

# Oracle® Communications Network Charging and Control

## Charging Control Services User's Guide



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The Oracle logo, consisting of the word "ORACLE" in white, uppercase, sans-serif font, centered within a solid red square.

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# About This Document

## Scope

The scope of this document includes all functionality a user must know in order to effectively operate the Charging Control Services (CCS) application. It does not include detailed design of the service.

## Audience

This guide is written primarily for CCS administrators. However, the overview sections of the document are useful to anyone requiring an introduction.

## Prerequisites

Although there are no prerequisites for using this guide, familiarity with the target platform would be an advantage.

This manual describes system tasks that should only be carried out by suitably trained operators.

## Related Documents

The following documents are related to this document:

- *Advanced Control Services User's Guide*
- *Feature Nodes Reference Guide*
- *Control Plan Editor User's Guide*
- *Customer Care Portal User's Guide*
- *Subscriber Profile Manager User's Guide*
- *Voucher Manager User's Guide*
- *Charging Control Services Technical Guide*
- *Promotion Manager User's Guide*
- *Service Management System User's Guide*

# Document Conventions

## Typographical Conventions

The following terms and typographical conventions are used in the Oracle Communications Network Charging and Control (NCC) documentation.

| Formatting Convention                    | Type of Information                                                                                                                        |
|------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Special Bold</b>                      | Items you must select, such as names of tabs.<br>Names of database tables and fields.                                                      |
| <i>Italics</i>                           | Name of a document, chapter, topic or other publication.<br>Emphasis within text.                                                          |
| <b>Button</b>                            | The name of a button to click or a key to press.<br><b>Example:</b> To close the window, either click <b>Close</b> , or press <b>Esc</b> . |
| <b>Key+Key</b>                           | Key combinations for which the user must press and hold down one key and then press another.<br>Example: <b>Ctrl+P</b> or <b>Alt+F4</b> .  |
| Monospace                                | Examples of code or standard output.                                                                                                       |
| <b>Monospace Bold</b>                    | Text that you must enter.                                                                                                                  |
| <i>variable</i>                          | Used to indicate variables or text that should be replaced with an actual value.                                                           |
| <b>menu option &gt; menu option &gt;</b> | Used to indicate the cascading menu option to be selected.<br>Example: <b>Operator Functions &gt; Report Functions</b>                     |
| <a href="#">hypertext link</a>           | Used to indicate a hypertext link.                                                                                                         |

Specialized terms and acronyms are defined in the glossary at the end of this guide.

## Terminology

This topic explains any terminology specific to this manual.

| Term             | Definition                                                                                                                                                         |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ACS Customer     | ACS customers are set up in the ACS Customer screen. They configure systems to provide services to subscribers.                                                    |
| Service Provider | CCS service providers are the same as ACS customers and are set up in the ACS Customer screen. There is additional service provider configuration provided in CCS. |
| Customer         | Customers in CCS refer to the customers configured on the Subscriber Management screen.                                                                            |
| Subscriber       | A subscriber account is set up for each MSISDN which uses services provided by the service provider.                                                               |

# System Overview

## Overview

### Introduction

This chapter explains the main features of CCS and describes the basic functionality of the system.

### In this chapter

---

This chapter contains the following topics.

|                                                             |    |
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## What is CCS and VWS?

### Overview

Charging Control Services (CCS) and Voucher and Wallet Server (VWS) are prepaid and post-paid services. They offer flexibility and control over billing methods and telephony services in general.

They operate at the service application level of the network.

### Features

Features of CCS and the VWS include:

- Customization of call / session management and routing according to factors such as:
  - Geography
  - Demographics
  - Availability of resources
  - User preference
  - Call screening
  - Validation of subscriber credit prior to routing of calls

- Free call options (for example, to customer service)
- Flexible wallet states (such as active and frozen) adaptable to customer requirements
- Variable levels of credit and selection for different services for complex promotion logic
- Options for customers with low credit ratings through extensive rating plans
- Forced disconnection on credit exhaustion
- Fraud control (detection of unauthorized simultaneous subscriber ID entry, credit card use, or bad PIN)
- Links to VWS to provide wallet and balance management, including:
  - Individual or group subscriber accounts
  - Monetary and time-based wallet balances
  - Rechargeable, single use, debit or credit subscriber accounts
- Option to split wallet management across separate charging and tracking domains
- User interaction:
  - On-line credit recharge and balance query through a www CGI interface
- Home and roaming network support through CAMEL 2 / 3
  - Support for GSM, 2G, 2.5G and 3G circuit-switched and packet networks

### ACS functionality

CCS works in conjunction with the Advanced Control Services product for added processing capability. Many of the features of CCS are accessed through ACS, for example:

- Customer-managed control plans
- Graduated levels of security
- Management of all outgoing and incoming calls
- Statistics generation
- Announcements.

See *ACS User's Guide* for the full functionality provided with CCS.

### CCS Macro Nodes

The feature nodes that are available to CCS within the Control Plan Editor are listed in the *Feature Nodes Reference Guide*.

For information on using the CPE see *CPE User's Guide*.

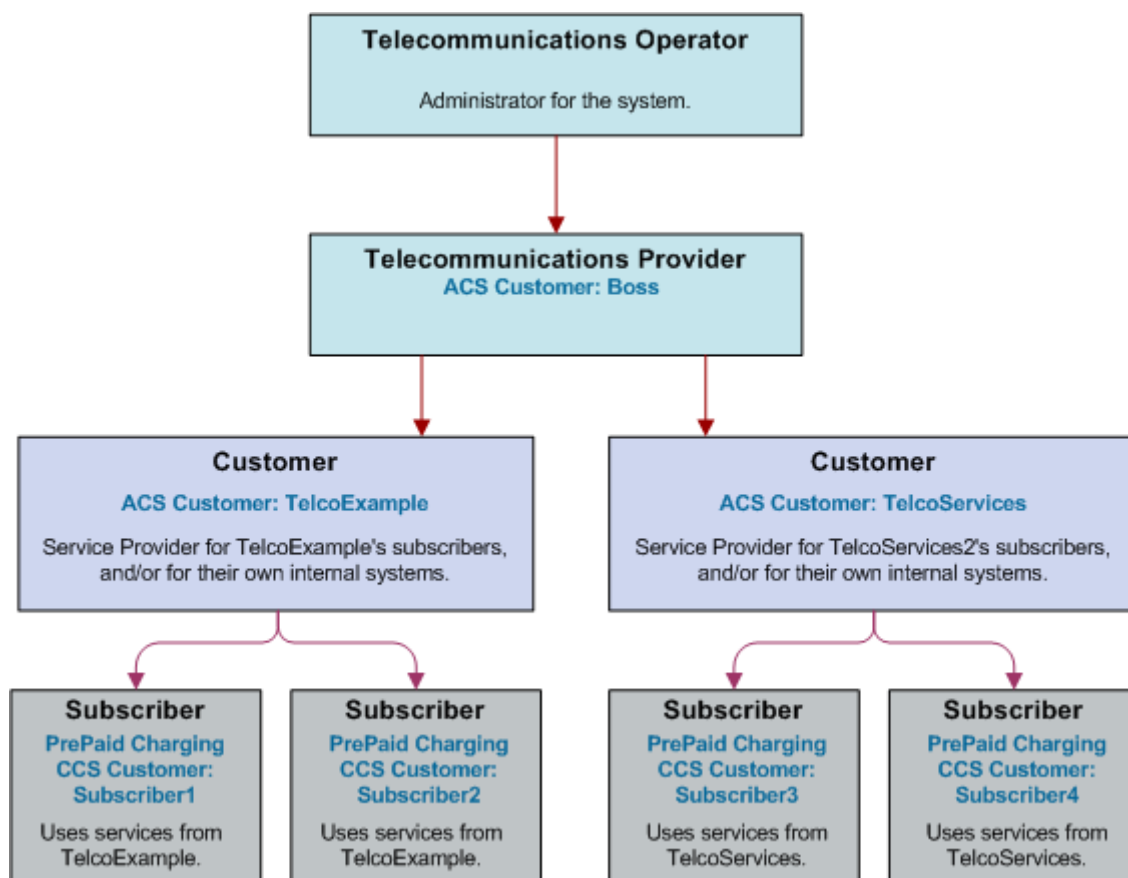
### Service providers

The Voucher and Wallet Server is installed and run as a network service by a Telecommunications Operator (telco). It enables the Telco to create service providers and to create customers and subscribers for those service providers. Although the customer is able to monitor subscriber details and recharge wallet balances through the web interface, the telco retains full control over all aspects of the wallet.



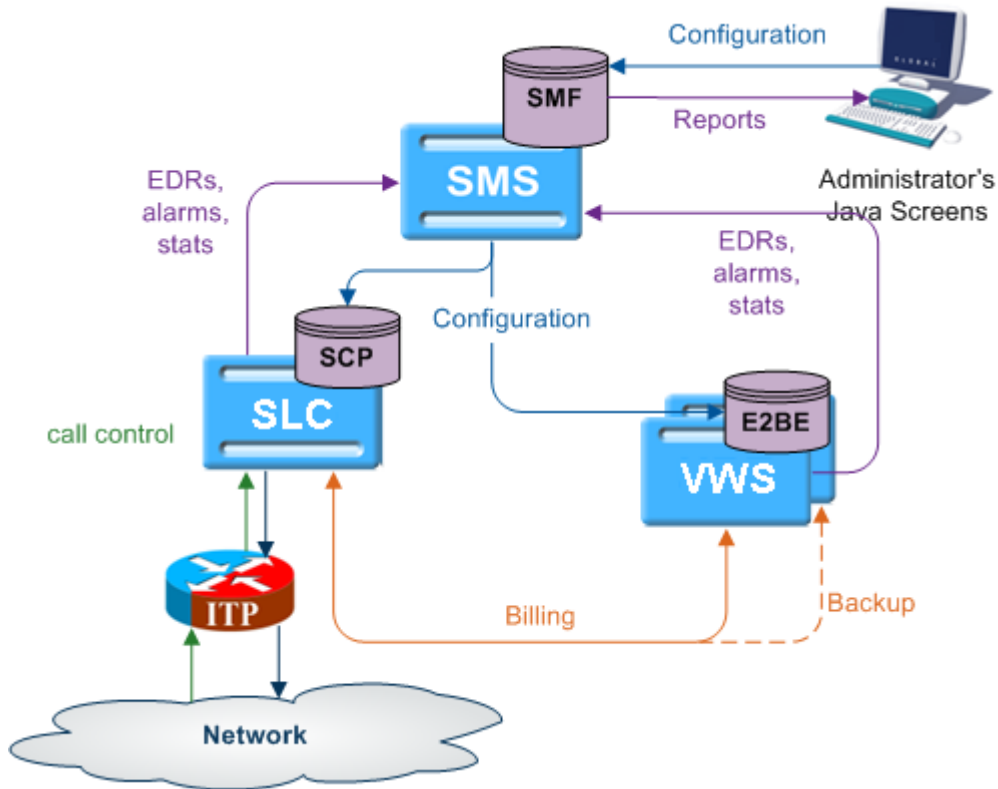
## CCS structure

Here is an example of the roles of telco, service provider, and customer in CCS.



## Hardware deployment

This diagram shows the how the machines in a CCS deployment interact.



## Domains

### Domains

CCS uses domains to control which service is provided by a specific network element.

A domain defines the functionality CCS uses a set of one or more domain nodes for. Domain nodes are network elements that provide one or more of the following functions:

- Rating
- Billing
- Wallet management
- Voucher management

An example of a domain would be a pair of Oracle Voucher and Wallet Servers.

Domains enable CCS to separate traffic for a dedicated service such as voucher redemption.

### BCD Domain

The BCD domain is used for subscriber accounts stored on the Billing and Revenue Management (BRM) system. For these accounts, the following NCC charging features will have no effect if used:

- Periodic Service/Charge logic (for example, the ability to perform logic based on periodic charge subscriptions in BRM)
- Balance cascade overrides
- Service logic derived discounts

- Text notification of mid-call tariff change (for example, text notification of mid-call tariff change will not be available).

**Note:** NCC does not require a subscriber to have a subscriber record stored locally on NCC. If subscriber information is not present on NCC, NCC uses the subscriber's logical calling number as the subscriber reference.

## Domain Types

Domain types enable CCS to handle groups of domain nodes that share a common technology. This can reflect the communication protocol, and/or make and model of the node.

**Examples:** The following are domain types:

- VWS
- DIAMETER
- Intec

For more information about configuring these domain types, see *Domain* (on page 475).

## Changing Domains During Call Processing

The Set Active Domain feature node enables the domain type to be changed at any point within a control plan. For example, if TUS is installed with a default Voucher Domain type of '2', the domain type can be changed mid-call to VWS.

For more information about the Set Active Domain feature node, see *Feature Nodes Reference Guide*.

## Distributed Wallet Management

You can distribute wallet management across two domains. The wallet management functionality is split between the following two elements:

- Charging management
- Tracking management

A domain can be configured to support one or both of these elements. This allows chargeable balances to be held on the charging domain, and fraud and expense balances to be held separately on a tracking domain.

**Note:** Tracking domains can only be configured for a VWS domain type. Charging domains can be configured for any domain type.

## What Services Does CCS Provide?

### Introduction

As a prepaid and post-paid service, CCS offers profitable alternate billing options to a telecommunications provider.

- Single Use Debit (Prepaid) phone-cards generate a profit for the telco, due to breakage (the remaining, unusable balance on a phone card at expiry).
- Expiry of balance and voucher expiry have an effect similar to breakage, making fixed line or mobile phones equally profitable for the telco.

## Wallet flexibility

Combinations of prepaid and post-paid facilities can be tailor-made to suit individual service providers and to meet the business needs of the telco.

The rich system of prepaid services enables services to be offered to everyone wherever they are. CCS enables the telco to offer these customers the flexibility and convenience of multiple services on a single wallet, in a manageable and user-controlled form.

## Wallet configuration options

Some examples of wallet flexibility are illustrated below:

- 1 A wallet can be one of the following:
  - Single-use debit wallet (non-rechargeable prepaid)
  - Debit wallet (rechargeable prepaid)
  - Limited-credit wallet (rechargeable prepaid with some post-paid facility)
  - Credit wallet (rechargeable, fully post-paid).
- 2 A single wallet can provide two services:
  - PIN access from any phone
  - Access from a registered telephone line number (CLI) used for any telephony service (phone, internet).
- 3 Wallets can be recharged through the web interface, using a voucher or a credit card.
- 4 A single subscriber can have a single wallet with up to two services.
- 5 A single subscriber can have multiple access devices, all drawing on the same wallet balance.
- 6 A group of subscribers can have access to a single wallet, in the name of one customer. Each subscriber in the group would access the wallet using the same physical phone line, or using the same PIN.
- 7 A group of subscribers can have multiple devices drawing on the same wallet balance. Each subscriber in the group would have his or her own named wallet. She or he would access the wallet using a different physical phone line or using a unique PIN.
- 8 Wallets can be set up anonymously, where a subscriber is not named as in the case of phonecards purchased for resale, or of single-use debit wallets.

## Example 1 - single wallet

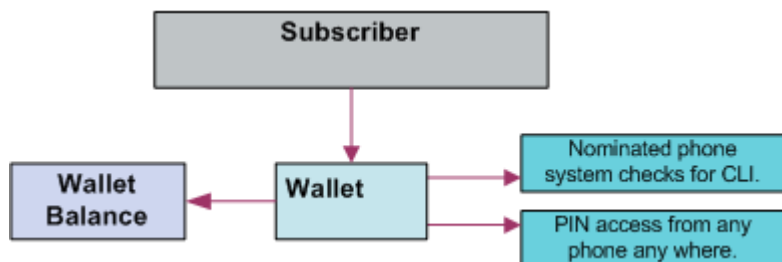
In this example, a subscriber has a single wallet.

A wallet can be accessible by a CLI (the number of a physical phone line used to access the wallet. This can be a mobile or fixed phone.) or by using a PIN. It is only required to select one method of access (PIN or CLI), but it is possible to have both. In this example, the subscriber has both a CLI and a PIN.

This enables the subscriber to use the wallet from any phone, using the PIN, or from a specific phone, where the CLI has been associated with the wallet.

### Diagram - single wallet

Here is an example of a single user with single wallet balance, a single wallet and two access mechanisms.



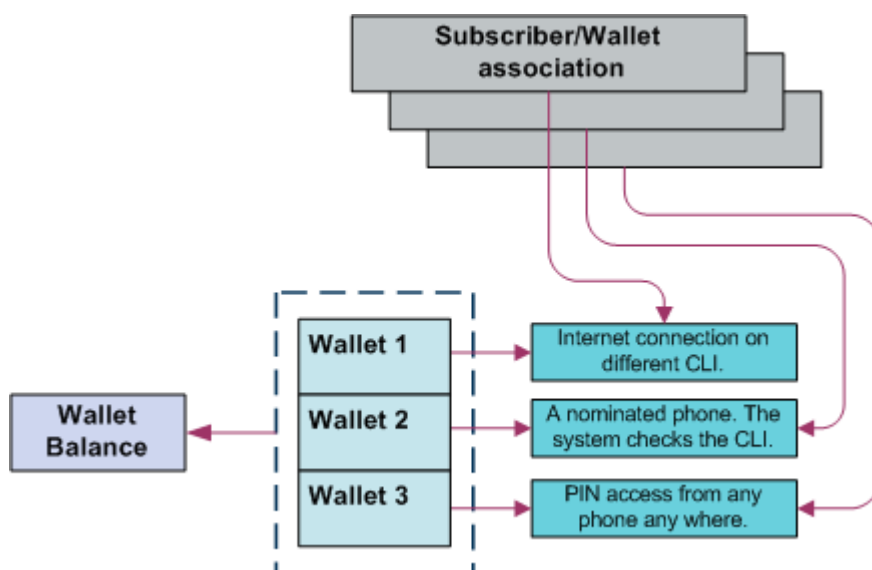
## Example 2 - multiple devices

A single subscriber can have an internet connection, a mobile phone and a prepaid card, all drawing on the same wallet and rechargeable through the web interface.

| Scenario | Description                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1        | The internet connection requires a phone connection, which has a CLI. This CLI is registered to a subscriber. Since a subscriber can only have one CLI, no other phone line can be used to access this subscriber/wallet association without a PIN.                                                                                                                                                                        |
| 2        | The subscriber wishes to use a mobile phone without a PIN. The internet connection has been registered as the CLI, so a second subscriber must be created. The new subscriber draws on the same wallet balance as the first subscriber, but is based on the CLI of the mobile phone.                                                                                                                                       |
| 3        | The subscriber wishes to have a PIN, in order to access the wallet from any fixed or mobile phone. It is possible to add a PIN to either of the two wallets created above, which would allow this feature to be used independently. However, the subscriber in this example has elected to create a completely new subscriber/wallet association. It draws on the same balance as the first two, but has a PIN and no CLI. |

### Diagram

Here is an example of a single user with single wallet balance, and three subscriber/wallet associations, one for each of three services.



## Example 3 - client group

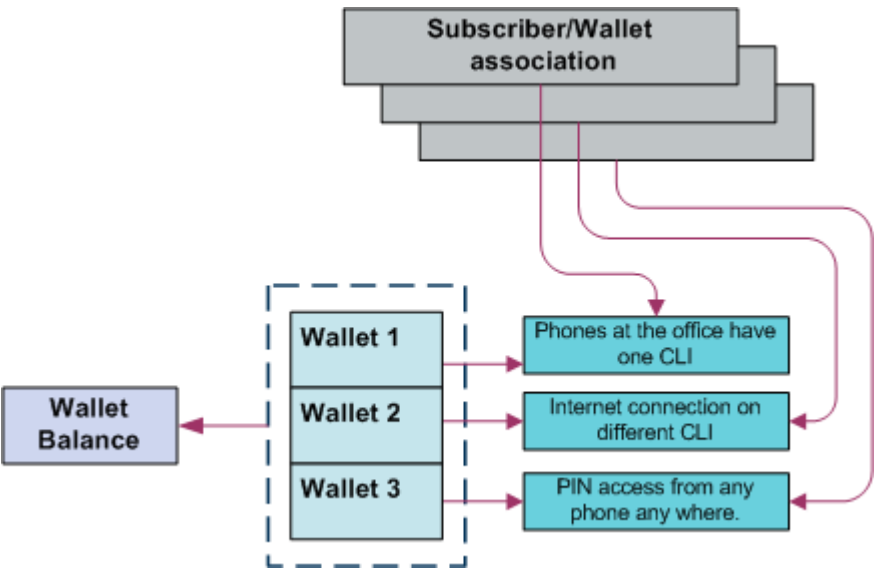
Alternatively, several individual subscribers can have associations with a single wallet. The service provider can monitor each subscriber/wallet association without the inconvenience of maintaining a separate wallet for each subscriber. In a business setting, this has positive implications.

Within an organization, all employees can be issued with a calling card, giving them access to a common wallet. This would allow employees to work off-site, while retaining full access to their usual telephony services. The organization can also run an internet connection through this same wallet, as well as any specific fixed or mobile phones that are registered on the CCS system. This could be achieved through three subscriber/wallet associations, drawing on one wallet.

| Scenario | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|----------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1        | The telephone system at the office runs on a single telephone line. A subscriber/wallet association is set up, based on the CLI of that phone line. Any call made from the office will draw on the same wallet. If an organization had more than one phone line, or more than one office, each of these phone lines could have an individual subscriber/wallet association drawing on the same wallet.                                                                                                                                |
| 2        | The office internet connection requires a telephone connection, which has a CLI. The CLI is registered to a new subscriber using the same wallet as before. Since a subscriber can only have one CLI, no other phone line can be used to access this subscriber record without a PIN. It is possible for a subscriber to have both a CLI and a PIN, so the internet connection CLI could be on the same subscriber record as the PIN described above. In this example, the customer wishes to keep these subscriber records separate. |
| 3        | The customer wishes to issue calling cards to all employees. A subscriber/wallet association is set up with a PIN, but with no CLI. All employees are given cards with the subscriber ID printed on them. They are given the PIN to access the wallet. All employees can then access the wallet from any fixed or mobile phone, using the PIN. If it is preferred that each employee has an independent PIN, then each employee must have a separate subscriber record. A subscriber record can only have one PIN.                    |

Diagram

Here is an example of multiple users with a common wallet balance, three subscriber/wallet associations for each of three services.



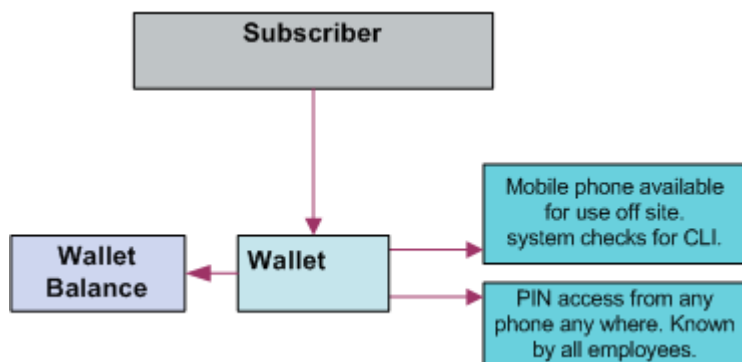
Example 4 - shared single account

Customers may prefer to manage their services on a single wallet. The flexibility of CCS makes this a viable option. Even with a single wallet, it is still possible to manage an internet connection through the CLI, as well as PIN access from any phone. This means that the CLI registered on the subscriber record is that of the internet connection, while the registered PIN enables access to the wallet from any phone.

Alternatively, the registered CLI could refer to the office phone line or to a specific mobile phone. As long as the subscriber/wallet association is registered with only one CLI and one PIN, the service provider can use the wallet according to its requirements.

### Diagram

Here is an example of multiple users with one wallet balance, one wallet and two services.



### Example 5 - branded prepaid cards

A further opportunity enabled by CCS is branded prepaid. Branded prepaid allows service providers to market customized prepaid cards (either single-use debit wallets of a set value or rechargeable debit cards) with their own company logo. This can be a novel means of advertising for the service provider, particularly if the prepaid cards include special rates and discounts not available elsewhere. This is easily configurable in CCS.

The convenience and economy of the card is in itself a selling point, but the service provider also benefits from the longevity of the advertisement – especially in the case of rechargeable cards. A subscriber is far less likely to discard an advertisement printed on a phonecard.

In this example, the card is a \$5 single-use debit wallet, which means that each card printed has a subscriber record and wallet of its own.

## Making a Call in CCS

### Introduction

After a subscriber has been assigned a subscriber ID and PIN or a CLI, it is possible for them to make a call against a CCS subscriber/wallet association.

### Calling from a registered phone

Here is the process followed when a subscriber makes a call from a registered fixed or mobile phone (CLI).

| Stage                                                                | Action                                                                                            |
|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| 1                                                                    | The subscriber dials the toll-free number corresponding to the country in which they are located. |
| <b>Note:</b> The telco supplies this number to the service provider. |                                                                                                   |

| Stage | Action                                                                                                                                                                                                                              |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2     | CCS checks the CLI against the subscriber information.<br>As the phone is registered, a dial tone will indicate that the CLI has been accepted.<br><b>Note:</b> If the information is invalid, then the call will not be connected. |
| 3     | The subscriber enters the required phone number, followed by #.<br><b>Result:</b> The call will be connected and charged to the subscriber's wallet, using the appropriate tariffs for that specific date and time of day.          |

## Calling from any phone

Here is the process followed when a subscriber makes a call from a fixed or mobile phone that is not registered, using CCS.

| Stage | Description                                                                                                                                                                                                                                                                                                                                                                                                             |
|-------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1     | The subscriber dials the toll-free number corresponding to the country in which they are located.<br><b>Note:</b> The telco supplies this number to the service provider.                                                                                                                                                                                                                                               |
| 2     | CCS checks the CLI against the subscriber information.<br>As the phone is not registered, a 'beep' will indicate that the system requires entry of phone subscriber identification details.                                                                                                                                                                                                                             |
| 3     | The subscriber enters the subscriber ID and PIN as a single number, followed by #. The subscriber ID consists of 6 digits, including a 2-digit prefix specific to the service provider. The PIN can have up to 20 digits.<br><b>Example:</b> The subscriber with a subscriber ID of 445678 and a PIN of 9900 would enter the number 4456789900#.                                                                        |
| 4     | A dial tone will indicate that the subscriber ID and PIN have been accepted.<br><b>Note:</b> The Product Capability control plan collects the PIN information and the next service handover validates the PIN. If the PIN is validated, the call gets connected. When the PIN validation fails and if the CCS_PIN_AUTH_FAILURE is configured, the last used PIN number in the service handover is used to authenticate. |
| 5     | The subscriber enters the required phone number, followed by #.<br><b>Result:</b> The call will be connected and charged to the subscriber's wallet using the appropriate tariffs for that specific date and time of day.                                                                                                                                                                                               |

The Product Capability control plan collects the PIN information and the next service handover validates the PIN. If the PIN is validated, the call gets connected. When the PIN validation fails and if the CCS\_PIN\_AUTH\_FAILURE is configured, the last used PIN number in the service handover is used to authenticate.

## Subscriber Accounts and Wallets

### Subscriber accounts

A subscriber account is the unique record in CCS which records the details of a person (subscriber) who is purchasing services from the telecommunications provider.

A subscriber account is identified by a unique E.164 number. This is referred to as the MSISDN of the subscriber.



## Wallets

Each subscriber account has one associated primary wallet. The subscriber can also have a secondary wallet. Wallets can be shared between subscriber accounts. A wallet is a group of balances owned by the subscriber and available to pay for prepaid services offered by the platform.

**Example:** A subscriber could have a “General Cash” balance and a “Free SMS” balance in their wallet. Each balance has its own expiry date, which means that any value left in the balance after this date is removed.

Wallets are associated with a specific VWS Voucher and Wallet Server pair. For more information about this relationship, see *Voucher and Wallet Server Technical Guide*. For more information about moving wallets from one VWS pair to another, see *UBE Account Balancing* (on page 83).

## Wallet states

The wallet has a state which:

- Indicates what phase of the life cycle the associated subscriber account currently is in
- Determines whether the subscriber can use his or her services

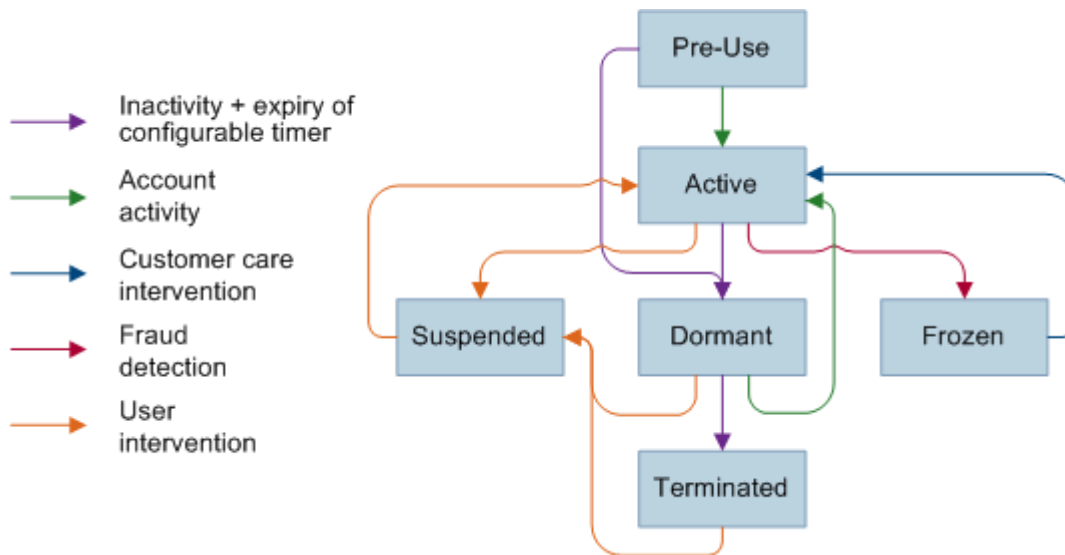
This table describes the available wallet states.

| State      | Description                                                                                                                                                                                                                                                                                                                                 |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pre-use    | The first state after the subscriber account/wallet is created.                                                                                                                                                                                                                                                                             |
| Active     | The state during which normal wallet operations are handled. All services can be used.<br><br>When a subscriber uses their account for the first time (via any paid service), the wallet moves from the Pre-use state into the Active state. The initial expiry dates for the balances and the wallet are set when the wallet is activated. |
| Dormant    | If the subscriber does not use any services for a configurable period of time, the account/wallet is put in the Dormant state. The Dormant state is useful for reporting inactive subscribers. All services are still accessible.                                                                                                           |
| Frozen     | If fraudulent activity is detected on the subscriber account, the subscriber account/wallet is changed into the Frozen state. All services are disabled until manual intervention by an operator.                                                                                                                                           |
| Suspended  | The suspended state can be used by the operator to temporarily disable a subscriber's account.                                                                                                                                                                                                                                              |
| Terminated | When the wallet's expiry date is reached, the subscriber account/wallet is moved into the terminated state.                                                                                                                                                                                                                                 |

**Note:** Wallets may also be affected by expiry dates. For more information about wallet and bucket expiry, see *Wallet and Bucket Expiry* in *Voucher and Wallet Server Technical Guide*.

## Wallet lifecycle

This diagram shows the states in a standard life cycle of a wallet.



## Balance units

Balance units define how a wallet treats a type of currency (for example, treating SMSs differently from cash). All balance types have a balance unit.

## Balance types

Balances of different sorts of value are distinguished by balance type. Balance types enable Service Providers to separate a subscriber's cash/units into logically separate areas such as:

- Promotional (have 1 day to use 20 SMSs)
- Normal (recharges done by a subscriber)

When a new balance type is created, you must list the services it can be used for.

Balance Types can be dedicated to particular services. A Promotional Cash Balance might only be for services which are high value for the subscriber, but can be delivered at minimal cost to the operator.

**Example:** National voice calls to other of the operator's subscribers.

## Internal balance types

Some balance types are only used internally in CCS, for example, periodic charge subscription balances.

## Balance expiry

When the expiry date of a balance is reached, the credit of that balance is lost.

## Credit Cards

### Maintaining credit card details

Credit card details can be created and edited in the following Subscriber Management screens:

- **Credit Cards** tab – See *Credit Cards* (on page 45)

- Create credit cards. See *Adding credit cards* (on page 48). You can then register a subscriber to the credit card. See *Registering subscribers to credit cards* (on page 51).
- Edit credit cards. See *Editing credit cards* (on page 50).
- **Subscriber** tab – From the New and the Edit Subscriber screens - *Credit Card* (on page 104) option
  - New – Create credit card registered to the subscriber. See *Adding credit cards* (on page 48)
  - Register – See *Registering credit cards to subscribers* (on page 106)
  - Deregister – Deregister a credit card from the subscriber
  - Freeze – Freeze a credit card
  - Confirm – Confirm the credit card to the subscriber
  - Delete – Delete the credit card

## Credit card and subscriber maximums

Each subscriber can recharge the account using up to the specified number of credit cards, for example, 4. Each credit card can be used to recharge up to the specified number of calling cards. These limits are set:

- Globally on the **Global Configuration** tab. See *Setting global credit card maximums* (on page 505).
- Per service provider on the **Resource Limits** tab. See *Setting Subscriber Credit Card Limits* (on page 527).

## Credit card control plans

Each action executed by clicking a button on a credit card related screen executes a Business Process Logic (BPL) that runs a control plan to carry out the action.

Here are the default control plans associated with credit card BPLs.

| BPL                        | Control Plan     |
|----------------------------|------------------|
| BPL Add Credit Card        | BPL-AddCC        |
| BPL Edit Credit Card       | BPL-EditCC       |
| BPL Register Credit Card   | BPL-RegisterCC   |
| BPL Deregister Credit Card | BPL-DeregisterCC |
| BPL Delete Credit Card     | BPL-DeleteCC     |

## Product Types

### Product types

A product type defines the:

- Services that are available to a subscriber
- Tariffs which apply to the subscriber's services
- Control plans that are executed when a service is used
- Wallet life cycle policy

Product types are assigned to a subscriber and wallet combination. This enables the subscriber to have two different product types, if they have two wallets. If a wallet is shared between subscribers, each subscriber can have a different product type for that wallet.

### Activation credits/promotions

You can associate product types with wallet activation promotions, with configurable:

- Balances (one of the predefined balance types, or one of the operator-defined balance types)
- Values
- Validity periods

**Example:** A wallet activation promotion that adds 10 EUR to the Promotional Cash balance with a validity period of 2 months can be associated with the Bronze product type. This results in each Bronze subscriber receiving 10 EUR on their Promotional Cash balance when they use a service for the first time. The expiry date of the balance is set to 2 months after the activation date.

## Rating and Tariffs

### Introduction

The charge for a call or data session is set by subscriber's product type. Product types include the tariff plans which define the service charge. Tariff plans can be associated with multiple product types. A different set of tariffs can be defined for each product type.

Tariff plans define which rate table applies to a product type at a particular time.

Tariff plans and product types can also be associated with a named event catalog through the Tariff Plan Selector. The named event catalog defines:

- A list of specific events (named events) that can be charged
- The actual charge for the included events

The charges are applied whenever the named event occurs.

### More information

For more detailed information about voice call rating in CCS, see:

- *Rating Management* (on page 341)
- *CCS Technical Guide*
- *Voucher and Wallet Server Technical Guide*

## Recharges

### Introduction

Subscribers can recharge their balances through a range of recharge mechanisms, including:

- Voucher recharge through IVR
- Voucher recharge through direct dial
- External recharge through provisioning interface (for example: ATM, credit card, web interface)

In addition to the nominal value of the recharge, a bonus can be given when a recharge is made.

After the recharge, a notification SMS is sent to the subscriber.

### Recharge promotions

You can reward a subscriber with a promotion bonus when a custom recharge is performed. The promotion bonus is given when two conditions are met:

- 1 The CCS PI `EXTRA_EDR` parameter must be set to:  
`EXTRA_EDR = "CHANNEL=CHANNEL_NAME"`
- 2 The recharge value passed in the PI command exceeds the balance value condition associated with the applicable promotion.

**Example:** If a promotion is defined with channel “ATM” and balance value event condition 10 EUR, a PI recharge with reference ATM20080110123000 and value 20 EUR will trigger the promotion to be awarded.

Promotions can be configured with various parameters. For more information, see *Promotion Manager User's Guide*.

## Balance expiry

Recharges extend the expiry periods of the balances and/or the wallet being recharged.

When a balance is recharged, its expiry date is set to the current date plus the balance expiry period specified in the recharge's voucher type. If the current expiry date of the balance is already greater than this date, the current date is kept.

## Wallet expiry

Recharges extend the expiry periods of the wallet being recharged.

When a wallet is recharged, its expiry date is set to the current date plus the wallet expiry period specified in the recharge's voucher type. If the current expiry date of the wallet is already greater than this date, the current date is kept.

## Failed recharges

You can set the maximum number of failed recharge attempts that are allowed within a 24 hour period (allowed values 2-99). If the maximum number of failed recharge attempts is exceeded, the account of the recharging subscriber is moved into the frozen state.

## Voucher batches

You can use the CCS Voucher Management screens to create vouchers in batches of up to 999999999 vouchers.

Each voucher batch is encrypted during the batch creation process using a PGP public/private key pair. You can upload voucher reseller's PGP public keys to encrypt a batch so that it can only be decoded by the retailer.

For security reasons, after the creation of a voucher batch, the batch remains in “Created” state until it is moved into the “Active” state manually by an operator.

## Voucher recharge methods

This table describes the methods subscribers can use to recharge their account with a voucher.

| Method    | Description                                                                                                                                               |
|-----------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Self-care | Subscribers use IVR to interact with the self-care function.<br>For more information about self-care, see <i>Subscriber Self-care</i> (on page 24).       |
| Web       | Subscribers use a web interface to enter the voucher details. The website is developed by the operator and uses PI commands to integrate with the CCS PS. |

| Method            | Description                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SMS Direct Access | Subscribers send an SMS to a dedicated short code on the CCS PS with the voucher number inside the SMS.<br><b>Example:</b> A subscriber sends voucher number 12345678901234 inside an SMS to short code 4001. The subscriber's account balance is recharged with voucher 12345678901234.                                                                                                               |
| Direct Dial       | Subscribers dial a dedicated number that connects them to the CCS PS with the voucher number appended to it. After CCS PS attempts the recharge, an announcement is played indicating success or failure of the recharge.<br><b>Example:</b> If the special direct dial recharge number is 4123, a call to 412312345678901234 will recharge the account of the subscriber with voucher 12345678901234. |
| Customer Care     | Subscribers call the customer service center, and the operator recharges the accounts by entering the voucher details into the Voucher Management screen.                                                                                                                                                                                                                                              |

## External recharge methods

The Provisioning Interface provides an interface to CCS's recharge facility. Using the interface, you can integrate CCS with another system (for example: a web-based self-care system or a banking system such as ATM or credit card).

Recharges using the PI can include custom details, including:

- Configurable recharge amount
- Balance and expiry dates

## Subscription Services

### Introduction

Periodic charges enable a telco to set up ongoing charging. Services which are provided using control plans (such as service bundle discounts) can use the Periodic Charge State Branching node to check whether a subscriber has a valid subscription to a service before providing any benefits.

While periodic charges are generally used to apply regular charges, they can also be used for other functions such as resetting balances. This can be done with or without notifying the subscriber.

### Types of periodic charges

Periodic charges have three main actions:

- 1 Debit a subscriber's wallet
- 2 Recharge a subscriber's wallet
- 3 Send SMS notifications to a subscriber

These actions can be combined in various ways to implement different types of services.

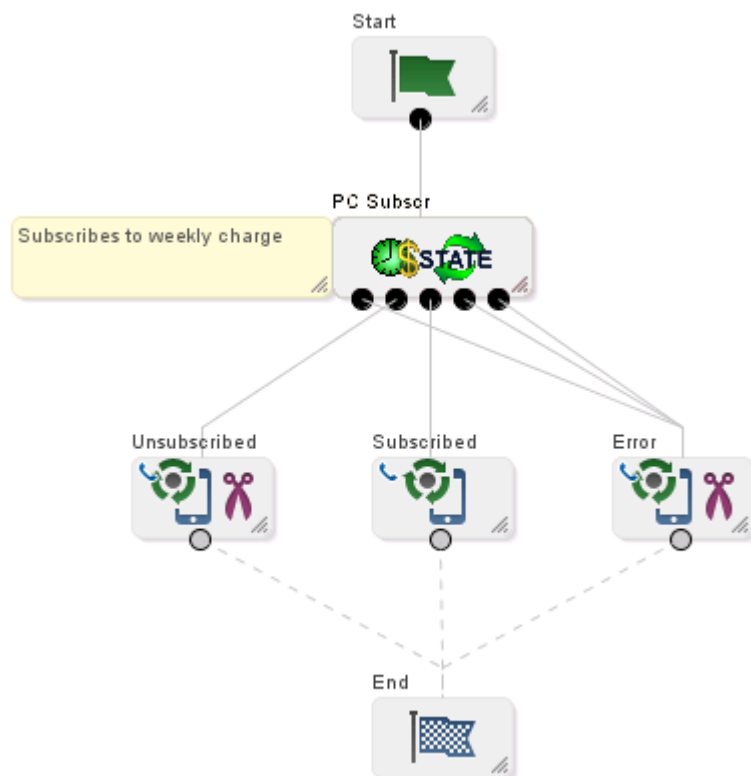
### Subscribing and Unsubscribing

Changing a subscriber's service subscription state is controlled using BPL tasks. These tasks can be made available to subscribers using self-care facilities such as IVR or web, and can be made available to Customer Care Representatives on the Customer Care Portal.

The BPL tasks use the Periodic Charge Subscription feature node to change the subscriber's periodic charge state to subscribed, unsubscribed or terminated. For more information about the Periodic Charge Subscription feature node, see *Feature Nodes Reference Guide*. For more information about setting up BPL tasks, see *Task Management* (on page 589).

### Example Periodic Charge Subscription Control Plan

This figure shows an example control plan that could be used for a simple BPL task which subscribes the subscriber to a periodic charge.

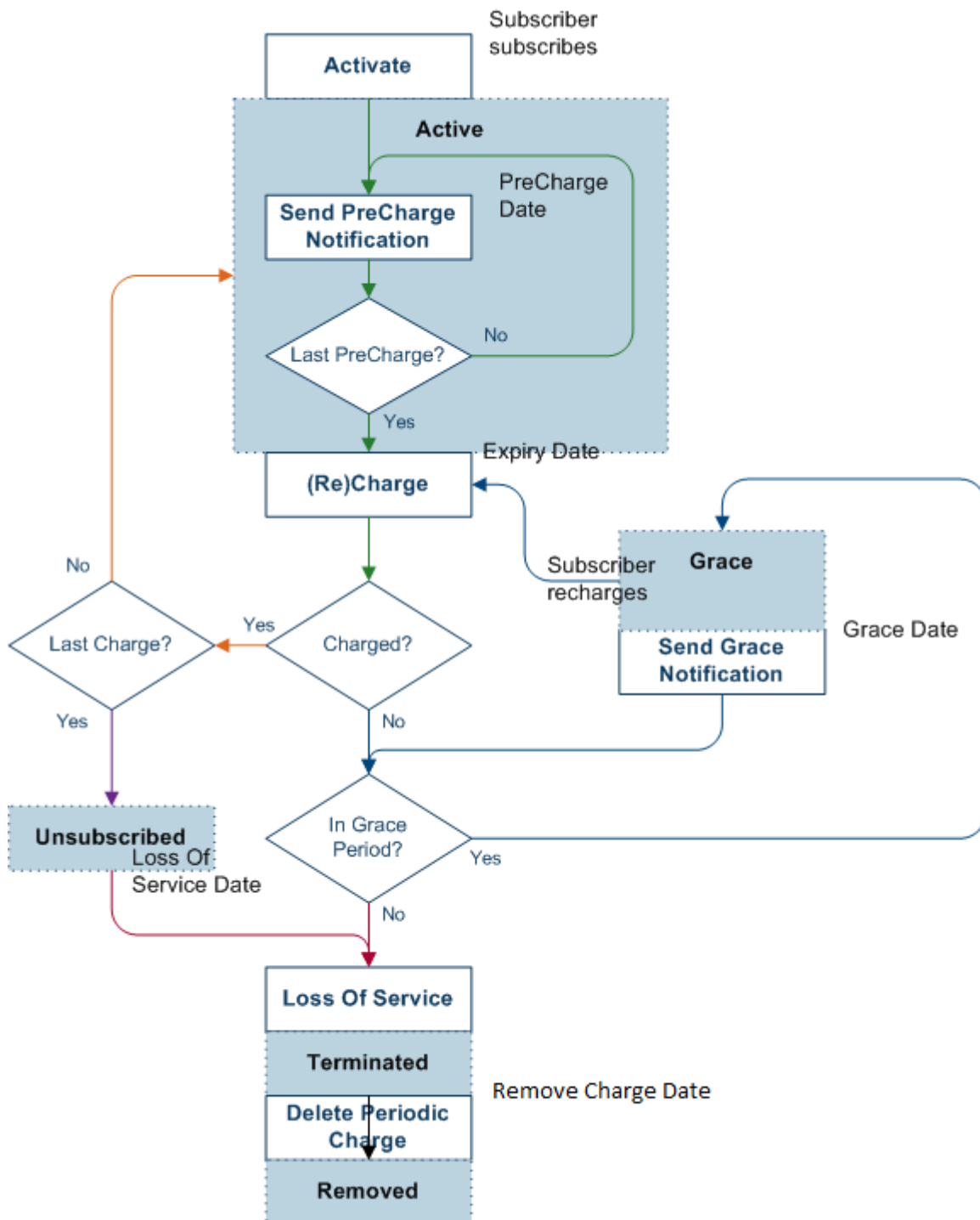


#### Notes:

- The Periodic Charge Subscription feature node attempts to subscribe the subscriber to the weekly charge. Depending on the result of the operation, the BPL task is routed to a different exit.
- The Unconditional Terminate feature node called Subscribed returns a 103 to the BPL task running the control plan.
- The Disconnect feature node called Unsubscribed returns a 102 error to the BPL task running the control plan.
- The Disconnect feature node called Error returns a 99 error to the BPL task running the control plan.

## Periodic charge life cycle diagram

This diagram shows the standard life cycle of a periodic charge.





## Periodic charge life cycle

This table describes the periodic charge life cycle shown in *Periodic charge life cycle diagram* (on page 18).

| Transition                   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Activate                     | <p>The activate transition sets up the periodic charge for a subscriber's wallet. The periodic charge is active after this stage has finished.</p> <p>During the active stage, any configured pre-charge notifications are sent.</p> <p><b>Note:</b> There is a unique periodic charge for each subscriber who uses a wallet. The subscriber's product type defines which periodic charges they can use.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Send Pre-Charge Notification | The first, second or third pre-charge notification is sent to the subscriber.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| (Re)Charge                   | <p>The charge transition is triggered by the expiry date defined in the <b>When</b> option of the periodic charge. The recharge transition is triggered when the subscription is in a grace state and the subscriber recharges their wallet.</p> <p>The charge or recharge transition attempts to apply the charges (if any) and then the recharges (if any) defined in the <i>What</i> (on page 319) option for the periodic charge.</p> <ul style="list-style-type: none"> <li>• If a charge or recharge succeeds and it is not the final charge, the State is set to Active. If a successful charge or a recharge success notification is configured, it is sent.</li> <li>• If a charge or recharge succeeds and it is the final charge, the state is set to unsubscribed. If a final success notification is configured, it is sent.</li> <li>• If a charge or recharge fails (whether or not it is the final charge) and a grace notification is configured, the periodic charge state is set to grace. If a failed charge or recharge failure notification is configured, it is sent.</li> <li>• If a charge or recharge fails (whether or not it is the final charge) and no grace notifications are defined, the periodic charge state is set to terminated. If a loss of service notification is configured, it is sent.</li> </ul> |
| Send Grace SMS               | The first or second grace notification is sent to the subscriber.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Loss Of Service              | <p>The loss of service transition is triggered by the expiry date defined in the <b>Loss Of Service</b> field.</p> <p>The loss of service transition changes the state of the periodic charge to terminated and sends out the loss of service notification (if any).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Delete Periodic Charge       | <p>The delete periodic charge transition is triggered by the expiry date defined in the <b>Remove Charge</b> field.</p> <p>The delete periodic charge transition removes the periodic charge from the subscriber's wallet.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## Period calculations

This table shows how the intervals between transitions for periodic charges are defined.

| Interval                                                         | State              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------------------------------------------------------------------|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Activation Date to Charge Date                                   | Active             | <p>Activation uses the When option configuration (specifically Period) to define the interval between the activation date and the charge date. The charge date defines when the periodic charge is applied.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>For monthly, quarterly, semi-annual, and annual charges, the day of the month to apply the charge is configured. If the day specified is invalid for a particular month, the charge is applied on the last day of the month. For example, if you specify the 31st, the charge is applied on the 30th for months with only 30 days or on the 28th/29th for February.</li> <li>While periodic charges are held in buckets, the product type's <b>Recharge Minimum Balance Expiry Period Extension</b> field does not affect the expiry calculation.</li> </ul> |
| PreCharge Notification Dates to Charge Date                      | PreCharge (Active) | <p>The interval between the precharge notifications being sent and the charge date is defined by the <b>Days Before Charge</b> field which corresponds to the notification being sent.</p> <p><b>Note:</b> The notifications must be at least 1 day apart, 1 day before the charge date and 1 day within the smallest possible activation to charge interval.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Charge Date to Charge Date                                       | Active             | The interval between charge dates is defined by the period of the charge (as defined on the When option).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Charge Date to Grace Notification Dates                          | Grace              | <p>The interval between the charge date and the grace notification dates are calculated forward from charge date.</p> <p><b>Note:</b> The notifications must be at least 1 day apart, 1 day after the charge date and 1 day within the smallest possible charge to loss of service interval.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Charge Date to Loss Of Service Date                              | Unsubscribed       | <p>The interval between charge date and loss of service date is defined by the normal period of the charge period.</p> <p><b>Note:</b> A periodic charge moves immediately from charged to terminated if either occurs:</p> <ul style="list-style-type: none"> <li>No grace notifications are configured</li> <li>The subscriber is specifically terminated by a BPL or IVR event</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Loss Of Service or Grace Notification Dates to Remove After Date | Terminated         | <p>Defined by the <b>Remove Charge</b> field on the Notifications option for the periodic charge.</p> <p><b>Note:</b> This is true, even if a subscriber terminates while in a grace state.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

**Note:** The transitions are executed after the specified date. The exact time depends on the platform's specific circumstances. For more information about when transitions are triggered, see *CCS Technical Guide*.

## Applying periodic charges

Periodic charges are applied according to the these rules:

- Periodic charges apply to product types they have been assigned to. You can assign more than one periodic charge to a particular product type.
- Periodic charges are applied on a per-wallet basis based on which periodic charges the subscribers who use the wallet have subscribed to. This means if more than one subscriber uses a wallet, the wallet is debited/credited for each of the charges as they are applied to the subscribers.
- Debit charges are applied before credit charges.

## Transferring Subscriptions

Subscribers can transfer from one subscription in a periodic charge group to another subscription in a periodic charge group. This can be triggered from a control plan (enabling IVR or BPL task implementations) or using the CCP Dashboard.

Control plan-based transfers are executed using the Periodic Charge Transfer feature node. For more information about this node, see *Feature Nodes Reference Guide*.

For more information about setting up transfers using the CCP Dashboard, see *Customer Care Portal User's Guide*.

**Warning:** Subscribers should only be subscribed to one periodic charge in a group at any one time. This restriction is not strictly enforced by the VWS, so it must be enforced by the design of the service.

## Promotions

### Introduction

Promotions can be used to increase subscriber activity by rewarding subscribers with more attractive packages for specific behavior. Promotional bonuses can be implemented using one of the following:

- In-built rewards and bonus schemes configured in Promotion Manager
- Free form configuration such as control plans and/or profile fields

### In-built reward and bonus types

This table describes the types of in-built rewards and bonuses provided to CCS through Promotion Manager.

| Type                         | Description                                                                                                                                                                                                                                                                                                     |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tracker threshold promotions | Awarded to subscribers whose total usage exceeds a set threshold.<br>Promotional reward can change the subscriber's product type (and applicable tariff), and/or award one or more bonus credits.<br>Promotion notifications can be sent to subscribers specifying how much more they need to spend to upgrade. |
| Wallet activation promotions | Triggered when a subscriber activates their account.<br>Defines a time period from subscriber creation to activation.<br>If a subscriber activates their account in this period, they are given free SMS messages.                                                                                              |
| Balance recharge promotions  | Awards a promotional cash bonus to subscribers if they recharge their account and the recharge is above a specified threshold.                                                                                                                                                                                  |

### Expenditure balances

Tracker threshold promotional activity is recorded in expenditure balance types. These expenditure balance types are used as counters and are incremented according to the qualifying expenditure a subscriber incurs. Counters can be measures of:

- Cash
- Time
- Units of other activities

### Expenditure plans

Expenditure plans are collections of expenditure balances. They define the expenditure balances which are increased by qualifying charges.

Each CLI-DN or named event can specify a single expenditure plan to contribute to. The expenditure balances included in the expenditure plan are increased by charges against qualifying balances in the balance type cascade specified by the CLI-DN or named event.

A qualifying balance is a chargeable balance which:

- Is in the CLI-DN or named event's balance type cascade
- Has the Contributes to Expenditure check box enabled on its balance type record

For more information about configuring expenditure plans, see *Expenditure Plan* (on page 414).

### Expenditure promotions benefits

The benefits provided by a promotion are defined by the promotion type. For more information about the benefits which can be provided by a promotion type, see *Promotion Manager User's Guide*.

### Multi-balance type example

If you have an expenditure plan with the following expenditure balance types:

- Daily cash
- Daily time
- Weekly cash
- Monthly unit

A call comes in lasting for 60 seconds costing 50 cents.

Daily cash and monthly cash would be incremented by 50 cents. Daily time would be incremented by 60 seconds and monthly unit would be incremented by 1.

### Example - cash balance type

#### Configuration:

Standard calls between on-net locations are charged under the HPLNM-MO rate table, and the Onnet x Onnet CLI-DN.

The CLI-DN uses the voice balance type cascade which uses these balances in descending order:

- More cash
- Promotional cash
- General cash

The more cash balance does not contribute to expenditure. Promotional and general cash both have the **Contributes to Expenditure** check box selected.

Charges under the Onnet x Onnet CLI-DN contribute to the "Standard" expenditure plan. The "Standard" expenditure plan includes the monthly and yearly expenditure balances. Both expenditure balances have a corresponding reward (monthly reward and yearly reward).

The system also has an international reward program. Like the Onnet x Onnet CLI-DN, the international CLI-DN uses the voice balance type cascade, but it contributes to the "International" expenditure plan, not the standard expenditure plan. The "International" expenditure plan includes the "International" expenditure balance, which has a corresponding "International" reward.

#### **Example 1:**

Caller Ahmed places a Onnet to Onnet call and talks for 12 minutes. Following the voice balance type cascade, CCS charges \$2 to his more cash balance, \$3 to his promotional cash balance and 1\$ to his general cash balance.

Because more cash does not contribute to expenditure, his expenditure balances are not increased by his more cash charge. However, because the promotional and general cash both contribute to expenditure, \$4 is added to all the Expenditure balances in the Onnet x Onnet CLI-DN's specified expenditure plan (that is, \$4 is added to the yearly and monthly expenditure balances).

The international expenditure balance is not changed.

#### **Example 2:**

Caller Bernice places an Onnet to international call and talks for 12 minutes.

Following the voice balance type cascade, CCS charges \$2 to her more cash balance, \$3 to her promotional cash balance, and \$15 to her general cash balance. Because more cash does not contribute to expenditure, her expenditure balances are not increased by her more cash charge.

However, because the promotional and general cash both contribute to expenditure, \$18 is added to all the expenditure balances in the international CLI-DN's specified expenditure plan (that is, \$4 is added to the International expenditure balance).

The yearly and monthly expenditure balances are not changed.

### **Wallet Activation Promotions**

Wallet activation promotions are benefits which are provided when a subscriber activates their account.

To apply wallet activation promotions, a subscriber must be routed through the Account Activation feature node in a control plan. For more information about the Account Activation feature node, see *Feature Nodes Reference Guide*.

### **Recharge bonuses**

Balance recharge promotions are cash bonuses applied to a subscriber's account if they recharge by more than a specified amount to a specified balance. The bonuses can be one of the following:

- A percentage of the recharge amount
- A benefit defined by a voucher type

### **More information**

Promotions are configured in Promotion Manager. For more information about promotions, see *Promotion Manager User's Guide*.

# Subscriber Self-care

## Introduction

Subscriber self-care enables the subscriber to manage their own account. It includes these features:

- Requesting information on the current subscriber account and service status (for example: balance and wallet status, product information)
- Modifying certain parameters of their account within the limitations imposed by the operator (for example: change language, change product)
- Recharging their account

## Main menu

When subscribers access the IVR self-care facility, they are routed through a single main menu. The menu provides an overview of the available self-care features and enable the subscribers to navigate to the sub-menus for the individual self-care features.

## Voucher recharge

Subscribers can use self-care to redeem a voucher which recharges their own account and recharges another subscriber's account.

## IVR system

Subscribers can use the self-care feature through a CS1-compatible IVR reached by calling a special number (short code), set by the operator.

The IVR uses announcements created by the operator in each supported language. The announcements are used by the language extension in the PA/PACUI operations executed by the IVR. When subscribers who have not yet set their preferred language make a voice call, the system automatically connects them to an IVR menu to select their preferred language.

## Web

Subscribers can use the self-care feature through a separate website. The website uses the PI commands to trigger events in CCS.

The development, testing, integration and support of the web-based self-care interface is the sole responsibility of the operator.

# Notifications

## Introduction

Notifications are any short message sent by CCS to a subscriber's handset. CCS generates notifications which are sent to the subscriber to inform them about specific events.

CCS sets up notifications which are delivered by other applications. Different delivery applications are used depending on the type of network and destination.

Some examples of notifications that can be sent include:

- Balance expiry
- Service expiry
- Recharge notification

## ACS Notification Templates

You define the content to include in notifications by configuring ACS notification templates. For more information, see *ACS User's Guide*.

Examples of CCS activities that can use ACS notification templates are:

- Feature nodes in control plans
- Business process logic (BPL) tasks
- Credit transfers
- Periodic charges
- Profile updates
- Real-time notifications
- Promotions

## Notification Languages

Notifications can use any language configured on the system. They are sent in the subscriber's preferred language (if set) or in the system's default language.

For more information about configuring:

- Languages, see *ACS User's Guide*
- Notification translations, see *CCS User's Guide*

## Delivery methods

You can use any of the following methods to deliver notifications:

- Messaging Manager FDA (First Delivery Attempt) to deliver notification SMS directly to the handset of the subscriber
- EMI protocol to submit notification SMS to an EMI interface of the operator's SMSC
- SMPP protocol to submit notification SMS to an SMPP interface of the operator's SMSC

The CCS PS uses one of these delivery/submission attempt sequences:

- 1 Try FDA delivery first, if it fails try EMI submission
- 2 Try FDA delivery first, if it fails try SMPP submission
- 3 Try EMI submission
- 4 Try SMPP submission

In all cases, if all attempts fail, the message is discarded (no Store-and-Forward is performed).

## Basic notifications

Notifications are sent to subscribers when:

- The number of days until the expiry date of his wallet is less than a pre-configured threshold (the warning period can be configured for each product type)
- One or more of his balance(s) has (have) been recharged (the SMS contains the new balance values)

# Friends and Family/Destination Discount Configuration

## Discount Overview

The Friends & Family (F&F) discount module seeks to apply a configured discount to calls made to numbers defined in a list, of up to 10 entries, for a particular subscriber when made from an MSISDN associated with that subscriber.

The discount percentage is the accumulative amount that is to be discounted in total for Friends & Family numbers.

The only time when an individual call is discounted by the amount configured for the Friends & Family product associated with a subscriber is when that subscriber has only one Friends & Family number configured.

Friends & Destination discounting applies either to a single number prefix or a group of number prefixes. The percentage defined is discounted from all calls with the discount prefix, or a prefix in the same group as the discount prefix (prefixes belong to the same group if they share the same announcement).

**Note:** Whether discounting applies to a single number prefix or a group depends on whether or not Multi-Destination is selected in the Friend/Destination Discount Node in the control plan. For more details, see *Feature Nodes Reference Guide*.

## What will be discounted

Only dialed numbers that exactly match the configured Friends & Family numbers are discounted. However, numbers prefixed with the Friends & Destination number are discounted.

## No discount

There is no discount if:

- There is no discount set up
- Discount is set to 0
- There are no numbers defined to match
- The numbers defined do not match
- There is an error

## Discount example

If the Friends & Family discount percentage is 10% and:

- There is only 1 Friends & Family number configured, any calls to that number are discounted by 10%.
- There are 10 Friends & Family numbers configured, any calls to those numbers are discounted by 1%.

# The Wallet Life Cycle

## Introduction

Traditionally the life cycle of a wallet in the Prepaid Charging product is simple and non-customizable. There is a predefined list of states, with fixed rules for transition between these states.

The Wallet Life Cycle functionality described in this document defines a flexible user-definable method for enhancing the life cycle of the wallet. In addition, a user-definable life cycle is available for individual balances of a wallet.



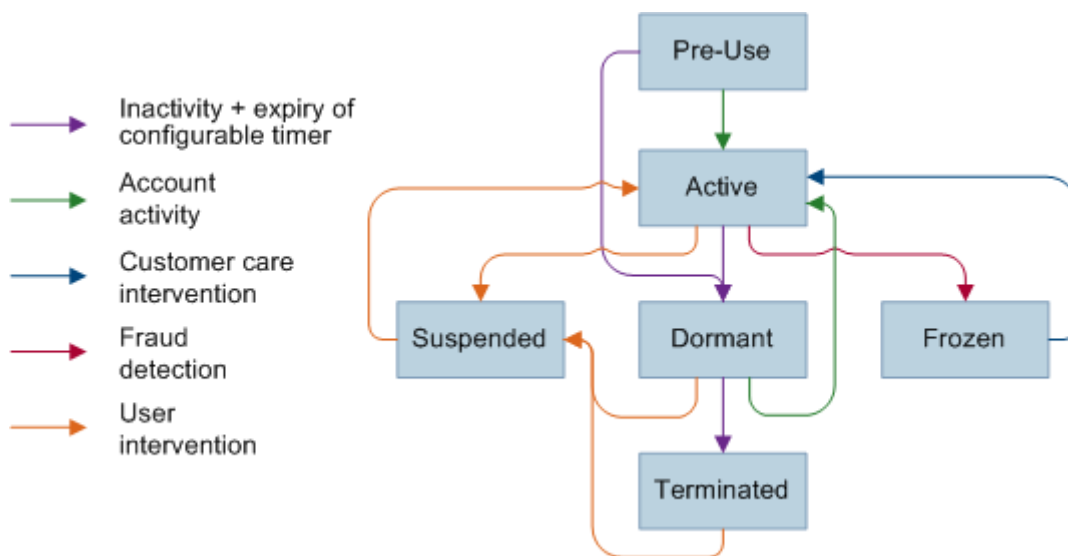
## Requirements

The principal requirements for the user-definable wallet life cycle are as follows:

- The user can define their own user-named periods within the wallet life cycle
- The wallet life cycle is definable per product (each product may have a different life cycle for the wallet)
- The user can define the durations of each period in the life cycle
- The user can define the basic services that are available during each period of the wallet life cycle:
  - Session Charges
  - General Charges and Recharges
  - Named Event operations
- The user may optionally define a control plan that will be run at the beginning of a period (control plans offer far more flexibility in terms of the actions that may be performed at key points in the wallet life cycle).
- The user may also optionally define notifications that will be triggered at the beginning of a period.

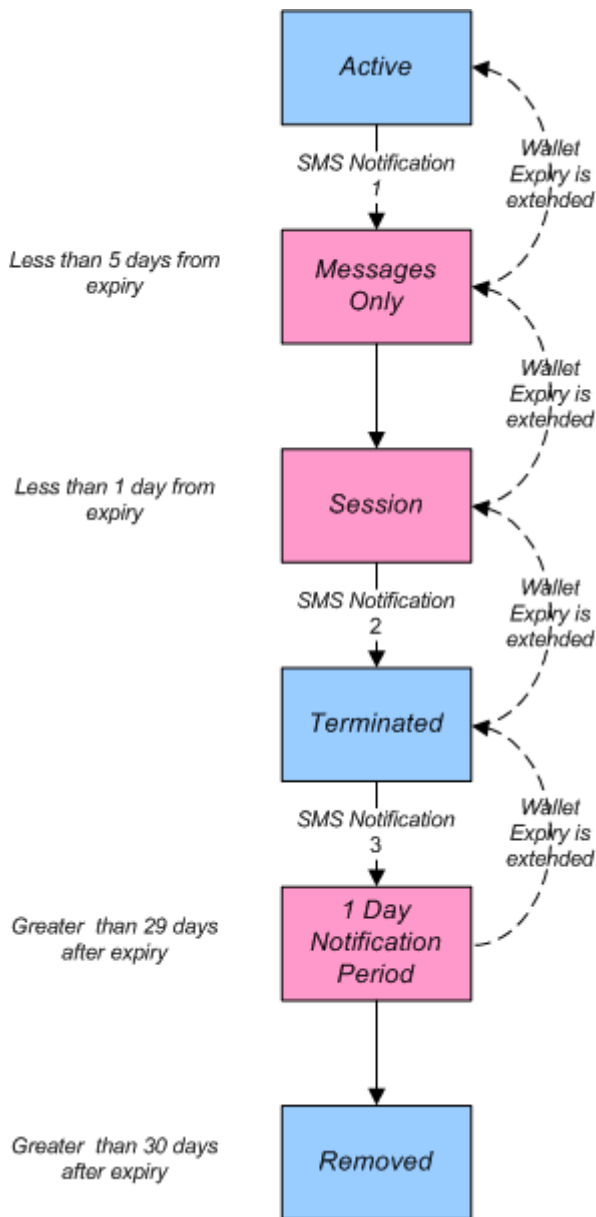
## Example default wallet life cycle

This diagram shows the states in a standard life cycle of a wallet.



## Example user-defined wallet life cycle

Here is an example user-defined wallet life cycle.



### Description of example

The above diagram shows a wallet life cycle with the usual states (Active, Terminated, Removed) extended by 3 periods. The periods are sub states that are definable per product (whereas the usual states are common to all products) to increase the granularity between states. Transitions between those periods are defined by offsets (in number of days) from the expiry date of the wallet.

For example, the state 'Messages Only' is defined as 5 days prior to wallet expiry hence it is configured as -5, whereas the state '1 Day Notification Period' is defined as 29 Days after expiry, hence is configured with a value of 29.

When the wallet is in a given state of the life cycle, only certain services may be allowed. For example, in the period 'Session' the 'Session Charges' feature is disabled, so no outgoing calls will be allowed for that wallet. Should a charge/reservation be requested for a named event or an outgoing (MO) call for example, the billing engine will respond to the request with a NACK representing a restriction to the service.

As the wallet moves from one period in the life cycle to another, certain actions may be triggered. For example, as the wallet moves beyond 29 days after the wallet expiry, the wallet enters the '1 Day Notification Period'. This is configured to trigger a named control plan. The named control plan is configured to deliver an SMS notification of imminent wallet removal.

## Tasks

### Introduction

Task Management comprises a set of Business Process Logic tasks that fall within the defined business rules of the service provider, and that can be executed for individual subscribers. Each business process is configured in the control plan referenced in the BPL task. The feature nodes in the control plan implement the actions of the business process.

For more information, see *Task Management* (on page 589).

### Purpose

The following list provides some examples of the processes that can be executed through a BPL task:

- Product Type Swaps
- Profile updates
- Voucher Type recharges
- Wallet State changes
- Credit Transfers

### Charging and notification

In the BPL task control plan you can configure extended functionality, including:

- A charge for the service provided
- Wallet state changes
- Profile updates
- Send notifications

If you have the Voucher Management functionality, you can also recharge vouchers. For more information about vouchers, see *Voucher Management*.

### Feature nodes

This table describes the core feature nodes used in BPL control plans.

**Note:** Other nodes available in the Control Plan Editor can be included in BPL control plans if required. For more information on the available feature nodes, see *Feature Nodes Reference Guide*.

| Node                 | Description                                                                                                              |
|----------------------|--------------------------------------------------------------------------------------------------------------------------|
| Account State Branch | Use this feature node to determine whether the subscriber's wallet is in the correct state to enable the BPL to execute. |

| Node                      | Description                                                                                                                                                                                                                                                                                                                           |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Business Prefix Branch    | Use this feature node to select the wallet type the BPL actions apply to, based on the called party number.                                                                                                                                                                                                                           |
| Disconnect Call           | <p>When a call passes through this feature node, it indicates that the BPL has failed to execute. The cause value for the feature node must be set to a response number configured for a 'Not Acceptable' BPL response on the <b>BPL Response Mapping</b> tab.</p> <p><b>Warning:</b> The default value of 31 should not be used.</p> |
| Named Event               | <p>Use this feature node to charge the subscriber for the business process. Use to:</p> <ul style="list-style-type: none"> <li>• Reserve funds for the BPL</li> <li>• Confirm the reservation after the BPL has completed</li> <li>• Allow for a negative wallet balance</li> </ul>                                                   |
| Send Short Message        | Use this feature node to send notifications for the BPL. The message to send is configured in the feature node.                                                                                                                                                                                                                       |
| Set BE EDR                | Use this feature node to update any EDRs generated by the actions of the BPL, such as a named event or a voucher type recharge.                                                                                                                                                                                                       |
| Set Wallet Type           | <p>Use this feature node to set the wallet type the BPL actions apply to.</p> <p><b>Warning:</b> Announcements configured in this feature node are not used in the BPL.</p>                                                                                                                                                           |
| Store Profile             | <p>Use this feature node to update a specified profile with the data configured in the feature node.</p> <p><b>Warning:</b> Updates to profile data can also trigger a DAP or notification. These must be configured on the <b>Profile Notifications</b> tab.</p>                                                                     |
| Terminate Unchanged       | When a call passes through this feature node, it indicates that the BPL has executed successfully. The 'OK' BPL response is reported.                                                                                                                                                                                                 |
| Unconditional Termination | <p>When a call passes through this feature node, it indicates that the BPL has executed successfully. The termination number for the feature node must be set to the number configured for the 'Found' BPL response on the <b>BPL Response Mapping</b> tab.</p>                                                                       |
| Voucher Type Recharge     | <p>Use this feature node to recharge the subscriber's wallets using the voucher type configured for the feature node.</p> <p><b>Tip:</b> The 'Unsupported' exit is taken if the domain for the subscriber does not support voucher type redemptions.</p>                                                                              |
| Wallet State Update       | Use this feature node to change the state of the subscriber's wallet to the state configured in the feature node.                                                                                                                                                                                                                     |

## User access

After a BPL has been defined, it can be accessed from:

- The Edit Subscriber screen
- The CCP Dashboard

User access to BPLs on the Edit Subscriber screen and the CCP Dashboard is managed through the user templates defined in the SMS User Management screen. For information about creating and maintaining user templates, see *SMS User's Guide*.

You can configure which BPLs appear on the CCP Dashboard by using the Subscriber Profile Manager screen. For more information, see *Subscriber Profile Manager User's Guide*.

## Processing

BPL execution is managed by the smsTrigDaemon process. For more information about smsTrigDaemon, see *SMS Technical Guide*.

# Alarms, Statistics, Reports and EDRs

## Introduction

CCS uses the centralized management services of SMS to assist the administration of the services.

## Alarms

CCS uses the SMS integrated alarms collection, viewing, and forwarding system. The alarms generated by all components of CCS are consolidated on the SMS and stored in a centralized alarm database.

The operator can:

- View the alarms through the alarm viewer built into the SMS screens
  - Forward all alarms to an integrated external fault management system using SNMP v1 or v3
- Alarms can be automatically deleted from the SMF alarm database after a configurable period.

For more information about:

- Specific alarms generated by CCS, see *Charging Control Services Alarms Guide*
- SMS alarms subsystem, see *SMS User's Guide*

## Statistics

Across CCS, statistics are collected at both the system and application levels, which provide information on the performance and load of the platform. All measurements are consolidated on the SMS and stored in a centralized statistics database.

You can view the statistics through the SMS screens.

## CCS\_Service statistics

This table describes the statistics produced by CCS activity.

**Note:** These statistics are reported as CCS\_Service statistics.

| Statistic     | Description                                      |
|---------------|--------------------------------------------------|
| CCS_PD_FAIL   | Number of failed DAP requests.                   |
| CCS_PD_SUCS   | Number of successful DAP requests.               |
| NUM_BE_FAIL   | Number of calls rejected due to VWS failure.     |
| NUM_BUSY      | Number of calls terminated to busy number.       |
| NUM_IDP       | Number of InitialDP triggering CCS service.      |
| NUM_NO_ANSWER | Number of calls terminated but not answered.     |
| NUM_NSF       | Number of calls rejected for insufficient funds. |
| NUM_RSF       | Number of calls causing route selection failure. |

| Statistic | Description                              |
|-----------|------------------------------------------|
| NUM_TERM  | Number of calls terminated successfully. |

## E2BE statistics

This table describes the statistics produced or changed by CCS activity on the VWS.

**Note:** These statistics are reported as E2BE statistics, and not as CCS statistics.

| Statistic                              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|----------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| NUM_ATC_REQ                            | Number of Apply Tariff Charge requests (ATC_Req) sent to the VWS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| NUM_BPIN_REQ                           | Number of Bad Password Pin requests (BPIN) that were sent to the VWS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| NUM_CARR_REQ                           | Number of Commit Amount Reservation requests (CARR_Req) made to the VWS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| NUM_CNER_REQ                           | Number of Confirm Named Event Reservation requests (CNER_Req) made to the VWS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| NUM_CR_REQ                             | Number of Commit Reservation requests (CR_Req) made to the VWS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| NUM_CVR_REQ                            | Number of Commit Voucher Redeem requests (CVR_Req) made to the VWS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| NUM_DA_REQ                             | Number of Amount Charge (DA_Req) requests sent to the VWS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| NUM_EXTRA_EXPENDITURE_BALANCES_UPDATED | <p>This counter is incremented when an expenditure plan contribution is made. The statistics counter is incremented with a value of (x-1) where x is the number of expenditure balances being contributed to by the expenditure plan.</p> <p><b>Examples:</b></p> <ul style="list-style-type: none"> <li>Contribution to Yearly and Monthly expenditure balance - Counter incremented by 1</li> <li>Contribution to Yearly, Monthly and Weekly expenditure balance - Counter incremented by 2</li> <li>Contribution to Monthly expenditure balance - Counter is not incremented</li> </ul> |
| NUM_IARR_REQ                           | Number of Initial Amount Reservation requests (IARR_Req) made to the VWS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| NUM_INER_REQ                           | Number of Initial Named Event Reservation requests (INER_Req) made to the VWS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| NUM_IR_REQ                             | Number of Initial Reservation requests (IR_Req) made to the VWS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| NUM_LDMF_REQ                           | Number of MFile Reload requests (LDMF) made to the VWS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| NUM_NER_REQ                            | Number of Named Event Rate requests (NER_Req) sent to the VWS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| NUM_NE_REQ                             | Number of Named Event requests (NE_Req) sent to the VWS.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| NUM_PC_CREDIT_ATTEMPT                  | <p>Number of periodic charge credit attempts (Direct Credit (WGR_Req) or Voucher Type Recharge (VTR_Req) sent by ccsVWARSPeriodicCharge as part of a charge attempt.</p> <p><b>Note:</b> Backlogged charges report a statistic for each credit attempt.</p>                                                                                                                                                                                                                                                                                                                                |
| NUM_PC_DEBIT_ATTEMPT                   | Number of periodic charge debit attempts (NE_Req for periodic charges).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

| Statistic           | Description                                                                                                                                                                                                                                                                                            |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                     | <b>Note:</b> Backlogged charges report a statistic for each Named Event. Also, a statistic is reported during the first charge attempt following a wallet recharge.                                                                                                                                    |
| NUM_PC_STATE_CHANGE | Number of periodic charge state changes (that is, when a new VALUE and EXPIRY are written to a periodic charge bucket).<br><b>Note:</b> Only one statistic is reported when processing backlogged charges.                                                                                             |
| NUM_RARR_REQ        | Number of Revoke Amount Reservation requests (RARR_Req) sent to the VWS.                                                                                                                                                                                                                               |
| NUM_RNER_REQ        | Number of Revoke Named Event Reservation requests (RNER_Req) sent to the VWS.                                                                                                                                                                                                                          |
| NUM_RR_REQ          | Number of Revoke Reservation requests (RR_Req) sent to the VWS.                                                                                                                                                                                                                                        |
| NUM_RVR_REQ         | Number of Revoke Voucher Redeem requests (RVR_Req) sent to the VWS.                                                                                                                                                                                                                                    |
| NUM_SARR_REQ        | Number of Subsequent Amount Reservation requests (SARR_Req) sent to the VWS.                                                                                                                                                                                                                           |
| NUM_SNER_REQ        | Number of Subsequent Named Event Reservation requests (SNER_Req) sent to the VWS.                                                                                                                                                                                                                      |
| NUM_SR_REQ          | Number of Subsequent Reservation requests (SR_Req) sent to the VWS.                                                                                                                                                                                                                                    |
| NUM_TOTAL_REQ       | Total number of requests sent to the VWS.<br><b>Note:</b> This statistic is produced, not by CCS, but by VWS processes. However, CCS increments it when an expenditure plan contribution is made. The increment is (x-1) as explained above for the statistic, NUM_EXTRA_EXPENDITURE_BALANCES_UPDATED. |
| NUM_USR_REQ         | Number of Unit Seconds Rate requests (USR_Req) sent to the VWS.                                                                                                                                                                                                                                        |
| NUM_VI_REQ          | Number of Voucher Information requests (VI_Req) sent to the VWS.                                                                                                                                                                                                                                       |
| NUM_VRW_REQ         | Number of Voucher Redeem Wallet requests (VRW_Req) sent to the VWS.                                                                                                                                                                                                                                    |
| NUM_VR_REQ          | Number of Voucher Redeem requests (VR_Req) sent to the VWS.                                                                                                                                                                                                                                            |
| NUM_VU_REQ          | Number of Voucher Update requests (VU_Req) sent to the VWS.                                                                                                                                                                                                                                            |
| NUM_WC_REQ          | Number of Wallet Create requests (WC_Req) sent to the VWS.                                                                                                                                                                                                                                             |
| NUM_WD_REQ          | Number of Wallet Delete requests (WD_Req) sent to the VWS.                                                                                                                                                                                                                                             |
| NUM_WGR_REQ         | Number of Wallet General Recharge requests (WGR_Req) sent to the VWS.                                                                                                                                                                                                                                  |
| NUM_WI_REQ          | Number of Wallet Information requests (WI_Req) sent to the VWS.                                                                                                                                                                                                                                        |
| NUM_WR_REQ          | Number of Wallet Recharge requests (WR_Req) sent to the VWS.                                                                                                                                                                                                                                           |
| NUM_WU_REQ          | Number of Wallet Update requests (WU_Req) sent to the VWS.                                                                                                                                                                                                                                             |

**Note:** All statistics are collected with a period of 1,800 seconds.

For more information about the request messages these statistics measure, see *Voucher and Wallet Server Technical Guide*.

### Reports

CCS has a set of standard reports which analyze the statistics gathered on the platform.

The statistics can be off-loaded from the database to an external statistical processing platform (for example, a data warehouse) for further analysis.

For more information about reports, see *CCS Reports* (on page 627).

### EDRs

EDRs are written whenever an action occurs in CCS that affects a wallet or subscriber, including when a:

- Call is processed
- SMS is sent or received
- Recharge is attempted
- Wallet changes state

EDRs are automatically uploaded to the SMS where they are added to a centralized database.

EDRs can be:

- Viewed per subscriber through the SMS screens (see *View EDRs* (on page 142))
- Post-processed in a flat file format, including being offload through SFTP

For more information about the EDR format, see *Event Detail Record Reference Guide*.

For more information about managing EDRs, see *EDR Management* (on page 603).



# Getting Started

## Overview

### Introduction

This chapter explains how to access the CCS application and describes some of the common functionality of the CCS screens.

### In this chapter

---

This chapter contains the following topics.

|                         |    |
|-------------------------|----|
| Signing on to CCS ..... | 35 |
| Services Menu .....     | 37 |

## Signing on to CCS

### Accessing the application

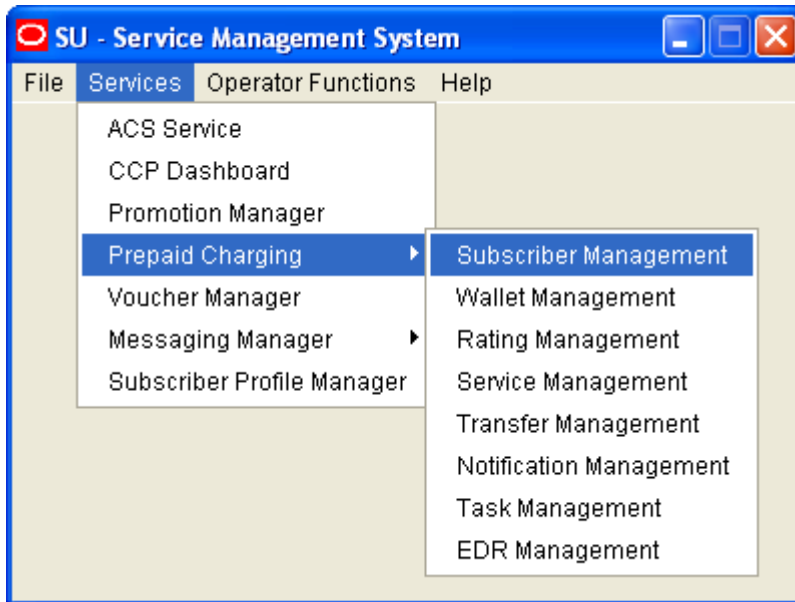
To access the CCS application, click a desktop icon for:

- SMS
- CCS

**Note:** The CCS product works in conjunction with ACS. If CCS is accessed through a standalone icon, you must start the CCS application as well.

## SMS main menu

Here is an example of the SMS main menu showing the Prepaid Charging menu options.



## SMS Login screen

Here is an example of the SMS Login screen.



## Logging into SMS

Follow these steps to log into SMS.

| Step | Action                                                                                                                                                                                                                                                                               |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the <b>User Name</b> field, type your username.                                                                                                                                                                                                                                   |
| 2    | In the <b>Password</b> field, type your password.                                                                                                                                                                                                                                    |
|      | <b>Notes:</b> <ul style="list-style-type: none"> <li>• Passwords are case sensitive.</li> <li>• You have three attempts to enter a correct username and password before the User ID is locked. If this happens, you must see your System Administrator to re-activate it.</li> </ul> |
| 3    | Click <b>OK</b> .                                                                                                                                                                                                                                                                    |
|      | <b>Result:</b> You see the Service Management System main screen.                                                                                                                                                                                                                    |

## Services Menu

### Prepaid Charging menu options

This table describes the menu options accessible from the Prepaid Charging menu.

| Menu                    | Description                                                                                                                                     |
|-------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| Subscriber Management   | Accesses the screens to create and maintain subscribers.<br>For more information, see <i>Subscriber Management</i> (on page 43).                |
| Wallet Management       | Accesses the screens to create and maintain wallets.<br>For more information, see <i>Wallet Management</i> (on page 225).                       |
| Rating Management       | Accesses the screens to create and maintain rates applying to subscribers.<br>For more information, see <i>Rating Management</i> (on page 341). |
| Service Management      | Accesses the configuration screens to create and maintain services:<br>For more information, see <i>Service Management</i> (on page 471).       |
| Transfer Management     | Accesses the screens to create and maintain credit transfers.<br>For more information, see <i>Transfer Management</i> (on page 565).            |
| Notification Management | Accesses the screens to create and maintain profile notifications.<br>For more information, see <i>Notifications Management</i> (on page 577).  |
| Task Management         | Accesses the screens to create and maintain business processes and tasks.<br>For more information, see <i>Task Management</i> (on page 589).    |
| EDR Management          | Accesses the screens to create and maintain EDRs.<br>For more information, see <i>EDR Management</i> (on page 603).                             |



# Initial Configuration

## Overview

### Introduction

This chapter explains the steps required to perform basic functions using the software.

### In this chapter

---

This chapter contains the following topics.

|                                        |    |
|----------------------------------------|----|
| Setting Up CCS for the First Time..... | 39 |
| Implementing a New Service.....        | 40 |

## Setting Up CCS for the First Time

### Default Customer - BOSS

The system is shipped with a default system customer, “BOSS”.

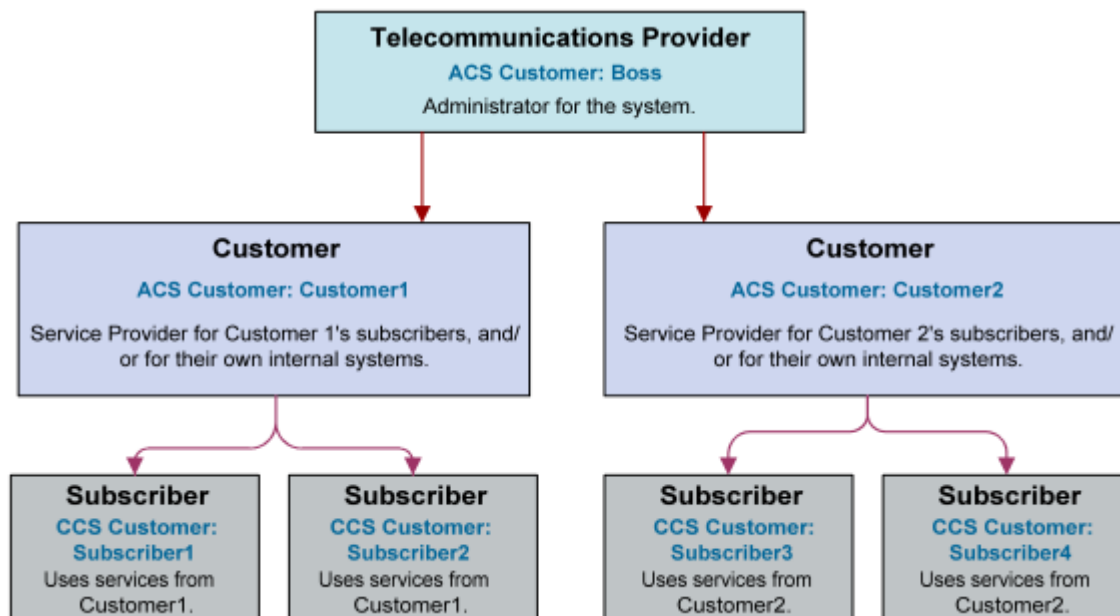
You must use this service provider when setting up CCS.

topic title

|                     |                                                          |
|---------------------|----------------------------------------------------------|
| <b>Syntax:</b>      | <code>paraMeter = value</code>                           |
| <b>Description:</b> | The number of seconds .....                              |
| <b>Type:</b>        | Integer, Decimal, Array, Parameter list, String, Boolean |
| <b>Optionality:</b> | Optional (default used if not set)                       |
| <b>Allowed:</b>     |                                                          |
| <b>Default:</b>     |                                                          |
| <b>Notes:</b>       |                                                          |
| <b>Example:</b>     | <code>paraMeter =</code>                                 |

## Customer hierarchy

Here is an example showing the Customer hierarchy.



## Creating a global Control Plan

Only the system administrator is able to create a global Control Plan using the Control Plan Editor.

The global Control Plan contains all the features of ordinary Control Plans, following the guidelines in *CCS User's Guide*. However, the global Control Plan takes precedence over any Control Plan associated with it.

Any nodes in the global Control Plan that require telephony action (unconditional terminate, disconnect, terminate unchanged) result in the main Control Plan being abandoned.

**Example:** If the Global Screening CCS Control Plan included a disconnect node, the caller would hear the announcement advertising Customer Garden Center and then the call would be disconnected. The Control Plan created by Customer Pizza is never enacted.

## Implementing a New Service

### Introduction

This quick start procedure to implementing a new service assumes that a CCS service provider has been created to attach the new tariff plan to. The attributes of a CCS service provider are just its default language and contact details.

A tariff plan is created using tabs in the Rating Management screen. For details on this screen, see *Rating Management* (on page 341).

### Procedure

Follow these steps to implement a new service.

| Step | Action                                               | For details, see...               |
|------|------------------------------------------------------|-----------------------------------|
| 1    | On the <b>Tariff Plan</b> tab, create a tariff plan. | <i>Tariff Plans</i> (on page 344) |

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                            | For details, see...                        |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------|
| 2    | <p>On the <b>Rate Tables</b> tab, add a new rate table object, and select the applicable geography and holiday set.</p> <p><b>Warning:</b> If a geography set and a holiday set have not been created, a rate table cannot be saved. Refer to <i>ACS User's Guide</i>.</p>                                                                                                                                                                                        | <i>Rate Tables</i> (on page 350)           |
| 3    | <p>On the <b>Tariff Plan Selector</b> tab, set the following:</p> <ul style="list-style-type: none"> <li>• Tariff plan this rate table belongs to</li> <li>• Date from which this rate table is effective</li> </ul>                                                                                                                                                                                                                                              | <i>Tariff Plan Selectors</i> (on page 347) |
| 4    | <p>On the <b>Discount Sets</b> tab, create the discount set(s) that are to be attached to this rate table.</p> <p>A discount set is just a placeholder object, without attributes.</p>                                                                                                                                                                                                                                                                            | <i>Discount Sets</i> (on page 361)         |
| 5    | <p>On the <b>Charge Periods</b> tab, create as many charge periods sets as required. After a charge period set is created, use this tab to create the individual charge periods within that set.</p> <p><b>Example:</b> first minute, next 2 minutes, next 7 minutes</p>                                                                                                                                                                                          | <i>Charge Periods</i> (on page 402)        |
| 6    | <p>On the <b>Discount Periods</b> tab, create as many discount period sets as required. After the discount set is created, the individual discount periods, with a % discount in each discount period can be created in each set.</p> <p><b>Example:</b> 5% on tariff in Charge Period 1, 10% in Charge Period 2, 30% in Charge Period 3.</p>                                                                                                                     | <i>Discount Periods</i> (on page 398)      |
| 7    | <p>On the <b>Balance Type Cascades</b> tab, create cascades of balance types to use for rating. A balance type cascade determines the order in which different balance types are debited.</p> <p><b>Example:</b> "Weekend Calls cascade": first a promotional cash balance, then a weekend balance, then the general cash balance.</p>                                                                                                                            | <i>Balance Type Cascades</i> (on page 410) |
| 8    | <p>On the <b>Weekly</b> tab, set the following for each rate table:</p> <ul style="list-style-type: none"> <li>• Discount set</li> <li>• Discount periods set</li> <li>• Maximum charge</li> <li>• Balance cascade</li> <li>• Period of the week these setting are to apply for</li> </ul> <p>This tab is used to set, for each rate table, a discount set to be applied for selected periods of the week.</p>                                                    | <i>Weekly Tariffs</i> (on page 381)        |
| 9    | <p>On the <b>Holiday</b> tab, set the following, for each rate table:</p> <ul style="list-style-type: none"> <li>• Holiday</li> <li>• Discount periods set</li> <li>• Discount period</li> <li>• Maximum charge</li> <li>• Balance cascade</li> </ul> <p>Discount periods can be set for each holiday contained in the ACS Holiday Set that is associated with this rate table, each of these have a minimum charge and a cascade balance associated with it.</p> | <i>Holiday Tariffs</i> (on page 385)       |

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | For details, see...              |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------|
| 10   | <p>For a given rate table, the <b>CLI-DN</b> tab specifies the rate to be used for calls from each source geography (Calling Line ID, CLI) to each destination geography (Destination Number, DN).</p> <p>This enables you to specify, for the CLI-DN combination, the following attributes:</p> <ul style="list-style-type: none"> <li>• Free call disposition</li> <li>• Charge period: <ul style="list-style-type: none"> <li>– Maximum charge</li> <li>– Minimum length (s)</li> <li>– Minimum charge period (s)</li> </ul> </li> <li>• Low credit warning at (s)</li> <li>• Cascade: the balance cascade to be used</li> </ul> <p>If no tariff is specified for a given CLI-DN combination, the rating algorithm attempts to:</p> <ul style="list-style-type: none"> <li>• Search for a higher level DN' range (with defined CLI-DN' combination) containing the requested DN range;</li> <li>• If this does not succeed, for each higher level CLI' range, search again to find a CLI'-DN or CLI'-DN' combination defined in the rate table.</li> </ul> | <i>CLI-DN</i> (on page 369)      |
| 11   | <p>On the <b>Named Event</b> tab, create named event set(s), then the individual named events:</p> <ul style="list-style-type: none"> <li>• Indicating cost and a few extra attributes</li> <li>• To allow charging of SMS, product type swaps, and the rest.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      | <i>Named Event</i> (on page 391) |



# Subscriber Management

## Overview

### Introduction

This chapter explains how to specify subscriber details for service providers.

### In this chapter

---

This chapter contains the following topics.

|                                          |    |
|------------------------------------------|----|
| Subscriber Management Module .....       | 43 |
| Credit Cards .....                       | 45 |
| Subscriber Batch .....                   | 53 |
| Customer .....                           | 59 |
| Closed User Groups .....                 | 62 |
| Friends and Family Black List .....      | 67 |
| Friends and Destination Black List ..... | 69 |
| Friends and Destination Prefix Map ..... | 71 |
| Profile Group Fields .....               | 74 |
| UBE Account Balancing .....              | 83 |

## Subscriber Management Module

### Introduction

The Subscriber Management screen lets you configure the subscribers to CCS customers. It contains these tabs:

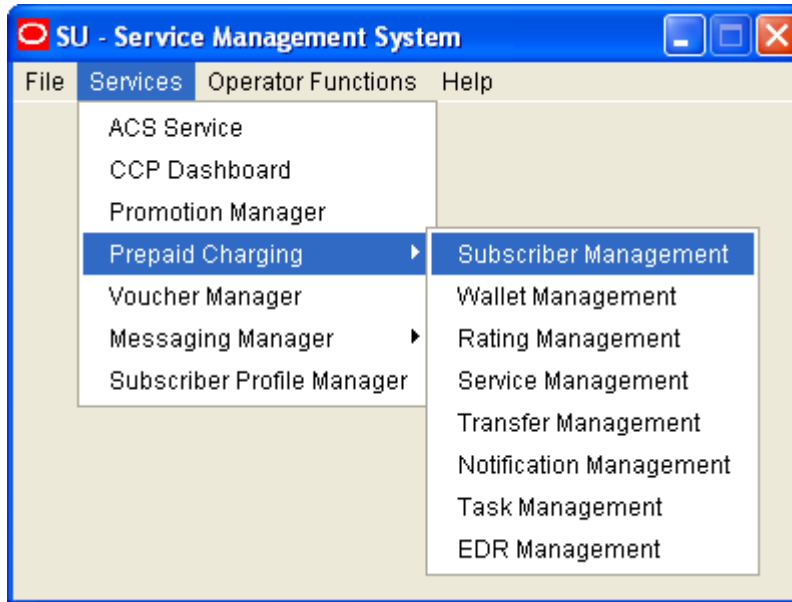
- *Closed User Groups* (on page 62)
- *Credit Cards* (on page 45)
- *Customer* (on page 59)
- *Friends and Destination Black List* (on page 69)
- *Friends and Destination Prefix Map* (on page 71)
- *Friends and Family Black List* (on page 67)
- *Product Type* (on page 155)
- *Profile Group Fields* (on page 74)
- *Subscriber* (on page 95)
- *Subscriber Batch* (on page 53)
- *UBE Account Balancing* (on page 83)

**Note:** The **Subscriber** and **Product Type** tabs are documented in separate chapters.

## Accessing the Subscriber Management screen

Follow these steps to open the Subscriber Management screen.

| Step | Action                                                    |
|------|-----------------------------------------------------------|
| 1    | Select the <b>Services</b> menu from the SMS main screen. |



**Note:** The services which are available under the **Services** menu depend on the components which have been installed, and the permissions of the user. The services displayed in this screen shot may not match the services you have available on your system.

- 2 Select **Prepaid Charging > Subscriber Management**.  
**Result:** You see the Subscriber Management screen.

## Subscriber Management screen

Here is an example Subscriber Management screen.

**Note:** The tabs or options available to you on a screen will depend upon which CCS components have been installed on the system and the Oracle license agreement.

Subscriber Management

Service Provider: Boss

Help

Tabs: Friends and Destination Black List, Friends and Destination Prefix Map, UBE Account Balancing, Credit Cards, **Subscriber**, Product Type, Subscriber Batch, Customer, Closed User Groups, Friends and Family Black List

Search fields: Wallet Reference, Card Number, Subscriber ID, Customer

Search button

| Wallet Reference | Card Number | Subscriber ID | Customer | Product Type |
|------------------|-------------|---------------|----------|--------------|
|------------------|-------------|---------------|----------|--------------|

Buttons: New, Edit, Delete, Close

## Credit Cards

### Introduction to credit cards

The **Credit Cards** tab enables credit card data to be managed securely. You can perform the following tasks from the **Credit Cards** tab:

- *Search for credit cards* (on page 47)
- *Add credit cards* (on page 48)
- *Register subscribers to credit cards* (on page 51)
- *Edit credit card details* (on page 50)
- *Delete credit cards* (on page 53)

You can also manage a subscriber's credit cards from the Add Subscriber or Edit Subscriber screens. See *Subscriber Management - Subscribers* (on page 95) for details.

**Note:** To use the legacy credit card options, the `smsGui.bat/smsGui.sh` file must include the application property `LegacyCC=True`. See *SMS Technical Guide* for more information.

### About Auditing Credit Card Changes

The EDR auditing feature keeps track of changes to subscribers credit cards. When EDR auditing is enabled, a user who is updating a subscriber's credit card details is forced to enter a reason for the change in a special **Change Reason** dialog box; for example, when:

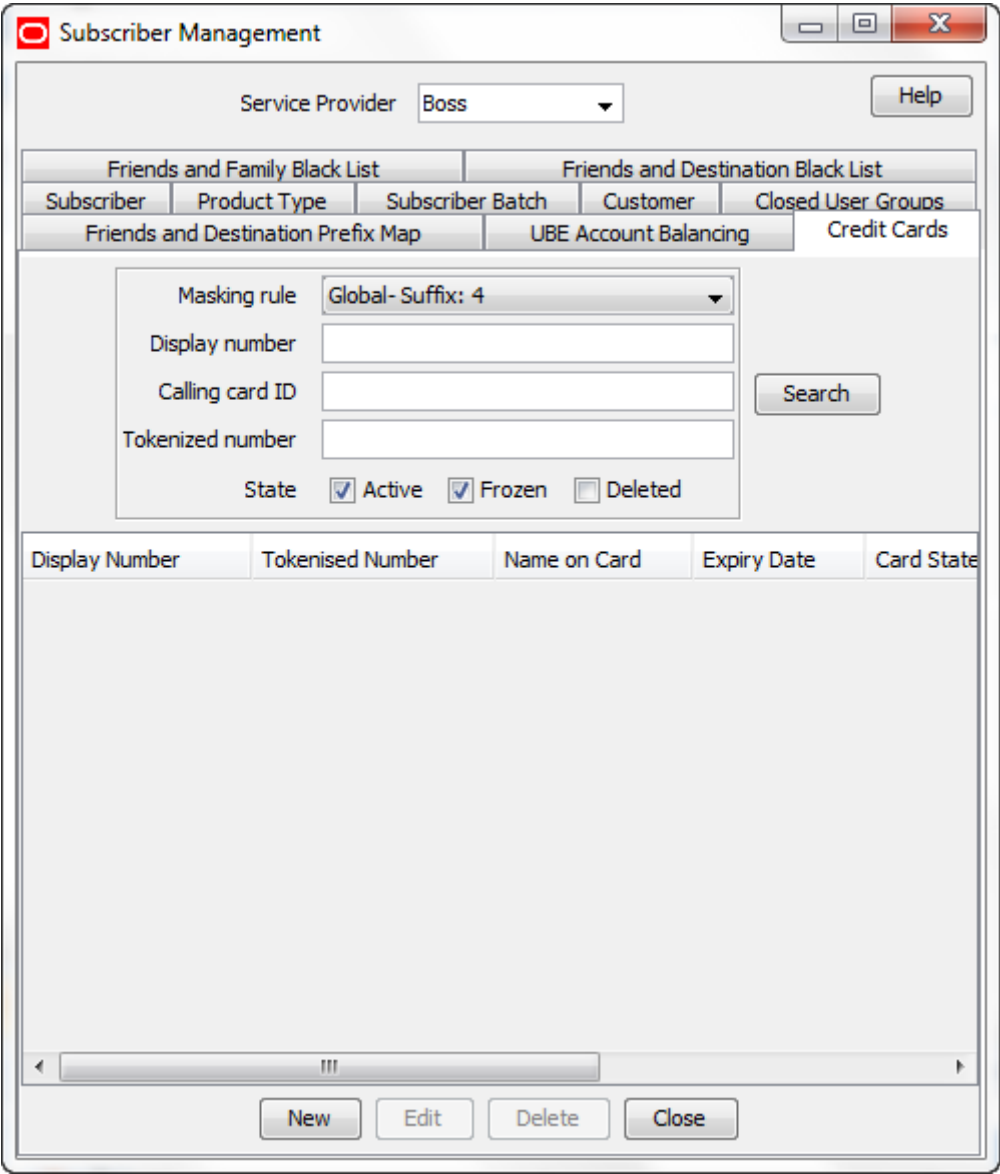
- Adding a new credit card
- Editing or deleting an existing credit card
- Registering or deregistering a credit card
- Freezing a credit card

The reason for the change, and the user who made the change are reported in the **Change Reason**, and **Operator Name** fields in the BE EDR. You can view this information by displaying the BE EDR in the EDR Viewer.

Credit card auditing is enabled by the EDR auditing global configuration option. For more information, see the discussion on EDR auditing in *Global Configuration* (on page 499).

Credit Cards tab

Here is an example of the Subscriber Management, **Credit Cards** tab.



Searching for credit cards

Follow these steps to search for existing credit cards.

| Step | Action                                                                                                                                                                                                |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | On the <b>Credit Cards</b> tab, select the credit card masking rule from the <b>Masking rule</b> list. For more information about masking rules, see <i>About Credit Card Security</i> (on page 550). |

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | Specify the search criteria by entering search values in one or more of the following search fields: <ul style="list-style-type: none"> <li>• <b>Display Number</b> – To search on the credit card display number</li> <li>• <b>Calling card ID</b> – To search for credit cards already registered to the subscriber with the specified subscriber ID</li> <li>• <b>Tokenised number</b> – To search on a tokenized credit card number</li> </ul> |
| 3    | Select the credit card states to search for. The <b>Active</b> and <b>Frozen</b> states are selected by default.                                                                                                                                                                                                                                                                                                                                   |
| 4    | Click <b>Search</b> .<br>The table displays the first 100 records that match the search criteria. If the credit cards you want are not displayed and the search returns more than 100 records, enter a longer search strings in the search fields, and click <b>Search</b> again.                                                                                                                                                                  |

## Adding credit cards

Follow these steps to add a credit card record on the **Credit Card** tab.

| Step | Action                                                                                                                                                                                                                                                   |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                  |
| 2    | Click <b>New</b> on the <b>Credit Card</b> tab.<br>The <i>New Credit Card screen</i> (See example on page 49) displays.                                                                                                                                  |
| 3    | Fill in the credit card details. For more information, see <i>New Credit Card fields</i> (on page 49).                                                                                                                                                   |
| 4    | (Optional) Register a subscriber to the credit card. See <i>Registering subscribers to credit cards</i> (on page 51) for details.<br>Registered new cards can be in a frozen or an active state. Unregistered new cards must be set to the frozen state. |
| 5    | Click <b>Save</b> .                                                                                                                                                                                                                                      |
| 6    | If EDR auditing is enabled, then the <b>Change Reason</b> dialog displays. Enter the reason for the change in the <b>Change Reason</b> field, and click <b>OK</b> . The reason can be up to 200 characters long.                                         |
| 7    | Click <b>OK</b> .<br>You are returned to the <b>Credit Cards</b> tab. To see the card just added, select the relevant search criteria and click <b>Search</b> .                                                                                          |

## New Credit Card screen

Here is an example of the New Credit Card screen.

## New Credit Card fields

This table describes the function of each field on the New Credit Card screen.

| Field                   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subscriber ID           | Displays the ID of the subscriber. If you create a credit card through: <ul style="list-style-type: none"> <li>A subscriber screen, this field is set automatically and cannot be changed. For more information, see <i>Adding Subscribers</i> (on page 99) and <i>Editing and Deleting Subscribers</i>.</li> <li>The <b>Credit Card</b> tab, this field is blank. You can register this credit card to a subscriber immediately by clicking <b>Subscriber</b>, or you can register the credit card at a later date. Once registered, the ID of the selected subscriber displays in this field. For more information, see <i>Registering subscribers to credit cards</i> (on page 51).</li> </ul> |
| Full Credit Card Number | The full credit card number, with no spaces between the digits.<br><b>Note:</b> This field is available only on the New Credit Card screen. All other credit card screens contain the display name and the tokenized number.                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Masking Rule            | The rule used to mask the credit card number. For more information about masking rules, see <i>About Credit Card Security</i> (on page 550).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Expiry Date             | The credit card's expiry date. Select the month and year from the month and year lists.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Name on Card            | (Optional) The name of the account holder as it is written on the credit card.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

| Field   | Description                                                                                                                                                                                                                                                                                                                                |
|---------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| CVC     | The three or four digit credit verification code (CVC) that is printed on the credit card. The CVC provides the credit card owner with additional security when making purchases.                                                                                                                                                          |
| Frozen  | <p>When selected, the credit card is in a frozen state. When not selected, the state is active.</p> <p>Registered new cards can be frozen or active. Unregistered new cards can only be frozen.</p> <p><b>Note:</b> This field is visible only when you open the New Credit Card screen from the Edit Subscriber, Credit Cards option.</p> |
| Warning | Displays a warning message at the bottom of the screen if the checksum failed.                                                                                                                                                                                                                                                             |

## Editing credit cards

Follow these steps to edit a credit card record.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                                                               |
| 2    | Click the <b>Credit Card</b> tab, and select the credit card to edit from the table on the tab. For information about searching for credit cards, see <i>Finding credit cards</i> (on page 47).                                                                                                                                                                       |
| 3    | Click <b>Edit</b> .<br>The Edit Credit Card screen displays and shows a list of all the registration records for the credit card. For information about the displayed fields, see <i>Edit Credit Card fields</i> (on page 51).                                                                                                                                        |
| 4    | (Optional) Change the following details as required: <ul style="list-style-type: none"> <li>• Expiry date details</li> <li>• Name on card</li> <li>• CVC number</li> <li>• Freeze or make active the credit card state</li> </ul>                                                                                                                                     |
| 5    | (Optional) To register a subscriber to the credit card, click <b>Register</b> . See <i>Registering subscribers to credit cards</i> (on page 51).                                                                                                                                                                                                                      |
| 6    | (Optional) To deregister a subscriber from the credit card: <ol style="list-style-type: none"> <li>Select the subscriber from the table and click <b>Deregister</b>.</li> <li>Click <b>Deregister</b> to confirm.</li> </ol> <p><b>Note:</b> You cannot deregister the primary subscriber.</p>                                                                        |
| 7    | (Optional) To freeze a subscriber's primary wallet: <ol style="list-style-type: none"> <li>Select the subscriber and click <b>Freeze Wallet</b>.</li> <li>Click <b>Freeze</b>.</li> <li>If EDR auditing is enabled, then the <b>Change Reason</b> dialog displays. Enter the reason for the change in the <b>Change Reason</b> field, and click <b>OK</b>.</li> </ol> |
| 8    | If the <b>Registration State</b> is <b>Pending</b> , and you want to confirm the subscriber's registration to the credit card, click <b>Confirm</b> .                                                                                                                                                                                                                 |
| 9    | If there is more than one subscriber registered to a frozen credit card, register the primary subscriber by selecting the required subscriber, and then clicking <b>Primary</b> .                                                                                                                                                                                     |
| 10   | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                   |



| Step | Action                                                                                                                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11   | If EDR auditing is enabled, then the <b>Change Reason</b> dialog displays. Enter the reason for the change in the <b>Change Reason</b> field, and click <b>OK</b> . The reason can be up to 200 characters long. |
| 12   | Click <b>OK</b> .                                                                                                                                                                                                |

## Edit Credit Card fields

This table describes the function of each field on the Edit Credit Card screen.

| Field                  | Description                                                                                                                                                                                                                                                                                                            |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Display Number         | The credit card number (prefix + padding + suffix), as specified by the associated masking rule. For more information about masking rules, see <i>About Credit Card Security</i> (on page 550).                                                                                                                        |
| Tokenised Number       | The tokenized credit card number.                                                                                                                                                                                                                                                                                      |
| Expiry Date            | The credit card's expiry date. Select the month and year from the month and year lists.                                                                                                                                                                                                                                |
| Name on Card           | (Optional) The name of the account holder as written on the credit card.                                                                                                                                                                                                                                               |
| CVC                    | The three or four digit credit verification code (CVC) that is printed on the back of the credit card. The CVC provides the credit card owner with additional security when making purchases.                                                                                                                          |
| Frozen                 | When selected the credit card is in a frozen state. When not selected the state is active.<br>You can unfreeze a credit card only if it is registered.                                                                                                                                                                 |
| Registered Subscribers | This table displays the: <ul style="list-style-type: none"> <li>Subscriber ID</li> <li>Registration state – The registration state (Primary, Secondary, Pending, or New) of the registered subscriber</li> <li>Primary wallet state – The registered subscriber's primary <i>Wallet states</i> (on page 11)</li> </ul> |

## Registering subscribers to credit cards

Follow these steps to register a subscriber to a credit card from the New Credit Card screen or the Edit Credit Card screen.

| Step | Action                                                                                                                                                                                                                                                        |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Do one of the following: <ul style="list-style-type: none"> <li>From the New Credit Card screen, click <b>Subscriber</b>.</li> <li>From the Edit Credit Card screen, click <b>Register</b>.</li> </ul> The Register Subscriber to Credit Card screen appears. |
| 2    | Enter one or more initial digits of the subscriber number in the <b>Subscriber ID</b> field.                                                                                                                                                                  |
| 3    | Select: <ul style="list-style-type: none"> <li><b>Exact Match</b> to search for the matching subscriber.</li> <li><b>Prefix Match</b> to search for all subscribers with IDs that match the entered prefix.</li> </ul>                                        |
| 4    | Click <b>Search</b> .<br>The search returns a maximum of 100 records.                                                                                                                                                                                         |

| Step | Action                                                                                                                                                                                                         |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | From the search results table, select the subscriber you want to register to the credit card and click <b>Register</b> .                                                                                       |
| 6    | If EDR auditing is enabled, the <b>Change Reason</b> dialog displays. In the <b>Change Reason</b> field, enter the reason for the change and click <b>OK</b> .<br>The reason can be up to 200 characters long. |

## Register Subscriber to Credit Card screen

Here is an example of the Register Subscriber to Credit Card screen.

The screenshot shows a window titled "Register Subscriber to Credit Card" with a standard Windows-style title bar (minimize, maximize, close buttons). Inside the window, there is a "Help" button in the top right corner. Below it, there is a search section with a text input field labeled "Subscriber ID", a "Search" button, and two radio buttons: "Exact Match" and "Prefix Match" (which is selected). Below the search section is a large, empty list box with a header "Subscriber ID". At the bottom of the window, there are two buttons: "Register" and "Cancel".

## Deleting credit cards

Follow these steps to delete credit card records.

| Step | Action                                                                                                                                                                                                      |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Search for the credit card to delete. See <i>Finding credit cards</i> (on page 47).                                                                                                                         |
| 2    | Select the credit card to delete, and then click <b>Delete</b> .                                                                                                                                            |
| 3    | If EDR auditing is enabled, the <b>Change Reason</b> dialog displays. Enter the reason for the change in the <b>Change Reason</b> field, and click <b>OK</b> . The reason can be up to 200 characters long. |
| 4    | Click <b>Delete</b> .<br>The credit card is removed from the results list.                                                                                                                                  |

**Note:** A credit card is removed from the database only if it is in the primary state. When you delete a frozen credit card, it is moved to a deleted state, but it is not removed from the database.

## Subscriber Batch

### Introduction

The **Subscriber Batch** tab lets you view, add, modify and delete batches of subscribers.

**Tip:** It is also possible to work with subscribers using the ccsAccount command line tool. For more information about this tool, see *CCS Technical Guide*.

## Subscriber Batch tab

Here is an example **Subscriber Batch** tab.

**Subscriber Management**

Service Provider: Boss Help

**Subscriber Batch**

Subscriber ID:

Batch State: Created Search

| Batch ID | Start Card Number | End Card Number | Activatic |
|----------|-------------------|-----------------|-----------|
| 41       | 0                 | 0               |           |
| 56       | 1034567890161     | 1034567890163   |           |
| 58       | 1034567890164     | 1034567890166   |           |
| 59       | 1034567890167     | 1034567890169   |           |
| 60       | 1034567890171     | 1034567890173   |           |
| 61       | 1034567890174     | 1034567890176   |           |
| 62       | 1034567890177     | 1034567890179   |           |
| 84       | 0                 | 0               |           |
| 101      | 0                 | 0               |           |

New Edit Delete Close

## Finding subscriber batches

To find specific subscriber batches in the **Subscriber Batch** tab:

| Step | Action                                                                                                                                                                                                                                                                         |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Enter the first few characters of the subscriber ID and select a batch state.                                                                                                                                                                                                  |
| 2    | Click <b>Search</b> .                                                                                                                                                                                                                                                          |
|      | <b>Result:</b> The table displays the first 100 records which match the search criteria. Results include creation date. If the subscriber batch you want is not displayed and more than 100 records were returned, enter a longer search string and click <b>Search</b> again. |

## Adding subscriber batches

Follow these steps to add a new subscriber batch.

| Step | Action                                                                                                                                                                                |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.                                                                               |
| 2    | On the <b>Subscriber Batch</b> tab in the Subscriber Management screen, click <b>New</b> .<br><b>Result:</b> You see the <i>New Subscriber Batch screen</i> (See example on page 56). |
| 3    | Fill in the fields, as described in New subscriber batch fields.<br>Once you have filled in all the fields, the <b>Save</b> button becomes active.                                    |
| 4    | Click <b>Save</b> .<br><b>Result:</b> If successful, you see a message confirming the subscriber batch has been created.                                                              |
| 5    | Click <b>OK</b> .                                                                                                                                                                     |

## New Subscriber Batch screen

Here is an example New Subscriber Batch screen.

## Subscriber Batch Fields

This table describes the function of each field.

| Field                    | Description                                                                                                                                                                                 |
|--------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Batch Size               | The number of subscribers in the batch.                                                                                                                                                     |
| Subscriber List Filename | Name of the file containing the list of subscribers to use when creating the batch.<br>Each line of the file can include either one subscriber or a range of them.<br>Comments are ignored. |

| Field                             | Description                                                                                                                                                                                                                                                                                                                                   |
|-----------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                   | <b>Example:</b> Subscriber List file content.<br><pre># this is a comment 482345932 482464935-482464945</pre>                                                                                                                                                                                                                                 |
| Result Filename                   | The name of the file to create for the batch.                                                                                                                                                                                                                                                                                                 |
| Charging Domain                   | List of domains on which wallets for this subscriber batch can be stored.<br>This drop down list is populated by the domains configured on the <b>Domain</b> (on page 475) tab on the Service Management screen.                                                                                                                              |
| Tracking Domain                   | List of available domains for fraud tracking and promotional balance types.<br>This drop down list is populated by the domains configured on the <b>Domain</b> (on page 475) tab on the Service Management screen.<br><b>Note:</b> The tracking domain must be a VWS domain and will be available if the charging domain is not a VWS domain. |
| Product Type                      | List of available product types.<br>This drop down list is populated by the product types configured on the <b>Product Type</b> (on page 155) tab on the Subscriber Management screen.                                                                                                                                                        |
| Wallet Currency                   | The currency the wallet created with these subscribers should use.<br>This drop down list is populated by the currencies configured on the <b>Currency</b> (on page 489) tab on the Service Management screen.                                                                                                                                |
| Maximum Concurrent Accesses       | Sets the default total number of accesses that can be supported against the subscriber at any one time.                                                                                                                                                                                                                                       |
| Use Subscriber ID                 | When selected, the card number range fields are grayed out and the subscriber ID is used to provide the card number.                                                                                                                                                                                                                          |
| Allocate in Range                 | The starting and ending points for the card number range.                                                                                                                                                                                                                                                                                     |
| Encryption File                   | The context string to be used for encryption.<br>This can have different values, depending on your setup.<br>Acceptable values for the supported DES encryption method include a PIN length that should be a number between 4 and 20.                                                                                                         |
| Add PINS to accounts              | When selected, the card number has an associated PIN generated from the selected <b>Encryption Method</b> and <b>PIN Length</b> fields.<br>When not selected there is no PIN associated with the card number.                                                                                                                                 |
| Encryption Method                 | The pluggable authentication module which will be used for generation of encrypted of PINs for this batch.<br>The module is used to generate random PINs of the length specified (PIN Length), and then encrypt them for storing in the database.                                                                                             |
| Creation Date                     | Indicates the creation date of the batch.                                                                                                                                                                                                                                                                                                     |
| PIN Length                        | The length of the PIN that will be generated for accounts in this batch. This is the actual length of the non encrypted PIN and must be a minimum of 4 digits to a maximum of 20 digits.                                                                                                                                                      |
| Subscriber ID to Wallet Reference | Subscriber ID and related wallet reference.<br><b>Example:</b> 123456 ref1334                                                                                                                                                                                                                                                                 |

## Editing subscriber batches

Follow these steps to edit an existing subscriber account batch.

**Tip:** By editing a subscriber batch, you will change the batch state. Changing the batch state enables you to activate subscriber batches.

**Note:** The **Subscriber Batch** tab and **Edit Subscriber Batch** tab have a creation date read-only value which preserves the creation date when a batch is edited.

| Step | Action                                                                                                               |
|------|----------------------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.              |
| 2    | In the table on the <b>Subscriber Batch</b> tab, select the record to edit.                                          |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the <i>Edit Subscriber Batch</i> screen (See example on page 58).      |
| 4    | You can only change the <b>Batch State</b> field. Changing the batch state to active activates the subscriber batch. |
| 5    | Click <b>Save</b> .                                                                                                  |

## Edit Subscriber Batch screen

Here is an example Edit Subscriber Batch screen.

## Deleting subscriber batches

Follow these steps to delete an existing subscriber batch.

| Step | Action                                                                                                  |
|------|---------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list. |



| Step | Action                                                                          |
|------|---------------------------------------------------------------------------------|
| 2    | In the table on the <b>Select Batch</b> tab, select the record to delete.       |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt. |
| 4    | Click <b>OK</b> to delete the record from the database.                         |

## Customer

### Introduction

This screen enables you to add, modify or delete customers.

The Customer screen displays the customers that have been set up for the service provider.

Once you have set up customers, you can assign subscriber accounts to a specific customer.

## Customer tab

Here is an example **Customer** tab.

Subscriber Management

Service Provider: Boss

Help

Customer

Name:  Search

| Name        | Description    | Reference    | Change Us |
|-------------|----------------|--------------|-----------|
| Tree Tamers | Small Business | 1234-0123456 | SU        |

New Edit Delete Close

## Finding customers

To find a specific customer in the **Customer** tab, enter the first few characters of the customer's name, and click **Search**.

**Result:** The grid will display the first 100 records which begin with the characters searched for. If the required customer is not displayed and more than 100 records were returned, enter a longer search string and click **Search** again.

## Adding customers

Follow these steps to add a new customer for a service provider.

| Step | Action                                                                                                  |
|------|---------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list. |
| 2    | On the <b>Customer</b> tab, click <b>New</b> .                                                          |

| Step | Action |
|------|--------|
|------|--------|

**Result:** You see the New Customer screen.

- 3 In the **Name** field, enter the name of the new customer.  
The name must be completed. Customer names must be unique for the service provider. Special characters and case do not make a distinction between names. For example, Super Savers is the same as Super saver's.
- 4 In the **Description** field, enter the description of the new customer.
- 5 In the **Reference** field, enter a reference for the new customer.
- 6 Click **Save**.

## Editing customers

Follow these steps to edit an existing customer.

| Step | Action |
|------|--------|
|------|--------|

- 1 In the Subscriber Management screen, select the service provider from the **Service Provider** list.
- 2 On the **Customer** tab, select the customer record to edit.  
**Tip:** If the required customer is not displayed, you can try searching for them as described in *Finding customers* (on page 60).
- 3 Click **Edit**.  
**Result:** You see the Edit Customer screen.

| Step | Action |
|------|--------|
|------|--------|

- 4 Edit the details as described in *Adding customers* (on page 60).
- 5 Click **Save**.

## Deleting customers

Follow these steps to delete an existing customer.

| Step | Action                                                                                                                                                                                                         |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                        |
| 2    | On the <b>Customer</b> tab, select the customer to delete.<br><br><b>Tip:</b> If the required customer is not displayed, you can try searching for them as described in <i>Finding customers</i> (on page 60). |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                                                                                                |
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> The record is deleted and you see the Customer prompt.                                                                               |
| 5    | Click <b>OK</b> .                                                                                                                                                                                              |

## Closed User Groups

### Introduction

The **Closed User Groups** tab lets you define groups of users (Closed User Groups), that use an alternative tariff plan when both the calling and the called numbers are part of the same group. The alternative tariff plan normally reduces the rate of calls or provides free calls.

A CUG has the following membership rules:

- A CUG is defined for a specific service provider, therefore only the subscribers of that service provider may belong to that CUG.
- Subscribers may be members of more than one CUG.

A CUG Feature node must be included in the control plan to determine whether the calling and the called numbers are in the same CUG.

Closed user groups may also contain **Virtual Members**. Virtual members are defined as single numbers or number ranges. An MSISDN calling a number that resides in any virtual member range in any CUG in which that MSISDN is also a member is deemed to be making a closed user group call, and can be billed accordingly.

**Tip:** You can also define CUG membership through the Subscriber screens.

## Closed User Groups tab

Here is an example **Closed User Groups** tab.

Subscriber Management

Service Provider: Boss Help

**Closed User Groups**

Name:

MSISDN:  Search

| Name | Tariff Plan     | Members | Change User |
|------|-----------------|---------|-------------|
| SG   | Silver HPLMN MO | 1       | PPP         |

New Edit Delete Close

## Adding closed user groups

Follow these steps to add a Closed User Group (CUG) and its members.

| Step | Action                                                                                                  |
|------|---------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list. |

| Step | Action                                                                                                                                                                                                                                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | On the <b>Closed User Groups</b> tab, click <b>New</b> .<br>The <i>New Closed User Group dialog</i> (on page 65) displays. For information about the fields on this screen, see <i>Closed User Group fields</i> (on page 65).                                                                                                                      |
| 3    | For each member that you want to add, enter the subscriber MSISDN in the <b>MSISDN</b> field, and click <b>Add</b> .                                                                                                                                                                                                                               |
| 4    | For each virtual CUG member that you want to add, perform the following steps: <ol style="list-style-type: none"><li>Select either <b>Single number</b>, <b>Range</b>, or <b>Pattern</b>.</li><li>Depending on your previous selection, specify the virtual member number, number range, or prefix and length.</li><li>Click <b>Add</b>.</li></ol> |
| 5    | When you have completed adding members to the CUG, click <b>Save</b> .                                                                                                                                                                                                                                                                             |

New Closed User Group Dialog

Here is an example New Closed User Group dialog.

New Closed User Group

Help

Name

Tariff Plan

Bronze Callback

Members

MSISDN

AddDelete

Virtual Members

Virtual Member

Single number

Range

From

To

Pattern

Prefix

Length

AddDelete

Save

Cancel

Closed User Group fields

This table describes the function of each field in the New and Edit Closed User Group dialogs.

| Field | Description                                                                                                                         |
|-------|-------------------------------------------------------------------------------------------------------------------------------------|
| Name  | Unique name for this closed user group. After saving a new closed user group you can view, but not edit the closed user group name. |

| Field           | Description                                                                                                                                                                                                         |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Tariff Plan     | The tariff plan to apply to phone calls between members of this closed user group.                                                                                                                                  |
| Members         | Lists the subscriber accounts who are part of this closed user group. You create a member by adding the subscriber's MSISDN to the list of members.<br><b>Tip:</b> Subscribers can be members of more than one CUG. |
| Virtual Members | Lists the virtual members of the CUG. You create virtual members by providing a single number, a start and end number, or a prefix and a number length.                                                             |

## Editing closed user groups

Follow these steps to edit an existing closed user group (CUG).

| Step | Action                                                                                                                                                                                                                                                                                                                                                      |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                                                     |
| 2    | On the <b>Closed User Groups</b> tab, select the CUG to edit.<br><b>Tip:</b> You can search for a specific CUG or MSISDN by entering the details in the <b>Name</b> and <b>MSISDN</b> fields on the tab, and clicking <b>Search</b> .                                                                                                                       |
| 3    | Click <b>Edit</b> . The Edit Closed User Group dialog opens.<br>For more information about the closed user group fields, see <i>Closed User Group fields</i> (on page 65).                                                                                                                                                                                  |
| 4    | Edit the list of members as required. To: <ul style="list-style-type: none"> <li>• Add a new member, enter the MSISDN in the <b>MSISDN</b> field, and click <b>Add</b>.</li> <li>• Delete an existing member, select the member's MSISDN in the Members list and click <b>Delete</b>.</li> </ul>                                                            |
| 5    | Edit the list of virtual members as required. To: <ul style="list-style-type: none"> <li>• Add a new entry, enter either the number, number range, or prefix and length for the virtual member entry, and then click <b>Add</b>.</li> <li>• Delete an entry from the Virtual Members list, select the entry in the list and click <b>Delete</b>.</li> </ul> |
| 6    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                         |

## Deleting closed user groups

Follow these steps to delete an existing closed user group (CUG).

| Step | Action                                                                                                                                                                                                                                  |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                                                 |
| 2    | On the <b>Closed User Groups</b> tab, select the CUG to delete.<br><b>Tip:</b> You can search for a specific CUG or MSISDN by entering the details in the <b>Name</b> and <b>MSISDN</b> fields on the tab, and clicking <b>Search</b> . |
| 3    | Click <b>Delete</b> .<br>The Delete Confirmation prompt displays.                                                                                                                                                                       |
| 4    | Click <b>OK</b> to delete the record from the database.                                                                                                                                                                                 |



| Step | Action                                                                                 |
|------|----------------------------------------------------------------------------------------|
| 5    | The record is deleted and the Closed User Groups prompt displays.<br>Click <b>OK</b> . |

## Friends and Family Black List

### Introduction

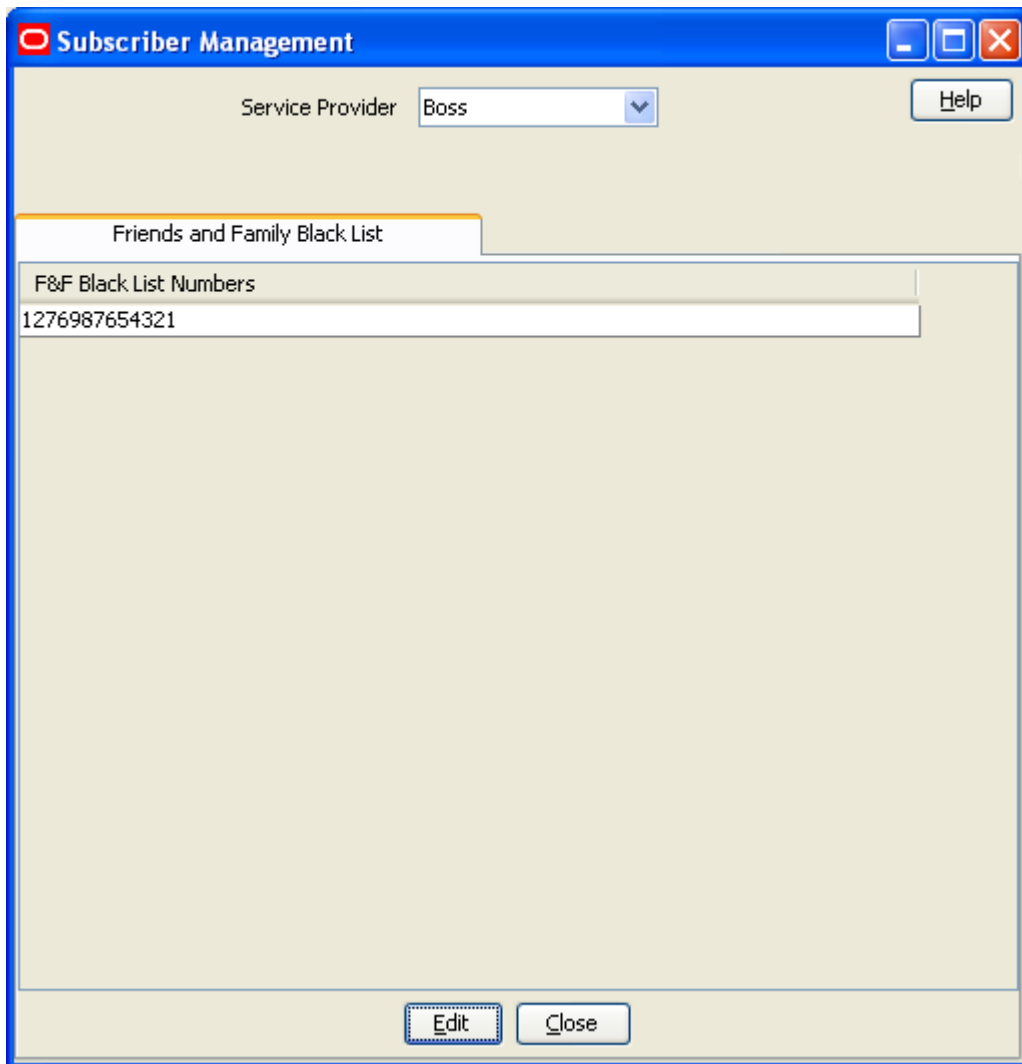
Friends and Family Black List numbers are numbers that may not be added to a subscriber's friends and family list (using the Friends and Family IVR configuration service).

The **Friends and Family (F&F) Black List** tab displays all F&F black list entries. Up to 100 numbers may be added, each up to 32 digits long.

**Note:** Friends and Family discounts are also configured in a subscriber's product type. For details, see *FF White List* (on page 173).

## Friends and Family Black List tab

Here is an example **Friends and Family Black List** tab.



## Editing the F&F Black List

Follow these steps to edit the numbers in the friends and family black list.

| Step | Action                                                                                                                                 |
|------|----------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.                                |
| 2    | On the <b>Friends and Family Black List</b> tab, click <b>Edit</b> .<br><b>Result:</b> You see the Edit F&F Black List Numbers screen. |

| Step | Action |
|------|--------|
|------|--------|

The screenshot shows a window titled "Edit F&F Black List Numbers". It contains a "Black List" section with a "Number List" box (containing "01206") and a "New Number" text field (containing "01255"). There are "Add" and "Delete" buttons below the text field, and "Save" and "Cancel" buttons at the bottom of the window. A "Help" button is located in the top right corner of the window's content area.

- 3 To add a black listed number, enter the number in the **New Number** field and click **Add**.  
**Result:** The number is added to the friends and family black list for this service provider.
- 4 To delete a number, select the number to remove from the list and click **Delete**.  
**Result:** The number is removed from the list.
- 5 Click **Save**.

## Friends and Destination Black List

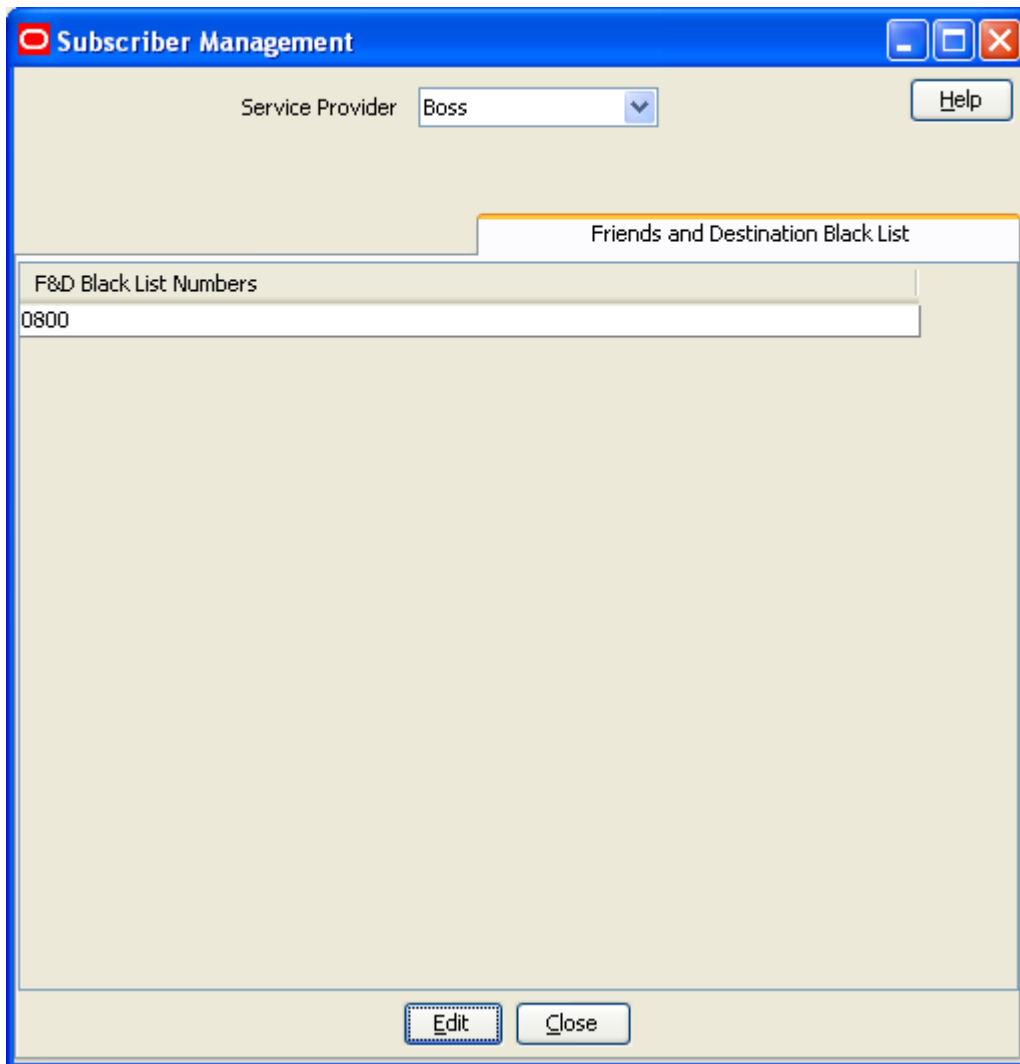
### Introduction

Subscribers may not use prefixes contained in the friends and destination black list when setting their Friends and Destination prefix using the Friends and Destination IVR configuration service.

The **Friends and Destination (F&D) Black List** tab displays all F&D black list entries. Up to 100 prefixes may be added, each up to 32 digits long.

## Friends and Destination Black List tab

Here is an example **Friends and Destination Black List** tab.



## Adding numbers to the Black List

Follow these steps to edit the numbers in the Friends and Destination Black List.

| Step | Action                                                                                                                                      |
|------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.                                     |
| 2    | On the <b>Friends and Destination Black List</b> tab, click <b>Edit</b> .<br><b>Result:</b> You see the Edit F&D Black List Numbers screen. |

| Step | Action |
|------|--------|
|------|--------|

The screenshot shows a window titled "Edit F&D Black List Numbers". It contains a "Black List" section with a "Number List" box (containing "0800") and a "New Number" input field (containing "01395"). There are "Add" and "Delete" buttons between these two sections. At the bottom of the window are "Save" and "Cancel" buttons. A "Help" button is located in the top right corner of the window's content area.

- 3 To add a black listed number, enter the number in the **New Number** field and click **Add**.  
**Result:** The number is added to the friends and destination black list for this service provider.
- 4 To delete a number, select the number to remove from the list and click **Delete**.  
**Result:** The number is removed from the list.
- 5 Click **Save**.

## Friends and Destination Prefix Map

### Introduction

The friends and destination prefix map entries are used to configure the announcements corresponding to a particular friends and destination prefix. These announcements are played to the caller when using the friends and destination IVR configuration service.

You can create groups of prefixes (for example, by region) by mapping all the prefixes in the group to the same announcement. These prefix groups can then be used to apply a discount to multiple destinations instead of to a single number prefix.

**Tip:** You can order prefixes by prefix or by mapped announcement by clicking on the column title on the **Friends and Destination Prefix Map** tab.

**Note:** Up to 100 prefix maps can be added.

## Friends and Destination Prefix Map tab

Here is an example Friends and Destination Prefix Map tab.

Subscriber Management

Service Provider: Boss

Help

Friends and Destination Prefix Map

| Prefix | Mapped Announcement |
|--------|---------------------|
| 3214   | FD Area 1           |
| 3215   | FD Area 1           |
| 322    | FD Area 2           |
| 323    | FD Area 1           |
| 329    | FD Area 3           |

New Edit Delete Close

## Friends and Destination Prefix Map fields

This table describes the function of each field.

| Field              | Description                                                                                                                                                  |
|--------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Prefix             | The prefix for the friends and destination destination number.                                                                                               |
| Announcement Set   | The ACS announcement set which contains the announcement which should be played for this prefix.                                                             |
| Announcement Entry | <p>The announcement which should be played for this prefix.</p> <p><b>Note:</b> Prefixes which use the same announcement entry will be grouped together.</p> |

For more information about ACS announcements, see *ACS User's Guide*.

## Adding Friends and Destination Prefix Mappings

Follow these steps to add a new Friends and Destination Prefix Announcement Mapping.

| Step | Action                                                                                                                                         |
|------|------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.                                        |
| 2    | On the <b>Friends and Destination Prefix Map</b> tab, click <b>New</b> .<br><b>Result:</b> You see the New Prefix Announcement Mapping screen. |

|   |                                                                                                                                                                                                  |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3 | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Friends and Destination Prefix Map fields</i> (on page 72). |
| 4 | Click <b>Save</b> .                                                                                                                                                                              |

## Editing Friends and Destination Prefix Mappings

Follow these steps to edit an existing Friends and Destination Prefix Announcement Mapping.

| Step | Action                                                                                                  |
|------|---------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list. |
| 2    | In the grid on the <b>Friends and Destination Prefix Map</b> tab, select the record you want to edit.   |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the Edit Prefix Announcement Mapping screen.              |

| Step | Action |
|------|--------|
|      |        |

- 4 Edit the fields to reflect the changes you need to make.  
For more information about the fields in this screen, see *Friends and Destination Prefix Map fields* (on page 72).
- 5 Click **Save**.

## Deleting Friends and Destination Prefix Mappings

Follow these steps to delete an existing Friends and Destination Prefix Announcement Mapping.

| Step | Action                                                                                                                                 |
|------|----------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.                                |
| 2    | In the table on the <b>Friends and Destination Prefix Map</b> tab, select the record to delete.                                        |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                        |
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> The record is deleted and you see the F&D Prefix Map prompt. |
| 5    | Click <b>OK</b> .                                                                                                                      |

## Profile Group Fields

### Introduction

The **Profile Group Fields** tab lets you define and manage subscriber profile groups and fields dynamically. You can:

- Specify a set of Profile Groups
- Specify the fields to include in each group

Two types of profile group fields may be specified:

- BPL tasks (defined on the Task Management screen)
- Profile Fields (defined on the **Profile Details** tab in the ACS Configuration screen)

You can view and edit the Profile Group field values, and execute the BPL tasks on the Edit Subscriber screen.



**Note:** Some other applications, for example Messaging Manager, will configure profile group fields on installation. Refer to the appropriate guide for information about specific profile group fields.

For more information about setting up BPL tasks, see *Task Management* (on page 589).

## Profile tags

The tag names for profile fields are defined on the **Profile Tag Details** tab in the ACS Configuration screen.

This table describes the supported data types for profile tags.

| Profile Field Tag Type | Description                                                                                                                                                                                                                                                                                    |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| BOOLEAN                | A single value which is either true or false                                                                                                                                                                                                                                                   |
| BYTE                   | A single byte integer (0 to 255).                                                                                                                                                                                                                                                              |
| DATE                   | A date.                                                                                                                                                                                                                                                                                        |
| DISCOUNT               | A discount specification comprising: <ul style="list-style-type: none"> <li>• First discount percentage (an integer between -100 and 100)</li> <li>• Second discount percentage (an integer between -100 and 100)</li> <li>• Reserved (integer)</li> <li>• Maximum charge (integer)</li> </ul> |
| INTEGER                | 32 bit integer value (signed).                                                                                                                                                                                                                                                                 |
| LNSTRING               | A limited numeric string. Valid characters are 0-9.<br><b>Note:</b> The limits for LNSTRING field values may be set for the product type or in resource limits.                                                                                                                                |
| LOPREFIX               | A limited ordered prefix tree. This is made up of a limited list of numbers.<br><b>Note:</b> The limits for LOPREFIX field values may be set for the product type or in resource limits.                                                                                                       |
| NSTRING                | Numeric string. Valid characters are 0-9.                                                                                                                                                                                                                                                      |
| OPREFIX                | An ordered prefix tree comprising an ordered list of numbers.                                                                                                                                                                                                                                  |
| PREFIX                 | A prefix tree comprising a list of numbers.                                                                                                                                                                                                                                                    |
| STRING                 | A non limited ASCII string.                                                                                                                                                                                                                                                                    |
| ZONE                   | A set of shape definitions for the area covered by the zone. Shapes may be circular or rectangular and are defined by their coordinates.<br><b>Note:</b> Zones may only be included in profile groups if the Location Capabilities Pack (LCP) is installed.                                    |

## Configuring Zone Profile Tags

You can define a set of zones that can be used to determine the location of a subscriber.

To define a zone, you must first define the zone profile group field using a ZONE profile tag.

ZONE profile tags are configured in ACS. The LCP ZONE profile tags, Home and Work, are all configured at installation. All other zone profile tags are user defined and must conform to the configuration shown in this table.

| Profile Tag Name | Profile Tag Type | Profile Tag                                          | Parent Profile Tag | Comment                                                                                                               |
|------------------|------------------|------------------------------------------------------|--------------------|-----------------------------------------------------------------------------------------------------------------------|
| LCP ZONES        | Profile Block    | 4128769                                              |                    | Configured during installation.                                                                                       |
| Home             | ZONE             | 4128770                                              | 4128769            | Configured during installation.                                                                                       |
| Work             | ZONE             | 4128771                                              | 4128769            | Configured during installation.                                                                                       |
| ZoneName         | ZONE             | An integer value in the range:<br>4128772 to 4194305 | 4128769            | User defined.<br><b>Warning:</b> The parent profile tag must be set to 4128769 (the profile tag value for LCP ZONES). |

For more information about profile tags, see *ACS User's Guide*.

## User access

Users can access profile group fields and profile group BPLs from the Profile Groups option in the Edit Subscriber screen, provided the users have sufficient privileges.

You manage user access to profile groups, profile fields, and BPLs through the User Templates defined in the SMS User Management screen. It can be set for all fields and BPLs in the profile group, or for selected fields and BPLs. The required level of access privilege for each individual field or BPL must be added manually to the template.

This table describes the privileges that may be assigned to each profile field and BPL.

| Privilege     | Description                                                                                                                                                         |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Read/Only     | The field's value (if present) will be visible to the user through the screens, but they will not be able to edit, create, or delete it.                            |
| Read/Modify   | The field's value (if present) will be visible to the user through the screens, and they will be able to edit it, but they will not be able to create or delete it. |
| Create/Delete | The field's value (if present) will be visible to the user through the screens, and they will be able to edit, create and delete it.                                |
| Execute       | This BPL will be visible to the user through the screens, and they will be able to execute it.                                                                      |

**Note:** For information about creating and maintaining user Templates, see *SMS User's Guide*.

Profile Group Fields tab

Here is an example **Profile Group Fields** tab.

Subscriber Management

Service ProviderBossHelp

Profile Group Fields

GroupAccount\_DetailsNew GroupEdit GroupDelete Group

| Group           | Group Order | Sub Order | Field Type             | BPL            | BPL Perm   |
|-----------------|-------------|-----------|------------------------|----------------|------------|
| Account_Details | 1           | 1         | Business Process Logic | Update Account | Telco Serv |
| Account_Details | 1           | 1         | Profile Field          |                |            |
| Account_Details | 1           | 2         | Profile Field          |                |            |
| Account_Details | 2           | 1         | Profile Field          |                |            |
| Account_Details | 2           | 2         | Profile Field          |                |            |

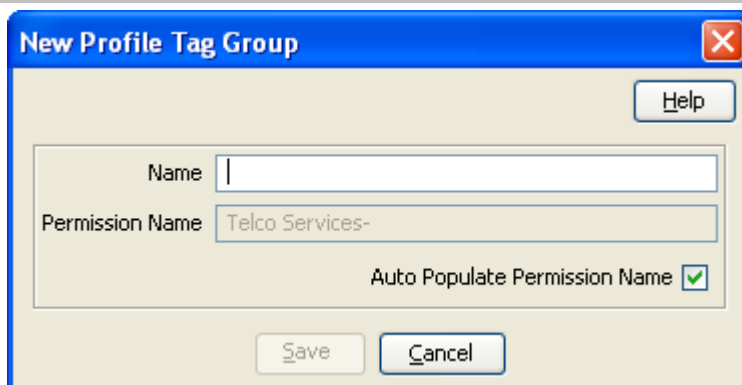
NewEditDeleteClose

Adding profile tag groups

Follow these steps to add a new profile tag group.

| Step | Action                                                                                                                       |
|------|------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.                      |
| 2    | On the <b>Profile Group Fields</b> tab, click <b>New Group</b> .<br><b>Result:</b> You see the New Profile Tag Group screen. |

| Step | Action |
|------|--------|
|------|--------|



The dialog box titled "New Profile Tag Group" has a blue header bar with a close button (X) on the right. Below the header is a "Help" button. The main area contains two text input fields: "Name" (empty) and "Permission Name" (containing "Telco Services-"). Below these fields is a checkbox labeled "Auto Populate Permission Name" which is checked. At the bottom are "Save" and "Cancel" buttons.

- 3 In the **Name** field, enter the name for this profile tag group.
- 4 The **Permission Name** field displays the permission name for this group. It is used when configuring the user template in ACS.  
 To set the permission name to the standard name, ensure the **Auto Populate Permission Name** check box is selected.  
 The standard format is:  
`<Service Provider>-<Profile Tag Group Name>`  
 To set the Permission Name to something other than the standard name:
  - Clear the **Auto Populate Permission Name** check box
  - In the **Permission Name** field, enter the name for this profile tag group.
- 5 Click **Save**.

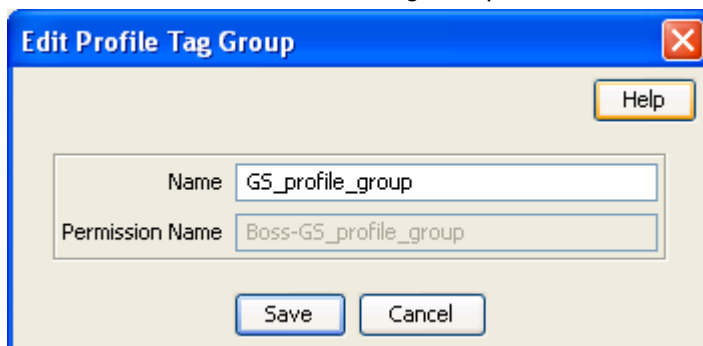
## Editing profile tag groups

Follow these steps to edit an existing Profile Tag Group.

| Step | Action |
|------|--------|
|------|--------|

- 1 In the Subscriber Management screen, select the service provider from the **Service Provider** list.
- 2 On the **Profile Group Fields** tab, select the **Group** you want to edit.
- 3 Click **Edit Group**.

**Result:** You see the Edit Profile Tag Group screen.



The dialog box titled "Edit Profile Tag Group" has a blue header bar with a close button (X) on the right. Below the header is a "Help" button. The main area contains two text input fields: "Name" (containing "G5\_profile\_group") and "Permission Name" (containing "Boss-G5\_profile\_group"). Below these fields are "Save" and "Cancel" buttons.

- 4 Edit the **Name** for the profile tag group.  
**Note:** The **Permission Name** field is not editable.
- 5 Click **Save**.

## Adding a new profile group field

Follow these steps to add a profile group field to a profile group.

| Step | Action                                                                                                                                                                                                       |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.<br>On the <b>Profile Group Fields</b> tab, select the <b>Group</b> you want from the drop down list. |
| 2    | Click <b>New</b> .<br><b>Result:</b> You see the New Profile Group Field screen.                                                                                                                             |
| 3    | Select <b>Profile Field</b> from the <b>Field Type</b> drop down list.<br><b>Result:</b> You see the Profile Field options in the New Profile Group Field screen:                                            |

- 4 In the **Group Order** field, set the number of the line this field should be displayed in. Lower numbers are closer to the top of the screen.  
**Tip:** The combination of group and sub order determines how profile group fields are displayed on the Edit Subscriber screen.
- 5 In the **Sub Order** field, set the number which defines where this field is displayed relative to other fields in its group. Lower numbers are closer to the left.
- 6 In the **Display Name** field, type the name you want to give to the field.
- 7 From the **Profile Tag Name** drop down list, select the profile tag this field will be in. This list is populated from the profile tags defined on the ACS Configuration screen.
- 8 The **Permission Name** field displays the permission name for this field. It is used when configuring the user template in ACS.  
If you want to set the permission name to the standard name, ensure the **Auto Populate Permission Name** check box is selected.  
The standard format is:  
*ServiceProvider-ProfileGroup-DisplayName*  
If you want to set the permission name to something other than the standard name:

| Step | Action                                                                                                                                                                                                        |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | <ul style="list-style-type: none"> <li>• Deselect the <b>Auto Populate Permission Name</b> check box,</li> <li>• In the <b>Permission Name</b> field, enter the name for this profile group field.</li> </ul> |
| 9    | Click <b>Save</b> .                                                                                                                                                                                           |

## Adding BPL fields

Follow these steps to add a BPL to a profile group.

**Note:** You will only be able to use this functionality if you have the Task Management license.

| Step | Action                                                                                                                                                                                                       |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.<br>On the <b>Profile Group Fields</b> tab, select the <b>Group</b> you want from the drop down list. |
| 2    | Click <b>New</b> .<br><b>Result:</b> You see the New Profile Group Field screen.                                                                                                                             |
| 3    | Select <i>Business Process Logic</i> from the <b>Field Type</b> drop down list.<br><b>Result:</b> You see the Business Process Logic options in the New Profile Group Field screen.                          |

- In the **Group Order** field, set the number of the line this field should be displayed in. Lower numbers are closer to the top of the screen.  
**Tip:** The combination of group and sub order determines how profile group fields are displayed on the Edit Subscriber screen.
- In the **Sub Order** field set the number which defines where this field is displayed relative to other fields in its group. Lower numbers are closer to the left.
- From the **BPL** drop down list, select the BPL to include in the profile group.  
This list is populated from the BPL tasks defined in the Task Management screen. For more information about setting up BPL tasks, see *Task Management* (on page 589).

| Step | Action                                                                                                                                                                    |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | <b>Tip:</b> The <b>Permission Name</b> field is for reference only. It displays the permission name for this BPL which is used when configuring the User Template in ACS. |
| 7    | Click <b>Save</b> .                                                                                                                                                       |

## Editing a profile group field

Follow these steps to edit an existing profile group field or BPL for a profile group.

**Note:** The **Field Type**, **Profile Tag Name** and **Permission Name** fields are not editable.

| Step | Action                                                                                                  |
|------|---------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list. |
| 2    | On the <b>Profile Group Fields</b> tab, select the <b>Group</b> you want to edit.                       |
| 3    | In the table, select the row to edit.                                                                   |
| 4    | Click <b>Edit Field</b> .                                                                               |

**Result:** You see the Edit Profile Group Field screen. The screen fields differ depending on whether you are changing a Business Process Logic or Profile Field:

**Edit Profile Group Field**

Help

Field Type: Business Process Logic

Group Order: 1 Sub Order: 1

**Business Process Logic**

BPL: BPL 1

Permission Name: Boss\_BPL1

Save Cancel

| Step | Action |
|------|--------|
|------|--------|

- 5 Edit the **Group Order** and **Sub Order** for the profile group field.

**Tip:** The combination of group and sub order determines how profile group fields are displayed on the Edit Subscriber screen.

- 6 If required, edit the profile group field details.
- For BPLs, you can select a different BPL from the drop down list.
  - For profile tags, you can enter a new display name.
- 7 Click **Save**.

## Deleting profile groups and fields

Follow these steps to delete an existing Profile Group or Profile Field.

| Step | Action |
|------|--------|
|------|--------|

- 1 In the Subscriber Management screen, select the service provider from the **Service Provider** list.
- 2 On the **Profile Group Fields** tab, select the **Group** you want from the drop down list.
- 3 To delete the group and all its associated fields, click **Delete Group**.
- 4 To delete a specific field from the group, in the table, select the row containing the field to delete and click **Delete**.  
**Result:** You see the Delete Confirmation prompt.
- 5 Click **OK** to delete the record from the database.  
**Result:** The record is deleted. A confirmation prompt is displayed.
- 6 Click **OK**.



## UBE Account Balancing

### Introduction

The UBE Account Balancing tab enables you to move wallets from one VWS domain to another. This may be used to:

- Redistribute wallets and buckets after a hardware upgrade or the addition of more Voucher and Wallet Servers
- Move wallets and buckets off a VWS that is being decommissioned

For more information about wallets, see *Subscriber Accounts and Wallets* (on page 10).

For more information about domains, see *Domains* (on page 4).

### UBE Account Balancing tab

Here is an example UBE Account Balancing tab.

Subscriber Management

Service Provider: Boss

UBE Account Balancing

Complete ☒ Running ☒ Pending ☒ Refresh

| Source Domain | Target Domain | Batch ID | Start Date          | End Date/Progress   | S |
|---------------|---------------|----------|---------------------|---------------------|---|
| 11            | 88            | 83       | 2008-06-10 10:27:46 | 2008-06-10 10:27:46 | M |
| 11            | 88            | 83       | 2008-06-10 10:49:52 | 2008-06-10 10:49:52 | M |
| 11            | 88            | 84       | 2008-06-10 22:10:32 | 0%                  | R |
| 11            | 88            | 84       | 2008-06-10 22:41:29 | 2008-06-10 22:41:45 | F |
| 11            | 88            | 84       | 2008-06-10 22:42:29 |                     | P |
| 11            | 88            | 84       | 2008-06-10 23:15:44 | 2008-06-10 23:15:44 | C |
| 11            | 88            | 84       | 2008-06-10 23:13:25 |                     | S |
| 11            | 88            | 84       | 2008-06-10 22:54:34 |                     | N |
| 11            | 88            | 84       | 2008-06-10 25:51:40 | 2008-06-10 25:52:15 | I |
| 11            | 88            | 84       | 2008-06-10 25:59:29 |                     | H |

Priority Restart Pause Report Cancel

New Edit Delete Close

## Migration states

This table describes the possible states a migration can have.

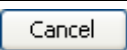
| State | Row Color    | Description                                                                                                                                         |
|-------|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| P     | White        | Pending                                                                                                                                             |
| N     | Light yellow | Priority (run Next regardless of insertion order)                                                                                                   |
| H     | White        | On Hold (pending but marked to not run yet)                                                                                                         |
| S     | Light orange | Paused (Stopped by the user)                                                                                                                        |
| C     | Orange       | Canceled                                                                                                                                            |
| F     | Red          | Failure (all or some wallets not moved successfully; they were either not on the source VWS VWS or did not have one of the specified wallet states) |
| M     | Blue         | Migrated                                                                                                                                            |
| I     | Yellow       | Incomplete (Maximum Wallets reached before the end of the batch)                                                                                    |
| R     | Green        | Running                                                                                                                                             |

**Tip:** Highlighted migrations are shown in dark blue. Table text is always black.

## UBE Account Balancing buttons

This table describes the function of each field.

| Field                                   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |           |        |          |               |         |   |         |                     |
|-----------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------|--------|----------|---------------|---------|---|---------|---------------------|
| <input type="button" value="Refresh"/>  | <p>Refreshes the table with migrations of the states which correspond to the selected check boxes. The states are:</p> <table> <tr> <th>Check box</th><th>States</th></tr> <tr> <td>Complete</td><td>M, C, I and F</td></tr> <tr> <td>Running</td><td>R</td></tr> <tr> <td>Pending</td><td>N, P, H, S, I and F</td></tr> </table>                                                                                                                                                                               | Check box | States | Complete | M, C, I and F | Running | R | Pending | N, P, H, S, I and F |
| Check box                               | States                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |           |        |          |               |         |   |         |                     |
| Complete                                | M, C, I and F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |           |        |          |               |         |   |         |                     |
| Running                                 | R                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |           |        |          |               |         |   |         |                     |
| Pending                                 | N, P, H, S, I and F                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |           |        |          |               |         |   |         |                     |
| <input type="button" value="Priority"/> | <p>Changes the state of a selected migration to the priority (N) state.</p> <p><b>Tip:</b> Disabled if the selected migration has any of these states: N, C, R or M.</p>                                                                                                                                                                                                                                                                                                                                        |           |        |          |               |         |   |         |                     |
| <input type="button" value="Restart"/>  | <p>Changes the state of a selected migration to the pending (P) state.</p> <p><b>Tip:</b> Disabled if the selected migration has any of these states: P, C, R or M.</p>                                                                                                                                                                                                                                                                                                                                         |           |        |          |               |         |   |         |                     |
| <input type="button" value="Pause"/>    | <p>Changes the state of a selected migration to the paused (S) state.</p> <p><b>Tip:</b> Disabled if the selected migration is not in the Running (R) state.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>After the Pause button is clicked, the system takes up to 5 seconds to react to the change. Any migrations started before the pause is recognized are completed.</li> <li>If the selected migration is in the Paused (P) state, this button turns into the Hold button.</li> </ul> |           |        |          |               |         |   |         |                     |
| <input type="button" value="Hold"/>     | <p>Changes the state of a selected migration to the On Hold (H) state.</p> <p>The Pause button turns into the Hold button if the selected migration is in the Paused (P) state.</p>                                                                                                                                                                                                                                                                                                                             |           |        |          |               |         |   |         |                     |

| Field                                                                             | Description                                                                                                                                                                                                                                                 |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|  | Changes the state of a selected migration to the canceled (C) state. A report on which wallets were migrated is compiled and saved.<br><b>Tip:</b> Disabled if the selected migration has any of these states C, R, M, F, S or I.                           |
|  | Opens a Report screen displaying the report. For more information about what you can do with the Report screen, see <i>Saving unmigrated accounts to input file</i> (on page 91).<br><b>Tip:</b> Disabled if there is no report for the selected migration. |

## UBE Account Balancing fields

This table describes the function of each field in the **UBE Account Balancing** tab and the New/Edit Migration screen.

| Field                  | Description                                                                                                                                                                                                                                                                                                                                                    |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Source Domain          | The name of the VWS domain the wallets are being moved from.<br>Can only be changed if state is P, N or H.                                                                                                                                                                                                                                                     |
| Target Domain          | The name of the VWS domain the wallets are being moved to.<br>Can only be changed if state is P, N or H.                                                                                                                                                                                                                                                       |
| Batch ID               | The ID of the subscriber batch the wallets belong to. This field is required for moving subscriber accounts which were generated in a batch.                                                                                                                                                                                                                   |
| Start Date             | The day the migration started. For second attempts or continuation when in Incomplete (I) state, this is reset to the latest start time.<br>Shows blank if the migration has not been started.                                                                                                                                                                 |
| Ed Date/Progress       | If the migration is complete (states M or F), or interrupted (states C, I or S), this field shows the date the migration finished.<br>If the migration has not started, this field is blank.<br>If the migration is in progress (state R) this field shows the progress of the migration as a percentage of the wallets which have successfully been migrated. |
| State                  | The state of the migration. For more information about migration states, see <i>Migration states</i> (on page 84).                                                                                                                                                                                                                                             |
| Input File             | Input filename. Shows blank if the migration has no input file.<br><b>Note:</b> This file is the same as Input File below.                                                                                                                                                                                                                                     |
| Subscribers to migrate | Defines the criteria which will be used to determine which subscriber accounts will be moved. One of the radio buttons is selected.<br>Can only be changed if state is P, N or H.                                                                                                                                                                              |
| Range Start            | If the subscriber range option is selected, this field defines the lowest subscriber account number in the range to move.<br>Cannot be edited after it is first saved.                                                                                                                                                                                         |
| Range End              | If the subscriber range option is selected, this field defines the highest subscriber account number in the range to move.<br>Cannot be edited after it is first saved.                                                                                                                                                                                        |

| Field                                    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Account Batch                            | <p>The ID of the batch of subscriber accounts to move. This field is populated by the <b>Subscriber Batch</b> tab. For more information about subscriber batches, see <i>Subscriber Batch</i> (on page 53).</p> <p>This field can only be edited if:</p> <ul style="list-style-type: none"> <li>State is P, N or H</li> <li>the migration was not first saved with a range or input file</li> </ul>                                         |
| Input File                               | <p>The file which lists the subscriber accounts to migrate. This field is displayed in the <b>UBE Account Balancing</b> tab as Input File.</p> <p>Cannot be edited after it is first saved.</p>                                                                                                                                                                                                                                             |
| Product Type                             | <p>The product type of the wallets to migrate.</p> <p>This field is populated by the <b>Product Type</b> field. For details, see <i>Subscriber Management - Product Type</i> (on page 155).</p> <p>This field can only be edited if:</p> <ul style="list-style-type: none"> <li>State is P, N or H</li> <li>The migration was not first saved with a range or input file.</li> </ul>                                                        |
| Wallet States to migrate                 | <p>Each selected wallet state indicates that the migration should include wallets which are in this state. If this option is selected, at least one check box must be selected. For more information about wallet states, see <i>VWS Technical Guide</i>.</p> <p>Can only be changed if state is P, N or H.</p>                                                                                                                             |
| Maximum Wallets                          | <p>The maximum number of wallet move requests to send in one set of requests. If this value is set to less than the number of wallets which need migrating, the migration will stop after this number of wallets and change to the Incomplete (I) state.</p> <p>Optional. If not set, no limit is applied.</p> <p>Can only be changed if state is P, N, H, I, F or S.</p>                                                                   |
| Throttle                                 | <p>The maximum number of wallet move requests to send to the VWS Voucher and Wallet Servers in one second. Optional. Value can be between 1 and 9999.</p> <p><b>Note:</b> The actual maximum is the lowest of this number and the throttle parameter in the ccsDomainMigration configuration. For more information about ccsDomainMigration, see <i>CCS Technical Guide</i>.</p> <p>Can only be changed if state is P, N, H, I, F or S.</p> |
| Save the remaining subscribers to a file | <p>The filename of the file which stores the details of any subscriber account which is not successfully moved.</p> <p><b>Tip:</b> This file can be used as an Input File for a rerun of the migration.</p> <p>Only enabled if state is P, N, H, I, F or S.</p>                                                                                                                                                                             |

## Adding migrations

Follow these steps to add a migration.

| Step | Action                                                                                                                                 |
|------|----------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.                                |
| 2    | On the <b>UBE Account Balancing</b> tab, click <b>New</b> .<br><b>Result:</b> You see the New Account Balance Domain Migration screen. |

Step

Action

**New Account Balance Domain Migration**

Source UBE domain: UBE Domain 1 Target UBE domain: UBE Domain 1 Check Accounts

**Subscribers to migrate**

☒ Range Start  Range End

☐ Account Batch

☐ Input File  Select

☐ Product Type

**Wallet states to migrate**

☒ Pre-Use ☒ Active ☒ Dormant ☒ Suspended ☒ Frozen ☒ Terminated

**UBE domain protection**

Maximum Wallets  Throttle

Save remaining subscribers to file  Select Save

Save Cancel

3 Enter data in the fields to configure this record.

For more information about the fields on this screen, see *UBE Account Balancing fields* (on page 85).

4 You can check the number of wallets and subscribers on the source and target domains, using the **Check Accounts** button. For more information about how to use this feature, see *Reviewing domain records* (on page 89).

5 When you have completed configuring the migration, click **Save**.

**Result:** The Confirmation Dialog prompt shows the migration details. and asks for the confirmation.

6 Click **Confirm**.

**Results:**

- The migration record details are saved to the database, the migration is started, and the New Account Balance Domain Migration screen is closed.
- If the migration is successful, the details in the SMF database are updated. After the screen data is refreshed (for example, by clicking **Refresh**), the migration is shown as having a Migrated (M) state.
- If the migration has errors all changes are rolled back, and the migration is shown as having a Failure (F) state.

## Editing migrations

Follow these steps to edit an existing migration.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 2    | On the <b>UBE Account Balancing</b> tab, click <b>Edit</b> .<br><b>Result:</b> You see the Edit Account Balance Domain Migration screen.                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 3    | Edit the fields to reflect the changes you need to make.<br>For more information about the fields in this screen, see <i>UBE Account Balancing fields</i> (on page 85).                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 4    | You can check the number of wallets and subscribers on the source and target domains, using the <b>Check Accounts</b> button. For more information about how to use this feature, see <i>Reviewing domain records</i> (on page 89).                                                                                                                                                                                                                                                                                                                                                                    |
| 5    | When you have completed changing the details, click <b>Save</b> .<br><b>Note:</b> The Save button is not available if the migration has a migrated (M) state.<br><b>Result:</b> The Confirmation Dialog prompt shows the migration details and asks for confirmation to make the changes.                                                                                                                                                                                                                                                                                                              |
| 6    | Click <b>Confirm</b> .<br><b>Results:</b> <ul style="list-style-type: none"> <li>The migration record changes are saved to the database, the migration is restarted, and the Edit Account Balance Domain Migration screen is closed.</li> <li>If the migration is successful, the details in the SMF database are updated. After the screen data is refreshed (for example, by clicking <b>Refresh</b>), the migration is shown as having a Migrated (M) state.</li> <li>If the migration has errors all changes are rolled back, and the migration is shown as having a Failure (F) state.</li> </ul> |

## Reviewing domain records

Follow these steps to review the wallets and subscribers on the source and target domains in a migration.

- | Step | Action                                                                                                                                                                                                                                                  |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | On the New Account Balance Domain Migration, or the Edit Account Balance Domain Migration screen, select the source and target UBE domains and click <b>Check Accounts</b> .<br><b>Result:</b> You will see the details in the Accounts Summary screen. |

The Accounts Summary window displays the following data:

| Source UBE Wallet Count |                   |
|-------------------------|-------------------|
| Wallet State            | Number of Wallets |
| Active                  | 10055             |
| Frozen                  | 2                 |
| Preuse                  | 1080              |
| Suspended               | 1                 |
| Terminated              | 40                |
| <b>TOTAL</b>            | <b>11178</b>      |

| Source UBE Subscriber Count |                       |
|-----------------------------|-----------------------|
| Product Type                | Number of Subscribers |
| Bronze                      | 7254                  |
| Gold                        | 2981                  |
| Silver                      | 1608                  |
| <b>TOTAL</b>                | <b>11843</b>          |

| Target UBE Wallet Count |                   |
|-------------------------|-------------------|
| Wallet State            | Number of Wallets |
| Active                  | 10067             |
| Frozen                  | 1                 |
| Preuse                  | 126               |
| Suspended               | 1                 |
| Terminated              | 12                |
| <b>TOTAL</b>            | <b>10207</b>      |

| Target UBE Subscriber Count |                       |
|-----------------------------|-----------------------|
| Product Type                | Number of Subscribers |
| Bronze                      | 6124                  |
| Gold                        | 3418                  |
| Silver                      | 772                   |
| <b>TOTAL</b>                | <b>10314</b>          |

Close

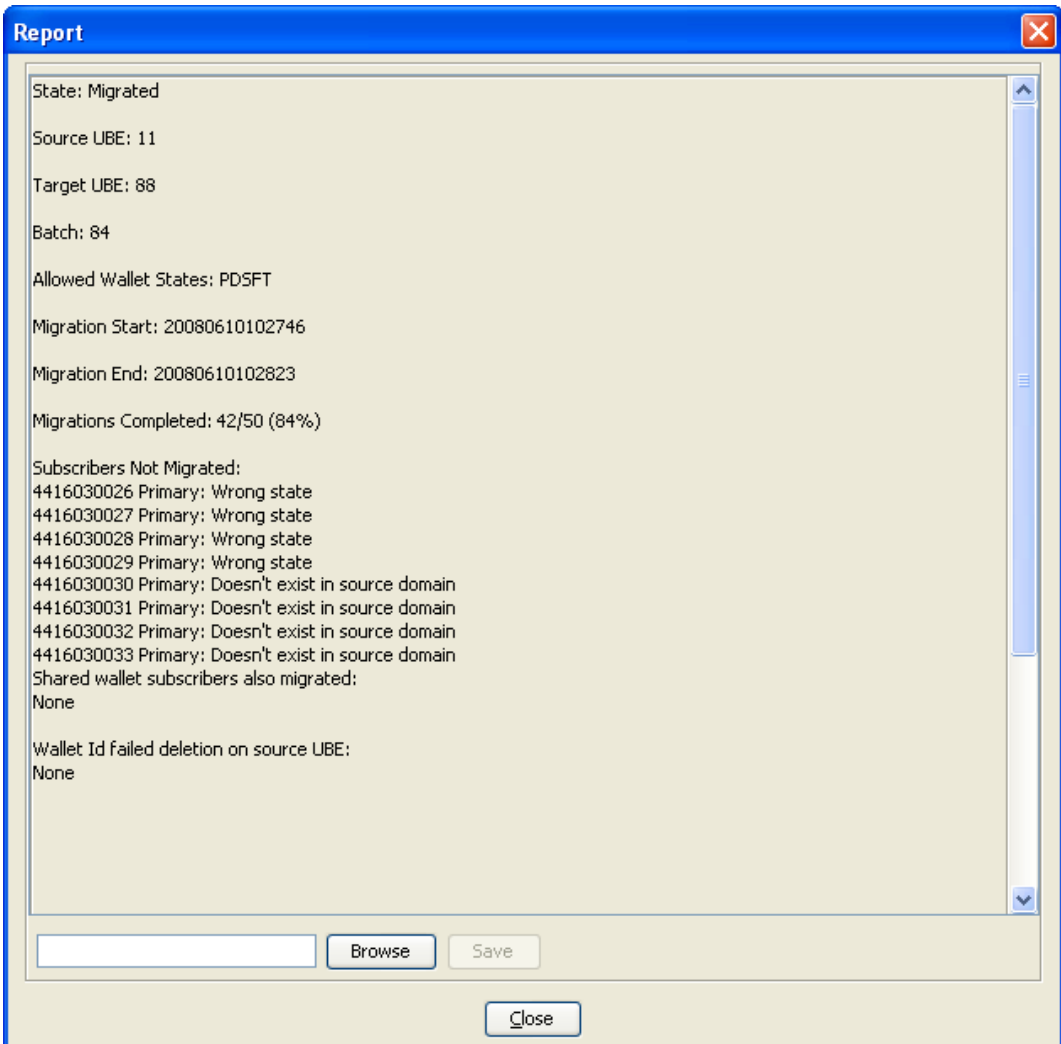
| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <p>The <b>Source UBE Wallet Count</b> table shows the number of wallets in each state which are on the source Voucher and Wallet Server.</p> <p>The <b>Source UBE Subscriber Count</b> table shows the number of subscribers linked to wallets in the source Voucher and Wallet Server. The subscribers are grouped by product type.</p> <p>The <b>Target UBE Wallet Count</b> table shows the number of wallets in each state which are on the destination Voucher and Wallet Server.</p> <p>The <b>Target UBE Subscriber Count</b> table shows the number of subscribers linked to wallets in the target Voucher and Wallet Server. The subscribers are grouped by product type.</p> |
| 3    | <p>When you have finished reviewing the details, click <b>Close</b>.</p> <p><b>Result:</b> The Accounts Summary screen will close and you will be returned to the New or Edit Account Balance Domain Migration screen.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

## Viewing migration details

Follow these steps to view the details of an existing migration.

| Step | Action                                                                                                                                                                                |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.                                                                               |
| 2    | <p>On the <b>UBE Account Balancing</b> tab, click <b>Edit</b>.</p> <p><b>Result:</b> You see the Edit Account Balance Domain Migration screen.</p>                                    |
| 3    | <p>View the details of the record.</p> <p>For more information about the fields in this screen, see <i>UBE Account Balancing fields</i> (on page 85).</p>                             |
| 4    | <p>When you have completed viewing the details, click <b>Cancel</b>.</p> <p><b>Result:</b> The Edit Account Balance Domain Migration screen is closed without saving any changes.</p> |
| 5    | <p>With the migration still selected, click <b>Report</b>.</p> <p><b>Result:</b> The Report screen appears showing the migration report.</p>                                          |



| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |  <p>The screenshot shows a 'Report' window with the following text:</p> <pre> State: Migrated Source UBE: 11 Target UBE: 88 Batch: 84 Allowed Wallet States: PDSFT Migration Start: 20080610102746 Migration End: 20080610102823 Migrations Completed: 42/50 (84%)  Subscribers Not Migrated: 4416030026 Primary: Wrong state 4416030027 Primary: Wrong state 4416030028 Primary: Wrong state 4416030029 Primary: Wrong state 4416030030 Primary: Doesn't exist in source domain 4416030031 Primary: Doesn't exist in source domain 4416030032 Primary: Doesn't exist in source domain 4416030033 Primary: Doesn't exist in source domain Shared wallet subscribers also migrated: None  Wallet Id failed deletion on source UBE: None </pre> <p>At the bottom, there is a text input field, a 'Browse' button, a 'Save' button, and a 'Close' button.</p> |

6 To export the report, perform one of the following actions:

- Enter the filename into the field
- Click **Browse** and select a destination file.

Click **Save**.

**Result:** The report will be exported to the specified file.

**Example:** For an example of an exported report, see *Example exported report* (on page 92).

7 When you have finished looking at the report, click **Close**.

**Result:** The Report screen will close.

## Saving unmigrated accounts to input file

Follow these steps to save a list of unmigrated account MSISDNs to a file. This file can then be used as an Input file for a rerun of the migration.

| Step | Action                                                                                                      |
|------|-------------------------------------------------------------------------------------------------------------|
| 1    | On the <b>UBE Account Balancing</b> tab, select the migration to save the file for, and click <b>Edit</b> . |

| Step | Action                                                                                                                                                                                                                                                                                                                                  |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | <b>Result:</b> The Edit Account Balance Domain Migration screen appears showing the migration details.                                                                                                                                                                                                                                  |
| 2    | Specify the name of the file to write the report to. Perform one of the following actions: <ul style="list-style-type: none"> <li>Click <b>Select</b> and browse to the file to write the report to</li> <li>Enter the name of the output file.</li> </ul>                                                                              |
| 3    | Click <b>Save</b> .<br><b>Result:</b> The details of the migration report are saved to the file specified in step 2.<br><b>Example:</b> This text shows an example of a export of unmigrated MSISDNs: <pre> 971559101709 971559101701 971559101702 971559101703 971559101704 971559101705 971559101706 971559101707 971559101708 </pre> |
| 4    | Click <b>Cancel</b> .<br><b>Result:</b> The Edit Account Balance Domain Migration screen closes.                                                                                                                                                                                                                                        |

## Example exported report

This text shows an example of an exported report. It can be used as an input file to run another migration.

```

State: Migrated

Source UBE: 11

Target UBE: 88

Batch: 84

Allowed Wallet States: PDSFT

Migration Start: 20080610102746

Migration End: 20080610102813

Migrations Completed: 42/50 (84%)

Subscribers Not Migrated:
4416030026 Primary: Wrong state
4416030027 Primary: Wrong state
4416030028 Primary: Wrong state
4416030029 Primary: Wrong state
4416030030 Primary: Doesn't exist in source domain
4416030031 Primary: Doesn't exist in source domain
4416030032 Primary: Doesn't exist in source domain
4416030033 Primary: Doesn't exist in source domain
Shared wallet subscribers also migrated:
None

Wallet Id failed deletion on source UBE:
None

```

## Deleting subscriber account migrations

Follow these steps to delete an existing subscriber account migration record.

| Step | Action                                                                                                  |
|------|---------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list. |
| 2    | In the table on the <b>UBE Account Balancing</b> tab, select the record to delete.                      |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                         |
| 4    | Click <b>Yes</b> to delete the record from the database.                                                |



# Subscriber Management - Subscribers

## Overview

### Introduction

This chapter explains the subscriber configuration screens.

### In this chapter

---

This chapter contains the following topics.

|                                               |     |
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| Subscriber .....                              | 95  |
| Adding Subscribers .....                      | 99  |
| Editing Subscribers.....                      | 117 |
| Record Subscriber comments .....              | 120 |
| Configure Subscriber Zones.....               | 122 |
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| Perform Credit Transfers .....                | 152 |

## Subscriber

### Introduction

The **Subscriber** tab displays the subscriber accounts created for the selected service provider.

A subscriber account may take the form of a prepaid card or be assigned to a subscriber ID or CLI. The subscriber has a card printed with the calling card number, which is used when making a call. In the case of subscriber ID-based records, the wallet is set up to recognize a physical phone number. This enables any user of that line to access the wallet. Group wallets are created when multiple subscribers are established on a single wallet reference.

### About Auditing Changes to Subscriber Data

The EDR auditing feature enables you to monitor changes to the financial data held for subscribers. When EDR auditing is enabled, a user is forced to enter a reason for changes they make to financial data in a special **Change Reason** dialog box; for example, when editing a subscriber to:

- Update the subscriber's credit cards
- Update the subscriber's wallets
- End a reservation
- Reverse charges in the EDR Viewer

The reason for the change, and the user who made the change are reported in the **Change Reason**, and **Operator Name** fields in the corresponding VWS EDR. You can view this information by displaying the EDR in the EDR Viewer.

The EDR auditing feature is enabled by the EDR auditing global configuration option. For more information, see the discussion on EDR auditing in *Global Configuration* (on page 499).

## Subscriber tab

Here is an example **Subscriber** tab.

Service Provider: OCNCCTemplate

Help

Subscriber

Wallet Reference:

Card Number:

Subscriber ID: 10

Customer:

☐ Exact Match ☒ Prefix Match

Search

| Wallet Reference | Card Number | Subscriber ID | Customer |
|------------------|-------------|---------------|----------|
| 2 (Primary)      | 1012345678  | 1012345678    |          |

New Edit Delete Close

Access to elements of this screen are controlled by user permissions. If you cannot see some of the functionality described for this screen, your permissions may have been set to restrict access to that element.

## Component options summary

This table lists all the available subscriber configuration options and their functionality.

**Note:** The options available to you will depend on how your system has been set up, and will be a subset of this list.

| Option              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Details             | Sets the service details for this subscriber. See <i>Details</i> (on page 100) for set up information.                                                                                                                                                                                                                                                                                                                                                                                                             |
| Call Barring        | Use to add and maintain the barred/allowed numbers list that applies to a subscriber. See <i>Call Barring</i> (on page 102) for set up information.                                                                                                                                                                                                                                                                                                                                                                |
| Number Translation  | Use to view and maintain the short codes that are mapped to specific termination numbers for a subscriber. See <i>Number Translation</i> (on page 103) for set up information.                                                                                                                                                                                                                                                                                                                                     |
| Credit Card         | Use to view and maintain the credit card details for a subscriber. See <i>Credit Card</i> (on page 104) for set up information.                                                                                                                                                                                                                                                                                                                                                                                    |
| Remote Access       | Sets the subscriber's access to the remote access service. See <i>Remote Access</i> (on page 108) for set up information.                                                                                                                                                                                                                                                                                                                                                                                          |
| Friends and Family  | <p>Configures the list of Friends and Family or the Friends and Destination numbers for a subscriber.</p> <p>This screen enables you to:</p> <ul style="list-style-type: none"> <li>View the discount prefix for the number, see how many changes have been made to the number listing and the most recent date of the change</li> <li>Add or delete numbers from the Friends and Family or the Friends and Destination list</li> </ul> <p>See <i>Friends and Family</i> (on page 109) for set up information.</p> |
| Closed User Groups  | <p>Use to view and modify the list of closed user groups (CUG) that the subscriber belongs to.</p> <p>See <i>Closed User Groups</i> (on page 110) for set up information.</p>                                                                                                                                                                                                                                                                                                                                      |
| Balance Topup Rules | <p>Use to view the active topup rules defined for the subscriber. The rules are used to allocate additional items, such as additional notifications, to specified balance types on a regular basis.</p> <p>See <i>Balance Topup Rules</i> (on page 111) for details.</p>                                                                                                                                                                                                                                           |
| Peer-to-Peer        | <p>Use to perform the subscriber's peer-to-peer credit transfers.</p> <p>See <i>Perform Credit Transfers</i> (on page 152) for details.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>This configuration option may only be accessed through the Edit Subscriber screen.</li> <li>You can only execute peer-to-peer credit transfers if you have purchased the license for this functionality and you have been allocated sufficient User privileges.</li> </ul>                                 |
| Service Bundle      | <p>Use to view and configure the subscriber's service bundle credit transfers.</p> <p>See <i>Perform Credit Transfers</i> (on page 152) for details.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>This configuration option may only be accessed through the Edit Subscriber screen.</li> </ul>                                                                                                                                                                                                 |

| Option | Description                                                                                                                                                                                                         |
|--------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|        | <ul style="list-style-type: none"> <li>You can only execute service bundle credit transfers if you have purchased the license for this functionality and have been allocated sufficient user privileges.</li> </ul> |

## Finding subscribers

Follow these steps to search for an existing subscriber.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                                                                                                                                                                     |
| 2    | <p>On the <b>Subscriber</b> tab, enter the search strings to use to find the required subscriber. Enter the first few characters of the corresponding string in one of the following fields:</p> <ul style="list-style-type: none"> <li><b>Wallet Reference</b></li> <li><b>Card Number</b></li> <li><b>Subscriber ID</b></li> <li><b>Customer</b></li> </ul> <p><b>Tip:</b> If you enter characters in more than one field, the <b>Search</b> button will be disabled.</p> |
| 3    | <p>Specify whether to search for an exact match, or for a prefix match. Select:</p> <ul style="list-style-type: none"> <li><b>Exact Match</b> to search for the subscriber with the specified subscriber ID</li> <li><b>Prefix Match</b> to search for all subscribers with subscriber IDs that match the specified prefix</li> </ul>                                                                                                                                       |
| 4    | <p>Click <b>Search</b>.</p> <p>The search returns a maximum of 100 rows. If the required subscriber is not displayed and more than 100 rows were returned, enter a longer search string and click <b>Search</b> again.</p> <p><b>Note:</b> If a subscriber has more than one wallet then the search returns additional rows for the subscriber; one for each wallet. The wallet type is displayed next to the wallet reference number.</p>                                  |

## Black List

The Details option provides a **Blacklisted** check box, which lets you add or remove a subscriber from the black list.

By default subscribers are not blacklisted. However, a subscriber is automatically blacklisted if they fail, three times in succession, to recharge their wallet with a valid voucher number. The blacklisted subscriber remains active, however any future attempts at recharging with a voucher number will also require the matching scratch card serial number.

## Deleting subscribers

Follow these steps to delete an existing subscriber.

| Step | Action                                                                                                  |
|------|---------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list. |
| 2    | In the table on the <b>Subscriber</b> tab, select the subscriber to delete.                             |
| 3    | Click <b>Delete</b> .                                                                                   |



| Step | Action                                                                                                                                                                                                                                                                                                     |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <p><b>Result:</b> The Delete Confirmation prompt appears.</p> <p>Click <b>OK</b>.</p> <p><b>Note:</b> The record is deleted and the <b>Subscriber</b> tab is refreshed as if you had clicked <b>Search</b>. If the subscriber has both a primary and a secondary wallet, both wallets will be deleted.</p> |

## Adding Subscribers

### Introduction

All configuration options must be completed to finalize a new subscriber record, however the configuration can be saved at any point by clicking **Save**.

**Note:** When you save a new subscriber, you are presented with the New Wallet screen. You need to configure the wallet to finish configuring the new subscriber. See Wallets for details. After adding the wallet, the subscriber is saved. To fill in any of the options that you have not completed for the subscriber, you need to search for, then edit the subscriber. See Editing and Deleting Subscribers.

### New subscriber options

Here is a list of options available on the New Subscriber screen.

- Details
- *Call Barring* (on page 102)
- *Number Translation* (on page 103)
- *Credit Card* (on page 104)
- *Remote Access* (on page 108)
- *Friends and Family* (on page 109)
- *Closed User Groups* (on page 110)
- *Balance Topup Rules* (on page 111)

### Subscriber screen example

Here is an example New Subscriber screen.

**Note:** The tabs or options available to you on a screen will depend upon which CCS components have been installed on the system and the Oracle license agreement.

The screenshot shows a 'New Subscriber' window with a sidebar on the left containing 'Subscriber' and 'Profile' sections. Under 'Subscriber', 'Details' is selected. The main area is titled 'Details' and contains the following fields and options:

- Card Number: 11
- Subscriber ID: [Empty field]
- Description: [Empty text area]
- PIN: [Empty field]
- Confirm PIN: [Empty field]
- Language: No Language Selected (dropdown menu)
- Subscriber ID Restricted: ☐
- Disable Incoming Calls When Roaming: ☐
- Blacklisted: ☐
- Disable Notifications: ☐
- Is Defined: ☐

Buttons: 'Help' (top right), 'Save' and 'Cancel' (bottom center).

## Details

Follow these steps to configure basic details for a new subscriber or edit the details of a current subscriber.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                                                                                                                             |
| 2    | On the <b>Subscriber</b> tab, to: <ul style="list-style-type: none"> <li>Create a new subscriber, click <b>New</b>.</li> <li>Edit a subscriber, select the subscriber from the table and click <b>Edit</b>.</li> </ul> <p><b>Result:</b> You see the <i>New Subscriber</i> screen (See example on page 99) or the <i>Edit Subscriber</i> screen (See example on page 118), with the Subscriber, <b>Details</b> option selected.</p> |
| 3    | In the <b>Card Number</b> field, enter the card number for this subscriber. This field is required.                                                                                                                                                                                                                                                                                                                                 |
|      | <b>Tip:</b> Most commonly, this is the same as the subscriber ID.                                                                                                                                                                                                                                                                                                                                                                   |

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <p>In the <b>Subscriber ID</b> field, enter the Calling Line Identifier (CLI) for this subscriber. This identifies the line which the call is being placed from. When a call is made using CCS, the system determines which wallet to charge based on the subscriber ID of the caller. If the subscriber ID is not recognized, the card number and PIN is used to determine the subscriber and validity of the call.</p> <p>The subscriber ID is mandatory.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 5    | In the <b>Description</b> field, enter a description for the new subscriber.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 6    | To add a PIN for this subscriber, select the <b>Is Defined</b> PIN check box. This will enable the <b>PIN</b> and <b>Confirm PIN</b> fields for entry.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 7    | <p>Skip this step if a PIN is not required for this subscriber.</p> <p>If a PIN is required, configure the PIN by doing the following:</p> <ol style="list-style-type: none"> <li>In the <b>PIN</b> field, enter the PIN number.</li> <li>In the <b>Confirm PIN</b> field, re-enter the same PIN number. The two fields must match before the new subscriber record can be saved.</li> </ol> <p>To use the PIN, the <b>eserv.config</b> parameter <code>AccountLength</code> must be set to the required length for card numbers, or a large value for variable length card numbers, for example 50, (default = 10).</p> <p>For more information, see the <i>CCS Technical Guide</i>.</p> <p>When using the PIN option to recharge vouchers, the length of the Wallet Reference number must equal the <code>AccountLength</code> parameter (that is, variable length wallet references cannot be used).</p> <p>A PIN is also used in credit transfers (service bundle or peer-to-peer) that are configured to require a PIN on execution.</p> <p><b>Tip:</b> A PIN is recommended for security reasons.</p> |
| 8    | <p>From the <b>Language</b> drop down box, select the language to use for announcements for this subscriber.</p> <p>The list displays all languages available to the current service provider. Languages are configured on the Tools screen. To create a new language or give a service provider permission to use a language, see <i>ACS User's Guide</i>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 9    | If the subscriber should be allowed to set the presentation restricted indicator in the outgoing connect message for all services other than CCS_ROAM, select the <b>Subscriber ID Restriction</b> check box.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 10   | If this subscriber should not be able to receive incoming calls while roaming, select the <b>Disable Incoming Calls When Roaming</b> check box.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 11   | <p>If this subscriber should be:</p> <ul style="list-style-type: none"> <li>Able to use the service, ensure the <b>Blacklisted</b> check box is not selected.</li> <li>Stopped from using the service, select the <b>Blacklisted</b> check box.</li> </ul> <p>For more information about blacklisted subscribers, see <i>Black List</i> (on page 98).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 12   | If the subscriber should not be sent SMS notifications, select the <b>Disable SMS Notifications</b> check box.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 13   | Select another option to configure for this subscriber or click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|      | <p><b>Note:</b> When you save a new subscriber, you will see the New Wallet screen. See <i>Wallets</i> (on page 112) for more information.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## Call Barring

Follow these steps to add or edit call barring configuration details for a subscriber.

**Note:** Allowed/barred lists can also be configured at the following levels:

- System-wide
- Service provider (see the *Barred List* (on page 528) tab)
- Product type (see *Call Barring* (on page 172) option).

| Step | Action                                                                                                                                                                                                                                                                                                                                                       |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New or the Edit Subscriber screen, select the Profile, Call Barring option from the left hand menu.<br><b>Result:</b> You see the <i>Call Barring</i> (See example on page 102) configuration option fields.                                                                                                                                          |
| 2    | In the <b>Allowed/Barred List</b> section, select whether the listed numbers will be allowed or barred from the <b>List Type</b> drop down list.<br><b>Tip:</b> Depending on the list type, all numbers in the list are allowed, or all numbers are barred for this subscriber. It is not possible to have some allowed and some barred numbers in the list. |
| 3    | If you want the service to ignore the allowed/barred list for this subscriber, select the <b>Ignore</b> check box.                                                                                                                                                                                                                                           |
| 4    | To add a number to the list, enter the number in the <b>New Number</b> field and click <b>Add</b> .                                                                                                                                                                                                                                                          |
| 5    | To delete a number from the list, select it in the <b>Number List</b> and click <b>Delete</b> .                                                                                                                                                                                                                                                              |
| 6    | Repeat steps 4 and 5 as required to complete the number list.                                                                                                                                                                                                                                                                                                |
| 7    | Select another option to configure for this subscriber or click <b>Save</b> .<br><b>Note:</b> When you save a new subscriber, you will see the New Wallet screen. Refer to <i>Wallets</i> (on page 112) to finish configuring the new subscriber.                                                                                                            |

## Call Barring option

Here is an example New Subscriber screen, **Call Barring** option.

## Number Translation

Follow these steps to add the number translation details to a new subscriber.

**Note:** Number translation can also be configured at the following levels:

- System-wide
- Service provider
- Product type.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the New Subscriber screen, select the Profile, Number Translation option from the left hand menu.</p> <p><b>Result:</b> You see the <i>Number Translation</i> (See example on page 104) configuration option fields.</p>                                                                                                                                                                                                                                                                                                                                                           |
| 2    | <p>In the <b>Short Codes</b> section, edit the number list.</p> <ul style="list-style-type: none"> <li>• To add a number to the list: <ul style="list-style-type: none"> <li>– In the <b>In</b> field, enter the service short code to translate</li> <li>– In the <b>Out</b> field, enter the termination number to translate the short service code to</li> <li>– Click <b>Add</b></li> </ul> </li> <li>• To delete a number from the list: <ul style="list-style-type: none"> <li>– Select the number in the <b>Number list</b></li> <li>– Click <b>Delete</b></li> </ul> </li> </ul> |

| Step                                                                                                                                                               | Action                                                                        |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------|
| 3                                                                                                                                                                  | Repeat step 2 until the number list contains all the required numbers.        |
| 4                                                                                                                                                                  | Select another option to configure for this subscriber or click <b>Save</b> . |
| <b>Note:</b> When you save the new subscriber, you will see the New Wallet screen. Refer to <i>Wallets</i> (on page 112) to finish configuring the new subscriber. |                                                                               |

## Number Translation option

Here is an example New Subscriber, **Number Translation** option.

The screenshot shows the 'New Subscriber' dialog box with the 'Number Translation' option selected in the left-hand menu. The main area is titled 'Short Codes' and contains a 'Number List' table with columns 'In' and 'Out'. To the right of the table are input fields for 'In' and 'Out'. At the bottom right of the table area are 'Add' and 'Delete' buttons. At the bottom of the dialog box are 'Save' and 'Cancel' buttons. A 'Help' button is located in the top right corner of the dialog box.

## Credit Card

Follow these steps to configure and update credit card details for a subscriber.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New or the Edit Subscriber screen, select the Profile, Credit Card option from the left hand menu.<br>The <i>Credit Card</i> (See example on page 105) table displays, listing the details of the subscriber's credit cards.                                                                                                                                                                                                                                    |
| 2    | (Optional) Create a new credit card registered to the subscriber by performing the following steps: <ul style="list-style-type: none"> <li>a. Click <b>New</b>. The New Credit Card dialog displays.</li> <li>b. Enter the credit card details in the credit card fields, and click <b>Save</b>. For information about credit card fields, see <i>New Credit Card fields</i> (on page 49).</li> </ul> <p>The credit card is added to the <b>Credit Card</b> table.</p> |

| Step                                                                                                                                        | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|---------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3                                                                                                                                           | <p>If you want to:</p> <ul style="list-style-type: none"> <li>Register an existing credit card to the subscriber, click <b>Register</b> and then follow the credit card registration procedure. See <i>Registering credit cards to subscribers</i> (on page 106) for details</li> <li>Confirm the credit card to the subscriber, select the credit card in the table and click <b>Confirm</b>.</li> <li>Delete a credit card, select the credit card in the table and click <b>Delete</b>.</li> </ul> |
| 4                                                                                                                                           | <p>If you want to deregister a credit card from the subscriber:</p> <ol style="list-style-type: none"> <li>Select the credit card in the table and click <b>Deregister</b>. The Deregister Credit Card confirmation panel displays.</li> <li>Click <b>Deregister</b>.</li> </ol>                                                                                                                                                                                                                      |
| 5                                                                                                                                           | <p>If you want to freeze a credit card:</p> <ol style="list-style-type: none"> <li>Select the credit card in the table and click <b>Freeze</b>. The Freeze Credit Card confirmation panel displays.</li> <li>Click <b>Freeze</b>.</li> </ol>                                                                                                                                                                                                                                                          |
| 6                                                                                                                                           | <p>If EDR auditing is enabled, then the <b>Change Reason</b> dialog displays. Enter the reason for the change in the <b>Change Reason</b> field, and click <b>OK</b>. The reason can be up to 200 characters long.</p>                                                                                                                                                                                                                                                                                |
| 7                                                                                                                                           | <p>Select another option to configure for this subscriber or click <b>Save</b>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <p><b>Note:</b> When you save a new subscriber, the New Wallet screen displays. For more information, see <i>Wallets</i> (on page 112).</p> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Credit Card option

Here is an example New Subscriber, **Credit Card** option.

The screenshot shows a software window titled "New Subscriber". On the left is a sidebar with a tree view containing "Subscriber" (with sub-items "Details" and "Profile") and "Credit Card" (which is selected and highlighted in blue). The main content area is titled "Credit Card" and contains a table with the following headers: "Display Number", "Name on Card", "Expiry Date", "Card State", and "Registration State". The table body is empty. At the bottom of the window, there is a row of buttons: "New", "Register", "Deregister", "Freeze", "Confirm", "Delete", "Save", and "Cancel". A "Help" button is located in the top right corner of the main content area.

## Registering credit cards to subscribers

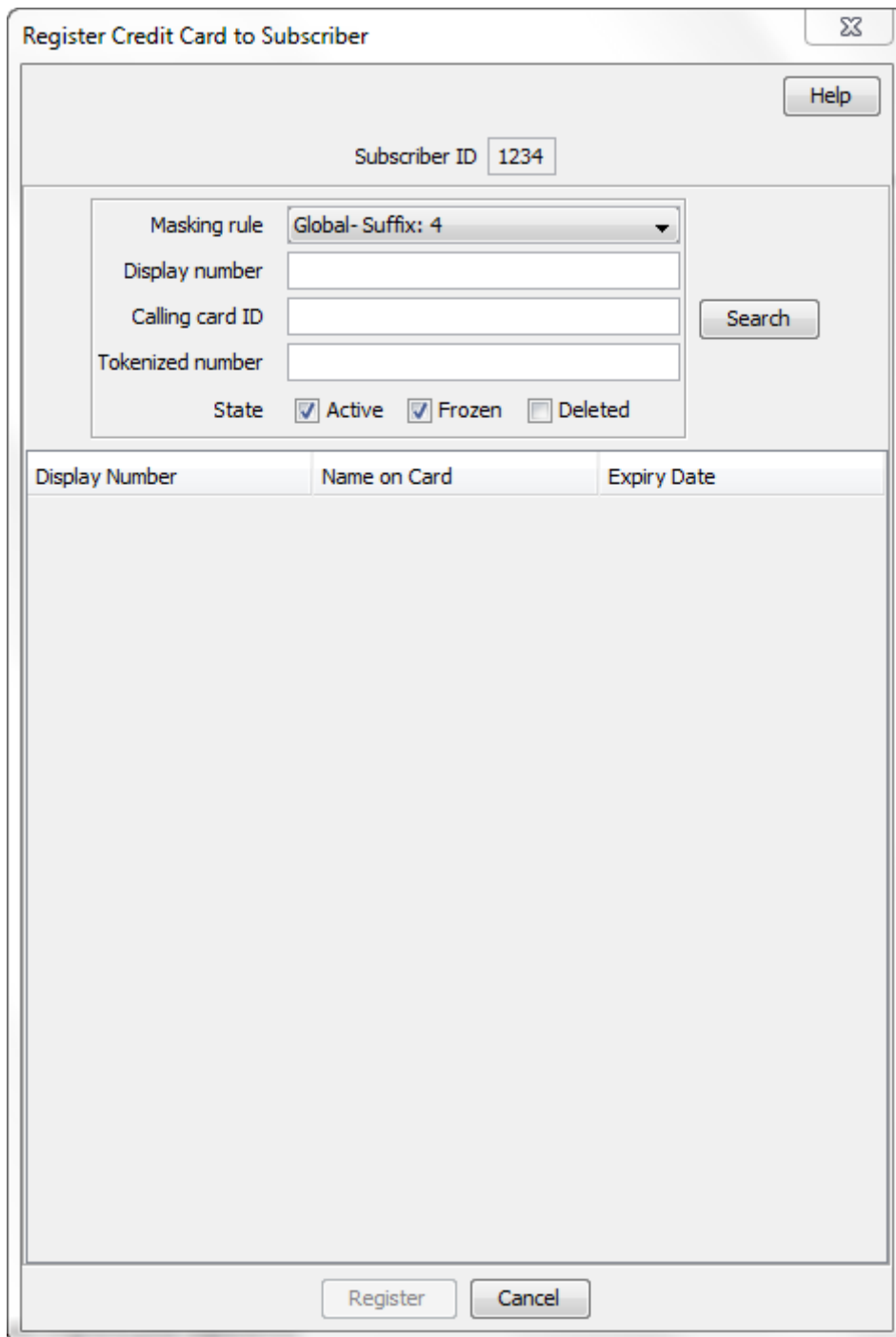
Follow these steps to register a credit card to a subscriber.

| Step | Action                                                                                                                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Search for the credit card to register. See <i>Finding credit cards</i> (on page 47).                                                                                                                            |
| 2    | Select the credit card to register.                                                                                                                                                                              |
| 3    | Click <b>Register</b> .                                                                                                                                                                                          |
|      | <b>Note:</b> The <b>Register</b> button is disabled if the subscriber already has the allowed number of credit card registrations.                                                                               |
| 4    | If EDR auditing is enabled, then the <b>Change Reason</b> dialog displays. Enter the reason for the change in the <b>Change Reason</b> field, and click <b>OK</b> . The reason can be up to 200 characters long. |



## Register Credit Card to Subscriber screen

Here is an example of the Register Credit Card to Subscriber screen.



The screenshot shows a web application window titled "Register Credit Card to Subscriber". The window has a standard browser-like interface with a close button in the top right corner. Inside the window, there is a "Help" button in the top right. Below the title bar, there is a "Subscriber ID" label followed by a text input field containing the value "1234".

Below the Subscriber ID field, there is a form area with several input fields and a "Search" button:

- "Masking rule" is a dropdown menu currently showing "Global- Suffix: 4".
- "Display number" is a text input field.
- "Calling card ID" is a text input field.
- "Tokenized number" is a text input field.
- Below these fields, there are three checkboxes: "Active" (checked), "Frozen" (checked), and "Deleted" (unchecked).
- A "Search" button is located to the right of the input fields.

Below the form area, there is a table with three columns: "Display Number", "Name on Card", and "Expiry Date". The table is currently empty.

At the bottom of the window, there are two buttons: "Register" and "Cancel".

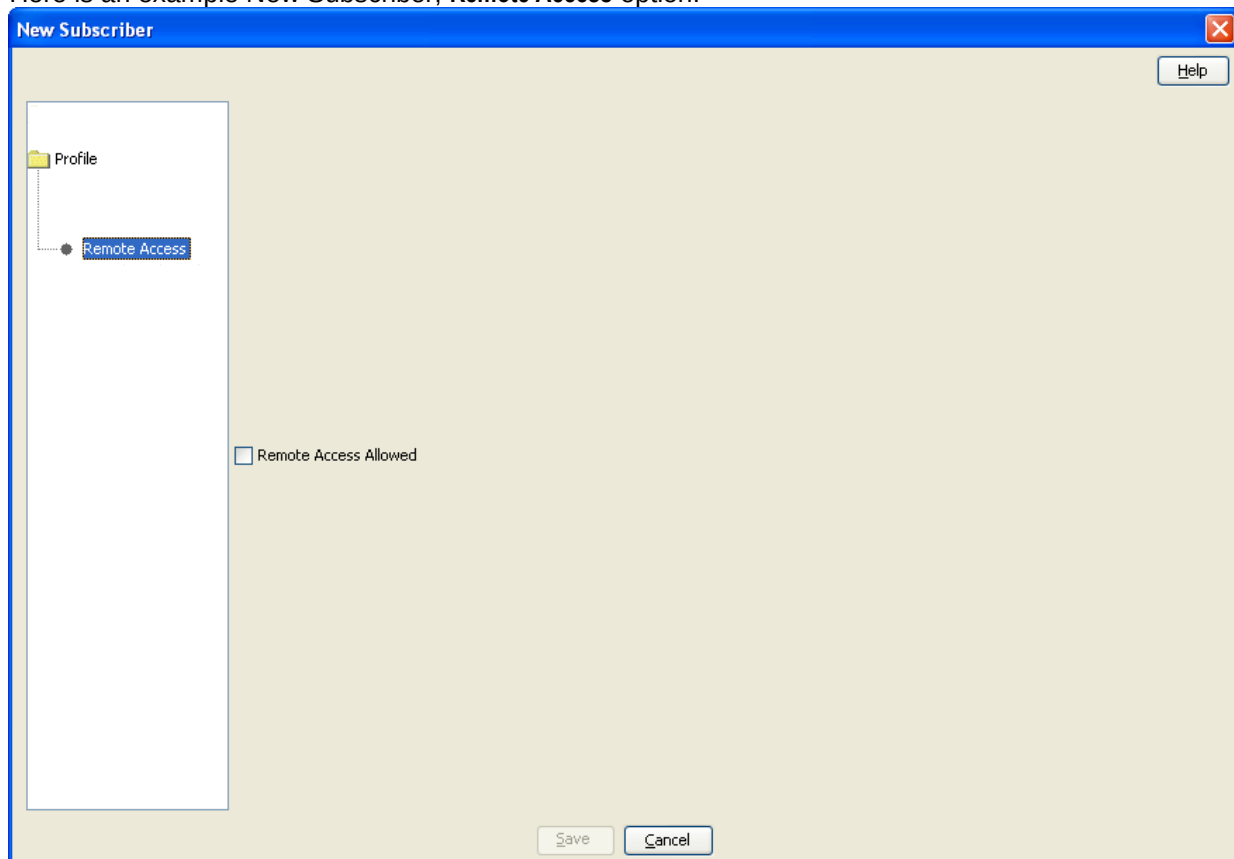
## Remote Access

Follow these steps to add remote access to a new subscriber.

| Step | Action                                                                                                                                                                                                                                                                                                   |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Subscriber screen, select the Profile, Remote Access option from the left hand menu.<br><b>Result:</b> You see the <i>Remote Access</i> (See example on page 108) configuration option.                                                                                                       |
| 2    | If you want the subscriber to have remote access, select the <b>Remote Access Allowed</b> check box.<br><b>Note:</b> The subscriber will only be able to use remote access IVR if their product type also has the Remote Access check box selected. For details, see <i>Remote Access</i> (on page 193). |
| 3    | Select another option to configure for this subscriber or click <b>Save</b> .<br><b>Note:</b> When you save the new subscriber, you will see the New Wallet screen. Refer to <i>Wallets</i> (on page 112) to finish configuring the new subscriber.                                                      |

## Remote Access option

Here is an example New Subscriber, **Remote Access** option.



## Friends and Family

Follow these steps to add Friends and Family configuration details to a new subscriber.

| Step | Action                                                                                                                                                                                                                                                                                                                               |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Subscriber screen, select the Profile, Friends and Family option from the left hand menu.<br><b>Result:</b> You will see the <i>Friends and Family</i> (See example on page 110) configuration option.                                                                                                                    |
| 2    | From the <b>Active Service</b> options, select the service that should be active for the subscriber.                                                                                                                                                                                                                                 |
| 3    | In the <b>Friends &amp; Destination Settings</b> frame, select the discount prefix for Friends and Destination from the <b>Discount Prefix</b> drop down list.                                                                                                                                                                       |
| 4    | In the <b>Change Count</b> field, enter the total number of change counts for the subscriber.                                                                                                                                                                                                                                        |
| 5    | From the <b>Change date</b> drop down list, select the day, month, year, hour and minute of the most recent change to the subscriber.                                                                                                                                                                                                |
| 6    | From the <b>Friends &amp; Family Settings</b> frame, enter the number of times the subscriber has been changed in the <b>Change count</b> field.                                                                                                                                                                                     |
| 7    | From the <b>Change date:</b> drop down list, select the day, month, year, hour and minute of the most recent change to the subscriber.                                                                                                                                                                                               |
| 8    | In the <b>Friends &amp; Family Numbers</b> frame, edit the number list. To: <ul style="list-style-type: none"> <li>• Add to the list, enter a required number in the <b>New Number</b> field and click <b>Add</b>.</li> <li>• Delete from the list, in the <b>Number List</b>, select the number and click <b>Delete</b>.</li> </ul> |
| 9    | Select another option to configure for this subscriber or click <b>Save</b> .<br><b>Note:</b> When you save the new subscriber, you will see the New Wallet screen. Refer to <i>Wallets</i> (on page 112) to finish configuring the new subscriber.                                                                                  |

## Friends and Family option

Here is an example New Subscriber screen, **Friends and Family** option.

**New Subscriber**

Help

Profile

Friends and Family

**Active Service**

☒ F&F ☐ F&D ☐ None

**Friends & Destination Settings**

Discount prefix: (N/A)

Change Count:

Change date: 8 May 2007

13 19

**Friends & Family Settings**

Change count:

Change date: 8 May 2007

13 19

**Friends & Family Numbers**

**Number List**

**New Number**

Add Delete

Save Cancel

## Closed User Groups

Follow these steps to update the closed user groups (CUG) a subscriber belongs to.

**Warning:** This functionality is only available where rating management for the subscriber is either handled by the VWS, or a third-party domain that supports closed user groups.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New or the Edit Subscriber screen, select the Profile, <b>Closed User Groups</b> option from the left hand menu.<br><b>Result:</b> You see the <b>Closed User Groups</b> (See example on page 111) configuration options.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| 2    | Update the <b>Closed User Group Membership List</b> for the subscriber as required. To: <ul style="list-style-type: none"> <li>Add a closed user group, <ul style="list-style-type: none"> <li>Select the CUG you want from the <b>Available Closed User Groups</b> drop down list.</li> <li>Click <b>Add</b>.</li> </ul> </li> </ul> <b>Result:</b> The closed user group name appears in the list. <ul style="list-style-type: none"> <li>Remove a CUG from the list, <ul style="list-style-type: none"> <li>Select it in the Closed User Group Membership List</li> <li>Click <b>Delete</b>.</li> </ul> </li> </ul> <b>Result:</b> The closed user group name is moved from the membership list to the available list. |

| Step | Action                                                                                                                                                                                                                                                  |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | Select another option to configure for this subscriber or click <b>Save</b> .<br><br><b>Note:</b> When you save the new subscriber, you will see the New Wallet screen. Refer to <i>Wallets</i> (on page 112) to finish configuring the new subscriber. |

**Note:** You can also assign CUG membership on the **Closed User Group** tab of the Subscriber Management screen. For more information, see *Editing closed user groups* (on page 66).

## Closed User Groups option

Here is an example New Subscriber, **Closed User Groups** option.

## Balance Topup Rules

The Balance Topup Rules option lets you view the active topup rules defined for the subscriber, and when they were last activated. The rules are used to allocate additional items, such as additional notifications, to specified balance types on a regular basis. For details on creating and activating balance topup rules, see *CCS Technical Guide*.

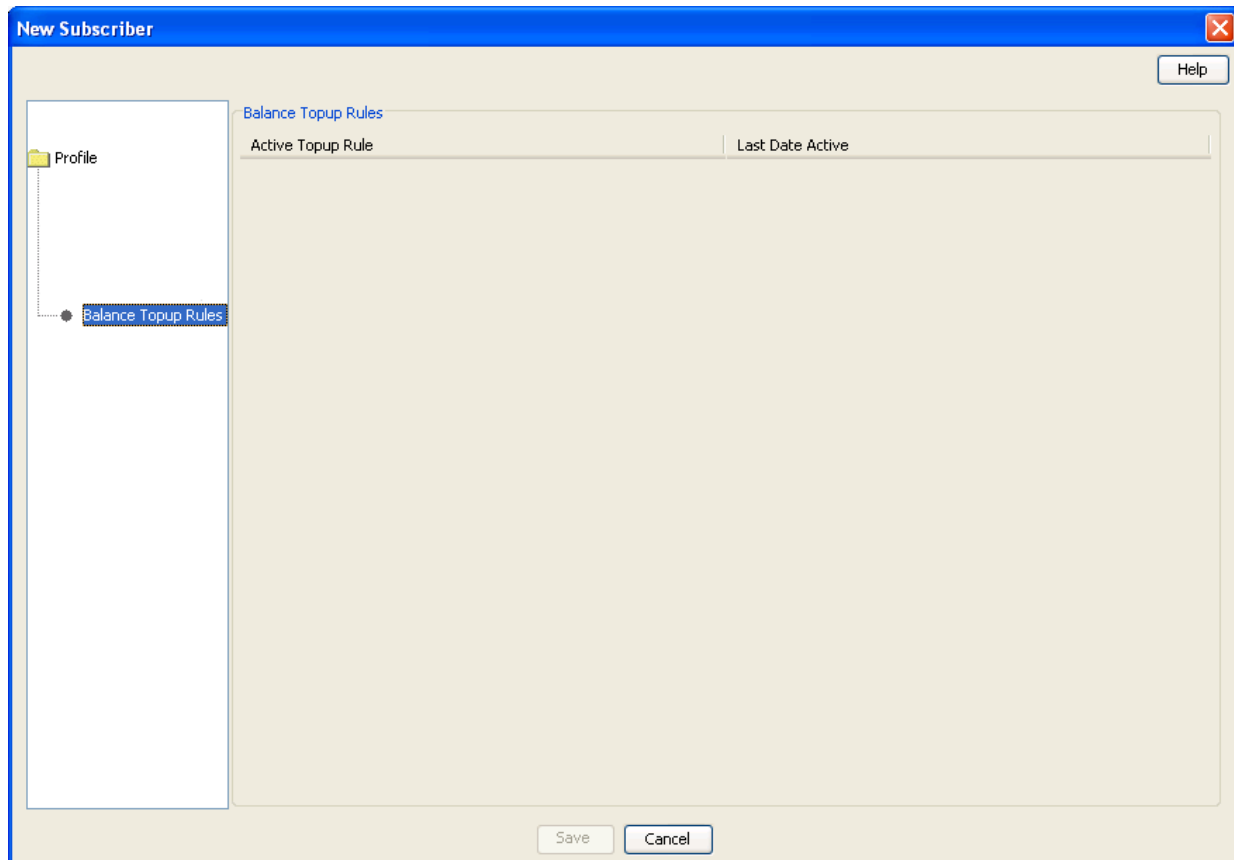
Follow these steps to view the active balance topup rules for a subscriber.

| Step | Action                                                                                                                                                                                                                       |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New or the Edit Subscriber screen, select the <b>Balance Topup Rules</b> option from the left hand menu.<br><br><b>Result:</b> You see the <b>Balance Topup Rules</b> (See example on page 112) configuration option. |

| Step | Action                                                                                                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | Select another option to configure for this subscriber or click <b>Save</b> .                                                                                      |
|      | <b>Note:</b> When you save the new subscriber, you will see the New Wallet screen. Refer to <i>Wallets</i> (on page 112) to finish configuring the new subscriber. |

## Balance Topup Rules option

Here is an example New Subscriber screen, **Balance Topup Rules** option.



## Wallets

The New Wallet screen appears when you first save the configuration for a new subscriber, or when you click **New Wallet** in the Edit Subscriber screen. The new wallet can be a:

- New private wallet
- Link to a shared wallet

## Distributed wallets

When you add a new wallet for a subscriber you can specify that the wallet balances should be distributed across separate charging and tracking domains.

For a distributed wallet the charging domain:

- Will hold chargeable balances
- Can be either a VWS or a Diameter domain type

The tracking domain:

- Will hold fraud and expenditure balances
- Must be a VWS domain type

## Wallet rules

The following rules apply when creating a new wallet for a subscriber:

- 1 By default, a new wallet will be created on a VWS charging domain and not distributed across a charging domain and a tracking domain.
- 2 You can only specify a charging and a tracking domain for a subscriber's wallet when you add the new wallet. If you add a non-distributed wallet for subscriber (that is, specify a charging domain only for the wallet), then you will not be able to edit the wallet later to add a tracking domain.
- 3 If you specify a VWS domain type for the charging domain then you must specify the same VWS instance for the tracking domain.
- 4 Only balances held on a VWS domain type will be accessible through the Edit Subscriber screen.
- 5 If a subscriber's wallet is distributed across an external charging domain and a VWS tracking domain, then you will only be able to access fraud and expenditure balances in the Edit Subscriber screen. That is, you will only be able to access balances where the balance category is set to 'Expenditure Balance' or 'Fraud Balance'.

## New Wallet screen

Here is an example New Wallet screen.

**New Wallet for Subscriber 4409548**

Type of Wallet

Link To Existing Wallet ☐

Charging Domain: PCDEV

Tracking Domain: None

Wallet Reference:

Product Type: BL 1

Display Currency: GBP

Wallet Currency: United Kingdom (Great Britain), Pound Sterling

Customer: No Customer Selected

Limit Type: Prepaid

Minimum Credit: 0.00

Maximum Concurrent Accesses: 1

OK Cancel

## New Wallet fields

This table describes the function of each field.

| Field                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Link To Existing Wallet     | Selecting this option indicates that the wallet is shared. This field will be disabled for non-VWS charging domains.                                                                                                                                                                                                                                                                                                                         |
| Charging Domain             | <p>The domain to use for chargeable balance types. The drop down list will display all available domains. This field will be disabled if <b>Link To Existing Wallet</b> is selected.</p> <p><b>Note:</b> For distributed wallets the system will support either Diameter or VWS charging domains.</p>                                                                                                                                        |
| Tracking Domain             | <p>The domain for balance types used for tracking promotions and fraud. The drop down list will display all available VWS domains.</p> <p><b>Note:</b> A VWS must be used.</p>                                                                                                                                                                                                                                                               |
| Wallet Reference            | <p>The wallet reference for one of:</p> <ul style="list-style-type: none"> <li>• The wallet on a VWS or external charging domain</li> <li>• For a shared wallet on a VWS charging domain</li> </ul> <p>If this field is left blank, then the wallet reference will be generated automatically.</p> <p><b>Note:</b> This field becomes enabled if <b>Link to Existing Wallet</b> is selected or if a non VWS charging domain is selected.</p> |
| Product Type                | The product type associated with the wallet. For more information on product types, see <i>Product Type</i> (on page 155).                                                                                                                                                                                                                                                                                                                   |
| Display Currency            | The currency used to display the value in the <b>Minimum Credit</b> field.                                                                                                                                                                                                                                                                                                                                                                   |
| Wallet Currency             | The currency used to hold monetary values in this wallet.                                                                                                                                                                                                                                                                                                                                                                                    |
| Customer                    | The customer who has access to this wallet.                                                                                                                                                                                                                                                                                                                                                                                                  |
| Limit Type                  | <p>Indicates if the limit type associated with this wallet is:</p> <ul style="list-style-type: none"> <li>• Prepaid</li> <li>• Single Use</li> <li>• Postpaid</li> <li>• Limited Postpaid</li> </ul>                                                                                                                                                                                                                                         |
| Minimum Credit              | For limited postpaid wallets, this is the minimum credit value for the wallet.                                                                                                                                                                                                                                                                                                                                                               |
| Maximum Concurrent Accesses | <p>The total number of accesses that can be supported against the wallet at any one time.</p> <p><b>Note:</b> Setting this field to more than 1 may change the way charges are applied to balances. For more information about how this parameter affects balance charges, see <code>alwaysUsePreferred</code> parameter in <i>CCS Technical Guide</i>.</p>                                                                                  |

### Adding a new VWS wallet

Follow these steps to add a new wallet to a subscriber on a VWS domain.

See *New Wallet fields* (on page 114) for a description of the fields on the New Wallet screen.

| Step | Action                                                                           |
|------|----------------------------------------------------------------------------------|
| 1    | In the New Wallet screen, ensure <b>Link To Existing Wallet</b> is not selected. |



| Step | Action                                                                                                                                                                                                                                            |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | From the <b>Charging Domain</b> drop down list select a VWS domain.<br>This field is populated by the <b>Domain</b> tab. For more information, see <i>Domain</i> (on page 475).                                                                   |
| 3    | From the drop down list, select the <b>Product Type</b> that will be associated with this wallet.<br>This field is populated by the <b>Product Type</b> tab. For more information, see <i>Subscriber Management - Product Type</i> (on page 155). |
| 4    | From the <b>Display Currency</b> drop down list, select the currency that the <b>Minimum Credit</b> field will be displayed in.                                                                                                                   |
| 5    | From the <b>Wallet Currency</b> drop down list, select the currency that will be used for monetary values for this wallet.<br>All available currencies are displayed in this list.                                                                |
| 6    | If required, select the <b>Customer</b> from drop down list who will have access to this wallet.<br>This field is populated by the <b>Customer</b> tab. For more information, see <i>Customer</i> (on page 59).                                   |
| 7    | Select the <b>Limit Type</b> from the drop down list that will be used for this wallet.<br><b>Note:</b> This field will be disabled if a non VWS charging domain is selected.                                                                     |
| 8    | If you selected <code>Limited Postpaid</code> for the limit type, enter the minimum credit value for this Wallet in the <b>Minimum Credit</b> field.<br><b>Note:</b> This field will be disabled if a non VWS charging domain is selected.        |
| 9    | In the <b>Maximum Concurrent Accesses</b> field, enter the total number of accesses that can be supported against the wallet at any one time.<br><b>Note:</b> This field will be disabled if a non VWS charging domain is selected.               |
| 10   | Click <b>OK</b> to save the new wallet.                                                                                                                                                                                                           |

### Adding a third party domain wallet

Follow these steps to add a new non distributed wallet to a subscriber using a third party domain.

See *New Wallet fields* (on page 114) for a description of the fields on the New Wallet screen.

| Step | Action                                                                                                                                                                                                 |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Ensure <b>Link To Existing Wallet</b> is not selected.                                                                                                                                                 |
| 2    | From the <b>Charging Domain</b> drop down list, select the third party domain for the wallet. This field is populated by the <b>Domain</b> tab. For more information, see <i>Domain</i> (on page 475). |
| 3    | From the <b>Tracking Domain</b> drop down list, ensure <code>None</code> is selected.                                                                                                                  |
| 4    | Enter the identifier for the wallet in the <b>Wallet Reference</b> field. If you leave this field blank then the external wallet reference is auto-generated using the value of the wallet ID.         |
| 5    | Click <b>OK</b> to save the new Wallet.                                                                                                                                                                |

### Adding a distributed wallet

Follow these steps to add a new distributed wallet to a subscriber.

See *New Wallet fields* (on page 114) for a description of the fields on the New Wallet screen.

| Step | Action                                                                                                                                                                                                                                                                                                    |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Wallet screen, ensure <b>Link To Existing Wallet</b> is not selected.                                                                                                                                                                                                                          |
| 2    | From the <b>Charging Domain</b> drop down list, select the domain to use for chargeable balances.<br>This field is populated by the <b>Domain</b> tab. For more information, see <i>Domain</i> (on page 475).                                                                                             |
| 3    | From the <b>Tracking Domain</b> drop down list, select the VWS domain to use for expense and fraud balances.                                                                                                                                                                                              |
| 4    | If you selected a third party charging domain then in the <b>Wallet Reference</b> field type the external wallet reference.                                                                                                                                                                               |
| 5    | From the drop down list, select the <b>Product Type</b> that will be associated with this wallet.<br>This field is populated by the <b>Product Type</b> tab. For more information, see <i>Subscriber Management - Product Type</i> (on page 155).                                                         |
| 6    | From the <b>Display Currency</b> drop down list, select the currency that the <b>Minimum Credit</b> field will be displayed in.                                                                                                                                                                           |
| 7    | From the <b>Wallet Currency</b> drop down list, select the currency that will be used for monetary values for this wallet.<br>All available currencies are displayed in this list.                                                                                                                        |
| 8    | If required, select the <b>Customer</b> from the drop down list who will have access to this wallet.<br>This field is populated by the <b>Customer</b> tab. For more information, see <i>Customer</i> (on page 59).<br><b>Note:</b> This field will be disabled if a non VWS charging domain is selected. |
| 9    | Select the <b>Limit Type</b> from the drop down list that will be used for this wallet.<br><b>Note:</b> This field will be disabled if a non VWS charging domain is selected.                                                                                                                             |
| 10   | If you selected <i>Limited Postpaid</i> for the limit type, enter the minimum credit value for this Wallet in the <b>Minimum Credit</b> field.<br><b>Note:</b> This field will be disabled if a non VWS charging domain is selected.                                                                      |
| 11   | In the <b>Maximum Concurrent Accesses</b> field, enter the total number of accesses that can be supported against the wallet at any one time.<br><b>Note:</b> This field will be disabled if a non VWS charging domain is selected.                                                                       |
| 12   | Click <b>OK</b> to save the new wallet.                                                                                                                                                                                                                                                                   |

### Adding a linked wallet

Follow these steps to add a new link to an existing wallet for a subscriber.

See *New Wallet fields* (on page 114) for a description of the fields on the New Wallet screen.

| Step | Action                                                                                                                    |
|------|---------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Wallet screen, select <b>Link To Existing Wallet</b> .                                                         |
| 2    | Enter the identifier for the shared wallet in the <b>Wallet Reference</b> field.<br>You must enter an existing wallet ID. |
| 3    | If this is a distributed wallet, select the <b>Tracking Domain</b> from the drop down list of available VWS domains.      |

| Step | Action                                                                                                                                                                                                                                           |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | Select the <b>Product Type</b> from the drop down list that will be associated with this wallet.<br>This field is populated by the <b>Product Type</b> tab. For more information, see <i>Subscriber Management - Product Type</i> (on page 155). |
| 5    | From the drop down list, select the <b>Display Currency</b> to use to display the minimum credit for the wallet.                                                                                                                                 |
| 6    | Click <b>OK</b> to save the new linked wallet.                                                                                                                                                                                                   |

## Editing Subscribers

### Introduction

The Edit Subscriber screen allows you to *Editing subscriber configuration* (on page 119) and profile configuration options.

From this screen you can also:

- *Record subscriber comments* (on page 120)
- *Configure subscriber zones* (on page 122)
- *Edit wallets* (on page 126)
- *Edit wallet balances* (on page 130)
- *Change wallet balance adjustment limits* (on page 135)
- *Merge wallets* (on page 137)
- *Reservations* (on page 139)
- *View EDRs* (on page 142)
- *Execute business process logic* (on page 148)
- *View subscriber promotions* (on page 150)
- *Perform credit transfers* (on page 152)

If the NCC EDR auditing feature is enabled, and you update the financial data for a subscriber; for example, by updating their wallets, then you will be required to record the reason for the change when you save the subscriber record. For more information, see *About Auditing Changes to Subscriber Data* (on page 95).

### Edit subscriber screen layout

The configuration and layout for the Edit Subscriber screen is defined in the Subscriber Profile Manager (SPM). When you open the Edit Subscriber screen, the fields and options you see depend on the configuration defined in the SPM for the subscriber's product type and service provider (see following screen example). This means that you may see one of the following:

- The default configuration for the Edit Subscriber screen containing all the fields and options available as a standard
- A customized Edit Subscriber screen containing a subset of the standard fields and options, plus any subscriber profile groups, fields and zones that have been configured specifically for you. The labels given to the fields and options may also be different from the default labels

You see the available options listed in the menu on the left hand side of the screen. To view or edit the fields for a particular option, select the option in the list.

**Note:** For information on configuring the Edit Subscriber screen, refer to *Subscriber Profile Manager User's Guide*.

## Example Edit Subscriber screen

Here is an example Edit Subscriber screen configured to show subscriber details when the Details option is selected.

Access to elements of this screen are controlled by user permissions. If you cannot see some of the functionality described for this screen, your permissions may have been set to restrict access to that element.

## Reverting unsaved changes

You can revert any unsaved changes to a subscriber's configuration by clicking **Revert**. The data will revert to the most recently saved version of the subscriber's configuration.

For details see *Reverting subscriber edits* (on page 120).

## Subscriber details fields

This table describes the function of the standard subscriber details fields that may be available in the Edit Subscriber screen.

**Note:** Some of these fields may have been given different labels in your screens depending on how the Edit Subscriber screen has been configured.

| Field       | Description                                   |
|-------------|-----------------------------------------------|
| Card Number | Specifies the card number for the subscriber. |

| Field                               | Description                                                                                                                                                                                                                     |
|-------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subscriber ID                       | The Calling Line Identifier (CLI) for this subscriber. This identifies the line that the call is being placed from. When a call is made, the system determines which wallet to charge based on the subscriber ID of the caller. |
| Description                         | A description for this subscriber.                                                                                                                                                                                              |
| Is Defined                          | Either removes a subscriber's PIN (unselected), or enables adding or editing a subscriber's PIN (selected)                                                                                                                      |
| PIN                                 | Sets the subscriber's PIN (Is Defined must be selected).                                                                                                                                                                        |
| Confirm PIN                         | Confirmation of the subscriber's PIN (Is Defined must be selected).                                                                                                                                                             |
| Language                            | Sets the language to use for announcements for this subscriber.                                                                                                                                                                 |
| Subscriber ID Restricted            | Sets whether or not the subscriber may set the presentation restricted indicator in the outgoing connect message for services. For further information refer to <i>CCS User's Guide</i> .                                       |
| Disable Incoming Calls When Roaming | Sets whether or not the subscriber may receive incoming calls while roaming.                                                                                                                                                    |
| Blacklisted                         | Sets whether or not the subscriber may use the service. When selected, the service will be disabled.<br>For more information about blacklisted subscribers, see <i>Adding Subscribers</i> (on page 99).                         |
| Disable SMS Notifications           | Sets whether or not the subscriber may receive SMS notifications.                                                                                                                                                               |
| Subscriber Information              | Core information about the subscriber. For information purposes only.                                                                                                                                                           |

## Editing subscriber configuration

Follow these steps to edit the configuration for an existing subscriber.

**Note:** You can also access the Edit Subscriber screen and edit subscriber configuration from the CCP Dashboard. For details, refer to *Customer Care Portal User's Guide*.

| Step | Action                                                                                                                                                                                                                                                                                                                     |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                    |
| 2    | On the <b>Subscriber</b> tab, search for the subscriber to edit. For details see <i>Finding subscribers</i> (on page 98).                                                                                                                                                                                                  |
| 3    | Select the row in the search results for the subscriber to edit.<br><br><b>Note:</b> If the subscriber has both a primary and a secondary wallet, there will be a row in the search results for each wallet. The wallet type is displayed next to the wallet reference number. Select the row for the wallet type to edit. |
| 4    | Click <b>Edit</b> .<br><b>Result:</b> You see the Edit Subscriber screen with the wallet type indicated in the screen title bar.                                                                                                                                                                                           |
| 5    | Edit the subscriber details fields as required. See <i>Editing configuration options</i> (on page 120).                                                                                                                                                                                                                    |
| 6    | Edit the subscriber profile options as described in <i>Adding Subscribers</i> (on page 99).                                                                                                                                                                                                                                |
| 7    | Edit the wallets for the subscriber as required. See <i>Edit Wallets</i> (on page 126).                                                                                                                                                                                                                                    |
| 8    | Execute business process logic actions as required. See <i>Execute Business Process Logic</i> (on page 148).                                                                                                                                                                                                               |

| Step | Action                                                                                                                                                                                                                                                                                                                                                                  |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 9    | Perform credit transfers as required. See <i>Perform Credit Transfers</i> (on page 152).                                                                                                                                                                                                                                                                                |
| 10   | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                     |
| 11   | If EDR auditing is enabled and you have changed the financial status of the subscriber, then the <b>Change Reason</b> dialog displays. Enter the reason for the change in the <b>Change Reason</b> field, and click <b>OK</b> . The reason can be up to 200 characters long.<br>See <i>About Auditing Changes to Subscriber Data</i> (on page 95) for more information. |

## Editing configuration options

Follow these steps to edit the configuration options for a subscriber account.

| Step | Action                                                                                                 |
|------|--------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Subscriber screen, select the option from the left hand menu that holds the field to edit. |
| 2    | Enter the new details as required.                                                                     |
| 3    | Repeat steps 1 and 2 for all the fields to edit.                                                       |
| 4    | When you have completed your edits, click <b>Save</b> .                                                |

## Reverting subscriber edits

Follow these steps to revert unsaved changes to the subscriber configuration.

| Step | Action                                                                                                                                                                                                      |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Subscriber screen, click <b>Revert</b> .<br><b>Result:</b> Any unsaved changes to the subscriber configuration will be reversed and the subscriber will be redisplayed using the original data. |

## Record Subscriber comments

### Introduction

The **Comments** panel, available from the Edit Subscriber screen, allows you to add notes about the subscriber's account. You can add, edit and delete comments in the panel.

### User access

You can access comments in the Edit Subscriber screen provided you have been given sufficient privileges.

This table describes the privileges for comments.

| Privilege   | Description                                                                                                                                                                                                                                |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Read/Only   | The Comments panel will be visible through the screens, but no buttons will be available and you will not be able to edit, create, or delete comments.                                                                                     |
| Read/Modify | The Comments panel will be visible through the screens, and the <b>Add</b> and <b>Edit</b> buttons will be available. You will be able to create and edit your own comments, but you will not be able to edit the comments of other users. |

| Privilege     | Description                                                                                                                                                                                              |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Create/Delete | The Comments panel will be visible through the screens, and the <b>Add</b> , <b>Edit</b> and <b>Delete</b> buttons will be available. You will be able to create, edit and remove any existing comments. |

**Note:** Access permissions are managed through the user templates defined in the Service Management System User Management screen. For information on creating and maintaining user templates, see *SMS User's Guide*.

## Comments panel

Here is an example **Comments** panel in the Edit Subscriber screen.

## Adding a comment

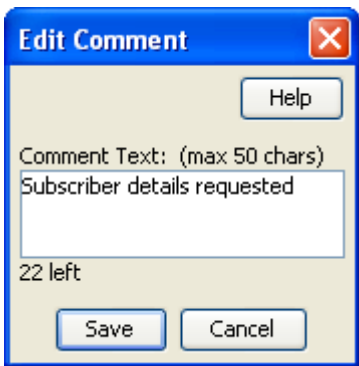
Follow these steps to add a comment to a Subscriber record.

| Step | Action                                                                                                 |
|------|--------------------------------------------------------------------------------------------------------|
| 1    | On the left hand panel in the Edit Subscriber screen, select the option containing the Comments panel. |
| 2    | Click <b>Add</b> .<br><b>Result:</b> You see the Add Comment screen.                                   |

- |   |                                                                                                     |
|---|-----------------------------------------------------------------------------------------------------|
| 3 | In the <b>Comment Text</b> field type in your comment. The comment can be up to 50 characters long. |
| 4 | Click <b>Save</b> .<br><b>Result:</b> You are returned to the Edit Subscriber screen                |

## Editing a comment

Follow these steps to edit a comment on a subscriber record.

| Step | Action                                                                                                        |
|------|---------------------------------------------------------------------------------------------------------------|
| 1    | On the left hand panel in the Edit Subscriber screen, select the option containing the <b>Comments</b> panel. |
| 2    | Click <b>Edit</b> .<br><b>Result:</b> You see the Edit Comment screen.                                        |
|      |                              |
| 3    | Modify the comment in the <b>Comment Text</b> field, as required..                                            |
| 4    | Click <b>Save</b> .<br><b>Result:</b> You are returned to the Edit Subscriber screen                          |

## Deleting a comment

Follow these steps to delete a comment from a subscriber record.

| Step | Action                                                                                                          |
|------|-----------------------------------------------------------------------------------------------------------------|
| 1    | On the left hand panel in the Edit Subscriber screen, select the option containing the <b>Comments</b> panel.   |
| 2    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation screen for the comment.                 |
| 3    | Click <b>Yes</b> .<br><b>Result:</b> The comment is deleted and you are returned to the Edit Subscriber screen. |

## Configure Subscriber Zones

### Introduction

Zones provide the facility to customize the services provided to the subscriber depending on their location. For example, a home zone could be defined where the subscriber may obtain cheaper calls.

A subscriber may have up to nine zones. Each zone can be configured to include a group of up to five rectangular and circular shapes. The location and area covered by each shape is determined by its coordinates (defined in latitude and longitude format). If required, the shapes may overlap.

**Note:** This functionality is only operational if the NCC Location Capabilities Pack (LCP) package is installed.



## User access

You can access zones in the Edit Subscriber screen provided you have been given sufficient privileges. This table describes the privileges that may be assigned to zone.

| Privilege     | Description                                                                                                                                                                                                                                                                                                                                              |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Read/Only     | The zone will be visible through the screens, but you will not be able to edit, create, or delete it.                                                                                                                                                                                                                                                    |
| Read/Modify   | The zone will be visible through the screens, and you will be able to edit it, but you will not be able to create or delete it. This means that you will be able to add, edit and delete shapes for the zone. However, if there is only one shape defined for the zone you will not be able to delete it because this would also delete the zone itself. |
| Create/Delete | The zone will be visible to the user through the screens, and you will be able to add, edit, and delete shapes for it even if there is only one shape defined for the zone. If you delete the only remaining zone shape, then the zone's profile tag will also be removed from the subscriber's profile.                                                 |

**Note:** Access permissions are managed through the user templates defined in the Service Management System User Management screen. For information on creating and maintaining user templates, see *Service Management System User's Guide*.

## Zone group

Zones are defined in zone group panels in the Edit Subscriber screen. A zone group panel can be included where needed using the Subscriber Profile Manager.

## Zone group panel

Here is an example zone group panel.

Home

**Circular Shapes**

| Centre X-Longitude | Centre Y-Latitude | Circle Radius |
|--------------------|-------------------|---------------|
|                    |                   |               |

**Rectangular Shapes**

| Top-Left X-Longitude | Top-Left Y-Latitude | Bottom-Right X-Longitude | Bottom-Right Y-Latitude |
|----------------------|---------------------|--------------------------|-------------------------|
|                      |                     |                          |                         |

New Edit Delete

## Adding a new zone shape

Follow these steps to add a new shape to a zone.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Subscriber screen, select the option that holds the zone to add a shape to.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 2    | In the group for the zone, click <b>New</b> .<br><b>Result:</b> You see the <i>New Zone screen</i> . (See example on page 125)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 3    | Select the option for the zone shape, select one of: <ul style="list-style-type: none"> <li>• Circular Shapes</li> <li>• Rectangular Shapes</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| 4    | If you are specifying a circular zone shape, in the boxes enter the coordinates for the center of the circle and its radius. <ul style="list-style-type: none"> <li>• <b>X (Deg):</b> The longitude coordinate. Restricted to between -179.99999 (W) and 180.00000 (E) degrees.</li> <li>• <b>Y (Deg):</b> The Latitude coordinate. Restricted to between -90.00000 and 90.0000 degrees.</li> <li>• <b>R (Kms):</b> The radius. Restricted to between 0.0000000 and 99999999.9999999 kilometers.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 5    | If you are specifying a rectangular zone shape, enter the coordinates for the top left and bottom right corners of the rectangle.<br>Top-Left Corner: <ul style="list-style-type: none"> <li>• <b>X (Deg):</b> The longitude west coordinate. Restricted to between -179.99999 (W) and 180.00000 (E) degrees and must not equal the value for the longitude east coordinate.</li> <li>• <b>Y (Deg):</b> The latitude north coordinate. Restricted to between -90.00000 and 90.0000 degrees and must be a higher number than the latitude south coordinate.</li> </ul> Bottom-Right Corner: <ul style="list-style-type: none"> <li>• <b>X (Deg):</b> The longitude east coordinate. Restricted to between -179.99999 (W) and 180.00000 (E) degrees and must not equal the value for the longitude west coordinate.</li> <li>• <b>Y (Deg):</b> The latitude south coordinate. Restricted to between -90.00000 and 90.0000 degrees and must be a lower number than the latitude north coordinate.</li> </ul> |
| 6    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Zone screen

Here is an example Zone screen.

## Editing a zone shape

Follow these steps to edit a Zone shape.

| Step | Action                                                                                                                                              |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Subscriber screen, select the option where the zone to edit is defined.                                                                 |
| 2    | In the zone group select the shape to edit and click <b>Edit</b> .<br><b>Result:</b> You see the <i>Edit Zone screen</i> (See example on page 125). |
| 3    | Edit the shape definition as described in <i>Adding a new zone shape</i> (on page 124).                                                             |
| 4    | Click <b>Save</b> .                                                                                                                                 |

## Deleting a zone shape

Follow these steps to delete a Zone shape.

| Step | Action                                                                                                              |
|------|---------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Subscriber screen, select the option where the zone shape to delete is defined.                         |
| 2    | In the zone group select the shape to delete and click <b>Delete</b> .<br><b>Result:</b> The zone shape is deleted. |

## Edit Wallets

### Introduction

The wallet information available in the Edit Subscriber screen will depend on the configuration defined for the product type and service provider for the subscriber (see following screen examples). This means that you may see one of the following:

- The default wallet configuration where all the standard wallet information fields are displayed under a single Wallet option.
- The Edit Subscriber screen may have been customized to contain a subset of the standard wallet information fields. This information may be available under a single option listed in the panel on the left hand side of the screen, or it may be split over more than one option. The labels given to the fields and options may also be different.

You see the available options listed in the menu on the left hand side of the screen. To view or edit the fields for a particular option, select the option in the list.

If EDR auditing is enabled in NCC, and you update the wallets for a subscriber, then you will be required to record the reason for the change in a special **Change Reason** dialog that displays when you save the subscriber record. For more information, see *About Auditing Changes to Subscriber Data* (on page 95).

### Example wallet details

Here is an example Edit Subscriber screen configured to provide wallet details when the Wallets option is selected. It shows the primary and secondary wallets on separate tabs.

**Edit Subscriber 104022113344 - Primary Wallet**

Help

Subscriber

- Details
- Wallets**
- Business Process Logic

Profile

- Call Barring
- Number Translation
- Credit Card
- Remote Access
- Friends and Family
- Closed User Groups
- Balance Topup Rules

Profile Groups

- Periodic Charges

Credit Transfers

- Peer-to-Peer Transfer
- Service Bundle

**Wallets**

Display Currency: GBP Number Of CDRs To Display: 5 View EDRs New Wallet Merge Wallet Details

Primary Secondary

| Balance Type     | Limit Type | Total Value | First Expiry Date |
|------------------|------------|-------------|-------------------|
| General Cash     | Prepaid    | 0.00        |                   |
| Promotional Cash | Prepaid    | 0.00        |                   |
| Bad Pin          |            | 0           |                   |
| Monthly Exp      |            | 0.00        |                   |
| Yearly Exp       |            | 0.00        |                   |
| Free SMS         | Prepaid    | 0           |                   |
| Time             | Prepaid    | 0 (0:00:00) |                   |

Wallet Reference: 1079 Wallet Currency: United Kingdom (Great ...)

Private/Shared: Private Wallet State: Pre-use

Product Type: BL 1 Bill for Product Swap: ☐

Promotional Destination Messages: 0

Maximum Concurrent Accesses: 1 Customer: No Customer Selected

**Wallet Expiry Details**

Define Wallet Expiry Date ☐ Wallet Expiry Date: <Not Set>

**Wallet History**

|                                   |      |                              |      |
|-----------------------------------|------|------------------------------|------|
| Date Last Use                     |      | Last Activation Date         |      |
| Initial Activation Date           |      | Previous Wallet Expiry Date  |      |
| Last Product Type Swap            |      | Previous Balance Expiry Date |      |
| Balance Before Last Recharge      | 0.00 | Date of Last Recharge        |      |
| Most Recently Expired Credit      | 0.00 | Total Expired Credit         | 0.00 |
| Date of Last Credit Card Recharge |      | Last State Change Reason     |      |

Save Cancel

Access to elements of this screen are controlled by user permissions. If you cannot see some of the functionality described for this screen, your permissions may have been set to restrict access to that element.

## Example wallet details

Here is an example Edit Subscriber screen configured to provide wallet details when the Wallets option is selected. It shows how the information appears if the CCP is enabled on your system.

**Edit Subscriber 4411 Primary Wallet**

Buttons: New Wallet, Merge Wallet, View EDRs

Display Currency: GBP | Details | Add Balance | All Balance Categories

| Balance Type     | Limit Type | Total Value | First Expiry Date | Category   |
|------------------|------------|-------------|-------------------|------------|
| General Cash     | Prepaid    | 91.84       |                   | Chargeat   |
| Promotional Cash | Prepaid    | 10.00       | 2010-10-19 15:10  | Chargeat   |
| Bad Pin          |            | 0           |                   | Internal t |
| Monthly Exp      |            | 0.00        |                   | Expendit   |
| Yearly Exp       |            | 0.00        | 2011-10-19 15:20  | Expendit   |
| Free SMS         | Prepaid    | 1           |                   | Chargeat   |

**Wallet Information**

Wallet Reference: 2 | Wallet Currency: Britain (Great Britain), I

Private/Shared: Private | Maximum Concurrent Accesses: 1

Promotional Destination Messages: 0 | Bill for Product Swap: ☐

Product Type: PT1 | Wallet State: Active | Customer: No Customer Selected

**Wallet Expiry Details**

Define Wallet Expiry Date: ☒ | Wallet Expiry Date: 03-Oct-2009 15:00:00

**Wallet History**

|                              |                     |                              |                     |
|------------------------------|---------------------|------------------------------|---------------------|
| Date Last Use                | 2007-11-01 16:28:45 | Last Activation Date         | 2007-10-25 08:10:41 |
| Initial Activation Date      | 2007-10-25 08:10:41 | Previous Wallet Expiry Date  | 2009-10-02 15:00:00 |
| Last Product Type Swap       |                     | Previous Balance Expiry Date |                     |
| Balance Before Last Recharge | 94.34               | Date of Last Recharge        | 2007-11-01 16:28:45 |
| Most Recently Expired Credit | 0.00                | Total Expired Credit         | 0.00                |

Buttons: Save, Cancel, Revert

Access to elements of this screen are controlled by user permissions. If you cannot see some of the functionality described for this screen, your permissions may have been set to restrict access to that element.

## Default wallet configuration

The default configuration for the Edit Subscriber screen contains the following categories of information and fields for subscribers' wallets. Depending on how your screens have been configured, you will be able to edit some or all of this data:

- Wallet information
- Wallet expiry details
- Wallet history
- Wallet balances
- Product type
- Wallet state
- Customer

## Wallet type

The Edit Subscriber screen lets you look at the wallet details for the primary and secondary wallets. In a standard installation the primary and the secondary wallets appear on separate tabs in the Edit Subscriber screen. You can select the wallet by selecting its tab.

If the CCP is enabled on your system then you will only be able to access either the primary or the secondary wallet from the Edit Subscriber screen, but not both. The wallet type will:

- Depend on which row you selected in the subscriber search results table
- Be clearly indicated in the Edit Subscriber screen title

## Wallet field groups

This table describes the function of the standard groups of fields that may be available with a wallet in the Edit Subscriber screen. Each group contains a standard set of fields, some of which may be editable.

**Note:** This table shows the default labels given to the information groups. These labels may be different in your screens depending on how the Edit Subscriber screen has been configured.

| Group Label                                     | Description                                                                                                |
|-------------------------------------------------|------------------------------------------------------------------------------------------------------------|
| Balance Types panel                             | A panel showing the available wallet balances. For details, see <i>Edit Wallet Balances</i> (on page 130). |
| Wallet Information                              | Core information about the wallet. For details, see <i>Editing wallet information</i> (on page 128).       |
| Product Type, Wallet State, and Customer fields | Wallet attributes. For details, see <i>Product Type, Wallet State and Customer fields</i> (on page 129).   |
| Wallet Expiry Details                           | Describes wallet expiry date (if any). For details, see <i>Setting wallet expiry dates</i> (on page 130).  |
| Wallet History                                  | For information purposes only. Provides details about the wallet history.                                  |

## Wallet Information group

Here is an example **Wallet Information** group.

The screenshot shows a form titled "Wallet Information" with the following fields:

- Wallet Reference: 43
- Wallet Currency: United Kingdom (Great ...)
- Private/Shared: Private
- Maximum Concurrent Accesses: 1
- Promotional Destination Messages: 0
- Bill for Product Swap: ☐

## Editing wallet information

Follow these steps to edit the details in the Wallet Information group.

**Warning:** Although the names of the fields in the group remain the same, the group name will depend on how the Edit Subscriber screen has been configured.

| Step | Action                                                                                                                      |
|------|-----------------------------------------------------------------------------------------------------------------------------|
| 1    | From the left hand menu in the Edit Subscriber screen, select the option containing the Wallet Information group of fields. |

| Step | Action                                                                                                                                                                                                                                                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | In the Wallet Information panel select a different <b>Wallet Currency</b> from the drop down list, if required.<br>This defines the currency used for monetary values for this Wallet.                                                                                                                             |
| 3    | If required, enter a new number for the <b>Maximum Concurrent Accesses</b> that can be supported against the subscriber at any one time.                                                                                                                                                                           |
| 4    | If you have changed the subscriber's product type and you want to charge for this change then select the <b>Bill for Product Swap</b> check box.<br><br><b>Tip:</b> This charge is made when the current subscriber edits are saved. The next time you edit this subscriber this check box will have been cleared. |
| 5    | If you have completed your subscriber edits, click <b>Save</b> .                                                                                                                                                                                                                                                   |
| 6    | If EDR auditing is enabled, then the <b>Change Reason</b> dialog displays. Enter the reason for the change in the <b>Change Reason</b> field, and click <b>OK</b> . The reason can be up to 200 characters long.                                                                                                   |

## Product Type, Wallet State and Customer fields

This table describes the function of each field.

| Field        | Description                                                                                                                                                                                                                                                         |
|--------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Product Type | The product type which applies when this subscriber uses this wallet.                                                                                                                                                                                               |
| Wallet State | The state the current wallet is in. A wallet's state controls what features of the service a wallet can use, and reflects where in the wallet life cycle the wallet is. For more information about the wallet life cycle, see <i>Wallet lifecycle</i> (on page 12). |
| Customer     | The customer the wallet is associated with. For more information about customers, see <i>Customer</i> (on page 59).                                                                                                                                                 |

## Activating a wallet

Follow these steps to set a wallet state to active.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | From the left hand menu in the Edit Subscriber screen, select the option containing the <b>Wallet State</b> field.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 2    | From the <b>Wallet State</b> drop down list, select <i>Active</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 3    | Click <b>Save</b> .<br><br><b>Result:</b> The subscriber record will be saved and the wallet state will be set to active. Any wallet activation promotions which have been configured for the subscriber or product type will be applied.<br><br><b>Note:</b> If a wallet activation promotion has been configured for a balance type that exceeds the maximum balance value defined for the balance type and the maximum balance policy is: <ul style="list-style-type: none"> <li>Limit additional credits, the wallet state will be set to active and the balance will be set to the maximum balance value.</li> <li>Reject credits over, the wallet state and wallet balances will not be updated.</li> </ul> |

| Step | Action                                                                                                                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | If EDR auditing is enabled, then the <b>Change Reason</b> dialog displays. Enter the reason for the change in the <b>Change Reason</b> field, and click <b>OK</b> . The reason can be up to 200 characters long. |

## Wallet Expiry Details group

Here is an example of the Wallet Expiry Details group fields.

## Setting wallet expiry dates

Follow these steps to set the expiry date for a wallet.

| Step | Action                                                                                                                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | From the left hand menu in the Edit Subscriber screen, select the option containing the Wallet Expiry Details group of fields.                                                                                   |
| 2    | In the Wallet Expiry Details group ensure <b>Define Wallet Expiry Date</b> is selected.                                                                                                                          |
| 3    | Select the <b>Wallet Expiry Date</b> from the drop down window.<br>For more information about setting dates, see Time and Date panels.                                                                           |
| 4    | If you have completed editing the subscriber, click <b>Save</b> .                                                                                                                                                |
| 5    | If EDR auditing is enabled, then the <b>Change Reason</b> dialog displays. Enter the reason for the change in the <b>Change Reason</b> field, and click <b>OK</b> . The reason can be up to 200 characters long. |

## Edit Wallet Balances

### Introduction

You can view and edit balances for the wallets on the CCS VWS domain.

**Note:** If the wallet is on a third party domain then you will not be able to access balance type information in the Edit Subscriber screen.

If EDR auditing is enabled in NCC, and you update the wallet balances for a subscriber, then you will be required to record the reason for the change in a special **Change Reason** dialog that displays when you save the subscriber record. For more information, see *About Auditing Changes to Subscriber Data* (on page 95).

For each balance type, you can specify:

- A set of bucket values and expiry dates
- Offset dates for bucket balances
- The limit type
- The minimum credit (only available on general cash balances)
- The display currency (not valid for non-cash balances such as time or notifications).

Bucket values are used to update balances. When you add a new bucket for a balance type, the bucket value is added to its current balance. When you edit a bucket value, the balance is changed to the new value.



Bucket expiry dates are used to define when the bucket balance will expire. When a bucket expiry date is reached, its balance is subtracted from the current balance value of the balance type.

**Note:** For time balance types, you specify bucket values in seconds. The value is shown on screen in both minutes and seconds. This functionality is only available if you have the appropriate license.

## Distributed wallet balances

If the wallet has been distributed across separate charging and tracking domains, then you may not be able to edit all wallet balances through the Edit Subscriber screen. If the wallet has been configured to use:

- A VWS domain for charging and tracking, you will be able to view and edit all wallet balances
- A third party charging domain and no tracking domain, you will not be able to view or edit any wallet balances
- A third party charging domain and a VWS tracking domain, you will only be able to view or edit expense and fraud balances

## Maximum balance values

You can set a maximum value for prepaid balance types. If set, the total value held in the wallet for the balance type may not be updated to exceed the defined maximum value.

Maximum values are configured on the **Balance Types** tab in the wallet management screen. For details, see *Balance Types* (on page 234).

## Offset dates

You can specify an offset date for a bucket balance which defines a future date from which the bucket balance will become available. You can specify offset dates for these balance type categories:

- Chargeable
- Cross balance discount

## Balance Types panel

Here is an example Balance Types panel in the Edit Subscriber screen.

| Display Currency <span>GBP</span> <span>Details</span> <span>Add Balance</span> <span>All Balance Categories</span> |            |             |                   |                   |                     |
|---------------------------------------------------------------------------------------------------------------------|------------|-------------|-------------------|-------------------|---------------------|
| Balance Type                                                                                                        | Limit Type | Total Value | First Expiry Date | First Offset Date | Category            |
| General Cash                                                                                                        | Prepaid    | 77.00       |                   |                   | Chargeable Balance  |
| Promotional Cash                                                                                                    | Prepaid    | 50.00       |                   | 2009-09-01 10:53  | Chargeable Balance  |
| Bad Pin                                                                                                             |            | 0           |                   |                   | Fraud Balance       |
| Monthly Exp                                                                                                         |            | 0.00        | 2009-09-24 00:00  |                   | Expenditure Balance |
| Yearly Exp                                                                                                          |            | 0.00        | 2010-08-24 00:00  |                   | Expenditure Balance |
| Free SMS                                                                                                            | Prepaid    | 0           |                   |                   | Chargeable Balance  |
| General Time                                                                                                        | Prepaid    | 0 (0:00.00) |                   |                   | Chargeable Balance  |

## Changing the display currency

Follow these steps to change the currency used to display balance values.

| Step | Action                                                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------|
| 1    | On the left hand panel in the Edit Subscriber screen, select the Wallets option, containing the Balance Type area. |

| Step | Action                                                                                                                                                                                                                |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <p>Select a different display currency from the drop down list.</p> <p><b>Result:</b> The Total Value column in the <b>Balance Type</b> table will be re-displayed using the currently selected display currency.</p> |

## Displaying balances by category

Follow these steps to display a selected balance category in the Balance Types panel.

| Step | Action                                                                                                                                                                                                                                                                                                        |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | On the left hand panel in the Edit Subscriber screen, select the option containing the Balance Types panel.                                                                                                                                                                                                   |
| 2    | <p>Select the Balance Category you want to display from the drop down list.</p> <p><b>Result:</b> The Balance Types grid is redisplayed showing only the balances for the selected balance category.</p> <p>Here is an example Balance Types panel showing balances for the Expenditure Balance Category.</p> |

| Display Currency  |            | GBP         | Details           | Add Balance       | Expenditure Balance Category |
|-------------------|------------|-------------|-------------------|-------------------|------------------------------|
| Balance Type      | Limit Type | Total Value | First Expiry Date | First Offset Date | Category                     |
| Monthly Exp       |            | 0.00        | 2009-09-24 00:00  |                   | Expenditure Balance          |
| Yearly Exp        |            | 0.00        | 2010-08-24 00:00  |                   | Expenditure Balance          |
| Daily Expenditure |            | 0.00        |                   |                   | Expenditure Balance          |

## Adding a new balance

Follow these steps to add a new balance to a wallet.

**Warning:** Once you have added a wallet balance and saved the subscriber record you will not be able to delete the balance.

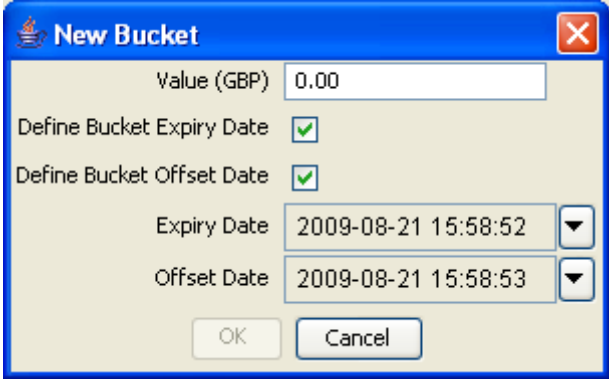
| Step | Action                                                                                                      |
|------|-------------------------------------------------------------------------------------------------------------|
| 1    | On the left hand panel in the Edit Subscriber screen, select the option containing the Balance Types panel. |
| 2    | <p>Click <b>Add Balance</b>.</p> <p><b>Result:</b> You see the Add Balance for Subscriber screen.</p>       |

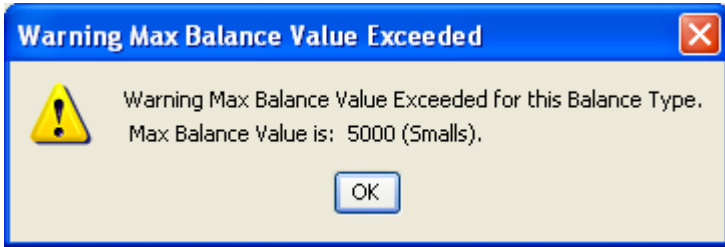
- Select the **Balance Type** to add from the drop down list.
- Note:** You will only be able to choose a balance type that has not been added already.
- In the **Value** field, enter the current value for the balance.

| Step | Action                                                                                                                                                                                                                                                                                       |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | <p>To set an expiry date for the balance:</p> <ul style="list-style-type: none"> <li>• Select the <b>Define Bucket Expiry Date</b> check box</li> <li>• Select the <b>Expiry Date</b> from the drop down window</li> </ul> <p>For details on selecting a date, see Time and Date panels.</p> |
| 6    | <p>Click <b>OK</b>.</p> <p>You are returned to the Edit Subscriber screen.</p> <p><b>Warning:</b> The changes to the wallet balances will be saved only when you save the subscriber record.</p>                                                                                             |

## Adding a new bucket balance

Follow these steps to add a new bucket for a balance type.

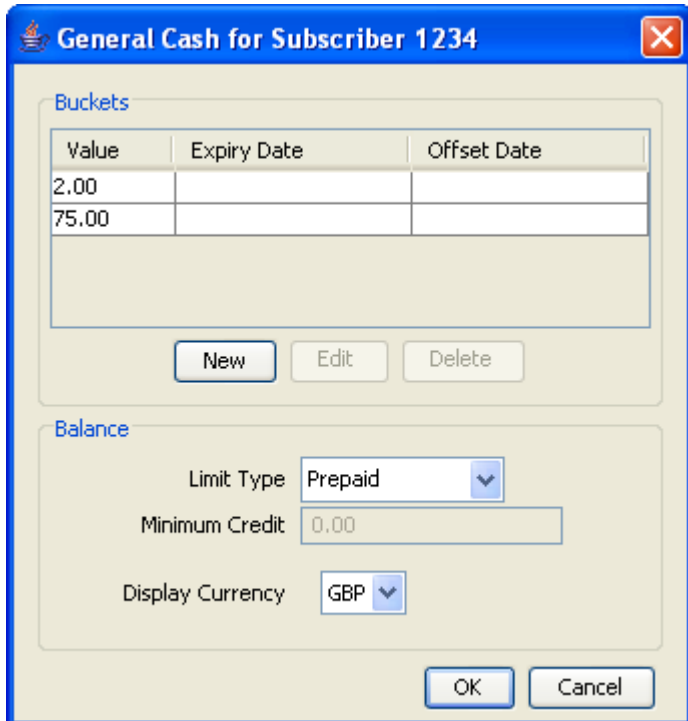
| Step | Action                                                                                                                                                                                                                                                               |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the details screen for the selected balance type, click <b>New</b>.</p> <p><b>Result:</b> You see the New Bucket screen for the balance type.</p>                            |
| 2    | <p>In the <b>Value</b> field, type the new balance.</p> <p><b>Note:</b> If a maximum value has been specified for the balance type then you must enter a value that will not cause the total value for the balance type to exceed the maximum set.</p>               |
| 3    | <p>To specify an expiry date for the new bucket, check the <b>Define Bucket Expiry Date</b> field.</p> <p><b>Result:</b> The <b>Expiry Date</b> field is populated with today's date.</p>                                                                            |
| 4    | <p>If required, select a different <b>Expiry Date</b>. For details, see Time and Date panels.</p>                                                                                                                                                                    |
| 5    | <p>To specify an offset date for the new bucket, check the <b>Define Bucket Offset Date</b> field. This defines the date from which the bucket balance will become available.</p> <p><b>Result:</b> The <b>Offset Date</b> field is populated with today's date.</p> |
| 6    | <p>If required, select a different <b>Offset Date</b>. For details, see Time and Date panels.</p> <p><b>Note:</b> You must specify a date between the current date and the bucket expiry date, if set.</p>                                                           |
| 7    | <p>Click <b>OK</b>.</p> <p>If a maximum value has been set for the balance type and the new total value for the balance type exceeds this amount, you will see the Warning Max Balance Value Exceeded prompt.</p>                                                    |

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                                                                                                                                                                                                                                                                                                                                       |
| 8    | <p>Click <b>OK</b>.</p> <p>The new bucket balance displays in a new row in the Buckets table. You must edit the value of the bucket value so that the total value for the balance type is below or equal to the maximum value allowed.</p> <p><b>Note:</b> Offset balance values which are not currently available are not taken into account when evaluating whether or not the maximum balance has been exceeded.</p> |
| 9    | <p>Click <b>OK</b> to return to the Edit Subscriber screen.</p> <p><b>Result:</b> The balance for the new bucket is added to the existing balance for the balance type.</p>                                                                                                                                                                                                                                             |

## Editing wallet balance details

Follow these steps to edit the balance details for a selected balance type for a wallet.

| Step | Action                                                                                                       |
|------|--------------------------------------------------------------------------------------------------------------|
| 1    | From the left hand menu in the Edit Subscriber screen, select the option containing the Balance Types panel. |
| 2    | Highlight the row in the Balance Types table for the balance to edit and click <b>Details</b> .              |
|      | <b>Result:</b> You see the details screen for the selected balance.                                          |



| Value | Expiry Date | Offset Date |
|-------|-------------|-------------|
| 2.00  |             |             |
| 75.00 |             |             |

Limit Type: Prepaid  
 Minimum Credit: 0.00  
 Display Currency: GBP

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | <p>To edit a bucket for the balance type, highlight the bucket in the Buckets table, and click <b>Edit</b>. Edit the details as described in <i>Adding a new bucket balance</i> (on page 133).</p> <p>To delete a bucket for the balance type, highlight the bucket in the Buckets table, and click <b>Delete</b>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 4    | <p>Edit the <b>Balance</b> fields as required.</p> <p><b>Notes:</b></p> <p>The list of options for <b>Limit Type</b> depends on the setting of the <b>Allow Credit</b> setting (Wallet Management, <b>Balance Types</b> tab, Balance Type screen. See <i>Balance Type Details fields</i> (on page 238)) and whether the Balance Type is a default or not.</p> <p>For default Balance Type (Allow Credit always set), the options are:</p> <ul style="list-style-type: none"> <li>• Prepaid</li> <li>• Single Use</li> <li>• Postpaid</li> <li>• Limited Postpaid</li> </ul> <p>For non-default balance type and allow credit set, the options are:</p> <ul style="list-style-type: none"> <li>• Prepaid</li> <li>• Limited Postpaid</li> </ul> <p>For non default balance type and allow credit not set, the options is:</p> <ul style="list-style-type: none"> <li>• Prepaid</li> </ul> |
| 5    | <p>Click <b>OK</b> to return the Edit Subscriber screen.</p> <p><b>Warning:</b> The updated wallet balance is saved only when you save the subscriber record.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## Change Wallet Balance Adjustment Limits

### Introduction

The Adjustments panel in the Edit Subscriber screen enables you to adjust the subscriber's wallet balances by the specified amount. The adjustment amount can be added to, or subtracted from the selected wallet balance for the subscriber.

This feature is available only if:

- The wallet is on a VWS domain.
- The Adjustments panel is included in the configuration defined for the Edit Subscriber screen for the subscriber's product type in the Subscriber Profile Manager. For more information about configuring the Edit Subscriber screen, see the *SPM User's Guide*.

### Adjustment limits

Adjustment limits are configured in the Edit Product Type screen and determine the minimum and maximum amount by which a balance type can be adjusted. The limits can be set at the following levels:

- Product type
- Individual user

If you are executing an adjustment for the current user, and limits have been configured for them, then these limits will be used. If no limits have been configured for the current user, then the product type limits will be used. For details on configuring adjustment limits, see *Adjustments* (on page 209).

## Maximum balance value

If a maximum value has been defined for the balance type, then the maximum balance policy will be applied to adjustment amounts which exceed the defined maximum.

For more information on:

- Maximum balance values, see *Maximum balances* (on page 235)
- Maximum balance policy, see *Maximum balance policy* (on page 236)

## Adjustment panel

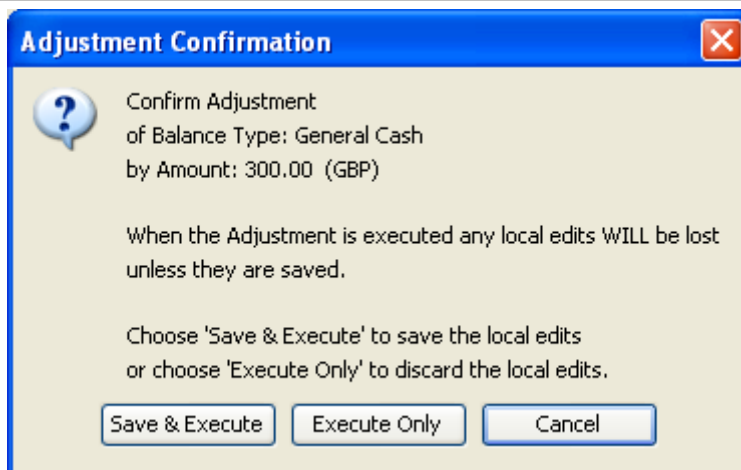
Here is an example Adjustment panel in the Edit Subscriber screen.

## Adjusting a wallet balance

Follow these steps to adjust a selected balance.

| Step | Action                                                                                                                                                                                                                                                                               |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | From the left hand menu in the Edit Subscriber screen, select the option containing the Adjustment group of fields.                                                                                                                                                                  |
| 2    | From the Balance Type drop down list in the Adjustment panel select the balance type that you want to adjust.                                                                                                                                                                        |
| 3    | Type the value of the adjustment you want to make in the <b>Amount</b> field. If you want the amount to be subtracted from the current balance, then type a minus sign (-) in front of the amount.                                                                                   |
|      | <b>Notes:</b> <ul style="list-style-type: none"> <li>• The minimum and maximum values that you can specify for an adjustment are displayed in the panel.</li> <li>• You will only be able to make a negative adjustment if the minimum value is set to a negative amount.</li> </ul> |
| 4    | Click <b>Adjust</b> .                                                                                                                                                                                                                                                                |
|      | <b>Result:</b> You see the Adjustment Confirmation screen.                                                                                                                                                                                                                           |

| Step | Action |
|------|--------|
|------|--------|



- 5 Do one of the following:
  - If you want to execute the adjustment without saving any updates to the subscriber configuration, click **Execute Only**.
  - If you want to save the updates you have made to the subscriber configuration, and then execute the adjustment, click **Save & Execute**.
- 6 If you clicked **Save & Execute**, and EDR auditing is enabled, then the **Change Reason** dialog displays. Enter the reason for the change in the **Change Reason** field, and click **OK**. The reason can be up to 200 characters long.
- 7 When the Adjustment Success prompt displays, click **OK**.

## Merge Wallets

### Introduction

The Merge Wallets option in the Edit Subscriber screen provides the facility to merge primary and secondary wallets. Typically you use this option to merge the wallets for a subscriber with the wallets of another subscriber. If required, you can also use the merge process to consolidate the primary and secondary wallets for a subscriber.

**Note:** You can only use the merge wallet facility if both the source and target wallets are on the VWS. If either wallet is on a third party domain then you will not be able to use this facility.

### Merge wallet rules

The following rules apply to wallet merges:

- 1 Only one wallet pair may be merged at a time. Therefore two merge operations are required to merge both the primary and the secondary wallets for a subscriber with those of a different subscriber.
- 2 If the source wallet is in a pre-use state, then the wallet is activated and the activation bonus is applied prior to the merge.
- 3 Once the merge has taken place, the source and target subscribers will share the same wallet. Normally, the target wallet will be shared and the source wallet will be deleted. However, if a secondary wallet is specified as the target, and a secondary wallet has not yet been created for the target subscriber, then the source wallet is shared.

- 4 After the merge, the state of the shared wallet will normally be set to that of the target wallet. If the target wallet does not yet exist then it is set to the state of the source wallet.

### Merge wallet expiry policy

The expiry policy for the merged wallet will be set to one of the following:

- Best – This means that the best of both wallet expiry dates will be used. In other words, if the target wallet expires before the source wallet, the expiry date of the target wallet is extended to match that of the source wallet.
- Ignore – This means that the expiry date of the target wallet is not changed.

The policy applies to the target wallet.

For more information on configuring the wallet expiry policy see *CCS Technical Guide*.

### Merge bucket expiry policy

The bucket expiry policy for the merged wallet will be set to one of the following:

- Merge – This means that buckets in the source wallet may be merged with buckets in the target wallet. For this to happen:

- A source wallet bucket must have an expiry date
- The target wallet bucket must be of the same balance type

The merged bucket takes the latest date of both buckets.

- Move – This means that buckets in the source wallet may be moved to the target wallet. For this to happen, a source wallet bucket must have an expiry date. The expiry date of the moved bucket is not changed.

For more information on configuring the bucket expiry policy see the *CCS Technical Guide*.

### Source wallet state

The merge can only be processed if the source wallet is in an allowable state. For more information on configuring the allowable source wallet states, see *CCS Technical Guide*.

## Merging a wallet

Follow these steps to merge either the primary or secondary wallet for the current subscriber with another wallet.

| Step | Action                                                                                                               |
|------|----------------------------------------------------------------------------------------------------------------------|
| 1    | In the panel at the top of the Edit Subscriber screen click <b>Merge Wallet</b> . The Merge Wallets screen displays. |

**Merge Wallets for Subscriber 21348560**

**Source**

MSISDN

Wallet Type ☒ Primary ☐ Secondary

**Target**

MSISDN

Wallet Type ☒ Primary ☐ Secondary



| Step | Action                                                                                                                                                                                                                                                                    |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | In the <b>Source MSISDN</b> field, enter the CLI of the subscriber holding the source wallet for the merge.<br><br><b>Note:</b> The <b>Target MSISDN</b> field contains the CLI of the subscriber currently being edited. It is for reference only and cannot be changed. |
| 3    | Select the <b>Source Wallet Type</b> for the merge.                                                                                                                                                                                                                       |
| 4    | Select the <b>Target Wallet Type</b> for the merge                                                                                                                                                                                                                        |
| 5    | Click <b>Save &amp; Merge</b> .<br><br>Changes to the subscriber configuration made in the Edit Subscriber screens are saved, and the source and target wallets are merged.                                                                                               |
| 6    | If EDR auditing is enabled, then the <b>Change Reason</b> dialog displays. Enter the reason for the change in the <b>Change Reason</b> field, and click <b>OK</b> . The reason can be up to 200 characters long.                                                          |

## Reservations

### Introduction

Data reservations can be maintained for a long time against an account without being charged.

The Reservation screens give the ability to view any outstanding reservations along with the wallet balances and to then action the reservation.

Because of the real time nature of reservation values changing, these screens are in effect a snap shot of the reservations. However any actions taken will be for the current values at the time of the action. See *Reservation example* (on page 142).

#### Notes:

- Every time you select to display a subscriber's reservations in the Edit Subscriber screen, the Balances and Reservations sections are blank. To populate, click **Refresh**.
- By default, when **Refresh** is clicked, the reservations shown are for the first balances row.
- The tab for the subscriber's primary wallet displays when you view the reservations for a subscriber. The tab for the secondary wallet is present only when there is a secondary wallet for the subscriber.
- The reservations for a balance will show either the balance type used for the reservation, or (multiple) when more than one balance type has been used for the reservation.

## Reservations option

Here is an example Edit Subscriber screen showing the reservations for a subscriber.

**Edit Subscriber 49393520 - Primary Wallet**

Primary Secondary

Display Currency: NZD Balance Category: All Balance Categories Refresh

**Balances**

| Balance Type     | Total Value | Uncommitted Reservations | Available Balance |
|------------------|-------------|--------------------------|-------------------|
| General Cash     | 1.50        | 1.50                     | 0.00              |
| Promotional Cash | 0.50        | 0.50                     | 0.00              |
| Bad Pin          | 0           | 0                        | 0                 |
| Monthly Exp      | 0.00        | 0.00                     | 0.00              |
| Yearly Exp       | 0.00        | 0.00                     | 0.00              |
| Free SMS         | 0           | 0                        | 0                 |

**Reservations**

One reservation found for this wallet View Detail

| Balance Type | Expires              | Reserved   | Used       | How Ended |
|--------------|----------------------|------------|------------|-----------|
| (Multiple)   | 13/May/2010 03:30:48 | (Multiple) | (Multiple) |           |

Save Cancel

## Reservation columns and buttons

This table describes the function of each field or button.

| Field                   | Description                                                                                                                                                                                 |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Display Currency        | Drop down list of available currencies the information can be displayed in.                                                                                                                 |
| Balance Category        | Drop down list of all the balance categories for which information can be shown. Used to filter the amount of information shown on the screen.                                              |
| Refresh                 | Button that will re-display the screen contents according to the Display Currency and Balance Category selection options.<br>Both the Balances and Reservations sections will be populated. |
| <b>Balances</b>         |                                                                                                                                                                                             |
| Balance Type            | The balance type for that row item.                                                                                                                                                         |
| Total Value             | The total value in the selected currency for this balance type.                                                                                                                             |
| Uncommitted Reservation | The value of reservation not yet committed for this balance type.                                                                                                                           |
| Available Balance       | The amount still available for reserving for this balance type.                                                                                                                             |
| <b>Reservations</b>     |                                                                                                                                                                                             |
| Balance Type            | The balance type for this reservation.                                                                                                                                                      |
| Expires                 | The date and time when this reservation is due to expire.                                                                                                                                   |
| Reserved                | The amount currently reserved for this reservation.                                                                                                                                         |
| Used                    | The amount currently used by the reservation.                                                                                                                                               |

| Field        | Description                                                     |
|--------------|-----------------------------------------------------------------|
| How Ended    | The cause for the ending of this reservation.                   |
| View Details | Button that shows the details for the selected Reservation row. |

## View reservation details

Follow these steps to view and then optionally perform an action on a reservation.

| Step | Action                                                                                                                                                                                      |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | From the Edit Subscriber screen, select the <b>Reservations</b> option in the left hand list. The <i>Reservation option</i> (on page 140) displays in the Edit Subscriber screen.           |
| 2    | (Optional) Select the currency from the <b>Display Currency</b> list.                                                                                                                       |
| 3    | (Optional) Filter the number of reservations displayed by selecting the display option from the <b>Balance Category</b> list.                                                               |
| 4    | Click <b>Refresh</b> to obtain the latest snap shot of the subscriber reservations.                                                                                                         |
| 5    | Select the row in the <b>Balances</b> section for the balance type of the reservations you want to see.<br><b>Result:</b> The Reservations section is populated with the reservations data. |
| 6    | Select the reservation to view from the <b>Reservations</b> section.                                                                                                                        |
| 7    | Click <b>View Details</b> .<br><b>Result:</b> The Reservation Detail panel shows the reservation details.                                                                                   |

Reservation Detail - SCP/Call Id 117610500/40238

Last Updated: 13/May/2010 03:21:38.604301

| Balance Type     | Expires              | Reserved | Used |
|------------------|----------------------|----------|------|
| General Cash     | 13/May/2010 03:30:48 | 1.50     | 0.00 |
| Promotional Cash | 13/May/2010 03:30:48 | 0.50     | 0.00 |

Buttons: Help, Commit, Revoke, Delete, Done

- 8 Optionally perform an action on a reservation to:
- Close the reservation without charging the subscriber
  - Close the reservation and charge the customer
  - Close the reservation and either charge, or do not charge the subscriber, depending on configuration setting for this subscriber

See *Action reservation* (on page 142).

- 9 Click **Done** to close the details panel.

**Note:** The Balances and Reservations sections will be empty on returning to the Reservations screen.

## Action reservation

Follow these steps to perform one or more actions on a reservation.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the reservation to action.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|      | <b>Note:</b> Each action explains the result of doing the action.                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 2    | If you want to charge the subscriber for the uncommitted usage, perform the following steps: <ol style="list-style-type: none"> <li>Click <b>Commit</b> to have the subscriber charged for the uncommitted usage. The Commit This Reservation? confirmation dialog displays.</li> <li>Click <b>Commit</b> to confirm the action.</li> </ol>                                                                                                                                                                                                     |
| 3    | If you want to cancel the reservation so that the subscriber is not charged for any uncommitted usage, perform the following steps: <ol style="list-style-type: none"> <li>Click <b>Revoke</b>. The Revoke This Reservation? confirmation dialog displays.</li> <li>Click <b>Revoke</b> to confirm the action.</li> </ol>                                                                                                                                                                                                                       |
| 4    | If you want to delete the reservation, perform the following steps: <ol style="list-style-type: none"> <li>Click <b>Delete</b>. The Delete This Reservation? confirmation dialog displays.</li> <li>Click Delete to confirm the action.</li> </ol> <p><b>Note:</b> When you delete a reservation, the subscriber is either charged or not charged for any uncommitted usage depending on reservation configuration for the CLI-DN tariff for the call. For more information, see the discussion on Rating Management, CLI-DN configuration.</p> |
| 5    | If EDR auditing is enabled, then the <b>Change Reason</b> dialog displays. Enter the reason for the reservation action in the <b>Change Reason</b> field, and click <b>OK</b> . The reason can be up to 200 characters long.                                                                                                                                                                                                                                                                                                                    |
| 6    | Click <b>Done</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

## Reservation example

This is an example explaining the difference between what is seen in the snap shot and what is charged to the subscriber.

- 1 When **Refresh** is pressed the reservation amount is \$3.40 and the used amount is \$1.70.
- 2 In the background the billing engine does a subsequent reservation and the current reservation amount is \$5.10 and the used amount is \$3.60.
- 3 **Refresh** has NOT been pressed so the amounts shown on the screen are still \$3.40 and \$1.70 respectively.
- 4 The user commits the reservation.
- 5 The values committed are for the current reservation of \$5.10 and \$3.60.
- 6 The values displayed on the screen are still \$3.40 and \$1.70.

The user can look at the EDR viewer to determine the actual values on the action taken.

## View EDRs

### Introduction

From the Edit Subscriber screen you can search for and view the EDRs that have been generated for the subscriber. For each EDR you can:

- View the EDR details
- Reverse any associated charges

If the EDR auditing feature is enabled, then you can monitor operator updates to a subscriber's financial data by viewing the reason entered by the operator for any updates that have been made through the Subscriber Management screens. The reason displays in the **Change Reason** field in the resulting EDR. For more information, see *About Auditing Changes to Subscriber Data* (on page 95).

## View EDRs for Subscriber screen

Here is an example View EDRs for Subscriber screen. This screen appears when you click **View EDRs** in the Edit Subscriber screen.

**View EDRs for Subscriber 4414733578**

Display Currency: GBP

Use Start Date: ☒ 2010-12-09 10:49

Use End Date: ☒ 2010-12-11 10:39

Called Number:

EDR Tag:

EDR Tag Value:

Use Call Cost: ☐ Cash £ 0.00

Unit Type: Cash

Wallet Types: Primary

Number of EDRs: 100

Include Partial EDRs: ☐

Call Duration:

Discount:

Search

**EDR Search Categories**

Available List

Selected List

- Amount Charge
- Bad Pin
- Call Barring Changes
- Control Plan Service Invoke
- Credit Card Free Form Recharge
- Data Call

| M | Date                | Balance Types          | Old Balances | Cost   | New Balances | EDR Type           |
|---|---------------------|------------------------|--------------|--------|--------------|--------------------|
| Y | 2010-12-09 11:16:33 | Promotional Cash       | 0.00         | -10.00 | 10.00        | Recharge           |
| Y |                     | Bonus_Counter          | 5            | 1      | 4            |                    |
|   | 2010-12-09 11:16:33 | General Cash           | 10.00        | -20.00 | 30.00        | Free Form Recharge |
| Y | 2010-12-09 11:16:33 | Promotional Cash       | 25.00        | -30.00 | 55.00        | Recharge           |
| Y |                     | Bonus_Counter          | 3            | 1      | 2            |                    |
| Y | 2010-12-09 11:16:33 | Promotional Cash       | 10.00        | -15.00 | 25.00        | Recharge           |
| Y |                     | Bonus_Counter          | 4            | 1      | 3            |                    |
|   | 2010-12-09 11:15:52 | General Cash           | 50.00        | 40.00  | 10.00        | Operator Update    |
|   | 2010-12-09 10:49:14 | See Details - Declined |              |        |              | Free Form Recharge |

Close Display Reverse Charge

## EDR Masking

You can set masking for EDR fields to prevent users from viewing part of the displayed values. To set masking for EDR fields see *Adding EDR elements* (on page 614) and *Editing EDR elements* (on page 615). To specify the masking rules for EDR fields, see *Editing EDR Viewer Display Masking* (on page 506).

You can disable masking of EDR fields for a user by specifying the EDR Viewer NO MASKING permission when you create a user template.

**Note:** The system administrator user receives the EDR Viewer NO MASKING permission by default.

See *Creating User Templates in SMS User's Guide* for information on creating a user template. See *Assigning a template to a user in SMS User's Guide* for information on assigning a template to a user.

## View EDRs for Subscriber fields

This table describes the function of each field.

| Field                | Description                                                                                                                                                                                                                                                                                                        |
|----------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Display Currency     | The currency for which the costs and balances should be displayed.                                                                                                                                                                                                                                                 |
| Use Start Date       | <p>If <b>Use Start Date</b> check box is selected, EDRs that have been generated after a specified date and time will be displayed.</p> <p><b>Note:</b> The start date field is populated with the current date and time. Select a different date and time if required. For details, see Time and Date panels.</p> |
| Use End Date         | <p>If <b>Use End Date</b> check box is selected, EDRs that have been generated before a specified date and time will be displayed.</p> <p><b>Note:</b> The end date field is populated with the current date and time. Select a different date and time if required. For details, see Time and Date panels.</p>    |
| Wallet Types         | <p>The type of wallet for which the EDRs will be displayed.</p> <p>The options are:</p> <ul style="list-style-type: none"> <li>• Primary</li> <li>• Secondary</li> </ul>                                                                                                                                           |
| Number of EDRs       | The maximum number of EDRs to search for. This can be left blank to find all the EDRs.                                                                                                                                                                                                                             |
| Called Number        | A specific called party number dialed by the subscriber for which the EDRs will be displayed. This value is derived from the TN field of the resulting EDR.                                                                                                                                                        |
| EDR Tag              | The operator defined EDR tag.                                                                                                                                                                                                                                                                                      |
| EDR Tag Value        | The tag values of the EDRs describe the type and length of data required, and a description of the value per EDR.                                                                                                                                                                                                  |
| Include Partial EDRs | By default only completed EDRs are shown. Select this box to also show intermediate partial EDRs.                                                                                                                                                                                                                  |
| Call Duration        | The duration of the entire call, that is, the length of call in seconds. This value is derived from the DURATION field of the resulting EDR.                                                                                                                                                                       |
| Discount             | <p>A list of discounts that exist for this call. This value is derived from the following fields of the resulting EDR:</p> <ul style="list-style-type: none"> <li>• DISCOUNT,</li> <li>• DISCOUNTS</li> <li>• CBTD_DISCOUNTS</li> </ul>                                                                            |
| Unit Type            | <p>The balance unit type for which the call cost is displayed. This is one of:</p> <ul style="list-style-type: none"> <li>• Cash</li> <li>• Time</li> <li>• Units</li> </ul>                                                                                                                                       |

| Field     | Description                                                                                                                                                                                                                                                                                                                      |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Call Cost | <p>The call cost is based on the sum of all the associated costs (recharge or charge) for a specified balance unit type for the call. This value is derived from the COSTS field of the resulting EDR.</p> <p><b>Note:</b> The cost for a recharge will be a negative value; the cost for a charge will be a positive value.</p> |

## Finding EDRs

Follow these steps to find the EDRs that have been generated for a subscriber.

**Note:** The view EDRs panel is now pre-populated with default search conditions for the current subscriber. The search parameters are defined in `smsGui.bat/smsGui.sh` and `ccpGui.bat/ccpGui.sh` files. If no parameters are defined, search defaults to 2 days and all categories.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the Edit Subscriber Screen, click <b>View EDRs</b>.</p> <p><b>Result:</b> You see the <i>View EDRs for Subscriber screen</i> (See example on page 143) for the current subscriber, pre-populated with default search results.</p> <p><b>Note:</b> If no parameters are found, this defaults to two days and all categories.</p>                                                                                                                                                                                                                                                                                          |
| 2    | <p>Enter the desired search criterion.</p> <p>For more information about the fields on this screen, see <i>View EDRs for Subscriber fields</i> (on page 144).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 3    | <p>Add the EDR Search Categories to search for to the Selected List. To:</p> <ul style="list-style-type: none"> <li>• Add a search category to the list, select it in the Available List and click <b>&gt;</b>.</li> <li>• Add all the search categories to the list, click <b>&gt;&gt;</b>.</li> <li>• Remove a search category from the list, select it in the Selected List and click <b>&lt;</b>.</li> <li>• Remove all the search categories from the list, click <b>&lt;&lt;</b>.</li> </ul> <p><b>Note:</b> If no search categories are selected then all the EDRs that match the search criteria will be returned.</p> |
| 4    | <p>Click <b>Search</b>.</p> <p><b>Result:</b> All the EDRs that match the search criteria are displayed in the EDR search results table at the bottom of the screen.</p> <p><b>Tip:</b> The text <code>See Details</code> in the <b>Balance Types</b> column indicates either that more than one balance type was used to charge for that EDR or that no charge was made and hence you must go into the details of the EDR itself.</p>                                                                                                                                                                                         |

## EDR search results order

The EDR search results initially appear in date order with the most recent first. You can re-order EDRs based on the columns described in the following table.

| Click this column | To...                                                                                                                                      |
|-------------------|--------------------------------------------------------------------------------------------------------------------------------------------|
| Date              | Order EDRs by date. The most recent EDR will be at the top of the list. Click on this column again to place records in reverse date order. |
| Balance Types     | Place EDRs in ascending order of balance type ID.                                                                                          |

| Click this column | To...                                                                                                                                                                                                       |
|-------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                   | <b>Note:</b> This is the internal reference number for the balance type and not the balance type name.                                                                                                      |
| Cost              | Order EDRs by cost, from highest cost to lowest cost.                                                                                                                                                       |
| EDR Type          | Place EDRs in ascending order of EDR type. Click on the column again to place records in descending order.<br><br><b>Note:</b> A secondary sort is used to place EDRs with the same EDR type in date order. |

## Re-ordering search results

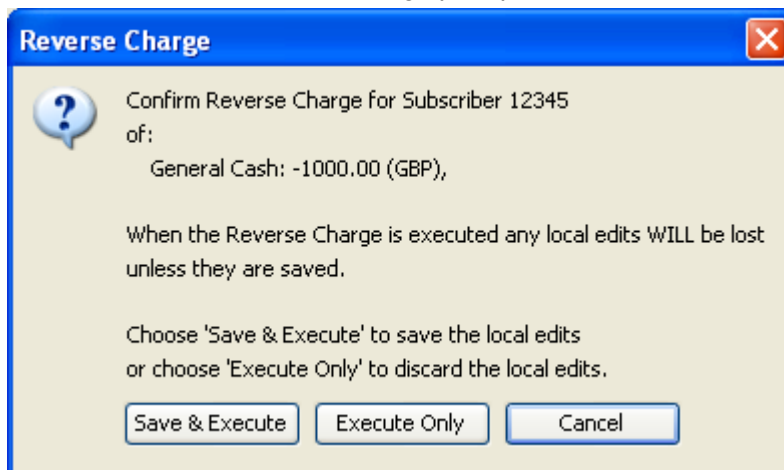
Follow this step to re-order the search results.

| Step | Action                                                                                                                                                         |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Click on the column in the search results table to use for re-ordering.<br><b>Result:</b> The search results are re-ordered based on the values in the column. |

## Reversing a charge

Follow these steps to reverse a charge detailed in an EDR record.

| Step | Action                                                                                                                       |
|------|------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the EDRs for Subscriber screen, search for the EDR record to reverse. For details on searching for EDRs see Finding EDRs. |
| 2    | Highlight the record in the search results table.                                                                            |
| 3    | Click <b>Reverse Charge</b> .<br><b>Result:</b> You see the Reverse Charge prompt.                                           |



- |   |                                                                                                                                                                                                                                                                                                                                                                      |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | <p>Do one of the following:</p> <ul style="list-style-type: none"> <li>• If you want to reverse the charge without saving any updates to the subscriber configuration, click <b>Execute Only</b>.</li> <li>• If you want to save the updates you have made to the subscriber configuration, and then reverse the charge, click <b>Save &amp; Execute</b>.</li> </ul> |
|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



| Step | Action                                                                                                                                                                                                                                                       |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | If you clicked <b>Save &amp; Execute</b> , and EDR auditing is enabled, then the <b>Change Reason</b> dialog displays. Enter the reason for the change in the <b>Change Reason</b> field, and click <b>OK</b> . The reason can be up to 200 characters long. |
| 6    | Click OK when the Reverse Charge prompt displays.<br>The charge is reversed for all the affected balance types and the subscriber data is reloaded. You are then returned to the Edit Subscriber screen.                                                     |

## Viewing EDR details

Follow these steps to view the details for a selected EDR.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the EDR record to view in the search results table in the <i>View EDRs for Subscriber</i> (See example on page 143) screen.<br>Click <b>Display</b> .<br><b>Result:</b> You see the <i>EDR Details for Subscriber</i> (See example on page 148) screen.<br><b>Note:</b> The screen layout and available fields depend on the category and template definition configured for the EDR in CCS. For details, see <i>EDR Templates</i> (on page 618). |
| 2    | To change the currency used to display costs and balances, select the <b>Display Currency</b> drop down list.                                                                                                                                                                                                                                                                                                                                            |
| 3    | When you have finished viewing that EDR record, click <b>Close</b> .<br><b>Result:</b> You return to the View EDRs for Subscriber screen.                                                                                                                                                                                                                                                                                                                |
| 4    | When you have finished viewing EDR records, click <b>Close</b> .<br><b>Result:</b> You return to the Edit Subscriber screen.                                                                                                                                                                                                                                                                                                                             |

## EDR Details for Subscriber screen

Here is an example EDR Details for Subscriber screen.

EDR Details for Subscriber 1234

Help

EDR Details

EDR Type: Operator Update

Display Currency: EUR

Operator Name: SU

Wallet Type:

Record Date: 2014-02-21 11:05:24

| Balance Name     | Original Value | Cost  | Old Expiry Date | New Expi |
|------------------|----------------|-------|-----------------|----------|
| Bad Pin          | 0              | 0     |                 |          |
| Data             | 0              | 0     |                 |          |
| Free SMS         | 0              | 0     |                 |          |
| General Cash     | 0.00           | -5.00 |                 |          |
| Monthly Exp      | 0.00           | 0.00  |                 |          |
| Promotional Cash | 0.00           | 0.00  |                 |          |
| Wallet Exp       | 0.00           | 0.00  |                 |          |
| Yearly Exp       | 0.00           | 0.00  |                 |          |

Product Type: Bronze

Previous State:

New State: Pre-use

Old Wallet Expiry:

New Wallet Expiry: Never Expires

Pi Identification:

Subscriber IDs: 1234

Change Reason:

Close

## Execute Business Process Logic

### Introduction

A business process logic (BPL) task comprises a set of actions that fall within the defined business rules of the service provider, and that may be executed for the subscriber. Each business process is defined in the control plan referenced in the BPL record. When the BPL is executed, this control plan is invoked for the current subscriber.

Depending on how the BPL task has been configured, a charge may be imposed for the service provided and SMS notifications may be sent out. For information on how to configure BPL tasks, see *Task Management* (on page 589).

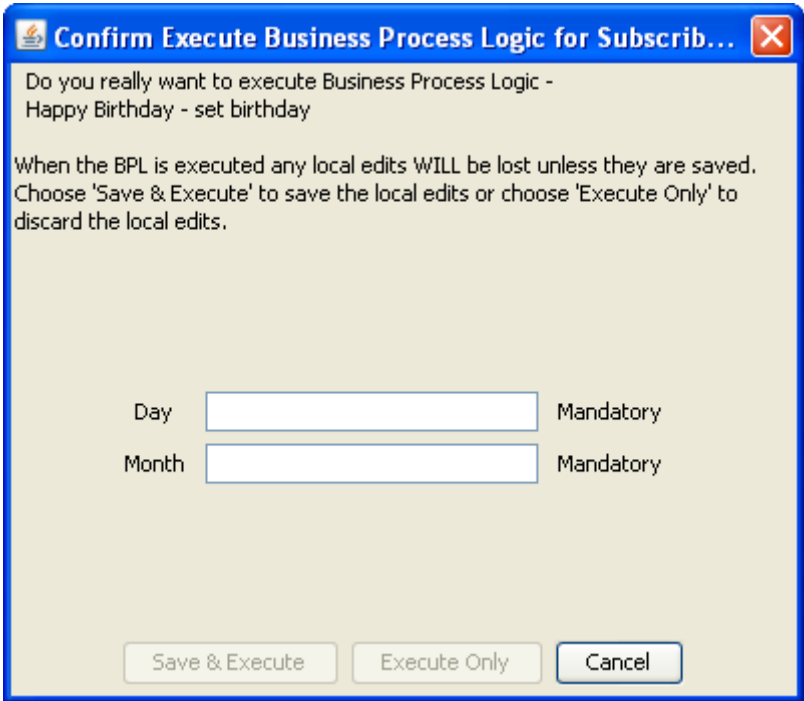
**Notes:**

- Business process logic tasks are also referred to as tasks.
- This functionality will only be available to you if you have an appropriate license.

**Executing a BPL**

Follow these steps to execute a BPL for a subscriber.

**Note:** BPLs can only be executed for existing subscribers.

| Step | Action                                                                                                                                                                                                                                                                                                                                       |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the Edit Subscriber screen select the Subscriber option where the BPL to execute is located.</p> <p><b>Result:</b> You see a button for each of the available BPLs.</p>                                                                                                                                                                |
| 2    | <p>Click the button for the BPL to execute.</p> <p><b>Result:</b> You see the Confirm Execute Business Process Logic for Subscriber prompt.</p>                                                                                                           |
| 3    | <p>If any parameters have been defined for the BPL, enter values for these as prompted.</p> <p><b>Warning:</b> You must enter a value for all mandatory parameters.</p>                                                                                                                                                                      |
| 4    | <p>To save any changes you have made to the subscriber configuration in the Edit Subscriber screens and then execute the BPL, click <b>Save &amp; Execute</b>.</p> <p>To execute the BPL without saving changes to the subscriber configuration, click <b>Execute Only</b>.</p> <p><b>Result:</b> You see the Execute BPL Result prompt.</p> |
| 5    | <p>Click <b>OK</b>.</p>                                                                                                                                                                                                                                                                                                                      |

## View Subscriber Promotions

### Introduction

The Edit Subscriber screen can be configured to display the following types of promotion information:

- Subscriber promotion panel showing the list of promotions for which the currently selected subscriber is eligible
- Promotion information for a specific promotion.

### Subscriber Promotion Panel

Here is an example Subscriber Promotion Panel in the Edit Subscriber screen.

| Promotion        | Status | Expiry Date |
|------------------|--------|-------------|
| BVset01          | Unset  |             |
| BVset02          | Unset  |             |
| BVset021         | Unset  |             |
| GC Bonus Set01   | Unset  |             |
| RichardsBonusSet | Unset  |             |
| Vince Promo 1    | Unset  |             |
| Vince Promo 2    | Unset  |             |
| Vince Promo 3    | Unset  |             |

### Subscriber promotion panel fields

This table describes the function of each field.

| Field       | Description                                                                                                                                                                             |
|-------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Promotion   | Lists the promotions for which the current subscriber is eligible.                                                                                                                      |
| Status      | Displays the global limited liability status value for each promotion. Options are: <ul style="list-style-type: none"> <li>• Unset</li> <li>• Eligible</li> <li>• Ineligible</li> </ul> |
| Expiry Date | Displays the global limited liability status expiry date for each promotion.                                                                                                            |

## Promotion Info Field example

Here is an example Promotion Info Field in the Edit Subscriber screen. This field has been configured with the **Monthly Spend** Display Name.

The screenshot shows a form titled "Monthly Spend" with the following fields:

- Name: Monthly Spend
- Status: Active
- Tracker Balance Value: 0.00
- Tracker Balance Expiry Date: 2009-12-25 16:46
- Individual Limited Liability Balance: (empty)
- Individual Limited Liability Expiry Date: (empty)
- Max Individual Limited Liability: (empty)
- Global Liability Status: Unset

## Promotion info field fields

The Promotion Info Field displays status, balance and expiry details for a specified promotion. The promotion is specified when the Promotion Info Field is configured in the Subscriber Profile Manager.

This table describes the function of each field.

| Field                                    | Description                                                                                                                                                                                                                                                                                                 |
|------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                                     | Promotion name.                                                                                                                                                                                                                                                                                             |
| Status                                   | Promotion status. Either active or inactive.                                                                                                                                                                                                                                                                |
| Tracker Balance Value                    | The total value of the tracker balance used to trigger the promotion for the subscriber.                                                                                                                                                                                                                    |
| Tracker Balance Expiry Date              | Displays the first expiry date for the tracker balance. If an expiry date has not been specified, then "Does not expire" will be displayed.<br><b>Note:</b> This field will only be visible if the <b>Show Expiry Date</b> check box was selected when this Promotion Info Field was configured in the SPM. |
| Individual Limited Liability Balance     | The subscriber's total balance held in the limit balance type configured for the promotion.                                                                                                                                                                                                                 |
| Individual Limited Liability Expiry Date | Displays the first expiry date for the individual limited liability balance. If an expiry date has not been specified, then <i>Does not expire</i> will be displayed.                                                                                                                                       |
| Max Individual Limited Liability         | Maximum individual limited liability configured for the promotion.                                                                                                                                                                                                                                          |
| Global Liability Status                  | The options are <ul style="list-style-type: none"> <li>Unset</li> <li>Eligible</li> <li>Not Eligible</li> </ul>                                                                                                                                                                                             |

## Perform Credit Transfers

### Introduction

The **Credit Transfers** option in the Edit Subscriber screen lets you perform credit transfers. A credit transfer moves credit from one subscriber to another. For information on how to configure credit transfers, see *Transfer Management* (on page 565).

**Note:** The credit transfer functionality will only be available to you if you have an appropriate license.

### Maximum balance value

If a maximum value has been set for a balance type, then the maximum balance policy will be applied to credit transfers which exceed the defined maximum.

For more information, see:

- *Maximum balances* (on page 235)
- *Maximum balance policy* (on page 236)

### Credit transfer types

Two types of credit transfer may be performed:

- Service bundle
- Peer-to-peer

#### Peer-to-Peer credit transfers

You use peer-to-peer credit transfers to one of the following:

- Transfer credit between the primary and secondary wallets held by an individual subscriber
- Transfer credit between the wallets held by two different subscribers

#### Service Bundle credit transfers

You use service bundle credit transfers to one of the following:

- Transfer credit between different balances held by an individual subscriber in the same wallet
- Transfer credit between two subscribers that share the same wallet

### Credit transfer voucher type

When a credit transfer is performed, cash credit from the purchasing subscriber is used to buy a specified voucher type which is then applied to the recipient's wallet. The voucher type definition may include any of the following:

- A list of balance types where the value and/or the expiry periods have changed
- An extension to the recipient's wallet expiry period
- A product type swap on the recipient's wallet
- A limited list of available product types (the credit transfer will only succeed if the product type for the recipient matches one of the product types in the list)
- Multiple balance types which may also be associated with a limited list of product types

## Performing a credit transfer

Follow these steps to make a credit transfer for a subscriber.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the Edit Subscriber screen choose the credit transfer option you require from the left hand menu:</p> <ul style="list-style-type: none"> <li>To make a peer-to-peer credit transfer, select <b>Peer-to-Peer Transfer</b>.</li> <li>To make a service bundle credit transfer, select <b>Service Bundle</b>.</li> </ul> <p><b>Result:</b> You see a series of buttons on the Edit Subscriber screen such as in this example. There is one button for each of the available credit transfer definitions.</p> |

The screenshot shows a software window titled "Edit Subscriber 55500000000 - Primary Wallet". On the left is a sidebar menu with categories like "Subscriber", "Profile", and "Closed User Groups". Under "Subscriber", "Peer-to-Peer Transfer" is highlighted. The main content area has a "Recipient MSISDN" input field at the top. Below it are six buttons arranged in a 3x2 grid: "10 EUR Transfer Bronze", "10 EUR Transfer Gold", "10 EUR Transfer Silver", "20 EUR Transfer Bronze", "20 EUR Transfer Gold", and "20 EUR Transfer Silver". At the bottom of the window are "Save", "Cancel", and "Revert" buttons. A "Help" button is in the top right corner.

- 2 In the **Recipient MSISDN** field, enter the CLI for the subscriber who will receive the credit.

**Tip:** This field is optional. If you do not enter a value, then the current subscriber ID is used.

- 3 Click the button for the credit transfer to make.

**Result:** You see the Confirm Credit Transfer prompt.

| Step | Action |
|------|--------|
|------|--------|

**Confirm Credit Transfer for Subscriber 55500000000**

When the Credit Transfer is executed any local edits WILL be lost unless they are saved. Choose 'Save & Execute' to save the local edits or choose 'Execute Only' to discard the local edits.

Credit Transfer: 10 EUR Transfer Bronze

**Purchaser**

MSISDN: 55500000000

Wallet Type: ☒ Primary ☐ Secondary

Security PIN:

**Recipient**

MSISDN: 55500000000

Wallet Type: ☒ Primary ☐ Secondary

Buttons: Save & Execute, Execute Only, Cancel

- 4 If the subscriber has two wallets, then **Wallet Type** selection will be enabled for the purchaser/recipient. Select the required wallet types for the transfer.
  - 5 If the **Security PIN** field is enabled then you must enter the PIN for the purchaser subscriber.
- Warning:** The PIN must be already configured in the subscriber details.
- 6 To save any changes you have made to the subscriber configuration in the Edit Subscriber screens before making the credit transfer, click **Save & Execute**. To make the credit transfer without saving changes to the subscriber configuration, click **Execute Only**.
  - 7 If you clicked **Save & Execute**, and EDR auditing is enabled, then the **Change Reason** dialog displays. Enter the reason for the change in the **Change Reason** field, and click **OK**. The reason can be up to 200 characters long.



# Subscriber Management - Product Type

## Overview

### Introduction

This chapter explains the Product Type configuration screens.

### In this chapter

---

This chapter contains the following topics.

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| Control Plans .....                  | 165 |
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## Product Type

### Introduction

The **Product Type** tab lets you view, add, edit, copy and remove product types. For more information about product types, see *Product Types* (on page 13).

For more information about the aspects of a product type which can be configured, see Configuration options summary.

## Product Type tab

Here is an example **Product Type** tab.

Subscriber Management

Service Provider: Boss

Help

Product Type

| Name   | Description | Expiry Period | Minimum B. |
|--------|-------------|---------------|------------|
| Bronze |             | 180 Days      |            |
| Gold   |             | 180 Days      |            |
| Silver |             | 180 Days      |            |

New Edit Delete Copy Close

## Before you add a product type

Before you start to add a new product type, ensure you have configured any elements you will use. Product types may use:

- ACS configuration:
  - Languages
  - Announcement sets
  - Holiday sets
  - Geography sets
  - LNSTRING and LOPREFIX group profile fields
  - Control plans which subscribers with this product type will be sent to
- CCS configuration:
  - Tariffs
  - Named events

For more information, see *ACS User's Guide*, *ACS Configuration* chapter.

For more information, see *Rating Management* (on page 341).

## Adding product types

Follow these steps to add a new product type.

| Step                                                                                                                                                                    | Action                                                                                                                                   |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------|
| 1                                                                                                                                                                       | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.                                  |
| 2                                                                                                                                                                       | On the <b>Product Type</b> tab, click <b>New</b> .<br><b>Result:</b> You see the New Product Type screen, as shown in the example below. |
| <b>Note:</b> The tabs or options available to you on a screen will depend upon which CCS components have been installed on the system and the Oracle license agreement. |                                                                                                                                          |

**New Product Type**

Help

Display Currency: CAD ☐ Set as default

Name:

Description:

Initial Wallet Expiry Period:  days  hours

Initial Balance Expiry Period:  days  hours

Pre-use Subscriber Batch Wallet Expiry Period:  days  hours

Recharge Minimum Wallet Expiry Period Extension:  days  hours

Recharge Minimum Balance Expiry Period Extension:  days  hours

Wallet Expiry Warning Threshold:  days

Balance Expiry Warning Threshold:  days

Maximum Call Length (secs):

Active to Dormant:  days  hours

Dormant to Terminated:  days  hours

Terminated to Removed:  days  hours

Initial Value: 0.00 \$

Number Of Free Swaps Allowed:

Save Cancel

- Configure this record by completing the required details on the different option panels on this screen.  
All configuration options must be completed to finalize a product type. However, once the name and the control plans have been defined for the Product Type the configuration can be saved at any point by clicking **Save**.  
For more information about the available options, see Configuration options summary.
- Click **Save**.

## Configuration options summary

This table lists all the product type configuration options and their functionality.

| Option                    | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             | More Information                               |
|---------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------|
| Name and Periods          | Defines the core details of the product type including name and expiry periods.                                                                                                                                                                                                                                                                                                                                                                                                                                         | <i>Name and Periods</i> (on page 162)          |
| Control Plans             | Defines the control plans which are used for subscribers who have this product type.                                                                                                                                                                                                                                                                                                                                                                                                                                    | <i>Control Plans</i> (on page 165)             |
| Announcements             | Sets the product type-dependant announcements for some interaction feature nodes.                                                                                                                                                                                                                                                                                                                                                                                                                                       | <i>Announcements</i> (on page 170)             |
| Call Barring              | This option: <ul style="list-style-type: none"> <li>Configures the call barring for the selected product type.</li> <li>Shows the numbers that are allowed or barred at a product type level.</li> </ul>                                                                                                                                                                                                                                                                                                                | <i>Call Barring</i> (on page 172)              |
| FF White List             | Use to create and edit the list of number prefixes that all friends and family numbers must begin with. Typically, the white list covers all local networks and local areas.<br><br><b>Tip:</b> Friends and family numbers can only be accepted if they are included in the FF White List, but are not included in the friends and family black list for this service provider. For more details, see <i>Friends and Family Black List</i> (on page 67).                                                                | <i>FF White List</i> (on page 173)             |
| Number Translations       | Use to view and maintain the number translation short codes that are mapped to specific termination numbers for the selected product type.                                                                                                                                                                                                                                                                                                                                                                              | <i>Number Translations</i> (on page 175)       |
| Bypass Numbers            | Use to view and maintain the bypass numbers that are allowed or barred at the product type level for the selected product type.<br><br>A bypass number is a number that has a discount applied to it.<br><br>The discount that applies to bypass numbers is set: <ul style="list-style-type: none"> <li>At the service level, on the in the Service Management, Edit Resource Limits screen. For details, see <i>Resource Limits</i> (on page 509).</li> <li>At product type level, in the Discounts option.</li> </ul> | <i>Bypass Numbers</i> (on page 177)            |
| Creditcard Recharge Rules | Use to set the rules for credit card recharge. These rules will then apply to any credit card recharge that is attempted on wallets associated with the selected product type.                                                                                                                                                                                                                                                                                                                                          | <i>Creditcard Recharge Rules</i> (on page 179) |
| Second Currency           | Configures a second currency for wallets associated with the selected product type.                                                                                                                                                                                                                                                                                                                                                                                                                                     | <i>Second Currency</i> (on page 183)           |

| Option                         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                 | More Information                                    |
|--------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
| What's New                     | Use to enable the What's New feature node. This node plays the caller an advertising message and offers the option to divert the call to a service number for further information. For more information about the What's New feature node, see <i>Feature Nodes Reference Guide</i> .                                                                                                                                                       | <i>What's New</i> (on page 184)                     |
| Help & Info                    | Use to enter details for the Help Info Menu feature node. For more information about the Help Info Menu feature node, see <i>Feature Nodes Reference Guide</i> .                                                                                                                                                                                                                                                                            | <i>Help &amp; Info</i> (on page 186)                |
| Product Type Swaps             | Use to create a product type swap menu. This entails setting a number of options in various parts of the system. There are two stages to this procedure:<br><ol style="list-style-type: none"> <li>1 Create a named event. Perform this once to create the set and event.</li> <li>2 Modify the product that you wish to enable swapping from. You need to repeat this stage for every product that has the swap option enabled.</li> </ol> | <i>Product Type Swaps</i> (on page 188)             |
| Node Options                   | Use to select the options that are offered to the caller on the Main Menu and Personal Options Menu feature nodes in Control Plans associated with this product type. For more information about these feature nodes, see <i>Feature Nodes Reference Guide</i> .                                                                                                                                                                            | <i>Node Options</i> (on page 191)                   |
| Remote Access                  | Use to configure access to remote access for subscribers with this product type.<br><br><b>Note:</b> Subscribers must also have the Remote Access check box selected in their subscriber details. For more information, see <i>Remote Access</i> (on page 108).                                                                                                                                                                             | <i>Remote Access</i> (on page 193)                  |
| Friends and Destination        | Use to configure the product type level settings for the F&D service.                                                                                                                                                                                                                                                                                                                                                                       | <i>Friends and Destination</i> (on page 195)        |
| Friends and Family             | Use to configure the product type level settings for the F&F service.                                                                                                                                                                                                                                                                                                                                                                       | <i>Friends and Family</i> (on page 197)             |
| Promotional Destination Rates  | Lets you apply a discount to short messages, when a subscriber has sent a certain amount of short messages in the month already.                                                                                                                                                                                                                                                                                                            | <i>Promotional Destination Rates</i> (on page 199)  |
| Cumulative Balances            | Defines the cumulative balance plan to use with this product type.                                                                                                                                                                                                                                                                                                                                                                          | <i>Cumulative Balances</i> (on page 202)            |
| Real-Time Wallet Notifications | Defines the notifications which are sent out due to real-time events such as wallet recharges.<br><br><b>Note:</b> This functionality is only available for the VWS domain.                                                                                                                                                                                                                                                                 | <i>Real-Time Wallet Notifications</i> (on page 204) |
| Periodic Charges               | Defines which periodic charges can apply to wallets with this product type. The charges are applied on a regular basis to all the wallets with this product type. Each charge either credits or debits the specified balance type.                                                                                                                                                                                                          | <i>Periodic Charges</i> (on page 206)               |

| Option                         | Description                                                                                                                                                                                                                                                             | More Information                                    |
|--------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------|
|                                | <b>Note:</b> This functionality is only available for the VWS domain.                                                                                                                                                                                                   |                                                     |
| Adjustments                    | Use to set the value for the minimum and maximum adjustments that may be made to the subscriber's balances.<br><b>Note:</b> This functionality is only available for the VWS domain.                                                                                    | <i>Adjustments</i> (on page 209)                    |
| Wallet Life Cycle              | Defines the WLC periods which control feature availability around wallet expiry dates.<br><b>Note:</b> This functionality is only available for the VWS domain.                                                                                                         | <i>Wallet Life Cycle</i> (on page 215)              |
| Discounts                      | Used to set the discounts applied to a product type bypass number.                                                                                                                                                                                                      | Discounts                                           |
| Subscriber Profile Limitations | Use to set product type limits for LNSTRING and LOPREFIX profile field types. The limits set here override the limits set in the Service Management, Resource Limits screen.<br><b>Note:</b> Profile field limitations may only be set in the Edit product type screen. | <i>Subscriber Profile Limitations</i> (on page 218) |
| Profile                        | Use to configure the profile fields (excluding LNSTRING and LOPREFIX profile field types) that have been added to the product type.<br><b>Note:</b> Profile fields can only be set in the Edit Product Type screen.                                                     | <i>Profile Fields</i> (on page 221)                 |

## Editing product types

Follow these steps to edit an existing product type.

| Step | Action                                                                                                                                                                                                                                                                                |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                               |
| 2    | From the <b>Product Type</b> tab, select the product type to edit.                                                                                                                                                                                                                    |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the Edit Product Type screen, as shown in the example below.<br><b>Note:</b> The tabs or options available to you on a screen will depend upon which CCS components have been installed on the system and the Oracle license agreement. |

Step

Action

Edit Product Type

Name & Periods

Control Plans

Announcements

Call Barring

FF White List

Number Translations

Bypass Numbers

Creditcard Recharge Rules

Second Currency

What's New

Help & Info

Product Type Swaps

Node Options

Remote Access

Friends and Destination

Friends and Family

Promotional Destination Rates

Cumulative Balances

Real-Time Wallet Notifications

Periodic Charges

Adjustments

Wallet Life Cycle

Discounts

Subscriber Profile Limitations

Profile

Name And Periods

Display CurrencyEURSet as default

NamePremium

DescriptionPremium account

Initial Wallet Expiry Period30 days 0 hours

Initial Balance Expiry Period30 days 0 hours

Pre-use Subscriber Batch Wallet Expiry Period days hours

Recharge Minimum Wallet Expiry Period Extension0 days 0 hours

Recharge Minimum Balance Expiry Period Extension0 days 0 hours

Wallet Expiry Warning Threshold0 days

Balance Expiry Warning Threshold0 days

Maximum Call Length (secs)

Active to Dormant days hours

Dormant to Terminated days hours

Terminated to Removed days hours

Initial Value0.00 \$

Number Of Free Swaps Allowed0

Save

Cancel

Help

Access to elements of this screen are controlled by user permissions. If you cannot see some of the functionality described for this screen, your permissions may have been set to restrict access to that element.

4

Check or update the details on the different option panels as necessary.  
For more information about the available options, see Configuration options summary.

5

If you have made changes to the product type's details, click **Save**.  
If you do not want to make changes to the product type's details, click **Cancel**.

Deleting Product Types

Follow these steps to delete an existing product type.

**Note:** You cannot delete a product type that is in use.

| Step | Action                                                                                                                                                    |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the service provider from the <b>Service Provider</b> list.                                                   |
| 2    | On the <b>Product Type</b> tab, select the product type to delete.                                                                                        |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete confirmation prompt.                                                                           |
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> The record is deleted and you see the Product Type successfully deleted prompt. |
| 5    | Click <b>OK</b> .                                                                                                                                         |

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| Step | Action                                                          |
|------|-----------------------------------------------------------------|
|      | <b>Result:</b> You are returned to the <b>Product Type</b> tab. |

## Rules for Expiry Period Extensions

The system will take the maximum value of the following:

- 1 Existing expiry period
- 2 Today's date plus recharge rule expiry period (voucher or credit card)
- 3 Today's date plus product type minimum expiry extension

**Example:** If you have:

- A wallet with an expiry date one month in the future
  - A credit card or voucher with an expiry date extension of seven days
  - Your product type has a minimum expiry date extension of two months
- When you recharge, your account expiry period will be today plus two months.

## Name and Periods

### Introduction

The Name & Periods option sets general information about the product type, including:

- Name and description
- Currency defaults
- Expiry and recharge minimums
- Wallet state periods

For more information, see *Wallet states* (on page 11).



## Name & Periods option

Here is an example New Product Type screen showing the Name and Periods option.

**New Product Type**

Help

- Name & Periods
- Control Plans
- Announcements
- Call Barring
- FF White List
- Number Translations
- Bypass Numbers
- Creditcard Recharge Rules
- Second Currency
- What's New
- Help & Info
- Product Type Swaps
- Node Options
- Remote Access
- Friends and Destination
- Friends and Family
- Promotional Destination Rates
- Cumulative Balances
- Real-Time Wallet Notifications
- Periodic Charges
- Adjustments
- Wallet Life Cycle
- Discounts

**Name And Periods**

Display Currency: NZD ☐ Set as default

Name:

Description:

Initial Wallet Expiry Period:  days  hours

Initial Balance Expiry Period:  days  hours

Pre-use Subscriber Batch Wallet Expiry Period:  days  hours

Recharge Minimum Wallet Expiry Period Extension:  days  hours

Recharge Minimum Balance Expiry Period Extension:  days  hours

Wallet Expiry Warning Threshold:  days

Balance Expiry Warning Threshold:  days

Maximum Call Length (secs):

Active to Dormant:  days  hours

Dormant to Terminated:  days  hours

Terminated to Removed:  days  hours

Initial Value: 0.00 \$

Number Of Free Swaps Allowed:

Save Cancel

Access to elements of this screen are controlled by user permissions. If you cannot see some of the functionality described for this screen, your permissions may have been set to restrict access to that element.

## Name & Periods fields

This table describes the function of each field.

| Field            | Description                                                                                                |
|------------------|------------------------------------------------------------------------------------------------------------|
| Display Currency | The currency cash records for this product type are stored in.                                             |
| Set as default   | Whether or not the display currency should be used as the default currency for the Edit Subscriber screen. |
| Name             | The name of this product type.                                                                             |
| Description      | A description of this product type. Maximum of 2000 characters.                                            |

| Field                                            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Initial Wallet Expiry Period                     | The number of days and hours between activating wallets with this product type and their expiry.<br>The maximum is 999 days and 23 hours. If this field is left blank, wallets of this type will never expire.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Initial Balance Expiry Period                    | The number of days and hours between activating balances and buckets within wallets with this product type and their expiry.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Pre-use Subscriber Batch Wallet Expiry Period    | The number of days and hours between creating wallets with this product type and their expiry if they are not activated.<br><b>Note:</b> This expiry date is deactivated when the wallet becomes active.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Recharge Minimum Wallet Period Extension         | The minimum number of days and hours a wallet with this product type can have its expiry period extended by when it is recharged.<br>0 (zero) value in this field means there is no set minimum expiry period for this product type.                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Recharge Minimum Balance Expiry Period Extension | The minimum number of days and hours a balance or bucket within a wallet with this product type can have its expiry period extended when it is created or updated.<br>0 (zero) value in this field means there is no set minimum expiry period for this product type.                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Wallet Expiry Warning Threshold                  | The number of days before the wallet expiry date when a warning about the wallet expiry will be sent to subscribers with this product type.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Balance Expiry Warning Threshold                 | The number of days before the balance expiry date when a warning about the balance expiry will be sent to subscribers with this product type.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Maximum Call Length (secs)                       | The maximum number of seconds a call using this product type can last for.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Active to Dormant                                | The number of days and hours a wallet with this product type can have no activity before its status is changed from active to dormant.<br>A dormant wallet may be used, and when it is used, its status will return to active.                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Dormant to Terminated                            | The number of days and hours a wallet with this product type can have no activity before its status is changed from dormant to terminated.<br>A terminated wallet may not be used and has all existing credit removed.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Terminated to Removed                            | The number of days and hours after its expiry date has passed before a wallet with this product type is removed from the system. A manual intervention is required to change the status back to active or dormant.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Initial Value                                    | The amount (in currency subunits) of the initial balance of wallets of this product type.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Number Of Free Swaps Allowed                     | The number of times wallets with this product type may be swapped to to wallets of with a different product type.<br>If a wallet with this product type is changed to a different product type, the number of free swaps allowed is modified to reflect the new product type.<br><b>Example:</b> <ul style="list-style-type: none"> <li>Product Type 1 is allowed two free swaps.</li> <li>Product Type 2 is allowed only one free swap.</li> <li>Wallet A is set up as Product Type 1, so it is allowed two free swaps. Wallet A uses one of its two free swaps to change to Product Type 2. As Product Type 2 only allows a single free swap, any further wallet swaps will incur a charge.</li> </ul> |

| Field | Description                                                                                                                                                                                                                                                                                                         |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | <ul style="list-style-type: none"> <li>• Wallet B is set up as Product Type 2, so it is allowed a single free swap.</li> <li>• Wallet B uses its free swap to change to Product Type 1. As Product Type 1 allows two free swaps, Wallet B may change to another Product Type without incurring a charge.</li> </ul> |

## Adding Name & Period details

Follow these steps to add the name & period details for a product type.

| Step | Action                                                                                                                                                                                                                                                                          |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the New Product Type screen, select the Name &amp; Periods option from the left hand list.</p> <p><b>Result:</b> You see the Name &amp; Periods configuration options.</p> <p>For an example screen of the Name &amp; Periods options, see Name &amp; Periods option.</p> |
| 2    | <p>Configure this record by entering data in the fields on this screen.</p> <p>For more information about the fields on this screen, see <i>Name &amp; Periods fields</i> (on page 163).</p>                                                                                    |

## Editing Name & Period details

Follow these steps to view or change the name & period details for a product type.

| Step | Action                                                                                                                                                                                                                                                        |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the Edit Product Type screen, select the Name &amp; Period option from the left hand menu.</p> <p><b>Result:</b> You see the Name &amp; Period options.</p> <p>For an example screen of the Name &amp; Period options, see Name and Periods option.</p> |
| 2    | <p>Check or update the name &amp; period details as necessary.</p> <p>For more information about the fields in this option, see <i>Name &amp; Periods fields</i> (on page 163).</p>                                                                           |

## Control Plans

### Introduction

The Control Plans option configures the control plans to use for incoming and outgoing calls made using subscriber accounts which are associated with this product type.

## Control Plans option

Here is an example New Product Type screen showing the Control Plans option.

The screenshot shows a software window titled "New Product Type". On the left is a sidebar with a list of options, each preceded by a small globe icon. The "Control Plans" option is highlighted. The main content area is titled "Control Plans" and contains a "Default Tariff Plan" dropdown menu. Below this is a table with three columns: "CCS Capability", "Control Plan", and "Tariff Plan Override". The table is currently empty. At the bottom of the window are five buttons: "New", "Edit", "Delete", "Save", and "Cancel".

## Control Plan fields

This table describes the function of each field.

| Field               | Description                                                                                                                                                                |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Default Tariff Plan | The tariff plan that will be used by any service which does not set its own override tariff.<br><b>Tip:</b> This field is only available on the Control Plan option panel. |
| CCS Capability      | The service type which will use this configuration.<br>The list displays all the CCS Capabilities a service provider can use.                                              |

| Field                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Control Plan              | <p>The control plan subscribers who have this product type and are using this service will use.</p> <p>The Control Plan drop down list displays all the control plans a subscriber can use.</p> <p><b>Tip:</b> This list can be shortened by using the <b>Search By</b> field and then <b>Search</b>.</p> <p><b>Note:</b> If a subscriber calls the CCS service and no control plan exists for the applicable product type, then their call will be released.</p>                                                                        |
| Search By                 | <p>Use initial characters of the control plan name or combine with % (match on any number of characters), or _ (match on a single character).</p> <p><b>Examples:</b></p> <p>Search for e%SMS will find all control plan names beginning with e and containing SMS.</p> <p>Search for e_han%SMS will find all control plan names beginning with e, containing the string han in positions 3 to 5, and containing SMS.</p> <p>The list can be further restricted by entering a maximum number of names to show in the Max Rows field.</p> |
| Tariff Plan Override      | <p>Whether or not to override the default tariff plan set in the Control Plan option panel.</p> <p><b>Tip:</b> This field is only available on the Control Plan option panel.</p>                                                                                                                                                                                                                                                                                                                                                        |
| Override Tariff Plan with | <p>If the Tariff Plan Override check box is selected, calls using this service will use the tariff plan selected in this drop down list.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>This tariff plan overrides the default tariff plan set in the Control Plan option panel.</li> <li>This drop down list is populated by the Tariff Plan tab on the Rating Management screen. For more information about Tariffs, see <i>Tariff Plans</i> (on page 344).</li> </ul>                                                |
| Trigger Override          | Select the check box if you wish to override the in-session notification trigger for the selected call capability and product type combination.                                                                                                                                                                                                                                                                                                                                                                                          |
| Override Trigger With     | Select the trigger from the drop down list.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## Control Plan screen

Here is an example of a Control Plan screen used to add or edit a control plan for a product type.

**Edit Control Plan**

Help

CCS Capability **ACS\_Notification**

**Control Plans**

Control Plans **ACS\_Notification**

Search By  **Search** Max Rows **200**

**Tariff Plan**

Tariff Plan Override ☐ Override Tariff Plan With **Bronze Callback**

**In-Session Notification**

Trigger Override ☐ Override Trigger With **ISN\_SMS**

**Update** **Cancel**

## Adding Control Plans

Follow these steps to add the control plan configuration to a product type.

| Step | Action                                                                                                                                                                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Product Type screen, select the Control Plans option from the left hand list.<br><b>Result:</b> You see the Control Plans configuration options.<br>For an example screen of the Control Plan options, see <i>Control Plans option</i> (on page 166). |
| 2    | Click <b>New</b> .<br><b>Result:</b> You see the New <i>Control Plan screen</i> (See example on page 168).                                                                                                                                                       |

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | <p>Configure this record by entering data in the fields on this screen.<br/>For more information about the fields on this screen, see <i>Control Plan fields</i> (on page 166).</p> <p><b>Note:</b></p> <p>The <b>Override Tariff Plan With</b> field drop down list can only be changed if the <b>Tariff Plan Override</b> check box is selected.</p> <p>The <b>Override Trigger With</b> field drop down list can only be changed if the <b>Trigger Override</b> check box is selected.</p> |
| 4    | <p>Click <b>Apply</b>.</p> <p><b>Result:</b> Your changes will be temporarily saved and will be displayed in the Edit Product Type screen.</p>                                                                                                                                                                                                                                                                                                                                                |

## Editing control plans

Follow these steps to view or edit the control plan details for a product type.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the Edit Product Type screen, select the Control Plans option from the left hand list.</p> <p><b>Result:</b> You see the Control Plans configuration options.</p>                                                                                                                                                                                                                                                                                               |
| 2    | <p>In the Control Plans table select the record to change and click <b>Edit</b>.</p> <p><b>Result:</b> You see the Edit <i>Control Plan</i> screen (See example on page 168).</p>                                                                                                                                                                                                                                                                                     |
| 3    | <p>Check or update the control plan details as necessary.</p> <p>For more information about the fields in this option, see <i>Control Plan fields</i> (on page 166).</p> <p><b>Note:</b></p> <p>The Override Tariff Plan with drop down list can only be changed if the <b>Tariff Plan Override</b> check box is selected.</p> <p>The <b>Override Trigger With</b> field drop down list can only be changed if the <b>Trigger Override</b> check box is selected.</p> |
| 4    | <p>Click <b>Update</b>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                           |

## Deleting control plans

Follow these steps to delete a control plan from a product type.

| Step | Action                                                                                                                                                                  |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the Edit Product Type screen, select the Control Plans option from the left hand list.</p> <p><b>Result:</b> You see the Control Plans configuration options.</p> |
| 2    | <p>In the Control Plans table, select the record to delete and click <b>Delete</b>.</p> <p><b>Result:</b> You see the Delete Confirmation prompt.</p>                   |
| 3    | <p>Click <b>OK</b>.</p>                                                                                                                                                 |

# Announcements

## Introduction

The Announcements option configures the announcements which will be played to incoming and outgoing calls made using subscriber accounts which are associated with this product type.

## Announcements option

Here is an example New Product Type screen showing the Announcements option.

The screenshot shows the 'New Product Type' window. On the left is a sidebar with a list of options: Name & Periods, Control Plans, Announcements (highlighted), Call Barring, FF White List, Number Translations, Bypass Numbers, Creditcard Recharge Rules, Second Currency, What's New, Help & Info, Product Type Swaps, Node Options, Remote Access, Friends and Destination, Friends and Family, Promotional Destination Rates, Cumulative Balances, Real-Time Wallet Notifications, Periodic Charges, Adjustments, Wallet Life Cycle, and Discounts. The main area has a 'Help' button in the top right. Below the sidebar, there are two sections: 'Time Left Announcement' and 'Product Name Announcement'. Each section contains two dropdown menus: 'Announcement Set' (set to 'CCS Announcements') and 'Announcement Entry' (set to 'Account Reference Prompt Announcement'). At the bottom of the window are 'Save' and 'Cancel' buttons.

Access to elements of this screen are controlled by user permissions. If you cannot see some of the functionality described for this screen, your permissions may have been set to restrict access to that element.



## Announcements fields

This table describes the function of each field.

| Field              | Description                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Announcement Set   | Under the <b>Time Left Announcement</b> section, this field indicates the Announcement Set which contains the Announcement Entry that will be played to Subscribers when they have a limited amount of credit remaining. The drop-down list displays all the Announcement Sets a Service Provider can use.                                                                               |
| Announcement Entry | Under the <b>Time Left Announcement</b> section, this field indicates the Announcement Entry that will be played to Subscribers when they have a limited amount of credit remaining. The time period is set in the <b>CLI-DN</b> tab of the Rating Management screen. The drop-down list displays all the Announcement Entries from the selected Time Left Announcement Set.             |
| Announcement Set   | Under the <b>Product Name Announcement</b> section, this field indicates the Announcement Set which contains the Announcement Entry that will be played to Subscribers when their wallet is swapped from this product type to another type. The drop-down list displays all the Announcement Sets a Service Provider can use.                                                            |
| Announcement Entry | Under the <b>Product Name Announcement</b> section, this field indicates the Announcement Entry that will be played to Subscribers when their wallet is swapped from this product type to another type. The time period is set in the <b>CLI-DN</b> tab of the Rating Management screen. The list displays all the Announcement Entries from the selected Product Name Announcement Set. |

## Adding Announcement details

Follow these steps to add the Announcement details for a product type.

| Step | Action                                                                                                                                                                                                                                            |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Product Type screen, select the Announcements option from the left hand list.<br><b>Result:</b> You see the Announcements configuration options.<br>For an example screen shot of the Announcements options, see Announcements option. |
| 2    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Announcements fields</i> (on page 171).                                                                      |

## Editing Announcements details

Follow these steps to view or change the Announcements details for a product type.

| Step | Action                                                                                                                                                                                                                               |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Product Type screen, select the Announcements option from the left hand menu.<br><b>Result:</b> You see the Announcements options.<br>For an example screen shot of the Announcements options, see Announcements option. |

| Step | Action                                                                                                                                                  |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | Check or update the Announcements as necessary.<br>For more information about the fields in this option, see <i>Announcements fields</i> (on page 171). |

## Call Barring

### Introduction

The Call Barring option defines which numbers can be called by subscribers with this product type.

**Note:** Allowed/barred lists can also be configured at the following levels:

- System-wide
- Service Provider (see the *Barred List* (on page 528) tab)
- Subscriber account (see New/Edit Subscriber screen, *Call Barring* (on page 102) option).

### Call Barring option

Here is an example New Product Type screen showing the Call Barring option.

The screenshot shows the 'New Product Type' window. On the left, a sidebar lists various options, with 'Call Barring' highlighted. The main content area is titled 'Product Type Allowed/Barred List'. Inside this area, there is a 'Number List' table which is currently empty. To the right of the table, the 'List Type' is set to 'Allowed' via a dropdown menu. Below this, the 'Ignore' checkbox is checked. There is also a 'New Number' input field. At the bottom right of the main area are 'Add' and 'Delete' buttons. At the bottom center of the window are 'Save' and 'Cancel' buttons. A 'Help' button is located in the top right corner of the window.

## Call Barring fields

This table describes the function of each field.

| Field       | Description                                                                                                                                                                                                                                                                    |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number List | The numbers or number prefixes which cannot be called by subscribers with this product type.                                                                                                                                                                                   |
| List Type   | Whether the numbers in the Number List will be allowed or barred.<br><b>Note:</b> Depending on the list type, all the numbers in the list will be either allowed or barred for this product type. It is not possible to have some allowed and some barred numbers in the list. |
| Ignore      | Whether the service should ignore the allowed/barred list for this product type.                                                                                                                                                                                               |

## Adding Call Barring details

Follow these steps to add the Call Barring details for a product type.

| Step | Action                                                                                                                                                                                                                                                        |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Product Type screen, select the Call Barring option from the left hand list.<br><b>Result:</b> You see the Call Barring configuration options.<br>For an example screen shot of the Call Barring options, see Call Barring option.                 |
| 2    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Call Barring fields</i> (on page 173).<br>For more information about how to configure the Number List, see Number lists. |

## Editing Call Barring details

Follow these steps to view or change the Call Barring details for a product type.

| Step | Action                                                                                                                                                                                                                                          |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Product Type screen, select the Call Barring option from the left hand menu.<br><b>Result:</b> You see the Call Barring options.<br>For an example screen shot of the Call Barring options, see Call Barring option.                |
| 2    | Check or update the Call Barring details as necessary.<br>For more information about the fields in this option, see <i>Call Barring fields</i> (on page 173).<br>For more information about how to configure the Number List, see Number lists. |

## FF White List

### Introduction

The FF White List option sets the numbers which subscribers with this product type can nominate for their Friends and Family list.

For more information about the Friends and Family feature, see *Friends and Family/Destination Discount Configuration* (on page 26).

## FF White List option

Here is an example New Product Type screen showing the FF White List option.

The screenshot shows a 'New Product Type' dialog box. On the left is a list of product type options, with 'FF White List' highlighted. The main area is titled 'Friends and Family White List' and contains a 'Number List' section with a large empty text area. To the right of this area is a checkbox labeled 'Ignore' which is checked. Below the 'Number List' area is a 'New Number' input field. At the bottom of the dialog are 'Save' and 'Cancel' buttons. A 'Help' button is in the top right corner. The 'Add' and 'Delete' buttons are located at the bottom right of the 'Number List' area.

## FF White List fields

This table describes the function of each field.

| Field       | Description                                                                                                                                                                                                                                                                    |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Number List | The numbers or number prefixes which cannot be nominated as friends and family discounted numbers by subscribers with this product type.                                                                                                                                       |
| List Type   | Whether the numbers in the Number List will be allowed or barred.<br><b>Note:</b> Depending on the list type, all the numbers in the list will be either allowed or barred for this product type. It is not possible to have some allowed and some barred numbers in the list. |
| Ignore      | Whether the service should ignore the allowed/barred list for this product type.                                                                                                                                                                                               |

## Adding FF White List details

Follow these steps to add the FF White List details for a product type.

| Step | Action                                                                                                                                                                                                                                                         |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Product Type screen, select the FF White List option from the left hand list.<br><b>Result:</b> You see the FF White List configuration options.<br>For an example screen shot of the FF White List options, see FF White List option.             |
| 2    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>FF White List fields</i> (on page 174).<br>For more information about how to configure the Number List, see Number lists. |

## Editing FF White List details

Follow these steps to view or change the FF White List details for a product type.

| Step | Action                                                                                                                                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Product Type screen, select the FF White List option from the left hand menu.<br><b>Result:</b> You see the FF White List configuration options.<br>For an example screen shot of the FF White List options, see FF White List option. |
| 2    | Check or update the FF White List details as necessary.<br>For more information about the fields in this option, see <i>FF White List fields</i> (on page 174).<br>For more information about how to configure the Number List, see Number lists.  |

## Number Translations

### Introduction

The Number Translations option defines the short number translations which apply to calls by subscribers with this product type.

**Note:** Number Translation can also be configured at the following levels:

- System-wide
- Service Provider (see the *Number Translation List* (on page 534) tab), and
- Subscriber account (see New/Edit Subscriber screen, *Number Translation* (on page 103) option).

## Number Translations option

Here is an example New Product Type screen showing the Number Translations option.

The screenshot shows a software window titled "New Product Type". On the left is a sidebar with a list of options, each preceded by a small globe icon. The "Number Translations" option is highlighted with a blue background. The main content area is titled "Product Type Short Codes" and contains a "Number List" section. This section has a table with two columns, "In" and "Out". To the right of the table are two input fields, one for "In" and one for "Out". At the bottom right of the main area are two buttons: "Add" and "Delete". At the bottom center of the window are two buttons: "Save" and "Cancel". In the top right corner of the window is a "Help" button.

## Number Translations fields

This table describes the function of each field.

| Field       | Description                                                                        |
|-------------|------------------------------------------------------------------------------------|
| Number List | The short number mappings which apply to subscribers with this product type.       |
| In          | The string of digits which are called to access the short number.                  |
| Out         | The destination number calls to the corresponding In number will be terminated to. |

## Adding number translation details

Follow these steps to add the Number Translation details for a product type.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the New Product Type screen, select the Number Translations option from the left hand list.</p> <p><b>Result:</b> You see the Number Translations configuration options.</p> <p>For an example screen shot of the Number Translations options, see Number Translations option.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 2    | <p>Configure this record by entering data in the fields on this screen.</p> <p>Edit the <b>Number List</b> as required:</p> <ul style="list-style-type: none"> <li>• To add a number to the list: <ul style="list-style-type: none"> <li>▪ in the <b>In</b> field, type the service short code you want to translate from</li> <li>▪ in the <b>Out</b> field, type the termination number you want to translate the short service code to, and click <b>Add</b>.</li> </ul> </li> <li>• To remove a number from the list, select the number in the <b>Number List</b> grid and click <b>Delete</b>.</li> </ul> <p>For more information about the fields on this screen, see <i>Number Translations fields</i> (on page 176).</p> |

## Editing Number Translation details

Follow these steps to view or change the Number Translation details for a product type.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the Edit Product Type screen, select the Number Translation option from the left hand menu.</p> <p><b>Result:</b> You see the Number Translations options.</p> <p>For an example screen shot of the Number Translations options, see Number Translations option.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 2    | <p>Check or update the Number Translations details as necessary.</p> <p>Edit the <b>Number List</b> as required:</p> <ul style="list-style-type: none"> <li>• To add a number to the list: <ul style="list-style-type: none"> <li>▪ in the <b>In</b> field, type the service short code you want to translate from</li> <li>▪ in the <b>Out</b> field, type the termination number you want to translate the short service code to, and click <b>Add</b>.</li> </ul> </li> <li>• To remove a number from the list, select the number in the <b>Number List</b> grid and click <b>Delete</b>.</li> </ul> <p>For more information about the fields in this option, see <i>Number Translations fields</i> (on page 176).</p> |

## Bypass Numbers

### Introduction

The Bypass Numbers option defines the destination numbers which subscribers with this product type can call with the bypass discount being applied.

**Notes:** Bypass Number discounts are applied at the rate set in the *Bypass Number Discount* (on page 522) options in the Resource Limits for the Service Provider.

Bypass Numbers can also be configured at the following levels:

- System-wide`
- Service Provider (see the Edit Resource Limits - *Bypass Numbers* (on page 520) option).

## Bypass Numbers option

Here is an example New Product Type screen showing the Bypass Numbers option.

The screenshot shows the 'New Product Type' window with the 'Product Type Bypass Numbers' tab active. On the left, a tree view lists various configuration options, with 'Bypass Numbers' highlighted. The main panel features a large empty table labeled 'Number List'. To the right of the table, there is a 'List Type' dropdown menu currently set to 'Allowed', a checkbox labeled 'Ignore' which is checked, and a text input field labeled 'New Number'. At the bottom of the window, there are four buttons: 'Add', 'Delete', 'Save', and 'Cancel'.

## Bypass Numbers fields

This table describes the function of each field.

| Field       | Description                                                                                                               |
|-------------|---------------------------------------------------------------------------------------------------------------------------|
| Number List | The numbers or number prefixes which subscribers with this product type can call and receive the bypass numbers discount. |



| Field     | Description                                                                                                                                                                                                                                                                                                                   |
|-----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| List Type | Whether the numbers in the Number List will be allowed or barred from receiving the bypass numbers discount.<br><br><b>Note:</b> Depending on the list type, all the numbers in the list will be either allowed or barred for this product type. It is not possible to have some allowed and some barred numbers in the list. |
| Ignore    | Whether the service should ignore the allowed/barred list for this product type.                                                                                                                                                                                                                                              |

## Adding Bypass Number details

Follow these steps to add the Bypass Numbers details for a product type.

| Step | Action                                                                                                                                                                                                                                                                    |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Product Type screen, select the Bypass Numbers option from the left hand list.<br><br><b>Result:</b> You see the Bypass Numbers configuration options.<br>For an example screen of the Bypass Numbers options, see <i>Bypass Numbers option</i> (on page 178). |
| 2    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Bypass Numbers fields</i> (on page 178).<br>For more information about how to configure the Number List, see Number lists.           |

## Editing Bypass Numbers details

Follow these steps to view or change the Bypass Numbers details for a product type.

| Step | Action                                                                                                                                                                                                                                                       |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Product Type screen, select the Bypass Numbers option from the left hand menu.<br><br><b>Result:</b> You see the Bypass Numbers options.<br>For an example screen of the Bypass Numbers options, see <i>Bypass Numbers option</i> (on page 178). |
| 2    | Check or update the Bypass Numbers details as necessary.<br>For more information about the fields in this option, see <i>Bypass Numbers fields</i> (on page 178).<br>For more information about how to configure the Number List, see Number lists.          |

## Credit Card Recharge Rules

### Introduction

Credit card recharge rules control how subscribers can use their credit cards to recharge their accounts.

**Note:** This functionality is only available where Rating Management is handled by the VWS Voucher and Wallet Server, or a third party Voucher and Wallet Server that supports the credit card recharge rules.

## Creditcard Recharge Rules option

Here is an example New Product Type screen showing the Creditcard Recharge Rules option.

The screenshot shows a software window titled "New Product Type". On the left is a sidebar with a list of product type options, each preceded by a small globe icon. The option "Creditcard Recharge Rules" is highlighted with a blue background. The main area of the window is titled "Creditcard Recharge Rules" and contains a table with the following headers: "Order", "Amount (smalls)", "Currency", "Balance Expiry Period", and "Wallet Expiry Period". The table body is empty. At the bottom of the window are five buttons: "Save", "Cancel", "Edit", "Insert", and "Delete". A "Help" button is located in the top right corner of the window.

## Creditcard Recharge Rules fields

This table describes the function of each field.

| Field            | Description                                                                                                                                                                             |
|------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Order            | Where in the recharge options list this entry should appear.<br>The list is played to a caller as a series of recharge options when the caller attempts a credit card recharge.         |
| Amount (littles) | The amount (in subunits of currency) of recharge which will be added to wallets with this product type when this option in a credit card recharge is completed.                         |
| Currency         | The currency to make the recharge in. The list displays all the currencies a Subscriber can use. For more information about creating new currencies, see <i>Currency</i> (on page 489). |

| Field                 | Description                                                                                                                                                                                                                                                                                                         |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Balance Expiry Period | The number of days after wallet activation at which wallets with this product type will have their balance reduced to 0.<br>If this field is left blank, the wallet balance will never expire.<br>The setting in this field overrides the setting on the Name & Periods option when a credit card recharge is made. |
| Wallet Expiry Period  | The number of days after wallet activation at which wallets with this product type will expire.<br>If this field is left blank, the wallet will never expire.<br>The setting in this field overrides the setting on the Name & Periods option when a credit card recharge is made.                                  |

## Adding Creditcard Recharge Rule details

Follow these steps to configure the Creditcard Recharge Rules for this product type.

| Step | Action                                                                                                                                                                                                                                                                                            |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Product Type screen, select the Creditcard Recharge Rules option from the left hand menu.<br><b>Result:</b> You see the Creditcard Recharge Rules configuration options.<br>For an example screen shot of the Creditcard Recharge Rules options, see Creditcard Recharge Rules option. |
| 2    | Click <b>Insert</b> .<br><b>Result:</b> You see the Edit/Insert screen.                                                                                                                                                                                                                           |

- Configure this record by entering data in the fields on this screen.  
For more information about the fields on this screen, see *Creditcard Recharge Rules fields* (on page 180).
- Click **Save** to save the details to the database and return to the New Product Type screen.  
**Result:** Your changes will be temporarily saved and will be displayed in the New Product Type screen.
- If required, repeat steps 2-4 until all the recharge options have been configured.

## Editing Creditcard Recharge Rule details

Follow these steps to configure the Creditcard Recharge Rules for this product type.

| Step | Action                                                                                                                                                                                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Product Type screen, select the Creditcard Recharge Rules option from the left hand menu.<br><b>Result:</b> You see the Creditcard Recharge Rules configuration options.<br>For an example screen shot of the Creditcard Recharge Rules options, see Creditcard Recharge Rules option. |
| 2    | In the Creditcard Recharge Rules grid, select the record you want to change and click <b>Insert</b> .<br><b>Result:</b> You see the Edit/Insert screen.                                                                                                                                            |

- |   |                                                                                                                                                                                                                   |
|---|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3 | Check or update the Creditcard Recharge Rules details as necessary.<br>For more information about the fields on this screen, see <i>Creditcard Recharge Rules fields</i> (on page 180).                           |
| 4 | Click <b>Save</b> to save the details to the database and return to the Edit Product Type screen.<br><b>Result:</b> Your changes will be temporarily saved and will be displayed in the Edit Product Type screen. |
| 5 | If required, repeat steps 2-4 until all the recharge options have been configured.                                                                                                                                |

## Deleting Creditcard Recharge Rule details

Follow these steps to delete a Creditcard Recharge Rule from a product type.

| Step | Action                                                                                                                                                                                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Product Type screen, select the Creditcard Recharge Rules option from the left hand menu.<br><b>Result:</b> You see the Creditcard Recharge Rules configuration options.<br>For an example screen shot of the Creditcard Recharge Rules options, see Creditcard Recharge Rules option. |
| 2    | In the Creditcard Recharge Rules table, select the record to delete and click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                                                                                                            |
| 3    | Click <b>OK</b> .                                                                                                                                                                                                                                                                                  |
| 4    | If required, repeat steps 2 and 3 until all the Creditcard Recharge Rules to delete have been deleted.                                                                                                                                                                                             |

## Second Currency

### Introduction

A product type's Secondary Currency provides an additional currency which can be used in subscriber interfaces. All values are stored in the main product type currency, but can be translated into the secondary currency using the exchange rate between the currency.

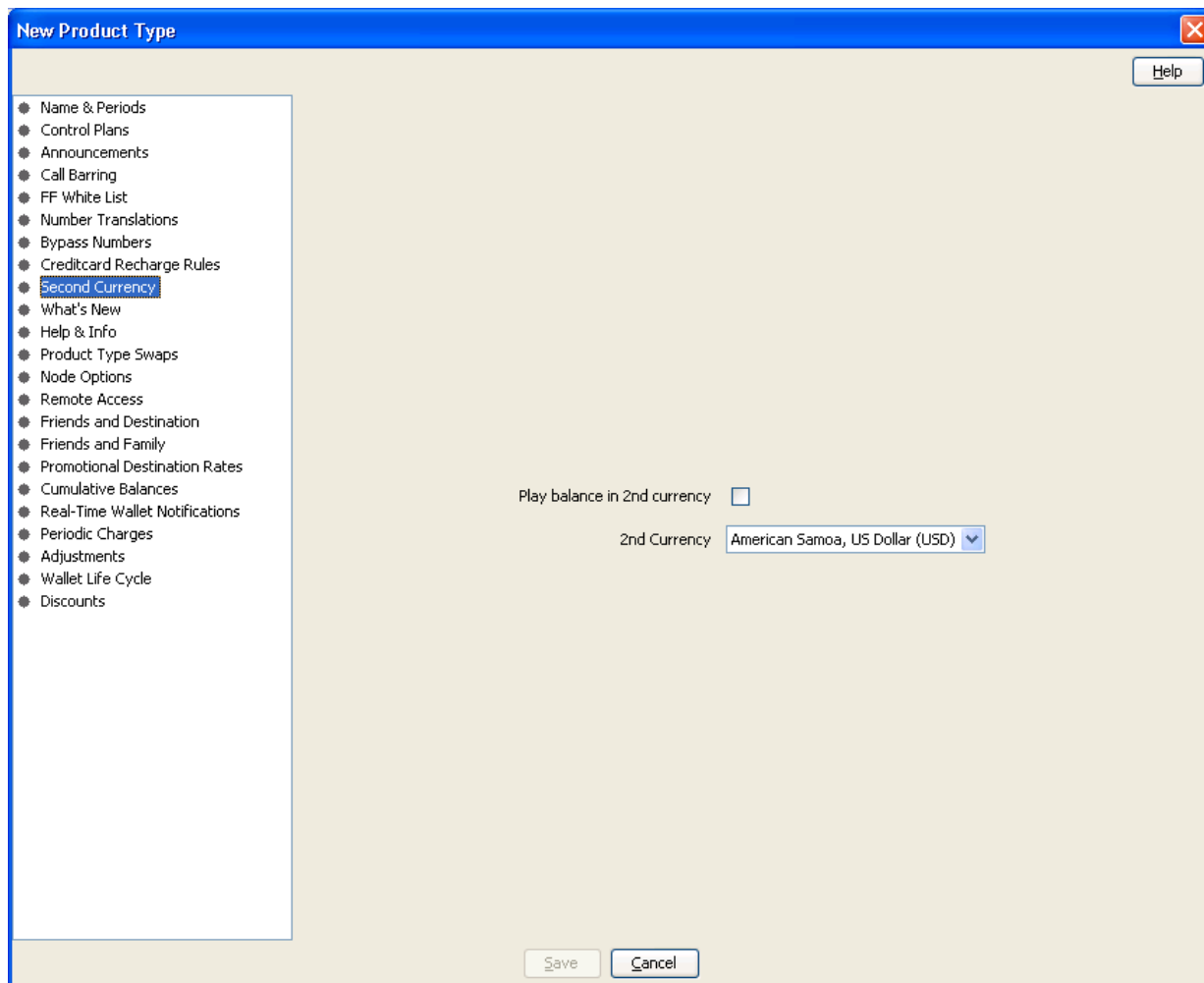
For more information about currencies, see *Currency* (on page 489).

For more information about exchange rates, see *Exchange Rates* (on page 506).

**Note:** This functionality is only available where Rating Management is handled by the VWS Voucher and Wallet Server, or a third party Voucher and Wallet Server that supports the use of second currencies.

### Second Currency option

Here is an example New Product Type screen showing the Second Currency option.



The screenshot shows a window titled "New Product Type" with a blue header bar. On the left is a vertical list of options, each preceded by a small circle icon. The "Second Currency" option is highlighted with a blue background. To the right of this list, there is a checkbox labeled "Play balance in 2nd currency" which is currently unchecked. Below this checkbox is a dropdown menu labeled "2nd Currency" with "American Samoa, US Dollar (USD)" selected. At the bottom of the window are two buttons: "Save" and "Cancel". A "Help" button is located in the top right corner of the window's content area.

**New Product Type**

- Name & Periods
- Control Plans
- Announcements
- Call Barring
- FF White List
- Number Translations
- Bypass Numbers
- Creditcard Recharge Rules
- **Second Currency**
- What's New
- Help & Info
- Product Type Swaps
- Node Options
- Remote Access
- Friends and Destination
- Friends and Family
- Promotional Destination Rates
- Cumulative Balances
- Real-Time Wallet Notifications
- Periodic Charges
- Adjustments
- Wallet Life Cycle
- Discounts

Play balance in 2nd currency ☐

2nd Currency American Samoa, US Dollar (USD) ▼

Save Cancel

Help

## Second Currency fields

This table describes the function of each field.

| Field                        | Description                                                                                                                                                                                                                                                                                                                                       |
|------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Play balance in 2nd currency | Whether wallets with this product type should have a balance which will be announced in the secondary currency.<br>Selecting this option enables the Dual Currency announcements set in the Configure Announcements panel of the New/Edit Currency screen. For more information about creating new currencies, see <i>Currency</i> (on page 489). |
| 2nd Currency                 | The currency which will be the alternate currency for wallets with this product type.                                                                                                                                                                                                                                                             |

## Adding Second Currency details

Follow these steps to add the Second Currency details for a product type.

| Step | Action                                                                                                                                                                                                                                                    |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Product Type screen, select the Second Currency option from the left hand menu.<br><b>Result:</b> You see the Second Currency configuration options.<br>For an example screen shot of the Second Currency options, see Second Currency option. |
| 2    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Second Currency fields</i> (on page 184).                                                                            |

## Editing Second Currency details

Follow these steps to view or change the Second Currency details for a product type.

| Step | Action                                                                                                                                                                                                                                       |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Product Type screen, select the Second Currency option from the left hand menu.<br><b>Result:</b> You see the Second Currency options.<br>For an example screen shot of the Second Currency options, see Second Currency option. |
| 2    | Check or update the Second Currency as necessary.<br>For more information about the fields in this option, see <i>Second Currency fields</i> (on page 184).                                                                                  |

## What's New

### Introduction

The What's New configuration option defines how the What's New feature node behaves when used in a control plan for this product type. For more information about using the What's New feature node, see the *Feature Nodes Reference Guide*.

## What's New option

Here is an example New Product Type screen showing the What's New option.

The screenshot shows a window titled "New Product Type". On the left is a sidebar with a list of product type options, each preceded by a bullet point. The "What's New" option is highlighted with a blue background. The main area of the window is light beige and contains the following controls:

- A "Help" button in the top right corner.
- A "Whats new enabled" checkbox, which is currently unchecked.
- An "Announcement" section containing two dropdown menus labeled "Set" and "Entry".
- A "Dialled number" text input field.
- "Save" and "Cancel" buttons at the bottom center.

## What's New fields

This table describes the function of each field.

| Field             | Description                                                                                                              |
|-------------------|--------------------------------------------------------------------------------------------------------------------------|
| Whats new enabled | Whether the What's New feature node should be available to control plans for subscriber accounts with this product type. |
| Announcement      | The announcement which will be played to a caller when the call traverses the What's New node in the control plan.       |
| Dialled number    | The number to route the caller to if they choose to hear more about the advertised feature.                              |

## Adding What's New details

Follow these steps to add the What's New details for a product type.

| Step | Action                                                                                                                                                                                                                                                 |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Product Type screen, select the What's New option from the left hand menu.<br><b>Result:</b> You see the What's New configuration options.<br>For an example screen shot of the What's New options, see <a href="#">What's New option</a> . |
| 2    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>What's New fields</i> (on page 185).                                                                              |

## Editing What's New details

Follow these steps to view or change the What's New details for a product type.

| Step | Action                                                                                                                                                                                                                                    |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Product Type screen, select the What's New option from the left hand menu.<br><b>Result:</b> You see the What's New options.<br>For an example screen shot of the What's New options, see <a href="#">What's New option</a> . |
| 2    | Check or update the What's New details as necessary.<br>For more information about the fields in this option, see <i>What's New fields</i> (on page 185).                                                                                 |

## Help & Info

### Introduction

The Help & Info configuration defines how the Help Information feature node behaves when used in a control plan for this product type. For more information about using the Help Information feature node, see the *Feature Nodes Reference Guide*.



## Help & Info option

Here is an example New Product Type screen showing the Help & Info option.

The screenshot shows a software window titled "New Product Type". On the left is a sidebar with a list of product types, each preceded by a bullet point. The "Help & Info" option is highlighted with a blue background. The main area of the window is titled "Help & Info Config" and contains a table with three columns: "Order", "Summary Announcement", and "Detailed Announcement". The table is currently empty. At the bottom of the window are buttons for "Edit", "Insert", "Delete", "Save", and "Cancel". A "Help" button is located in the top right corner of the window.

## Help & Info fields

This table describes the function of each field.

| Field                 | Description                                                                                                                                                                              |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Order                 | The number specifying where in the options list this entry should appear. The list is played to a caller as a series of help menu options when the caller accesses the Help & Info menu. |
| Summary Announcement  | The Announcement Entry to play to callers to summarize the contents of this help menu item.                                                                                              |
| Detailed Announcement | The Announcement Entry to play to callers who choose to listen to the detailed contents of this help menu item.                                                                          |

## Adding Help & Info details

Follow these steps to add the Help & Info details for a product type.

| Step | Action                                                                                                                                                                                                                                                         |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Product Type screen, select the Help & Info option from the left hand menu.<br><b>Result:</b> You see the Help & Info configuration options.<br>For an example screen shot of the Help & Info options, see <a href="#">Help &amp; Info option</a> . |
| 2    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <a href="#">Help &amp; Info fields</a> (on page 187).                                                                        |

## Editing Help & Info details

Follow these steps to view or change the Help & Info details for a product type.

| Step | Action                                                                                                                                                                                                                                            |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Product Type screen, select the Help & Info option from the left hand menu.<br><b>Result:</b> You see the Help & Info options.<br>For an example screen shot of the Help & Info options, see <a href="#">Help &amp; Info option</a> . |
| 2    | Check or update the Help & Info details as necessary.<br>For more information about the fields in this option, see <a href="#">Help &amp; Info fields</a> (on page 187).                                                                          |

## Product Type Swaps

### Introduction

The Product Type Swap configuration defines how the Product Type Swap feature node behaves when used in a control plan for this Product Type. For more information about using the Product Type Swap feature node, see [Feature Nodes Reference Guide](#).

## Product Type Swaps option

Here is an example New Product Type screen showing the Product Type Swaps option.

The screenshot shows a window titled "New Product Type" with a sidebar on the left containing a list of options. The "Product Type Swaps" option is highlighted. The main area of the window is titled "Product Type Swaps" and contains two columns: "Allowed Type" and "Menu Order". The bottom of the window has buttons for "Save", "Cancel", "Edit", "Insert", and "Delete".

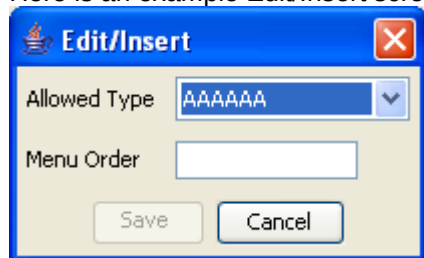
## Product Type Swap fields

This table describes the function of each field.

| Field        | Description                                                                                    |
|--------------|------------------------------------------------------------------------------------------------|
| Allowed Type | The product type the subscriber can choose for this menu item.                                 |
| Menu Order   | The number value specifying where in the list of product type menu options this choice occurs. |

## Edit/Insert screen

Here is an example Edit/Insert screen.



## Adding Product Type Swap details

Follow these steps to add the Product Type Swap details for a product type.

**Warning:** To use product type swaps, you must also have configured a named event set called "Product Type" and it must have a named event in the set called "Product Type Swap". The Product Type Swap named event must have the **Contributes to Monthly Expenditure** check box selected. These values must be exact, or the product type swap will fail.

| Step | Action                                                                                                                                                                                                                                                            |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Product Type screen, select the Product Type Swap option from the left hand menu.<br><b>Result:</b> You see the Product Type Swap configuration options.<br>For an example screen shot of the Product Type Swap options, see Product Type Swap option. |
| 2    | Click <b>Insert</b> .<br><b>Result:</b> You see the <i>Edit/Insert screen</i> (See example on page 190).                                                                                                                                                          |
| 3    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Product Type Swap fields</i> (on page 189).                                                                                  |
| 4    | Click <b>Save</b> to save the details to the database and return to the New Product Type screen.<br><b>Result:</b> Your changes will be temporarily saved and will be displayed in the New Product Type screen.                                                   |
| 5    | If required, repeat steps 2-4 until all the recharge options have been configured.                                                                                                                                                                                |

## Editing Product Type Swap details

Follow these steps to configure the Product Type Swaps for this product type.

| Step | Action                                                                                                                                                                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Product Type screen, select the Product Type Swaps option from the left hand menu.<br><b>Result:</b> You see the Product Type Swaps configuration options.<br>For an example screen of the Product Type Swaps options, see Product Type Swap option. |
| 2    | In the Product Type Swap table, select the record to change and click <b>Insert</b> .<br><b>Result:</b> You see the <i>Edit/Insert screen</i> (See example on page 190).                                                                                         |

| Step | Action                                                                                                                                                                                                            |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | Check or update the Product Type Swap details as necessary.<br>For more information about the fields on this screen, see <i>Product Type Swap fields</i> (on page 189).                                           |
| 4    | Click <b>Save</b> to save the details to the database and return to the Edit Product Type screen.<br><b>Result:</b> Your changes will be temporarily saved and will be displayed in the Edit Product Type screen. |
| 5    | If required, repeat steps 2-4 until all the recharge options have been configured.                                                                                                                                |

## Deleting Product Type Swap details

Follow these steps to delete a Product Type Swap from a product type.

| Step | Action                                                                                                                                                                                                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Product Type screen, select the Product Type Swap option from the left hand menu.<br><b>Result:</b> You see the Product Type Swap configuration options.<br>For an example screen shot of the Product Type Swap options, see Product Type Swap option. |
| 2    | In the Product Type Swap table, select the record to delete and click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                                                                                    |
| 3    | Click <b>OK</b> .                                                                                                                                                                                                                                                  |
| 4    | If required, repeat steps 2 and 3 until all the Product Type Swaps to delete have been deleted.                                                                                                                                                                    |

## Node Options

### Introduction

The Node Options option sets product type-specific configuration for these feature nodes:

- Main Menu, and
- Personal Options Menu.

## Node Options option

Here is an example New Product Type screen showing the Node Options option.

**New Product Type**

Help

- Name & Periods
- Control Plans
- Announcements
- Call Barring
- FF White List
- Number Translations
- Bypass Numbers
- Creditcard Recharge Rules
- Second Currency
- What's New
- Help & Info
- Product Type Swaps
- Node Options**
- Remote Access
- Friends and Destination
- Friends and Family
- Promotional Destination Rates
- Cumulative Balances
- Real-Time Wallet Notifications
- Periodic Charges
- Adjustments
- Wallet Life Cycle
- Discounts

☐ Allow product type swaps  
☐ Allow fixed line maintenance  
☐ Allow outcall  
☐ Enable help and info  
☐ Enable voucher recharge

Balance status warning threshold (system currency : littles)

Save Cancel

## Node Options fields

This table describes the function of each field.

| Field                        | Description                                                                                                                                      |
|------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| Allow product type swaps     | Whether the Product Swap functionality should be available as a product type swap option on the Main Menu and the Personal Options Menu nodes.   |
| Allow fixed line maintenance | Whether the option to add a fixed line for a prepaid subscriber should be available as an option on the Main Menu and the Personal Options Menu. |
| Allow outcall                | Whether the option making follow-on calls out of the Main Menu node should be available.                                                         |
| Enable help and info         | Whether the option of finding more information from the Help & Info Menu should be available on the Main Menu node.                              |
| Enable voucher recharge      | Whether the option to recharge vouchers should be available.                                                                                     |

| Field                                                       | Description                                                                                                                                                              |
|-------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Balance status warning threshold (system currency: littles) | The amount below which an announcement will be played to the caller warning them about a low account balance. The balance amount will be in the currency of the account. |

## Adding Node Options details

Follow these steps to add the Node Options details for a product type.

| Step | Action                                                                                                                                                                                                                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Product Type screen, select the Node Options option from the left hand list.<br><b>Result:</b> You see the Node Options configuration options.<br>For an example screen shot of the Node Options options, see Node Options option. |
| 2    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Node Options fields</i> (on page 192).                                                                   |

## Editing Node Options details

Follow these steps to view or change the Node Options details for a product type.

| Step | Action                                                                                                                                                                                                                           |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Product Type screen, select the Node Options option from the left hand menu.<br><b>Result:</b> You see the Node Options options.<br>For an example screen shot of the Node Options options, see Node Options option. |
| 2    | Check or update the Node Options details as necessary.<br>For more information about the fields in this option, see <i>Node Options fields</i> (on page 192).                                                                    |

# Remote Access

## Introduction

The Remote Access option defines whether or not subscribers with this product type can use the IVR system.

**Note:** Subscribers may not be able to access to the IVR system if:

- no IVR control plan is set up, or
- the subscriber's account denies access to the IVR system.

## Remote Access option

Here is an example New Product Type screen showing the Remote Access option.

The screenshot shows a window titled "New Product Type" with a blue header bar. On the left is a list of product type options, each preceded by a small globe icon. The "Remote Access" option is highlighted with a blue background. The main area of the window is titled "Remote Access" and contains a single checkbox labeled "Allowed". At the bottom of the window are "Save" and "Cancel" buttons. A "Help" button is located in the top right corner of the main area.

## Adding Remote Access details

Follow these steps to add the Remote Options details for a product type.

| Step | Action                                                                                                                                                                                                                                                                                     |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Product Type screen, select the Remote Options option from the left hand list.<br><b>Result:</b> You see the Remote Options configuration options.<br>For an example screen of the Remote Options options, see Remote Access option.                                            |
| 2    | To enable access to the IVR system for subscribers with this product type, select the <b>Allowed</b> field.<br><br><b>Note:</b> Subscribers must also have the Remote Access check box selected in their Subscriber details. For more information, see <i>Remote Access</i> (on page 108). |



## Editing Remote Access details

Follow these steps to add the Remote Options details for a product type.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Product Type screen, select the Remote Options option from the left hand list.<br><b>Result:</b> You see the Remote Options configuration options.<br>For an example screen shot of the Remote Options options, see Remote Access option.                                                                                                                                                                            |
| 2    | To enable access to the IVR system for subscribers with this product type, select the <b>Allowed</b> check box.<br>To disable access to the IVR system for subscribers with this product type, clear the Allowed check box.<br><b>Note:</b> To access the IVR system, subscribers must also have the Remote Access check box selected in their Subscriber details. For more information, see <i>Remote Access</i> (on page 108). |

## Friends and Destination

### Introduction

The Friends and Destination option defines charging for the friends and destination service.

For more information about the Friends and Destination feature, see *Friends and Family/Destination Discount Configuration* (on page 26).

## Friends and Destination option

Here is an example New Product Type screen showing the Friends and Destination option.

The screenshot shows a software window titled "New Product Type" with a blue title bar. On the left is a vertical list of menu items, each preceded by a small circular icon. The item "Friends and Destination" is highlighted with a blue background. The main area of the window is titled "Friends & Destination Product Type" and contains two input fields: "Total Discount %:" followed by a text box, and "Free changes allowed:" followed by a text box. At the bottom of the window are "Save" and "Cancel" buttons. A "Help" button is located in the top right corner of the main content area.

## Friends and Destination fields

This table describes the function of each field.

| Field                 | Description                                                                                              |
|-----------------------|----------------------------------------------------------------------------------------------------------|
| Total Discount %:     | The total discount for dialed numbers falling within the subscriber's Friends & Destination prefix.      |
| Free changes allowed: | The maximum number of free changes the subscriber can make to their Friends & Destination configuration. |

## Adding Friends and Destination details

Follow these steps to add the Friends and Destination charging details for a product type.

| Step | Action                                                                                                                                                                                                                                                                                                   |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the New Product Type screen, select the Friends and Destination option from the left hand list.</p> <p><b>Result:</b> You see the Friends and Destination configuration options.</p> <p>For an example screen shot of the Friends and Destination options, see Friends and Destination option.</p> |
| 2    | <p>Configure this record by entering data in the fields on this screen.</p> <p>For more information about the fields on this screen, see <i>Friends and Destination fields</i> (on page 196).</p>                                                                                                        |

## Editing Friends and Destination details

Follow these steps to view or change the Friends and Destination details for a product type.

| Step | Action                                                                                                                                                                                                                                                                                      |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the Edit Product Type screen, select the Friends and Destination option from the left hand menu.</p> <p><b>Result:</b> You see the Friends and Destination options.</p> <p>For an example screen shot of the Friends and Destination options, see Friends and Destination option.</p> |
| 2    | <p>Check or update the Friends and Destination details as necessary.</p> <p>For more information about the fields in this option, see <i>Friends and Destination fields</i> (on page 196).</p>                                                                                              |

## Friends and Family

### Introduction

The Friends and Family configuration defines some details about how the friends and family feature works with this product type.

For more information about the Friends and Family feature, see *Friends and Family/Destination Discount Configuration* (on page 26).

## Friends and Family option

Here is an example New Product Type screen showing the Friends and Family option.

The screenshot shows a software window titled "New Product Type". On the left is a vertical list of product options, each preceded by a small globe icon. The option "Friends and Family" is highlighted with a blue background. The main area of the window is titled "Friends & Family Product Type" and contains three input fields with labels: "Total Discount %:", "Free changes allowed:", and "Maximum F&F numbers allowed:". At the bottom of the window are two buttons: "Save" and "Cancel". A "Help" button is located in the top right corner of the main area.

## Friends and Family fields

This table describes the function of each field.

| Field                         | Description                                                                                                                                                                        |
|-------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Total Discount %:             | The total discount applied to calls made to the subscriber's Friends & Family numbers.<br><b>Note:</b> This percentage is distributed evenly amongst all Friends & Family numbers. |
| Free changes allowed:         | The maximum number of free changes the subscriber can make to the Friends & Family configuration.                                                                                  |
| Maximum F&FD Numbers allowed: | The maximum number of Friends & Family entries the subscriber can add to their Friends & Family list.                                                                              |

## Adding Friends and Family details

Follow these steps to add the Friends and Family details for a product type.

| Step | Action                                                                                                                                                                                                                                                                               |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the New Product Type screen, select the Friends and Family option from the left hand list.</p> <p><b>Result:</b> You see the Friends and Family configuration options.</p> <p>For an example screen shot of the Friends and Family options, see Friends and Family option.</p> |
| 2    | <p>Configure this record by entering data in the fields on this screen.</p> <p>For more information about the fields on this screen, see <i>Friends and Family fields</i> (on page 198).</p>                                                                                         |

## Editing Friends and Family details

Follow these steps to view or change the Friends and Family details for a product type.

| Step | Action                                                                                                                                                                                                                                                                  |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the Edit Product Type screen, select the Friends and Family option from the left hand menu.</p> <p><b>Result:</b> You see the Friends and Family options.</p> <p>For an example screen shot of the Friends and Family options, see Friends and Family option.</p> |
| 2    | <p>Check or update the Friends and Family details as necessary.</p> <p>For more information about the fields in this option, see <i>Friends and Family fields</i> (on page 198).</p>                                                                                    |

## Promotional Destination Rates

### Introduction

The Promotional Destination Rates option provides configuration for discounting short messages.

## Promotional Destination Rates option

Here is an example New Product Type screen showing the Promotional Destination Rates option.

The screenshot shows a software window titled "New Product Type". On the left is a sidebar with a list of product types, each preceded by a small globe icon. The "Promotional Destination Rates" option is highlighted with a blue selection bar. The main content area is titled "Promotional Destination Discount Rates" and contains a table with two columns: "Threshold" and "Discount Rate". The table is empty. At the bottom of the window, there are five buttons: "New", "Edit", "Delete", "Save", and "Cancel". A "Help" button is located in the top right corner of the window.

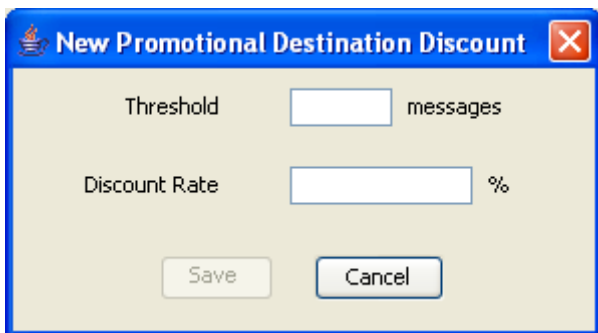
## Promotional Destination Rates fields

This table describes the function of each field.

| Field         | Description                                                                                         |
|---------------|-----------------------------------------------------------------------------------------------------|
| Threshold     | The number of non discounted short messages which must be sent before the discount will be applied. |
| Discount Rate | The percentage of discount which will be applied to qualifying short messages.                      |

## Adding Promotional Destination Rate details

Follow these steps to add Promotional Destination Rates to a product type.

| Step | Action                                                                                                                                                                                                                                                                                                                           |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the New Product Type screen, select the Promotional Destination Rates option from the left hand list.</p> <p><b>Result:</b> You see the Promotional Destination Rates configuration options.</p> <p>For an example screen shot of the Promotional Destination Rates options, see Promotional Destination Rates option.</p> |
| 2    | <p>Click <b>New</b>.</p> <p><b>Result:</b> You see the New Promotional Destination Discount screen.</p>                                                                                                                                         |
| 3    | <p>Configure this record by entering data in the fields on this screen.</p> <p>For more information about the fields on this screen, see <i>Promotional Destination Rates fields</i> (on page 200).</p>                                                                                                                          |
| 4    | <p>Click <b>Save</b>.</p> <p><b>Result:</b> Your changes will be temporarily saved and will be displayed in the New Product Type screen.</p>                                                                                                                                                                                     |

## Editing Promotional Destination Rate details

Follow these steps to view or edit Promotional Destination Rates to a product type.

| Step | Action                                                                                                                                                                                                                                                                                                                            |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the Edit Product Type screen, select the Promotional Destination Rates option from the left hand list.</p> <p><b>Result:</b> You see the Promotional Destination Rates configuration options.</p> <p>For an example screen shot of the Promotional Destination Rates options, see Promotional Destination Rates option.</p> |
| 2    | <p>Click <b>Edit</b>.</p> <p><b>Result:</b> You see the New Promotional Destination Discount screen.</p>                                                                                                                                                                                                                          |

| Step | Action |
|------|--------|
|------|--------|

**New Promotional Destination Discount**

Threshold  messages

Discount Rate  %

- 3 Check or update the Promotional Destination Discount details as necessary.  
For more information about the fields in this option, see *Promotional Destination Rates fields* (on page 200).
- 4 If you have made changes to the promotional destination rate's details, click **Save**.  
**Result:** Your changes will be temporarily saved and will be displayed in the Edit Product Type screen.  
If you do not want to make changes to the promotional destination rate details, click **Cancel**.

## Deleting Promotional Destination Rule details

Follow these steps to delete a Promotional Destination Rule from a product type.

| Step | Action                                                                                                                                                                                                                                                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Product Type screen, select the Promotional Destination Rules option from the left hand menu.<br><b>Result:</b> You see the Promotional Destination Rules configuration options.<br>For an example screen shot of the Promotional Destination Rules options, see Promotional Destination Rates option. |
| 2    | In the Promotional Destination Rules table, select the record to delete and click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                                                                                                                        |
| 3    | Click <b>OK</b> .                                                                                                                                                                                                                                                                                                  |
| 4    | If required, repeat steps 2 and 3 until all the Promotional Destination Rules to delete have been deleted.                                                                                                                                                                                                         |

## Cumulative Balances

### Introduction

The Cumulative Balances option configures the default cumulative balance plan for a product type. The cumulative balance plan defines the set of cumulative balance categories for which announcements can be played using the Cumulative Balances feature node.

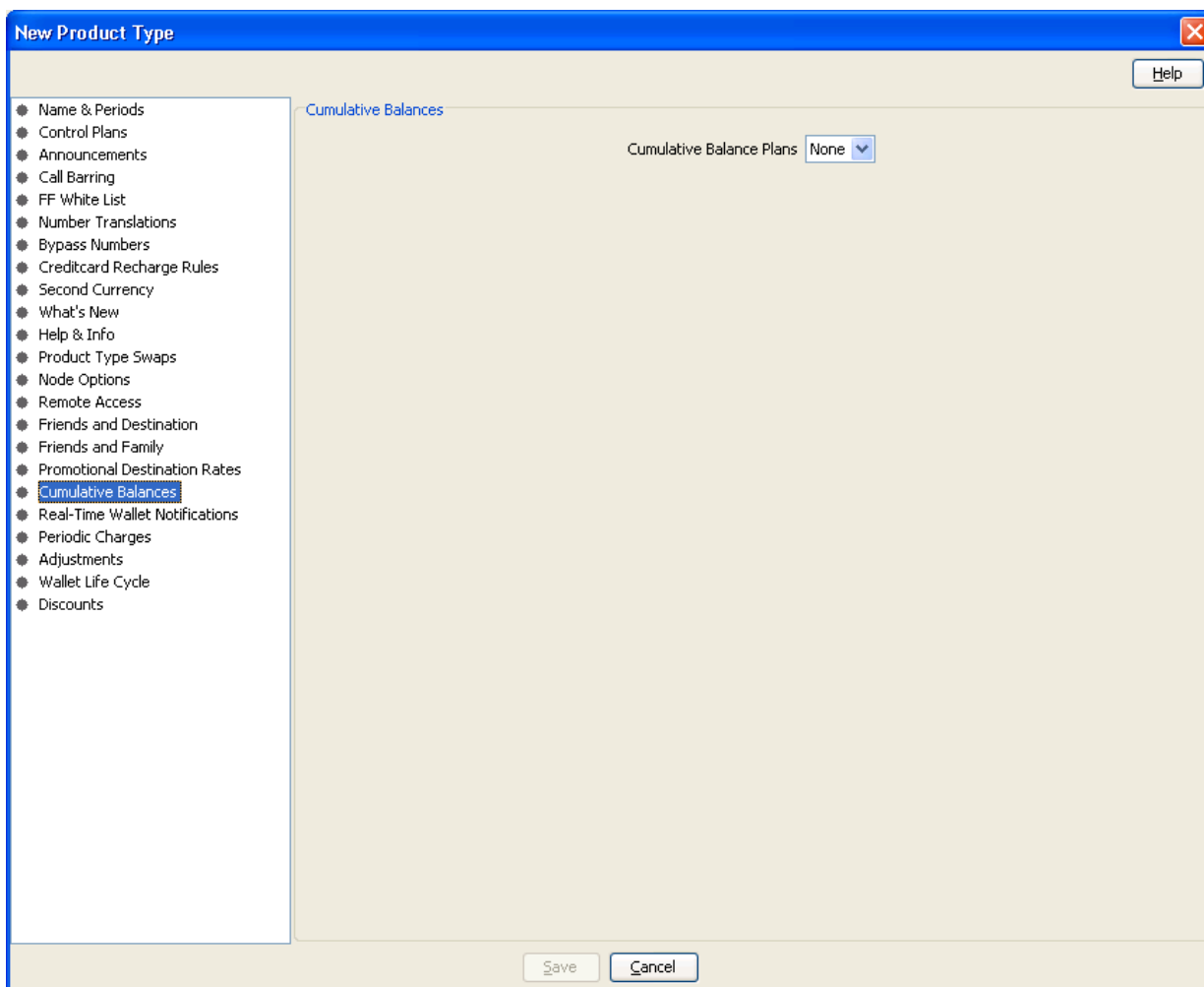
For more information about the Cumulative Balances node, see *Feature Nodes Reference Guide*. For details on configuring cumulative balance plans, see *Cumulative Balance Plans* (on page 300).

**Note:** Balances that have not been assigned to a cumulative balance category cannot be played by the node.



## Cumulative Balances option

Here is an example New Product Type screen showing the Cumulative Balances option.



## Configuring the cumulative balances option

Follow these steps to configure the default cumulative balance plan for a Product Type.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                            |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the New/Edit Product Type screen, select the Cumulative Balances option from the left hand list.</p> <p><b>Result:</b> You see the Cumulative Balances configuration options.</p> <p>For an example screen shot, see <i>Cumulative Balances option</i> (on page 203).</p>                                                                                                                                   |
| 2    | <p>From the <b>Cumulative Balance Plans</b> drop down list, select the default cumulative balance plan for the Product Type. The balance categories defined for the plan will be used by the Cumulative Balances node to play cumulative balance announcements.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>The default value can be overridden by specifying a value in the node.</li> </ul> |

| Step | Action                                                                                                                                                                                                                                                                                   |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | <ul style="list-style-type: none"><li>• If None is selected, this indicates there is no default cumulative balance plan associated with the Product Type.</li><li>• Cumulative balance plans and cumulative balance categories are configured in the Wallet Management screen.</li></ul> |

## Real-Time Wallet Notifications

### Introduction

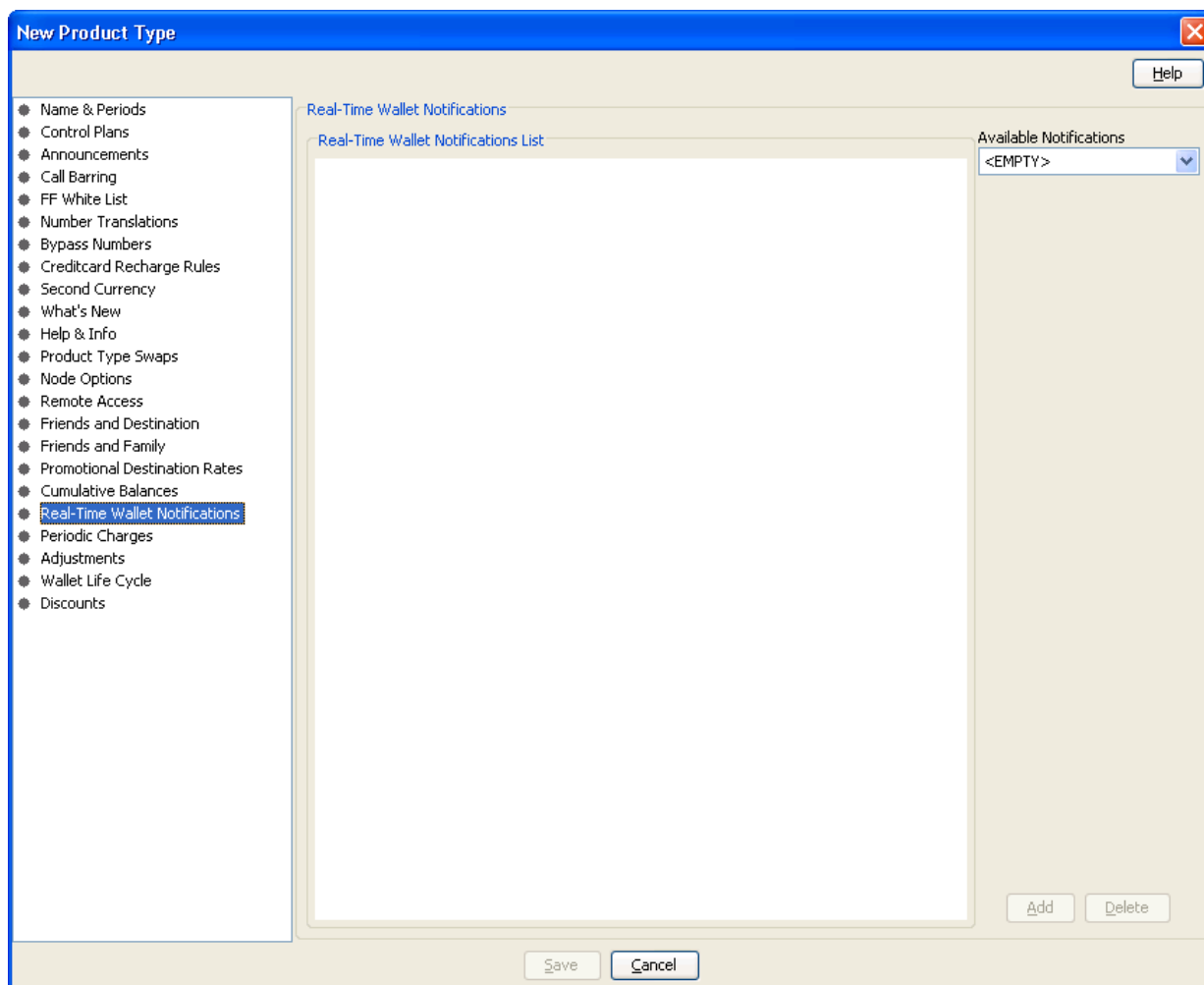
The Real-Time Wallet Notifications option enables real-time wallet notifications for a Product Type. The real-time wallet notifications listed in this option will apply to all wallets with this Product Type.

#### Notes:

- This functionality is only available where Rating Management is handled by the VWS.
- For details on defining the criteria used for generating real-time notifications, see *Adding real-time wallet notifications* (on page 273).

## Real-Time Wallet Notifications option

Here is an example New Product Type screen showing the Real-Time Wallet Notifications option.



## Real-Time Wallet Notifications fields

This table describes the function of each field.

| Field                        | Description                                                                                                                                                                                                                                                                         |
|------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Real-Time Notifications List | Displays all real-time wallet notifications enabled for this product type.                                                                                                                                                                                                          |
| Available Notifications      | Displays real-time wallet notifications available for adding to this product type. This field is populated by the Real-Time Wallet Notifications tab on the Wallet Management screen. For more information about this tab, see <i>Real-Time Wallet Notifications</i> (on page 269). |

## Editing real-time wallet notification details

Follow these steps to view or change the Real-Time Wallet Notifications which are active for a Product Type.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the Edit Product Type screen, select the Real-Time Wallet Notifications option from the left hand list.</p> <p><b>Result:</b> You see the Real-Time Wallet Notifications options.</p> <p>For an example screen shot of the Real-Time Wallet Notifications options, see Real-Time Wallet Notifications option.</p>                                                                                                                                               |
| 2    | <p>Check or edit the <b>Real-Time Notifications List</b>.</p> <ul style="list-style-type: none"> <li>To add a notification, select the one you want from the <b>Available Notifications</b> drop down list, and click <b>Add</b>.</li> <li>To delete a notification, select the one you want to delete in the list, and click <b>Delete</b>.</li> </ul> <p>For more information about the fields, see <i>Real-Time Wallet Notifications fields</i> (on page 205).</p> |
| 3    | <p>If you have made changes to the product type's details, click <b>Save</b>.</p> <p>If you do not want to make changes to the product type's details, click <b>Cancel</b>.</p>                                                                                                                                                                                                                                                                                       |

## Periodic Charges

### Introduction

The Periodic Charges option configures:

- which periodic charges can be applied to subscribers who have a wallet which uses this product type, and
- (optionally) which ccsPeriodicCharge process should process which periodic charges.

For more general information about periodic charges, see *Subscription Services* (on page 16).

### VWS domain functionality

This functionality is only available where Rating Management is handled by the VWS Voucher and Wallet Server.

For more information about domains, see *Domain* (on page 475).

## Periodic Charges option

Here is an example New Product Type screen showing the Periodic Charges option.

The screenshot shows a software window titled "New Product Type". On the left is a sidebar with a list of product type options, each preceded by a bullet point. The "Periodic Charges" option is highlighted with a blue background. The main area of the window has three tabs: "Periodic Charge" (which is active), "Apply to Activating", and "Apply to Existing". The "Periodic Charge" tab is currently empty. At the bottom of the window is a control bar containing an "Available Charges" dropdown menu, followed by "Add", "Delete", "Up", and "Down" buttons. To the right of these buttons is a "Daemon" spinner set to "1". At the very bottom are "Save" and "Cancel" buttons.

## Periodic Charges fields

This table describes the function of each field.

| Field               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|---------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Periodic Charge     | Displays all periodic charges enabled for this product type.<br><b>Note:</b> The default system setting allows assigning a maximum of 15 periodic charges per product type. To change the number of periodic charges per product type allowed in the NCC UI, set the <b>MaxProductTypePeriodicCharges</b> applet parameter to the desired number of charges in the <b>smsGui.bat/smsGui.sh</b> file. See the section on setting up the screens in <i>Charging Control Services Technical Guide</i> for more information. |
| Apply To Activating | Whether or not this periodic charge should be automatically applied to all subscribers who activate a wallet with this product type.                                                                                                                                                                                                                                                                                                                                                                                     |
| Apply To Existing   | Whether this periodic charge should be automatically applied to all existing subscribers who currently have this product type.                                                                                                                                                                                                                                                                                                                                                                                           |

| Field             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Available Charges | Displays periodic charges which can be added to this product type.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Daemon            | <p>The ccsPeriodicCharge daemon process id which should process periodic charges from this group.</p> <p><b>Note:</b> You can have 1 - 5 daemons running. The number is set by the numbers configured on this screen.</p> <p>The highest number available to select will be one more than the current highest set number across a service provider's products, with a maximum of 5.</p> <p>So if:</p> <ul style="list-style-type: none"> <li>• none yet set, the maximum is 1</li> <li>• "1" is already set, maximum is 2</li> <li>• "2" is already set, maximum is 3</li> <li>• "3" is already set, maximum is 4</li> <li>• "4" is already set, maximum is 5</li> <li>• "5" is already set, maximum is also 5</li> </ul> <p>For more information about the ccsPeriodicCharge process, see <i>CCS Technical Guide</i>.</p> |

The records and details shown in these fields are populated by the **Periodic Charges** tab for this service provider. For more information about managing periodic charges, see *Wallet Management - Periodic Charges* (on page 313).

## Editing applicable periodic charges

Follow these steps to view or change the periodic charges which are active for a Product Type.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the Edit Product Type screen, select the Periodic Charges option from the left hand list.</p> <p><b>Result:</b> You see the Periodic Charges options.</p> <p>For an example screen shot of the Periodic Charges options, see Periodic Charges option.</p>                                                                                                                                                                                                                                                                                                                                                                                                     |
| 2    | <p>Check or edit the <b>Periodic Charges List</b>.</p> <ul style="list-style-type: none"> <li>• To add a periodic charge, select the one you want from the <b>Available Charges</b> drop down list, and click <b>Add</b>.</li> <li>• To delete a periodic charge, select the one you want to delete in the list, and click <b>Delete</b>.</li> <li>• To move a periodic charge up the list, select it from the Periodic Charges List and click <b>Up</b>.</li> <li>• To move a periodic charge down the list, select it from the Periodic Charges List and click <b>Down</b>.</li> </ul> <p>For more information about the fields, see Periodic Charges fields.</p> |
| 3    | <p>If you want to balance the load of processing periodic charges by assigning different periodic charges to more than one ccsPeriodicCharge process, select a ccsPeriodicCharge process id from the <b>Daemon</b> field.</p> <p>The ccsPeriodicCharge with this id will process the selected periodic charge.</p>                                                                                                                                                                                                                                                                                                                                                  |
| 4    | <p>If you have made changes to the product type's details, click <b>Save</b>.</p> <p>If you do not want to make changes to the product type's details, click <b>Cancel</b>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

# Adjustments

## Introduction

Adjustment option configuration sets the limits for balance type Adjustments for a new Product Type. The Adjustments will apply to all Wallets with this Product Type. A further limit can be set for individual users. The limits set at the user level take precedence over the limits set for the Product Type.

On the Adjustment Users tab in the New/Edit Adjustment screen you can configure the minimum and maximum balance type adjustments allowed for specified users. You can add, edit, and delete adjustment amounts for individual users for the balance type selected on the Adjustment tab.

**Note:** This functionality is only available where Rating Management is handled by the VWS Voucher and Wallet Server.

## Adjustments option

Here is an example New Product Type screen showing the Adjustments option.

The screenshot shows a software window titled "New Product Type" with a blue header bar. On the left is a vertical list of menu items, each preceded by a small circle icon. The "Adjustments" item is highlighted with a blue background. The main area of the window is titled "Adjustments" and contains a table with three columns: "Balance Type", "Min Amount", and "Max Amount". The table is currently empty. At the bottom of the window, there are four buttons: "Save", "Cancel", "New", and "Delete". A "Help" button is located in the top right corner of the main content area.

## Adjustments fields

This table describes the function of each field.

| Field        | Description                                                                                                                                                                                                            |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Balance Type | The balance type these adjustment limits apply to.                                                                                                                                                                     |
| Min Amount   | The minimum value for an adjustment to the balance. Specify minor units for currency amounts and seconds for time amounts.<br><b>Tip:</b> To specify a negative value, type the minus sign (-) in front of the amount. |
| Max Amount   | The maximum value allowed for an adjustment to the balance.<br><b>Note:</b> The value for Max Amount must be greater than the value for Min Amount.                                                                    |

## Adding Adjustment details

Follow these steps to add Adjustment limits to a product type.

| Step | Action                                                                                                                                                                                                                               |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Product Type screen, select the Adjustments option from the left hand list.<br><b>Result:</b> You see the Adjustments configuration options.<br>For an example screen of the Adjustments options, see Adjustments option. |
| 2    | Click <b>New</b> .<br><b>Result:</b> You see the New Adjustment screen, <b>Adjustment</b> tab.                                                                                                                                       |

- Configure this record by entering data in the fields on this screen.  
For more information about the fields on this screen, see *Adjustments fields* (on page 210).
- To configure adjustment limits for the balance type for specific users, select the **Adjustment Users** tab.



| Step | Action |
|------|--------|
|------|--------|

**Result:** You see the Adjustment Users table on the tab.

- 5
- Configure user adjustments as required. For details see:
  - *Adding user adjustment limits* (on page 213)
  - *Editing user adjustment limits* (on page 214), and
  - *Deleting user adjustment limits* (on page 215).
- 6
- Click **Save**.

**Editing Adjustments details**

Follow these steps to edit the Adjustment limits configured for a product type.

| Step | Action |
|------|--------|
|------|--------|

- 1
- In the Edit Product Type screen, select the Adjustments option from the left hand list.  
**Result:** You see the Adjustments configuration options.  
For an example screen of the Promotional Destination Rates options, see Adjustments option.
- 2
- In the Adjustments table, select the record to change and click **Edit**.  
**Result:** You see the Edit Adjustment screen, **Adjustment** tab.

| Step | Action |
|------|--------|
|------|--------|

**Edit Adjustment**

Adjustment Adjustment Users

Balance Type General Cash

Min Amount (NZD)

Max Amount (NZD)

- 3 Check or update the Promotional Destination Discount details as necessary.  
For more information about the fields in this option, see *Adjustments fields* (on page 210).
- 4 To modify the adjustment limits configured for specific users, select the **Adjustment Users** tab.

**Result:** You see the Adjustment Users table on the tab.

**Edit Adjustment**

Adjustment Adjustment Users

| User Name | Min Amount   | Max Amount  |
|-----------|--------------|-------------|
| ACS_ADMIN | -5.00 (NZD)  | 15.00 (NZD) |
| SU        | -10.00 (NZD) | 10.00 (NZD) |

| Step | Action                                                                                                                                                                                                                                                                                                                                                                      |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | Configure user adjustments as required. For details, see: <ul style="list-style-type: none"> <li>• <i>Adding user adjustment limits</i> (on page 213)</li> <li>• <i>Editing user adjustment limits</i> (on page 214)</li> <li>• <i>Deleting user adjustment limits</i> (on page 215)</li> </ul>                                                                             |
| 6    | Click <b>Save</b> to save the configuration and return to the Edit Product Type screen.<br>If you have made changes to the adjustment's details, click <b>Save</b> .<br><b>Result:</b> Your changes will be temporarily saved and will be displayed in the Edit Product Type screen.<br>If you do not want to make changes to the adjustment details, click <b>Cancel</b> . |

## Deleting adjustments

Follow these steps to delete adjustment configuration from a product type.

**Note:** When you delete the adjustment configuration for a balance type, the associated user adjustment configuration will also be deleted.

| Step | Action                                                                                                                                                                                                                                |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Product Type screen, select the Adjustments option from the left hand list.<br><b>Result:</b> You see the Adjustments configuration options.<br>For an example screen of the Adjustments options, see Adjustments option. |
| 2    | In the Adjustments table, select the record to delete and click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                                                             |
| 3    | Click <b>OK</b> .                                                                                                                                                                                                                     |

## Adding user adjustment limits

Follow these steps to add balance type adjustment limits for a selected user.

| Step | Action                                                                                                                                              |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New/Edit Adjustment screen, select the Adjustment Users tab and click <b>New</b> .<br><b>Result:</b> You see the New User Adjustment screen. |

The screenshot shows a 'New User Adjustment' window. It contains the following fields and controls:

- Balance Type:** A dropdown menu currently showing 'General Cash'.
- User Name:** A dropdown menu currently showing 'ACS\_ADMIN'.
- Min Amount (NZD):** A text input field containing '0.00'.
- Max Amount (NZD):** A text input field containing '0.00'.
- Buttons:** 'Save', 'Cancel', and 'Help' (located in the top right corner).

| Step | Action                                                                                                                                                                       |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | <b>Note:</b> The <b>Balance Type</b> field is for information only and cannot be changed in this screen. It displays the balance type that this configuration will apply to. |
| 2    | From the <b>User Name</b> drop down list, select the user for whom to define adjustment limits.                                                                              |
| 3    | In the <b>Min Amount</b> field type the minimum value for a balance type adjustment. Specify minor units for currency amounts and seconds for time amounts.                  |
|      | <b>Tip:</b> To specify a negative value, type the minus sign (-) in front of the amount.                                                                                     |
| 4    | In the <b>Max Amount</b> field type the maximum value allowed for adjustment to the balance.                                                                                 |
|      | <b>Note:</b> The value for Max Amount must be greater than the value for Min Amount.                                                                                         |
| 5    | Click <b>Save</b> .                                                                                                                                                          |
|      | <b>Result:</b> You are returned to the New/Edit Adjustment screen.                                                                                                           |
| 6    | Click <b>Save</b> to save the configuration.                                                                                                                                 |

## Editing user adjustment limits

Follow these steps to edit balance type adjustment limits for a selected user.

| Step | Action                                                              |
|------|---------------------------------------------------------------------|
| 1    | In the New/Edit Adjustment screen, select the Adjustment Users tab. |
| 2    | Highlight the record to edit on the table and click <b>Edit</b> .   |
|      | <b>Result:</b> You see the Edit User Adjustment screen.             |

|   |                                                                                                                                                                              |
|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|   | <b>Note:</b> The <b>Balance Type</b> field is for information only and cannot be changed in this screen. It displays the balance type that this configuration will apply to. |
| 3 | If required, select a different user from the <b>User Name</b> drop down list.                                                                                               |
| 4 | If required, in the <b>Min Amount</b> field type a different minimum value for adjustments to the balance.                                                                   |
| 5 | If required, in the <b>Max Amount</b> field type a different maximum value allowed for adjustments to the balance.                                                           |
|   | <b>Note:</b> The value for Max Amount must be greater than the value for Min Amount.                                                                                         |
| 6 | Click <b>Save</b> .                                                                                                                                                          |
|   | <b>Result:</b> You are returned to the New/Edit Adjustment screen.                                                                                                           |

| Step | Action                                       |
|------|----------------------------------------------|
| 7    | Click <b>Save</b> to save the configuration. |

## Deleting user adjustment limits

Follow these steps to delete the adjustment limits configured for a specified user and balance type.

| Step | Action                                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the <b>Adjustment Users</b> tab in the New/Edit Adjustment screen.<br><b>Result:</b> You see a list of user adjustment limits in the table. |
| 2    | In the table, highlight the record to delete.                                                                                                      |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                                    |
| 4    | Click <b>OK</b> .<br><b>Result:</b> The record is deleted and you are returned to the New/Edit Adjustment screen.                                  |
| 5    | Click <b>Save</b> to save your changes.                                                                                                            |

## Wallet Life Cycle

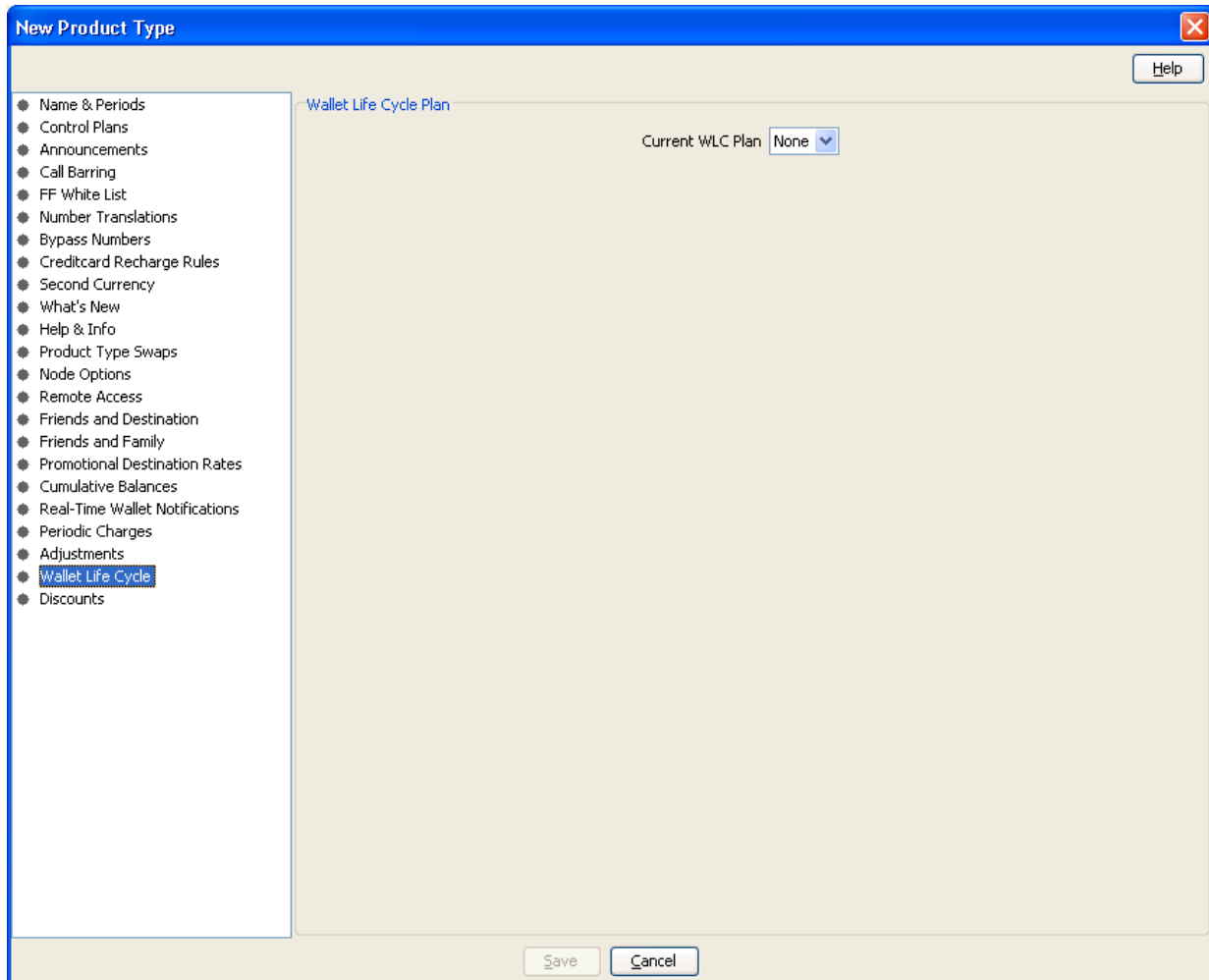
### Introduction

The WLC option is available only if the WLC service is installed.

You configure Wallet Life Cycles on a Product Type basis.

## Wallet Life Cycle option

Here is an example New Product Type screen showing the Wallet Life Cycle option.



## Selecting the current WLC plan

Follow these steps to select a Wallet Life Cycle Plan for a product type.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Product Type screen, select the Wallet Life Cycle option from the left hand list.<br><b>Result:</b> You see the Wallet Life Cycle Plan configuration option.                                                                                                                                                                                                                                                                                                                                                                                          |
| 2    | Select the current WLC Plan from the drop down list.<br><br><b>Note:</b> By selecting <b>None</b> you disassociate the current WLC Plan without associating another WLC Plan.                                                                                                                                                                                                                                                                                                                                                                                     |
| 3    | Click <b>Save</b> .<br><br><b>Result:</b> If you save a different WLC Plan to the one currently saved for the Product Type, then there will be an impact for all Subscribers currently assigned to the Product Type. The system will disassociate them from the old WLC Plan (if any) and associate them to the new WLC Plan (if any). This operation will be performed next time the Subscriber's Wallet is accessed or when the Subscriber's bucket expired and is grovelled by beGroveller or when the wallet is grovelled by the ccsSLEEChangeDaemon process. |

# Discounts

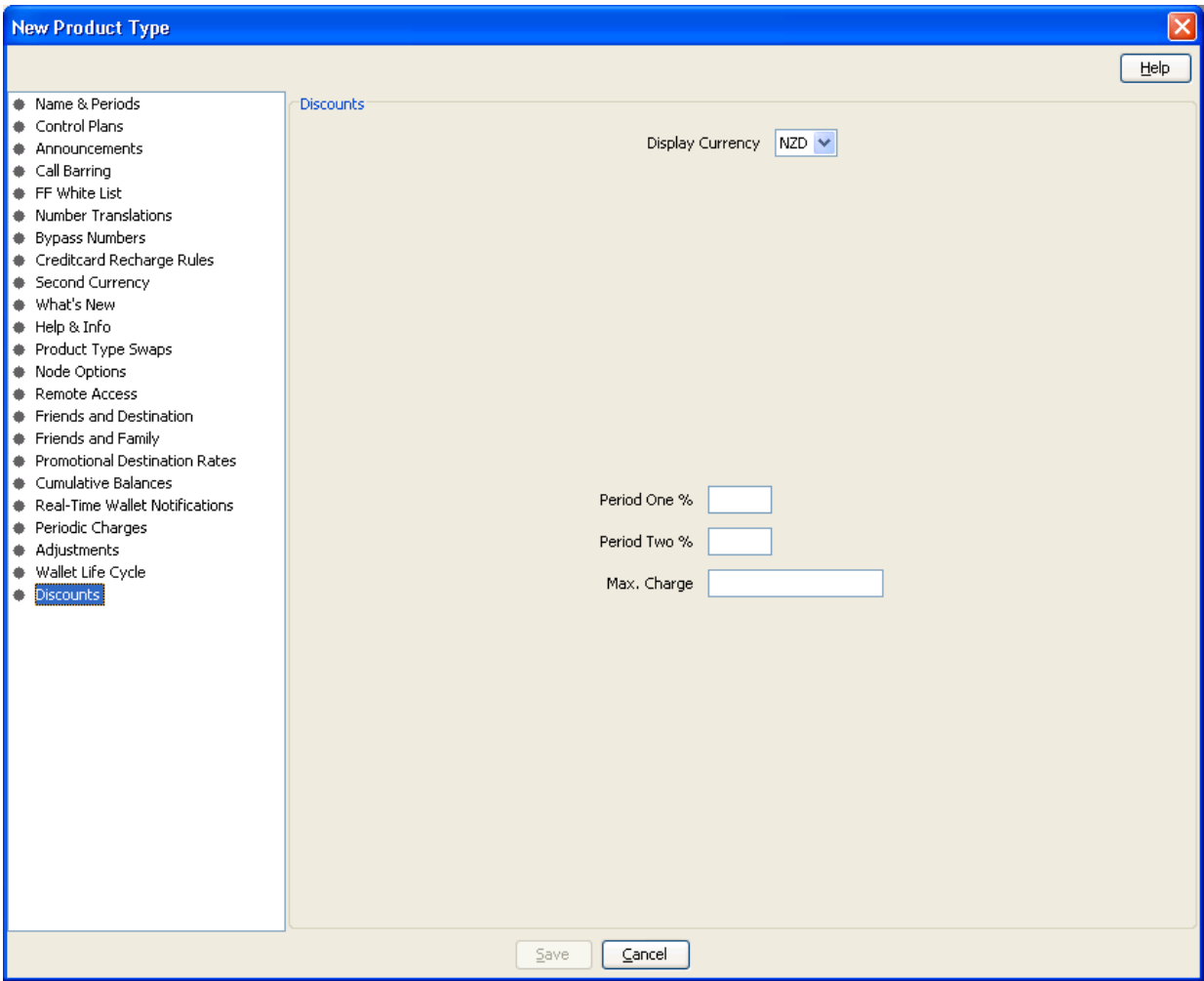
## Introduction

The Discounts option is used to set the discounts applied to a Product Type Bypass Number.

**Note:** To enable the discount, you must include the Set Discount node in the control plan. For details on how to configure the node, see the Set Discount feature node in *Feature Nodes Reference Guide*.

## Discounts option

Here is an example New Product Type screen showing the Discounts option.



## Editing discounts

Follow these steps to view or change the discounts which are applied to a bypass number for a product type.

| Step | Action                                                                                                                                                                                                                            |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Product Type screen, select the Discounts option from the left hand list.<br><b>Result:</b> You see the Discounts option.<br>For an example screen of the Discount option, see <i>Discounts option</i> (on page 217). |

| Step | Action                                                                                                                                                                 |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | Select the currency code which the maximum charge will be displayed in from the <b>Display Currency</b> drop down box.                                                 |
| 3    | Type the percentage which will be discounted during the first discount period in the <b>Period One %</b> field.                                                        |
| 4    | Type the percentage which will be discounted during the second discount period in the <b>Period Two %</b> field.                                                       |
| 5    | Type the maximum total charge the subscriber will be charged for any one call in the <b>Max. Charge</b> field.                                                         |
| 6    | If you have made changes to the product type's details, click <b>Save</b> .<br>If you do not want to make changes to the product type's details, click <b>Cancel</b> . |

## Subscriber Profile Limitations

### Introduction

You can set Product Type limits for LNSTRING and LOPREFIX profile field types. The limits set here override the limits set in the Service Management, Resource Limits screen.

### Profile groups

The profile fields for which you can set limits are available from the Subscriber Profile Limitations folder in the left hand panel in the Edit Product Type screen. Each group listed in the Subscriber Profile Limitations folder contains the limited profile fields that have been added to that Subscriber group through the SPM. If a field has been added to more than one group then it will be listed more than once.

**Note:** For more information on:

- Configuring profile fields in ACS, see the *ACS User's Guide*
- Using the SPM to add profile fields to a Subscriber group, see the *SPM User's Guide*

### Editing profile field limitations

Follow these steps to set the limits for a product type for a selected profile field where the field type is LNSTRING.

**Tip:** You can configure service provider limits for profile fields in the **Service Management**>Edit Resource Limits screen.

| Step | Action                                                                                                                                                   |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | From the left hand list in the Edit Product Type screen, expand the Subscriber Profile Limitations group containing the LNSTRING field you want.         |
| 2    | Select the LNSTRING field in the group.<br><b>Result:</b> You see the LNSTRING profile field limitations configuration options, such as in this example. |



| Step | Action |
|------|--------|
|------|--------|

- 3 Select the **Ignore Limitations** check box, if required:
  - When selected, the limits set for the product type are ignored and the resource limits are used.
  - When not selected, the limits set here for the product type are used.
- 4 In the **Min Number Length** field, enter the minimum numeric value for the profile field. Defaults to zero if no value is specified.
- 5 In the **Max Number Length** field, enter the maximum numeric value for the profile field. Defaults to 255 if no value is specified.
- 6 Select the **Limitation Prefix Tree Type** from the drop down list. If you select:
  - Allowed – The profile field value must match an entry in the number list.
  - Barred – The profile field value must not match an entry in the number list.
- 7 Edit the **Number List**. To:
  - Add to the list,
    - Enter a required number in the **New Number** field
    - Click **Add**.
  - Delete from the list
    - In the **Number List**, select the number
    - Click **Delete**.
- 8 Repeat step 7 until all the numbers you want are included.
- 9 Click **Save**.

## Editing profile field limitations

Follow these steps to set the limits for a Product Type for a selected profile field where the field type is LOPREFIX.

**Tip:** You can configure Service Provider limits for profile fields in the Service Management>Edit Resource Limits screen.

| Step | Action                                                                                                                                                   |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | From the left hand list in the Edit Product Type screen, expand the Subscriber Profile Limitations group containing the LOPREFIX field you want.         |
| 2    | Select the LOPREFIX field in the group.<br><b>Result:</b> You see the LOPREFIX profile field limitations configuration options, such as in this example. |

The screenshot shows the 'Edit Product Type' dialog box. On the left, a tree view under 'Subscriber Profile Limitations' shows 'Details' expanded, with 'Limited Ordered Prefix Tree' selected. The main area is titled 'Number List' and is empty. On the right, configuration options are shown: 'Ignore Limitations' is checked, 'Max Number of Entries' is 100, 'Min Number Length' is 0, 'Max Number Length' is 255, and 'Limitation Prefix Tree Type' is 'Barred'. Below these is a 'New Number' section with an input field and 'Add' and 'Delete' buttons. At the bottom are 'Save' and 'Cancel' buttons.

- 3 Tick the **Ignore Limitations** check box, if required:
  - When selected, the limits set for the product type are ignored and the resource limits are used.
  - When not selected, the limits set here for the product type are used.
- 4 In the **Max Number of Entries** field, type the maximum number of prefixes that may be included in the Number List. Defaults to 100 if no value is specified.
- 5 In the **Min Number Length** field, type the minimum numeric value for the LOPREFIX field. Defaults to zero if no value is specified.
- 6 In the **Max Number Length** field, type the maximum numeric value for the LOPREFIX field. Defaults to 255 if no value is specified.

| Step | Action                                                                                                                                                                                                                                                                                                    |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 7    | Select the <b>Limitation Prefix Tree Type</b> from the drop down list. If you select: <ul style="list-style-type: none"> <li>Allowed – The LOPREFIX field value must match an entry in the Number List.</li> <li>Barred – The LOPREFIX field value must not match an entry in the Number List.</li> </ul> |
| 8    | Edit the <b>Number List</b> . To: <ul style="list-style-type: none"> <li>Add to the list: Type a required number in the <b>New Number</b> field and then click <b>Add</b>.</li> <li>Delete from the list: In the <b>Number List</b>, select the number, and then click <b>Delete</b>.</li> </ul>          |
| 9    | Repeat step 8 until all the numbers you want are included.                                                                                                                                                                                                                                                |
| 10   | Click <b>Save</b> .                                                                                                                                                                                                                                                                                       |

## Profile Fields

### Introduction

You can configure the profile fields that have been added to the product type through the SPM. The available profile fields are listed by product type group in the Profile folder in the Edit Product Type screen.

**Note:** Profile field tags are configured in ACS. The SPM can then be used to add the profile fields to a group in the Edit Product Type screen. For more information on:

- Setting up profile fields in ACS, see *ACS User's Guide*.
- Using the SPM to add profile fields to the product type groups, see the *SPM User's Guide*.

## Edit Product Type screen - profile fields example

Here is an example Edit Product Type screen. In this example you see the profile fields that have been added to the PT1 Profile Fields group.

The screenshot shows the 'Edit Product Type' window. On the left is a tree view under the 'Profile' folder, containing 'MJH\_PT\_Panel' and 'PT1 Profile Fields' (which is selected). The main area contains three input fields: 'Product Number', 'Access network', and 'Creation Date' (a date picker). There is a 'Use Date' checkbox next to the 'Creation Date' field. At the bottom are 'Save' and 'Cancel' buttons. A 'Help' button is in the top right corner.

## Configuring profile fields

Follow these steps to configure the profile fields in a selected product type group.

| Step | Action                                                                                                                                                                                                                                                                                                                                                |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>From the left hand menu in the Edit Product Type screen, select the <b>Profile</b> group you want to configure.</p> <p><b>Result:</b> The available profile fields are displayed in the screen.</p> <p><b>Tip:</b> If the profile groups are not currently visible, double click the <b>Profile</b> folder in the left hand menu to expand it.</p> |
| 2    | Edit the profile field data entry boxes.                                                                                                                                                                                                                                                                                                              |
| 3    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                   |

## Copying Product Types

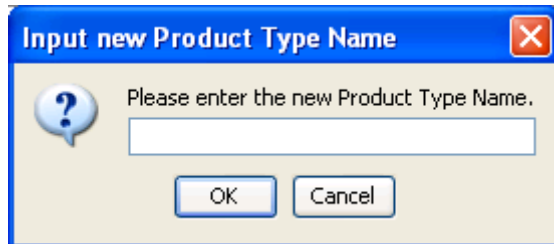
### Introduction

You can copy product types on the **Product Type** tab. This facility creates a new product type by copying all the configuration details from a selected product type to a new product type name. Once the new product type has been created, you can edit its configuration in the Edit Product Type screen.

### Copying a product type configuration

Follow these steps to copy a selected product type configuration to a new product type.

| Step | Action                                                                                          |
|------|-------------------------------------------------------------------------------------------------|
| 1    | In the Subscriber Management screen, select the <b>Service Provider</b> from the drop down box. |
| 2    | From the <b>Product Type</b> tab, select the Product Type to copy.                              |
| 3    | Click <b>Copy</b> .<br><b>Result:</b> You see the Input New Product Type Name screen.           |



- |   |                                                                                                                                                                                                                                   |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | Type in the name of the product type to be created.                                                                                                                                                                               |
| 5 | Click <b>OK</b> .<br><b>Result:</b> The configuration for the selected product type is copied to the new product type. The <b>Product Type</b> tab is refreshed and the copied product type appears in the list of product types. |



# Wallet Management

## Overview

### Introduction

This chapter explains how to configure the components used to manage wallets.

**Warning:** The Wallet Management screens are only available if the Rating Management module has been installed on your system and if you are using the VWS domain. If you are using a third party domain, then you will not be able to access these screens.

### In this chapter

This chapter contains the following topics.

|                                      |     |
|--------------------------------------|-----|
| Wallet Management Module.....        | 225 |
| Tracker Plans .....                  | 228 |
| Balance Units .....                  | 231 |
| Balance Types.....                   | 234 |
| Currency to Announcement Maps.....   | 245 |
| Balance Type Translations .....      | 247 |
| Rewards .....                        | 253 |
| Reward Product Translations .....    | 263 |
| Wallet Name Translation .....        | 266 |
| Real-Time Wallet Notifications ..... | 269 |
| Policy Counters .....                | 275 |
| Free Form Recharge .....             | 280 |
| Wallet Life Cycle.....               | 283 |
| Bonus Types.....                     | 292 |
| Bonus Values .....                   | 295 |
| Cumulative Balance Plans .....       | 300 |
| Periodic Charge Groups.....          | 309 |

## Wallet Management Module

### Introduction

The Wallet Management screen lets you configure components of wallets. It contains the following tabs which are covered in the chapter:

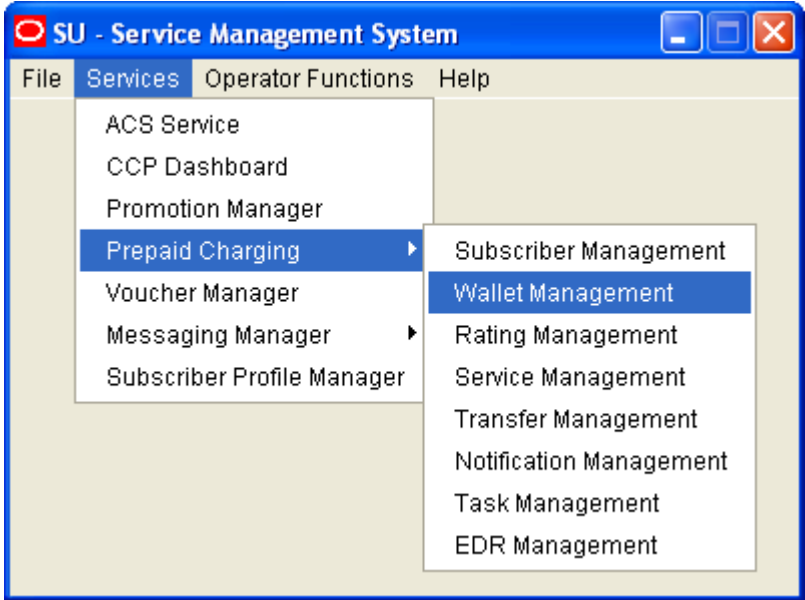
- *Balance Type Translations* (on page 247)
- *Balance Types* (on page 234)
- *Balance Units* (on page 231)
- *Bonus Types* (on page 292)
- *Bonus Values* (on page 295)
- *Cumulative Balance Plans* (on page 300)
- *Free Form Recharge* (on page 280)
- *Real-Time Wallet Notifications* (on page 269)

- *Reward Product Translations* (on page 263)
- *Rewards* (on page 253)
- *Tracker Plans* (on page 228)
- *Wallet Life Cycle* (on page 283)
- *Wallet Name Translation* (on page 266)

In addition it contains the **Periodic Charges** tab. This tab is covered in the *Wallet Management - Periodic Charges* (on page 313) chapter.

## Accessing the Wallet Management screen

Follow these steps to open the Wallet Management screen.

| Step | Action                                                                                                          |
|------|-----------------------------------------------------------------------------------------------------------------|
| 1    | Select the <b>Services</b> menu from the Service Management System main screen.                                 |
|      |                              |
| 2    | Select <b>Prepaid Charging &gt; Wallet Management</b> .<br><b>Result:</b> You see the Wallet Management screen. |



Wallet Management screen

Here is an example of Wallet Management screen.

Wallet Management

Service Provider

Boss

Help

Bonus Types

Bonus Values

Cumulative Balance Plans

Balance Type Translations

Periodic Charges

Free Form Recharge

Balance Units

Balance Types

Rewards

Reward Product Translations

Wallet Name Translation

| Name                  | Change User | Change Date         |
|-----------------------|-------------|---------------------|
| Bad Pin               | SU          | 2009-06-03 11:33:51 |
| Cash                  | SU          | 2009-06-03 11:33:51 |
| Days to wallet expiry | SU          | 2009-06-03 11:33:51 |
| SMSs                  | SU          | 2009-06-03 11:33:51 |
| Time                  | SU          | 2009-06-03 11:33:51 |

New

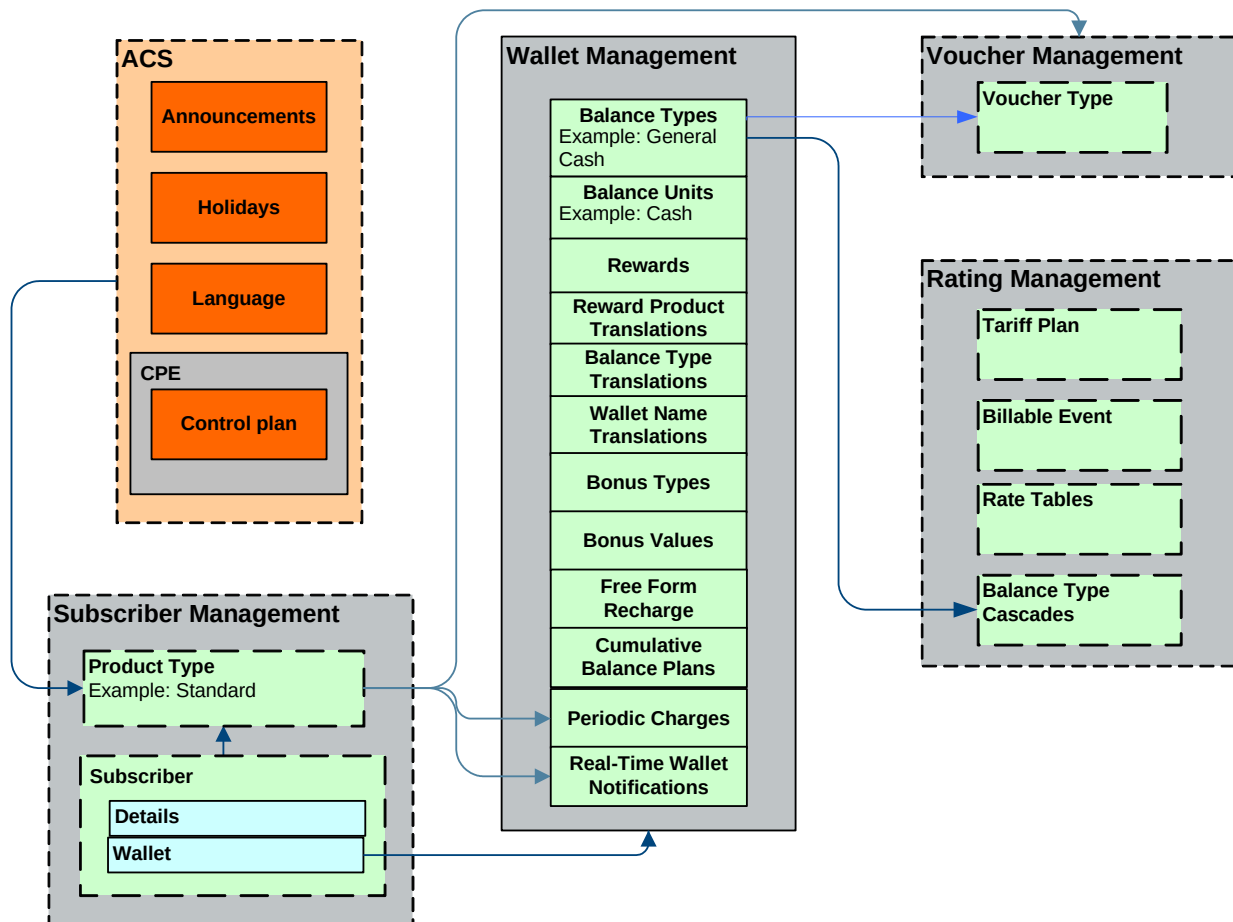
Edit

Delete

Close

## Wallet Management relationships

This diagram shows the relationships between the various screens available in the Wallet Management module.



## Tracker Plans

### Introduction

The **Tracker Plans** tab lets you add, modify or delete tracker plans.

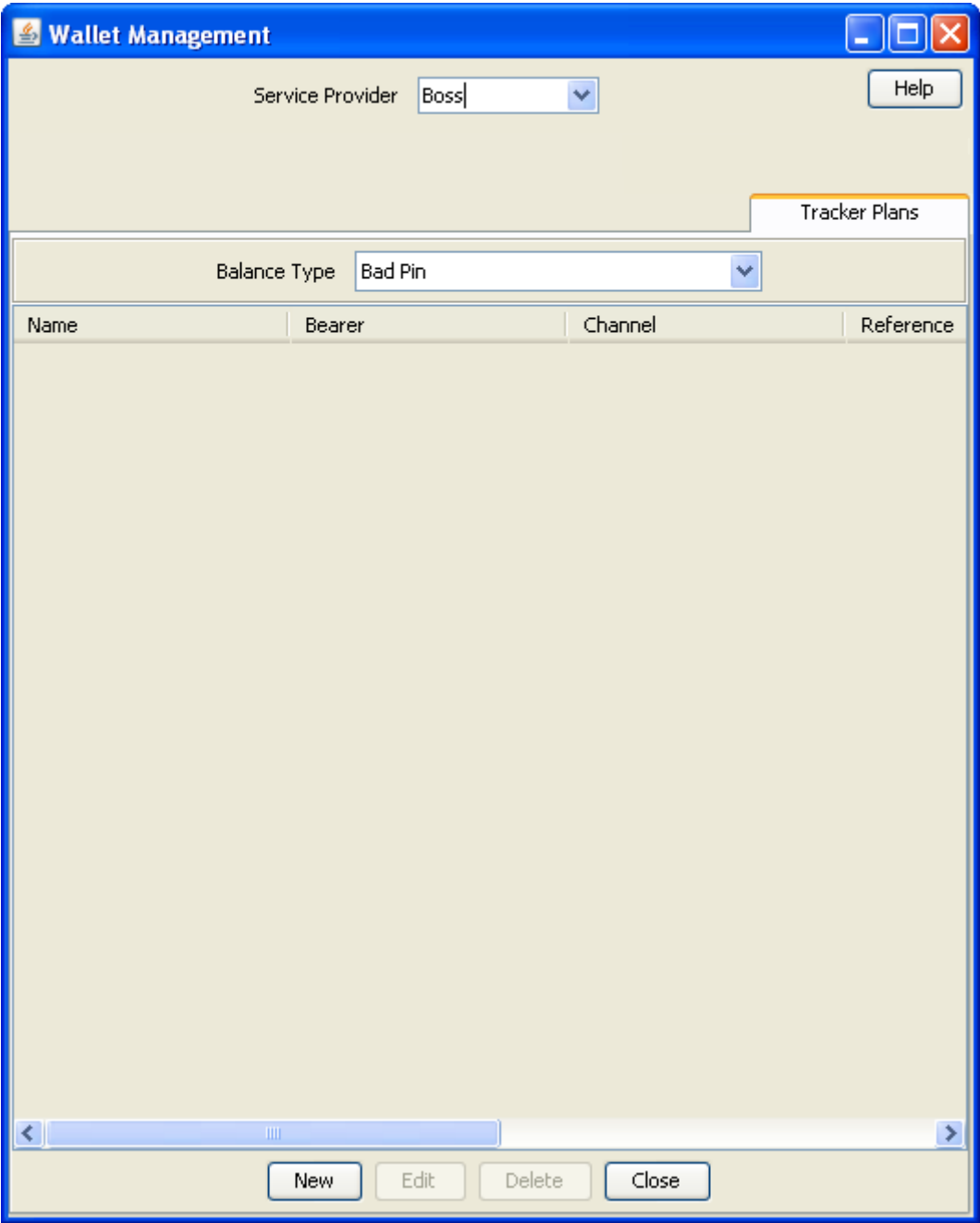
A tracker plan is associated to an expenditure plan. It sets a preference for recharging a certain balance type depending on the rules defined by the expenditure plan. Operators can use tracker plans during promotions when they want to:

- Define counters which track a subscriber's usage or expenditure within a configured promotion period
  - Reward the subscriber based on their expenditure, either in real time or at the end of the period
- Each counter is linked to a service (such as voice calls or SMS) and a configured rating scenario consisting of the following:
- A corresponding balance type
  - Period of promotion (daily, weekly, monthly or yearly)
  - The amount of activity (cash, time or number of events) which will trigger the reward

When each service and rating scenario is defined, the counters which should be updated are chosen. This gives the operator full control over which services will be used as part of the promotion.

**Tracker Plans tab**

Here is an example of the **Tracker Plans** tab.



## Tracker Plan fields

This table describes the function of each field.

| Field        | Description                                                                                               |
|--------------|-----------------------------------------------------------------------------------------------------------|
| Name         | A unique name for the tracker plan.                                                                       |
| Tracker Plan | Indicates the expenditure plan that determines which balance types are tracked for promotion rewards.     |
| Bearer       | Selecting this check box allows you to select the type of service to which the tracking plan applies.     |
| Channel      | Selecting this check box allows you to select the method of recharge to which the tracking plan applies.  |
| Reference    | Selecting this check box enables a text box where you can enter a short description of the tracking plan. |

**Note:** The bearer, channel or reference values are matched during voucher recharge. If they are not set, the voucher will be recharged using standard voucher information.

## Tracker Plan screen

Here is an example Tracker Plan screen.

## Adding tracker plans

Follow these steps to add a new tracker plan.

| Step | Action                                                                                                     |
|------|------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the drop down box.                       |
| 2    | On the <b>Tracker Plans</b> tab, select the balance type to which the new tracker plan will be linked.     |
| 3    | Click <b>New</b> .<br><b>Result:</b> You see the <i>New Tracker Plan screen</i> (See example on page 230). |
| 4    | Configure this record by entering data in the fields on this screen.                                       |

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
|      | For more information about the fields on this screen, see <i>Tracker Plan fields</i> (on page 230). |
| 5    | When you have completed configuring the new tracker plan, click <b>Save</b> .                       |

## Editing tracker plans

Follow these steps to edit an existing tracker plan.

| Step | Action                                                                                                                                                          |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the drop down box.                                                                            |
| 2    | On the <b>Tracker Plans</b> tab, select the balance type to display all associated tracker plans.                                                               |
| 3    | In the table, select the record to edit and click <b>Edit</b> .<br><b>Result:</b> You see the Edit <i>Tracker Plan</i> screen (See example on page 230).        |
| 4    | Edit the fields to reflect the changes you need to make.<br>For more information about the fields in this screen, see <i>Tracker Plan fields</i> (on page 230). |
| 5    | Click <b>Save</b> .                                                                                                                                             |

## Deleting tracker plans

Follow these steps to delete an existing tracker plan.

| Step | Action                                                                                                                        |
|------|-------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the drop down box.                                          |
| 2    | On the <b>Tracker Plans</b> tab, select the balance type to display all associated tracker plans.                             |
| 3    | In the table, select the record to delete and click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt. |
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> You see the Tracker Plans prompt.                   |
| 5    | Click <b>OK</b> .                                                                                                             |

## Balance Units

### Introduction

This screen enables you to view, add, edit and remove balance units.

Balance units are the type of unit used in balance types. Balance units are either cash or non-cash. Non-cash units include:

- Notifications
- Bad PIN counts,
- Promotional Counters
- Time
- Data.

**Note:** The functionality that uses time balance units is only available if you have the appropriate license.

## Balance Units tab

Here is an example **Balance Units** tab.

The screenshot shows a window titled "Wallet Management" with a blue title bar. Inside the window, there is a "Service Provider" dropdown menu set to "Boss" and a "Help" button. Below this is a tab labeled "Balance Units". The tab contains a table with three columns: "Name", "Change User", and "Change Date". The table lists five items: "Bad Pin", "Cash", "Days to wallet expiry", "Notifications", and "Time", all with "SU" as the change user and various timestamps as the change date. At the bottom of the window, there are four buttons: "New", "Edit", "Delete", and "Close".

| Name                  | Change User | Change Date         |
|-----------------------|-------------|---------------------|
| Bad Pin               | SU          | 2009-06-03 11:33:51 |
| Cash                  | SU          | 2009-06-03 11:33:51 |
| Days to wallet expiry | SU          | 2009-06-03 11:33:51 |
| Notifications         | SU          | 2009-10-21 09:47:21 |
| Time                  | SU          | 2009-06-03 11:33:51 |

## Balance Unit screen

Here is an example Balance Unit screen.

## Adding balance units

Follow these steps to add a new balance unit.

| Step | Action                                                                                                                                       |
|------|----------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.                                          |
| 2    | On the <b>Balance Units</b> tab, click <b>New</b> .<br><b>Result:</b> You see the <i>New Balance Unit screen</i> . (See example on page 233) |
| 3    | In the <b>Name</b> field, enter the name of the balance unit.                                                                                |
| 4    | Click <b>Save</b> .                                                                                                                          |

## Editing balance units

Follow these steps to edit an existing balance unit.

| Step | Action                                                                                                       |
|------|--------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.          |
| 2    | On the <b>Balance Units</b> tab, select the balance unit you want to edit.                                   |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the <i>Edit Balance Unit screen</i> (See example on page 233). |
| 4    | Edit the details as described in Adding balance units.                                                       |
| 5    | Click <b>Save</b> .                                                                                          |

## Deleting balance units

Follow these steps to delete an existing balance unit.

**Warning:** If you delete a balance unit which is associated with a balance type, your system may become unstable.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list. |
| 2    | On the <b>Balance Units</b> tab, select the balance unit to delete.                                 |
| 3    | Click <b>Delete</b> .                                                                               |

| Step | Action                                                                                                                                                                                                                                                                                  |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <p><b>Result:</b> A Delete Confirmation screen appears, similar to that shown below. The type of balance unit shown in the screen will depend on the name of the unit you are deleting.</p> <p>Click <b>OK</b>.</p> <p><b>Result:</b> The record will be deleted from the database.</p> |

## Balance Types

### Introduction

The **Balance Types** tab on the Wallet Management screen allows you to view, add, and edit balance types.

**Note:** The units used for balance types can be either cash, time, data, or units.

### Balance type categories

This table describes the different categories of wallet balance types.

| Balance Type        | Description                                                                                                                                                                                                                   |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Chargeable Balance  | Holds the balance types used to cover charges to subscribers. For example: General Cash.<br>These are the only balances that can contribute to expenditure.                                                                   |
| Cross Balance       | Used to apply a cross balance discount to calls that have a cash charge.                                                                                                                                                      |
| Expenditure Balance | Used to accrue daily, weekly, monthly, annual, and total wallet expenditure. Expenditure is calculated based on charges applied to chargeable wallet balance types that have the 'Contributes to Expenditure Plans' flag set. |
| Fraud Balance       | Holds fraud balance types. For example: Bad PIN balances.                                                                                                                                                                     |
| Internal Balance    | Used by the system for internal accounting purposes. Any balance type that is not chargeable, cross, expenditure, or fraud should be set to internal.                                                                         |
| Quota Balance       | Used to accrue data quotas. As part of a multi-tariff rating definition, it can then be used to track, and limit, the use of another charging balance cascade.                                                                |

### Cross balance types

The cross balances are collected into cross balance type cascades. Charges against the subscriber's wallet also debit the cross balances in the cross balance cascade. As each cross balance reaches zero, the debit passes to the next cross balance. The discount which applies is the discount configured for the cross balance which is highest in the cross balance cascade and has a positive balance.

Each cross balance type cascade applies to the CLI-DNs which include it in their configuration.

Charges from CLI-DNs are cumulative. For more information about cross balance type cascades, see *Cross Balance Type Cascades* (on page 417). For more information about CLI-DNs, see *CLI-DN* (on page 369).

### Expenditure balance types

Expenditure balance types can have one of the following expenditure types:

- Daily
- Weekly
- Monthly



- Yearly
- Wallet

Monthly, yearly, and wallet are always installed, but daily and weekly are only available if you have the Promotion Manager license.

All other balance types must have the **Expenditure Type** field set to `None`. Expenditure is updated by expenditure against chargeable balances which:

- Have the 'Contributes to Expenditure Plans' flag set to 'Y'
- Are included in an expenditure plan which is included in a CLI-DN or named event

Expenditure balance types are also used as a basis for calculating promotions.

## Expenditure expiry dates

The expiry date for an expenditure balance is first set when the wallet is activated and then reset when the balance expires. The date set will depend on the expenditure type and the date basis used.

The date basis determines which day of the month and month of the year is assigned to the balance. The options are:

- Balance creation date (default)
- Fixed date
- Wallet activation date
- Wallet expiry date

The expenditure type determines the period used to extend the expiry date. When the expenditure type is:

- Daily, the expiry date will be extended by one day
- Weekly, the expiry date will be extended by seven days
- Monthly, the expiry date will be extended by one month
- Yearly, the expiry date will be extended by one year
- Wallet, the expiry date will be extended to match the current expiry date for the wallet

### Example 1

If you set the expiry date calculation basis to 'Fixed Date' for a monthly expenditure balance type, then the specified day of the month will be used to extend the expiry date.

### Example 2

If you set the expiry date calculation basis to 'Wallet Activation Date' for a yearly expenditure balance type, then the day and month of the year the wallet was activated will be used to extend the expiry date.

## Distributed wallet balances

Subscribers can have wallet balances distributed across separate charging and tracking domains. If the subscriber's charging domain is a Diameter domain type, then all chargeable balance types will need to be updated externally. Only balance types with the following balance type categories will be available through the Edit Subscriber screen:

- Expenditure Balance
- Fraud Balance

## Maximum balances

You can set a maximum balance value for a balance type. If set, then this value may not be exceeded when a wallet is recharged or updated.

When applying a wallet recharge or update, the maximum balance value will be evaluated against currently available balances only. Any offset balances defined for the wallet will not be included in the total balance value.

**Note:** This functionality is applicable to prepaid balance types only.

## Maximum balance policy

You can specify the policy to associate with the maximum balance value. This table describes the available policy options.

| Policy                   | Description                                                                                                                                                                                                                                                                                                                                                                 |
|--------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limit Additional Credits | A wallet recharge or wallet update will be restricted to the maximum balance value configured for the balance type for all applicable balances.<br><br>Any unused balance values will be recorded in the EXCEEDED_BALANCE_TYPES and EXCEEDED_VALUES tags in the resulting VWS EDR.                                                                                          |
| Reject Credits Over      | The default option. You will not be able to apply a wallet recharge or update which would exceed the maximum value configured for any of the balance types in the wallet. This will result in failure and no balances will be updated or recharged.<br><br>The balance types causing the failure will be recorded in the FAILED_BALANCE_TYPES tag in the resulting VWS EDR. |

## Quota Notifications

You can define quota notifications that will be sent to users when their balance breaches a configured threshold.

On the **Quota Notifications** tab, the following fields are displayed:

- Quota Notification 1
- Notification
- Threshold (%)

The **Quota Notifications** tab enables you to define up to three quota notifications per service provider. For each quota notification, you define the notification to send and the threshold value.

Thresholds are a percentage of the used quota that is in the Quota Tag Set profile fields. When a subscriber's balance breaches a quota of the specified threshold, the defined notification is sent.

For example, if the quota retrieved from the Quota Tag Set Profile field is 50% and the threshold value is 1000 (£10.00), the notification is sent when the subscriber's balance reaches 50% of the defined threshold value, £5.00.

The thresholds apply to all subscribers. However, they can be customized at the subscriber level by using the PI command to set the **Quota Value** and **Quota Threshold** profile fields.

See *CCS Provisioning Interface Commands* for more information about using PI commands to change subscriber profile fields.

## Balance Types tab

Here is an example **Balance Types** tab.

Service Provider: Boss Help

**Balance Types**

| Name                      | Unit                 | Default Type | Display to Spend Rate |
|---------------------------|----------------------|--------------|-----------------------|
| General Cash              | Cash                 | Yes          |                       |
| Promotional Cash          | Cash                 | No           |                       |
| Bad Pin                   | Bad Pin              | No           |                       |
| Monthly Exp               | Cash                 | No           |                       |
| Yearly Exp                | Cash                 | No           |                       |
| Free SMS                  | Notifications        | No           |                       |
| Last expiry offset        | Days to wallet ex... | No           |                       |
| Units                     | Days to wallet ex... | No           |                       |
| Bonus                     | Cash                 | No           |                       |
| Daily Expenditure         | Cash                 | No           |                       |
| Additional time           | Time                 | No           |                       |
| General Time              | Time                 | No           |                       |
| Vince No Max Balance Time | Time                 | No           |                       |
| Other Cash                | Cash                 | No           |                       |
| Vince Max Balance Cash    | Cash                 | No           | 3.0                   |
| Vince Max Balance Time    | Time                 | No           |                       |
| Vince Max Balance Unit    | Days to wallet ex... | No           |                       |
| Promotion exp 1           | Cash                 | No           |                       |
| Loyalty expenditure       | Cash                 | No           |                       |
| _pr_NedC                  | State                | No           |                       |

New Edit Delete Close

## Balance Types help

For help with a new Balance Type screen, see [Adding balance types](#).

For help with editing an existing Balance Type screen, see [Editing balance types](#) (on page 245).

## Balance Type screen

The New Balance Type and Edit Balance Type screens contain tabs which enable you to configure:

- Balance Type Details
- Balance Type Announcements
- Quota Notifications

## Balance Type Details tab

Here is an example **Balance Type Details** tab on the Edit Balance Type Screen.

## Balance Type Details fields

This table describes the function of each field on the **Balance Type Details** tab.

| Field                           | Description                                                                                                                                                                                                                                                                                                                                                                                                   |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                            | Enter the name of the balance type. This field is required.                                                                                                                                                                                                                                                                                                                                                   |
| Unit                            | <p>The balance unit associated with this balance type. The drop-down list displays all available balance units.</p> <p><b>Note:</b> For more information about configuring balance units, see <i>Balance Units</i> (on page 231).</p>                                                                                                                                                                         |
| Default Type                    | <p>Indicates if the unit selected in the <b>Unit</b> field is the default cash balance type.</p> <p><b>Tip:</b> Only one balance type in CCS should be set as the default type.</p>                                                                                                                                                                                                                           |
| Display to Spend Ratio          | <p>The ratio value applied to this balance type. This increases the value of this balance type by the entered value when it is used within a rating solution.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• Valid range is 0 to 9.99. The default value is 1.00.</li> <li>• This value can only be entered when the <code>expenditure type</code> is set to <code>None</code>.</li> </ul> |
| Delete After Last Bucket Expiry | <p>Select this check box to delete this balance type when the last bucket expires.</p> <p><b>Note:</b> You may not set this option for fraud balances or the default balance type (normally the General Cash balance type).</p>                                                                                                                                                                               |
| Exclude from Creation           | <p>Select this check box to exclude this balance type from all new wallets when they are created.</p> <p>Deselecting this check box adds this balance type to all newly created wallets.</p>                                                                                                                                                                                                                  |

| Field                             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Play Announcement if Zero Balance | <p>Select this check box to play an announcement to the caller when the caller's balance is zero.</p> <p><b>Tip:</b> This configuration option is used by feature nodes that inform a subscribers about their balances.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Category                          | <p>Indicates if the balance type is:</p> <ul style="list-style-type: none"> <li>• Chargeable</li> <li>• Cross</li> <li>• Expenditure</li> <li>• Fraud</li> <li>• Internal</li> <li>• Quota</li> </ul> <p>For more information about balance type categories, see <i>Balance type categories</i> (on page 234).</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• The <code>Quota Balance</code> option is available only to users with <b>Quota Balances</b> SMS permission.</li> <li>• When the quota balance is selected, the <b>Primary Quota tag Set</b> and <b>Secondary Quota Tag Set</b> fields and the <b>Quota Notifications</b> tab become available.</li> </ul> |
| Primary Quota Tag Set             | <p>Select the quota limit value for the primary wallet.</p> <p><b>Note:</b> This is available when <b>category</b> is set to <code>Quota Balances</code>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Secondary Quota Tag Set           | <p>Select the quota limit value for secondary wallet.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Allow Credit                      | <p>Select this check box if this balance type can have a credit limit.</p> <p>Credit limits are configured in the Convergent Charging, Subscriber Management, Wallets screen.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Expenditure Type                  | <p>If <b>Category</b> is set to <b>Expenditure Balance</b>, set this field to how frequently the balance is reset to zero.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• If <b>Category</b> is set to <b>Expenditure Balance</b>, this field is required.</li> <li>• If this balance type is used in a reward that has the <b>Reset Counter</b> field selected, the period may be overridden.</li> </ul>                                                                                                                                                                                                                                                               |
| Contributes to Expenditure Plans  | <p>Select this check box if charges against balances of this type can increase expenditure balances.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• To contribute to the expenditure balance, the charging mechanism (CLI-DN or named event) must specify an expenditure plan. The expenditure balances in the expenditure plan will be increased.</li> <li>• This check box is available for only if <b>Category</b> is set to <b>Chargeable Balances</b>.</li> </ul>                                                                                                                                                                                                  |

| Field                           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Include in Reward Notification  | <p>Selecting this check box indicates that this balance type will be included in SMS notifications.</p> <p><b>Note:</b> This check box is available for only if <b>Category</b> is set to Chargeable Balances.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Re-create Bucket on Expiry      | <p>Select this check box to recreate a bucket belonging to this balance type on expiry.</p> <p><b>Note:</b> This check box is enabled only if <b>Category</b> is set to Expenditure Balance.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Delete After Last Bucket Expiry | <p>Select this check box to delete balances of this type when the last bucket expires.</p> <p><b>Note:</b> This check box is not enabled for fraud balances or the default balance types (the general cash balance type).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Cross Balance Type Discount %   | <p>The discount percentage to be applied for a cross balance type.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>Valid range is 0 to 100.0000.</li> <li>This discount will be applied to voice calls where the rating solution includes this cross balance type in a cross balance type cascade.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Max Balance                     | <p>(Optional) sets the maximum value a balance of this type may have. May be set for these balance categories:</p> <ul style="list-style-type: none"> <li>Balance Chargeable</li> <li>Balance Cross</li> <li>Balance Fraud</li> </ul> <p>In the cash field, type the required value in the units of the balance type and select the <b>Policy</b> to use from the drop down list.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>For more information on maximum balances, see <i>Maximum balances</i> (on page 235).</li> <li>This field is available to help prevent fraud, and therefore recharges and wallet updates that would take the balance over the configured maximum may be rejected depending on the policy selected.</li> </ul> |
| Expiry Date Calculation         | <p>Base the balance type expiry date for tracker balances on one of the following:</p> <ul style="list-style-type: none"> <li>Fixed Date</li> <li>Balance Creation Date</li> <li>Wallet Expiry Date</li> <li>Wallet Activation Date</li> </ul> <p>If you select <i>Fixed Date</i>, you must select the date using the date selector.</p>                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Balance Type Announcements tab

Here is an example **Balance Type Announcements** tab on the Edit Balance Type Screen.

The screenshot shows a software window titled "Edit Balance Type Screen". At the top, there is a "Name" field containing the text "Data" and a "Help" button. Below this is a tab labeled "Balance Type Announcements". The main area of the window contains several rows of settings, each with a label and a dropdown menu:

- Expiry Announcement Set: No Announcement
- Expiry Announcement Entry: (empty dropdown)
- Single Day Expiry Announcement Set: No Announcement
- Single Day Expiry Announcement Entry: (empty dropdown)
- Positive Announcement Set: No Announcement
- Positive Announcement Entry: (empty dropdown)
- Negative/No Credit Announcement Set: No Announcement
- Negative/No Credit Announcement Entry: (empty dropdown)

Below these settings is a large empty rectangular area. At the bottom of the window, there are three buttons: "New", "Edit", and "Delete". In the bottom right corner, there are two buttons: "Save" and "Cancel".

## Balance Type Announcements fields

This table describes the function of each field on the **Balance Type Announcements** tab.

| Field                                 | Description                                                                                                                                                                                                                                |
|---------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                                  | Name of the balance type. This field is required and must be the same as for the <b>Balance Type Details</b> tab.                                                                                                                          |
| Expiry Announcement Set               | The announcement set to play from when the subscriber's balance expires.                                                                                                                                                                   |
| Expiry Announcement Entry             | The announcement entry to play to the subscriber if their balance expires.                                                                                                                                                                 |
| Single Day Expiry Announcement Set    | The announcement set to play from when the subscriber's balance is due to expire in a day.                                                                                                                                                 |
| Single Day Expiry Announcement Entry  | The announcement entry to play to the subscriber if their balance is due to expire in a day.                                                                                                                                               |
| Positive Announcement Set             | <p>The announcement set to play from if the subscriber's non-cash balance is positive.</p> <p><b>Note:</b> This field cannot be set if <b>Cash</b> is selected in the <b>Unit</b> field (<b>Balance Type Details</b> tab).</p>             |
| Positive Announcement Entry           | <p>The announcement entry to play to the subscriber if their non-cash balance is positive.</p> <p><b>Note:</b> This field cannot be set if <b>Cash</b> is selected in the <b>Unit</b> field (<b>Balance Type Details</b> tab).</p>         |
| Negative/No Credit Announcement Set   | <p>The announcement set to play from if the subscriber's balance is negative or has no credit.</p> <p><b>Note:</b> This field cannot be set if <b>Cash</b> is selected in the <b>Unit</b> field (<b>Balance Type Details</b> tab).</p>     |
| Negative/No Credit Announcement Entry | <p>The announcement entry to play to the subscriber if their balance is negative or has no credit.</p> <p><b>Note:</b> This field cannot be set if <b>Cash</b> is selected in the <b>Unit</b> field (<b>Balance Type Details</b> tab).</p> |



Quota Notifications tab

Here is an example **Quota Notifications** tab on the Edit Balance Type Screen.

Edit Balance Type Screen

Name

Data

Help

Balance Type Details

Balance Type Announcements

Quota Notifications

Quota Notification 1

Notification

Threshold (%)

Quota Notification 2

Notification

Threshold (%)

Quota Notification 3

Notification

Threshold (%)

Save

Cancel

Quota Notifications fields

This table describes the function of each field.

| Field        | Description                                                      |
|--------------|------------------------------------------------------------------|
| Name         | Name of the balance type.                                        |
| Notification | Select the notification to send to the subscriber from the list. |

| Field         | Description                                                                                                                                                                                                                                                                                                                                                                                  |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Threshold (%) | <p>The threshold at which a notification is sent to the subscriber. A maximum of three thresholds can be set.</p> <p><b>Note:</b> Thresholds are the percent of the used quota in the profile location selected in the <b>Primary Quota Tag Set</b> and <b>Secondary Quota Tag Set</b> fields. The Threshold field gets enabled when you select the notification to send the subscriber.</p> |

## Adding balance types

Follow these steps to add a new balance type.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 2    | <p>On the <b>Balance Types</b> tab, click <b>New</b>.</p> <p><b>Result:</b> You see the New Balance Type Screen, <b>Balance Type Details</b> tab (See example on page 238).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 3    | <p>Enter detail data in the available fields on this tab to configure this record.</p> <p>For more information about the fields on this tab, see <i>Balance Type Details fields</i> (on page 238).</p> <p><b>Note:</b> Some fields are unavailable depending on selections in other fields on this tab.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 4    | Select the <b>Balance Type Announcements</b> tab.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 5    | <p>Configure the announcements from the available drop down lists on this tab. For more information about the fields on this tab, see <i>Balance Type Announcements fields</i> (on page 242).</p> <p><b>Note:</b> Depending on the <b>Unit</b> selection (on <b>Balance Type Details</b> tab), some of these fields will be unavailable.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 6    | <p>Click <b>New</b> to add, edit and delete a currency to announcement maps. See <i>Currency to Announcement Maps</i> (on page 245).</p> <p><b>Tip:</b> The <b>New</b> button will be available when the <b>Unit</b> is <b>Cash</b> (<b>Balance Type Details</b> tab).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 7    | <p>Select the <b>Quota Notifications</b> tab (See example on page 243).</p> <p><b>Note:</b> This tab is only available when <b>Category</b> is set to <b>Quota Balance</b> on the <b>Balance Type Details</b> tab.</p> <p>For more information about the fields on this tab, see <i>Quota Notifications fields</i> (on page 243).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 8    | <p>For each quota notification, specify the quota notification thresholds by doing the following:</p> <ul style="list-style-type: none"> <li>From the <b>Notifications list</b>, select the notification to send.</li> <li>In the <b>Threshold %</b> field, enter the threshold value.</li> </ul> <p><b>Note:</b> These notifications are sent to the subscriber when the thresholds set here have been breached. The thresholds are the percent of the used quota in the profile location selected in the <b>Primary Quota Tag Set</b> field and <b>Secondary Quota Tag Set</b> field.</p> <p><b>Tip:</b> When saved, the quota notification sets are sorted largest to smallest, so when adding a threshold value, any of the sets can be used. However the notifications are sent in ascending percentage order.</p> |

| Step | Action                                                                                                                                                                                                                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | For example; thresholds for 60, 30 and 90 percent are set in that order, after saving, the list will be in 90, 60 and 30 order, but the first notification is sent after 30% of quota has been used, a second when 60% and a third after 90%. |
| 9    | Click <b>Save</b> .                                                                                                                                                                                                                           |

## Editing balance types

Follow these steps to edit an existing balance type.

| Step | Action                                                                                                                                                                                                                                                                                  |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                     |
| 2    | On the <b>Balance Types</b> tab, select the balance type to edit from the table.                                                                                                                                                                                                        |
| 3    | Perform one of the following: <ul style="list-style-type: none"> <li>Click <b>Edit</b></li> <li>Double-click on the record</li> </ul> <b>Result:</b> You see the Edit Balance Type Screen.                                                                                              |
| 4    | Edit the fields with the required changes on the <b>Balance Type Details</b> tab.<br>For information about the available fields, see <i>Balance Type Details fields</i> (on page 238).                                                                                                  |
| 5    | Edit the fields with the required changes on the <b>Balance Type Announcements</b> tab.<br>For information about the available fields, see <i>Balance Type Announcements fields</i> (on page 242).                                                                                      |
| 6    | If the balance unit is <b>Cash</b> , you can add, edit and delete a currency to announcement map for Positive and Negative/No Credit announcements. See <i>Currency to Announcement Maps</i> (on page 245).                                                                             |
| 7    | If the <b>Category</b> of the balance type is <b>Quota Balance</b> , you can configure notifications for the quota on the <b>Quota Notifications</b> tab (See example on page 243).<br>For information about the available fields, see <i>Quota Notifications fields</i> (on page 243). |
| 8    | Click <b>Save</b> .                                                                                                                                                                                                                                                                     |

## Deleting balance types

To ensure ongoing stability between CCS and the VWS, the delete function for balance types is not available.

# Currency to Announcement Maps

## Introduction

As part of setting up a balance type, you can configure currency to announcement maps. Announcements are used in the Cumulative Balances feature node.

## Currency to Announcement Mapping screen

Here is an example Currency to Announcement Mapping screen.

## Adding a currency to announcement map

Follow these steps to add a currency to announcement map for a cash unit balance type.

| Step | Action                                                                                                                                                                                            |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Open the Balance Type screen for an existing cash unit balance type, as described in steps 1-3 of <i>Editing balance types</i> (on page 245).                                                     |
| 2    | Click <b>New</b> .<br><b>Result:</b> You see the <i>Currency to Announcement Mapping screen</i> (See example on page 246).                                                                        |
| 3    | From the <b>Currency One</b> drop down box, select the primary currency this balance type will use.                                                                                               |
| 4    | If this service provider has a second currency configured, select the second currency from the <b>Currency Two</b> drop down box.                                                                 |
| 5    | From the <b>Positive Announcement Set</b> drop down box, select the announcement set which contains the announcement entry which should be played to the subscriber if their balance is positive. |
| 6    | From the <b>Positive Announcement</b> drop down box, select the announcement entry which should be played to the subscriber if their balance is positive.                                         |
| 7    | From the <b>Negative Announcement Set</b> drop down box, select the announcement set which contains the announcement entry which should be played to the subscriber if their balance is negative. |
| 8    | From the <b>Negative Announcement</b> drop down box, select the announcement entry which should be played to the subscriber if their balance is negative.                                         |
| 9    | Click <b>Save</b> to save the changes to the database and return to the Balance Type screen. The mapping will appear in the table.                                                                |

## Editing a currency to announcement map

Follow these steps to edit a currency to announcement map for a cash unit balance type.

| Step | Action                                                                                                                                                          |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Open the Balance Type screen for an existing cash unit balance type, as described in steps 1-3 of <i>Editing balance types</i> (on page 245).                   |
| 2    | Select a mapping from the table and click <b>Edit</b> .<br><b>Result:</b> You see the <i>Currency to Announcement Mapping screen</i> (See example on page 246). |
| 3    | Edit the details, as described in Adding a currency to announcement map.                                                                                        |
| 4    | Click <b>Save</b> .                                                                                                                                             |

## Deleting a currency to announcement map

Follow these steps to delete a currency to announcement map for a cash unit balance type.

| Step | Action                                                                                                                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Open the Balance Type screen for an existing cash unit balance type, as described in steps 1-3 of <i>Editing balance types</i> (on page 245). |
| 2    | Select a mapping from the table and click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                           |
| 3    | Click <b>OK</b> to remove the mapping and return to the Balance Type screen.                                                                  |

## Balance Type Translations

### Introduction

The **Balance Type Translations** tab lets you view, add, edit and remove translations of balance types. All SMS Notifications which include balance amounts use these translations. Short messages which use this method of displaying balances include:

- Short messages generated by the Call Info Text Message feature node
- Reward notification short messages
- Recharge confirmation short messages.

#### Notes:

- If your system lets you specify time costs, then you can define translations for time balance messages. The time balances are displayed in both seconds and in minutes and seconds. This functionality is only available if you have the appropriate license.
- If no translations of a balance type are provided here for a language, no references to that balance type will be displayed in any short message generated in that language.

### Message values

#### Cash balances

Cash balances in a notification have this format:

[Translated Balance Type Name] [Currency Code][Wallet Balance] [Separator]  
where

- [Translated Balance Type Name] is entered in the **Translated Name** field
- [Currency Code] is the default currency's currency code
- [Wallet Balance] is the subscriber's currency wallet balance
- [Separator] is the character, entered in the **Separator** field, used to separate the main units of the balance value from its sub units.

**Example:** If the translated name is 'Gen' and the separator is '.', then the translated short message will be:

```
"Your account balance is Gen PLN400.00"
```

### Non cash balance messages

A non cash balance notification has this format:

```
[Translated Balance Type Name] [Wallet Balance]
```

**Where:**

- [Translated Balance Type Name] is entered in the **Translated Name** field
- [Wallet Balance] is the subscriber's balance in the appropriate units

**Example:** If the translated name is 'Time', and the balance in seconds is 300, then the short message will be:

```
"Your Time balance is 300 seconds"
```

Balance Type Translations tab

Here is an example Balance Type Translations tab.

Wallet Management

Service Provider

Boss

Help

Balance Type Translations

| Single Balance C...    | Dual Balance Cur...    | Language | Default Name     | Translated M |
|------------------------|------------------------|----------|------------------|--------------|
| Great Britain, Poun... | Great Britain, Poun... | English  | General Cash     | Gen Bal      |
| Afghanistan, Afgha...  | Afghanistan, Afgha...  | English  | Promotional Cash | PROMO        |
| Great Britain, Poun... | Great Britain, Poun... | English  | Promotional Cash | Promo Bal    |

<

>

New

Edit

Delete

Close

## Balance Type Translations Fields

This table describes the balance-type translation fields.

| Field                        | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |          |                |         |    |               |     |    |                           |    |    |           |   |      |                         |   |                       |                            |      |                         |
|------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------|----------------|---------|----|---------------|-----|----|---------------------------|----|----|-----------|---|------|-------------------------|---|-----------------------|----------------------------|------|-------------------------|
| Language                     | <p>The language the short message is being translated to.</p> <p>This field cannot be changed after the record is first saved.</p> <p>This list is populated by the <b>Language</b> tab on the ACS Tools screen. For more information about configuring languages, see <i>ACS User's Guide</i>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |          |                |         |    |               |     |    |                           |    |    |           |   |      |                         |   |                       |                            |      |                         |
| Balance Type                 | <p>The balance type this translation will be for. This list is populated by the records configured in the <b>Balance Types</b> (on page 234) tab.</p> <p>This field cannot be changed after the record is first saved.</p> <p><b>Tip:</b> You can create only one balance-type translation for each language and balance-type combination.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |          |                |         |    |               |     |    |                           |    |    |           |   |      |                         |   |                       |                            |      |                         |
| Single Balance Currency Type | <p>If required, you can select a different single balance currency type to use for the balance type.</p> <p><b>Note:</b> This field is available only if the <b>Balance Type</b> field is set to a balance type that has a unit of cash.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |          |                |         |    |               |     |    |                           |    |    |           |   |      |                         |   |                       |                            |      |                         |
| Dual Balance Currency Type   | <p>If required, you can select a different dual-balance currency type to use for the balance type.</p> <p><b>Note:</b> This field is available only if the <b>Balance Type</b> field is set to a balance type that has a unit of cash.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |                |         |    |               |     |    |                           |    |    |           |   |      |                         |   |                       |                            |      |                         |
| Translated Name              | <p>The translated balance-type name to send to the subscriber in short messages. If nothing is entered in this field, this part of the message will not be sent.</p> <p><b>Tip:</b> The maximum number of characters allowed is 20.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |          |                |         |    |               |     |    |                           |    |    |           |   |      |                         |   |                       |                            |      |                         |
| Single Format for Balance    | <p>The structure of the data to send to the subscriber in short messages for a single (or first) currency.</p> <ul style="list-style-type: none"><li>For balance types with a cash unit, the structure of the data to send to the subscriber in short messages when the balance is in one currency. The subscriber's actual details are inserted into the variables. The variables must include the following, in order:<br/>%s %d %c %02d<br/>Where:<table><tr><th>Variable</th><th>Replaced by...</th><th>Example</th></tr><tr><td>%s</td><td>Currency Code</td><td>AUD</td></tr><tr><td>%d</td><td>Main unit of the currency</td><td>\$</td></tr><tr><td>%c</td><td>Separator</td><td>.</td></tr><tr><td>%02d</td><td>Subunit of the currency</td><td>c</td></tr></table></li><li>For balance types with non-cash units (for example, time balances are in seconds), you may only include the %d variable in the text in the <b>Single Format for Balance</b> field.<table><tr><th>For balance type unit</th><th>%d variable is replaced by</th></tr><tr><td>Time</td><td>Time balance in seconds</td></tr></table></li></ul> | Variable | Replaced by... | Example | %s | Currency Code | AUD | %d | Main unit of the currency | \$ | %c | Separator | . | %02d | Subunit of the currency | c | For balance type unit | %d variable is replaced by | Time | Time balance in seconds |
| Variable                     | Replaced by...                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | Example  |                |         |    |               |     |    |                           |    |    |           |   |      |                         |   |                       |                            |      |                         |
| %s                           | Currency Code                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | AUD      |                |         |    |               |     |    |                           |    |    |           |   |      |                         |   |                       |                            |      |                         |
| %d                           | Main unit of the currency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | \$       |                |         |    |               |     |    |                           |    |    |           |   |      |                         |   |                       |                            |      |                         |
| %c                           | Separator                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | .        |                |         |    |               |     |    |                           |    |    |           |   |      |                         |   |                       |                            |      |                         |
| %02d                         | Subunit of the currency                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | c        |                |         |    |               |     |    |                           |    |    |           |   |      |                         |   |                       |                            |      |                         |
| For balance type unit        | %d variable is replaced by                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |          |                |         |    |               |     |    |                           |    |    |           |   |      |                         |   |                       |                            |      |                         |
| Time                         | Time balance in seconds                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |          |                |         |    |               |     |    |                           |    |    |           |   |      |                         |   |                       |                            |      |                         |



| Field                   | Description                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         | SMS<br>Number of named events                                                                                                                                                                                                                                                                                                                                          |
|                         | Bad PIN<br>Number of bad PIN attempts during the last 24 hours.                                                                                                                                                                                                                                                                                                        |
| Dual Format for Balance | <p>The structure of the data to send to the subscriber in short messages for the second currency.</p> <p><b>Note:</b> This field is not available for non-cash balance types or balance types that have only one currency.</p>                                                                                                                                         |
| Separator               | <p>The character to use to separate the different balances when put together in an SMS Notification.</p> <p><b>Example:</b> If you enter a comma (,) and there are two balances, General Cash and Promotional Cash, the short message sent in response to a balance inquiry looks like this:<br/>General Cash balance \$20.00 , Promotional Cash balance \$10.00 .</p> |
| Balance Expiry          | <p>The balance-expiry text.</p> <p><b>Warning:</b> You must include '%d' in the text. This variable will be converted to the number of days remaining until the balance expires.</p>                                                                                                                                                                                   |
| No Balance Expiry       | The text to output for balances that have no expiry date.                                                                                                                                                                                                                                                                                                              |

## Balance Type Translation screen

Here is an example Balance Type Translation screen.

**Edit Balance Type Translation**

Help

Single Balance Currency Type: United Arab Emirates, Rating Dirham (RAD) ▼

Dual Balance Currency Type: United Arab Emirates, Rating Dirham (RAD) ▼

Language: English

Balance Type: General Cash

Translated Name: Gen Cash

Single Format for Balance: Gen Bal %s%d%c%02d

Dual Format for Balance: %s%d%c%02d/%s%d%c%02d

Separator: -

Balance Expiry: %d days

No Balance Expiry: None

Save Cancel

## Adding balance type translations

Follow these steps to add a new balance type translation.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                                                                                                                                       |
| 2    | On the <b>Balance Type Translations</b> tab, click <b>New</b> .<br><b>Result:</b> You see the <i>New Balance Type Translation screen</i> (See example on page 251).                                                                                                                                                                                                                                                                       |
| 3    | Enter data in the fields to configure this record.<br>For more information about these fields, see <i>Balance Type Translations Fields</i> (on page 250).<br><b>Note:</b> The <b>Single Balance Currency Type</b> and <b>Dual Balance Currency Type</b> fields and the <b>Dual Format for Balance</b> field are only available if you select a balance type which has a balance unit of cash from the <b>Balance Type</b> drop down list. |
| 4    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Editing balance type translations

Follow these steps to edit an existing balance type translation.

| Step | Action                                                                                                                                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                |
| 2    | In the table on the <b>Balance Type Translations</b> tab, select the balance type translation to edit.                                                                                                                                             |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the <i>Edit Balance Type Translation screen</i> (See example on page 251).                                                                                                                           |
| 4    | Edit the fields with the changes to make.<br>For more information about the fields on this screen, see <i>Balance Type Translations Fields</i> (on page 250).<br><b>Note:</b> The <b>Language</b> and <b>Balance Type</b> fields cannot be edited. |
| 5    | Click <b>Save</b> .                                                                                                                                                                                                                                |

## Deleting balance type translations

Follow these steps to delete an existing balance type translation.

| Step | Action                                                                                                         |
|------|----------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.            |
| 2    | In the table on the <b>Balance Type Translations</b> tab, select the balance type translation to delete.       |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                |
| 4    | Click <b>OK</b> to delete the record from the database and return to the <b>Balance Type Translations</b> tab. |

## Rewards

### Introduction

The **Rewards** tab lets you view, add, edit and remove rewards.

You use rewards to:

- Configure product type changes based on the amount of activity a subscriber did in a defined period
- Specify the message to output to a subscriber when they receive a reward
- Grant additional cash or equivalent bonuses

Any combination of product type change and cash reward can be defined, including:

- Cash rewards only (where there is no product type change)
- Product type changes only (where there is no associated cash reward)
- Both cash rewards and product type rewards

### Multiple balance type

You can add more than one balance type to a reward type. When a reward is triggered, all balance types associated with the reward type are recharged. This can include both monetary balance types (such as general cash or promotional cash) and non-monetary balance types (such as free SMS or time).

More than one entry can be added for the same balance type, with different details for each entry, including:

- Balance values and balance policies
- Unique expiry dates and extension policies
- Balance availability dates that will be applied when the selected balance type entry is recharged

### Offset date rules

Here are the rules which apply when setting a balance offset date.

- 1 You may only set balance offset dates for the following balance type categories:
  - Chargeable
  - Cross balance discount
- 2 If you set the balance offset date to a specific date then the balance expiry policy options will be disabled.
- 3 If you set the balance offset date to a specified number of days or months, then the balance offset date will be determined by extending the current system date by the configured value.
- 4 If you set the balance offset date (either as a specific date or as a number of days/months) then you can also set a balance expiry date. The balance expiry date will be calculated from the specified balance offset date.

### Notifications

Notifications can be sent when a reward is triggered. To send a notification when the subscriber's account is close to triggering a reward, specify an additional reward with no value, which includes the notification.

**Example:** You have a reward which is triggered when the subscriber has used 100 short messages. You want to send subscribers who have sent 90 short messages a notification which will encourage them to send 10 more (for example: "You have nearly reached the bonus SMS level.").

Create a new reward which is triggered when a subscriber has used 90 short messages. The new reward will not change any balances, but it will send out the message as a notification.

## Triggering rewards

Rewards are triggered on VWS Voucher and Wallet Servers for one of the following:

- The reward type balance type threshold is reached.
- The relevant expenditure balance expires.

## Expiration examples

This table provides examples of when a reward is triggered.

| Period  | Expiration                                             | Example                                                                                                     |
|---------|--------------------------------------------------------|-------------------------------------------------------------------------------------------------------------|
| Daily   | Midnight same day                                      | Activated @ 1:30 pm.<br>Expires midnight same day.                                                          |
| Weekly  | Midnight                                               | Activated @ 1:30 pm Tuesday.<br>Expires midnight following Monday.                                          |
| Monthly | Midnight following month                               | Activated @ 1:30 pm 5th of the month.<br>Expires midnight of 4th of the following month.                    |
| Yearly  | Midnight following year                                | Activated @ 1:30 pm 5th March.<br>Expires midnight 4th March following year.                                |
| Wallet  | 24 hours before the wallet expires @ 1:30pm 5th March. | Expires 1:30pm 4th March<br>If less than 24 hours exist before wallet expiry, wallet will not be recreated. |

**Note:** Unlike other expenditure balance types, the wallet expenditure balance type cannot be used again on expiry. Once the wallet expires, the system will not recreate or add to the wallet expenditure balance, until the wallet expiry date/time is extended to be more than 24 hours in the future. The wallet expenditure balance is recreated and will be used once more after the wallet expiry extension.

## Rewards tab

Here is an example **Rewards** tab.

Service Provider: Boss Help

**Rewards**

| Reward Type         | Current Product | Start Amount | Reward Product | Reward Description           |
|---------------------|-----------------|--------------|----------------|------------------------------|
| Monthly Exp         | Basic PT        | 10.00        | Basic PT       | Basic Reward                 |
| Reward exp 1        | GOLD            | 100.00       | GOLD           | Reward credit 1 exp          |
| Loyalty expenditure | Basic PT        | 50.00        | Basic PT       | Loyalty expenditure (bronze) |

New Edit Delete Close

## Rewards fields

This table describes the function of each field.

| Field       | Description                                                                                           |
|-------------|-------------------------------------------------------------------------------------------------------|
| Reward Type | The expenditure balance type where the activity qualifying the subscriber for the reward is recorded. |

| Field                 | Description                                                                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Current Product       | <p>The product type from which the subscriber's account is being transferred.</p> <p><b>Tip:</b> Selecting <code>ALL PRODUCTS</code> from the drop down list will set this reward to apply to any product type.</p>                                                                                                                                                                                                   |
| Start Amount          | <p>The amount which will trigger the change of product type.</p> <p><b>Warning:</b> Rewards must be defined for all monthly totals within a product type. For example, if you want to have a reward which is triggered when a subscriber has a total of \$50 of activity in a month/year, you will also need to configure a reward for subscribers who have a smaller monthly total and the same current product.</p> |
| Reward Product        | <p>The product type to which the subscriber's account is being transferred.</p> <p><b>Note:</b> Selecting <code>NO PRODUCT</code> from the drop down list means the subscriber's account will not be transferred.</p>                                                                                                                                                                                                 |
| Reward Description    | A brief description of the reward.                                                                                                                                                                                                                                                                                                                                                                                    |
| Start Date            | The start date of the period during which the subscriber's expenditure will be tracked for earning this reward.                                                                                                                                                                                                                                                                                                       |
| End Date              | The end date of the period during which the subscriber's expenditure will be tracked for earning this reward.                                                                                                                                                                                                                                                                                                         |
| Notification Template | <p>The notification sent to the subscriber when they receive a reward.</p> <p><b>Note:</b> For information about setting up notifications, see <i>ACS User's Guide</i>.</p>                                                                                                                                                                                                                                           |
| Reset Counter         | <p>Whether to reset the expenditure balance type specified in the <b>Reward Type</b> field when the reward is triggered.</p> <p><b>Note:</b> This check box is only available if you have selected the <b>Real-Time Reward</b> option.</p>                                                                                                                                                                            |
| Real-Time Reward      | Indicates that the reward is applied as soon as the expenditure threshold is reached.                                                                                                                                                                                                                                                                                                                                 |
| Control Plan          | <p>Defines the control plan that will be used to apply the reward for subscribers who are on a non VWS charging domain.</p> <p><b>Note:</b> The control plan must contain the Voucher Type Recharge node.</p>                                                                                                                                                                                                         |
| Reward Announcement   | Defines the announcement to play when the reward is selected using the Play Reward node.                                                                                                                                                                                                                                                                                                                              |

## Reward screen

Here is an example Reward screen.

**Edit Reward**

Product Reward

Reward Type: Yearly Exp Start Date: 2009 March 24

Current Product: SRM One End Date: 2010 March 24

Start Amount: 98.00 Control Plan: None

Reward Product: Vince Test Voucher Type Notification Template: Vince Apply Reward

Reward Description: Vince Test Yearly Exp

Reward Announcement Set: Pedro Test 2

Reward Announcement Entry: Pedro 1

**Multi-Balances**

| Balance Type | Value | New Buc... | Expiry Months | Expiry Days | Expiry Hours | Behaviour | Start Date | End Date |
|--------------|-------|------------|---------------|-------------|--------------|-----------|------------|----------|
| General Cash | 25    | Add Today  |               | 0           | 0            | Ignore    |            |          |
| Yearly Exp   | 75    | Add Today  |               | 0           | 0            | Ignore    |            |          |

New Edit Delete

Reset Counter ☒ Real-Time Reward ☒ Expiry Reward ☐

## Adding rewards

Follow these steps to add a new reward.

| Step | Action                                                                                                                                                    |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.                                                       |
| 2    | On the <b>Rewards</b> tab, click <b>New</b> .<br><b>Result:</b> You see the <i>New Reward screen</i> (See example on page 257).                           |
| 3    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Rewards fields</i> . |
| 4    | Click <b>Save</b> .                                                                                                                                       |

## Editing rewards

Follow these steps to edit an existing reward.

| Step | Action                                                                                                 |
|------|--------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.    |
| 2    | On the <b>Rewards</b> tab, select the reward to edit.                                                  |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the <i>Edit Reward screen</i> (See example on page 257). |

| Step | Action                                                                                                                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | Edit the fields to reflect the changes you need to make.<br>For more information about the fields in this screen, see <i>Rewards fields</i> . |
| 5    | Click <b>Save</b> .                                                                                                                           |

## Deleting rewards

Follow these steps to delete an existing reward.

**Warning:** When you delete a reward, any associated freeform SMS messages are also deleted.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list. |
| 2    | In the table on the <b>Rewards</b> tab, select the reward to delete.                                |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                     |
| 4    | Click <b>OK</b> to delete the record from the database and return to the <b>Rewards</b> tab.        |

## Multi-Balances fields

This table describes the function of each field.

| Field                 | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Balance Type          | The balance type you want the reward to apply to. This field is populated by the records on the <i>Balance Types</i> (on page 234) tab.<br><b>Note:</b> Any valid balance type can be selected. This includes non cash balance types, such as time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Value                 | The reward amount for balances of the balance type selected in the <b>Balance Type</b> field.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Tax Plan              | The tax plan associated with this voucher type.<br><b>Note:</b> For inclusive tax, the tax component will be removed before crediting the subscriber.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Balance Expiry Period | The period between when the reward is activated and when the balance will expire.<br>Depending on the selection in the expiry period type options, enter one of: <ul style="list-style-type: none"> <li>• Days and hours</li> <li>• Months</li> </ul> <b>Note:</b> Month expiries set expiry dates measured in calendar months. If a bucket is created on the 31 <sup>st</sup> of the month, and the expiry will be on month which has 30 days or less, the expiry date is set for the 1 <sup>st</sup> of the month after. For example, a two-month bucket created on the 31 <sup>st</sup> of December will expire on the 1 <sup>st</sup> of March.<br><b>Tip:</b> The <code>expireAtMidnight</code> configuration option in <code>eserv.config</code> overrides the displayed hour for expiry and will expire the balance only at midnight on the expiry date. For further information about this configuration option, see <i>VWS Technical Guide</i> . |
| Expiry Period Type    | The unit the balance expiry period is calculated in.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |



| Field                  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        | <p>Select either:</p> <ul style="list-style-type: none"> <li>Hours - the balance expiry is calculated in days and hours.</li> <li>Months - the balance expiry is calculated in months.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Applicable Start Date  | Optional start date when balances of this type can be rewarded by rewards of this type. To activate this field, select the check box to the right of the field, then, in the date selection boxes, select the day, month and year for the start date.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Applicable End Date    | Optional end date when balances of this type can no longer be rewarded using rewards of this type. To activate this field, select the check box to the right of the field, then, in the date selection boxes, select the day, month and year for the end date.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| Offset Date            | <p>Optional offset date fields used to configure the offset date to apply when balances of this type are recharged. To activate these fields, select the check box to the right of the offset date fields area. To enter:</p> <p>A specific offset date      Select the <b>Date</b> option and in the date selection boxes, select the required day, month and year.</p> <p>An offset date which is an extension to the current system date      Select either the <b>Days/Hours</b> or the <b>Months</b> option. In the available field(s), type the required number of days and hours, or months by which the system date should be extended to create the offset date.</p> <p><b>Note:</b> For details on the rules applying to offset dates, see <i>Offset date rules</i> (on page 253).</p> |
| Missing Balance Policy | <p>What to do, if this balance type does not already exist in the wallet when the reward is applied. Choose one of:</p> <ul style="list-style-type: none"> <li>Allow - the system will create the balance type and apply the reward</li> <li>Fail - the reward will fail</li> <li>Ignore - the reward is applied, but the system will not create the balance type</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Expiry Policy          | <p>How to apply the expiry period for this balance type when rewards of this type are applied. Choose:</p> <ul style="list-style-type: none"> <li>Ignore - no change is made to the current expiry period</li> <li>Extend - the current expiry period is extended by the specified days and hours</li> <li>Extend From Today - the current expiry period to be extended the specified number of days and hours from today's date</li> <li>Best - The system will select the best policy option for the subscriber depending on their particular circumstances</li> </ul>                                                                                                                                                                                                                         |
| New Bucket             | Whether to create a new bucket for the balance type when the reward is applied.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Replace Balance        | <p>Whether to replace the existing balance for the balance type with the new value when the reward is applied.</p> <p><b>Note:</b> You can only set the replace balance option providing there are no overlapping reward balances for the same balance type with this option set.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

| Field                 | Description                                                                                                                                                                     |
|-----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Allowed Product Types | <p>The product types which rewards of this type can apply to.</p> <p><b>Tip:</b> An empty Allocated list means that the balance type can be rewarded for all product types.</p> |

## Multi-Balance screen

Here is an example Multi-Balance screen.

| Edit Multi-Balance                                                                                                                                                                                                                                                                                                    |                                                                                                                                  |                                                                       |                                 | Help                            |       |            |      |       |                |                 |                                                                                                          |  |  |           |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------|---------------------------------|---------------------------------|-------|------------|------|-------|----------------|-----------------|----------------------------------------------------------------------------------------------------------|--|--|-----------|
| Balance Type                                                                                                                                                                                                                                                                                                          | <input type="text" value="100 Free Minutes"/>                                                                                    |                                                                       |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |
| Value                                                                                                                                                                                                                                                                                                                 | <input type="text" value="0"/>                                                                                                   |                                                                       |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |
| Tax Plan                                                                                                                                                                                                                                                                                                              | <input type="text" value="None"/>                                                                                                |                                                                       |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |
| Balance Expiry Period                                                                                                                                                                                                                                                                                                 | <input type="text" value="0"/> Days                                                                                              | <input type="text" value="0"/> Hours                                  |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |
| Expiry Period Type                                                                                                                                                                                                                                                                                                    | <input checked="" type="radio"/> Hours <input type="radio"/> Months                                                              |                                                                       |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |
| Applicable Start Date                                                                                                                                                                                                                                                                                                 | <input type="text" value="2010"/>                                                                                                | <input type="text" value="July"/>                                     | <input type="text" value="30"/> | <input type="checkbox"/> Enable |       |            |      |       |                |                 |                                                                                                          |  |  |           |
| Applicable End Date                                                                                                                                                                                                                                                                                                   | <input type="text" value="2010"/>                                                                                                | <input type="text" value="July"/>                                     | <input type="text" value="30"/> | <input type="checkbox"/> Enable |       |            |      |       |                |                 |                                                                                                          |  |  |           |
|                                                                                                                                                                                                                                                                                                                       | <input checked="" type="radio"/> Date <input type="radio"/> Days/Hours <input type="radio"/> Months                              |                                                                       |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |
| Offset Date                                                                                                                                                                                                                                                                                                           | <input type="text" value="2010"/>                                                                                                | <input type="text" value="July"/>                                     | <input type="text" value="30"/> | <input type="checkbox"/> Enable |       |            |      |       |                |                 |                                                                                                          |  |  |           |
|                                                                                                                                                                                                                                                                                                                       | <input type="text" value="0"/> Days                                                                                              | <input type="text" value="0"/> Hours                                  |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |
| Missing Balance Policy                                                                                                                                                                                                                                                                                                | <input type="radio"/> Allow <input type="radio"/> Fail <input checked="" type="radio"/> Ignore                                   |                                                                       |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |
| Expiry Policy                                                                                                                                                                                                                                                                                                         | <input type="radio"/> Best <input type="radio"/> Extend <input type="radio"/> Ignore <input checked="" type="radio"/> From Today |                                                                       |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |
| Scenario                                                                                                                                                                                                                                                                                                              | <input type="checkbox"/> New Bucket <input type="checkbox"/> Replace Balance                                                     |                                                                       |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |
| Allowed Product Types (none allocated means any allowed)                                                                                                                                                                                                                                                              |                                                                                                                                  |                                                                       |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |
| <table border="1"> <thead> <tr><th>Available</th></tr> </thead> <tbody> <tr><td>Prepaid</td></tr> <tr><td>PostPaid</td></tr> <tr><td>Lohit</td></tr> <tr><td>Lohit-Bill</td></tr> <tr><td>test</td></tr> <tr><td>delay</td></tr> <tr><td>HILLARY_BUNDLE</td></tr> <tr><td>Periodic Charge</td></tr> </tbody> </table> |                                                                                                                                  | Available                                                             | Prepaid                         | PostPaid                        | Lohit | Lohit-Bill | test | delay | HILLARY_BUNDLE | Periodic Charge | <table border="1"> <thead> <tr><th>Allocated</th></tr> </thead> <tbody> <!-- Empty --> </tbody> </table> |  |  | Allocated |
| Available                                                                                                                                                                                                                                                                                                             |                                                                                                                                  |                                                                       |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |
| Prepaid                                                                                                                                                                                                                                                                                                               |                                                                                                                                  |                                                                       |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |
| PostPaid                                                                                                                                                                                                                                                                                                              |                                                                                                                                  |                                                                       |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |
| Lohit                                                                                                                                                                                                                                                                                                                 |                                                                                                                                  |                                                                       |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |
| Lohit-Bill                                                                                                                                                                                                                                                                                                            |                                                                                                                                  |                                                                       |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |
| test                                                                                                                                                                                                                                                                                                                  |                                                                                                                                  |                                                                       |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |
| delay                                                                                                                                                                                                                                                                                                                 |                                                                                                                                  |                                                                       |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |
| HILLARY_BUNDLE                                                                                                                                                                                                                                                                                                        |                                                                                                                                  |                                                                       |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |
| Periodic Charge                                                                                                                                                                                                                                                                                                       |                                                                                                                                  |                                                                       |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |
| Allocated                                                                                                                                                                                                                                                                                                             |                                                                                                                                  |                                                                       |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |
|                                                                                                                                                                                                                                                                                                                       |                                                                                                                                  | <input type="button" value=""/> >> <input type="button" value=""/> << |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |
| <input type="button" value="Save"/>                                                                                                                                                                                                                                                                                   |                                                                                                                                  | <input type="button" value="Cancel"/>                                 |                                 |                                 |       |            |      |       |                |                 |                                                                                                          |  |  |           |

## Adding balance types to a reward

Follow these steps to add a balance type to the current reward type.

**Note:** To add multiple balance types to the reward type, repeat this process as required.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Multi-Balances area at the bottom of the New Reward screen or Edit Reward screen, click <b>New</b> .<br><b>Result:</b> You see the New <i>Multi-Balance</i> screen (See example on page 261).                                                                                                                                                                                                                                                                                                                      |
| 2    | Start to configure this record by entering data in the fields in the top of this screen. For more information about the fields on this screen, see Multi-Balances fields.                                                                                                                                                                                                                                                                                                                                                 |
| 3    | In the <b>Allowed Product Types</b> section select the product types for which the reward can be applied to this balance type. To: <ul style="list-style-type: none"> <li>• Allocate a product type, select it in the <b>Available</b> list and click the '&gt;&gt;' button</li> <li>• Remove an allocated product type, select it in the <b>Allocated</b> list and click the '&lt;&lt;' button.</li> </ul> <p><b>Tip:</b> An empty Allocated list means that the balance type can be rewarded for all product types.</p> |
| 4    | Click <b>Save</b> .<br><b>Result:</b> The balance type details are saved, and you return to the Reward screen.                                                                                                                                                                                                                                                                                                                                                                                                            |

## Editing balance types for a reward

Follow these steps to edit an existing balance type for the current reward type.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Reward screen or Edit Reward screen, select the balance type record to edit in the Multi-Balances area.                                                                                                                                                                                                                                                                                                                                                                                                        |
| 2    | Click <b>Edit</b> .<br><b>Result:</b> You see the Edit <i>Multi-Balance</i> screen (See example on page 261).                                                                                                                                                                                                                                                                                                                                                                                                             |
| 3    | Edit the fields to reflect the changes you need to make.<br>For more information about the fields in this screen, see Multi-Balances fields.                                                                                                                                                                                                                                                                                                                                                                              |
| 4    | If required, in the <b>Allowed Product Types</b> section select the product types for which this balance type can be rewarded. To: <ul style="list-style-type: none"> <li>• Allocate a product type, select it in the <b>Available</b> list and click the '&gt;&gt;' button</li> <li>• Remove an allocated product type, select it in the <b>Allocated</b> list and click the '&lt;&lt;' button.</li> </ul> <p><b>Tip:</b> An empty Allocated list means that the balance type can be rewarded for all product types.</p> |
| 5    | Click <b>Save</b> .<br><b>Result:</b> The modified balance type record is saved, and you return to the Reward screen.                                                                                                                                                                                                                                                                                                                                                                                                     |

## Deleting balance types for a reward

Follow these steps to delete an existing balance type from a reward.

| Step | Action                                                                                                               |
|------|----------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Reward screen or Edit Reward screen, select the balance type record to delete in the Multi-Balances area. |
| 2    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Multi-Balance prompt.                                     |
| 3    | Click <b>Apply</b> to delete the record from the database.                                                           |

## Reward Product Translations

### Introduction

The **Reward Product Translations** tab lets you view, add, edit and remove the translations used by the Call Info Text Message feature node.

A translation is required for each language, source product and destination product. The reward translations are specified separately for each service provider.

## Reward Product Translations tab

Here is an example **Reward Product Translations** tab.

The screenshot shows a window titled "Wallet Management" with a blue title bar. Inside the window, there is a "Service Provider" dropdown menu with "Boss" selected and a "Help" button. Below this is a tabbed interface with the "Reward Product Translations" tab selected. The tab contains a table with the following data:

| Reward Type | Original Product | Reward Product | Language |
|-------------|------------------|----------------|----------|
| Daily Cash  | PT1              | PT2            | English  |

At the bottom of the window, there is a horizontal scrollbar and four buttons: "New", "Edit", "Delete", and "Close".

## Reward Product Translation screen

Here is an example Reward Product Translation screen.

**Edit Reward Product Translation**

Help

Reward Type: Monthly Exp  
 Original Product Type: Chris PT  
 Reward Product Type: Chris PT  
 Language: Arabic  
 Translation: ChrisPT Trans

Save Cancel

## Adding reward product translations

Follow these steps to add a new reward product translation.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                                                                                                                     |
| 2    | On the <b>Reward Product Translations</b> tab, click <b>New</b> .<br><b>Result:</b> You see the <i>New Reward Product Translation screen</i> (See example on page 265).                                                                                                                                                                                                                                                 |
| 3    | From the <b>Reward Type</b> drop down list, select the balance type the reward applies to.<br><b>Tip:</b> The available reward types are a sub-set of the balance types that have been configured where the expenditure type is not <i>None</i> .                                                                                                                                                                       |
| 4    | From the <b>Original Product Type</b> drop down box, select the subscriber's previous product type.                                                                                                                                                                                                                                                                                                                     |
| 5    | From the <b>Reward Product Type</b> drop down box, select the product type the subscriber is being transferred to.<br><b>Tip:</b> If an invalid product type transfer has been chosen, the instructions under the <b>Translation</b> field will indicate that an invalid original/reward combination was selected. The original and reward product types must match a current and reward product type pair in a reward. |
| 6    | From the <b>Language</b> drop down box, select the language the message sent to the subscriber should be in. This will be sent instead of the default text for this system.                                                                                                                                                                                                                                             |
| 7    | In the <b>Translation</b> field, type the text which should be sent to the subscriber when their product type is changed as part of a reward.<br><b>Tip:</b> If the text entered in this field is invalid, the instructions under the <b>Translation</b> field will indicate that text entered is invalid.                                                                                                              |
| 8    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                                                     |

## Editing reward product translations

Follow these steps to edit an existing reward product translation.

| Step | Action                                                                                                                                                                      |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.                                                                         |
| 2    | On the <b>Reward Product Translations</b> tab, select the reward product translation to edit.                                                                               |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the <i>Edit Reward Product Translation</i> screen (See example on page 265).                                                  |
| 4    | The <b>Translation</b> field is the only editable field.<br><b>Tip:</b> The details of the fields are described in <i>Adding reward product translations</i> (on page 265). |
| 5    | Click <b>Save</b> .                                                                                                                                                         |

## Deleting reward product translations

Follow these steps to delete an existing reward product translation.

| Step | Action                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.              |
| 2    | In the table on the <b>Reward Product Translations</b> tab, select the reward product translation to delete.     |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                  |
| 4    | Click <b>OK</b> to delete the record from the database and return to the <b>Reward Product Translations</b> tab. |

## Wallet Name Translation

### Introduction

The **Wallet Name Translation** tab lets you view, add, edit and remove translations of wallet type names to the subscriber's language for real-time wallet notifications. A translation is required for each wallet type and language. The wallet name translations are specified separately for each service provider.



Wallet Name Translation tab

Here is an example **Wallet Name Translation** tab.

Wallet Management

Service Provider

Boss

Help

Wallet Name Translation

| Wallet Type | Language | Translation |
|-------------|----------|-------------|
| Primary     | English  | Personal    |
| Secondary   | English  | Business    |

<

>

New

Edit

Delete

Close

## Wallet Name Translation screen

Here is an example Wallet Name Translation screen.

## Adding wallet name translations

Follow these steps to add a new translation for a wallet type name.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 2    | On the <b>Wallet Name Translation</b> tab, click <b>New</b> .<br><b>Result:</b> You see the <i>New Wallet Name Translation screen</i> (See example on page 268).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 3    | From the <b>Language</b> drop down box, select the language the wallet type name will be translated to.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 4    | From the <b>Wallet Type</b> drop down box, select the wallet type that will be translated.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 5    | In the <b>Translation</b> field, type the text which will be sent to the subscriber in the short message. This will be sent instead of the default text for this system.<br><b>Tip:</b> If there is a problem with the translation text, the instructions under this field will indicate one of the following: <ul style="list-style-type: none"> <li>• A translation is required (because there is no text in the Translation field)</li> <li>• The translation is too long (because there are more than 12 characters in it)</li> </ul> In the <b>Wallet Expiry</b> field, type in the balance expiry text.<br><b>Warning:</b> You must include '%d' in the text. This variable will be converted to the number of days remaining until the wallet expires.<br>In the <b>No Wallet Expiry</b> field, type the text to output for wallets that have no expiry date. |
| 6    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## Editing a wallet name translation

Follow these steps to edit an existing Wallet Name Translation.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list. |
| 2    | In the table on the <b>Wallet Name Translation</b> tab, select the wallet name translation to edit. |

| Step | Action                                                                                                                                                                                                  |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the <i>Edit Wallet Name Translation screen</i> (See example on page 268).                                                                                 |
| 4    | Edit the details as described in <i>Adding wallet name translations</i> (on page 268).<br><b>Note:</b> The <b>Language</b> and <b>Wallet Type</b> fields are for reference only, they are not editable. |
| 5    | Click <b>Save</b> .                                                                                                                                                                                     |

## Deleting a wallet name translation

Follow these steps to delete an existing wallet name translation.

| Step | Action                                                                                                       |
|------|--------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.          |
| 2    | In the table on the <b>Wallet Name Translation</b> tab, select the wallet name translation to delete.        |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                              |
| 4    | Click <b>OK</b> to delete the record from the database and return to the <b>Wallet Name Translation</b> tab. |

## Real-Time Wallet Notifications

### Introduction

The **Real-Time Wallet Notifications** tab lets you configure when to trigger real-time notification messages for a subscriber, based on the following events:

- Wallet expired
- Wallet state changed
- Balance Expired
- Balance Charged
- Balance Recharged

For more information about how real-time wallet notifications are delivered, see *CCS Technical Guide*.

**Tip:** You choose which real-time wallet notifications to enable on the Product Type screens (**SMS > Services > Subscriber Management > Product Type** tab, then for a product type, **Real-Time Wallet Notification** option).

## Real-Time Wallet Notifications tab

Here is an example Real-time Notifications tab.

Service Provider: Boss Help

**Real-Time Wallet Notifications**

| Name              | Threshold | Notification Type   | Old State |
|-------------------|-----------|---------------------|-----------|
| Balance Expiry    | 0         | Balance Expiry      |           |
| Balance Recharged | 0         | Recharging          |           |
| Low Balance       | 120       | Balance Expiry      |           |
| Wallet Expiry     |           | Wallet Expiry       |           |
| Wallet not used   |           | Wallet State Change | Active    |

New Edit Delete Close

## Real-Time Notifications fields

This table describes the function of each field.

| Field             | Description                                           |
|-------------------|-------------------------------------------------------|
| Name              | A unique name for the real-time notification message. |
| Notification Type | The type of event that triggers the notification.     |

| Field                  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Threshold              | <p>The total balance that triggers the notification.</p> <p>For charging notifications, the message is triggered when a balance that was above the threshold changes so it is equal to or below the threshold.</p> <p>For recharging notifications, the message is triggered when a balance that was below the threshold changes so it is equal to or above the threshold.</p> <p><b>Tip:</b> For time thresholds, this value is in seconds.</p> <p><b>Note:</b> This field is optional. If no value is entered, no threshold check is made and a notification is triggered on any charge or recharge event.</p> |
| Above credit limit     | <p>Include the subscriber's credit limit with the threshold to determine notification triggering.</p> <p><b>Note:</b> This check box is on the New and Edit Real-Time Notification screens and not on the tab table.</p>                                                                                                                                                                                                                                                                                                                                                                                         |
| Excluding reservations | <p>Exclude current uncommitted reservations from the balance for comparing with the threshold to determine notification triggering.</p> <p>The default is to ignore uncommitted reservations (i.e., the <b>Exclude reserved funds</b> checkbox is enabled by default), take the actual balance for the comparison with the threshold value. To include uncommitted reservations, deselect the <b>Exclude reserved funds</b> checkbox.</p> <p><b>Note:</b> This check box is on the New and Edit Real-Time Notification screens and not on the tab table.</p>                                                     |
| Old State              | <p>Indicates the state a wallet must be changed from when triggering a <code>Wallet State Change</code> notification.</p> <p><b>Note:</b> This option is only available if <code>Wallet State Change</code> is selected in the <b>Notification Type</b> field.</p>                                                                                                                                                                                                                                                                                                                                               |
| New State              | <p>Indicates the state a wallet must be changed to when triggering a <code>Wallet State Change</code> notification.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• This option is only available if <code>Wallet State Change</code> is selected in the <b>Notification Type</b> field.</li> <li>• A notification is triggered only if the old and new states are different.</li> </ul>                                                                                                                                                                                                       |
| Balance Type           | <p>The balance type associated with the notification.</p> <p><b>Tip:</b> This field applies to charging, recharging and balance expiry notifications.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| DAP Operation          | <p>The name of the DAP operation to use to output the notification message. Choosing <code>No DAP</code> will only output a notification.</p> <p><b>Tip:</b> This field is populated by the XML templates set up in the DAP application. For more information on templates, see <i>DAP User's Guide</i>.</p>                                                                                                                                                                                                                                                                                                     |
| Suppress DAP           | <p>Indicates whether DAP notifications should be suppressed for certain events. Individual subscribers can opt-out of receiving DAP notifications by having the value <b>true</b> in their profile at the drop-down tag selected here.</p> <p><b>Tip:</b> If <code>Not Used</code> is selected the notifications will be sent in all cases.</p>                                                                                                                                                                                                                                                                  |

| Field                                | Description                                                                                                                                                                                                                                                                              |
|--------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Notification Template (SMS Template) | <p>The name of the notification template to use to output a notification. Choosing <code>No SMS</code> will only send a DAP Notification.</p> <p><b>Tip:</b> This field is populated by the notification templates set up in ACS. For more information, see <i>ACS User's Guide</i>.</p> |
| Suppress Notification (Suppress SMS) | <p>Indicates whether notifications should be suppressed. No notifications will be sent if this field is set to <code>true</code>.</p> <p><b>Tip:</b> If <code>Not Used</code> is selected the notifications will be sent in all cases</p>                                                |
| Wallet Type                          | <p>The wallet type associated with the notification. Options are:</p> <ul style="list-style-type: none"> <li>• Primary</li> <li>• Secondary</li> </ul>                                                                                                                                   |
| Reference                            | Reference                                                                                                                                                                                                                                                                                |

### Trigger notification example

This example is for a charging notification.

If the:

- threshold is \$30
- actual balance is \$30
- credit limit is \$10, and
- an outstanding reservation for \$5

This table shows how the comparison value is computed for these values:

|                        | Above credit limit                                                                                                       |                                                                                                                                         |
|------------------------|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Excluding reservations | No                                                                                                                       | Yes                                                                                                                                     |
| No                     | <p>Actual balance<br/>= \$30</p> <p>Notification triggered<br/>(comparison = threshold)</p>                              | <p>Actual balance + Credit Limit<br/>\$30+ \$10 = \$40</p> <p>No notification<br/>(comparison &gt; threshold)</p>                       |
| Yes                    | <p>Actual balance - Reservations<br/>\$30 - \$5 = \$25</p> <p>Notification triggered<br/>(comparison &lt; threshold)</p> | <p>Actual balance - Reservations + Credit Limit<br/>\$30 - \$5 + \$10 = \$35</p> <p>No notification<br/>(comparison &gt; threshold)</p> |

## Real-Time Wallet Notifications screen

Here is an example Real-Time Wallet Notifications screen.

**Edit Real-Time Wallet Notifications**

Help

Name: Charging9000

Notification Type: Charging

Threshold: 9000

☒ Above credit limit

☒ Exclude reserved funds

Old State:

New State:

Balance Type: General Cash

DAP Operation: -- No DAP --

Suppress DAP: -- Not Used --

SMS Template: 25% Threshold

Suppress SMS: -- Not Used --

Wallet Type: -- Any Type --

Reference:

Save Cancel

## Adding real-time wallet notifications

Follow these steps to add the configuration for a real-time wallet notification.

| Step | Action                                                                                                                                                                         |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.                                                                            |
| 2    | On the <b>Real-Time Wallet Notifications</b> tab, click <b>New</b> .<br><b>Result:</b> You see the New <i>Real-Time Wallet Notifications</i> screen (See example on page 277). |
| 3    | In the <b>Name</b> field enter a unique name for the real-time notification message.                                                                                           |
| 4    | From the <b>Notification Type</b> drop down box, select the type of notification to generate.                                                                                  |

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | <p>Fill in the fields, depending upon notification type selected:</p> <ul style="list-style-type: none"> <li>For notification types <i>Charging</i> or <i>Recharging</i>, enter data as follows: <ul style="list-style-type: none"> <li><b>Threshold</b> field - the threshold for the notification.</li> <li><b>Above credit limit</b> check box - select to use any credit limit with the threshold.</li> <li><b>Exclude reserved funds</b> check box - select to ignore uncommitted reservations (default behaviour); leave clear to use uncommitted reservations with the threshold.</li> <li><b>Balance Type</b> drop down list - select the applicable balance type.</li> </ul> </li> </ul> <p><b>Tip:</b> For time thresholds, the <b>Threshold</b> value is in milliseconds.</p> <ul style="list-style-type: none"> <li>For notification type <i>Wallet State Change</i>, enter data in the <b>Old State</b> and <b>New State</b> drop down boxes.</li> <li>For notification type <i>Balance Expiry</i>, select a record from the <b>Balance Type</b> drop down box.</li> </ul> |
| 6    | <p>Configure the rest of this record by selecting the required option from the the remaining drop down lists on this screen.</p> <p>For more information about the fields on this screen, see <i>Real-Time Notifications fields</i> (on page 270).</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| 7    | <p>Click <b>Save</b>.</p> <p><b>Warning:</b> Real-time wallet notifications are not usable until they are associated with one or more product types. To use this new notification for a subscriber, the wallet product type for the subscriber must now be configured.</p> <p>To check which product type the wallet uses, see <b>SMS &gt; Services &gt; Subscriber Management &gt; Subscriber</b> tab, then edit the required subscriber details, followed by the <b>Wallets</b> option.</p> <p>To configure the product types that may use this new real-time wallet notification see <b>SMS &gt; Services &gt; Subscriber Management &gt; Product Type</b> tab, then for a product type, <b>Real-Time Wallet Notification</b> option, see <i>Real-Time Wallet Notifications</i> (on page 204).</p>                                                                                                                                                                                                                                                                                   |

## Editing real-time wallet notifications

Follow these steps to edit an existing real-time wallet notification.

| Step | Action                                                                                                                                                                                                                                 |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                                                    |
| 2    | On the <b>Real-Time Wallet Notifications</b> tab, select the wallet notification to edit.                                                                                                                                              |
| 3    | <p>Click <b>Edit</b>.</p> <p><b>Result:</b> You see the <i>Edit Real-Time Wallet Notifications</i> screen (See example on page 277).</p>                                                                                               |
| 4    | <p>Edit the fields with the required changes.</p> <p>For more information about the fields in this screen, see <i>Real-Time Notifications fields</i> (on page 270) and <i>Adding real-time wallet notifications</i> (on page 273).</p> |
| 5    | Click <b>Save</b> .                                                                                                                                                                                                                    |



## Deleting real-time wallet notifications

Follow these steps to delete an existing real-time notification configuration.

| Step | Action                                                                                                                                                                          |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.                                                                             |
| 2    | On the <b>Real-Time Wallet Notifications</b> tab, select the real-time wallet notification to delete.                                                                           |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                                                                 |
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> You see the Real-time Notifications confirmation message and the record is removed from the database. |

## Policy Counters

### Introduction

The **Policy Counters** tab lets you view, add, edit and remove policy label tiers and policy label tier ranges.

## Policy Counters Tab

Here is an example Policy Counters tab:

Service Provider: MyTelco Help

| Label Name     | Balance Type            | Send Pending Policy | Change User | Change Date    |
|----------------|-------------------------|---------------------|-------------|----------------|
| PeriodicCharge | MyPC1 (Periodic Charge) | Y                   | SU          | 2017-10-04 ... |

New Edit Delete Close

## Policy Counters fields

This table describes the function of each field.

| Field               | Description                                 |
|---------------------|---------------------------------------------|
| Label Name          | Name of the policy label tier.              |
| Balance Type        | Type of balance.                            |
| Send Pending Policy | Specify whether to send pending policy.     |
| Change User         | User ID of the user who changed the status. |

| Field       | Description                        |
|-------------|------------------------------------|
| Change Date | Date on which the change was made. |

## Policy Label Tier Screen

Here is an example of the New Policy Label Tier screen:

The screenshot shows a software window titled "New Policy Label Tier". It contains the following elements:

- Form Fields:**
  - Name:** A text input field.
  - Balance Type:** A dropdown menu currently set to "Bad Pin".
  - Send Pending Policy:** An unchecked checkbox.
- Table:** A table with the following columns: "Status Name", "Start", "End", "Change User", and "Change Date". The table body is currently empty.
- Buttons:**
  - Help:** Located in the top right corner.
  - New, Edit, Delete:** A row of three buttons below the table.
  - Save, Cancel:** A row of two buttons at the bottom center.

## Policy Label Tier fields

This table describes the function of each field.

| Field               | Description                              |
|---------------------|------------------------------------------|
| Name                | Name of the policy label tier.           |
| Balance Type        | Type of balance                          |
| Send Pending Policy | Specify whether to send pending policy.  |
| Status Name         | Name of the status                       |
| Start               | Start of range                           |
| End                 | End of range                             |
| Change User         | User ID of the user who made the change. |
| Change Date         | Date on which the change was made.       |

## Adding Policy Label Tiers

Follow these steps to add policy label tiers.

| Step | Action                                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the Service Provider list.                                                       |
| 2    | On the <b>Policy Counters</b> tab, click <b>New</b> .<br><b>Result:</b> You see the <i>New Policy Label Tier screen</i> (See example on page 277). |
| 3    | In the <b>Name</b> field, enter a unique name for the policy label tier.                                                                           |
| 4    | From the <b>Balance Type</b> drop down box, select the type of balance.                                                                            |
| 5    | If you want to send pending policy, select <b>Send Pending Policy</b> .                                                                            |
| 7    | Click <b>Save</b> .                                                                                                                                |

## Editing Policy Label Tiers

Follow these steps to edit an existing policy label tier.

| Step | Action                                                                                       |
|------|----------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the Service Provider list. |
| 2    | On the <b>Policy Counters</b> tab, select the policy counter to edit.                        |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the Edit Policy Label Tier screen.             |
| 4    | Edit the fields with the required changes.                                                   |
| 5    | Click <b>Save</b> .                                                                          |

## Deleting Policy Label Tiers

Follow these steps to delete an existing policy label tier.

| Step | Action                                                                                                                                                  |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the Service Provider list.                                                            |
| 2    | On the <b>Policy Counters</b> tab, select the policy counter to delete.                                                                                 |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                                         |
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> You see the confirmation message and the record is removed from the database. |

## Adding Policy Label Tier Ranges

Follow these steps to add policy label tier ranges.

| Step | Action                                                                                                                                                                                                                                                                                                                                                     |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the Service Provider list.                                                                                                                                                                                                                                                               |
| 2    | On the <b>Policy Counters</b> tab, select the policy counter to which you want to add policy label tier ranges.                                                                                                                                                                                                                                            |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the Edit Policy Label Tier screen.                                                                                                                                                                                                                                                                           |
| 4    | Click <b>New</b> .<br><b>Result:</b> You see the Policy Label Tier Range screen.                                                                                                                                                                                                                                                                           |
| 5    | Fill in the fields: <ul style="list-style-type: none"> <li>▪ <b>Status Name</b> field - the name of the tier. For example, Low Balance.</li> <li>▪ <b>Start of range</b> field - enter a number for the start of the policy label tier range.</li> <li>▪ <b>End of range</b> field - enter a number for the end of the policy label tier range.</li> </ul> |
| 6    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                        |

## Policy Label Tier Range fields

This table describes the function of each field.

| Field         | Description                        |
|---------------|------------------------------------|
| Status Name   | Name of the status                 |
| Service State | The state the status is mapped to. |

## Editing Policy Label Tier Ranges

Follow these steps to edit policy label tier ranges.

| Step | Action                                                                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the Service Provider list.                                                                     |
| 2    | On the <b>Policy Counters</b> tab, select the policy counter you want to edit.                                                                                   |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the Edit Policy Label Tier screen.                                                                                 |
| 4    | In the Edit Policy Label Tier screen, select the policy label tier to edit.<br>Click <b>Edit</b> .<br><b>Result:</b> You see the Policy Label Tier Range screen. |
| 5    | Edit the fields with the required changes.                                                                                                                       |
| 6    | Click <b>Save</b> .                                                                                                                                              |

## Deleting Policy Label Tier Ranges

Follow these steps to delete policy label tier ranges.

| Step | Action                                                                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the Service Provider list.                                                                     |
| 2    | On the <b>Policy Counters</b> tab, select the policy counter from which you want to delete policy label tier ranges.                                             |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the Edit Policy Label Tier screen.                                                                                 |
| 4    | In the Edit Policy Label Tier screen, select the policy label tier to delete.<br>Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt. |
| 5    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> You see the confirmation message and the record is removed from the database.          |

## Free Form Recharge

### Introduction

The **Free Form Recharge** tab lets you recharge a subscriber's wallets. It can be used when the subscriber has experienced problems with either the voucher or credit card recharge.

## Free Form Recharge tab

Here is an example **Free Form Recharge** tab.

**Wallet Management**

Service Provider: Boss [v] [Help]

**Free Form Recharge**

Subscriber ID: 123456789

**Wallet Type**

☒ Primary Wallet ☐ Secondary Wallet

Balance Expiry Period: 5 Days 0 Hours

Wallet Expiry Period: 15 Days 0 Hours

Amount: 20.00

Reference: Promotion failed to increase credit

**Type Of Recharge**

☒ Free Form Recharge ☐ Credit Card Recharge

☐ Voucher Recharge

[Recharge] [Close]

## Recharging Rules - Wallet Expiry Date

The following recharge rules apply to the wallet expiry date when performing a free form recharge.

The date is calculated by determining the greatest value of the following:

- Current date + period entered in screen
- Current wallet expiry date

If the wallet is in the pre-use period, the initial wallet expiry period is used to calculate the current wallet expiry date before the comparison of the above date.

The free form recharging rules differ in that they ignore the recharge minimum wallet expiry periods specified at product type level.

**Note:** Non-expiry wallets ignore the expiry periods.

A subscriber's wallet with a 'Pre-Use' or 'Dormant' state will have its status changed to 'Active'.

## Recharging Rules - Balance Expiry Date

The following recharge rules apply to the balance expiry date when performing a free form recharge.

The date is calculated by calculating the greatest value of the following:

- Current date + period entered in screen.
- Current balance expiry date.

If the wallet is in pre-use, the initial balance expiry period is used to calculate the current balance expiry date before the comparison of the above date.

The free form recharging rules differ in that they ignore the recharge minimum balance expiry periods specified at product type level.

**Note:** Non-expiry wallets ignore the expiry periods.

A subscriber's wallet with a 'Pre-Use' or 'Dormant' state will have its status changed to 'Active'.

## Completing free form recharges

Follow these steps to perform a free form recharge on a subscriber's wallet.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                   |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                                                                                                      |
| 2    | In the <b>Free Form Recharge</b> tab, enter the <b>Subscriber ID</b> .                                                                                                                                                                                                                                                                                                                                   |
| 3    | From the <b>Wallet Type</b> options, select one of the following: <ul style="list-style-type: none"> <li>• <b>Primary Wallet</b></li> <li>• <b>Secondary Wallet</b>.</li> </ul>                                                                                                                                                                                                                          |
| 4    | In the <b>Balance Expiry Period</b> fields, enter the days and hours to be added to the subscriber's balance expiry period. <p><b>Tip:</b> The <code>expireAtMidnight</code> configuration option overrides the displayed hour for expiry and will expire the balance only at midnight on the expiry date. For more information about this configuration option, see the <i>VWS Technical Guide</i>.</p> |
| 5    | In the <b>Wallet Expiry Period</b> fields, type the days and hours to be added to the wallet expiry period. <p><b>Note:</b> The <code>expireAtMidnight</code> configuration option overrides the displayed hour for expiry and will expire the balance only at midnight on the expiry date. For more information about this configuration option, see the <i>VWS Technical Guide</i>.</p>                |
| 6    | In the <b>Amount</b> field, enter the amount which will be added (or subtracted in the case of a negative value) to the wallet balance. <p><b>Tip:</b> The amount is in the system currency.</p>                                                                                                                                                                                                         |
| 7    | In the <b>Reference</b> field, enter the recharge reference ID. <p><b>Tip:</b> The recharge may include a bonus award if the reference matches a <b>Bonus Type Component</b> field.</p>                                                                                                                                                                                                                  |
| 8    | From the <b>Type Of Recharge</b> options, select the type of recharge to be completed. Select one of the following:                                                                                                                                                                                                                                                                                      |



| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | <ul style="list-style-type: none"> <li>• <b>Free Form Recharge</b> to indicate a free form recharge will be performed (EDR type 8).</li> <li>• <b>Credit Card Recharge</b> to indicate a credit card recharge will be performed (EDR type 9)</li> <li>• <b>Voucher Recharge</b> to indicate the customer tried to perform voucher recharge (EDR type 10)</li> </ul>                                                                                                                                    |
|      | <b>Notes:</b> <ul style="list-style-type: none"> <li>• Credit card recharges require a properly configured credit card to be available.</li> <li>• Voucher recharges requires the balance type to allow vouchers.</li> </ul>                                                                                                                                                                                                                                                                           |
| 9    | Click <b>Recharge</b> to create an EDR of the type specified in step 7. <p><b>Note:</b> If a maximum value has been configured for the balance type being recharged, then the maximum value policy will be applied to amounts which exceed the configured maximum. For more information on:</p> <ul style="list-style-type: none"> <li>• Maximum balance values, see <i>Maximum balances</i> (on page 235)</li> <li>• Maximum value policy, see <i>Maximum balance policy</i> (on page 236)</li> </ul> |

## Error Messages

There are six possible types of error messages that may be reported when **Recharge** is clicked. The messages are:

- Invalid CLI. Recharge was not performed.
- This account does not have any credit card details. Recharge was not performed.
- This account does not allow voucher recharges. Recharge was not performed.
- This account is in state frozen. Recharge was not performed.
- This account is in state suspended. Recharge was not performed.
- This account is in state terminated. Recharge was not performed.

## Wallet Life Cycle

### WLC plans

A wallet life cycle plan is defined at service provider level.

Wallets may be shared by many subscribers and these subscribers may have different product types and hence different wallet life cycle plans to apply.

A WLC plan contains a list of WLC periods, which are actioned in their offset order.

### WLC periods

A wallet life cycle period is associated to the account, which is a single subscriber-wallet association. if a subscriber has multiple wallets, each subscriber-wallet association could have its own distinct WLC period.

In a shared wallet environment, the current wallet life cycle period to apply is calculated from the wallet expiry and the wallet life cycle plan associated with the specific subscriber and the product type linked to that subscriber-wallet association.

When viewing the defined wallet life cycle periods within the **Wallet Life Cycle Plan** tab, the periods are ordered in ascending wallet expiry offset order, for example, -5 days before, then -2 days before, +1 days after. See *Wallet Life Cycle Period fields* (on page 290).

### Duration of period

A WLC period starts at its expiry offset date and continues until the next period starts, or the wallet is removed.

#### Example 1

WLC Plan 1 contains 3 periods:

- WLC Period 1 (-10 days)
- WLC Period 2 (0 days)
- WLC Period 3 (10 days)

WLC period 1 starts 10 days before expiry and finishes on wallet expiry, when WLC period 2 starts.

#### Example 2

WLC Plan 2 contains 2 periods:

- WLC Period 4 (-20 days)
- WLC Period 5 (+20 days)

WLC period 4 starts 20 days before expiry and finishes 20 days after wallet expiry, when WLC period 5 starts.

### Product Type swap

The wallet life cycle plan for a given product type will apply to all subscribers of that product type.

When a subscriber swaps to a different product type, the wallet life cycle period for the new product type will be calculated based on the wallet expiry date, and the control plan for the new period will be executed.

On product type swap the wallet life cycle period “On Backout” actions (if configured) and the “On Entry” actions (if configured) will be executed when the product type swap action will be treated by the system.

**Note:** There will be a delay between the moment when the product type swap was requested and the moment when all actions are executed.

## Wallet Life Cycle tab

Here is an example **Wallet Life Cycle** tab, displaying the wallet life cycle plans.

Service Provider: Test Customer

Help

Wallet Life Cycle

Name:

Search ☐ Marked For Deletion

| Name                          | Change User | Changed Date          | D |
|-------------------------------|-------------|-----------------------|---|
| PAL_copyFirstOne              | SU          | 2010-02-01 12:45:43.0 |   |
| PAL_firstOne                  | SU          | 2010-01-29 15:41:51.0 |   |
| UKE Wallet Life Cycle Plan 01 | SU          | 2010-02-03 14:43:15.0 |   |
| UKE Wallet Life Cycle Plan 02 | SU          | 2010-02-04 11:13:57.0 |   |
| pouet                         | SU          | 2010-02-03 09:56:14.0 |   |
| toto                          | SU          | 2010-02-03 10:03:27.0 |   |

New Edit Copy Delete Close

## Finding a WLC plan

Follow these steps to search for an existing wallet life cycle plan..

| Step | Action                                                                                                      |
|------|-------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the drop down list.                       |
| 2    | On the <b>Wallet Life Cycle</b> tab, enter the search criteria you are using to find the required WLC plan. |

| Step | Action                                                                                                                                                                                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | You can select the <b>Marked For Deletion</b> check box to include plans in the process of being deleted in the search results (row will be grayed).<br><br><b>Note:</b> By default the check box is cleared and the search will ignore deleted plans.                                             |
| 4    | Click <b>Search</b> .<br><br><b>Result:</b> The WLC plan table displays the first 100 records matching the search criteria entered in steps 2 and 3. If the required plan is not displayed and more than 100 records were returned, enter different search criteria and click <b>Search</b> again. |

## Adding a WLC plan

Follow these steps to add a new wallet life cycle plan.

| Step | Action                                                                                                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | On the <b>Wallet Life Cycle</b> tab, click <b>New</b> .<br><b>Result:</b> You see the New Wallet Life Cycle Plan screen.                                           |
| 2    | In the <b>Name</b> field, enter the name of the wallet life cycle plan.                                                                                            |
| 3    | Click <b>Save</b> .<br><b>Result:</b> The new plan is created. To add periods to the plan, you need to edit the plan. See <i>Editing a WLC plan</i> (on page 287). |

## Copying a WLC plan

Follow these steps to copy a wallet life cycle plan.

| Step | Action                                                                                                                                                                                           |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | On the <b>Wallet Life Cycle</b> tab, select the wallet life cycle plan you want to copy from the table and click <b>Copy</b> .<br><b>Result:</b> You see the Copy Wallet Life Cycle Plan screen. |
| 2    | Name the wallet life cycle plan.                                                                                                                                                                 |
| 3    | Click <b>Save</b> .<br><b>Result:</b> The plan is added to the list in the table. The copied plan will contain the same periods as the original plan.                                            |

## Modifying a currently active/associated plan

Here is the recommended method to modify a currently active/associated wallet life cycle plan.

| Step | Action                                                                         |
|------|--------------------------------------------------------------------------------|
| 1    | Copy the WLC plan.                                                             |
| 2    | Make the required changes to the plan copy.                                    |
| 3    | Re-associate the appropriate product types to the new plan.                    |
| 4    | Delete the original plan when transition to the new plan is deemed successful. |

## Editing a WLC plan

Follow these steps to edit a wallet life cycle plan.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                              |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>On the <b>Wallet Life Cycle</b> tab, select the wallet life cycle plan you want to edit from the table and click <b>Edit</b>.</p> <p><b>Result:</b> You see the <i>Edit Wallet Life Cycle Plan</i> screen (See example on page 288).</p>                                                                                                                                                                         |
| 2    | <p>The screen displays the wallet life cycle periods, in ascending wallet expiry offset order, for this plan. At the bottom of the screen, you can:</p> <ul style="list-style-type: none"><li>• <i>Adding a WLC period</i> (on page 289)</li><li>• <i>Editing a WLC period</i> (on page 291)</li><li>• <i>Changing a WLC plan name</i> (on page 292)</li><li>• <i>Deleting a WLC period</i> (on page 292)</li></ul> |

## Edit Wallet Life Cycle Plan screen

Here is an example Edit Wallet Life Cycle Plan screen.

**Edit Wallet Life Cycle Plan**

Help

Name: UKE Wallet Life Cycle Plan 01

| Name                          | Display Name                  | Offset |
|-------------------------------|-------------------------------|--------|
| UKE_WalletLifeCyclePeriod-... | UKE_WalletLifeCyclePeriod-... | -10    |
| UKE_WalletLifeCyclePeriod-... | UKE_WalletLifeCyclePeriod-... | 0      |
| UKE_WalletLifeCyclePeriod-... | UKE_WalletLifeCyclePeriod-... | 10     |

New Edit Update Delete Close

## Deleting a WLC plan

Follow these steps to delete an existing wallet life cycle plan.

| Step | Action                                                                                                                                                                              |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | On the <b>Wallet Life Cycle</b> tab, select the wallet life cycle plan to delete from the table and click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt. |
| 2    | Click <b>OK</b> .<br><b>Result:</b> You see a second prompt.                                                                                                                        |

| Step | Action                                                                                                                                                                                                                                                                                                                 |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | <p>Click <b>OK</b>.</p> <p><b>Result:</b> The plan is removed from the table on the tab. It will be deleted from the system after all subscribers have been disassociated from the WLC Plan.</p> <p><b>Note:</b> You can search for deleted WLC plans by first selecting the <b>Marked for Deletion</b> check box.</p> |

## Adding a WLC period

Follow these steps to add a new wallet life cycle period to a wallet life cycle plan.

| Step | Action                                                                                                                                                                                                                                                                                                                                              |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>On the Edit Wallet Life Cycle Plan screen, click <b>Add</b>.</p> <p><b>Result:</b> You see the <i>New Wallet Life Cycle Period screen</i> (See example on page 290).</p>                                                                                                                                                                         |
| 2    | <p>Fill in the fields, select disabled features and allow or disallow named event classes, as described in <i>Wallet Life Cycle Period fields</i> (on page 290).</p> <p><b>Note:</b> If the wallet life cycle period defines no functions to be disabled when the period is entered, then a notification or control plan operation is required.</p> |
| 3    | <p>Click <b>Save</b>.</p>                                                                                                                                                                                                                                                                                                                           |

## Wallet Life Cycle Period screen

Here is an example Wallet Life Cycle Period screen.

**Edit Wallet Life Cycle Period**

[Help](#)

**Period**

Name:

Display Name:

Expiry Offset (days):

**Disabled Features**

☐ Session Charges

☐ General Charges

☐ General Recharges

**Named Event Classes**

**Allowed Classes**

UKE BillableEventSet  
patrice\_event

**Disallowed Classes**

FnF FnD Events

>>

<<

**Notifications**

On Entry:

On Backout:

**Control Plans**

On Entry:

On Backout:

[Save](#) [Cancel](#)

## Wallet Life Cycle Period fields

This table describes the function of each field.

| Field        | Description                                                                                                                                                                                                                                                     |
|--------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name         | Unique name for the WLC period.                                                                                                                                                                                                                                 |
| Display Name | The display name of the WLC period.<br><b>Note:</b> Although a Wallet Life Cycle period name must be unique within the Wallet Lifecycle Plan, the Display Name may be non-unique and used within the CCP screens across multiple subscribers and product types. |



| Field                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Expiry Offset (days) | <p>Number of days offset, from expiry of the wallet, to start the period.</p> <ul style="list-style-type: none"> <li>Negative is days <i>before</i> expiry</li> <li>Positive is days <i>after</i> expiry</li> </ul> <p>Only one Wallet Life Cycle period will be applicable (active) for any given expiry offset within a defined Wallet Life Cycle Plan.</p> <p><b>Example:</b> '-10' evaluates to 10 days before expiry, or '+5' evaluates to 5 days after expiry. Creating one period with offset -10 results in a single period active from 10 days before expiry right up to removed date. Creating a second period with offset +5 will immediately curtail the first period, ending it at +4. It will be invalid to create two periods with the same offset.</p> |
| Disabled feature     | <p>You can select the check box(es) to disable:</p> <ul style="list-style-type: none"> <li>Session charges</li> <li>General charges</li> <li>General recharges</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Named Event Classes  | <p>Select and move the available and disallowed Named Event classes using the &gt;&gt; and &lt;&lt; buttons.</p> <p>If the period is:</p> <ul style="list-style-type: none"> <li><i>Prior</i> to the Wallet expiry date, then Named Event Classes will all be allowed by default and will be disallowed as the exception.</li> <li><i>On or after</i> the Wallet expiry date, then Named Event Classes will all be disallowed by default and will be allowed as the exception.</li> </ul>                                                                                                                                                                                                                                                                              |
| Notifications        | <p>If required, select the notifications to send on:</p> <ul style="list-style-type: none"> <li>Entry</li> <li>Backout.</li> </ul> <p>For more information about configuring SMS Notifications, see <i>ACS User's Guide</i>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Control Plans        | <p>If required, select the control plans to run on:</p> <ul style="list-style-type: none"> <li>Entry</li> <li>Backout</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |

## Editing a WLC period

Follow these steps to edit a wallet life cycle period.

| Step | Action                                                                                                                                                                                                                                                                                               |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>On the Edit Life Cycle Plan screen, select the wallet life cycle period to edit from the table and click <b>Edit</b>.</p> <p><b>Result:</b> You see the <i>Edit Wallet Life Cycle Period screen</i> (See example on page 290).</p>                                                                |
| 2    | <p>Edit the fields and named event classes, as described in <i>Wallet Life Cycle Period fields</i> (on page 290).</p> <p><b>Note:</b> If the wallet life cycle period defines no functions to be disabled when the period is entered, then a notification or control plan operation is required.</p> |
| 3    | <p>Click <b>Save</b>.</p>                                                                                                                                                                                                                                                                            |

## Deleting a WLC period

Follow these steps to delete an existing wallet life cycle period.

| Step | Action                                                                                                                                                                                              |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | On the Edit Wallet Life Cycle Plan screen, select the WLC period to delete from the table and click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                       |
| 2    | Click <b>OK</b> .<br><b>Result:</b> You see a second prompt.                                                                                                                                        |
| 3    | Click <b>OK</b> .<br><b>Result:</b> The period is greyed out in the WLC Period table. The period will be deleted from the system after all subscribers have been disassociated from the WLC Period. |

## Changing a WLC plan name

Follow these steps to change the name of an existing wallet life cycle plan.

| Step | Action                                                                                                       |
|------|--------------------------------------------------------------------------------------------------------------|
| 1    | On the Edit Wallet Life Cycle Plan screen, change the WLC plan name.                                         |
| 2    | Click <b>Update</b> .<br><b>Result:</b> You return to the <b>Wallet Life Cycle</b> tab. The name is updated. |

## Bonus Types

### Introduction

The **Bonus Types** tab lets you view, add, edit and remove bonus types.

Bonuses allow awards to be given to subscribers who recharge their wallets, where the recharge value is within a specified range of values.

Bonus types defines the following:

- Which awards are available for each type of recharge
- What balances the award is added to

## Bonus Types tab

Here is an example **Bonus Types** tab.

Service Provider:

**Bonus Types**

| Bonus Type  | Component | Bonus Set Name       | Promotional Balanc... | Chan |
|-------------|-----------|----------------------|-----------------------|------|
| Credit Card |           | Credit card recharge | General Cash          | SU   |
| Custom      | Web       | Web recharge         | General Cash          | SU   |

## Bonus Types fields

This table describes the function of each field.

| Field      | Description                                                                                                                                                                                                                                                                                                                                                                                  |
|------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Bonus Type | The type of recharge to which this bonus type will apply.                                                                                                                                                                                                                                                                                                                                    |
| Component  | <p>If <b>Custom</b> is selected in the <b>Bonus Type</b> field, this field indicates the component reference value. This is used to specify the PI recharge required for this bonus type, and as the reference for free form recharges.</p> <p><b>Tip:</b> A Bonus Set will only be applied when the Free Form Recharge Reference field and the <b>Bonus Type Component</b> field match.</p> |
| Bonus Set  | The bonus values set containing the promotional balance to which this bonus type will be applied.                                                                                                                                                                                                                                                                                            |

| Field               | Description                                                                                                                                                                                                                |
|---------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Promotional Balance | The balance type to which this bonus type will be applied.<br><b>Note:</b> If the <b>Percentage</b> field is filled out in a bonus value used with this bonus type, the recharge bonus will be added to this balance type. |

## Adding bonus types

Follow these steps to add a new Bonus Type.

| Step | Action                                                                                                   |
|------|----------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.      |
| 2    | From the <b>Bonus Types</b> tab, click <b>New</b> .<br><b>Result:</b> You see the New Bonus Type screen. |

- |   |                                                                                                                                                                                                  |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3 | From the <b>Bonus Type</b> drop down list, select the type of recharge this Bonus Type will apply to.                                                                                            |
| 4 | If you have selected Custom from the <b>Bonus Type</b> box, in the <b>Component</b> field type in the component reference value.                                                                 |
| 5 | Configure the rest of this record by entering data in the remaining fields on this screen.<br>For more information about the fields on this screen, see <i>Bonus Types fields</i> (on page 293). |
| 6 | Click <b>Save</b> .                                                                                                                                                                              |

## Editing bonus types

Follow these steps to edit an existing Bonus Type.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list. |
| 2    | On the <b>Bonus Types</b> tab, select the record you want to edit.                                  |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the Edit Bonus Type screen.                           |

| Step | Action |
|------|--------|
|------|--------|

- 4 Edit the fields to reflect the changes you need to make.  
For more information about the fields in this screen, see Rewards fields.
- 5 Click **Save**.

## Deleting bonus types

Follow these steps to delete an existing bonus type.

| Step | Action |
|------|--------|
|------|--------|

- 1 In the Wallet Management screen, select the service provider from the **Service Provider** list.
- 2 In the table on the **Bonus Types** tab, select the record to delete.
- 3 Click **Delete**.  
**Result:** You see the Delete Confirmation prompt.
- 4 Click **OK** to delete the record from the database.  
**Result:** You see the Error prompt.
- 5 Click **OK**.

## Bonus Values

### Introduction

The **Bonus Values** tab lets you view, add, edit and remove Bonus Values.

Bonus Values are used in Bonus Types to define:

- the amount which triggers the award
- the value of the award, and
- the balance which must be recharged to qualify for the reward.

Awards may be either:

- a bonus percentage applied to the amount the Balance is recharged by, or
- a Voucher Type.

The entries in a Bonus Set must cover the full range of values from 0 to the highest End value. If there is a gap in the covered values, the Bonus Set will fail. The Bonus Set may contain both percentage bonus values and voucher type bonus values.

For more information about Voucher Types, see *Voucher Manager User's Guide*.

## Example 1

To create a Bonus Value which applies a 5% bonus to all Voucher recharges of more than \$20, you must also configure a Bonus Value which applies a 0% bonus to recharges of \$0 to \$19.

## Example 2

Three recharge Bonuses have been specified in the example screen below.

- For a recharge of 0 to 1,000 cents, a Bonus of 8% of the recharge amount is added to the Balance.
- For a recharge of 1,001 cents to 4999 cents, a Bonus of 10% of the recharge amount is added to the Balance.
- For a recharge of over 5000 cents, a Bonus of 12.5% of the recharge amount is added to the Balance.

## Bonus Values tab

Here is an example **Bonus Values** tab.

Service Provider: Boss Help

Bonus Values

Bonus Set Name: Credit card recharge New Set Edit Set Delete Set

| Trigger Balance | Start Range | End Range | Percentage | Voucher Ty |
|-----------------|-------------|-----------|------------|------------|
| General Cash    | 0           | 1000      | 8.00       |            |
| General Cash    | 1001        | 5000      | 10.00      |            |
| General Cash    | 5001        | 10000     | 12.50      |            |

New Edit Delete Close

## Adding bonus values sets

Follow these steps to add a new Bonus Values Set.

| Step | Action                                                                                                              |
|------|---------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.                 |
| 2    | From the <b>Bonus Values</b> tab, click <b>New Set</b> .<br><b>Result:</b> You see the New Bonus Values Set screen. |

|   |                                                                      |
|---|----------------------------------------------------------------------|
| 3 | In the <b>Name</b> field, type the name of the new Bonus Values Set. |
| 4 | Click <b>Save</b> .                                                  |

## Editing bonus values sets

Follow these steps to edit an existing Bonus Values Set.

| Step | Action                                                                                                            |
|------|-------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.               |
| 2    | From the <b>Bonus Values</b> tab, in the <b>Bonus Set Name</b> drop down box, select the record you want to edit. |
| 3    | Click <b>Edit Set</b> .<br><b>Result:</b> You see the Edit Bonus Values Set screen.                               |

|   |                                |
|---|--------------------------------|
| 4 | Edit the set name as required. |
| 5 | Click <b>Save</b> .            |

## Deleting bonus values sets

Follow these steps to delete an existing Bonus Set.

| Step | Action                                                                                                     |
|------|------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.        |
| 2    | From the <b>Bonus Values</b> tab, in the <b>Bonus Set Name</b> drop down box, select the record to delete. |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                            |

| Step | Action                                                                                                        |
|------|---------------------------------------------------------------------------------------------------------------|
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> You see the Bonus Value Set prompt. |
| 5    | Click <b>OK</b> .                                                                                             |

## Bonus Values fields

This table describes the function of each field.

| Field           | Description                                                                                                                                                                                                                                                                                                                                                                                                                    |
|-----------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Trigger Balance | This bonus value will be triggered when recharges are made to this balance. If not set, the trigger balance will be general cash.                                                                                                                                                                                                                                                                                              |
| Start           | The low end of the range of recharge value that will trigger this bonus.<br><b>Note:</b> At least one bonus value in the set must start at 0.                                                                                                                                                                                                                                                                                  |
| End             | The high end of the range of recharge value that will trigger this bonus.                                                                                                                                                                                                                                                                                                                                                      |
| Percentage      | The percentage of the recharge amount to add to the recharge as a bonus when this bonus is triggered.<br><b>Notes:</b> <ul style="list-style-type: none"> <li>The additional recharge amount will be applied to the balance type specified in the <i>Bonus Types fields</i> (on page 293).</li> <li>This field cannot be set if a voucher type is selected in the <b>Voucher Type</b> field.</li> </ul>                        |
| Voucher Type    | The voucher type which defines the reward which will be given to the subscriber when the bonus is triggered.<br><b>Notes:</b> <ul style="list-style-type: none"> <li>This field is populated by the entries in the <b>Voucher Type</b> tab. For more information, see Voucher Type.</li> <li>Selecting an entry from this drop down list will clear any value from the <b>Percentage</b> field, and lock the field.</li> </ul> |

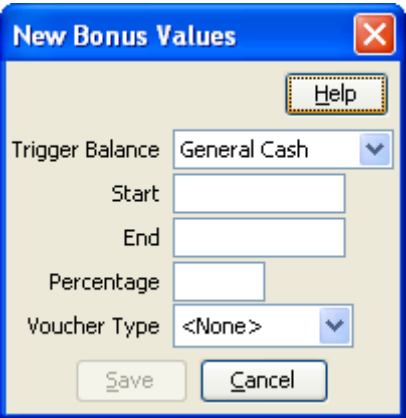
## Adding bonus values

Follow these steps to add a new Bonus Value.

| Step | Action                                                                                                     |
|------|------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.        |
| 2    | On the <b>Bonus Values</b> tab, select the Bonus Set Name to add bonus values to, from the drop down list. |
| 3    | Click <b>New</b> .<br><b>Result:</b> You see the New Bonus Values screen.                                  |



| Step | Action |
|------|--------|
|------|--------|



- 4 Configure this record by entering data in the fields on this screen.  
For more information about the fields on this screen, see *Bonus Values fields* (on page 298).
- 5 Click **Save**.

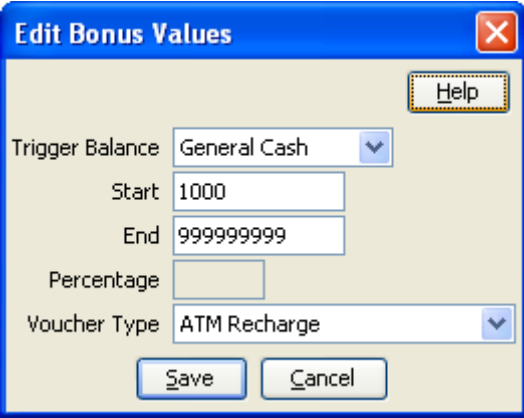
Editing bonus values

Follow these steps to edit an existing Bonus Value.

| Step | Action |
|------|--------|
|------|--------|

- 1 In the Wallet Management screen, select the service provider from the **Service Provider** list.
- 2 On the **Bonus Values** tab select the Bonus Set Name that contains the values you want to edit.
- 3 In the grid on the tab, select the record you want to edit and click **Edit**.

**Result:** You see the Edit Bonus Values screen.



- 4 Edit the fields to reflect the changes you need to make.  
For more information about the fields in this screen, see *Bonus Values fields* (on page 298).
- 5 Click **Save**.

## Deleting bonus values

Follow these steps to delete an existing Bonus Value.

| Step | Action                                                                                                                        |
|------|-------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.                           |
| 2    | On the <b>Bonus Values</b> tab, select the Bonus Set Name that contains the value to delete from the drop down box.           |
| 3    | In the table, select the record to delete and click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt. |
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> You see the Bonus Value Set prompt.                 |
| 5    | Click <b>OK</b> .                                                                                                             |

## Cumulative Balance Plans

### Introduction

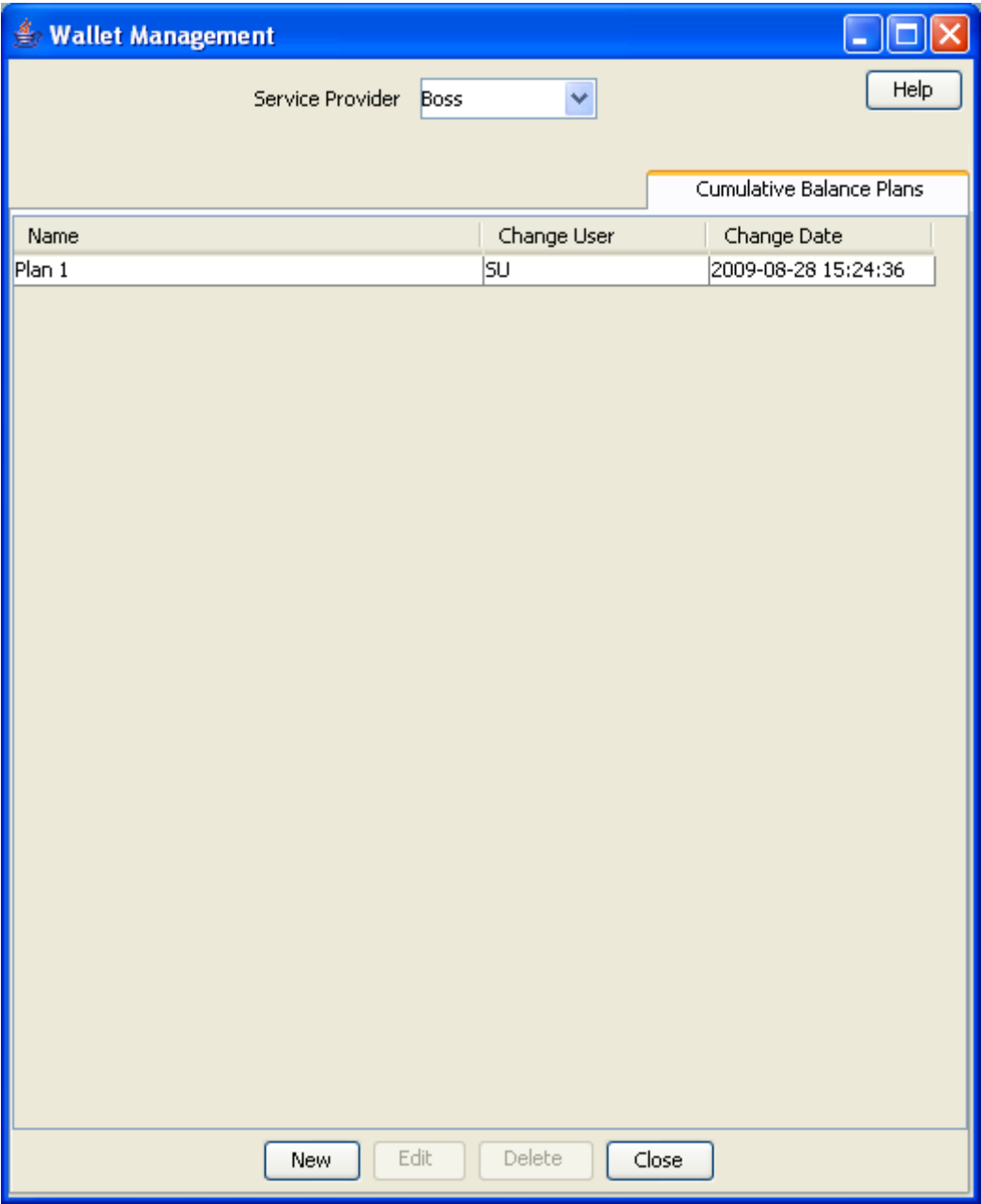
The Cumulative Balance Plans tab lets you:

- configure the balance categories included in your cumulative balance plans and
- assign balance types to the different balance categories.

The Cumulative Balances node will sum the balances for each balance category in a selected cumulative balance plan and play the relevant announcements.

Cumulative Balance Plans tab

Here is an example Cumulative Balance Plans tab.



Cumulative Balance Plan fields

This table describes the function of each field.

| Field     | Description                                            |
|-----------|--------------------------------------------------------|
| Name      | Cumulative balance plan name.                          |
| Unit Type | Lists the available unit types for balance categories. |

| Field                               | Description                                                                                                                                                                                                                                                                                                      |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Available <i>Unit_Type</i> balances | Lists the available balance types for the selected unit type.                                                                                                                                                                                                                                                    |
| <i>Unit_Type</i> categories         | Lists the categories that have been configured for the selected unit type. The balance types that have been assigned to each category are listed below the category heading.                                                                                                                                     |
| Playback Order                      | <ul style="list-style-type: none"> <li>Category - Lists all the categories that have been configured for the cumulative balance plan irrespective of unit type.</li> <li>Play Order - Lists the order in which balance category announcements will be played by the Cumulative Balances feature node.</li> </ul> |

## Adding cumulative balance plans

Follow these steps to add a cumulative balance plan.

| Step | Action                                                                                                                           |
|------|----------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.                              |
| 2    | On the <b>Cumulative Balance Plans</b> tab, click <b>New</b> .<br><b>Result:</b> You see the New Cumulative Balance Plan screen. |

**New Cumulative Balance Plan**

Help

Name

Balance Categories

Unit Type Cash

Add Category Modify Category Delete Category

Available Cash balances

- General Cash
- Promotional Cash
- Vince Max Balance Cash

Cash categories

Playback Order

| Category | Play Order |
|----------|------------|
|----------|------------|

UP  
DOWN

Save Cancel

- 3 In the **Name** field, type in the new cumulative balance plan name.
- 4 For each relevant **Unit Type**, add the required balance categories. For details, see Adding balance categories.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | <p>Use drag and drop to add the required balances to each balance category. To:</p> <ul style="list-style-type: none"> <li>• add a balance to a balance category, select it in the available balances list and drag it to the required balance category</li> <li>• remove a balance from a balance category, select in the categories list and drag it to the available balances list.</li> </ul> <p><b>Tip:</b> You can add a balance type to more than one category if required.</p> |
| 6    | <p>If required, change the order in which balance categories are played. You can see the current order in the <b>Playback Order</b> section.</p> <p>To change the position of a Category in the play order, select it in the <b>Playback Order</b> section and click either the <b>UP</b> or <b>DOWN</b> button.</p> <p><b>Note:</b> All the configured categories appear in the Playback Order section irrespective of their Unit Type.</p>                                           |
| 7    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |

## Editing cumulative balance plans

Follow these steps to edit a cumulative balance plan.

| Step | Action                                                                                                                                                                                |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                   |
| 2    | <p>On the Cumulative Balance Plans tab, select the required cumulative balance plan and click <b>Edit</b>.</p> <p><b>Result:</b> You see the Edit Cumulative Balance Plan screen.</p> |

| Step | Action |
|------|--------|
|      |        |

- 3 Make the required changes in the available fields. For more information on:
  - cumulative balance plan fields, see *Cumulative Balance Plan fields* (on page 301).
  - adding balance categories, see *Adding balance categories*
  - editing balance categories, see *Editing balance categories*, or
  - deleting balance categories, see *Deleting balance categories* (on page 309).
- 4 Click **Save**.

## Deleting cumulative balance plans

Follow these steps to delete an existing Cumulative Balance Plan.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list. |
| 2    | In the table on the Cumulative Balance Plans tab, select the record to delete.                      |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                     |
| 4    | Click <b>OK</b> to delete the record from the database.                                             |

## Balance Category fields

This table describes the function of each field.

| Field                                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Category Name                             | A unique name for the balance category. The name can be up to 30 alphanumeric characters long.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Announcement Set                          | <ul style="list-style-type: none"> <li>• <b>Category Announcements</b> section, this field indicates the Announcement Set which contains the Announcement Entry to be played for Subscribers who belong to this balance category.</li> <li>• <b>Positive</b> section, this field indicates the Announcement Set which contains the Announcement Entry to be played for Subscribers with a positive balance in their wallet.</li> <li>• <b>Negative / No Credit</b> section, this field indicates the Announcement Set which contains the Announcement Entry to be played for Subscribers with a negative balance in their wallet.</li> <li>• <b>Days until balance expiration</b> section, this field indicates the the Announcement Set which contains the Announcement Entry to be played for Subscribers when their balance is about to expire within days.</li> <li>• <b>Balance Expiration in one day</b> section, this field indicates the Announcement Set which contains the Announcement Entry to be played for Subscribers when their balance is about to expire within 24 hours.</li> </ul> |
| Announcement Entry                        | <ul style="list-style-type: none"> <li>• <b>Category Announcements</b> section, this field indicates the Announcement Entry that will be played to Subscribers who belong to this balance category.</li> <li>• <b>Positive</b> section, this field indicates the Announcement Set which contains the Announcement Entry that will be played to Subscribers with a positive balance in their wallet.</li> <li>• <b>Negative / No Credit</b> section, this field indicates the Announcement Entry that will be played to Subscribers when they run out of credit or have a negative balance in their wallet.</li> <li>• <b>Days until balance expiration</b> section, this field indicates the Announcement Entry that will be played to Subscribers when their balance is about to expire soon.</li> <li>• <b>Balance Expiration in one day</b> section, this field indicates the Announcement Entry that will be played to Subscribers when their balance is about to expire within 24 hours.</li> </ul>                                                                                               |
| Use unreserved balances                   | When selected, exclude uncommitted reservations in the available funds played in the announcements (the uncommitted reservation amount is subtracted from the available funds value).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Play Zero Cumulative Balance announcement | To play the announcements even if the cumulative balance for the category is zero, select this check box.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Play Expiry announcement                  | To play expiry announcements, select this check box.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## Adding balance categories

Follow these steps to add a balance category to a cumulative balance plan.

- | Step | Action                                                                                                                                                                                                                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the <b>Balance Categories</b> area in the New/Edit Cumulative Balance Plan screen, select the <b>Unit Type</b> for which to define balance categories from the drop down list.<br><b>Result:</b> You see the list of available balance types for the Unit Type, and the list of available balance categories. |
| 2    | Click <b>Add Category</b> .<br><b>Result:</b> You see the Add Balance Category screen.                                                                                                                                                                                                                           |

**Add Balance Category**

Category Name:

Category Announcements

**Category**

Announcement Set: ACS2 Management Announcements

Announcement Entry: collect follow me number prompt

**Positive**

Announcement Set: ACS2 Management Announcements

Announcement Entry: collect follow me number prompt

**Negative / No credit**

Announcement Set: ACS2 Management Announcements

Announcement Entry: collect follow me number prompt

**Days until balance expiration**

Announcement Set: ACS2 Management Announcements

Announcement Entry: collect follow me number prompt

**Balance Expiration in one day**

Announcement Set: ACS2 Management Announcements

Announcement Entry: collect follow me number prompt

☐ Play Zero Cumulative Balances announcement

☐ Play Expiry announcement

☐ Use unreserved balances

Apply Cancel

- Configure this record by entering data in the fields on this screen.  
For more information about the fields on this screen, see Balance Category fields.
- Click **Apply**.



| Step | Action                                                                                                                                                    |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | <b>Result:</b> You will be returned to the New/Edit Cumulative Balance Plan screen and the new category will be displayed in the balance categories list. |

## Editing balance categories

Follow these steps to view or edit a cumulative balance category for a Cumulative Balance Plan.

| Step | Action                                                                                                                                                                                                                                                                                                                      |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the <b>Balance Categories</b> area in the New/Edit Cumulative Balance Plan screen, select the <b>Unit Type</b> to view or edit balance categories for from the drop down list.</p> <p><b>Result:</b> You see the list of available balance types for the Unit Type, and the list of available balance categories.</p> |
| 2    | <p>Select the category to view or change and click <b>Modify Category</b>.</p> <p><b>Result:</b> You see the Modify Balance Category screen.</p>                                                                                                                                                                            |

| Step | Action |
|------|--------|
|      |        |

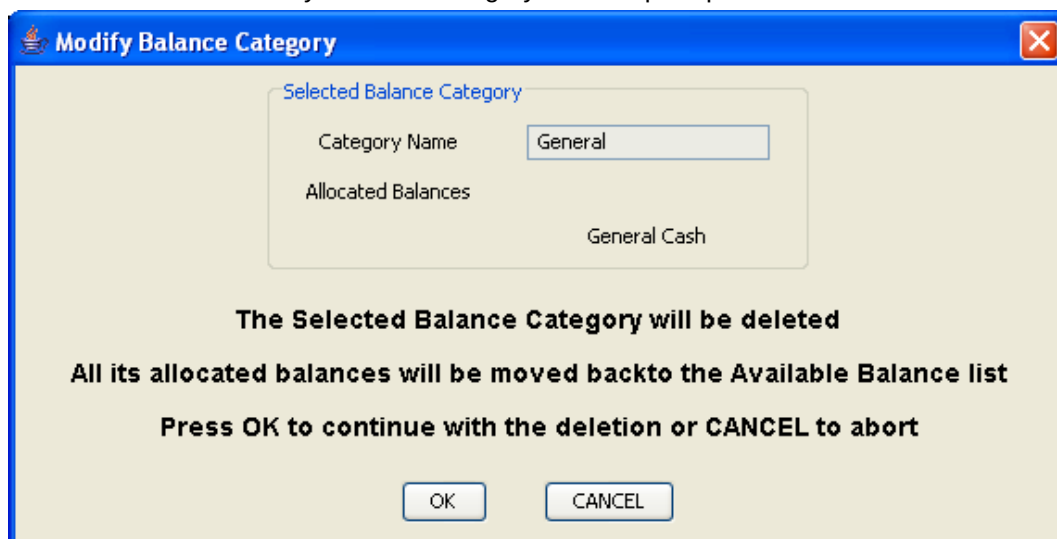
- 3 Check or update the Balance Category as necessary.  
For more information about the available fields, see Balance Category fields.
- 4 If you have made changes to save, click **Apply**.  
If you do not want to make changes to the balance category, click **Cancel**.  
**Result:** You are returned to the New/Edit Cumulative Balance Plan screen.
- 5 Use drag and drop to modify the list of balance types included in the balance category.  
**Tip:** You can add a balance type to more than one category if required.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6    | <p>If required, change the order in which balance categories are played. You can see the current order in the <b>Playback Order</b> section.</p> <p>To change the position of a Category in the play order, select it in the <b>Playback Order</b> section and click either the <b>UP</b> or <b>DOWN</b> button.</p> <p><b>Note:</b> All the configured categories appear in the Playback Order section irrespective of their Unit Type.</p> |
| 7    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                                                                          |

## Deleting balance categories

Follow these steps to delete a cumulative balance category from a Cumulative Balance Plan.

| Step | Action                                                                                                                                                                    |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New/Edit Cumulative Balance Plan screen, select the <b>Unit Type</b> which holds the balance category you want to delete.                                          |
| 2    | <p>Select the balance category record you want to delete and click <b>Delete Category</b>.</p> <p><b>Result:</b> You see the Modify Balance Category deletion prompt.</p> |



|   |                   |
|---|-------------------|
| 3 | Click <b>OK</b> . |
|---|-------------------|

## Periodic Charge Groups

### Introduction

Periodic charge groups control which periodic charges a subscriber can transfer to using the Periodic Charge Transfer node, or through the CCP screen. Subscribers can only transfer to periodic charges which are in the same group as the periodic charge they want to transfer from.

**Warning:** CCS determines which subscription will be transferred from, by locating the current subscription which is in the periodic charge group specified by the Periodic Charge Transfer node or a periodic charge field in CCP. If a subscriber has two subscriptions within the same periodic charge group, their transfer will fail. You must ensure the design of the service restricts subscriptions appropriately.

## Periodic Charge Groups tab

Here is an example of the **Periodic Charge Groups** tab.

The screenshot shows a window titled "Wallet Management" with a blue header bar. Below the header, there is a "Service Provider" dropdown menu set to "OCNCCtemplate" and a "Help" button. The "Periodic Charge Groups" tab is selected, showing a search interface with a "Name" input field and a "Search" button. Below the search bar, a table lists the periodic charge groups, with "Boost 1" visible. At the bottom of the window, there are buttons for "New", "Edit", "Delete", and "Close".

| Name    |
|---------|
| Boost 1 |

## Periodic charge group fields

This table describes the function of each field.

| Field   | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|---------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name    | The unique name of the periodic charge group.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Charges | <p>The periodic charges listed in the Allocated list are members of this group. The periodic charges which are in these lists are populated from the records on the <i>Periodic Charges</i> (on page 313) tab.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• A periodic charge can belong to more than one group.</li> <li>• The periodic charge group can be saved with no periodic charges in the Allocated list.</li> </ul> <p>For more information about how to use these fields and buttons, see Selection lists.</p> |

## Adding periodic charge groups

Follow these steps to add a new periodic charge group.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list. |
| 2    | On the <b>Periodic Charge Groups</b> tab, click <b>New</b> .                                        |

**Result:** You see the New Periodic Charge Group screen.

- Configure this record by entering data in the fields on this screen.  
For more information about the fields on this screen, see *Periodic charge group fields* (on page 311).
- When you have completed configuring the new periodic charge group, click **Save**.

## Editing periodic charge groups

Follow these steps to edit an existing periodic charge group.

- | Step | Action                                                                                                                                                                                                                                                                                                               |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                  |
| 2    | On the <b>Periodic Charge Groups</b> tab, select the periodic charge group you want to edit.<br><br><b>Tip:</b> You can search for a specific periodic charge group by entering the periodic charge group's name in the <b>Name</b> field on the tab, and clicking <b>Search</b> . You can also use % as a wildcard. |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the Edit Periodic Charge Group screen.                                                                                                                                                                                                                                 |

- |   |                                                                                                                                                                          |
|---|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | Edit the fields to reflect the changes you need to make.<br>For more information about the fields in this screen, see <i>Periodic charge group fields</i> (on page 311). |
| 5 | Click <b>Save</b> .                                                                                                                                                      |

## Deleting periodic charge groups

Follow these steps to delete an existing periodic charge group.

- | Step | Action                                                                                                                                                                                                                                                                      |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                         |
| 2    | On the <b>Periodic Charge Groups</b> tab, select the periodic charge group to delete.<br><br><b>Tip:</b> You can search for a specific periodic charge group by entering the periodic charge group's name in the <b>Name</b> field on the tab, and clicking <b>Search</b> . |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                                                                                                                                                             |
| 4    | Click <b>OK</b> to delete the record from the database.                                                                                                                                                                                                                     |

# Wallet Management - Periodic Charges

## Overview

### Introduction

This chapter explains the Periodic Charges configuration screens.

### In this chapter

---

This chapter contains the following topics.

|                                   |     |
|-----------------------------------|-----|
| Periodic Charges .....            | 313 |
| What .....                        | 319 |
| When .....                        | 323 |
| Notifications .....               | 328 |
| Subscription Pro-Rating .....     | 331 |
| Charge Alignment Pro-Rating ..... | 335 |
| Unsubscription Pro-Rating .....   | 337 |

## Periodic Charges

### Introduction

The **Periodic Charges** tab enables you to define subscriber charges which are applied regularly. For example, you can define periodic charges for providing a phone service, or for rental of services and equipment.

You can also define periodic charges for sending SMS notifications and for performing voucher type recharges.

**Note:** Each time a periodic charge occurs, it is logged in an EDR.

For more overview information about periodic charges, see *Subscription Services* (on page 16).

### Compatibility information

There are some configuration items for the voucher type definition that are not relevant for use with periodic charge pro-rating.

These should not be configured, however, if configured, the following should be noted:

- **Pre-use Expiry Period** -- Uncertain action
- **Product Swap Rules** -- Product type swap applied if specified
- **Scenario** -- All multi balances applied, irrespective of scenarios
- **Multi-Balances** - Where for each multi-balance entry
  - **Applicable Start Date** -- Can stop balance being processed
  - **Applicable End Date** -- Can stop balance being processed
  - **Offset Date** -- Can stop balance being processed
  - **Scenario** -- All multi balances applied, irrespective of scenarios

## Periodic Charges tab

Here is an example **Periodic Charges** tab.

Service Provider: Boss Help

Periodic Charges

Name:

Period: <Any> Search ☐ Show Marked For Deletion

| Name                          | Based On           | Period      |
|-------------------------------|--------------------|-------------|
| 15th Monthly                  | Fixed Date         | Daily       |
| BackCharge                    | Service Activation | Monthly     |
| ChgState                      | Service Activation | Monthly     |
| CreditPlan                    | Service Activation | Weekly      |
| MJH_Basic1                    | Reference Date     | Quarterly   |
| None_ControlPlan_ServiceA...  | Service Activation | Monthly     |
| None_CreditPlan_FixedDate     | Fixed Date         | Daily       |
| None_CreditPlan_RefDate       | Reference Date     | Monthly     |
| None_CreditPlan_ServiceAc...  | Service Activation | Monthly     |
| None_CreditPlan_WalletActi... | Wallet Activation  | Quarterly   |
| None_Credit_FixedDate         | Fixed Date         | Annually    |
| None_Credit_RefDate           | Reference Date     | Custom      |
| None_Credit_ServiceActivat... | Service Activation | Monthly     |
| None_Credit_WalletActivation  | Wallet Activation  | Weekly      |
| None_DebCredPlan_FixedD...    | Fixed Date         | Weekly      |
| None_DebCredPlan_RefDate      | Reference Date     | Monthly     |
| None_DebCredPlan_Service...   | Service Activation | Quarterly   |
| None_DebCredPlan_Wallet...    | Wallet Activation  | Monthly     |
| None_DebitCredit_FixedDate    | Fixed Date         | Monthly     |
| None_DebitCredit_RefDate      | Reference Date     | Custom      |
| None_DebitCredit_ServiceA...  | Service Activation | Monthly     |
| None_DebitCredit_WalletAc...  | Wallet Activation  | Half Yearly |
| None_Debit_FixedDate1         | Fixed Date         | Weekly      |
| None_Debit_RefDate            | Reference Date     | Monthly     |

New Edit Delete Close

## Periodic Charges tab fields

This table describes the function of each field in the table on the **Periodic Charge** tab.

| Field       | Description                   |
|-------------|-------------------------------|
| Name        | See <i>What</i> (on page 319) |
| Based On    | See <i>When</i> (on page 323) |
| Period      | See <i>When</i> (on page 323) |
| Custom Type |                               |



| Field                        | Description                                                                                                                                                                                                                                                                 |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Custom Value                 |                                                                                                                                                                                                                                                                             |
| Tag Date Field               |                                                                                                                                                                                                                                                                             |
| Time                         | Notification Time - see <i>When</i> (on page 323)                                                                                                                                                                                                                           |
| Day of Week                  | See <i>When</i> (on page 323)                                                                                                                                                                                                                                               |
| Day of Month                 | See <i>When</i> (on page 323)                                                                                                                                                                                                                                               |
| Month                        | Trigger month - see <i>When</i> (on page 323)                                                                                                                                                                                                                               |
| Charge on Activation         | Whether or not to charge on activation                                                                                                                                                                                                                                      |
| Charge States                | Wallet state - selected states - see <i>When</i> (on page 323)                                                                                                                                                                                                              |
| Wallet Type                  |                                                                                                                                                                                                                                                                             |
| Voucher Type                 |                                                                                                                                                                                                                                                                             |
| Event Class                  | See <i>What</i> (on page 319)                                                                                                                                                                                                                                               |
| Event Name                   | See <i>What</i> (on page 319)                                                                                                                                                                                                                                               |
| Insufficient Funds Action    | See <i>What</i> (on page 319)                                                                                                                                                                                                                                               |
| Balance Type                 | See <i>What</i> (on page 319)                                                                                                                                                                                                                                               |
| Recharge Amount              | See <i>What</i> (on page 319)                                                                                                                                                                                                                                               |
| Recharge Action              | See <i>What</i> (on page 319)                                                                                                                                                                                                                                               |
| Balance Expiry Update Policy | See <i>What</i> (on page 319)                                                                                                                                                                                                                                               |
| Balance Expiry Extension     | See <i>What</i> (on page 319)                                                                                                                                                                                                                                               |
| Wallet Expiry Update Policy  | See <i>What</i> (on page 319)                                                                                                                                                                                                                                               |
| Success Notification         | See <i>Notifications</i> (on page 328)                                                                                                                                                                                                                                      |
| Failure Notification         | See <i>Notifications</i> (on page 328)                                                                                                                                                                                                                                      |
| ID                           | ID allocated to this record                                                                                                                                                                                                                                                 |
| Deletion Date                | Displays the actual date that a periodic charge that has been deleted will finally be deleted. This date is calculated as the current date + one <b>Period</b> + the greatest number of any <b>Days After Failed Charge</b> for grace or loss of service notifications + 1. |

## Finding periodic charges

Follow these steps to search for an existing periodic charge.

| Step | Action                                                                                                                                                                                                                               |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the <b>Service Provider</b> from the drop down list.                                                                                                                                         |
| 2    | On the <b>Periodic Charges</b> tab, enter the search criteria you are using to find the required periodic charge.<br>Enter the first few characters of the <b>Name</b> and select the <b>Period</b> you want from the drop down box. |

| Step | Action                                                                                                                                                                                                                                                                                                       |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | Select the <b>Show Marked For Deletion</b> check box to include charges that have been deleted, but have not yet been removed from the database, in the search results (row will be grayed).<br><br><b>Note:</b> By default the check box is deselected and the search will ignore deleted periodic charges. |
| 4    | Click <b>Search</b> .<br><br><b>Result:</b> The table displays the first 100 records matching the search criteria entered in steps 2 and 3. If the required periodic charge is not displayed and more than 100 records were returned, enter different search criteria and click <b>Search</b> again.         |

## Adding periodic charges

Follow these steps to add a new periodic charge.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                                                                                                              |
| 2    | On the <b>Periodic Charges</b> tab, click <b>New</b> .<br>The New Periodic Charge window opens and displays the <b>What</b> option.                                                                                                                                                                                                                                                                              |
| 3    | In the <b>Name</b> field, enter a new name for the periodic charge. The name must be unique. Maximum length is 46 characters.                                                                                                                                                                                                                                                                                    |
| 4    | Add the details on the different option panels as necessary. See: <ul style="list-style-type: none"> <li>• <i>What</i> (on page 319)</li> <li>• <i>When</i> (on page 323)</li> <li>• <i>Notifications</i> (on page 328)</li> <li>• <i>Subscription Pro-Rating</i> (on page 331)</li> <li>• <i>Charge Alignment Pro-Rating</i> (on page 335)</li> <li>• <i>Unsubscription Pro-Rating</i> (on page 337)</li> </ul> |
| 5    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                                              |

### Notes:

- To apply a periodic charge to a subscriber, you must assign it to their product type. For more information, see *Periodic Charges* (on page 206).
- To add a periodic charge to a periodic charge group, you must edit the periodic charge group to add it to. For more information, *Periodic Charge Groups* (on page 309).

## Configuration options summary

This table lists the configuration options for periodic charges and their functionality.

| Option                                           | Description                                                                                            |
|--------------------------------------------------|--------------------------------------------------------------------------------------------------------|
| <i>What</i> (on page 319)                        | Configures the type of periodic charge to be applied.                                                  |
| <i>When</i> (on page 323)                        | Defines when to apply the periodic charge.                                                             |
| <i>Notifications</i> (on page 328)               | Configures the notifications which can be sent to the subscriber.                                      |
| <i>Subscription Pro-rating</i> (on page 331)     | Configures the rules for pro-rating a subscriber's periodic charge subscription.                       |
| <i>Charge Alignment Pro-rating</i> (on page 335) | Configures the rules for aligning a subscriber's periodic charge subscription to a common cycle point. |

|                                                |                                                                                         |
|------------------------------------------------|-----------------------------------------------------------------------------------------|
| <i>Unsubscription Pro-Rating</i> (on page 337) | Configures the rules for pro-rating a subscriber's periodic charge subscription refund. |
|------------------------------------------------|-----------------------------------------------------------------------------------------|

## Editing periodic charges

Follow these steps to edit an existing periodic charge.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                                                                                                                                                                               |
| 2    | On the <b>Periodic Charges</b> tab, select the periodic charge to edit.<br><br><b>Tip:</b> You can search for a specific periodic charge. See <i>Finding periodic charges</i> (on page 315).                                                                                                                                                                                                                                                                                      |
| 3    | Click <b>Edit</b> .<br>The Edit Periodic Charges window opens and displays the <b>What</b> option.<br><br><b>Note:</b> If a periodic charge is marked for deletion, all components will be grayed out, or read-only, except for the <b>Loss of Service Notifications</b> field on the <i>Notifications</i> (on page 328) option.                                                                                                                                                  |
| 4    | Check or update the details on the different option panels as necessary.<br>For more information about the available options, see: <ul style="list-style-type: none"> <li>• <i>What</i> (on page 319)</li> <li>• <i>When</i> (on page 323)</li> <li>• <i>Notifications</i> (on page 328)</li> <li>• <i>Subscription Pro-Rating</i> (on page 331)</li> <li>• <i>Charge Alignment Pro-Rating</i> (on page 335)</li> <li>• <i>Unsubscription Pro-Rating</i> (on page 337)</li> </ul> |
| 5    | If you have made changes to the periodic charge's details, click <b>Save</b> .<br>If you do not want to make changes to the periodic charge's details, click <b>Cancel</b> .                                                                                                                                                                                                                                                                                                      |

### Notes:

- To change which subscribers a periodic charge applies to, see *Periodic Charges* (on page 206).
- To change which periodic charge group a periodic charge belongs to, see *Periodic Charge Groups* (on page 309).

## Deleting periodic charges

Follow these steps to delete an existing periodic charge.

| Step | Action                                                                                                                                                                                                                               |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Wallet Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                                                                  |
| 2    | In the table on the <b>Periodic Charges</b> tab, select the periodic charge to delete.                                                                                                                                               |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                                                                                                                      |
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b><br>If the periodic charge has pre-charge and grace notifications configured, you see the <i>Deleting Periodic Charge with notifications</i> (on page 318). |

| Step | Action                                                                                                                             |
|------|------------------------------------------------------------------------------------------------------------------------------------|
|      | If not, the periodic charges confirmation prompt appears. Note that once deleted, a record with the same name cannot be recreated. |
| 5    | Click <b>OK</b> to return to the <b>Periodic Charges</b> tab.                                                                      |

**Note:** The periodic charge is still present until the final deletion date.

**Note:** You can search for deleted periodic charges on the **Periodic Charges** tab by selecting the **Show Marked for Deletion** check box, before making the search. See *Periodic Charges tab fields* (on page 314) for a description of a deletion date.

## Deleting Periodic Charge with notifications

When deleting a periodic charge that has any pre-charge and grace *Notifications* (on page 328) configured, a screen opens allowing you to define different notifications to be used during the period it takes to delete the charge.

| Step | Action                                                                                                                                                                    |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | If the periodic charge you are deleting from the <b>Periodic Charge</b> tab has pre-charge and grace notifications configured, you see the Delete Periodic Charge screen. |

- 2 If required, change the notifications to be sent during the period before the deleted periodic charge is removed from the database.

The following notifications may need to be configured:

- A separate **Pre-charge notification** for every pre-charge notification already configured (up to 3)

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | <ul style="list-style-type: none"> <li>• A single <b>Grace notification</b> for all currently configured grace notifications; only a single grace state will be available when the periodic charge definition has been deleted; if both grace periods are defined, the single Grace period available after periodic charge definition is deleted will correspond to the second grace period.</li> <li>• <b>Loss of Service</b> notification if loss of service notification is configured in the periodic charge to be deleted</li> </ul> |
| 3    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> The Periodic Charges confirmation prompt appears. Note that once deleted, a record with the same name cannot be recreated.                                                                                                                                                                                                                                                                                                                                      |
| 4    | Click <b>OK</b> to return to the <b>Periodic Charges</b> tab.<br><b>Note:</b> The periodic charge is still present until the final deletion date.                                                                                                                                                                                                                                                                                                                                                                                         |

**Note:** You may search for deleted periodic charges on the **Periodic Charges** tab, by selecting the **Show Marked for Deletion** check box, then making the search. See *Periodic Charges tab fields* (on page 314) for a description of a deletion date.

## What

### Introduction

The what configuration configures what happens when the periodic charge runs. This can include specifying charges and/or recharges.

## What option

Here is an example of the **What** option in the New Periodic Charge screen.

**New Periodic Charge**

Help

**What**

Name

ChargeType

**Debit**

Event Class

Event Name

Insufficient Funds Action

Retain Without Credit ☐

Credit Plan

Control Plan

**Credit**

Recharge Action

Balance Type

Recharge Amount

Balance Expiry Extension  Days  Hours

Balance Expiry Update Policy

☒ Date ☐ Extension Use Offset Date ☐

Balance Offset Date   Days  Hours

Wallet Expiry Extension  Days  Hours

Wallet Expiry Update Policy

Save Cancel

## What configuration fields

This table describes the function of each field on the **What** configuration option on the New or the Edit Periodic Charge screen.

| Field                                                                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|----------------------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Charge Type                                                          | <p>The type of charge. The options are:</p> <ul style="list-style-type: none"> <li>• Debit</li> <li>• Debit and Credit Plan</li> <li>• Debit and Credit</li> <li>• Credit</li> <li>• Credit Plan</li> <li>• Notification Only</li> <li>• Control Plan</li> </ul> <p>The fields you can use will be defined by the type of charge you have chosen.</p>                                                                                                                                                                                                   |
| <b>Debit / Debit and Credit Plan / Debit and Credit Charge Types</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Event Class                                                          | <p>The event class for the charge.</p> <p>This field is populated by the named event sets configured on the <i>Named Event</i> (on page 391) tab on the Rating Management screen.</p> <p>This field is available and mandatory for any Debit action.</p>                                                                                                                                                                                                                                                                                                |
| Event Name                                                           | <p>The event name for the charge.</p> <p>This field is populated by the named events configured on the <i>Named Event</i> (on page 391) tab on the Rating Management screen.</p> <p>This field is available and mandatory for any Debit action.</p>                                                                                                                                                                                                                                                                                                     |
| Insufficient Funds Action                                            | <p>Specifies what will happen if there are insufficient funds to cover the charge. The options are:</p> <ul style="list-style-type: none"> <li>• Take balance negative - The full charge will be applied, even if this results in a negative balance.</li> <li>• Do not make charge - No charge is made.</li> </ul> <p>This field is available for any Debit action.</p>                                                                                                                                                                                |
| Retain Without Credit                                                | <p>Selecting this option provides for excluding grace states in the event of a debit failure while continuing to retain the periodic service. Once selected, if a debit action fails, the credit due from a promotion is not implemented, but the periodic service will continue to the next "Active" state.</p> <p>This periodic service is only applicable to the following Charge Types:</p> <ul style="list-style-type: none"> <li>• Debit and Credit Plan</li> <li>• Debit and Credit</li> </ul> <p>By default, the check box is not selected.</p> |
| <b>Credit Plan / Debit and Credit Plan Charge Types</b>              |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Credit Plan                                                          | <p>The credit plan which defines the recharge and product type swap which is executed when this periodic charge is triggered.</p> <p>This drop down list is populated by records from the Voucher Type tab.</p> <p><b>Note:</b> If the application of the voucher type's expiry policy would result in a periodic charge's expiry date being reduced (that is, moved closer) the original expiry date will not be changed.</p> <p>This field is available for any credit plan action.</p>                                                               |

| Field                                         | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Control Plan Charge Type</b>               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Control Plan                                  | The control plan for this periodic charge to trigger.<br>This drop down list is populated from all the control plans that have been saved with an association to the OSD operation set periodic charge.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| <b>Credit / Debit and Credit Charge Types</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Recharge Action                               | Specifies from the list the way a credit is to be applied. The options are: <ul style="list-style-type: none"> <li>• Replace current value with amount credited (updates existing bucket with new value)</li> <li>• Update using an existing bucket (updates existing bucket by increasing it by the specified value)</li> <li>• Add new bucket with amount (creates a new bucket to hold the new value)</li> </ul> This field is available for any credit action. It is not available for credit plan actions.                                                                                                                                                                                                                                           |
| Balance Type                                  | The balance type to be credited with the recharge amount. This drop down list shows all chargeable balance types for the current service provider.<br>For more information about balance types, see <i>Balance Types</i> (on page 234).<br>This field is available for any Credit action.                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Recharge Amount                               | The credit recharge value, in units of the balance type.<br>The allowed range is 1 to 4294967294.<br>This field is available for any Credit action.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Balance Expiry Extension Days and Hours       | The number of days and hours by which to extend the current balance expiry period for the balance type specified in the <b>Balance Type</b> field.<br>Allowed range is 1 hour to 999999 days.<br>This field is available for any Credit action where the Balance Expiry Update Policy is not set to Ignore.                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Balance Expiry Update Policy                  | Controls how the balance's expiry date is extended by the recharge. The options are: <ul style="list-style-type: none"> <li>• Best - if you want the system to select the best policy option for the subscriber depending on their particular circumstances,</li> <li>• Ignore - if you do not want to change the current expiry period,</li> <li>• Extend - if you want to extend the current expiry period by the days and hours specified,</li> <li>• Extend From Today - if you want the current expiry period to be the number of days and hours specified from today's date.</li> </ul> This field is available for any Credit action.                                                                                                              |
| Balance Offset Date (Use Offset Date)         | Optional balance offset date that will be applied when the selected balance type is recharged. Creates a new bucket for the balance type that will be available from the balance offset date.<br>To activate these fields, select the <b>Use Offset Date</b> check box, then select: <ul style="list-style-type: none"> <li>• <b>Date</b> - if you want to set the balance offset date to a specific date. Select the date you want via  button.</li> <li>• <b>Extension</b> - if you want to base the balance offset date on the current system date extended by the specified number of <b>Days</b> and <b>Hours</b>.</li> </ul> Allowed range for days is 1-999999. |



| Field                                  | Description                                                                                                                                                                                             |
|----------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                        | Allowed range for hours is 1-23.                                                                                                                                                                        |
| Wallet Expiry Extension Days and Hours | The number of days and hours by which to extend the current wallet expiry date.<br>This field is available for any Credit charge where the Wallet Expiry Update Policy is not set to Ignore.            |
| Wallet Expiry Update Policy            | Controls how the wallet's expiry date is extended by the recharge.<br>See the Balance Update Expiry Policy field description for the list of options.<br>This field is available for any Credit action. |
| <b>Notification Only Charge Type</b>   |                                                                                                                                                                                                         |
|                                        | No fields are available for this Charge Type.                                                                                                                                                           |

## Adding What configuration options

Follow these steps to configure what happens when the periodic charge runs.

| Step | Action                                                                                                                                                                                                                                    |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Periodic Charge screen, select <b>What</b> from the left hand menu.<br>You see the What option fields.                                                                                                                         |
| 2    | From the <b>Charge Type</b> list, select the type of actions this periodic charge should take. The available fields on which charge type you select.                                                                                      |
| 3    | Configure this record by entering data in the fields on this screen as defined by the type of periodic charge you are adding.<br>For an overview of the fields on this screen and when they are available, see What configuration fields. |

## Editing What configuration

Follow these steps to view or change what happens when the periodic charge runs.

| Step | Action                                                                                                                                  |
|------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Periodic Charge screen, select the <b>What</b> option from the left hand menu.<br><b>Result:</b> You see the What option.   |
| 2    | Check or update the configuration as necessary.<br>For more information about the fields in this option, see What configuration fields. |

## When

### Introduction

The periodic charge when configuration sets the frequency and timing of when the periodic charge is triggered. Periodic charges which are scheduled to occur at exactly the same time are handled in alphabetical order.

For more information about how periods are calculated, see *Period calculations* (on page 20).

## About Scheduling Periodic Charges

You define a schedule for a periodic charge by using the periodic charge **When** option. The periodic charge schedule depends on the type of date you select in the **Based On** field. Select:

- **Fixed Date** to schedule a particular day or date that the periodic charge period will run from. For example, you could schedule a weekly charge that occurs every Friday, or you could schedule a monthly charge that occurs on the 28th day of every month, and so on.
- **Service Activation** to schedule a periodic charge based on the date that the subscriber subscribed to the periodic charge. For example, if a subscriber subscribes to a monthly periodic charge on the 15th of the month, then the next charge will occur on the 15th of the next month.
- **Wallet Activation** to schedule a periodic charge based on the date that the subscriber's wallet was activated. The date of the next charge is determined by adding the period selected for the charge to the Subscriber's wallet activation date. If this date is in the past, then this process is repeated until a date in the future is determined. For example, if the wallet is activated on 1st December 2012 and the charge period is weekly, then one week is added to the activation date to give a date for the next charge of 8th December 2012. If this date is in the past then another week will be added, and so on, until a future date for the next charge is determined.
- **Reference Date** to schedule a periodic charge based on a specific date. You can specify a reference date that is in the past or in the future. If you specify a future date then this will be the first charge date. If you specify a past date, then the date of the first charge is determined by adding the charge period to the specified reference date, and repeating this process until a date in the future is determined.

You can specify how many times a periodic charge is applied by specifying the number of repeats for the periodic charge in the **Number of Repeats** field. For periodic charges that are based on a specified reference date, you can select whether to count the number of repeats from the reference date or from the date of the first charge. If you select to count repeats from the reference date, then the charges count from the reference date itself even if this date is in the past.

### Number of repeats example:

In this example, the reference date is set to two weeks in the past, the period is set to weekly, and the number of repeats is set to three. If the number of repeats is counted from:

- The reference date, then two charges will already have been counted, and therefore the next and last charge will occur the following week.
- The date of the first charge, then the three charges will be applied from the anniversary of the period (the following week).

For more information about how periods are calculated, see *Period calculations* (on page 20).

## When option

Here is an example of the **When** option in the New Periodic Charge screen.

The screenshot shows the 'New Periodic Charge' window with the 'When' option selected in the left sidebar. The main area contains the following fields:

- Name:** A text input field.
- Schedule:**
  - Based On:** A dropdown menu set to 'Fixed Date'.
  - Period:** A dropdown menu set to 'Daily'.
  - Custom Period:** A text input field.
  - Days:** A radio button that is selected.
  - Months:** A radio button that is unselected.
  - Number of Repeats:** A text input field.
  - Notification Hour:** A dropdown menu set to '08 / 8AM'.
  - Timezone:** A dropdown menu set to 'US/Central'.
  - From Reference Date:** A radio button that is unselected.
  - From First Charge Date:** A radio button that is selected.
  - Remove Charge:** A text input field.
  - Days After Loss of Service:** A text input field.
- Apply to:**
  - Existing Subscribers:** A checkbox that is unselected.
  - Activating Subscribers:** A checkbox that is unselected.
- Fixed Date:**
  - Charge Hour:** A dropdown menu set to '10 / 10AM'.
  - Day of Week:** A dropdown menu.
  - Day of Month:** A text input field.
  - Trigger Month:** A dropdown menu.
- Wallet State:**
  - Active:** A checkbox that is checked.
  - Dormant:** A checkbox that is checked.
  - Suspended:** A checkbox that is unselected.
  - Terminated:** A checkbox that is unselected.
  - Frozen:** A checkbox that is unselected.

At the bottom of the window are 'Save' and 'Cancel' buttons.

## When configuration fields

This table describes the **When** configuration fields in the Periodic Charge screen.

| Field    | Description                                                                                                                                                                                                                                                 |
|----------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Based On | <p>Sets the type of date to use as a basis for scheduling the periodic charge. Select one of the following:</p> <ul style="list-style-type: none"> <li>Fixed Date</li> <li>Service Activation</li> <li>Wallet Activation</li> <li>Reference Data</li> </ul> |

| Field                  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        | For more information, see <i>About Scheduling Periodic Charges</i> (on page 324).                                                                                                                                                                                                                                                                                                                                                                                     |
| Period                 | Sets the frequency with which this periodic charge is run.                                                                                                                                                                                                                                                                                                                                                                                                            |
| Custom Period          | <p>Allows you to specify the number of days or months for which a custom periodic charge should apply.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>These fields are available only if you select <code>Custom</code> from the <b>Period</b> list.</li> <li>If the custom period starts on a fixed date, and the month is set to the past, then NCC uses the specified day in the current month to calculate the period for the charge.</li> </ul> |
| Number of Repeats      | <p>Sets the number of times to run this periodic charge. After this number of charges, the periodic charge becomes unsubscribed automatically.</p> <p><b>Note:</b> The normal behavior for unsubscribing a subscriber for failed charges is not affected.</p>                                                                                                                                                                                                         |
| Notification Hour      | <p>Defines when to send pre-charge notifications and grace notifications. When Notification Hour is not set or left blank, then pre-charge notifications and grace notifications will be sent at the periodic charge subscription time.</p> <p><b>Note:</b> The actual notification time may be influenced by other factors on the VWS.</p>                                                                                                                           |
| Timezone               | <p>(Optional) Defines the time zone that will be used when applying the charge. Overrides the default time zone set by the <code>jnlp.sms.TZ</code> Java application property. For more information, see <i>SMS Technical Guide</i>.</p> <p><b>Note:</b> The <b>Timezone</b> field applies only to fixed date periodic charges.</p>                                                                                                                                   |
| Remove Charge          | <p>Sets the number of days to allow, after sending the Loss Of Service notification, before deleting the periodic charge from the subscriber's wallet. Must be more than the number of days specified in the <b>Days After Failed Charge</b> field.</p> <p>If this field is not set, the periodic charge is removed after 1825 days (5 years).</p>                                                                                                                    |
| Existing Subscribers   | <p>Whether this periodic charge should apply to existing subscribers. This will apply to all wallets with a specific product type when the periodic charge is applied to that product type.</p> <p><b>Note:</b> You cannot apply a period charge to existing subscribers if you set <b>Based On</b> to <code>Service Activation</code>.</p>                                                                                                                           |
| Activating Subscribers | <p>Whether a named event should be charged when the wallet is activated. For more information about named events, see <i>Named Event</i> (on page 391).</p>                                                                                                                                                                                                                                                                                                           |
| Charge Hour            | Sets the hour when the charge will be applied on the charge date.                                                                                                                                                                                                                                                                                                                                                                                                     |
| Day of Week            | <p>The full name of the day of the week on which the periodic charge should run.</p> <p><b>Note:</b> Applies only if <b>Period</b> is set to weekly.</p>                                                                                                                                                                                                                                                                                                              |
| Day of Month           | <p>The day of the month the periodic charge should run on. Allowed values: 1-31.</p> <p><b>Notes:</b></p>                                                                                                                                                                                                                                                                                                                                                             |

| Field         | Description                                                                                                                                                                                                                                                                                                               |
|---------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|               | <ul style="list-style-type: none"> <li>If the charge is set to 29, 30 or 31, and is applied in a month which does not include the specified day; the charge will be applied on the last day of the month.</li> <li>Applies only if <b>Period</b> is set to monthly, quarterly, half-yearly, annual, or custom.</li> </ul> |
| Trigger Month | <p>The month that the periodic charge's cycle should start on.</p> <p><b>Note:</b> Applies only if <b>Period</b> is set to quarterly, half-yearly or annual.</p>                                                                                                                                                          |
| Active        | Whether or not to run the periodic charge on wallets which are in the active state.                                                                                                                                                                                                                                       |
| Dormant       | Whether or not to run the periodic charge on wallets which are in the dormant state.                                                                                                                                                                                                                                      |
| Frozen        | Whether or not to run the periodic charge on wallets which are in the frozen state.                                                                                                                                                                                                                                       |
| Suspended     | Whether or not to run the periodic charge on wallets which are in the suspended state.                                                                                                                                                                                                                                    |
| Terminated    | Whether or not to run the periodic charge on wallets which are in the terminated state.                                                                                                                                                                                                                                   |

For more information about wallet states, see *Wallet states* (on page 11).

#### Notes:

- Periodic charges can be configured to apply only to some wallet states. When the periodic charge is triggered, CCS checks whether the periodic charge is allowed for the wallet state before taking any action. If the wallet state is disallowed, notifications will be skipped but the expiry logic will continue as normal (that is, the periodic charge will be processed as if the charge failed).
- Periodic charges are never applied to wallets which are in the pre-use state.

## Adding When configuration

Follow these steps to configure the frequency and timing of when the periodic charge is triggered.

| Step | Action                                                                                                                                                                            |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Periodic Charge screen, select the <b>When</b> option from the left hand list.<br><b>Result:</b> You see the <i>When option</i> (on page 325).                         |
| 2    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>When configuration fields</i> (on page 325). |

## Editing When configuration

Follow these steps to view or change the frequency and timing of when the periodic charge is triggered.

| Step | Action                                                                                                                                                     |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Periodic Charge screen, select the <b>When</b> option from the left hand menu.<br><b>Result:</b> You see the <i>When option</i> (on page 325). |

| Step | Action                                                                                                                                                       |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | Check or update the configuration as necessary.<br>For more information about the fields in this option, see <i>When configuration fields</i> (on page 325). |

## Notifications

### Introduction

The notifications configuration enables you to configure which notifications are sent when different periodic charge-related events occur.

**Note:** If a subscriber account's profile sets **Suppress Notifications** to true, no notifications will be sent, even if they are configured to be sent here. For more information about the **Suppress Notifications** field, see Details.

### Notifications option

Here is an example of the **Notifications** option in the New Periodic Charge screen.

**New Periodic Charge** [Help]

Name

**Pre-Charge Notifications**

First  Days Before Charge

Second  Days Before Charge

Third  Days Before Charge

**Charge Notifications**

Successful Charge  Failed Charge

Final Success

**Grace Notifications**

First Grace  Days After Failed Charge

Second Grace  Days After Failed Charge

Recharge Success  Recharge Failure

**Loss of Service Notifications**

Loss of Service  Days After Failed Charge

[Save] [Cancel]

## Notifications fields

This table describes the function of each field.

| Field                           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |        |                      |        |   |         |    |           |    |             |     |          |     |             |                         |               |                                  |
|---------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------|----------------------|--------|---|---------|----|-----------|----|-------------|-----|----------|-----|-------------|-------------------------|---------------|----------------------------------|
| <b>Pre-Charge Notifications</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |        |                      |        |   |         |    |           |    |             |     |          |     |             |                         |               |                                  |
|                                 | <p><b>Note:</b> If <b>None</b> is selected in the drop down lists:</p> <ul style="list-style-type: none"> <li>No notification will be sent.</li> <li>The corresponding <b>Days Before Charge</b> field is cleared and made unavailable.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |                      |        |   |         |    |           |    |             |     |          |     |             |                         |               |                                  |
| First                           | <p>A notification to send to the subscriber before the charge is applied. The corresponding <b>Days Before Charge</b> field defines how many days before the charge this notification should be sent.</p> <p><b>Note:</b> If the frequency is daily, this field is not available.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |        |                      |        |   |         |    |           |    |             |     |          |     |             |                         |               |                                  |
| Days Before Charge              | <p>The number of days before the periodic charge is first applied to send the notification specified in the drop down list which corresponds to this field. If this field is available, it must have a value between 1 and the periodic charge frequency measured in days, minus 1.</p> <p>This table shows the maximum value depending on the value of the <b>Period</b> and <b>Custom Period</b> fields specified in the <b>When</b> option.</p> <table border="1"> <thead> <tr> <th>Period</th><th>Maximum value (days)</th></tr> </thead> <tbody> <tr> <td>Weekly</td><td>6</td></tr> <tr> <td>Monthly</td><td>27</td></tr> <tr> <td>Quarterly</td><td>88</td></tr> <tr> <td>Half-Yearly</td><td>180</td></tr> <tr> <td>Annually</td><td>364</td></tr> <tr> <td>Custom-Days</td><td>Days specified, minus 1</td></tr> <tr> <td>Custom-Months</td><td>(months specified x 28), minus 1</td></tr> </tbody> </table> <p>Each field must have a lower value than the field directly above it.</p> | Period | Maximum value (days) | Weekly | 6 | Monthly | 27 | Quarterly | 88 | Half-Yearly | 180 | Annually | 364 | Custom-Days | Days specified, minus 1 | Custom-Months | (months specified x 28), minus 1 |
| Period                          | Maximum value (days)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |        |                      |        |   |         |    |           |    |             |     |          |     |             |                         |               |                                  |
| Weekly                          | 6                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |        |                      |        |   |         |    |           |    |             |     |          |     |             |                         |               |                                  |
| Monthly                         | 27                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |                      |        |   |         |    |           |    |             |     |          |     |             |                         |               |                                  |
| Quarterly                       | 88                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |        |                      |        |   |         |    |           |    |             |     |          |     |             |                         |               |                                  |
| Half-Yearly                     | 180                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |                      |        |   |         |    |           |    |             |     |          |     |             |                         |               |                                  |
| Annually                        | 364                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |        |                      |        |   |         |    |           |    |             |     |          |     |             |                         |               |                                  |
| Custom-Days                     | Days specified, minus 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |        |                      |        |   |         |    |           |    |             |     |          |     |             |                         |               |                                  |
| Custom-Months                   | (months specified x 28), minus 1                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |        |                      |        |   |         |    |           |    |             |     |          |     |             |                         |               |                                  |
| Second                          | <p>A notification to send to the subscriber before the charge is applied. The corresponding <b>Days Before Charge</b> field defines how many days before the charge this notification should be sent.</p> <p><b>Note:</b> If the frequency is less than every 7 days, this field is not available.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |        |                      |        |   |         |    |           |    |             |     |          |     |             |                         |               |                                  |
| Third                           | <p>A notification to send to the subscriber before the charge is applied. The corresponding <b>Days Before Charge</b> field defines how many days before the charge this notification should be sent.</p> <p><b>Note:</b> If the frequency is less than every 7 days, this field is not available.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |        |                      |        |   |         |    |           |    |             |     |          |     |             |                         |               |                                  |
| <b>Charge Notifications</b>     |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |        |                      |        |   |         |    |           |    |             |     |          |     |             |                         |               |                                  |
|                                 | <b>Note:</b> If <b>None</b> is selected in the drop down lists no notification will be sent.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |        |                      |        |   |         |    |           |    |             |     |          |     |             |                         |               |                                  |
| Successful Charge               | A notification to send to the subscriber when the charge is applied successfully.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |        |                      |        |   |         |    |           |    |             |     |          |     |             |                         |               |                                  |
| Failed Charge                   | A notification to send to the subscriber when the charge is not applied successfully.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |        |                      |        |   |         |    |           |    |             |     |          |     |             |                         |               |                                  |

| Field                               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|-------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Final Success                       | <p>A notification to send to the subscriber when the charge is applied successfully and it is the last time the periodic charge will run.</p> <p><b>Note:</b> This field is only available if the <b>Number of Repeats</b> field in the <b>When</b> option has a value.</p>                                                                                                                                                                                                                                      |
| <b>Grace Notifications</b>          |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                     | <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>If <b>None</b> is selected for the drop down lists, the corresponding <b>Days After Failed Charge</b> field is cleared and made unavailable.</li> <li>If <b>No Notification</b> is selected for the drop down lists, the corresponding <b>Days After Failed Charge</b> field is available, but no notification will be sent.</li> </ul>                                                                                                              |
| First Grace                         | A notification to send to the subscriber when the periodic charge defined for this service has initially failed. The charges for has entered a grace period (that is, the periodic charge has failed).                                                                                                                                                                                                                                                                                                           |
| Days After Failed Charge            | <p>The number of days after the periodic charge has failed to send the notification specified in the drop down list which corresponds to this field.</p> <p>If this field is available, it must have a value between 1 and the frequency the periodic charge is applied in measured in days -1 as shown in <b>Days Before Charge</b> field.</p> <p><b>Notes:</b> This field sets the period before the periodic charge is set to Terminated, and (if there is one) the Loss of Service notification is sent.</p> |
| Second Grace                        | A notification to send to the subscriber when the service this periodic charge defines the charges for has entered a grace period (that is, the periodic charge has failed).                                                                                                                                                                                                                                                                                                                                     |
| Recharge Success                    | A notification to send to the subscriber when the subscriber successfully recharges their wallet while in a grace period (that is, the periodic charge has previously failed).                                                                                                                                                                                                                                                                                                                                   |
| Recharge Failure                    | A notification to send to the subscriber when the subscriber tries to recharge their wallet while in a grace period and the recharge fails (that is, the periodic charge has previously failed and has failed again).                                                                                                                                                                                                                                                                                            |
| <b>Loss of Service Notification</b> |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|                                     | <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>If <b>None</b> is selected for the drop down list, the corresponding <b>Days After Failed Charge</b> field is cleared and made unavailable.</li> <li>If <b>No Notification</b> is selected for the drop down list, the corresponding <b>Days After Failed Charge</b> field is available, but no notification will be sent.</li> </ul>                                                                                                                |
| Loss of Service                     | A notification to send to the subscriber when their service has been discontinued (that is, this periodic charge has failed and exited any available grace period).                                                                                                                                                                                                                                                                                                                                              |
| Days After Failed Charge            | The number of days after a subscriber's service has been disabled to send the Loss of Service notification. Must be greater than the Days After Failed Charge for the Second Grace notification (or First Grace if Second Grace is not set).                                                                                                                                                                                                                                                                     |



**Note:** The drop down lists on this screen are populated by the Type records configured in the CCS Application set in the **Notifications** tab on the ACS Configuration screen. For more information about the ACS Configuration screen, see *ACS User's Guide*.

## Adding Notifications configuration

Follow these steps to configure the notifications which can be sent out by a periodic charge.

| Step | Action                                                                                                                                                                       |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Periodic Charge screen, select the <b>Notifications</b> option from the left hand list.<br><b>Result:</b> You see the Notifications option.                       |
| 2    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Notifications fields</i> (on page 329). |

## Editing Notifications configuration

Follow these steps to view or change the notifications configuration.

| Step | Action                                                                                                                                                  |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Periodic Charge screen, select the <b>Notifications</b> option from the left hand menu.<br><b>Result:</b> You see the Notifications option. |
| 2    | Check or update the notifications as necessary.<br>For more information about the fields in this option, see <i>Notifications fields</i> (on page 329). |

## Subscription Pro-Rating

### Introduction

The subscription pro-rating configuration allows periodic services to be seamlessly charged from the subscription start in a manner that is transparent to the service being offered by the operator.

## Subscription Pro-Rating option

Here is an example of the **Subscription Pro-Rating** option in the New Periodic Charge screen.

The screenshot shows the 'New Periodic Charge' dialog box. On the left is a sidebar with a tree view containing several items, with 'Subscription Pro-Rating' selected and highlighted in blue. The main area contains the following fields:

- Name:** A text input field.
- Charge Type:** A dropdown menu with 'Debit' selected.
- Pro-Rating Type:** A dropdown menu with 'Proportional and Fixed Charge' selected.
- First Charge:** A section containing:
  - ☒ **Use Unique First Charge**
  - Event Class:** A dropdown menu with 'DCA Sample Events' selected.
  - Event Name:** A dropdown menu with 'Cent' selected.
  - Insufficient Funds Action:** A dropdown menu with 'Take balance negative' selected.
- Fixed Charge:** A section containing:
  - Event Class:** A dropdown menu with 'DCA Sample Events' selected.
  - Event Name:** A dropdown menu with 'Cent' selected.
  - Insufficient Funds Action:** A dropdown menu with 'Take balance negative' selected.

At the bottom of the dialog are 'Save' and 'Cancel' buttons. A 'Help' button is located in the top right corner.

## Subscription configuration fields

This table describes the function of each field.

| Field       | Description                                                                                                                                                                                                                                                                                      |
|-------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name        | Name of the periodic charge                                                                                                                                                                                                                                                                      |
| Charge Type | <p>The type of charge. The options are:</p> <ul style="list-style-type: none"> <li>• Debit</li> <li>• Debit and Credit Plan</li> <li>• Debit and Credit</li> <li>• Credit</li> <li>• Credit Plan</li> </ul> <p>The fields you can use will be defined by the type of charge you have chosen.</p> |

| Field                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Pro-Rating Type           | <p>The Pro-rating method to apply. Options are:</p> <ul style="list-style-type: none"> <li>• <b>None</b> - No pro-rating at all, charges are applied without respecting the actual date and periodic charge start time.</li> <li>• <b>Proportional</b> - The actual date defines the start of the subscription period, the charge to be applied is defined by calculating the remaining period of the subscription from the start point to the end of the subscription period using the defined granularity units. This is then applied as a percentage reduction to the full subscription charge or subscription elements (for example, bundles).</li> <li>• <b>Proportional and Fixed</b> - This is calculated in exactly the same manner as proportional, described above, but an option to add a fixed additional subscription charge or appropriate elements such as SMSs in a bundle is made. This charge has optional units, either in currency or in additional periodic units.</li> </ul> |
| Use Unique First Charge   | <p>Allow an initial charge that differs from subsequent charges.</p> <p><b>Note:</b> This charge is a substitute for the first charge. It will also be pro-rated if specified, unlike the fixed charge which is not pro-rated.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| Event Class               | <p>The event class for the charge (used for both first and all subsequent charges).</p> <p>This field is populated by the named event sets configured on the <i>Named Event</i> (on page 391) tab on the Rating Management screen.</p> <p>This field is available and mandatory for any Debit charge.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Event Name                | <p>The event name for the charge (used for both first and all subsequent charges).</p> <p>This field is populated by the named events configured on the <i>Named Event</i> (on page 391) tab on the Rating Management screen.</p> <p>This field is available and mandatory for any Debit charge.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Insufficient Funds Action | <p>Specifies what will happen if there are insufficient funds to cover the charge (used for both first and all subsequent charges). The options are:</p> <ul style="list-style-type: none"> <li>• Take balance negative - The full charge will be applied, even if this results in a negative balance.</li> <li>• Do not make charge - No charge is made.</li> </ul> <p>This field is available for any Debit charge.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |

## Adding Subscription configuration

Follow these steps to configure the subscription pro-rating for a periodic charge.

| Step | Action                                                                                                                                                                                                     |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the New Periodic Charge screen, select the <b>Subscription Pro-Rating</b> option from the left hand list.</p> <p><b>Result:</b> You see the <i>Subscription Pro-Rating option</i> (on page 332).</p> |
| 2    | <p>Select the <b>Pro-Rating Type</b> from the drop down list. See <i>Subscription configuration fields</i> (on page 332) for the options and their usage.</p>                                              |
| 3    | <p>Configure this record by entering data in the fields on this screen as defined by the type of periodic charge and rating being added.</p>                                                               |

| Step | Action                                                                                                                                                   |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | For an overview of the fields on this screen, see <i>Subscription configuration fields</i> (on page 332).                                                |
|      | <b>Note:</b> The <b>Charge Type</b> and <b>Pro-Rating Type</b> dictate the fields that can be use for pro-rating. See <i>Field Matrix</i> (on page 334). |
| 4    | Select the <b>Use Unique First Charge</b> check box if the initial charge differs from the subsequent charges.                                           |
| 5    | Click <b>Save</b> .                                                                                                                                      |

## Editing Subscription configuration

Follow these steps to view or change the subscription pro-rating configuration.

| Step | Action                                                                                                                                                                                                                                                                                                                                    |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Periodic Charge screen, select the <b>Subscription Pro-Rating</b> option from the left hand menu.<br><b>Result:</b> You see the <i>Subscription Pro-Rating option</i> (on page 332).                                                                                                                                          |
| 2    | View or update the subscription pro-rating as necessary.<br>For more information about the fields in this option, see <i>Subscription configuration fields</i> (on page 332).<br><b>Note:</b> The <b>Charge Type</b> and <b>Pro-Rating Type</b> dictate the fields that can be use for pro-rating. See <i>Field Matrix</i> (on page 334). |
| 3    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                       |

## Field matrix

This table describes the relationships between the pro-rating actions and the field sets available.

| Charge Types        | Subscription                 | Charge Alignment | Unsubscription | Pro-Rating Types            |
|---------------------|------------------------------|------------------|----------------|-----------------------------|
| Debit               | First Charge                 |                  |                | None                        |
|                     | First Charge                 |                  |                | Proportional                |
|                     | First Charge<br>Fixed Charge |                  | Fixed Charge   | Proportional & Fixed Charge |
| Debit & credit Plan | First Charge                 |                  |                | None                        |
|                     | First Charge                 |                  |                | Proportional                |
|                     | First Charge<br>Fixed Charge | Fixed Charge     |                | Proportional & Fixed Charge |
| Debit & Credit      | First Charge                 |                  |                | None                        |
|                     | First Charge                 |                  |                | Proportional                |
|                     | First Charge<br>Fixed Charge | Fixed Charge     | Fixed Charge   | Proportional & Fixed Charge |
| Credit              |                              |                  |                | None                        |
|                     |                              |                  |                | Proportional                |

| Charge Types      | Subscription | Charge Alignment | Unsubscription | Pro-Rating Types            |
|-------------------|--------------|------------------|----------------|-----------------------------|
|                   | Fixed Charge | Fixed Charge     | Fixed Charge   | Proportional & Fixed Charge |
| Credit Plan       |              |                  |                | None                        |
|                   |              |                  |                | Proportional                |
|                   | Fixed Charge | Fixed Charge     |                | Proportional & Fixed Charge |
| Notification Only |              |                  |                | None                        |
|                   |              |                  |                | Proportional                |
|                   |              |                  |                | Proportional & Fixed Charge |
| Control Plan      |              |                  |                | None                        |
|                   |              |                  |                | Proportional                |
|                   |              |                  |                | Proportional & Fixed Charge |

## Charge Alignment Pro-Rating

### Introduction

The charge alignment pro-rating configuration allows you to move the billing date for a periodic service further into the future or closer to the present date. The charge for the billing date change can be applied as required based on the existing periodic service definition.

### Charge Alignment Pro-Rating option

Here is an example of the **Charge Alignment Pro-Rating** option in the New Periodic Charge screen.

The screenshot shows the 'New Periodic Charge' window. On the left, a sidebar contains a tree view with 'Charge Alignment Pro-Rating' selected. The main area contains the following fields:

- Name:** [Empty text box]
- Charge Type:** [Debit and Credit]
- Pro-Rating Type:** [Proportional and Fixed Charge]
- Fixed Charge Section:**
  - Event Class:** [DCA Sample Events]
  - Event Name:** [Cent]
  - Insufficient Funds Action:** [Take balance negative]

At the bottom, there are 'Save' and 'Cancel' buttons. A 'Help' button is located in the top right corner.

## Charge Alignment configuration fields

This table describes the function of each field.

| Field                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                      | Name of the periodic charge                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Charge Type               | <p>The type of charge. The available options are:</p> <ul style="list-style-type: none"> <li>• Debit</li> <li>• Debit and Credit Plan</li> <li>• Debit and Credit</li> <li>• Credit</li> <li>• Credit Plan</li> </ul> <p>The fields you can use will be defined by the type of charge you have chosen.</p>                                                                                                                                                                                                                                                                                                       |
| Pro-Rating Type           | <p>The pro-rating method to apply. If the periodic charge is based on:</p> <ul style="list-style-type: none"> <li>• 'Fixed Date' or 'Wallet Activation' then pro-rating method will be None</li> <li>• 'Service Activation' or Reference Date' then all pro-rating methods will be available</li> </ul> <p>The available options are:</p> <ul style="list-style-type: none"> <li>• None</li> <li>• Proportional</li> <li>• Proportional and Fixed</li> </ul> <p><b>Note:</b> Charge alignment pro-rating can only be performed for fixed charges. Other options prevent the configuration from being set up.</p> |
| Event Class               | <p>The event class for the charge (used for both first and all subsequent charges).</p> <p>This field is populated by the named event sets configured on the <i>Named Event</i> (on page 391) tab on the Rating Management screen.</p>                                                                                                                                                                                                                                                                                                                                                                           |
| Event Name                | <p>The event name for the charge (used for both first and all subsequent charges).</p> <p>This field is populated by the named events configured on the <i>Named Event</i> (on page 391) tab on the Rating Management screen.</p>                                                                                                                                                                                                                                                                                                                                                                                |
| Insufficient Funds Action | <p>Specifies what will happen if there are insufficient funds to cover the charge (used for both first and all subsequent charges). The options are:</p> <ul style="list-style-type: none"> <li>• Take balance negative - The full charge will be applied, even if this results in a negative balance.</li> <li>• Do not make charge - No charge is made.</li> </ul>                                                                                                                                                                                                                                             |

## Adding Charge Alignment configuration

Follow these steps to configure the charge alignment pro-rating for a periodic charge subscription.

| Step | Action                                                                                                                                                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the New Periodic Charge screen, select the <b>Charge Alignment Pro-Rating</b> option from the left hand list.</p> <p><b>Result:</b> You see the <i>Charge Alignment Pro-Rating option</i> (on page 335).</p> |
| 2    | <p>Select the <b>Pro-Rating Type</b> from the drop down list. See <i>Charge Alignment configuration fields</i> (on page 336) for the options and their usage.</p>                                                  |
| 3    | <p>Configure this record by entering data in the fields on this screen as defined by the type of periodic charge and rating being added.</p>                                                                       |

| Step | Action                                                                                                                                                   |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | For an overview of the fields on this screen, see <i>Charge Alignment configuration fields</i> (on page 336).                                            |
|      | <b>Note:</b> The <b>Charge Type</b> and <b>Pro-Rating Type</b> dictate the fields that can be use for pro-rating. See <i>Field Matrix</i> (on page 334). |
| 4    | Click <b>Save</b> .                                                                                                                                      |

## Editing Charge Alignment configuration

Follow these steps to view or change the charge alignment pro-rating configuration.

| Step | Action                                                                                                                                                                                                                                                                                                                                            |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Periodic Charge screen, select the <b>Charge Alignment Pro-Rating</b> option from the left hand menu.<br><b>Result:</b> You see the see <i>Charge Alignment Pro-Rating option</i> (on page 335).                                                                                                                                      |
| 2    | View or update the charge alignment pro-rating as necessary.<br>For more information about the fields in this option, see <i>Charge Alignment configuration fields</i> (on page 336).<br><b>Note:</b> The <b>Charge Type</b> and <b>Pro-Rating Type</b> dictate the fields that can be use for pro-rating. See <i>Field Matrix</i> (on page 334). |
| 3    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                               |

## Unsubscription Pro-Rating

### Introduction

The unsubscription pro-rating configuration sets the rules for refunding "unused" amounts of the periodic charge subscription when a subscription is stopped.

## Unsubscription Pro-Rating option

Here is an example of the **Unsubscription Pro-Rating** option in the New Periodic Charge screen.

The screenshot shows the 'New Periodic Charge' window. On the left is a sidebar with a tree view where 'Unsubscription Pro-Rating' is selected. The main area contains the following fields:

- Name:** 15th Monthly
- Charge Type:** Debit and Credit
- Pro-Rating Type:** Proportional and Fixed Charge (dropdown)
- Fixed Charge section:**
  - Event Class:** DCA Sample Events (dropdown)
  - Event Name:** Cent (dropdown)
  - Insufficient Funds Action:** Take balance negative (dropdown)

At the bottom are 'Save' and 'Cancel' buttons. A 'Help' button is in the top right corner.

## Unsubscription configuration fields

This table describes the function of each field.

| Field           | Description                                                                                                                                                                                                                                                                                                                |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name            | Name of the periodic charge                                                                                                                                                                                                                                                                                                |
| Charge Type     | <p>The type of charge. The available options are:</p> <ul style="list-style-type: none"> <li>• Debit</li> <li>• Debit and Credit</li> <li>• Credit</li> </ul> <p>The fields you can use will be defined by the type of charge you have chosen.</p>                                                                         |
| Pro-Rating Type | <p>The pro-rating method to apply. The available options are:</p> <ul style="list-style-type: none"> <li>• None</li> <li>• Proportional</li> <li>• Proportional and Fixed</li> </ul> <p><b>Note:</b> Unsubscribing can only be performed for fixed charges. Other options prevent the configuration from being set up.</p> |
| Event Class     | <p>The event class for the charge (used for both first and all subsequent charges).</p> <p>This field is populated by the named event sets configured on the <i>Named Event</i> (on page 391) tab on the Rating Management screen.</p>                                                                                     |
| Event Name      | <p>The event name for the charge (used for both first and all subsequent charges).</p> <p>This field is populated by the named events configured on the <i>Named Event</i> (on page 391) tab on the Rating Management screen.</p>                                                                                          |



| Field                     | Description                                                                                                                                                                                                                                                                                                                                             |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Insufficient Funds Action | Specifies what will happen if there are insufficient funds to cover the charge (used for both first and all subsequent charges). The options are: <ul style="list-style-type: none"> <li>Take balance negative - The full charge will be applied, even if this results in a negative balance</li> <li>Do not make charge - No charge is made</li> </ul> |

## Adding Unsubscription configuration

Follow these steps to configure the unsubscription pro-rating for a periodic charge.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Periodic Charge screen, select the <b>Unsubscription Pro-Rating</b> option from the left hand list.<br><b>Result:</b> You see the <i>Unsubscription Pro-Rating option</i> (on page 338).                                                                                                                                                                                                              |
| 2    | Select the <b>Pro-Rating Type</b> from the drop down list. See <i>Unsubscription configuration fields</i> (on page 338) for the options and their usage.                                                                                                                                                                                                                                                         |
| 3    | Configure this record by entering data in the fields on this screen as defined by the type of periodic charge and rating being added.<br>For an overview of the fields on this screen, see <i>Unsubscription configuration fields</i> (on page 338).<br><b>Note:</b> The <b>Charge Type</b> and <b>Pro-Rating Type</b> dictate the fields that can be use for pro-rating. See <i>Field Matrix</i> (on page 334). |
| 4    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                                              |

## Editing Unsubscription configuration

Follow these steps to view or change the unsubscription pro-rating configuration.

| Step | Action                                                                                                                                                                                                                                                                                                                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Edit Periodic Charge screen, select the <b>Unsubscription Pro-Rating</b> option from the left hand menu.<br><b>Result:</b> You see the <i>Unsubscription Pro-Rating option</i> (on page 338).                                                                                                                                          |
| 2    | View or update the unsubscription pro-rating as necessary.<br>For more information about the fields in this option, see <i>Unsubscription configuration fields</i> (on page 338).<br><b>Note:</b> The <b>Charge Type</b> and <b>Pro-Rating Type</b> dictate the fields that can be use for pro-rating. See <i>Field Matrix</i> (on page 334). |
| 3    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                           |



# Rating Management

## Overview

### Introduction

This chapter explains how to manage the rates for a service provider.

### In this chapter

---

This chapter contains the following topics.

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## Rating Management Module

### Introduction

The Rating Management screen lets you configure the rates that can be applied to subscribers on the VWS domain.

For information about how CCS charges, see *Rating and Tariffs* (on page 14).

**Note:** The Rating Management screen is only available if the CCS Rating Management module has been installed on your system and if you are using the VWS. If you are using a 3rd party domain, then you will not be able to access this screen.

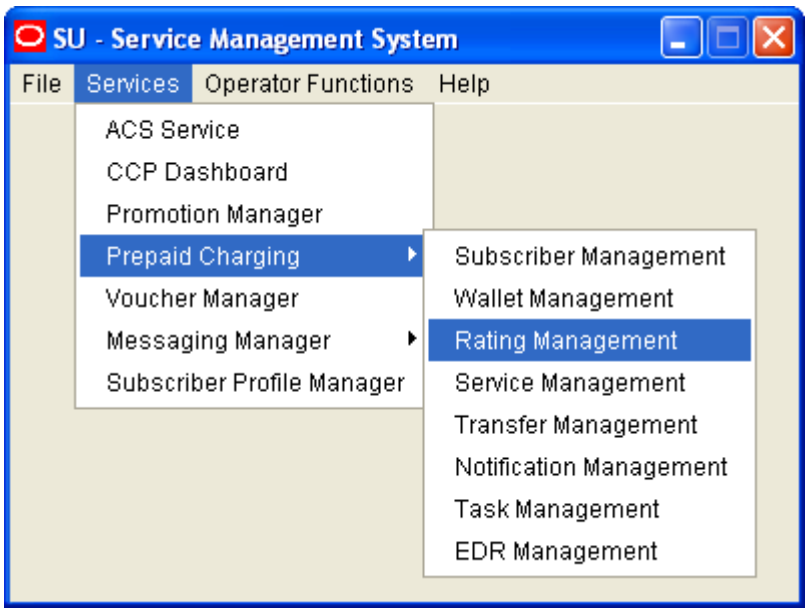
## Components

The Rating Management screen contains the following tabs:

- *Balance Type Cascades* (on page 410)
- *Charge Periods* (on page 402)
- *CLI-DN* (on page 369)
- *Cross Balance Type Cascades* (on page 417)
- *Discount Periods* (on page 398)
- *Discount Sets* (on page 361)
- *Expenditure Plan* (on page 414)
- *Holiday* (on page 385)
- *Named Event* (on page 391)
- *Rating Management - Named Event Catalogues* (on page 447)
- *Rate Tables* (on page 350)
- *Reservation Config* (on page 420)
- *Tariff Plan* (on page 344)
- *Tariff Plan Selector* (on page 347)
- *Weekly* (on page 381)
- *Dynamic Quota Config* (on page 441)

## Accessing the Rating Management screen

Follow these steps to open the Rating Management screen.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the <b>Services</b> menu from the SMS main screen.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|      |  <p>The screenshot shows a window titled 'SU - Service Management System'. It has a menu bar with 'File', 'Services', 'Operator Functions', and 'Help'. The 'Services' menu is open, displaying a list of services: 'ACS Service', 'CCP Dashboard', 'Promotion Manager', 'Prepaid Charging', 'Voucher Manager', 'Messaging Manager', and 'Subscriber Profile Manager'. The 'Prepaid Charging' item is highlighted, and a sub-menu is open next to it, listing: 'Subscriber Management', 'Wallet Management', 'Rating Management', 'Service Management', 'Transfer Management', 'Notification Management', 'Task Management', and 'EDR Management'. The 'Rating Management' option in the sub-menu is highlighted.</p> |
| 2    | Select <b>Prepaid Charging &gt; Rating Management</b> .<br><b>Result:</b> You see the Rating Management screen.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

## Rating Management screen

Here is an example of the Rating Management screen.

**Note:** The tabs or options available to you on a screen will depend upon which CCS components have been installed on the system and the Oracle license agreement.

Rating Management

Service Provider

OCNCCTemplate

Help

Named Event

Discount Periods

Charge Periods

Balance Type Cascades

Expenditure Plan

Tariff Plan

Tariff Plan Selector

Rate Tables

Discount Sets

CLI-DN

Weekly

Holiday

Low Credit Notification Config

Tax Plan

Dynamic Quota Config

Cross Balance Type Cascades

Reservation Config

Named Event Catalogue

| Name | Hold ... | Req ... | Commit Volume Thre... | Request Ti |
|------|----------|---------|-----------------------|------------|
|------|----------|---------|-----------------------|------------|

<

>

New

Edit

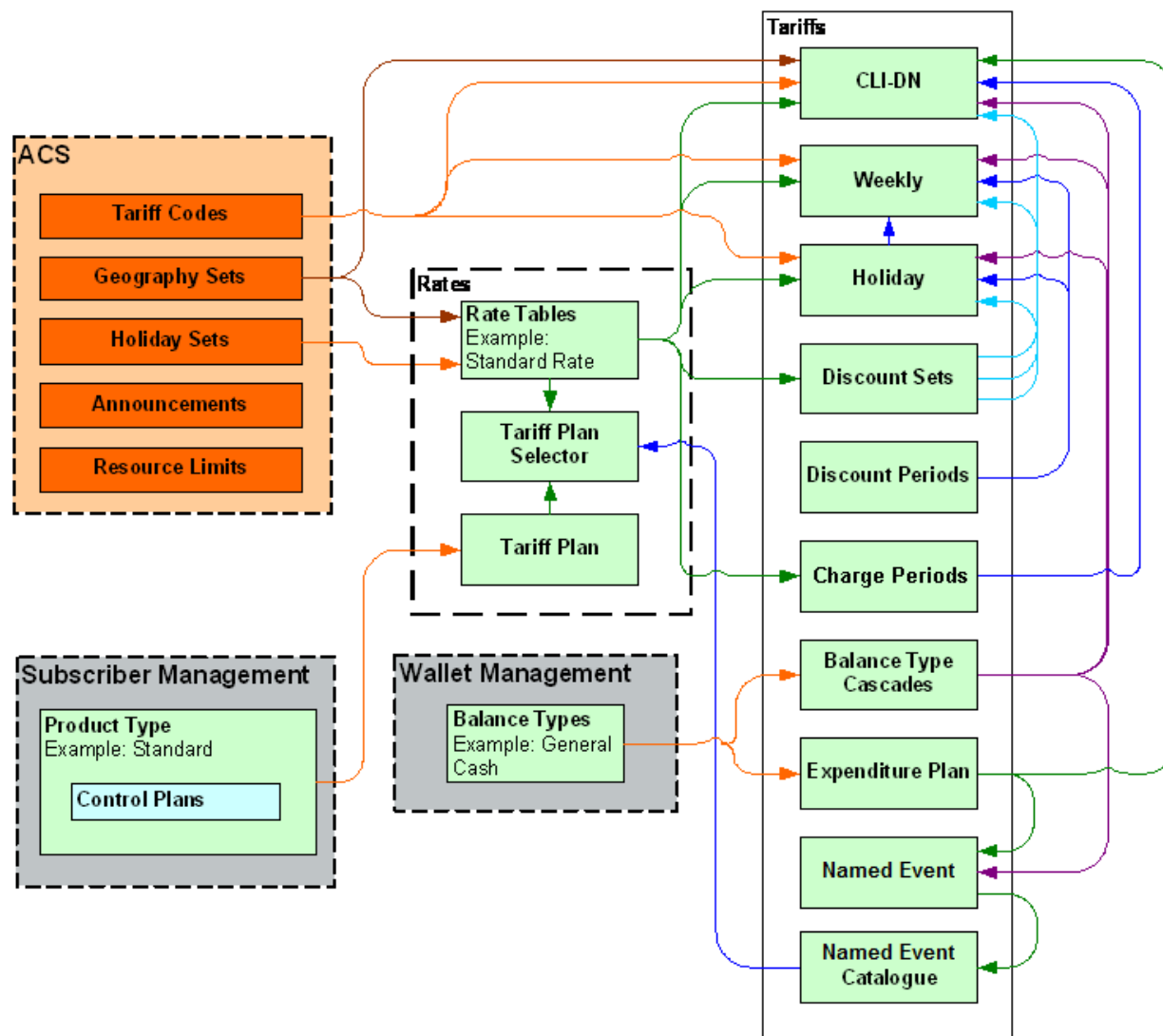
Delete

Close

## Rating Management relationships

This diagram shows the relationships between the various screens available in the Rating Management module.

**Note:** The lines are colored differently for clarity and have no other meaning.



## Tariff Plan

### Introduction

The **Tariff Plan** tab lets you set up and maintain tariff plans for the selected customer.

The tariff plan is used in the Control Plans option of the product type to select the tariff plan to use in the Attempt Termination with Billing nodes.

Once a tariff plan has been created, assign these items to it in the *Tariff Plan Selector* (on page 347):

- Rate table
- Named event catalogue
- Effective date

Tariff Plan tab

Here is an example **Tariff Plan** tab.

Rating Management

Service Provider

Boss

Help

Tariff Plan

| Name                | Announcement Name | Change  |
|---------------------|-------------------|---------|
| GC TestPlan         |                   | SU      |
| HANDI_TariffPlan    |                   | SU      |
| MJH_TariffPlan      |                   | SU      |
| MJHTP1              |                   | SU      |
| MJHTP1 (343)        |                   | CCS_ADR |
| SL_TestTariff       |                   | SU      |
| SL_TestTariff (106) |                   | CCS_ADR |
| SL_TestTariff (203) |                   | CCS_ADR |
| SLauto_TariffPlan   |                   | SU      |
| SRM Tariff 1        |                   | CCS_ADR |
| SRM Tariff 2        |                   | CCS_ADR |
| SRM Tariff 3        |                   | CCS_ADR |
| SRM Tariff 4        |                   | CCS_ADR |
| SRM Tariff 5        |                   | CCS_ADR |

<

>

New

Edit

Delete

Close

Tariff Plan fields

This table describes the function of each field.

| Field | Description                  |
|-------|------------------------------|
| Name  | The name of the tariff plan. |

| Field                   | Description                                                                                                                                                                                                                                                                                                         |
|-------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                         | <b>Notes:</b> <ul style="list-style-type: none"> <li>Tariff plan names must be unique within a customer's set of tariff plans.</li> <li>Special characters and case do not make a distinction between names. For example, Super Savers is the same as Super Saver's.</li> <li>This is a mandatory field.</li> </ul> |
| Name Announcement Set   | The announcement set containing the announcement entry you want to play.                                                                                                                                                                                                                                            |
| Name Announcement Entry | The entry name for the announcement to be played when the tariff plan is selected by the Tariff Plan Announcement node.<br><b>Note:</b> Announcement sets and their entries are configured in the ACS Configuration screen. Refer to <i>ACS User's Guide</i> for details.                                           |

## Tariff Plan screen

Here is an example Tariff Plan screen.

## Adding tariff plans

Follow these steps to add a new tariff plan.

| Step | Action                                                                                                                                                                     |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                        |
| 2    | On the <b>Tariff Plan</b> tab, click <b>New</b> .<br><b>Result:</b> You see the <i>New Tariff Plan screen</i> (See example on page 346).                                   |
| 3    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Tariff Plan fields</i> (on page 345). |
| 4    | Click <b>Save</b> .                                                                                                                                                        |

## Editing tariff plans

Follow these steps to edit an existing tariff plan.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list. |
| 2    | In the table on the <b>Tariff Plan</b> tab, select the tariff plan to edit.                         |



| Step | Action                                                                                                                        |
|------|-------------------------------------------------------------------------------------------------------------------------------|
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the Edit <i>Tariff Plan</i> screen (See example on page 346).                   |
| 4    | Make the required changes to the fields.<br>For more information on this screen, see <i>Tariff Plan fields</i> (on page 345). |
| 5    | Click <b>Save</b> .                                                                                                           |

## Deleting tariff plans

Follow these steps to delete an existing tariff plan.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 2    | In the table on the <b>Tariff Plan</b> tab, select the tariff plan to delete.<br><b>Tip:</b> You cannot delete a tariff plan which is being used by a tariff plan Selector.                                                                                                                                                                                                                                                                                                                                                     |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> <ul style="list-style-type: none"> <li>If the tariff plan is not used by a tariff plan selector, the record is deleted and you see the tariff plans prompt.</li> <li>If the tariff plan is used by a tariff plan selector, you see an error dialog.<br/>In this case, you first need to change the tariff plan selected on the Edit Tariff Plan Selector screen for the <b>Tariff Plan Selector</b> tab, before you can delete the record.</li> </ul> |
| 5    | Click <b>OK</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

## Tariff Plan Selector

### Introduction

The **Tariff Plan Selector** tab allows you to set up and maintain the details for tariff plans for the selected customer. The tariff plan selector enables you to:

- Link a rate table and a named event catalogue to a tariff plan
- Specify from when the tariff plan will be effective

## Tariff Plan Selector tab

Here is an example **Tariff Plan Selector** tab.

Service Provider: Boss Help

**Tariff Plan Selector**

| Tariff Plan       | Rate Table        | Named Event Catalogue | Ef  |
|-------------------|-------------------|-----------------------|-----|
| Bronze Callback   | Bronze Callback   | Bronze                | 201 |
| Bronze HPLMN MO   | Bronze HPLMN MO   | Bronze                | 201 |
| Bronze NGN        | Bronze NGN        | Bronze                | 201 |
| Bronze VPLMN MO   | Bronze VPLMN MO   | Bronze                | 201 |
| Bronze VPLMN MT   | Bronze VPLMN MT   | Bronze                | 201 |
| CS Tariff Plan    | CS Tariff Plan    | Default               | 201 |
| CS Tariff Plan    | CS Tariff Plan    | Default               | 201 |
| CUG Tariff Plan 1 | CUG Tariff Plan 1 | Default               | 201 |
| CUG Tariff Plan 1 | CUG Tariff Plan 1 | Default               | 201 |
| CUG Tariff Plan 2 | CUG Tariff Plan 2 | Default               | 201 |
| CUG Tariff Plan 2 | CUG Tariff Plan 2 | Default               | 201 |
| CUG Tariff Plan 3 | CUG Tariff Plan 3 | Default               | 201 |
| CUG Tariff Plan 3 | CUG Tariff Plan 3 | Default               | 201 |
| CUG Tariff Plan 4 | CUG Tariff Plan 4 | Default               | 201 |
| CUG Tariff Plan 4 | CUG Tariff Plan 4 | Default               | 201 |
| CUG Tariff Plan 5 | CUG Tariff Plan 5 | Default               | 201 |
| CUG Tariff Plan 5 | CUG Tariff Plan 5 | Default               | 201 |
| Gold Callback     | Gold Callback     | Gold                  | 201 |
| Gold HPLMN MO     | Gold HPLMN MO     | Gold                  | 201 |
| Gold NGN          | Gold NGN          | Gold                  | 201 |
| Gold VPLMN MO     | Gold VPLMN MO     | Gold                  | 201 |
| Gold VPLMN MT     | Gold VPLMN MT     | Gold                  | 201 |
| Overdraft Bronze  | Overdraft Bronze  | Default               | 201 |
| Overdraft Bronze  | Overdraft Bronze  | Default               | 201 |
| Overdraft Gold    | Overdraft Gold    | Default               | 201 |
| Overdraft Gold    | Overdraft Gold    | Default               | 201 |
| Overdraft Silver  | Overdraft Silver  | Default               | 201 |
| Overdraft Silver  | Overdraft Silver  | Default               | 201 |
| Silver Callback   | Silver Callback   | Silver                | 201 |

New Edit Delete Close

## Tariff Plan Selector fields

This table describes the function of each field.

| Field       | Description                                                                                       |
|-------------|---------------------------------------------------------------------------------------------------|
| Tariff Plan | The tariff plan to which a rate table, named event catalogue and effective date will be assigned. |

| Field                 | Description                                                                                                                                                                                                                                                                                                                                                           |
|-----------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rate Table            | The rate table which will be assigned to the selected tariff plan.<br><b>Note:</b> This list will display all the rate tables a service provider can use.                                                                                                                                                                                                             |
| Named Event Catalogue | The named event catalogue to assign to the selected tariff plan.<br>This field is populated by the records on the <b>Named Event Catalogue</b> tab. For more information, see <i>Named Event Catalogue</i> (on page 447).<br><b>Note:</b> Select the special value "Use Default" to always use the current default named event catalogue in the selected tariff plan. |
| Effective Date        | The year, month, day and hour at which the tariff plan will begin to use the rate table.<br><b>Tip:</b> Setting the effective date to a past date will make the change effective immediately.                                                                                                                                                                         |

## Tariff Plan Selector screen

Here is an example Tariff Plan Selector screen.

## Adding tariff plan selectors

Follow these steps to add a new tariff plan selector.

| Step | Action                                                                                                                                                                              |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                 |
| 2    | On the <b>Tariff Plan Selector</b> tab, click <b>New</b> .<br><b>Result:</b> You see the <i>New Tariff Plan Selector screen</i> (See example on page 349).                          |
| 3    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Tariff Plan Selector fields</i> (on page 348). |
| 4    | Click <b>Save</b> .                                                                                                                                                                 |

## Editing tariff plan selectors

Follow these steps to edit an existing tariff plan selector.

| Step | Action                                                                                                               |
|------|----------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                  |
| 2    | In the table on the <b>Tariff Plan Selector</b> tab, select the record to edit.                                      |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the <i>Edit Tariff Plan Selector screen</i> (See example on page 349). |
| 4    | Edit the details as described in <i>Tariff Plan Selector fields</i> (on page 348).                                   |
| 5    | Click <b>Save</b> .                                                                                                  |

## Deleting tariff plan selectors

Follow these steps to delete an existing tariff plan selector.

| Step | Action                                                                                                                                            |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                               |
| 2    | In the table on the <b>Tariff Plan Selector</b> tab, select the record to delete.                                                                 |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                                   |
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> The record will be deleted and you see the Tariff Plan Selector prompt. |
| 5    | Click <b>OK</b> .                                                                                                                                 |

## Rate Tables

### Introduction

The **Rate Tables** tab lets you set up and maintain rate tables. It also provides the facility to import and export rate table data. See *Importing and Exporting Rate Data* (on page 353) for details.

Rate tables are used to map currency to a geography set and a holiday set.

- Geography set: an ACS reusable resource set, defining the set of geographies. Each single Geography is based on an E.164 number range.
- Holiday set: an ACS reusable resource set, representing the calendar of predefined annual holidays. These are then used in the **Tariff Plan Selector** tab to assign rate tables and effective dates to tariff plans.

When a call is made, the system uses the rate table for the wallet/product type to determine:

- 1 The basic tariff for that rate table (these are the CLI DN tariffs)
- 2 Any weekly tariffs that may apply
- 3 Any holiday tariffs that may apply

There is no limitation on the number of rate plans that can be defined. You can set a rate plan for a number range or an individual.

Holiday tariffs override any weekly tariff that may apply to the call and weekly tariffs override charges set in the CLI-DN tariffs.

For more information about setting up geography sets and holiday sets, see *ACS User's Guide*.

## About testing new rate tables

You can test your rating configuration by performing a test call at a date and time that you specify in the CCS Call Date profile field. This feature allows you to test key elements of the rating system, such as:

- Time of day tariffs
- Day of week tariffs
- Holiday tariffs

The CCS Call Date profile field is held in temporary storage. You can set it to a specific date and time by using a Set feature node prior to the UATB feature node in your control plan. When set, the current system date and time will be overwritten by the profile field value in message requests sent to the VWS by the UATB feature node.

For more information about the UATB feature node, see the *Feature Nodes Reference Guide*. For more information about configuring control plans, see *Control Plan Editor User's Guide*.

## Rate Tables fields

This table describes the function of each field.

| Field                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Based on Rate Table        | <p>The rate table used to define the new rate table.</p> <p><b>Note:</b> The charge period sets belonging to the rate table selected in the <b>Base on Rate Table</b> field will be copied and associated with the new rate table. The charge period detail for the copied charge period sets will be retained and the newly created charge period sets will appear in the <b>Charge Periods</b> tab.</p>                                                                                                                                                                                                       |
| Default Reservation Config | <p>This indicates what the default reservation values are. The default reservation parameters are configured in <b>SMS &gt; Services &gt; Prepaid Charging &gt; Rating Management, Reservation Config</b> tab</p>                                                                                                                                                                                                                                                                                                                                                                                               |
| Rate Table                 | <p>The name of the new rate table.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• Tariff plan names must be unique within a customer's set of tariff plans.</li> <li>• Special characters and case do not make a distinction between names. For example, Super Savers is the same as Super Saver's.</li> <li>• This is a mandatory field.</li> </ul>                                                                                                                                                                                                                                         |
| Geography Set              | <p>The geography set which this rate table will map a currency to.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• All rate tables must have a geography set selected for them. This list displays all the geography sets which a customer can use. If no geography sets are displayed, geography sets must first be created and assigned to the customer.</li> </ul> <p>Geography sets are created using the ACS Configuration screen. Access to public sets is assigned using the Service Provider Details screen. For details on creating geography sets, see <i>ACS User's Guide</i>.</p> |

| Field             | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Holiday Set       | <p>The holiday set which this rate table will map a currency to.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>All rate tables must have a holiday set selected for them. This list box displays all the holiday sets which a customer can use. If no holiday sets are displayed, holiday sets must first be created and assigned to the customer.</li> </ul> <p>Holiday sets are created using the ACS Configuration screen. Access to public sets is assigned using the Service Provider Details screen. For details on creating holiday sets, see <i>ACS User's Guide</i>.</p> |
| Billing Indicator | <p>This indicates whether the rate table is time or data based.</p> <p><b>Note:</b> This is used for display purposes, and does not affect the rating, just what is displayed.</p> <p>The effect of the billing indicator when changing from a data unit to a time value is to display the rate per minute instead of per second. Hence the time rate will be 60x the data rate.</p>                                                                                                                                                                                                                |

## Rate Table screen

Here is an example Rate Table screen.

## Adding rate tables

Follow these steps to add a new rate table.

| Step | Action                                                                                                                                                        |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                           |
| 2    | On the <b>Rate Tables</b> tab, click <b>New</b> .<br><b>Result:</b> You see the <i>New Rate Table screen</i> (See example on page 352).                       |
| 3    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Rate Tables fields</i> . |

| Step | Action              |
|------|---------------------|
| 4    | Click <b>Save</b> . |

## Editing rate tables

Follow these steps to edit an existing rate table.

| Step | Action                                                                                                     |
|------|------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.        |
| 2    | In the table on the <b>Rate Tables</b> tab, select the record to edit.                                     |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the <i>Edit Rate Table screen</i> (See example on page 352). |
| 4    | Edit the details as described in Rate Tables fields.                                                       |
| 5    | Click <b>Save</b> .                                                                                        |

## Deleting rate tables

Follow these steps to delete an existing rate table.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                                                                                                                                                 |
| 2    | In the table on the <b>Rate Tables</b> tab, select the record that you want to delete.<br><b>Note:</b> You cannot delete a rate table which is associated with a billing period, CLI-DN, discount set, holiday, week, or a tariff plan selector.                                                                                                                                                                                                    |
| 3    | Click <b>Delete</b> .<br>The Delete Confirmation prompt appears.                                                                                                                                                                                                                                                                                                                                                                                    |
| 4    | Click <b>OK</b> .<br>The rate table is deleted from the database and the prompt appears.<br><b>Note:</b> An error displays if the rate table is associated with any of the following data: a billing period, CLI-DN, discount set, holiday, week, or a tariff plan selector. Remove the associations to the rate table by editing the relevant data on the other tabs in the Rating Management window before attempting to delete the record again. |
| 5    | Click <b>OK</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## Importing and Exporting Rate Data

### Introduction

The **Import** and **Export** buttons on the **Rate Tables** tab allow you to import and export rate tables and associated public data. Use this facility to create and modify rate data externally, using third party tools, before importing it into the system.

**Note:** Rate data is exported to a file and imported from a file in XML format. Refer to the files in the `/IN/html/Ccs_Service/xml/rateTable` directory on the SMS for more information.

## Data import

Use the import facility to import the following data from a file:

- New rate tables
- New public data
- Updates to existing public data

When you import rate data, the import file is pre-parsed to check that it conforms to the import file specification.

When there are errors in the import file, the following occurs:

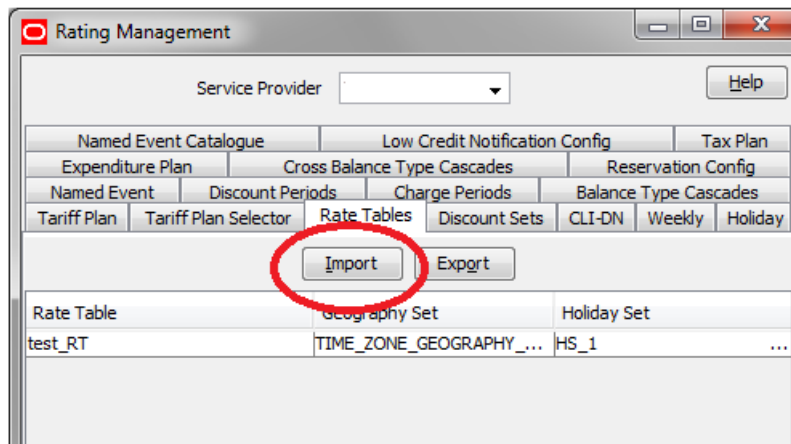
- The import process fails
- Any database changes are rolled back
- Details about the import file lines or sections that contain errors are reported to the user

**Warning:** You cannot update existing rate tables or delete rate data using this facility.

## Importing rate data

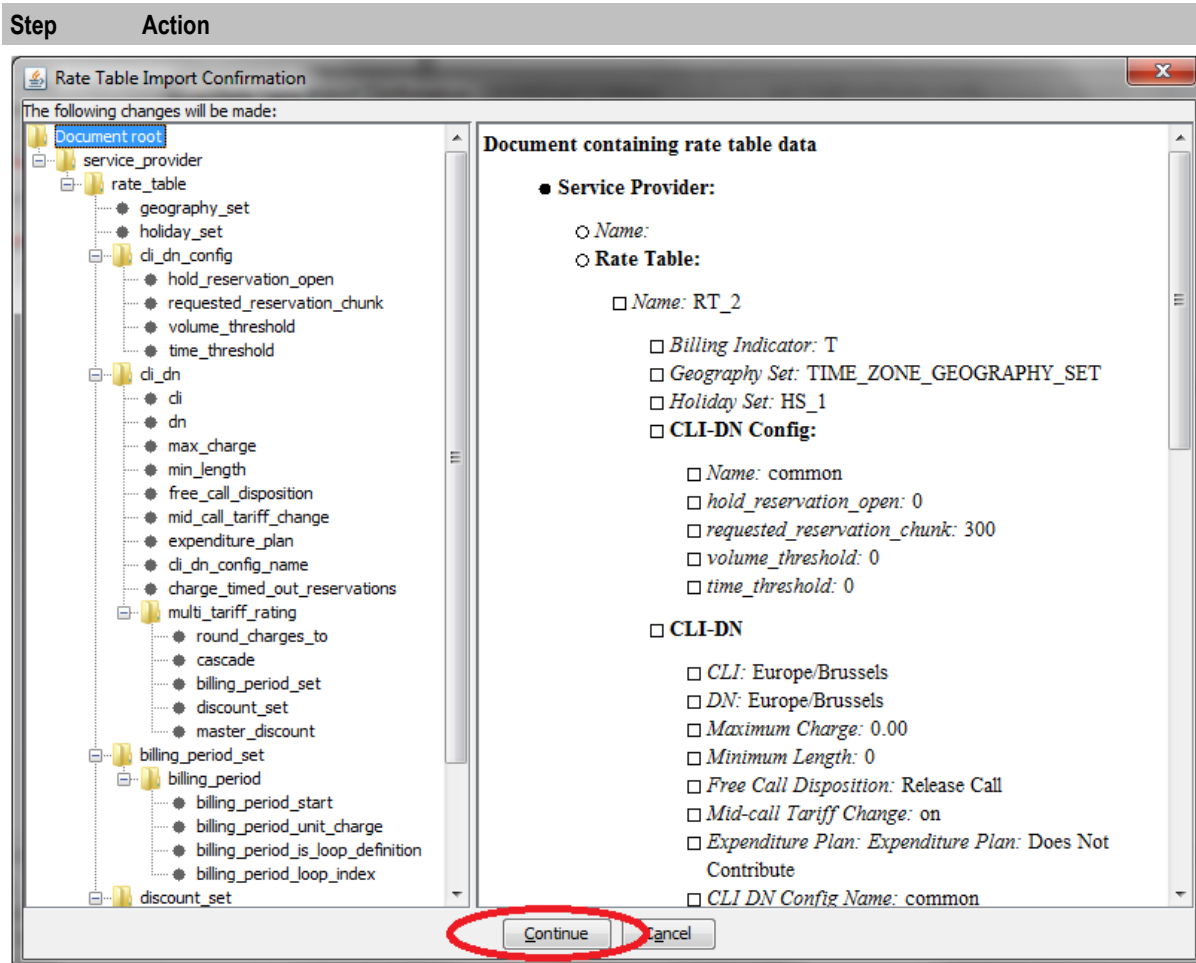
Follow these steps to import rate data from file.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list. |
| 2    | On the <b>Rate Tables</b> tab, click <b>Import</b> .<br><b>Result:</b> You see an Import screen.    |



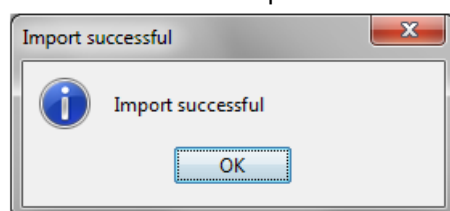
- Select the folder which holds the import file.
- In the **File name** field, type the import file name.  
**Warning:** The import file type must be XML.
- Click **Import**.  
**Result:** You see the Rate Table Import Confirmation screen.





6 Click **Continue**.

**Result:** You see the Import successful prompt.



**Note:** If there are errors in the XML file, a list of the errors in the XML file will be displayed instead of the Import successful prompt. Correct these errors and click **Import** to try again.

7 Click **OK**.

## Data export

Use the export facility to export a rate table or the public data associated with rate tables to a specified file.

When you export a rate table, the system exports all data that is privately related to the selected rate table, including:

- Name of the geography set being used
- CLI-DN listings and related tariffing details
- Rate table specific charge periods
- Associated weekly and holiday discount sets

When you export public data, the system exports all data that is publicly available to any rate table set up for this service provider, including:

- Public charge periods
- Balance type cascades
- Public discount periods
- Named events

## Exporting a rate table

Follow these steps to export a rate table and its related data to file.

| Step | Action                                                                                                                                                          |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                             |
| 2    | On the <b>Rate Tables</b> tab, select the rate table to export and click <b>Export</b> .<br><b>Result:</b> You see the Export Rate Table or Public Data prompt. |
| 3    | Click <b>Rate Table</b> .<br><b>Result:</b> You see an Export screen.                                                                                           |
| 4    | Select the folder in which you want to store the export file.                                                                                                   |
| 5    | In the <b>File name</b> field, type the export file name.<br><b>Warning:</b> The export file type must be set to XML.                                           |
| 6    | Click <b>Export</b> .<br><b>Result:</b> You see the Export successful prompt.                                                                                   |
| 7    | Click <b>OK</b> .                                                                                                                                               |

## Exporting public data

Follow these steps to export public data to file.

| Step | Action                                                                                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                                |
| 2    | On the <b>Rate Tables</b> tab, click <b>Export</b> .<br><b>Result:</b> If a rate is currently selected on the tab, you see the Export Rate Table or Public Data prompt. Click <b>Public Data</b> . |
| 3    | If none of the rates on the tab were selected, or you clicked <b>Public Data</b> , you see an Export screen.                                                                                       |
| 4    | Select the folder in which you want to store the export file.                                                                                                                                      |
| 5    | In the <b>File name</b> field, type the export file name.<br><b>Warning:</b> The export file type must be set to XML.                                                                              |
| 6    | Click <b>Export</b> .<br><b>Result:</b> You see the Export successful prompt.                                                                                                                      |
| 7    | Click <b>OK</b> .                                                                                                                                                                                  |

## Rounding During Rating Calculations

### Introduction

Rounding is applied to rating calculations when a voice call or data session is charged by CCS and the Voucher Wallet Servers (VWS).

NCC uses the following process to convert the units to be charged into a cost:

- 1 Determine the number of units to be charged, which takes into account the number of units already committed or charged and might be adjusted, for example, to suit the minimum call length definition.
- 2 Round the units up to the nearest multiple of the Billing Resolution.  
For example, for units to be charged of 22.5 seconds:
  - If Billing Resolution is 1 second, then the rounded units is 23 seconds
  - If Billing Resolution is 10 seconds, then the rounded units is 30 seconds
- 3 Multiply the units by the rate or rates defined for the Billing Periods.
- 4 Apply rounding to the calculated cost. You can apply any one of the following rounding methods:
  - Bankers
  - Ceiling
  - Commercial

#### Notes:

- This basic scenario can be complicated by using billing periods with different tariffs, cross balance tariffs, and so on. However, the rounding that is applied is fundamentally the same.
- Charging can occur at the end of a call or throughout the call, depending on the Commit Volume Threshold defined in the Reservation Configuration used to rate the call. If Mid-Session Commit is enabled, rounding occurs at each charge commit.
- Although rounding is applied at every interim commit, before rounding is applied, at each stage, the committed totals are first adjusted by the remainders from the previous commit, in such a manner that the total committed units for the call are the same as they would have been for an equivalent call with just one commit stage.

### Banker's Rounding

NCC applies bankers rounding, also known as symmetric rounding, to the calculated cost of a call or data session.

Bankers rounding is a way of performing neutral rounding of higher precision values to lower precision values. When converting floating point values to integers, it works as follows:

- Values with a fractional part above 0.5, round up to the nearest whole number
- Values with a fractional part below 0.5, round down to the nearest whole number
- Values with a fractional part equal to 0.5, round to the nearest *even* whole number

For example:

- 3.50 will be rounded to 4
- 4.25 will be rounded to 4
- 4.50 will be rounded to 4
- 4.75 will be rounded to 5
- 5.50 will be rounded to 6

**Note:** Rounding to the nearest even whole number guarantees neutral, or fair, rounding with a large sample.

## Ceiling Rounding

Ceiling rounding is a form of Round-Towards-Infinity rounding that you can apply to any fractional part.

With ceiling rounding, you can round fractional parts to Unit-Small(1s), Deca-Small(10s), and Hecto-Small(100s).

| Fractional Small | Ceiling Rounded to Unit Small | Ceiling Rounded to Deca Small | Ceiling Rounded to Hecto Small |
|------------------|-------------------------------|-------------------------------|--------------------------------|
| -11.1            | -12                           | -20                           | -100                           |
| -1.1             | -2                            | -10                           | -100                           |
| -0.9             | -1                            | -10                           | -100                           |
| -0.5             | -1                            | -10                           | -100                           |
| -0.1             | -1                            | -10                           | -100                           |
| +0.1             | +1                            | +10                           | +100                           |
| +0.5             | +1                            | +10                           | +100                           |
| +0.9             | +1                            | +10                           | +100                           |
| +1.1             | +2                            | +10                           | +100                           |
| +11.5            | +12                           | +20                           | +100                           |

In ceiling rounding, rounding granularity is determined by a rounding factor, RF, derived from the number of decimal places that you specify.

The Rounding Factor RF is given by the following formula:

$$10^{(\text{MaxDP} - \text{DP})}$$

where, MaxDP is the maximum number of decimal places, and DP is the decimal places you specify.

For example, in an installation with a currency base of 10000, you can apply rounding with granularity up to 4 decimal places:

| Decimal Places | Value   | Rounded Value             |
|----------------|---------|---------------------------|
| 0              | 10000.1 | 20000 (round up units)    |
| 1              | 01000.1 | 02000                     |
| 2              | 00100.1 | 00200                     |
| 3              | 00010.1 | 00020                     |
| 4              | 00001.1 | 00002 (round up subunits) |

The following table shows the rounding factors for a system currency base of 10000:

| Decimal Places | Applied Formula | Rounding Factor |
|----------------|-----------------|-----------------|
| 0              | $10^{(4 - 0)}$  | 10000           |
| 1              | $10^{(4 - 1)}$  | 1000            |
| 2              | $10^{(4 - 2)}$  | 100             |

|   |              |    |
|---|--------------|----|
| 3 | $10^{(4-3)}$ | 10 |
| 4 | $10^{(4-4)}$ | 1  |

RF is used to apply to a number, n, the ceil() function with a potentially higher granularity than simple unit rounding through the following formula:

$$n' = RF * (\text{ceil}(n/RF))$$

For example, if n = 10001 and RF = 10000, then:

$$\begin{aligned} n' &= 10000 * (\text{ceil}(10001/10000)) \\ &= 10000 * (\text{ceil}(1.0001)) \\ &= 10000 * (2) \\ &= 20000 \end{aligned}$$

## Commercial Rounding

Commercial rounding rounds positive .5 upwards and negative .5 downwards.

For example:

- -2.5 will be rounded to -3
- -0.5 will be rounded to -1
- +0.5 will be rounded to +1
- +2.5 will be rounded to +3

## Examples

The following examples illustrate how rounding is applied for a single charge per call. The following conditions apply:

- Mid-session commit (Reservation Configuration) is not configured
- Minimum Call Length: 0 seconds (CLI-DN Tariff)
- Billing Resolution: 1 second (CLI-DN Tariff)
- Rate: 15c/min (Billing Period)
- Duration is 49.1s and cost is 12c

The rating calculation is as follows:

- units to charge = 49.1s
- units rounded up = 50s
- cost (units \* rate) = 50 \* (15/60) = 50/4 = 12.5c
- cost after bankers rounding = 12c

## Example: Multiple Charges Per Call

The following examples illustrate how rounding is applied for a call with multiple charges:

- Mid-session commit - Commit Volume Threshold: 20 seconds (Reservation Configuration)
- Minimum Call Length: 0 seconds (CLI-DN Tariff)
- Billing Resolution: 1 second (CLI-DN Tariff)
- Rate: 15c/min (Billing Period)
- Total duration is 52.1s and cost is 13c

The rating calculation is as follows:

- 1 Processing first Subsequent Reservation (SR) Request
  - call duration = 29.7s
  - units to charge = 29.7s
  - units rounded up = 30s
  - cost (units \* rate) =  $30 * (15/60) = 30/4 = 7.5$
  - cost after bankers rounding = 8c
- 2 Processing second SR
  - call duration = 36.5s
  - already charged for 30 seconds, so units to charge = 6.5s
  - 6.5s is less than Commit Threshold of 20s so the units are not committed
- 3 Processing third SR
  - call duration = 50.6s
  - already charged for 30s, so units to charge = 20.6s
  - units rounded up = 21s
  - cost =  $21/4 = 5.25c$
  - cost adjustment =  $5.25 - 0.5c = 4.75c$
  - cost after bankers rounding = 5c
- 4 Processing Commit Reservation (CR) Request
  - call duration = 52.1s
  - already charged for 51s, so units to charge = 1.1s
  - units rounded up = 2s
  - cost =  $2/4 = 0.5c$
  - cost adjustment =  $0.5c - 0.25c = 0.25c$
  - cost after bankers rounding = 0c

**Note:** When committing funds during the call, an adjustment is made to the subsequent charges for any rounding that has taken place in the previous charge.

### Example: Single Charge Per Call with Rate Change During Call

The following examples illustrate how rounding is applied for a single charge per call with a rate change during the call:

- Mid-session commit - Commit Volume Threshold: 20 seconds (Reservation Configuration)
- Minimum Call Length: 0 seconds (CLI-DN Tariff)
- Billing Resolution: 1 second (CLI-DN Tariff)
- Rates: 15c/min for first 60s, 10c/min after the first 60s (Billing Period)
- Total duration is 110.1s and cost is 24c

The rating calculation is as follows:

- Processing Commit Reservation (CR) Request
- call duration = 110.1s
- units rounded up = 111s

The charge for the first 60s is calculated as:

- units to charge = 60s
- cost (units \* rate) =  $60 * (15/60) = 60/4 = 15c$

The charge for the remaining duration is calculated as:

- already charged for 60s so units to charge is 51s
- cost (units \* rate) =  $51 * (10/60) = 51/6 = 8.5c$

The total charge =  $15 + 8.5 = 23.5c$

- cost after bankers rounding = 24c

## Discount Sets

### Introduction

The **Discount Sets** tab lets you add, modify, and delete discount sets.

Discount sets are placeholder records which are used to connect rate tables and discounts. Discount sets are used by the following tariffs:

- *CLI-DN* (on page 369)
- *Weekly Tariffs* (on page 381)
- *Holiday Tariffs* (on page 385)

## Discount Sets tab

Here is an example **Discount Sets** tab.

The screenshot shows a window titled "Rating Management" with a blue title bar. Inside, there's a "Service Provider" dropdown menu set to "Boss" and a "Help" button. Below this is a tab labeled "Discount Sets". Under the tab is a "Rate Table" dropdown menu set to "GCRT01". A table with three columns is visible: "Name", "Description", and "Change User". The first row contains the values "GCdisc01", "test", and "SU". At the bottom of the window are four buttons: "New", "Edit", "Delete", and "Close".

## Discount Sets fields

This table describes the function of each field.

| Field      | Description                                                       |
|------------|-------------------------------------------------------------------|
| Rate Table | Displays the rate table selected on the <b>Discount Sets</b> tab. |
| Name       | The name of the discount set.                                     |



| Field       | Description                              |
|-------------|------------------------------------------|
| Description | A brief description of the discount set. |

## Discount Set screen

Here is an example Discount Set screen.

## Adding discount sets

Follow these steps to add a new discount set.

| Step | Action                                                                                                                                                                                |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                   |
| 2    | On the <b>Discount Sets</b> tab, select, from the <b>Rate Table</b> drop down box, the rate with which to associate a discount set.                                                   |
| 3    | Click <b>New</b> .<br><b>Result:</b> You see the <i>New Discount Set screen</i> (See example on page 363).<br>The <b>Rate Table</b> field displays the rate table selected in step 2. |
| 4    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Discount Sets fields</i> (on page 362).          |
| 5    | Click <b>Save</b> .                                                                                                                                                                   |

## Editing the discount sets

Follow these steps to edit an existing discount set.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list. |
| 2    | In the table on the <b>Discount Sets</b> tab, select the discount set to edit.                      |
| 3    | Click <b>Edit</b> .                                                                                 |

| Step | Action                                                                                |
|------|---------------------------------------------------------------------------------------|
|      | <b>Result:</b> You see the Edit <i>Discount Set</i> screen (See example on page 363). |
| 4    | Edit the details as described in <i>Discount Sets fields</i> (on page 362).           |
| 5    | Click <b>Save</b> .                                                                   |

## Deleting discount sets

Follow these steps to delete an existing discount set.

| Step | Action                                                                                                                                |
|------|---------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                   |
| 2    | In the table on the <b>Discount Sets</b> tab, select the discount set to delete.                                                      |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                       |
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> The record is deleted and you see the Discount Sets prompt. |
| 5    | Click <b>OK</b> .                                                                                                                     |

## Deriving a CLI-DN Tariff for a Call

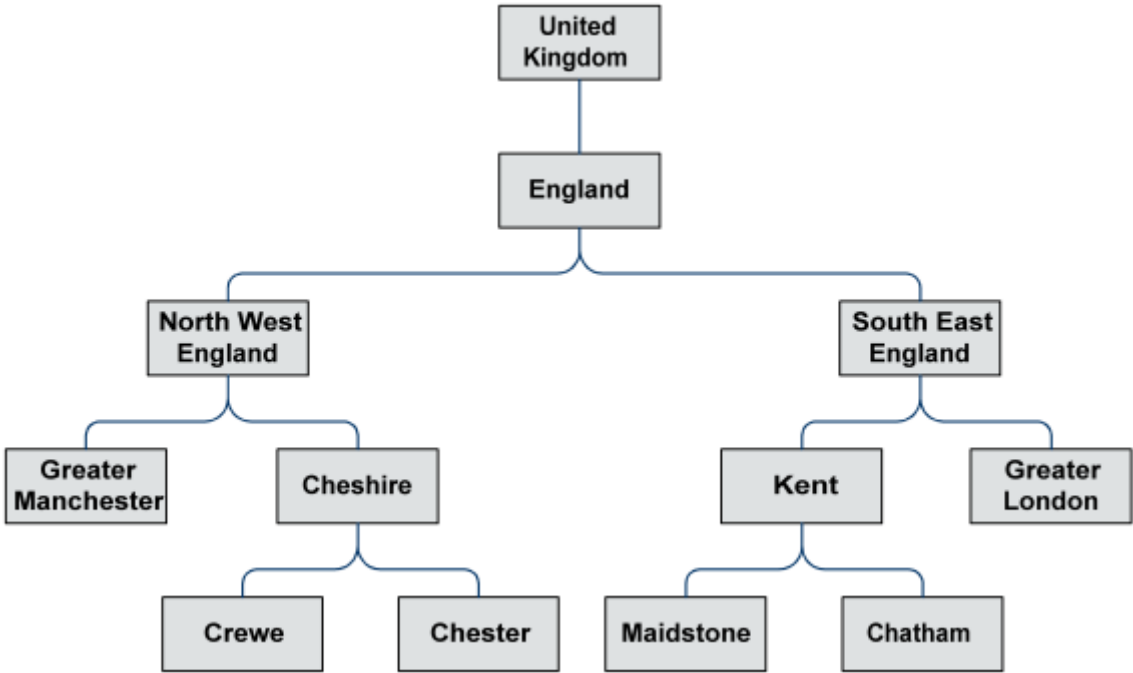
### Introduction

The CLI-DN tariff for a call is always chosen according to the closest matching link across a geography set. The system searches for:

- 1 a direct link first, then
- 2 looks for the nearest available link if a direct link is not available.

If no link between the two points is recognized, the call is disconnected. Location is based on the CC Calling Network Address tag from the call context profile.

**Example:** This diagram demonstrates the algorithm for obtaining the tariff. For simplicity's sake, all calling significant entries are on the left of England and all destination significant entries are on the right.



**Calling number X destination number**

The following table shows the links that are available for mapping calls.

| Calling Number     | Destination Number |
|--------------------|--------------------|
| North West England | Maidstone          |
| North West England | Kent               |
| Cheshire           | Greater London     |
| Cheshire           | South East England |
| Chester            | South East England |

**Destination geography map**

The following table shows the links mapping DN (Destination Numbers).

| Significant_Entry  | Lowest_Entry   | Level | Usage |
|--------------------|----------------|-------|-------|
| Greater London     | Greater London | 3     | 1     |
| Kent               | Chatham        | 3     | 1     |
| Kent               | Maidstone      | 3     | 1     |
| Maidstone          | Maidstone      | 4     | 1     |
| South East England | Chatham        | 2     | 2     |
| South East England | Greater London | 2     | 2     |
| South East England | Maidstone      | 2     | 2     |

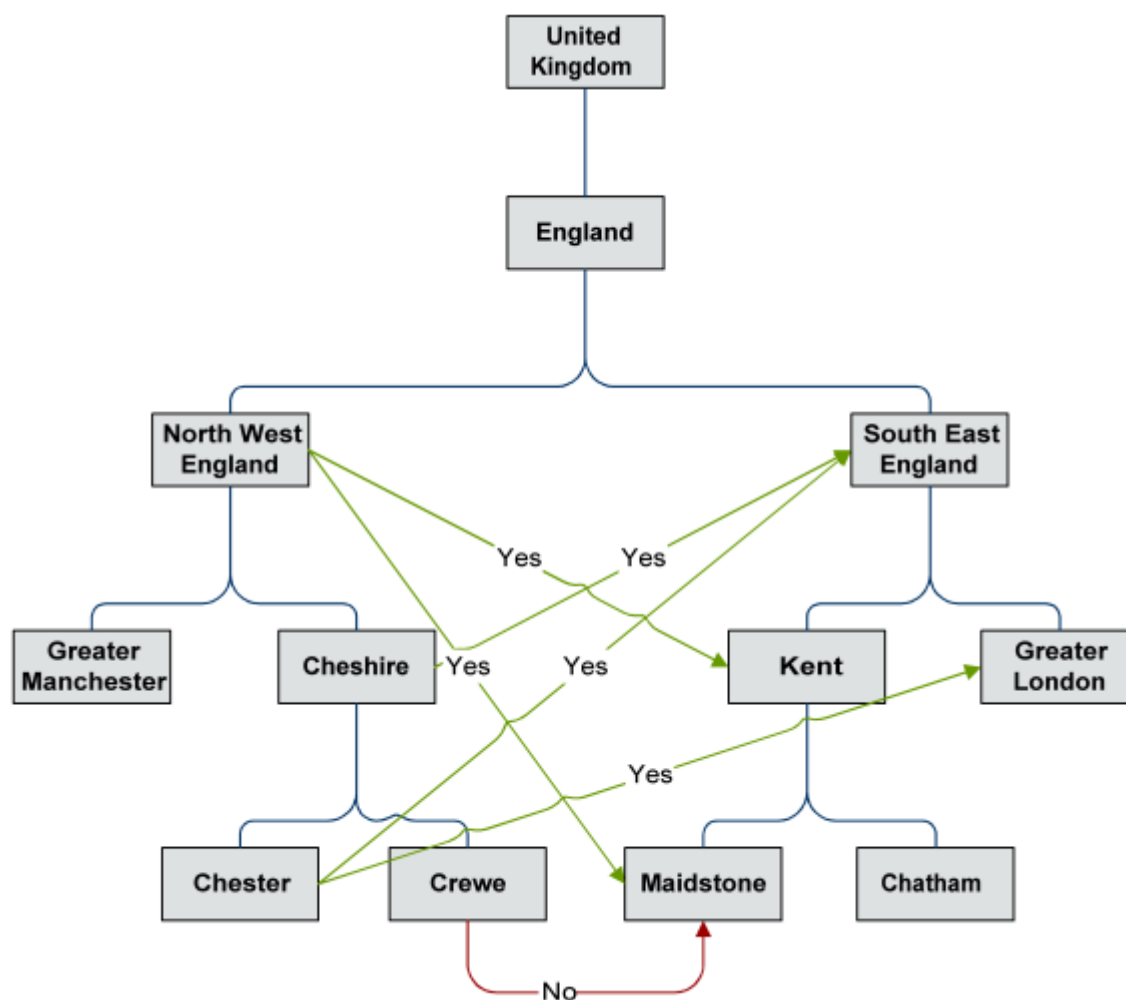
## Calling geography map

The following table shows the links mapping CLI (Calling Line Identifiers).

| Significant_Entry  | Lowest_Entry       | Level | Usage |
|--------------------|--------------------|-------|-------|
| Cheshire           | Chester            | 3     | 2     |
| Cheshire           | Crewe              | 3     | 2     |
| Chester            | Chester            | 4     | 1     |
| North West England | Chester            | 2     | 2     |
| North West England | Crewe              | 2     | 2     |
| North West England | Greater Manchester | 2     | 2     |

### Example CLI-DN tariff

Here is an example showing a call from Crewe to Maidstone, where 'yes' shows existing call links and 'no' shows that no link exists between Crewe and Maidstone.



To find a tariff, the system will return all significant entries for a CLI and DN and then rank them in CLI/DN level entry descending order and select the first hit. Where no record is found, the call is disconnected.

## First attempt

A call made from Crewe to Maidstone does not have a direct link mapped. Failing to find a link to Maidstone, the system will search for the most direct link. An attempt is made at each location along the same branch as Maidstone. The DNs on the Maidstone branch of the geography tree are Kent and South East England. There are no direct links from Crewe to either of these destinations.

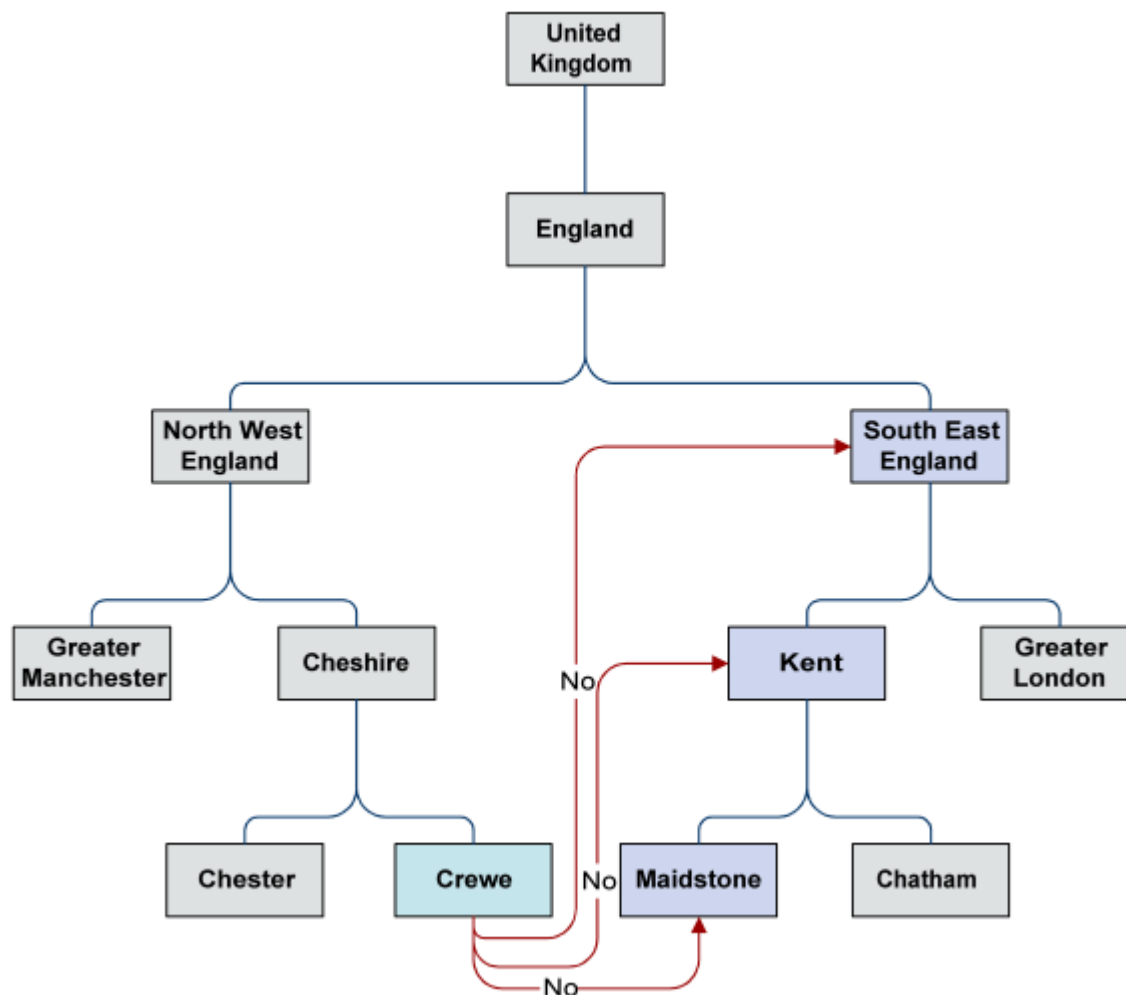
## DN significant entry

The following table shows the destination significant entries on the geography tree. A destination significant entry is a destination or the parent entry of a destination, or any parent entry of any destination significant entry.

| Destination Significant Entry | Level |
|-------------------------------|-------|
| Maidstone                     | 4     |
| Kent                          | 3     |
| South-East England            | 2     |

## Deriving a tariff - first attempt

Here is an example depicting the previous table and showing that there are no direct links from Crewe to any of the DN significant entries.



The first attempt to connect a call from Crewe to Maidstone searches for a direct link to a DN along the Maidstone branch of the geography tree.

## Second attempt

The system then searches from the next CLI along the same branch as Crewe, in an attempt to make a direct link.

The CLIs on the Crewe branch of the geography tree are Cheshire and North West England. There is no direct link from Cheshire to Kent, but there is a link from Cheshire to South East England (see *Destination geography map* (on page 365)). There is then no need to search for any links from North West England. The system will charge the call using Cheshire to South East England as the CLI-DN Tariff.

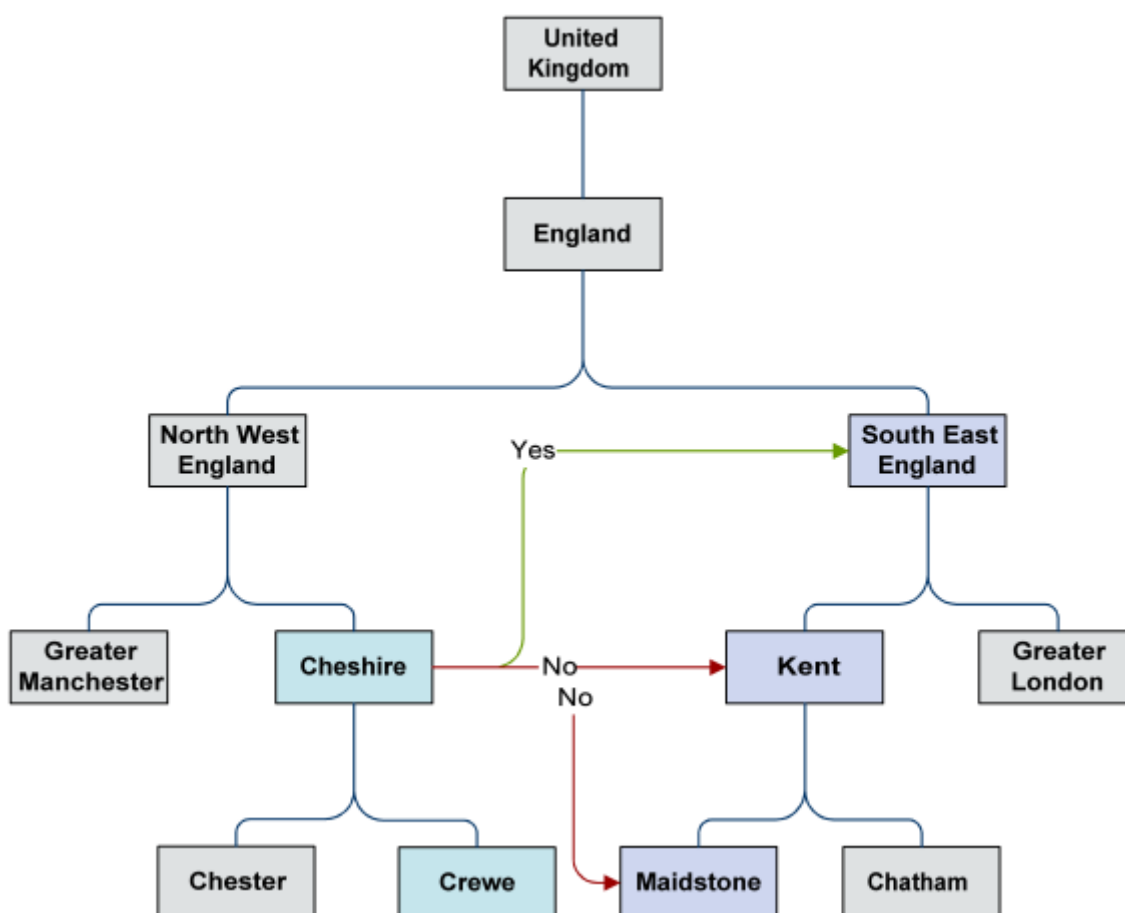
## CLI significant entry

The following table shows the calling significant entries on the geography tree. A calling significant entry is a CLI (calling location) or the parent entry of a CLI, or any parent entry of any calling significant entry.

| Calling Significant Entry | Level |
|---------------------------|-------|
| Cheshire                  | 3     |
| North West England        | 2     |

## Deriving a tariff - second attempt

Here is an example depicting the previous table and showing that there are no direct links from Crewe to any of the DN significant entries.



The second attempt to connect a call from Crewe to Maidstone searches for a direct link to a DN along the Crewe branch of the geography tree.

## CLI-DN

### Introduction

The **CLI-DN** tab lets you set up and maintain Calling Line Identifier (CLI) to Dialed Number (DN) tariffs for the selected customer. For more information, refer to *Deriving a CLI-DN Tariff for a Call* (on page 364).

Once a CLI-DN tariff has been created for a rate table, it may be used by a tariff plan to set geographical area to geographical area tariffs. The tariffs set in the **CLI-DN** tab are the basic tariffs that are used for the rate table. These are the tariffs that will be used for a call, unless it is overridden by a *Weekly Tariffs* (on page 381) or *Holiday Tariffs* (on page 385) tariff.

## CLI-DN tab

Here is an example **CLI-DN** tab.

## Finding CLI-DN tariffs

Follow these steps to search for the CLI-DN tariffs for a selected rate table.

| Step | Action                                                                                                                                                                                           |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                              |
| 2    | On the <b>CLI-DN</b> tab, select the <b>Rate Table</b> to search from the drop down list.<br><b>Result:</b> You see the geography set for the selected rate table in the top half of the screen. |



| Step                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Action                                                                                                                                                                                                                   |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | If required, select the CLI to search on from the list and click <b>Set</b> .                                                                                                                                            |
| 4                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | If required, select the DN to search on from the list and click <b>Set</b> .                                                                                                                                             |
| 5                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    | Click <b>Search</b> .<br><br><b>Result:</b> The CLI-DN tariffs that have be defined for the rate table and that match the search criteria are displayed in the table. Only the first 1000 matching records are returned. |
| <b>Notes:</b> <ul style="list-style-type: none"> <li>• If you leave both the CLI and DN fields empty when specifying your search criteria then all the configured CLI-DN tariffs will be returned for the rate table.</li> <li>• If you select either a CLI or a DN to search on, then the results will be restricted to the CLI-DN tariffs which exactly match the selected CLI or DN.</li> <li>• If you select a CLI and a DN to search on, the results will only include CLI-DN tariffs which exactly match both the selected CLI and the selected DN.</li> </ul> |                                                                                                                                                                                                                          |

## Using the CLI-DN tab

You use the **CLI-DN** tab to search for, and configure CLI-DN tariffs.

The tab operates as a split screen. In the top half of the screen you see:

- The selected rate table.
- A tree structure showing the geographical areas assigned to the rate table.
- The CLI and DN search fields.

In the bottom half of the screen you see a table for the search results. The CLI-DN tariffs that match the search criteria and that have been configured for the selected rate table are listed in the table.

You can expand either half of the screen to fill more of the tab by clicking on the up and down arrows between the two halves:

- To expand the top half of the screen to see more geographical areas, click the down arrow.
- To expand the bottom half of the screen to see more CLI-DN tariffs, click the up arrow.

## Configuring CLI-DN Tariffs

### Introduction

You can configure any of these types of tariffs:

- Single tariff
- Multi-tariff

### Multi-tariff CLI-DNs

Multi-tariff CLI-DNs provide the facility to split the CLI-DN tariff into its different revenue components. Each revenue component is identified by a specific service id and the tariff charging details are associated with it.

Whenever an EDR is generated from the CLI-DN tariff, it will include the revenue details for each service ID. This information can then be used for accounting purposes.

## Accessing the New CLI-DN Tariff screen

You use the New CLI-DN Tariff screen to configure new:

- Single tariff CLI-DNs
- Multi-tariff CLI-DNs

Follow these steps to access the New CLI-DN Tariff screen.

| Step | Action                                                                                                                                                                                                                                                                                                 |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                    |
| 2    | On the <b>CLI-DN</b> tab, select the rate table from the drop down list for which you want to configure a CLI-DN tariff.<br><b>Result:</b> You see a tree structure in the top half of the screen. It shows the geography set for the rate table and the list of all the available geographical areas. |
| 3    | Click <b>New</b> .<br><b>Result:</b> You see the New CLI-DN Tariff screen.                                                                                                                                                                                                                             |
| 4    | To configure a single tariff CLI-DN, see <i>Adding a single tariff CLI-DN</i> (on page 377).                                                                                                                                                                                                           |
| 5    | To configure a multi-tariff CLI-DN, see <i>Adding a multi-tariff CLI-DN</i> (on page 378).                                                                                                                                                                                                             |
| 6    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                    |

## CLI-DN tariff fields

This table describes the function of each field.

| Field                 | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rate Table            | The rate table that the CLI-DN tariff applies to.<br>This is set by the rate table which is selected from the <b>Rate Table</b> field in the <b>CLI-DN</b> tab when the record was first configured.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| CLI                   | Sets the CLI area for the tariff. This is the geographical area that calls are coming from.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| DN                    | Sets the free dialed number area for the tariff. This is the geographical area that calls are going to.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Free Call Disposition | Determines how a call is handled when a "freeCallIndicator" is received from the network.<br>An indicator such as this is occasionally received via INAP. It informs CCS that the call should be free, regardless of any defined tariff. CCS can handle a "freeCallIndicator" in one of three ways: <ul style="list-style-type: none"> <li>• Release a Call. It can release the call if it was told the call should be free.</li> <li>• Honour. It can take notice of the indication, and give the call for free (that is, honor the indication).</li> <li>• Ignore. It can ignore the indication and carry on and charge the call as defined in the tariffs.</li> </ul> <b>Note:</b> Not applicable to CAMEL/ISUP networks. |

| Field                                                           | Description                                                                                                                                                                                                                                                                                                                                                                         |
|-----------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Maximum Charge                                                  | <p>Sets the maximum amount that may be charged for calls made using this tariff. The unit of currency is displayed in brackets in the field name.</p> <p><b>Warning:</b> A value of zero (0) or a blank field means that there is no maximum charge.</p>                                                                                                                            |
| Minimum Length (secs),<br>Minimum Volume (data units)           | <p>Sets the minimum volume of time (seconds) or data (data units) which will be charged for a single call, even if the caller uses less time/data.</p> <p><b>Tip:</b> This must be a multiple of the billing resolution value or zero.</p>                                                                                                                                          |
| Expenditure Plan<br>(also listed as Contributes to Expenditure) | <p>Determines whether this CLI-DN contributes to expenditure calculations, and what expenditure plan it contributes to.</p> <p>This field is populated by the <b>Expenditure Plan</b> tab. For more information, see <i>Expenditure Plan</i> (on page 414).</p> <p><b>Tip:</b> When "Does Not Contribute" is selected the CLI-DN is excluded from all expenditure calculations.</p> |
| Cross Balance Type Cascade                                      | <p>Sets the cross balance type cascade for the CLI-DN tariff. This defines when a cross balance discount may apply, and also the cross balance type cascade to debit for charged calls using this CLI-DN.</p> <p>For more information, see <i>Cross Balance Type Cascades</i> (on page 417).</p>                                                                                    |
| Tariff Code                                                     | <p>Sets the tariff code to use for 16KHz charging.</p> <p><b>Tip:</b> Tariff codes are defined on the <b>Tariff Codes</b> tab in the ACS Resources screen. For more information, see <i>ACS User's Guide</i>.</p>                                                                                                                                                                   |
| Tax Plan                                                        | <p>Defines the tax plan to associate with this CLI-DN.</p> <p><b>Tip:</b> Tax plans are define on the <b>Tax Plan</b> tab in the Rating Management screen. For more information, see <i>Tax Plan</i> (on page 433).</p>                                                                                                                                                             |
| Mid-call Tariff Change                                          | <p>A switch which controls whether to apply, or stop applying, a discount to a call on this rate after the call has started.</p> <p><b>Tip:</b> When left deselected, the current discounted or non-discounted rate applies for the entire duration of the call.</p>                                                                                                                |
| Low Credit Notification Config                                  | <p>Defines the low credit configuration to use when explaining low credit to a subscriber. See <i>Low Credit Notification Config</i> (on page 430).</p>                                                                                                                                                                                                                             |
| Charge on Reservation Timeout                                   | <p>Select this check box to indicate that charging is to be applied for reservations that timeout.</p> <p><b>Note:</b> Charge on timeout will currently only commit used units and not granted units.</p>                                                                                                                                                                           |
| Reservation Config ID                                           | <p>Select the applicable reservation configuration to use, as defined in the <b>Reservation Config</b> tab.</p> <p>For more information, see <i>Reservation Config</i> (on page 420).</p>                                                                                                                                                                                           |
| Billing Resolution (secs)<br>Billing Resolution (data units)    | <p>Sets the unit length for billing calls either in seconds (SS) and hundredths of seconds (HH), or units of data. Uses the following format for time: SS.HH.</p> <p><b>Example:</b> 1.25 (One and a quarter seconds)</p>                                                                                                                                                           |

| Field                                            | Description                                                                                                                                                                                                                                                                                                                                     |
|--------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                  | <b>Tip:</b> The minimum length must be multiples of the billing resolution value.                                                                                                                                                                                                                                                               |
| Balance Type Cascade<br>(also listed as Cascade) | Sets the balance type cascade for the CLI-DN tariff. This field is populated by the records in the <b>Balance Type Cascades</b> tab.<br>For more information, see <i>Balance Type Cascades</i> (on page 410).                                                                                                                                   |
| Charge Period                                    | Sets the charge period for the CLI-DN tariff. This field is populated by the records in the <b>Charge Periods</b> tab.<br><b>Tip:</b> Charge periods that are not attached to a specific rate table are indicated by placing (G) after the charge period name (G for Global).<br>For more information, see <i>Charge Periods</i> (on page 402). |
| Discount Set                                     | Sets the discount set for the CLI-DN tariff.<br>This field is populated with the available discount sets for the selected rate table.<br>For more information, see <i>Discount Sets</i> (on page 361).                                                                                                                                          |
| Service Id                                       | A text field of up to 15 characters that sets the Service Id to use for the CLI-DN tariff. This field: <ul style="list-style-type: none"> <li>Is required for multi-tariff CLI-DNs (it is used to identify the separate revenue elements contained within the whole rate).</li> <li>Is optional for single-tariff CLI-DNs.</li> </ul>           |
| Master Discount                                  | Identifies the tariff for which any associated discount will be used to override the global settings as well as the local billing resolution and cascade.<br><b>Tip:</b> Only one of the definitions in a multi-tariff CLI-DN may be set to be the master discount tariff.                                                                      |

## CLI-DN Tariff screen

Here is an example CLI-DN Tariff screen.

**Note:** This example displays single-tariff mode. In Multi-tariff mode the bottom half of the screen is different.

## Using the New/Edit CLI-DN Tariff screen

You use the New and Edit CLI-DN Tariff screen to add new CLI-DN tariffs and edit existing ones.

Like the CLI-DN tab these screens are split into two halves. In the top half of the screen you see:

- The rate table for the CLI-DN
- A tree structure showing the geographical areas assigned to the rate table
- The CLI and DN fields

In the bottom half of the screen you see details of the CLI-DN tariff configuration.

You can expand the view of either half to fill the screen by clicking on the up and down arrows between the two halves:

- To expand the top half of the screen to see more geographical areas, click the down arrow.
- To expand the bottom half of the screen, click the up arrow.

When you add or edit a CLI-DN tariff and your cursor hovers over one of the following fields for two or three seconds, SMS displays the current configuration for the field in a popup window. This alleviates the need to obtain the information from other screens while configuring a CLI-DN tariff:

- Free Call Distribution
- Expenditure Plan
- Cross Balance Type Cascade
- Tariff Code
- Low-Credit Notification Config
- Tax Plan
- Reservation Config
- Balance Type Cascade
- Charge Period
- Discount Set

### Single-tariff mode

When you are in single tariff CLI-DN mode, the bottom half of the screen looks like this:

**Note:** This example is for a data rate table, the labels will change slightly for a voice rate table.

You switch to multi-tariff mode by clicking the **More** button. This button becomes enabled when you specify a value in the **Service Id** field.

## Multi-tariff mode

When you are in multi-tariff mode, the bottom half of the screen looks like this:

| Master Discount | Billing Resolution (secs) | Balance Type Cascade | Charge Period   | Discount Set | Service Id |
|-----------------|---------------------------|----------------------|-----------------|--------------|------------|
| Y               | 60.00                     | FD Free Changes      | VPLMN-MT-ON-IZ1 | No discounts | 1          |
| N               | 45.00                     | PromoVoice           | VPLMN-MT-ON-IZ1 | No discounts | 32         |

**Note:** This example is for a data rate table, the labels will change slightly for a voice rate table.

In multi-tariff mode you can:

- Add multi-tariff charges to the CLI-DN tariff configuration
- Edit multi-tariff charges
- Delete multi-tariff charges

## Adding a single tariff CLI-DN

Follow these steps to add a new single tariff CLI-DN.

**Tip:** For more information about a particular field in the New CLI-DN Tariff screen, see *CLI-DN tariff fields* (on page 372).

| Step | Action                                                                                                                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New CLI-DN Tariff screen, with the bottom half of the screen in single-tariff mode, select the <b>CLI</b> area for the tariff from the geography set in the top half of the screen and click <b>Set</b> . |
| 2    | Select the free <b>DN</b> area for the tariff from the geography set and click <b>Set</b> .                                                                                                                      |
| 3    | Configure this record by entering data in the rest of the fields on this screen.<br>For more information about the fields on this screen, see <i>CLI-DN tariff fields</i> (on page 372).                         |
| 4    | Click <b>Save</b> .                                                                                                                                                                                              |

## Editing a single tariff CLI-DN

Follow these steps to edit an existing single tariff CLI-DN.

| Step | Action                                                                                                                                                                                                            |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                                               |
| 2    | On the <b>CLI-DN</b> tab, search for the record to edit. See <i>Finding CLI-DN tariffs</i> (on page 370) for details.                                                                                             |
| 3    | Select the CLI-DN tariff in the table in the bottom half of the screen and click <b>Edit</b> .<br><b>Result:</b> You see the Edit CLI-DN Tariff screen, with the bottom half of the screen in single-tariff mode. |
| 4    | Edit the fields to reflect the changes you need to make.<br>For more information about the fields in this screen, see <i>CLI-DN tariff fields</i> (on page 372).                                                  |
| 5    | Click <b>Save</b> .                                                                                                                                                                                               |

## Adding a multi-tariff CLI-DN

Follow these steps to add a new multi-tariff CLI-DN.

**Tip:** For more information about a particular field in the New CLI-DN Tariff screen, see *CLI-DN tariff fields* (on page 372).

| Step | Action                                                                                                                                                                                                                                                                                                         |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New CLI-DN Tariff screen, from the geography set in the top half of the screen, select the <b>CLI</b> area for the tariff and click <b>Set</b> .                                                                                                                                                        |
| 2    | From the geography set select the free <b>DN</b> area for the tariff and click <b>Set</b> .                                                                                                                                                                                                                    |
| 3    | Specify values for the rest of the CLI-DN fields as described in <i>Adding a single tariff CLI-DN</i> (on page 377).<br><b>Note:</b> You must enter the <b>Service Id</b> for the CLI-DN tariff.                                                                                                               |
| 4    | Click <b>More</b> .<br><b>Note:</b> The <b>More</b> button becomes enabled when you enter the service Id.<br><b>Result:</b> You see the New CLI-DN Tariff screen re-displayed in multi-tariff mode. The tariff details you have just entered appear in the first row in the table at the bottom of the screen. |
| 5    | Click <b>New</b> .<br><b>Result:</b> You see the New Multi-Tariff Charge screen.                                                                                                                                                                                                                               |
| 6    | Add a new charge. For details, see <i>Adding a new multi-tariff charge</i> (on page 379).                                                                                                                                                                                                                      |
| 7    | Repeat steps 5 and 6 until all the charges required to complete the configuration for the multi-tariff CLI-DN have been added.                                                                                                                                                                                 |
| 8    | Click <b>Save</b> .<br><b>Note:</b> The <b>Save</b> button only becomes enabled when all the required fields for the CLI-DN have been entered correctly.                                                                                                                                                       |



Multi-Tariff Charge screen

Here is an example Multi-Tariff Charge screen.

New Multi-Tariff Charge

Help

Billing Resolution (secs)60

Balance Type CascadeFD Free Changes

Charge PeriodVPLMN-MT-ON-IZ1

Discount SetNo discounts

Service Id123456

Master Discount☒

OkCancel

**Note:** When your cursor hovers over one of the following fields for two or three seconds, SMS displays the current configuration for the field in a popup window. This alleviates the need to obtain the information from other screens while configuring a multi-tariff.

- Balance Type Cascade
- Charge Period
- Discount Set

Adding a new multi-tariff charge

Follow these steps to add a new multi-tariff charge to a CLI-DN tariff.

**Tip:** For more information about a particular field, see *CLI-DN tariff fields* (on page 372).

| Step | Action                                                                                                                                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New Multi-Tariff Charge screen, set the <b>Billing Resolution</b> for the charge.<br><b>Note:</b> The minimum length and low credit warning field values specified for the CLI-DN tariff must be multiples of the billing resolution value. |
| 2    | Select the <b>Cascade</b> for the charge from the drop down list.                                                                                                                                                                                  |
| 3    | Select the <b>Charge Period</b> for the charge from the drop down list.                                                                                                                                                                            |
| 4    | Select the <b>Discount Set</b> for the charge from the drop down list.                                                                                                                                                                             |
| 5    | Type in the <b>Service Id</b> for the charge.<br><b>Note:</b> This is a required field.                                                                                                                                                            |
| 6    | If you want to set this charge to be the master discount charge, select the <b>Master Discount</b> check box..                                                                                                                                     |
| 7    | Click <b>Save</b> .                                                                                                                                                                                                                                |

## Editing a multi-tariff CLI-DN

Follow these steps to edit an existing multi-tariff CLI-DN.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 2    | On the <b>CLI-DN</b> tab, search for the record you want to edit. See <i>Finding CLI-DN tariffs</i> (on page 370) for details.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 3    | Select the multi-tariff CLI-DN in the table in the bottom half of the screen and click <b>Edit</b> .<br><br><b>Tip:</b> A multi-tariff CLI-DN is indicated in the table by a tick in the Multi-Tariffs column.<br><br><b>Result:</b> You see the Edit CLI-DN Tariff screen in multi-tariff mode.                                                                                                                                                                                                                                                                                                                   |
| 4    | Edit the following fields as required: <ul style="list-style-type: none"> <li>• Free Call Disposition</li> <li>• Maximum Charge</li> <li>• Minimum Length</li> <li>• Low Credit Notification Config</li> <li>• Charge On Reservation Timeout</li> <li>• Expenditure Plan</li> <li>• Cross Balance Type Cascade</li> <li>• Tariff Code</li> <li>• Tax Plan</li> <li>• Mid-call Tariff Change</li> <li>• Reservation Config</li> </ul> <p>For more information about a particular field, see <i>CLI-DN tariff fields</i> (on page 372).</p> <p><b>Tip:</b> You can also reset the CLI and DN fields if required.</p> |
| 5    | Add additional multi-tariff charges and edit existing multi-tariff charges as required: <ul style="list-style-type: none"> <li>• To add an additional charge, click <b>New</b>.<br/><b>Result:</b> You see the New Multi-Tariff Charge screen.</li> <li>• To edit an existing charge, select it in the table at the bottom of the screen, and click <b>Edit</b>.<br/><b>Result:</b> You see the Edit Multi-Tariff Charge screen.</li> </ul>                                                                                                                                                                        |
| 6    | In the New/Edit Multi-Tariff Charge screen, specify the multi-tariff charge details as described in <i>Adding a new multi-tariff charge</i> (on page 379).                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 7    | Delete any multi-tariff charges that are no longer required: <ul style="list-style-type: none"> <li>• To delete a charge, select it in the table and click <b>Delete</b>.</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 8    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

## Deleting CLI-DNs

Follow these steps to delete an existing CLI-DN.

**Warning:** When you delete a multi-tariff CLI-DN, then all the multi-tariff charges defined for the CLI-DN are also deleted.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list. |

| Step | Action                                                                                                                                |
|------|---------------------------------------------------------------------------------------------------------------------------------------|
| 2    | On the <b>CLI-DN</b> tab, search for the record to delete. See <i>Finding CLI-DN tariffs</i> (on page 370) for details.               |
| 3    | In the table in the bottom half of the screen, select the record to delete.                                                           |
| 4    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                       |
| 5    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> The record is deleted and you see the CLI-DN Tariff prompt. |
| 6    | Click <b>OK</b> .                                                                                                                     |

## Weekly Tariffs

### Introduction

The **Weekly** tab lets you set up and maintain weekly tariffs for the selected customer. You can:

- Assign a cost or volume to specified days of the week
- Assign the tariff to a rate table

**Example:** A tariff may be set up for a rate table so that all calls from 18:00 on Friday to 06:00 on Monday will have a maximum charge of \$5.95.

Weekly tariffs override the basic tariffs that are set for the rate table in the **CLI-DN** tab.

## Weekly tab

Here is an example **Weekly** tab.

**Rating Management**

Service Provider: **CNCCtemplate** Help

**Weekly**

| Rate Table      | Discount Set    | Start Time (GMT) | End Time (GMT)  |
|-----------------|-----------------|------------------|-----------------|
| Bronze HPLMN MO | Bronze HPLMN MO | Sunday 00:00     | Monday 07:00    |
| Bronze HPLMN MO | Bronze HPLMN MO | Monday 18:00     | Tuesday 07:00   |
| Bronze HPLMN MO | Bronze HPLMN MO | Tuesday 18:00    | Wednesday 07:00 |
| Bronze HPLMN MO | Bronze HPLMN MO | Wednesday 18:00  | Thursday 07:00  |
| Bronze HPLMN MO | Bronze HPLMN MO | Thursday 18:00   | Friday 07:00    |
| Bronze HPLMN MO | Bronze HPLMN MO | Friday 18:00     | Saturday 24:00  |
| Bronze NGN      | Bronze NGN      | Sunday 00:00     | Monday 07:00    |
| Bronze NGN      | Bronze NGN      | Monday 18:00     | Tuesday 07:00   |
| Bronze NGN      | Bronze NGN      | Tuesday 18:00    | Wednesday 07:00 |
| Bronze NGN      | Bronze NGN      | Wednesday 18:00  | Thursday 07:00  |
| Bronze NGN      | Bronze NGN      | Thursday 18:00   | Friday 07:00    |
| Bronze NGN      | Bronze NGN      | Friday 18:00     | Saturday 24:00  |
| Gold HPLMN MO   | Gold HPLMN MO   | Sunday 00:00     | Monday 07:00    |
| Gold HPLMN MO   | Gold HPLMN MO   | Monday 18:00     | Tuesday 07:00   |
| Gold HPLMN MO   | Gold HPLMN MO   | Tuesday 18:00    | Wednesday 07:00 |
| Gold HPLMN MO   | Gold HPLMN MO   | Wednesday 18:00  | Thursday 07:00  |
| Gold HPLMN MO   | Gold HPLMN MO   | Thursday 18:00   | Friday 07:00    |
| Gold HPLMN MO   | Gold HPLMN MO   | Friday 18:00     | Saturday 24:00  |
| Gold NGN        | Gold NGN        | Sunday 00:00     | Monday 07:00    |
| Gold NGN        | Gold NGN        | Monday 18:00     | Tuesday 07:00   |
| Gold NGN        | Gold NGN        | Tuesday 18:00    | Wednesday 07:00 |
| Gold NGN        | Gold NGN        | Wednesday 18:00  | Thursday 07:00  |
| Gold NGN        | Gold NGN        | Thursday 18:00   | Friday 07:00    |
| Gold NGN        | Gold NGN        | Friday 18:00     | Saturday 24:00  |
| Silver HPLMN MO | Silver HPLMN MO | Sunday 00:00     | Monday 07:00    |
| Silver HPLMN MO | Silver HPLMN MO | Monday 18:00     | Tuesday 07:00   |
| Silver HPLMN MO | Silver HPLMN MO | Tuesday 18:00    | Wednesday 07:00 |
| Silver HPLMN MO | Silver HPLMN MO | Wednesday 18:00  | Thursday 07:00  |
| Silver HPLMN MO | Silver HPLMN MO | Thursday 18:00   | Friday 07:00    |
| Silver HPLMN MO | Silver HPLMN MO | Friday 18:00     | Saturday 24:00  |

New Edit Delete Close

## Weekly Tariff screen

Here is an example Edit Weekly Tariff screen.

## Weekly Tariffs fields

This table describes the function of each field.

| Field         | Description                                                                                                                                                                                                                                                                |
|---------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rate Table    | <p>The rate table assigned to this tariff.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>The drop down list displays all the rate tables available to the customer.</li> <li>This field cannot be edited after assigned to the weekly tariff.</li> </ul> |
| Discount Sets | <p>The discount set assigned to this weekly tariff.</p> <p><b>Tip:</b> The drop down list displays all the discount sets available to the customer.</p>                                                                                                                    |

| Field                               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Start Time (GMT)                    | The time and day of the week when this tariff activates.<br><b>Note:</b> This time is in the GMT time zone.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| End Time (GMT)                      | The time and day of the week when this tariff stops being active.<br><b>Note:</b> This time is in the GMT time zone.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Discount Period                     | The discount period you want to assign to this weekly tariff.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Maximum Charge                      | The maximum charge that can be applied to any call using this tariff. This value will be in the same currency as selected for the rate table in the <b>Rate Table</b> field. This may be a time based charge or a monetary unit based charge.<br><b>Warning:</b> If the value in this field is set to 0, calls using this tariff will not be charged. Either the <b>Maximum Charge</b> field must be populated, or both the <b>Initial Discount</b> and the <b>Remaining Discount</b> fields must contain a value greater than 0.                                                                                                                                        |
| Minimum Length (secs/data unit)     | The minimum period for which the calls will be charged for using this tariff.<br><b>Note:</b> This value is the minimum length of time or data that will be charged for a single call, even if the caller uses lesser time or data.                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Billing Resolution (secs/data unit) | The unit length to use for billing calls using this weekly tariff. <ul style="list-style-type: none"> <li>For time, the unit length is defined in seconds (SS) and hundredths of seconds (HH) using the format: SS.HH</li> <li>For data, the unit length is an integer.</li> </ul> <b>Examples:</b> <ul style="list-style-type: none"> <li>Telco A, charging by the minute (rounding up to the next full minute) would have this configured as 60.00</li> <li>Telco B, charging by the second (rounding up to the next full second) would have this configured as 1.00</li> <li>Telco C, charging for each 1000 data units would have this configured as 1000</li> </ul> |
| Low Credit Config                   | The notification template(s) to use when a credit value has reached a trigger value(s). Usually used for low credit warnings. To create or maintain these templates, see <i>Low Credit Notification Config</i> (on page 430).                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Cascade                             | The balance type cascade which will be assigned to this weekly tariff.<br><b>Note:</b> This drop down list displays all the balance type cascades available to a customer. To create new balance type cascades, see <i>Balance Type Cascades</i> (on page 410).                                                                                                                                                                                                                                                                                                                                                                                                          |
| Tariff Code                         | The tariff code to use for 16 KHz charging. The tariff codes listed are defined on the <b>Tariff Codes</b> tab in the ACS Resources screen.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |

## Adding weekly tariffs

Follow these steps to add a new weekly tariff.

| Step | Action                                                                                                                                 |
|------|----------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                    |
| 2    | On the <b>Weekly</b> tab, click <b>New</b> .<br><b>Result:</b> You see the New Weekly Tariff screen relevant to the billing indicator. |

| Step | Action                                                                                                                                                                        |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Weekly Tariffs fields</i> (on page 383). |
| 4    | Click <b>Save</b> .                                                                                                                                                           |

## Editing weekly tariffs

Follow these steps to edit an existing weekly tariff.

| Step | Action                                                                                                                                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                |
| 2    | In the table on the <b>Weekly</b> tab, select the record you want to edit.                                                                                                                                                                         |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the Edit Weekly Tariff screen relevant to the billing indicator.                                                                                                                                     |
| 4    | Edit the fields to reflect the changes you need to make.<br>For more information about the fields in this screen, see <i>Weekly Tariffs fields</i> (on page 383).<br><b>Note:</b> The <b>Rate Table</b> field is grayed out and cannot be changed. |
| 5    | Click <b>Save</b> .                                                                                                                                                                                                                                |

## Deleting weekly tariffs

Follow these steps to delete an existing weekly tariff.

| Step | Action                                                                                                                                |
|------|---------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                   |
| 2    | In the table on the <b>Weekly</b> tab, select the record to delete.                                                                   |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                       |
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> The record is deleted and you see the weekly tariff prompt. |
| 5    | Click <b>OK</b> .                                                                                                                     |

## Holiday Tariffs

### Introduction

You use the **Holiday** tab to configure holiday tariffs for the service provider and to assign them to rate tables. The billing indicator set for the rate table determines whether the tariff is based on the call length or the data volume. For more information about rate tables, see *Rate Tables* (on page 350).

You can configure a holiday tariff for a single day or for a range of days, and you can configure tariffs for multiple time periods within a holiday.

**Example 1:** A holiday tariff could be configured so that all calls on Christmas Day have a 50% discount.

**Example 2:** A holiday tariff could be configured for a three day period that applies a 50% discount at night and a 25% discount during the day.

**Note:** Holiday tariffs override weekly tariffs and the basic tariffs that are set for the rate table in the **CLI-DN** tab.

## Holiday Tariff Dialog

Here is an example holiday tariff dialog.

**New Holiday Tariff**

Rate Table: Bronze Callback

Discount Set: No discounts

Holiday: Christmas

Every Day: ☒

Start Month: December

Start Day: 25

Start Time (GMT): 00:00

End Month: December

End Day: 25

End Time (GMT): 24:00

Discount Period: Bronze holiday discount

Maximum Charge (E):

Minimum Length (secs):

Billing Resolution (secs):

Low Credit Config: -- No Notifications --

Cascade: dummyVASCascade

Tariff Code:

Selected holiday period:  
Dec 25

Apply Save Cancel



## Holiday tab

Here is an example **Holiday** tab.

Rating Management

Service Provider: ICNCCtemplate

Help

Holiday

| Rate Table      | Discount Set    | Holiday    |
|-----------------|-----------------|------------|
| Bronze HPLMN MO | Bronze HPLMN MO | Christmas  |
| Bronze HPLMN MO | Bronze HPLMN MO | Labour Day |
| Bronze HPLMN MO | Bronze HPLMN MO | New Year   |
| Bronze NGN      | Bronze NGN      | Christmas  |
| Bronze NGN      | Bronze NGN      | Labour Day |
| Bronze NGN      | Bronze NGN      | New Year   |
| Gold HPLMN MO   | Gold HPLMN MO   | Christmas  |
| Gold HPLMN MO   | Gold HPLMN MO   | Labour Day |
| Gold HPLMN MO   | Gold HPLMN MO   | New Year   |
| Gold NGN        | Gold NGN        | Christmas  |
| Gold NGN        | Gold NGN        | Labour Day |
| Gold NGN        | Gold NGN        | New Year   |
| Silver HPLMN MO | Silver HPLMN MO | Christmas  |
| Silver HPLMN MO | Silver HPLMN MO | Labour Day |
| Silver HPLMN MO | Silver HPLMN MO | New Year   |
| Silver NGN      | Silver NGN      | Christmas  |
| Silver NGN      | Silver NGN      | Labour Day |
| Silver NGN      | Silver NGN      | New Year   |

New Edit Delete Close

## Holiday Tariffs Fields

This table describes the fields in the **New Holiday Tariff** and **Edit Holiday Tariff** dialogs.

| Field      | Description                                                                                                                                                         |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Rate Table | The rate table that this tariff is assigned to. All the rate tables that are available to the service provider (ACS customer) appear in the <b>Rate Table</b> list. |

| Field                                                     | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|-----------------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                                                           | <b>Note:</b> After saving a holiday tariff, you can no longer change the rate table assigned to it.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| Discount Set                                              | The discount set assigned to this holiday tariff. All the discount sets that are available to the service provider appear in the <b>Discount Set</b> list.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Holiday                                                   | The holiday set that this tariff applies to.<br>This list displays all the holiday sets that a service provider can use. For information about creating holiday sets or granting permission to a service provider to use a holiday set, see <i>ACS User's Guide</i> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Every Day                                                 | (Optional) Select to specify daily tariffs.<br><b>Note:</b> This is the default and must be selected when the holiday period defined in the selected holiday set is for a single day. If you deselect <b>Daily Tariff</b> , you must specify the start and end month, and start and end day, for the holiday tariff.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Start Month                                               | (Optional) Specifies the first month in which this holiday tariff applies.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Start Day                                                 | (Optional) Specifies the day in the month to start applying this holiday tariff.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |
| Start Time (GMT)                                          | Sets the time of day, in the GMT time zone, when this holiday tariff becomes active.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| End Month                                                 | (Optional) Specifies the last month in which this holiday tariff applies.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| End Day                                                   | (Optional) Specifies the day in the month to stop applying this holiday tariff.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| End Time (GMT)                                            | Sets the time of day, in the GMT time zone, when this holiday tariff stops being active.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Discount Period                                           | Sets the discount period for the selected time period, in the local time zone, that you want to assign to this holiday tariff. The discount period determines the percentage discount to apply. See <i>Discount Periods</i> (on page 398) for more information.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Maximum Charge                                            | (Optional) Sets the maximum charge, in units of the global currency, that you want to apply to any call using this tariff.<br><b>Note:</b> The symbol for the global currency is displayed next to the <b>Maximum Charge</b> field name.<br>Specify a currency value of up to nine digits by using the following format:<br><i>Main_unitsSeparatorSub_units</i> where: <ul style="list-style-type: none"> <li><i>Main_units</i> is the currency main units value. You can specify a value that is up to seven digits long</li> <li><i>Separator</i> is the separator defined for the global currency</li> <li><i>Sub_units</i> is the currency sub-units value. You can specify a value that is up to two digits long</li> </ul> <b>Note:</b> A value of zero (0) or a blank field means that there is no maximum charge. |
| Minimum Length (secs)<br>or<br>Minimum Volume (data unit) | Sets the minimum length of time (in seconds) or volume of data (in data units) to charge for calls that use this tariff. If the caller uses less time or data, they are still charged this amount.<br><b>Note:</b> The charge type depends on the billing indicator set for the selected rate table.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

| Field                               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Billing Resolution (secs/data unit) | <p>Sets the unit length to use for billing calls using this holiday tariff. For units of:</p> <ul style="list-style-type: none"> <li>Time, the unit length is defined in seconds <i>SS</i> and hundredths of seconds <i>HH</i> by using the format: <i>SS.HH</i></li> <li>Data, the unit length is an integer value.</li> </ul> <p><b>Examples:</b></p> <ul style="list-style-type: none"> <li>Telco A, charging by the minute (rounding up to the next full minute) would have this configured as 60.00</li> <li>Telco B, charging by the second (rounding up to the next full second) would have this configured as 1.00</li> <li>Telco C charging for each 1000 data units would have this configured as 1000</li> </ul> |
| Low Credit Config                   | The notification templates to use when a credit value reaches a threshold value for sending low credit warnings. To create or maintain these templates, see <i>Low Credit Notification Config</i> (on page 430).                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Cascade                             | <p>The balance type cascade to assign to this holiday tariff.</p> <p><b>Note:</b> The <b>Cascade</b> list displays all the balance type cascades available to a service provider. For information about configuring balance type cascades, see <i>Balance Type Cascades</i> (on page 410).</p>                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Tariff Code                         | (Optional) The tariff code to use for 16 KHz charging. You define the available tariff codes on the <b>Tariff Codes</b> tab in the ACS Resources screen.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
| Selected holiday period             | Displays the holiday period start and end dates, time period start and end times, and a list of the discount periods that have been defined within those dates and times.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## Adding Holiday Tariffs

Follow these steps to add a new holiday tariff.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                                                                                                                                                                                                                |
| 2    | On the <b>Holiday</b> tab, click <b>New</b> .<br>The New <i>Holiday Tariff Dialog</i> (See example on page 386) opens. For information about the holiday tariff fields, see <i>Holiday Tariffs Fields</i> (on page 387).                                                                                                                                                                                                                                                                                           |
| 3    | Select the rate table, discount set, and holiday set for this tariff.                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 4    | Do one of the following: <ul style="list-style-type: none"> <li>To configure a daily tariff for the holiday, select <b>Every Day</b>. The <b>Every Day</b> option is automatically selected for holidays that are for only one day, and cannot be changed.</li> <li>To configure a tariff for a specific date range, deselect <b>Every Day</b> and select the date range for the holiday tariff from the lists in the <b>Start Month</b>, <b>Start Day</b>, <b>End Month</b> and <b>End Day</b> fields.</li> </ul> |
| 5    | Select the time period during which this tariff will apply from the lists in the <b>Start Time (GMT)</b> and <b>End Time (GMT)</b> fields.                                                                                                                                                                                                                                                                                                                                                                         |

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 6    | <p>Complete the tariff configuration by performing the following steps:</p> <ol style="list-style-type: none"> <li>Select the holiday discount to apply from the <b>Discount Periods</b> list.</li> <li>If required, enter values for the maximum charge, minimum length, and billing resolution for this tariff.</li> <li>Select the low credit warning notifications to send from the <b>Low Credit Config</b> list.</li> <li>Select the balance type cascade to use from the <b>Cascade</b> list.</li> <li>If you want to send SCI or FCI charging information, select the tariff code to use from the <b>Tariff Code</b> list.</li> </ol> |
| 7    | <p>(Optional) If you want to configure additional time periods for this holiday tariff, perform the following steps for each additional period:</p> <ol style="list-style-type: none"> <li>Click <b>Apply</b>.</li> <li>Repeat steps 5 and 6.</li> </ol> <p>The configured periods display in the <b>Defined periods</b> list.</p> <p><b>Important:</b> You must ensure that periods do not overlap when configuring multiple discount periods for a holiday tariff.</p>                                                                                                                                                                      |
| 8    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

## Editing holiday tariffs

Follow these steps to edit an existing holiday tariff.

**Note:** To configure additional time periods for an existing holiday tariff, see *Adding Multiple Time Periods to an Existing Holiday Tariff* (on page 390).

| Step | Action                                                                                                                                                                                                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                |
| 2    | On the <b>Holiday</b> tab, select the record you want to edit.                                                                                                                                                                                                     |
| 3    | Click <b>Edit</b> .<br>The <b>Edit Holiday Tariff</b> dialog displays.                                                                                                                                                                                             |
| 4    | <p>Edit the fields to reflect the changes you need to make.</p> <p>For more information about the fields in this screen, see <i>Holiday Tariffs Fields</i> (on page 387).</p> <p><b>Note:</b> The <b>Rate Table</b> field is grayed out and cannot be changed.</p> |
| 5    | Click <b>Save</b> .                                                                                                                                                                                                                                                |

## Adding Multiple Time Periods to an Existing Holiday Tariff

Follow these steps to add one or more time periods to an existing holiday tariff.

| Step | Action                                                                                                                                                                                                                             |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>On the <b>Holiday</b> tab, click <b>New</b>.</p> <p>The <b>New Holiday Tariff Dialog</b> (See example on page 386) opens. For information about the holiday tariff fields, see <i>Holiday Tariffs Fields</i> (on page 387).</p> |
| 2    | <p>Select the rate table, discount set, holiday set, and holiday dates for the existing holiday tariff.</p> <p>The holiday periods that are already defined for the holiday tariff display in the <b>Defined periods</b> list.</p> |

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | Select the time period that you want to add to this tariff from the lists in the <b>Start Time (GMT)</b> and <b>End Time (GMT)</b> fields. Ensure that the time period does not overlap an existing time period.                                                                                                                                                                                                                                                                                                                                                                                                                              |
| 4    | <p>Complete the tariff configuration by performing the following steps:</p> <ol style="list-style-type: none"> <li>Select the holiday discount to apply from the <b>Discount Periods</b> list.</li> <li>If required, enter values for the maximum charge, minimum length, and billing resolution for this tariff.</li> <li>Select the low credit warning notifications to send from the <b>Low Credit Config</b> list.</li> <li>Select the balance type cascade to use from the <b>Cascade</b> list.</li> <li>If you want to send SCI or FCI charging information, select the tariff code to use from the <b>Tariff Code</b> list.</li> </ol> |
| 5    | <p>(Optional) For each additional time period that you want to configure, perform the following steps:</p> <ol style="list-style-type: none"> <li>Click <b>Apply</b>.</li> <li>Repeat steps 3 and 4.</li> </ol> <p>The configured periods display in the <b>Defined periods</b> list.</p> <p><b>Important:</b> You must ensure that periods do not overlap when configuring multiple discount periods for a holiday tariff.</p>                                                                                                                                                                                                               |
| 6    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

## Deleting holiday tariffs

Follow these steps to delete an existing holiday tariff.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list. |
| 2    | In the table on the <b>Holiday</b> tab, select the record to delete.                                |
| 3    | Click <b>Delete</b> .                                                                               |
|      | You see the Delete Confirmation prompt.                                                             |
| 4    | Click <b>OK</b> to delete the record from the database.                                             |
|      | The record is deleted and you see the Holiday Tariffs prompt.                                       |
| 5    | Click <b>OK</b> .                                                                                   |

## Named Event

### Introduction

The **Named Event** tab allows you to set up and maintain activities, other than calls, that may incur a charge. The values you specify here are the base values for the events, and may be overridden by values specified in a *Named Event Catalogue* (on page 447).

The event may be sending a short text message, a product type swap, a credit transfer, or a connection to recharge facilities. The named events can be changed by the Named Event feature node for that event in the control plan.

### Event subscription

A named event catalogue event subscription is a named event that allows a subscriber to 'subscribe' to an unlimited use of a particular service without being charged during the subscribed period.

As such it will be possible to define a subscribable named event that is charged on first use and sets up a subscription to allow future uses in the subscription period to be charge free.

When this named event is used, an automatic subscription to the service is created which will then follow a normal life cycle.

If the subscription is already active, the user will not pay for the named event until the subscription expires.

**Note:** Event Subscription is not available if the UBE domain does not have 'Charging Management' configured or when there is no UBE domain configured.

### Balance type cascades

Events can be configured to be billed across multiple balance types in a pro-rata fashion.

**Example:** If the Cash cost for an event is \$10 and the Time cost is 120 seconds, and you only have a cash balance of \$5, then the event would use your remaining \$5, and then 60 seconds to pay for the rest of the event.

## Named Event tab

Here is an example **Named Event** tab.

Service Provider: Boss Help

Named Event

Event Set: DCA Sample Events New Set Edit Set Delete Set

| Named Event  | Cash Cost | Time Cost | Data Cost |
|--------------|-----------|-----------|-----------|
| Cent         | \$0.01    |           |           |
| Money Refund | -\$0.01   |           |           |
| Second       |           | 1.00      |           |
| Time Refund  |           | -1.00     |           |

New Edit Delete Close

## Named Event grid

This table describes the content of each table column on the **Named Event** tab.

| Field       | Description                  |
|-------------|------------------------------|
| Named Event | The name of the named event. |

| Field                  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cash Cost (\$)         | The amount which will be charged if using a cash balance to pay for this event.                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| Time Cost (secs)       | The time that will be charged if using time balance to pay for this event.                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Data Cost (data units) | The data units that will be charged if using a data balance to pay for this event.                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Unit Cost              | The charge when balance types are not any of: <ul style="list-style-type: none"> <li>• Cash</li> <li>• Time</li> <li>• Data</li> </ul>                                                                                                                                                                                                                                                                                                                                                                                                    |
| Free Event             | Indicates that this event has a zero cost.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Expenditure Plan       | Determines whether this CLI-DN contributes to expenditure calculations, and what expenditure plan it contributes to.<br>This field is populated by the <b>Expenditure Plan</b> tab. For more information, see <i>Expenditure Plan</i> (on page 414).                                                                                                                                                                                                                                                                                      |
| Tax Plan               | The tax plan associated with this named event.<br><b>Tip:</b> Tax plans are configured on the <b>Tax Plan</b> tab on the Rating Management screen. For more information, see <i>Tax Plan</i> (on page 433).                                                                                                                                                                                                                                                                                                                               |
| Contributes to PD      | Whether or not this named event is included in the promotional destination calculations.                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Single Balance         | Whether or not the cost of the event should be taken from a single balance.<br><b>Notes:</b> <ul style="list-style-type: none"> <li>• If this field is selected and there is no single balance that can cover the entire cost of an event, the event is declined with insufficient credit.</li> <li>• If this field is not selected, and providing the entire cost of the event can be satisfied with the selected cascade, the seconds, cash, data costs and generic units are taken pro-rata as necessary from each balance.</li> </ul> |

## Named Event Set screen

Here is an example Named Event Set screen.

The screenshot shows a standard Windows-style dialog box titled "Edit Named Event Set". It features a close button (X) in the top right corner. Below the title bar, there is a "Help" button. The main area contains a text input field labeled "Name" with the text "DCA Sample Events" entered. At the bottom of the dialog, there are two buttons: "Save" and "Cancel".



## Named Event screen

Here is an example Named Event screen.

## Named Event fields

This table describes the function of each field on the New Named Event and the Edit Named Event screens.

| Field              | Description                                |
|--------------------|--------------------------------------------|
| Name - Named Event | The name of the named event.               |
| Free Event         | Indicates that this event has a zero cost. |

| Field                            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|----------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Cash Cost (\$)                   | <p>The amount which will be charged if using a cash balance to pay for this event.</p> <p><b>Tip:</b> Select the <b>Enabled</b> check box to access this field.</p>                                                                                                                                                                                                                                                                                                                                                                                                |
| Time Cost (secs)                 | <p>The time that will be charged if using time balance to pay for this event.</p> <p><b>Tip:</b> Select the <b>Enabled</b> check box to access this field.</p>                                                                                                                                                                                                                                                                                                                                                                                                     |
| Data Cost (data units)           | <p>The data units that will be charged if using a data balance to pay for this event.</p> <p><b>Tip:</b> Select the <b>Enabled</b> check box to access this field.</p>                                                                                                                                                                                                                                                                                                                                                                                             |
| Units Cost                       | <p>The charge when balance types are not any of:</p> <ul style="list-style-type: none"> <li>• Cash</li> <li>• Time</li> <li>• Data</li> </ul> <p><b>Tip:</b> Select the <b>Enabled</b> check box to access this field.</p>                                                                                                                                                                                                                                                                                                                                         |
| Tax Plan                         | <p>The tax plan associated with this event.</p> <p>This field is populated by the <b>Tax Plan</b> tab. For more information, see <i>Tax Plan</i> (on page 433).</p>                                                                                                                                                                                                                                                                                                                                                                                                |
| Event Type                       | <p>The type of event to be billed, can be either Direct (bill now) or Reserved (reserve this amount) or either type. The default is Any (either type).</p>                                                                                                                                                                                                                                                                                                                                                                                                         |
| Expenditure Plan                 | <p>Determines whether this event contributes to expenditure calculations, and what expenditure plan it contributes to.</p> <p>This field is populated by the <b>Expenditure Plan</b> tab. For more information, see <i>Expenditure Plan</i> (on page 414).</p>                                                                                                                                                                                                                                                                                                     |
| Contributes to PD                | <p>Whether or not to include this named event in the promotional destination calculations.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Event Cascade                    | <p>The balance type cascade, which defines the order for using the balances, for the named event.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• This is a mandatory field.</li> <li>• This field is populated by the records on the <b>Balance Type Cascade</b> tab. For more information, see <i>Balance Type Cascades</i> (on page 410).</li> </ul>                                                                                                                                                                                          |
| Use Single Cascade Balance       | <p>Whether or not the cost of the event should be taken from a single balance.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• If this check box is selected and there is no single balance that can cover the entire cost of an event, then the event is declined with insufficient credit.</li> <li>• If this check box is not selected, and providing the entire cost of the event can be satisfied with the selected cascade, then seconds, cash, data costs and generic units are taken pro-rata as necessary from each balance.</li> </ul> |
| Available Named Event Catalogues | <p>List of available named event catalogues which can be allocated this named event.</p> <p>This field is populated by the records on the <b>Named Event Catalogue</b> tab.</p>                                                                                                                                                                                                                                                                                                                                                                                    |
| Allocated Named Catalogues       | <p>List of named event catalogues which have been allocated this named event.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

| Field | Description                                                                                                                                          |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------|
|       | <b>Note:</b> Allocating a named event catalogue to an event adds this event to the list of allowed named events in the named event catalogue record. |

## Adding named event sets

Follow these steps to add a new named event set.

| Step | Action                                                                                                                               |
|------|--------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                  |
| 2    | On the <b>Named Event</b> tab, click <b>New Set</b> .<br><b>Result:</b> The <i>New Named Event Set</i> screen (on page 394) appears. |
| 3    | In the <b>Name</b> field, type the name of the new named event set.                                                                  |
| 4    | Click <b>Save</b> .                                                                                                                  |

## Editing named event sets

Follow these steps to edit an existing named event set.

| Step | Action                                                                                                 |
|------|--------------------------------------------------------------------------------------------------------|
| 1    | On the <b>Named Event</b> tab, select the named event to edit from the <b>Event Set</b> drop down box. |
| 2    | Click <b>Edit Set</b> .                                                                                |
| 3    | Modify the <b>Name</b> as required.                                                                    |
| 4    | Click <b>Save</b> .                                                                                    |

## Deleting named event sets

Follow these steps to delete an existing named event set.

| Step | Action                                                                                                                               |
|------|--------------------------------------------------------------------------------------------------------------------------------------|
| 1    | On the <b>Named Event</b> tab, select the named event set to delete from the <b>Event Set</b> drop down box.                         |
| 2    | Click <b>Delete Set</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                  |
| 3    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> The record is deleted and you see the Named Events prompt. |
| 4    | Click <b>OK</b> .                                                                                                                    |

## Adding named events

Follow these steps to add a new named event to a named event set.

| Step | Action                                                                                      |
|------|---------------------------------------------------------------------------------------------|
| 1    | On the <b>Named Event</b> tab, select the required <b>Event Set</b> from the drop down box. |
| 2    | Click <b>New</b> .                                                                          |

| Step | Action                                                               |
|------|----------------------------------------------------------------------|
| 3    | Configure this record by entering data in the fields on this screen. |
| 4    | Click <b>Save</b> .                                                  |

## Editing named events

Follow these steps to edit an individual named event in a selected named event set.

| Step | Action                                                                             |
|------|------------------------------------------------------------------------------------|
| 1    | On the <b>Named Event</b> tab, select the <b>Event Set</b> from the drop down box. |
| 2    | In the table on the tab, select the record to edit.                                |
| 3    | Click <b>Edit</b> .                                                                |
| 4    | Edit the details as required.                                                      |
| 5    | Click <b>Save</b> .                                                                |

## Deleting named events

Follow these steps to delete an existing named event.

**Note:** When you delete a named event, the named event is automatically removed from any named event catalogues to which it has been allocated.

| Step | Action                                                                             |
|------|------------------------------------------------------------------------------------|
| 1    | On the <b>Named Event</b> tab, select the <b>Event Set</b> from the drop down box. |
| 2    | Select the record to delete.                                                       |
| 3    | Click <b>Delete</b> .                                                              |
|      | <b>Result:</b> You see the Delete Confirmation prompt.                             |
| 4    | Click <b>OK</b> to delete the record from the database.                            |
|      | <b>Result:</b> You see record deleted confirmation message.                        |
| 5    | Click <b>OK</b> .                                                                  |

## Discount Periods

### Introduction

A discount period is used to specify the discount percentage to be applied to each charge period, as created in *Charge Periods* (on page 402).

Discount periods are used by the weekly and holiday tariffs.

Discount Periods tab

Here is an example Discount Periods tab.

Rating Management

Service Provider

Boss

Help

Discount Periods

Discount Period

SL DiscountPeriod...

New Set

Edit Set

Delete Set

| Period | Percentage Dis... | Change User | Change Date         |
|--------|-------------------|-------------|---------------------|
| 1      | 0.1000            | SU          | 2009-09-09 11:41:06 |
| 2      | 20.0000           | SU          | 2009-09-09 08:54:56 |
| 3      | 25.0000           | SU          | 2009-09-09 08:55:00 |

New

Edit

Delete

Close

## Discount Period Set screen

Here is an example Discount Period Set screen.

## Adding discount period sets

Follow these steps to add a new discount period set.

| Step | Action                                                                                                                                                    |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                       |
| 2    | On the <b>Discount Periods</b> tab, click <b>New Set</b> .<br><b>Result:</b> You see the New <i>Discount Period Set</i> screen (See example on page 400). |

- |   |                                                                         |
|---|-------------------------------------------------------------------------|
| 3 | In the <b>Name</b> field, type the name of the new discount period set. |
| 4 | Click <b>Save</b> .                                                     |

## Editing discount period sets

Follow these steps to edit an existing discount period set.

| Step | Action                                                                                                                    |
|------|---------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                       |
| 2    | On the <b>Discount Periods</b> tab, select the discount period set to edit from the <b>Discount Period</b> drop down box. |
| 3    | Click <b>Edit Set</b> .<br><b>Result:</b> You see the Edit <i>Discount Period Set</i> screen (See example on page 400).   |
| 4    | Modify the <b>Name</b> as required.                                                                                       |
| 5    | Click <b>Save</b> .                                                                                                       |

## Deleting discount period sets

Follow these steps to delete an existing discount period set.

| Step | Action                                                                                                                                   |
|------|------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                      |
| 2    | On the <b>Discount Periods</b> tab, select the discount period set to delete from the <b>Discount Period</b> drop down box.              |
| 3    | Click <b>Delete Set</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                      |
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> The record is deleted and you see the Discount Periods prompt. |
| 5    | Click <b>OK</b> .                                                                                                                        |

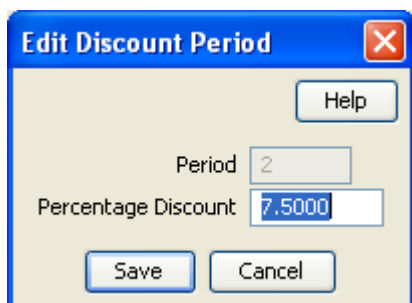
## Adding discount periods

Follow these steps to add a new discount period to a discount period set.

| Step | Action                                                                                                                                                                                                                                                                                                                                   |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                                      |
| 2    | On the <b>Discount Periods</b> tab, select the Discount Period Set from the <b>Discount Period</b> drop down box.                                                                                                                                                                                                                        |
| 3    | Click <b>New</b> .<br><b>Result:</b> You see the <i>New Discount Period</i> (See example on page 401) screen.<br>The <b>Period</b> field will display the amount of time before the charge is initiated.<br><b>Note:</b> This will already have been populated and cannot be changed. The period will increase by 1 for each new record. |
| 4    | In the <b>Percentage Discount</b> field, enter the numeric percentage of the discount to be applied to the charge period.                                                                                                                                                                                                                |
| 5    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                      |

## Discount Period screen

Here is an example Discount Period screen.



## Editing discount periods

Follow these steps to edit an individual discount period in an existing discount set.

| Step | Action                                                                                                                                                                                     |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                        |
| 2    | On the <b>Discount Periods</b> tab, select the <b>Discount Period</b> set to edit from the drop down box.                                                                                  |
| 3    | In the table, select the record to edit.                                                                                                                                                   |
| 4    | Click <b>Edit</b> .<br><b>Result:</b> You see the <i>Edit Discount Period</i> (See example on page 401).                                                                                   |
| 5    | Type a new value for the <b>Percentage Discount</b> to be applied to the charge period.<br><b>Note:</b> The <b>Period</b> field cannot be edited after the discount period is first saved. |
| 6    | Click <b>Save</b> .                                                                                                                                                                        |

## Deleting discount periods

Follow these steps to delete an existing discount period from a discount set.

| Step | Action                                                                                                                                   |
|------|------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                      |
| 2    | On the <b>Discount Periods</b> tab, select the <b>Discount Period</b> set from the drop down box.                                        |
| 3    | Select the record to delete in the table on the tab.                                                                                     |
| 4    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                          |
| 5    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> The record is deleted and you see the Discount Periods prompt. |
| 6    | Click <b>OK</b> .                                                                                                                        |

## Charge Periods

### Introduction

A charge period controls the charge rates applied to specific periods of time within a call. For example, you may wish to charge a lower-than-standard rate to the first 60 minutes of a call and then charge the full rate to the duration. Charge periods are used by the CLI-DN tariffs.

You may have up to ten charge periods per set, and any number of charge period sets. You may also define one charge period loop per charge period set.

**Note:** Charge period sets may be rate table specific, or global. Global charge period sets will be available to all rate tables when creating CLI-DN mappings.

### Charge period loops

Charge period loops repeat selected charge periods from the set, after the call has been through the normal charge period set. All the charge periods from the set can be included in the loop, however each charge period may only appear in it once.



To define a charge period loop, designate the last charge period in the set as a special 'Loop Period'. You can then:

- Select which charge periods to include in the loop
- Specify the order to apply them in

When you set up a charge period loop, the **Length In Loop** field for each of the included charge periods defines how long each charge period will last during loop processing. If you leave this field blank when defining a new charge period, then the length in loop defaults to the charge period length (that is, the difference between the charge period start time and the start time of the next charge period).

When you edit the start time for a charge period in a charge period loop, the **Length In Loop** field is not automatically updated to reflect the new start time. To change this value, you must edit it manually in the Edit Charge Period screen.

See *Adding a loop period* (on page 408) and *Defining a charge period loop* (on page 409).

## Charge Periods tab

Here is an example **Charge Periods** tab.

**Rating Management**

Service Provider

OCNCCtemplate

Help

Charge Periods

Display Filters

Charge Period Name

Rate Table Filter

No Filter

| Charge Period    | Rate Table      | Billing Indicator |
|------------------|-----------------|-------------------|
| CALLBACK-IZ1-FR  | Bronze Callback | Time              |
| CALLBACK-IZ1-FR  | Gold Callback   | Time              |
| CALLBACK-IZ1-FR  | Silver Callback | Time              |
| CALLBACK-IZ1-FX  | Bronze Callback | Time              |
| CALLBACK-IZ1-FX  | Gold Callback   | Time              |
| CALLBACK-IZ1-FX  | Silver Callback | Time              |
| CALLBACK-IZ1-IZ1 | Bronze Callback | Time              |
| CALLBACK-IZ1-IZ1 | Gold Callback   | Time              |
| CALLBACK-IZ1-IZ1 | Silver Callback | Time              |
| CALLBACK-IZ1-IZ2 | Bronze Callback | Time              |

New Set

Edit Set

Delete Set

Define Loop

| Start Time | Charge/min | Change User | Change Date |
|------------|------------|-------------|-------------|
|            |            |             |             |

New

Edit

Delete

Close

## Adding charge period sets

Follow these steps to add a new charge period set.

| Step | Action                                                                                                                                                |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                   |
| 2    | On the <b>Charge Periods</b> tab, click <b>New Set</b> .<br><b>Result:</b> You see the <i>New Charge Period Set screen</i> (See example on page 405). |

| Step | Action                                                                                                                                                                                                                                                                                                                                                                              |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | In the <b>Name</b> field, type the name of the new charge period set.                                                                                                                                                                                                                                                                                                               |
| 4    | If required, select the rate table to use for the charge period from the drop down list.<br><b>Tip:</b> The rate tables list is populated by the entries made on the <b>Rate Tables</b> tab.                                                                                                                                                                                        |
| 5    | If available, select the required <b>Billing Indicator</b> : <ul style="list-style-type: none"> <li>• Time - for duration billing rates</li> <li>• Data - for volume billing rates</li> </ul> <b>Note:</b> This can only be done if a rate table is not selected. If a rate table is selected then that rate tables billing indicator is applied and these options are unavailable. |
| 6    | Click <b>Save</b> .<br><b>Note:</b> Charge periods that do not have a rate table associated with them are global.                                                                                                                                                                                                                                                                   |

## Editing charge period sets

Follow these steps to edit an existing charge period set.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                              |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                                                                                 |
| 2    | On the <b>Charge Periods</b> tab, select the charge period set to edit from the list displayed in the table.                                                                                                                                                                                                                                                                        |
| 3    | Click <b>Edit Set</b> .<br><b>Result:</b> You see the Edit <i>Charge Period Set screen</i> (See example on page 405).                                                                                                                                                                                                                                                               |
| 4    | Modify the <b>Name</b> as required.                                                                                                                                                                                                                                                                                                                                                 |
| 5    | If available, select the required <b>Billing Indicator</b> : <ul style="list-style-type: none"> <li>• Time - for duration billing rates</li> <li>• Data - for volume billing rates</li> </ul> <b>Note:</b> This can only be done if a rate table is not selected. If a rate table is selected then that rate tables billing indicator is applied and these options are unavailable. |
| 6    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                 |

## Charge Period Set screen

Here is an example Charge Period Set screen.

The screenshot shows a Windows-style dialog box titled "Edit Charge Period Set". It contains a text field for "Name" with the value "CALLBACK-IZ1-IZ1". Below this is a "Billing Indicator" section with two radio buttons: "Time" (which is selected) and "Data". At the bottom of the dialog are "Save" and "Cancel" buttons. A "Help" button is located in the top right corner of the dialog area.

## Deleting charge period sets

Follow these steps to delete an existing charge period set.

| Step | Action                                                                                                                                                                                                                                           |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                                                                              |
| 2    | On the <b>Charge Periods</b> tab, select the charge period set to delete from the list displayed in the table.                                                                                                                                   |
| 3    | Click <b>Delete Set</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                                                                                                                              |
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> The record is deleted and you see the charge period prompt.<br><b>Tip:</b> The charge period set may only be deleted if there are no CLI-DN tariffs that use this set. |
| 5    | Click <b>OK</b> .                                                                                                                                                                                                                                |

## Charge period fields

This table describes the function of each field.

| Field                                               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                          |
|-----------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Period Start (secs)<br>Volume Start (data units)    | The start time or volume for the charge period. If the charge period set has a loop, then the start time or volume must be before the start time or volume for the loop period.<br>This field cannot be edited after the first time it is saved.<br><b>Allowed values:</b> Positive integers.<br><b>Tip:</b> There must be one charge period with a period start (secs) or volume start (data units) value of 0 to enable short calls to be charged. |
| Charge<br>( <i>CurrencyMinor</i> /min or data unit) | The amount which will be charged for this charge period.<br><b>Allowed values:</b> Positive integers.<br>You can only edit this field if the <b>Loop Period</b> check box is not selected.<br><b>Note:</b> The record with the highest start period will effectively have no upper limit on its period.<br><b>Tip:</b> As this field only defines the cash rate per min or data unit, the time and data rates is always one to one.                  |
| Loop Period                                         | Defines whether or not this charge period loops.<br><b>Note:</b> If you select this check box, the values in the <b>Charge</b> ( <i>CurrencyMinor</i> /min) and <b>Length in Loop (secs)</b> fields will be cleared.<br>For more information about charge period loops, see <i>Charge period loops</i> (on page 402).                                                                                                                                |

| Field                                           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|-------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Length in Loop (secs)<br>Loop Size (data units) | <p>The length of time/volume the charge period will last during loop processing. Only enter a value here if you want the charge period to have a different time/volume length when it is in the loop.</p> <p><b>Allowed values:</b> Positive integers</p> <p>You can only edit this field if the <b>Loop Period</b> check box is not selected.</p> <p><b>Note:</b> This field defaults to the charge period length if left blank (that is, the difference between charge period start time/volume and the start time/volume for the next charge period). However, once the charge period has been created, the length in loop value will be unaffected by any changes to the charge period start time/volume. It will maintain its original value. To change the length in loop value, you must edit it in the Edit Charge Period screen.</p> |

## Charge Period screen

Here is an example Charge Period screen.

## Adding charge periods

Follow these steps to add a new charge period to a charge period set.

| Step | Action                                                                                                                                                                                                                                  |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                                                                     |
| 2    | On the <b>Charge Periods</b> tab, select the charge period set to add a new charge period to from the list displayed in the table.                                                                                                      |
| 3    | Click <b>New</b> .<br><b>Result:</b> You see the <i>New Charge Period screen</i> (See example on page 407) for the relevant billing indicator.                                                                                          |
| 4    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Charge period fields</i> (on page 406).<br><b>Note:</b> Ensure <b>Loop Period</b> is not selected. |
| 5    | Click <b>Save</b> .                                                                                                                                                                                                                     |

## Adding a loop period

Follow these steps to add a loop period to a charge period.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                    |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                                                                       |
| 2    | On the <b>Charge Periods</b> tab, select the charge period set to add a loop period to from the list displayed in the table.                                                                                                                                                                                                                                              |
| 3    | Click <b>New</b> .<br><b>Result:</b> You see the <i>New Charge Period screen</i> (See example on page 407) for the billing indicator of the charge period set.                                                                                                                                                                                                            |
| 4    | For time charging: <ul style="list-style-type: none"> <li>• In the <b>Period Start (secs)</b> field, enter the start time for the loop period</li> <li>• This must be after the start time for all other periods in the set</li> </ul> For data charging: <ul style="list-style-type: none"> <li>• The <b>Volume Start (data units)</b> field defaults to zero</li> </ul> |
| 5    | Select the <b>Loop Period</b> check box.                                                                                                                                                                                                                                                                                                                                  |
| 6    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                       |

## Editing charge periods

Follow these steps to edit an individual charge period within an existing charge period set.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 2    | On the <b>Charge Periods</b> tab, select the charge period set that contains the charge period to edit from the list displayed in the table.                                                                                                                                                                                                                                                                                                                                                                          |
| 3    | In the table at the bottom of the <b>Charge Periods</b> tab, select the record to edit.                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 4    | Click <b>Edit</b> .<br><b>Result:</b> You see the <i>Edit Charge Period screen</i> (See example on page 407) relevant to the billing indicator.                                                                                                                                                                                                                                                                                                                                                                       |
| 5    | Edit the fields to reflect the changes you need to make.<br>For more information about the fields in this screen, see <i>Charge period fields</i> (on page 406).<br><br><b>Notes:</b> <ul style="list-style-type: none"> <li>• The <b>Period/Volume Start</b> field cannot be edited in the first charge period created.</li> <li>• The <b>Length In Loop</b> value will be unaffected by any changes to the charge period start time. For more information, see <i>Charge period loops</i> (on page 402).</li> </ul> |
| 6    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## Deleting charge periods

Follow these steps to delete an existing charge period from a charge set.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list. |

| Step | Action                                                                                                                                       |
|------|----------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | On the <b>Charge Periods</b> tab, select the charge period set that contains the charge period to edit from the list displayed in the table. |
| 3    | In the table at the bottom of the <b>Charge Periods</b> tab, select the record to delete from the table.                                     |
| 4    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                              |
| 5    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> The record is deleted and you see the Charge Periods prompt.       |
| 6    | Click <b>OK</b> .                                                                                                                            |

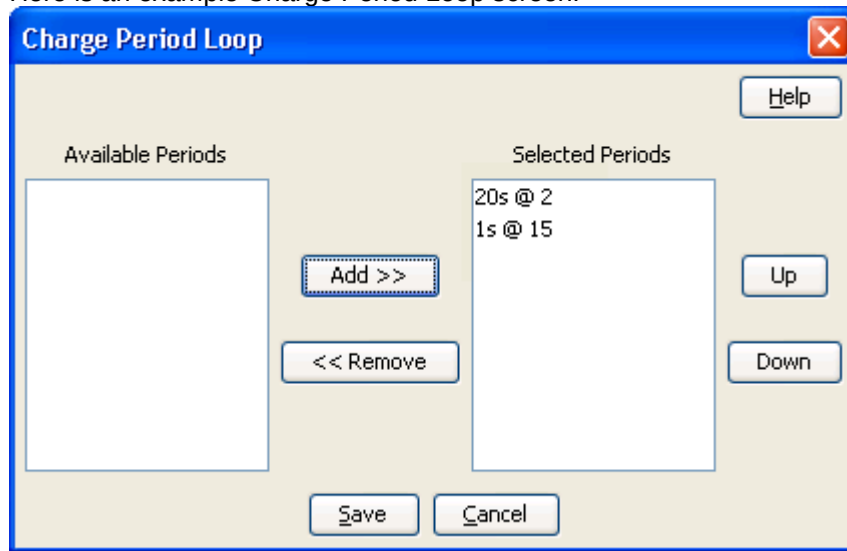
## Defining a charge period loop

Follow these steps to define a charge period loop for a charge period set.

| Step | Action                                                                                                                                                                                                                                                                                                                                                     |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                                                        |
| 2    | On the <b>Charge Periods</b> tab, select the charge period set.                                                                                                                                                                                                                                                                                            |
| 3    | Define a loop period for the charge period set as described in <i>Adding a loop period</i> (on page 408).                                                                                                                                                                                                                                                  |
| 4    | Click <b>Define Loop</b> .<br><b>Result:</b> You see the <i>Charge Period Loop screen</i> (See example on page 410).                                                                                                                                                                                                                                       |
| 5    | In the <b>Selected Periods</b> list, specify the charge periods to be in the loop. To: <ul style="list-style-type: none"> <li>• Add a period to the list, select it in the <b>Available Periods</b> list and click <b>Add</b>.</li> <li>• Remove a period from the list, select it in the <b>Selected Periods</b> list and click <b>Remove</b>.</li> </ul> |
| 6    | Use the <b>Up</b> and <b>Down</b> buttons to set the order in which the selected charge periods will be processed in the loop.                                                                                                                                                                                                                             |
| 7    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                        |

## Charge Period Loop screen

Here is an example Charge Period Loop screen.



## Balance Type Cascades

### Introduction

The **Balance Type Cascade** tab lets you specify which balance types are to be used, and in what order, to pay for a call. Please see the following examples:

- Standard
  - Promotional Balance
  - General Cash Balance
- Promotional Named Event
  - Free SMS
  - Promotional Balance
  - General Cash Balance

**Tip:** In order to use cascade plans, ensure that `ccsNamedEventHandler` has been correctly configured. For more information, see *CCS Technical Guide*.



## Balance Type Cascade tab

Here is an example **Balance Type Cascade** tab.

Rating Management

Service Provider: Boss

Help

| Name              | Change User | Change Date         |
|-------------------|-------------|---------------------|
| ahunt.full        | SU          | 2009-07-25 14:38:33 |
| ahunt_badpin      | SU          | 2009-07-21 14:10:58 |
| ahunt_time        | SU          | 2009-07-23 21:20:11 |
| Basic Cascade     | SU          | 2009-07-07 17:36:43 |
| ME                | SU          | 2009-08-16 14:45:34 |
| NamedEventCascade | SU          | 2009-08-19 08:55:14 |
| SamBTC            | SU          | 2009-09-14 09:02:24 |

New Edit Delete Close

## Balance Type Cascade fields

This table describes the function of each field.

| Field                   | Description                                                                     |
|-------------------------|---------------------------------------------------------------------------------|
| Name                    | The unique name of the balance type cascade.                                    |
| Available Balance Types | The balance types which could be part of the balance type cascade, but are not. |

| Field                  | Description                                                                                                                                                                                               |
|------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Selected Balance Types | The balance types which are charged when this balance type cascade is used.<br><b>Note:</b> The balance types are used in the same order they appear in the list, starting with the top and working down. |

## Balance Cascade screen

Here is an example Balance Cascade screen.

## Adding balance type cascades

Follow these steps to add a new balance type cascade.

| Step | Action                                                                                                                                                 |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                    |
| 2    | On the <b>Balance Type Cascades</b> tab, click <b>New</b> .<br><b>Result:</b> You see the New <i>Balance Cascade screen</i> (See example on page 412). |

| Step | Action |
|------|--------|
|------|--------|

- 3
- Configure this record by entering data in the fields on this screen.  
For more information about the fields on this screen, see *Balance Type Cascade fields* (on page 411).
- 4
- Click **Save**.

Editing balance type cascades

Follow these steps to edit an existing balance type cascade.

| Step | Action                                                                                                                                                          |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                             |
| 2    | In the grid on the <b>Balance Type Cascades</b> tab, select the record to edit.                                                                                 |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the Edit <i>Balance Cascade screen</i> (See example on page 412).                                                 |
| 4    | Edit the fields to reflect the required changes.<br>For more information about the fields on this screen, see <i>Balance Type Cascade fields</i> (on page 411). |
| 5    | Click <b>Save</b> .                                                                                                                                             |

Deleting balance type cascades

Follow these steps to delete an existing balance type cascade.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list. |

| Step | Action                                                                             |
|------|------------------------------------------------------------------------------------|
| 2    | In the table on the <b>Balance Type Cascades</b> tab, select the record to delete. |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.    |
| 4    | Click <b>OK</b> .<br><b>Result:</b> The record is deleted from the database.       |

## Expenditure Plan

### Introduction

The **Expenditure Plan** tab allows you to configure which balance types to include in expenditure plans. You use expenditure plans to determine the contributions to make to expenditure through named events and CLI-DN tariffs.

Only balance types that have been set up to hold expenditure contributions are available for inclusion in expenditure plans. The exact value of the expenditure will be charged to the included balance types.

**Note:** For named events, the charge is applied to the included balance types as follows:

- For cash only named events, it is only applied to cash expenditure balance types
- For time only named events, it is only applied to time expenditure balance types
- For cash and time named events, it is applied to all expenditure balance types included in the plan

For more information about setting up:

- CLI-DN tariffs which contribute to expenditure plans, see *Configuring CLI-DN Tariffs* (on page 371)
- Named events which contribute to expenditure plans, see *Named Event* (on page 391)

**Expenditure Plan tab**

Here is an example **Expenditure Plan** tab.

Rating Management

Service Provider

Boss

Help

Expenditure Plan

| Name            | Change User | Change Date         |
|-----------------|-------------|---------------------|
| MJHEP1          | SU          | 2009-06-24 10:03:46 |
| SL_ExpPlan      | SU          | 2009-08-17 09:12:44 |
| SRM Expenditure | CCS_ADMIN   | 2009-07-10 09:40:37 |

New

Edit

Delete

Close

**Expenditure Plan fields**

This table describes the function of each field.

| Field | Description                              |
|-------|------------------------------------------|
| Name  | The unique name of the expenditure plan. |

| Field                   | Description                                                                          |
|-------------------------|--------------------------------------------------------------------------------------|
| Available Balance Types | The balance types which could be part of the expenditure plan, but are not.          |
| Selected Balance Types  | The balance types which expenditure attributed to this expenditure plan is added to. |

## Expenditure Plan screen

Here is an example Expenditure Plan screen.

## Adding expenditure plans

Follow these steps to add a new expenditure plan.

| Step | Action                                                                                                                                                                          |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                             |
| 2    | On the <b>Expenditure Plan</b> tab, click <b>New</b> .<br><b>Result:</b> You see the New <i>Expenditure Plan</i> screen (See example on page 416).                              |
| 3    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Expenditure Plan fields</i> (on page 415). |
| 4    | Click <b>Save</b> .                                                                                                                                                             |

## Editing expenditure plans

Follow these steps to edit an existing expenditure plan.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list. |

| Step | Action                                                                                                                                                              |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | In the table on the <b>Expenditure Plan</b> tab, select the record to edit.                                                                                         |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the Edit <i>Expenditure Plan</i> screen (See example on page 416).                                                    |
| 4    | Edit the fields to reflect the changes you need to make.<br>For more information about the fields in this screen, see <i>Expenditure Plan fields</i> (on page 415). |
| 5    | Click <b>Save</b> .                                                                                                                                                 |

## Deleting expenditure plans

Follow these steps to delete an existing expenditure plan.

| Step | Action                                                                                                                                      |
|------|---------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                         |
| 2    | In the table on the <b>Expenditure Plan</b> tab, select the record to delete.                                                               |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                             |
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> You see the expenditure plans record successfully deleted prompt. |
| 5    | Click <b>OK</b> .                                                                                                                           |

## Cross Balance Type Cascades

### Introduction

The **Cross Balance Type Cascade** tab lets you specify which cross balance types are to be used for calculating cross balance type discounts. It also lets you specify the order in which they are used.

The discounts are applied to cash balance types being debited during voice calls. During a call the chargeable balance types that will be used to pay for the call are listed in a balance type cascade.

#### Notes:

- Only cash balance types are discounted. Time or other non-cash balance types cannot be discounted.
- Cross balance type discounts are compounded with any applicable weekly or holiday discounts.

For more information about cross balance types, see *Cross balance types* (on page 234).

### Rules applying to cross balance type cascades

During a call, the balance types in the cross balance type cascade are debited according to the following rules:

- 1 If the first cross balance type to be debited is neither cash nor time, it will be debited by one. There will be no further processing of the cross balance type cascade and no further discounting will be applied.

- 2 If a cash or a time cross balance type currently being debited becomes exhausted and the next cross balance type in the cascade is neither cash nor time, then this next cross balance type will not be debited. There will be no further processing of the cross balance type cascade and no further discounting will be applied.
- 3 If a cash or a time cross balance type currently being debited becomes exhausted and it is the last cross balance type in the cascade or all the remaining cross balance types are also exhausted, then there will be no further processing of the cross balance type cascade. No further discounting will be applied.

## Cross Balance Type Cascade tab

Here is an example **Cross Balance Type Cascade** tab.

The screenshot shows a window titled "Rating Management" with a blue header bar. Below the header, there is a "Service Provider" dropdown menu set to "Boss" and a "Help" button. The main area is titled "Cross Balance Type Cascades" and contains a table with the following data:

| Name   | Change User | Change Date         |
|--------|-------------|---------------------|
| SG CBT | SU          | 2009-10-06 14:23:07 |

At the bottom of the window, there is a horizontal scrollbar and four buttons: "New", "Edit", "Delete", and "Close".



## Cross Balance Type fields

This table describes the function of each field.

| Field                   | Description                                                                                                                                                                                                                                               |
|-------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                    | The unique name of the cross balance type.                                                                                                                                                                                                                |
| Available Balance Types | The balance types which could be part of the cross balance type, but are not.                                                                                                                                                                             |
| Selected Balance Types  | The balance types which are used for cross balance type discounts during voice calls which use this cross balance type.<br><br><b>Note:</b> The balance types are used in the same order they appear in the list, starting with the top and working down. |

## Cross Balance Cascade screen

Here is an example Cross Balance Cascade screen.

## Adding cross balance type cascades

Follow these steps to add a new cross balance type cascade.

| Step | Action                                                                                                                                                                            |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                               |
| 2    | On the <b>Cross Balance Type Cascades</b> tab, click <b>New</b> .<br><b>Result:</b> You see the <i>New Cross Balance Cascade screen</i> (See example on page 419).                |
| 3    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Cross Balance Type fields</i> (on page 419). |

| Step | Action              |
|------|---------------------|
| 4    | Click <b>Save</b> . |

## Editing cross balance type cascades

Follow these steps to edit an existing cross balance type cascade.

| Step | Action                                                                                                                                                        |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                           |
| 2    | In the table on the <b>Cross Balance Type Cascades</b> tab, select the record to edit.                                                                        |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the <i>Edit Cross Balance Cascade screen</i> (See example on page 419).                                         |
| 4    | Edit the fields to reflect the required changes.<br>For more information about the fields in this screen, see <i>Cross Balance Type fields</i> (on page 419). |
| 5    | Click <b>Save</b> .                                                                                                                                           |

## Deleting a cross balance type cascade

Follow these steps to delete a cross balance type cascade.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list. |
| 2    | In the table on the <b>Cross Balance Type Cascades</b> tab, select the record to delete.            |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                     |
| 4    | Click <b>OK</b> .<br><b>Result:</b> The record is deleted from the database                         |

# Reservation Config

## Introduction

The **Reservation Config** tab allows you to configure reservation settings. In the case of, for example, network failure, this allows the debit of known usage from the subscriber's account.

The reservation configurations are used in conjunction with the *Configuring CLI-DN Tariffs* (on page 371).

You can enable **Adaptive Reservations** and set **Adaptive Data Parameters** for reservation configurations using this tab. Adaptive Data ensures that when charging data with a DCA, ACS, or CCS:

- The data amount reserved on the VWS equals the amount which the subscriber would consume during the validity time at the current rate of consumption. The reservation size is still subject to upper and lower reservation size limits and the subscriber's available funds.
- The validity time in a Diameter Credit-Control-Answer (CCA) for an idle data session is longer than the validity time for an active data session.

- The validity time with the lowest value is used when a subscriber uses more than a single service concurrently.

Adaptive Reservations updates reservation amounts by comparing a subscriber's usage rate to the reservation configuration and the subscriber's available resources. The following example shows how reservation amounts are determined during a session with variable data usage rates.

**Note:** Access to the **Reservation Config** tab is controlled by user permissions. This tab is only visible to users with the relevant permission. See *Creating User Templates in SMS User's Guide*.

## Example

This example shows Adaptive Reservations for a subscriber with varying usage rates during a single data session. The subscriber has sufficient resources for the entire session. See Reservation Config screen for more information on the available configuration fields. Not all configuration fields are shown in this example.

The following table shows the reservation configuration for this example.

| Field                                       | Configured Value  |
|---------------------------------------------|-------------------|
| Hold Reservation Open (secs)                | 630 seconds       |
| Requested Reservation Chunk (units)         | 100 Units (500Kb) |
| Commit Volume Threshold                     | 100 Units (500Kb) |
| Request Time Threshold                      | 300 seconds       |
| Adaptive Data                               | Check box         |
| Idle Validity Time                          | 300 seconds       |
| Active Validity Time                        | 30 seconds        |
| Minimum Requested Reservation Chunk (units) | 1 Unit (5Kb)      |

Each row in the following table shows the subscriber's usage during the session and the resulting Adaptive Reservations behavior.

| Subscriber Usage                                           | Adaptive Reservations Behavior                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The subscriber initiates a new data session                | The CCS provides a reservation equaling 1 Unit with a validity time of 300 seconds based on the <b>Minimum Requested Reservation Chunk</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| The subscriber consumes no data in 5 minutes (300 seconds) | <p>The configured <b>Idle Validity Time</b> is exceeded, triggering usage reporting. Adaptive Reservations determines that the session is idle based on the following calculation:</p> $\text{Rate} = \text{Units Consumed} / \text{Time to Consume Units}$ <p>The usage rate calculated for the example is:</p> $0 \text{ units/sec} = 0 \text{ units} / 300 \text{ sec}$ <p>Non-usage results in the extension of the existing reservation of 5Kb for 300 seconds. The session is not terminated because the <b>Hold Reservation Open</b> value is configured to 630 seconds.</p> |

| Subscriber Usage                                                                            | Adaptive Reservations Behavior                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|---------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| The subscriber consumes 1 data unit (5Kb) in 10 seconds.                                    | <p>Adaptive Reservations determines that the session is active based on the following usage rate calculation:</p> $0.1 \text{ units/sec} = 1 \text{ unit} / 10 \text{ sec}$ <p>The CCS increases the subscriber's reservation based on the new rate using the following calculation for additional units:</p> $\text{Additional Units} = \text{Rate} \times \text{Active Validity Time}$ <p>The existing reservation of 1 unit is augmented with 3 additional units:</p> $3 \text{ units} = 0.1 \text{ units/sec} \times 30 \text{ seconds}$ <p>The reservation is now 4 units.</p> |
| The subscriber consumes 3 data units (15Kb) in 1 second before the reservation expires.     | <p>The CCS increases the subscriber's reservation by the number of units calculated using the new rate of:</p> $3 \text{ units/sec} = 3 \text{ units} / 1 \text{ sec}$ <p>The existing reservation of 4 units is augmented with 90 additional units:</p> $90 \text{ units} = 3 \text{ units/sec} \times 30 \text{ sec}$ <p>The reservation is now 94 units.</p>                                                                                                                                                                                                                     |
| The subscriber consumes 90 data units (450Kb) in 15 seconds before the reservation expires. | <p>The CCS calculates a new rate of 6 units/sec and increases the reservation by the maximum allowed chunk of 100 units. A reservation size of 180 units (6 X 30) is not allowed because of the <b>Requested Reservation Chunk</b> value is set to 100 units.</p> <p>The reservation is now 194 units.</p>                                                                                                                                                                                                                                                                          |
| The subscriber consumes 60 data units (300Kb) in 30 seconds before the reservation expires. | <p>The CCS performs a mid-session commit of the subscriber's usage because the usage exceeds the <b>Commit Volume Threshold</b> of 100 units. The committed usage at this point totals 154 units (770Kb).</p> <p>The CCS calculates a new rate of 2 units/sec and reserves 60 additional units. The reservation now totals 214 units (154 committed units and 60 reserved but not committed units).</p>                                                                                                                                                                             |
| The subscriber consumes 3 data units (15Kb) in 30 seconds before the reservation expires.   | <p>The CCS attempts to reserve 3 additional units based on the new data consumption rate. The existing unused reservation of 60 units exceeds the new required amount. In this case, the CCS performs another mid-session commit of the 3 data units used by the subscriber. The committed usage at this point totals 157 units (785Kb).</p> <p>The reservation adapts to a new value of 3 units with a 30 sec validity time.</p>                                                                                                                                                   |
| The subscriber consumes 2 data units (10Kb) in 15 seconds then terminates the session.      | <p>The CCS commits the 2 used units based on the session termination. The total committed usage for the session is 159 units (795Kb). No outstanding reservations against the subscriber's resource balance for this session exist.</p>                                                                                                                                                                                                                                                                                                                                             |

## TTC based Rating and Charging

You can disable continuous time rating by de-selecting **Continuous-Time Rating** check box in Reservation Config screen. Once continuous time rating is disabled, rating based on Tariff Time Change (TTC) is activated. This will ensure that any change that would affect the charging that takes place during an ongoing session is considered when consumed units are charged.

- TTC based charging ensures that a time of change in tariff (TTC) is sent out via DCA in CCA (credit-control-answer) messages as applicable.
- When a TTC is sent in CCA messages, it expects before TTC and after TTC usage in CCR-U/CCR-T messages.
- For handling TTC based rating and charging properly, appropriate eserv.config configurations should be present in DIAMETER section. For more information, see *Diameter Control Agent Technical Guide*.

When Continuous-Time Rating is disabled, TTC will be sent out or not is based on the following criteria:

- Favorable: If the rate is going to decrease during an ongoing session, TTC will be sent as the epoch time when the rate change will occur.
- Adverse: If the rate is going to increase during an ongoing session, TTC will not be sent.
- Neutral: If there is no rate change during an ongoing session, TTC will not be sent.

For detecting a change in the rate, following are treated as TTC boundaries:

- Charge Period Change
- Discount (Weekly / Holiday)
- Balance Type Cascade Change

**Note:** TTC boundaries are not applicable for cross balance cascade change. Normal slab based rating is performed in case of cross balance cascade change.

## About Mid-Session EDR Configuration

You can use the following options to control how partial EDRs are generated:

- You can configure to generate partial EDRs by volume.
- You can configure a time interval to generate partial EDRs. For example, you can create a partial EDR every hour. A partial EDR is created even if no volume has been consumed.
- You can configure to generate a partial EDR at a specified time of day based on a configured time zone. For example, an EDR could be generated at midnight. A partial EDR is created even if no volume has been consumed.

**Note:** This option can result in an increased load on system resources at the designated time.

These configuration options can be used in combination; for example:

- You can create partial EDRs at 100-MB intervals and once a day for the same session.
- You can create partial EDRs based on a time interval and a specified time of day. If both time-based intervals occur at the same time, only one partial EDR is created.

## About Billing Rounding Configuration

You can apply different rating rounding methods to Cash Chargeable Balances and Cash Cross Balances.

The rounding methods that you can apply are:

- Bankers
- Ceiling
- Commercial

By default, Bankers rounding is applied. For detailed information about rating rounding, see *Rounding During Rating Calculations* (on page 357).

## Reservation Config tab

Here is an example **Reservation Config** tab.

The screenshot shows a window titled "Rating Management" with a red icon. The window has a menu bar with the following items: "Named Event", "Discount Periods", "Charge Periods", "Balance Type Cascades", "Expenditure Plan", "Tariff Plan", "Tariff Plan Selector", "Rate Tables", "Discount Sets", "CLI-DN", "Weekly", "Holiday", "Low Credit Notification Config", "Tax Plan", "Dynamic Quota Config", "Cross Balance Type Cascades", "Reservation Config" (which is the active tab), and "Named Event Catalogue". Below the menu bar, there is a "Service Provider" dropdown menu set to "OCNCCTemplate" and a "Help" button. The main area of the window is a large, empty table with a header row containing the following columns: "Name", "Hold ...", "Req ...", "Commit Volume Thre...", and "Request Ti". At the bottom of the window, there is a horizontal scrollbar and four buttons: "New", "Edit", "Delete", and "Close".

## Introduction

This table describes the function of the reservation configuration fields.

| Field                               | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Configuration Name                  | The name of the configuration.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Hold Reservation Open (secs)        | <p>This value defines the minimum period of time in seconds that can elapse before a reservation will be timed out by the billing engine. If set, this value overrides both the Reservation Period Override (RPO) field in an Initial Reservation, and the Reservation Length Tolerance specified in VWS configuration for the CCS beVWARS Reservation Handler.</p> <p>Hold Reservation Open is a total figure and not a delta based on the maxReservationLength configured in the <b>eserv.config</b> file on the VWS. This means that if your reservation size is 200 seconds, you need to configure the Hold Reservation Open for a period greater than 200 seconds, otherwise you are going to trigger a timeout during the period of the reservation.</p> <p><b>Note:</b> If you enable Adaptive Data, this value must be greater than the combined time set in the <b>Request Time Threshold</b> and <b>Idle Validity Time</b>.</p>                                                                                                                                                                                                                                   |
| Requested Reservation Chunk (units) | <p>Requested Reservation Chunk defines the amount that the VWS shall attempt to return upon receipt of a reservation request, assuming that the subscriber has sufficient funds:</p> <ul style="list-style-type: none"> <li>• Upon receipt of an Initial Reservation, the VWS will attempt to reserve the specified number of units.</li> <li>• Upon receipt of a Subsequent Reservation Request (SRR), the VWS will examine the number of units consumed so far (specified in the SRR), and then return enough units to bring the total un-used reservation up to the Requested Reservation Chunk (RRC) value. So, the formula used is as follows:<br/>Returned Reservation = RRC – (Un-Used Reservation MOD RRC)</li> </ul> <p><b>Note:</b> The RRC value is subject to precision value, depending on the switch used, specified in IR REQ. For example, if the UATB node is configured for a:</p> <ul style="list-style-type: none"> <li>• CS2 (CAMEL) switch, it sends an IR REQ with "[PREC] = 'TEN'", which results in beVWARS returning a reservation with the value = 10 x &lt;RRC value&gt;.</li> <li>• Nokia switch, it uses the configured RRC value.</li> </ul> |
| Commit Volume Threshold             | <p>Any non-committed time, that has been confirmed as being used, will be committed once the total goes above this threshold.</p> <p><b>Note:</b> This field is active when the <b>Enabled</b> check box has been selected.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |

| Field                                       | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|---------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Request Time Threshold                      | <p>UATB can decide not to request more funds if there is enough of the reservation remaining. If however, the Request Time Threshold is reached, then an SR will be sent regardless. Its purpose is to stop the reservation expiring on the VWS.</p> <p><b>Note:</b> This field is active when the <b>Enabled</b> check box has been selected.</p>                                                                                                                                                                                                                                 |
| Go Greedy Reservation Length Limit (units)  | <p>If less than this number of units would be returned for the reservation, return the total number of units available instead.</p> <p><b>Note:</b> Selecting the <b>Use Global</b> check box defaults the limit to the <b>greedyReservationLengthLimit</b> value configured in the <b>eserv.config</b> file.</p>                                                                                                                                                                                                                                                                  |
| Continuous-Time Rating                      | <p>Whether to use continuous time rating or Tariff-Time-Change (TTC) based rating. By default this check box is selected.</p> <p>Un-check this check box to enable TTC based rating.</p>                                                                                                                                                                                                                                                                                                                                                                                           |
| Adaptive Data                               | <p>Whether to use the Adaptive Data parameters configured in the following fields for Adaptive Reservations.</p> <p><b>Note:</b> If you enable Adaptive Reservations, you must also provide a value greater than zero for the <b>Commit Volume Threshold</b> and select the <b>Enabled</b> check box for this field. Enabling a commit volume threshold allows reservation to be committed in the middle of active sessions when the threshold is reached. This behavior is required when using Adaptive Reservations.</p>                                                         |
| Dynamic Quota                               | Whether to use Dynamic Quota.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Idle Validity Time                          | <p>The validity time (in seconds) to send to DCA if the connection is idle.</p> <p>The connection is idle if one of the following is true:</p> <ul style="list-style-type: none"> <li>No data has been used yet.</li> <li>The data used last period is less than the Minimum Requested Reservation Chunk.</li> <li>The length of the last session is less than the Idle Validity Time.</li> </ul> <p>A value of <b>0</b> means do not send validityTime in the Diameter CCA message. When configured this way, the Gateway GPRS Support Node (GGSN) chooses the validity time.</p> |
| Active Validity Time                        | <p>The validity time (in seconds) to send the DCA if the connection is active. See <b>Idle Validity Time</b> for how an idle session is defined.</p> <p>A value of <b>0</b> means do not send validityTime in the Diameter CCA message. When configured this way, the GGSN chooses the validity time.</p>                                                                                                                                                                                                                                                                          |
| Minimum Requested Reservation Chunk (units) | <p>The minimum reservation size in units.</p> <p>If a value of <b>0</b> is used, the adaptive data parameters are turned off.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Mid-Session EDRs                            | Enables the feature.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Commit Time Threshold                       | This defines the amount of time at which point a partial EDR is produced (Duration of time since the last commit is greater than or equal to the Commit Time Threshold).                                                                                                                                                                                                                                                                                                                                                                                                           |
| Commit Time                                 | This defines a specific time to create a partial EDR, according to the configured time zone.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |



| Field                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Timezone             | The time zone to use for the commit time.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Billing Rounding     | Selecting the <b>Default</b> check box disables the fields in the Rounding Parameters group and uses the default rounding method, which is Bankers rounding.                                                                                                                                                                                                                                                                                                                                                                                                     |
| System Currency Base | This field displays the configured system currency base (which is chosen at installation time). The value signifies the order of magnitude of the "subunits" used in rating calculations, and determines the number of rounding decimal places available in the <b>Decimal Places</b> field.                                                                                                                                                                                                                                                                     |
| Rounding Method      | <p>The rounding method to use for rating. The available rounding methods are:</p> <ul style="list-style-type: none"> <li>• <b>Bankers:</b> Rounds to the nearest subunit. Values x.5 are rounded to the nearest even small.</li> <li>• <b>Ceiling:</b> Rounds upwards. Rounding granularity is determined by a rounding factor, RF, derived from the number of decimal places.</li> <li>• <b>Commercial:</b> Rounds to the nearest subunits. Values x.5 are rounded towards infinity. For example, x.5 is rounded to x+1 and -x.5 is rounded to -x-1.</li> </ul> |
| Decimal Places       | <p>The number of decimal places to use for rounding. The available decimal places in this field is determined by the system currency base.</p> <p><b>Note:</b> This field is enabled only when <b>Ceiling</b> is selected as the rounding method to use.</p>                                                                                                                                                                                                                                                                                                     |

## **Reservation Config screen**

Here is an example New Reservation Config screen.

New Reservation Config

×

Help

Configuration Name

Hold Reservation Open (secs)

Requested Reservation Chunk (units)

Commit Volume Threshold

☐ Enabled

Request Time Threshold

☐ Enabled

Go Greedy Reservation Length Limit (units)

60

☐ Use Global

Continuous-Time Rating

☒ Default

Adaptive Data

☐ Enabled

Dynamic Quota

☐ Enabled

Adaptive Data Parameters

Idle Validity Time

Active Validity Time

Minimum Requested Reservation Chunk (units)

Mid-Session EDRs

☐ Enabled

Mid-Session EDRs Parameters

Commit Time Threshold

Commit Time

00:00 ▾

☐ Enabled

Timezone

<Not Set>

Billing Rounding

☒ Default

Rounding Parameters

System Currency Base

100

Rounding Method

Bankers ▾

Decimal Places

2 ▾

Save

Cancel

## Adding a reservation config

Follow these steps to add a reservation config.

| Step | Action                                                                                                                |
|------|-----------------------------------------------------------------------------------------------------------------------|
| 1    | On the <b>Reservation Config</b> tab, click <b>New</b> .<br><b>Result:</b> The New Reservation Config screen appears. |
| 2    | Fill in the fields, as described in Reservation config fields.                                                        |
| 3    | Click <b>Save</b> .                                                                                                   |

## Editing a reservation config

Follow these steps to edit a reservation config.

| Step | Action                                                                                                         |
|------|----------------------------------------------------------------------------------------------------------------|
| 1    | In the table on the <b>Reservation Config</b> tab, select the record to edit.                                  |
| 2    | Click <b>Edit</b> or Double-click on the record.<br><b>Result:</b> The Edit Reservation Config screen appears. |
| 3    | Edit the details as described in Reservation config fields.                                                    |
| 4    | Click <b>Save</b> .                                                                                            |

## Deleting a reservation config

Follow these steps to delete an existing Reservation config.

| Step | Action                                                                                                                                              |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the table in the <b>Reservation Config</b> tab, select the record to delete.                                                                     |
| 2    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                                     |
| 3    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> The record is deleted and you see the Reservation Config success message. |
| 4    | Click <b>OK</b> .                                                                                                                                   |

# Low Credit Notification Config

## Introduction

The **Low Credit Notification Config** tab allows for notifications to be sent based on credit values.

These notifications are messages; to configure a 'beep' notification, see *CCS Feature Nodes - UATB node configuration*.

The low credit threshold configured in these screens control **when** the beep would be played, the macro node controls **if** it should be played.

Low Credit Notification Config tab

Here is an example of the Low Credit Notification Config tab.

Rating Management

Service ProviderBossHelp

Low Credit Notification Config

| Name                | Low Balance Threshold | DAP Operation | Suppress DAP | Notification Template |
|---------------------|-----------------------|---------------|--------------|-----------------------|
| CLIXDN Threshold 26 | 25                    | -- No DAP --  |              | -- No Notification -- |
| CLIXDN Threshold 42 | 75                    | -- No DAP --  |              | -- No Notification -- |
| CLIXDN Threshold 61 | 50                    | -- No DAP --  |              | -- No Notification -- |

NewEditDeleteClose

Low Credit Notification Config fields

This table describes the function of each field.

| Field | Description                                     |
|-------|-------------------------------------------------|
| Name  | The unique low credit notification config name. |

| Field                 | Description                                                                                                                                                                                                                                                                                                |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Low Balance Threshold | The threshold value that will trigger the notification. Setting this to less than 30 seconds can result in the in-band low credit tone not being generated. Some network equipment, or signaling implementations, use a fixed warning period of 30 seconds and anything less than that turns the tone off. |
| DAP Operation         | The name of the DAP operation to use for this notification. This list is configured in the DAP application SMS screen at <b>SMS &gt; Services &gt; DAP &gt; Resources</b> then <b>Operations</b> tab. For more information about DAP see <i>Data Access Pack User's and Technical Guide</i> .              |
| Suppress DAP          | Suppress DAP or not indicator location. This is a boolean profile tag for this customer, which if set to True will suppress the DAP notification. Profile tags are configured in <b>SMS &gt; ACS Service &gt; Configuration &gt; Profile Tag Details</b> tab.                                              |
| Notification Template | The notification template to use for this notification. This list is configured in <b>SMS &gt; ACS Service &gt; Configuration &gt; Notifications</b> tab.                                                                                                                                                  |

## Low Credit Notification Config screen

Here is an example Low Credit Notification Config screen.

## Adding a Low Credit Notification Config

Follow these steps to add a low credit notification item.

| Step | Action                                                                                                                                                                                                                                                                                                          |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management screen, select the <b>Service Provider</b> from the drop down box.                                                                                                                                                                                                                     |
| 2    | Select the <b>Low Credit Notification Config</b> tab and click <b>New</b> .<br><b>Result:</b> You see the New <i>Low Credit Notification Config</i> screen (See example on page 432).                                                                                                                           |
| 3    | Configure this record by entering data in the fields or selecting from the drop down lists on this screen.<br>For more information about the fields on this screen, see Low Credit Notification Config fields.<br><b>Note:</b> The <b>Suppress DAP</b> list becomes available when a DAP operation is selected. |
| 4    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                             |

## Editing a Low Credit Notification Config

Follow these steps to edit a low credit notification item.

| Step | Action                                                                                                                                                                                      |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management screen, select the <b>Service Provider</b> from the drop down box.                                                                                                 |
| 2    | Select the <b>Low Credit Notification Config</b> tab.                                                                                                                                       |
| 3    | Select a config record and click <b>Edit</b> or double-click on a config record.<br><b>Result:</b> You see the <i>Edit Low Credit Notification Config screen</i> (See example on page 432). |
| 4    | Edit the details as described in Low Credit Notification Config fields.<br><b>Note:</b> The <b>Suppress DAP</b> list becomes available when a DAP operation is selected.                    |
| 5    | Click <b>Save</b> .                                                                                                                                                                         |

## Deleting a Low Credit Notification Config

Follow these steps to delete an existing Low Credit Notification Config.

| Step | Action                                                                                                                                                          |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the table in the <b>Low Credit Notification Config</b> tab, select the record to delete.                                                                     |
| 2    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                                                 |
| 3    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> The record is deleted and you see the Low Credit Notification Config success message. |
| 4    | Click <b>OK</b> .                                                                                                                                               |

## Tax Plan

### Introduction

The **Tax Plan** tab lets you set up and maintain tax plans. Tax plans are used in calculating the tax component of charges and recharges in Prepaid Charging.

Online charging transactions use tax plans to:

- Acquire the tax amount to be applied to the charging activity
- Calculate tax as inclusive to the charging definitions
- Calculate tax as additional to the charging definitions.

A tax plan is a name that can be referenced in rating, much like rate tables. Definitions of how to calculate the tax for charges/credits with the tax plan will use the definitions associated with this plan.

### Applying tax

Currently, tax can be applied at three points during the charging transaction:

- Session rating
- Named event rating
- Redemption - voucher or promotional

Tax information is reported in the corresponding EDR and a tax report is made available indicating the tax liability for the platform.

### Session rating

Session rating (such as voice calls) use the CLI-DN rating tables. A single tax plan can be optionally associated with each CLI-DN mapping. This tax plan applies to all the tariffs of a multi-tariff CLI-DN. For mid-tariff moment changes, the tax plan associated with each of the CLI-DN mappings applies only to that part of the cost.

#### Example:

If after 10 minutes of a 15 minute call, the tariff plan changes from T1 to T2, the tax plan for T1 will only apply to the cash costs for the first 10 minutes, while the tax plan associated with T2 will apply for the last five minutes.

**Note:** Tax is calculated only for cash balance types of CLI-DN mappings.

### Named event

Named event rating for SMSes or one-off charges use the named event rating tables. A single tax plan can be optionally associated with each named event base definition.

This tax plan applies only to the cash cost of a named event.

### Computation methods

Each tax plan can be configured to calculate the associated tax definitions using one of the following methods:

- Compound
- Cumulative

#### Compound tax

In the compound method, multiple tax definitions are calculated by applying the tax percentage to each subtotal obtained during the computation.

Tax amount is initially calculated on the initial cost and subtotaled. The second tax is then applied to this subtotal and the process is repeated for each additional tax definition in the tax plan. This addition to the original amount means the tax is itself taxed in the compound method.

#### Example:

Tax plan (T1) has the two tax definitions linked to it:

TD1\_1: 20%  
TD1\_2: 10%

Now if a \$100 charge were to be taxed using the *compound* method the following calculation would occur:

$\$100 * 20/100 = \$20$   
**Sub Total:** \$120  
 $\$120 * 10/100 = \$12$   
**Total:** \$132

#### Cumulative tax

Cumulative tax is calculated on the base charge and all the tax amounts are added together at the end. This makes no difference for a tax plan with a single tax definition in it.

#### Example:

Tax plan (T1) has the two tax definitions linked to it:



TD1\_1: 20%

TD1\_2: 10%

Now if a \$100 charge were to be taxed using the *cumulative* method the following calculation would occur:

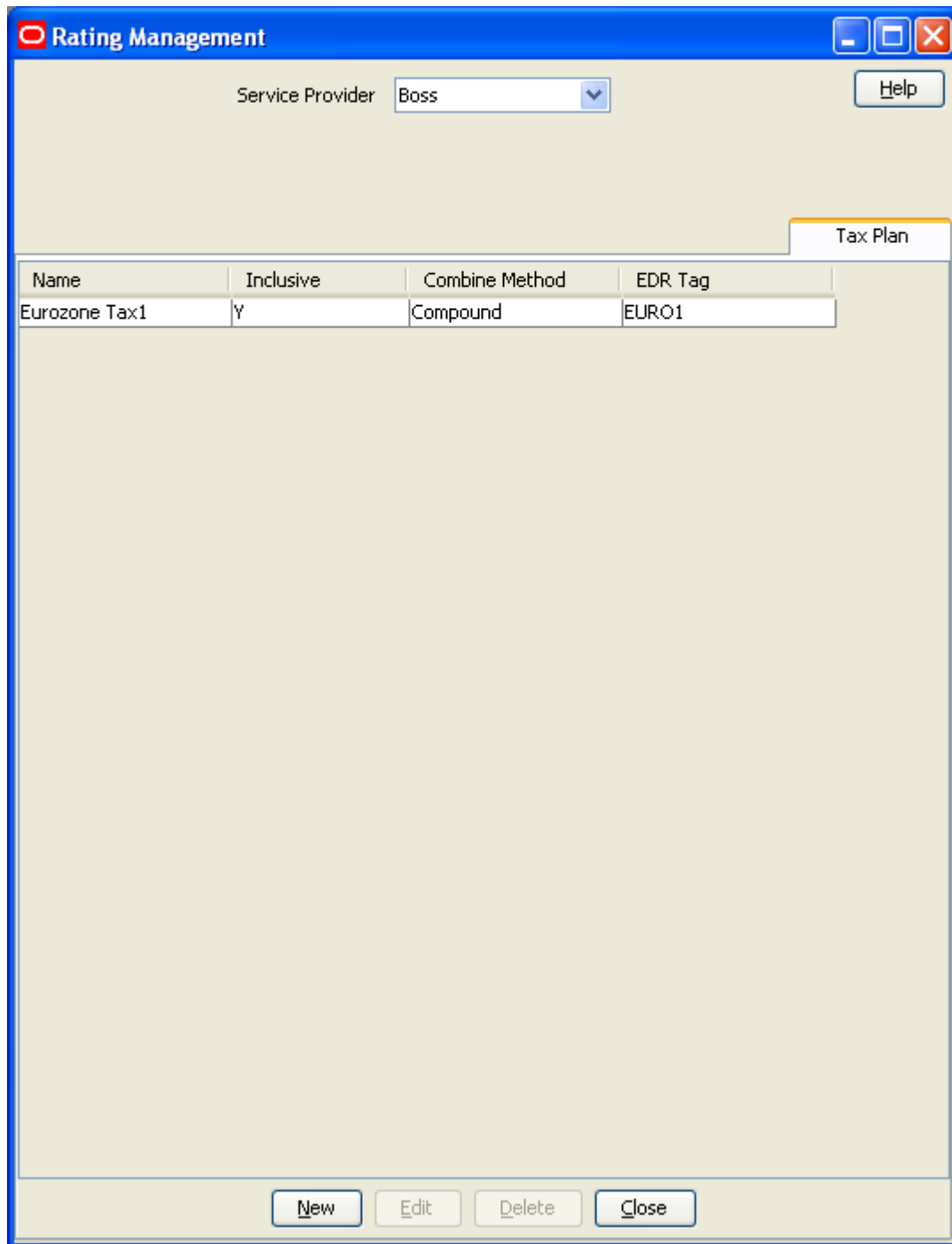
$\$100 * 20/100 = \$20$

$\$100 * 10/100 = \$10$

**Total:**  $\$100 + \$20 + \$10 = \$130$

## Tax Plan tab

Here is an example **Tax Plan** tab.



The image shows a software window titled "Rating Management". At the top, there is a "Service Provider" dropdown menu set to "Boss" and a "Help" button. Below this is a tabbed interface with the "Tax Plan" tab selected. The tab contains a table with the following data:

| Name          | Inclusive | Combine Method | EDR Tag |
|---------------|-----------|----------------|---------|
| Eurozone Tax1 | Y         | Compound       | EURO1   |

At the bottom of the window, there are four buttons: "New", "Edit", "Delete", and "Close".

## Tax Plan fields

This table describes the function of each field.

| Field          | Description                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name           | <p>The name of the tax plan.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• Tax plan names must be unique within a customer's set of tax plans.</li> <li>• Special characters and case do not make a distinction between names.</li> <li>• This is a mandatory field.</li> </ul>                                                                                                                                             |
| Inclusive      | Selecting this check box indicates the tax plan is of type inclusive, that is, the tax is already included in the cost.                                                                                                                                                                                                                                                                                                                         |
| Combine Method | <p>Indicates how multiple tax definitions are calculated for a single tax plan. Select one of:</p> <ul style="list-style-type: none"> <li>• <b>Compound:</b> each definition is calculated on the subsequent total.</li> <li>• <b>Cumulative:</b> each definition is calculated on the base charge and tax amounts added.</li> </ul> <p>See <i>Compound tax</i> (on page 434) and <i>Cumulative tax</i> (on page 434) for more information.</p> |
| EDR Tag        | Name used to identify this tax plan in an EDR.                                                                                                                                                                                                                                                                                                                                                                                                  |

## Tax Plan screen

Here is an example Tax Plan screen.

**Edit Tax Plan**

Help

Name: Eurozone Tax1

Combine Method: ☒ Compound ☐ Cumulative

Inclusive: ☒

EDR Tag: EURO1

Tax Definitions - for compound combine method order is important.

| Name  | Percentage | EDR Tag    | Change User |
|-------|------------|------------|-------------|
| Basic | 5          | EURO_BASIC | SU          |

New Edit Delete Up Down Save Cancel

## Adding tax plans

Follow these steps to add a new tax plan.

| Step | Action                                                                                                                                                                                                                                                          |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                             |
| 2    | On the <b>Tax Plan</b> tab, click <b>New</b> .<br><b>Result:</b> You see the <i>New Tax Plan screen</i> (See example on page 438).                                                                                                                              |
| 3    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Tax Plan fields</i> (on page 437).<br>To add tax definitions to the plan, see <i>Adding tax definitions</i> (on page 439). |
| 4    | Click <b>Save</b> .                                                                                                                                                                                                                                             |

## Editing tax plans

Follow these steps to edit an existing Tax Plan.

| Step | Action                                                                                                                                                                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                              |
| 2    | In the table on the <b>Tax Plan</b> tab, select the record to edit.                                                                                                                                                                                              |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the <i>Edit Tax Plan screen</i> (See example on page 438).                                                                                                                                                         |
| 4    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Tax Plan fields</i> (on page 437).<br>To add tax definitions to the plan, see <i>Editing tax definitions</i> (on page 440). |
| 5    | Click <b>Save</b> .                                                                                                                                                                                                                                              |

## Deleting tax plans

Follow these steps to remove a tax plan.

| Step | Action                                                                                                                                                   |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                      |
| 2    | In the table on the <b>Tax Plan</b> tab, select the record to delete and click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt. |
| 3    | Click <b>OK</b> to delete the record from the database.                                                                                                  |

## Adding tax definitions

Follow these steps to add a new tax definition.

| Step | Action                                                                                                                                                                                |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | On the New or the Edit <i>Tax Plan screen</i> (See example on page 438), click <b>New</b> .<br><b>Result:</b> You see the <i>New Tax Definition screen</i> (See example on page 440). |
| 2    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Tax plan definition fields</i> (on page 440).    |
| 3    | Click <b>Save</b> .<br><b>Result:</b> You will be returned to the Tax Plan screen and the new record will be displayed in the <b>Tax Definitions</b> table.                           |

## Tax definitions

Tax definitions define the actual percentage of the tax to be applied. The final amount of tax payable is dependent on the calculation method defined in the tax plan and the available account balances. The tax is only applied to cash balances and costs.

A tax plan can have multiple tax definitions associated to it.

## Tax Definition screen

Here is an example Tax Definition screen.

## Tax plan definition fields

This table describes the function of each field.

**Note:** All fields are mandatory.

| Field      | Description                                                                                                                                                                                                                                                                                                   |
|------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name       | A unique name of the tax definition.                                                                                                                                                                                                                                                                          |
| Percentage | <p>The actual tax percentage to be applied.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• Tax plan names must be unique within a customer's set of tax plans.</li> <li>• Percentage figures can include up to two decimal places.</li> <li>• Allowed range is within 0 to 100.</li> </ul> |
| EDR Tag    | Name used to identify this tax definition in an EDR. An abbreviated tax definition name appears in the EDR.                                                                                                                                                                                                   |

## Editing tax definitions

Follow these steps to edit an existing tax definition.

| Step | Action                                                                                                                                                                                                |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the New or the Edit Tax Plan screen, select the tax plan in the table and click <b>Edit</b>.</p> <p><b>Result:</b> You see the <i>Edit Tax Definition screen</i> (See example on page 440).</p> |
| 2    | <p>Configure this record by entering data in the fields on this screen.</p> <p>For more information about the fields on this screen, see <i>Tax plan definition fields</i> (on page 440).</p>         |
| 3    | <p>Click <b>Save</b>.</p> <p><b>Result:</b> You will be returned to the Edit Tax Plan screen and the new record will be displayed in the <b>Tax Definitions</b> table.</p>                            |

## Deleting tax definitions

Follow these steps to delete an existing tax definition.

| Step | Action                                                                                                                                                       |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New or the Edit Tax Plan screen, select the tax plan in the table and click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt. |
| 2    | Click <b>OK</b> to delete the record from the database.                                                                                                      |

## Dynamic Quota Config

### Introduction

Dynamic Quota configurations are used to manage quota reservation. The VT (Validity Time), QHT (Quota Holding Time), and VQT (Volume Quota Threshold) are configurable based on the reservation configuration being used.

- Quota Holding Time (QHT) - How long a granted-quota is allowed to be idle before the reservation is needed to be released.
- Volume Quota Thresholds (VQT) - How much before the full consumption of the granted quota should the client request more.

When Dynamic Quota is enabled, the configured value of QHT and VQT are sent in CCA (credit-control-answer) messages.

#### Note:

- One Reservation Config can be associated to only one Dynamic Quota set.
- To enable Dynamic Quota set creation for any Reservation Config, **Dynamic Quota** check box for the same should be selected. By default, Dynamic Quota is disabled for any Reservation Config.

## Dynamic Quota Config tab

Here is an example **Dynamic Quota Config** tab.

 Rating Management

Service Provider
OCNCCTemplate

Help

Cross Balance Type Cascades

Reservation Config

Named Event Catalogue

Named Event

Discount Periods

Charge Periods

Balance Type Cascades

Expenditure Plan

Tariff Plan

Tariff Plan Selector

Rate Tables

Discount Sets

CLI-DN

Weeklv

Holiday

Low Credit Notification Config

Tax Plan

Dynamic Quota Config

Display Filters

Dynamic Quota Name

Reservation Config Filter

No Filter

Dynamic Quota

Reservation Config

Validity Time

Quota Holdin...

New Set

Edit Set

Delete Set

Define Loop

Start Data Usage

Volume Quota Th...

Change User

Change Date

New

Edit

Delete

Close



## Adding dynamic quota sets

Follow these steps to add a new dynamic quota set.

| Step | Action                                                                                                                                                                                                                                                                                                       |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the Service Provider list.                                                                                                                                                                                                                 |
| 2    | On the <b>Dynamic Quota Config</b> tab, click <b>New Set</b> .<br><b>Result:</b> You see the New <i>Dynamic Quota Set</i> screen (on page 443).                                                                                                                                                              |
| 3    | In the <b>Name</b> field, type the name of the new dynamic quota set.                                                                                                                                                                                                                                        |
| 4    | Select the reservation configuration from the <b>Res Config</b> drop down list.<br><b>Tip:</b> The Res Config shows only those Reservation Configurations for which dynamic quota is enabled and there are no dynamic quota already created for it.                                                          |
| 5    | In the <b>Validity Time (Secs)</b> field, enter the validity time.<br><b>Tip:</b> This validity time is used in all outgoing CCA messages, when dynamic quota is enabled.<br>If TTC (charging based on Tariff Time Change) modifies validity time, then same is sent out and this configuration is not used. |
| 6    | In the <b>Quota Holding Time (Secs)</b> field, enter the quota holding time.<br><b>Note:</b> If this field is left blank, then QHT will not be sent in the outgoing messages.                                                                                                                                |
| 7    | Click <b>Save</b> .<br><b>Note:</b> Dynamic quota that do not have a reservation config associated with them are global.                                                                                                                                                                                     |

## Dynamic Quota Set screen

Here is an example **New Dynamic Quota Set** screen.

The screenshot shows a window titled "New Dynamic Quota Set" with a close button (X) in the top right corner. Inside the window, there is a "Help" button in the top right. Below it, there are four input fields: "Name" (a text box), "Res Config" (a dropdown menu showing "-global-"), "Validity Time (Secs)" (a text box with "0"), and "Quota Holding Time (Secs)" (a text box with "0"). At the bottom of the window are two buttons: "Save" and "Cancel".

## Editing dynamic quota sets

Follow these steps to edit an existing dynamic quota set.

| Step | Action                                                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the Service Provider list.                       |
| 2    | On the <b>Dynamic Quota Config</b> tab, select the dynamic quota set to edit from the list displayed in the table. |
| 3    | Click <b>Edit Set</b> .<br><b>Result:</b> You see the <i>Edit Dynamic Quota Set</i> screen (on page 444).          |
| 4    | Modify the <b>Name</b> as required.                                                                                |
| 5    | Modify the <b>Validity Time (Secs)</b> as required.                                                                |
| 6    | Modify the <b>Quota Holding Time (Secs)</b> as required.                                                           |
| 7    | Click <b>Save</b> .                                                                                                |

## Edit Dynamic Quota Set screen

Here is an example **Edit Dynamic Quota Set** screen.

The screenshot shows a dialog box titled "Edit Dynamic Quota Set". It contains a "Help" button in the top right corner. Below the title bar, there are three input fields: "Name" with the text "DQSet", "Validity Time (Secs)" with the value "150", and "Quota Holding Time (Secs)" with the value "100". At the bottom of the dialog, there are two buttons: "Save" and "Cancel".

## Deleting dynamic quota sets

Follow these steps to delete an existing Dynamic Quota set.

| Step | Action                                                                                                               |
|------|----------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the Service Provider list.                         |
| 2    | On the <b>Dynamic Quota Config</b> tab, select the dynamic quota set to delete from the list displayed in the table. |
| 3    | Click <b>Delete Set</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                  |

| Step | Action                                                                                                                                |
|------|---------------------------------------------------------------------------------------------------------------------------------------|
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> The record is deleted and you see the Dynamic Quota prompt. |
| 5    | Click <b>OK</b> .                                                                                                                     |

## Dynamic Quota fields

This table describes the function of each field.

| Field                               | Description                                                                                                                                                                                                                                      |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Volume Start (data units)           | Start of the range for a Volume Quota Threshold.<br><b>Allowed values:</b> Positive integers.                                                                                                                                                    |
| Volume End (data units)             | End of the range for a Volume Quota Threshold.<br><b>Allowed values:</b> Positive integers.                                                                                                                                                      |
| Volume Quota Threshold (data units) | Volume Quota Threshold to be sent when the granted data units are between Volume Start & Volume End.<br><b>Allowed values:</b> Positive integers.<br><b>Tip:</b> Specify a value greater than or equal to Volume Start and less than Volume End. |

## Dynamic Quota screen

Here is an example **New Dynamic Quota** screen.

The screenshot shows a window titled "New Dynamic Quota" with a close button (X) in the top right corner. Inside the window, there is a "Help" button in the top right. Below it, there are three input fields with labels: "Volume Start (data units)", "Volume End (data units)", and "Volume Quota Threshold (data units)". At the bottom of the window, there are two buttons: "Save" and "Cancel".

## Adding dynamic quota

Follow these steps to add a new Dynamic Quota..

| Step | Action                                                                                       |
|------|----------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the Service Provider list. |

| Step | Action                                                                                                                                                                       |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | On the <b>Dynamic Quota Config</b> tab, select a dynamic quota set from the list displayed in the table to add a new dynamic quota to.                                       |
| 3    | Click <b>New</b> .<br><b>Result:</b> You see the <i>Dynamic Quota screen</i> (on page 445) for the relevant dynamic quota set.                                               |
| 4    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Dynamic Quota fields</i> (on page 445). |
| 5    | Click <b>Save</b> .                                                                                                                                                          |

## Editing dynamic quota

Follow these steps to edit an existing Dynamic Quota..

| Step | Action                                                                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the Service Provider list.                                                                     |
| 2    | On the <b>Dynamic Quota Config</b> tab, select the dynamic quota set that contains the dynamic quota to edit from the list displayed in the table.               |
| 3    | In the table at the bottom of the <b>Dynamic Quota Config</b> tab, select the record to edit.                                                                    |
| 4    | Click <b>Edit</b> .<br><b>Result:</b> You see the <b>Edit Dynamic Quota</b> screen corresponding to the dynamic quota set.                                       |
| 5    | Edit the fields to reflect the changes you need to make.<br>For more information about the fields in this screen, see <i>Dynamic Quota fields</i> (on page 445). |
| 6    | Click <b>Save</b> .                                                                                                                                              |

## Deleting dynamic quota

Follow these steps to delete an existing dynamic quota.

| Step | Action                                                                                                                                               |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the Service Provider list.                                                         |
| 2    | On the <b>Dynamic Quota Config</b> tab, select the dynamic quota set that contains the dynamic quota to delete from the list displayed in the table. |
| 3    | In the table at the bottom of the <b>Dynamic Quota Config</b> tab, select the record to delete.                                                      |
| 4    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                                      |
| 5    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> The record is deleted and you see the Dynamic Quota prompt.                |
| 6    | Click <b>OK</b> .                                                                                                                                    |

# Rating Management - Named Event Catalogues

## Overview

### Introduction

This chapter explains how to configure named event catalogues.

### In this chapter

---

This chapter contains the following topics.

|                                                      |     |
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## Named Event Catalogue

### Introduction

A named event catalogue defines a list of named events and their overrides. On the **Named Event Catalogue** tab you can configure:

- The list of named events to include in the current catalogue
- General event overrides
- Time based event overrides, for example to cover holiday periods

**Note:** An override defines a period of time when the costs associated with the named event will be different or when the named event may be allowed or barred.

### Tariff plan

You assign a named event catalogue to a tariff plan using the tariff plan selector. The named events included (and allowed) in the catalogue will then be available to all the product types that use this tariff plan.

When you assign a catalogue to a tariff plan, this also sets the date when the named event catalogue will become active.

For more information on the tariff plan selector, see *Tariff Plan Selector* (on page 347).

**Note:** You can assign the same named event catalogue to more than one tariff plan.

## Default catalogue

The default catalogue defines the default list of named events and event overrides. A product type will use the default catalogue if there is no tariff plan selector entry for the product type's tariff plan at the current time.

You can choose to include the default catalogue configuration in a named event catalogue by selecting the **Include Default** option.

If the current catalogue includes the default catalogue configuration, then the default configuration for the included events will be used unless specifically overridden by the configuration in the current catalogue.

## Event rules

An event included in the named event catalogue can be either allowed or barred. This will depend on the overrides configured for the event.

Here are the rules used to determine whether or not an event will be allowed.

- 1 If no overrides have been configured for the event then it will be allowed by default.
- 2 If there is a general override in the current catalogue allowing the event then it will be allowed.
- 3 If there is a general override in the current catalogue barring the event then it will be barred.
- 4 If any time based overrides have been configured for the event to allow it or bar it, then the event will be either allowed or barred during the specified time period.

Here are the additional rules applying to the event if the default catalogue is included in the current catalogue:

- 1 The event will be barred if there is no general override in the current catalogue and there is a default general override barring the event.
- 2 A default time based override will override a general override in both the default and the current catalogue. This means that if any default time based overrides have been configured for the event to allow it or bar it, then the event will be either allowed or barred during the specified time period.
- 3 If a time based override has been configured for the same period in the default catalogue and in the current catalogue, then the override in the current catalogue will take precedence.

## Named Event Catalogue tab

Here is an example **Named Event Catalogue** tab.

**Note:** The current default named event catalogue name is shown on the tab. The row containing the default catalogue is highlighted in bold at the top of the list of catalogues on the tab.

**Rating Management**

Service Provider:

Named Event Catalogue

Default Catalogue: GCPT01

| Name                 | Default Catalogue | Include Default | Use Holiday Set |
|----------------------|-------------------|-----------------|-----------------|
| <b>GCPT01</b>        | <b>Yes</b>        | <b>No</b>       |                 |
| AHUNT_PR             | No                | No              |                 |
| Default              | No                | No              |                 |
| DT                   | No                | Yes             | Dave H5         |
| MJHPT1               | No                | Yes             |                 |
| SL ActivationCredits | No                | No              |                 |
| SL_Product1          | No                | No              |                 |
| SL_Product2          | No                | No              |                 |
| SLauto_ProdType      | No                | No              |                 |

## Named Event Catalogue tab columns

This table describes the content of each column.

| Field             | Description                                                                                           |
|-------------------|-------------------------------------------------------------------------------------------------------|
| Name              | The catalogue name.<br><b>Note:</b> The first catalogue in the list is the current default catalogue. |
| Default Catalogue | Flag to indicate which is the default catalogue.                                                      |
| Include Default   | Flag to indicate if the this catalogue also includes the default catalogue.                           |
| Use Holiday Set   | The name of a Holiday set when one is used in this catalogue.                                         |

## Setting the default named event catalogue

Follow these steps to set the default named event catalogue.

| Step | Action                                                                                                                                                                                                                                          |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                                                                             |
| 2    | In the table on the <b>Named Event Catalogue</b> tab, select the named event catalogue that you want to make into the default.<br><b>Note:</b> You must choose a named event catalogue which has the <b>Include Default</b> column set to 'No'. |
| 3    | Click <b>Make Default</b> .<br><b>Result:</b> You see the Confirm Change Default Catalogue prompt.                                                                                                                                              |
| 4    | Click <b>Yes</b> to confirm.<br><b>Result:</b> The <b>Named Event Catalogue</b> table will be refreshed and the new default catalogue will be highlighted in bold at the top of the list.                                                       |

## Copying named event catalogues

You can copy the configuration for a named event catalogue to a new catalogue. This will copy:

- The include default value
- The use holiday set value
- Included named events
- Allow in catalogue values
- Event override configuration

Follow these steps to copy a named event catalogue.

| Step | Action                                                                                                                                                              |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                 |
| 2    | On the <b>Named Event Catalogue</b> tab, select the catalogue to copy.                                                                                              |
| 3    | Click <b>Copy</b> .<br><b>Result:</b> You see the Copy Existing Named Event Catalogue screen. The name of the catalogue you are copying is displayed in the screen. |
| 4    | In the <b>Name</b> field, type the name you want to use for the new catalogue that will be created by the copy process.                                             |
| 5    | Click <b>Copy</b> .                                                                                                                                                 |



| Step | Action                                                                                                                                                                           |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | <b>Result:</b> The catalogue and its configuration is copied to the new name. The <b>Named Event Catalogue</b> tab is refreshed and you see the new catalogue listed on the tab. |

## Deleting named event catalogues

Follow these steps to delete a named event catalogue.

| Step | Action                                                                                                                                                                                                                                                                                                         |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                            |
| 2    | On the <b>Named Event Catalogue</b> tab, select the catalogue to delete.<br><br><b>Note:</b> You may not delete any of: <ul style="list-style-type: none"> <li>• The default catalogue</li> <li>• Any catalogue that has been associated with a tariff plan on the <b>Tariff Plan Selector</b> tab.</li> </ul> |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                                                                                                                                                                                                |
| 4    | Click <b>Ok</b> .<br><b>Result:</b> The catalogue is removed from any named event records included in the catalogue and the catalogue is deleted.                                                                                                                                                              |

## Named Event Catalogue screen

Here is an example Named Event Catalogue screen.

**Edit Named Event Catalogue**

Name:  Include Default (Bronze) ☐ Use Holiday Set:

**Named Events**

Display Filters

Event Sets:  Include In Catalogue:  Max Rows:

Event Name:  Allowed in Catalogue:

| Event Set | Named Event            | Cash Cost | Time Cost | Data Cost | Unit Cost | More Info |
|-----------|------------------------|-----------|-----------|-----------|-----------|-----------|
| BOOST     | ✓ Boost 1 Periodic Fee | \$0.30    |           |           | 1         |           |
|           | ✓ Boost 2 Periodic Fee | \$0.40    |           |           | 1         |           |
|           | ✓ Boost 3 Periodic Fee | \$0.50    |           |           | 1         |           |
|           | ✓ Boost 4 Periodic Fee | \$0.60    |           |           | 1         |           |
|           | ✓ Boost 5 Periodic Fee | \$0.70    |           |           | 1         |           |
| CS        | ✓ Change Fee           | \$0.30    |           |           | 1         |           |
|           | ✓ Monthly Fee          | \$3.00    |           |           | 1         |           |
| FD        | ✓ Change Fee           | \$0.30    |           |           | 1         |           |
|           | ✓ Monthly Fee          | \$3.00    |           |           | 1         |           |
| FF        | ✓ Change Fee           | \$1.00    |           |           | 1         |           |
|           | ✓ Monthly Fee          | \$5.00    |           |           | 1         |           |
| HA        | ✓ HA                   | \$0.00    |           |           | 1         |           |
| Loyalty   | ✓ Point                | \$0.01    |           |           | 1         |           |

**Named Event Override Configuration**

Event Name:

| Override Name | Cash Cost | Time Cost | Data Cost | Unit Cost | Free | A    | Gen... |
|---------------|-----------|-----------|-----------|-----------|------|------|--------|
| Change Fee    | \$0.01    |           |           |           | 1 No | true | Yes    |

## Named Event Catalogue fields

These tables describe the function of each field on the New and the Edit Named Event Catalogue screens.

| Field           | Description                                                                                                                                                                                                                                                                                                                                                                            |
|-----------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name            | The name of the named event catalogue.                                                                                                                                                                                                                                                                                                                                                 |
| Include Default | Select this check box to automatically include the named events and event overrides from the default named event catalogue in this named event catalogue.                                                                                                                                                                                                                              |
| Use Holiday Set | <p>The Holiday Set to use for time based overrides.</p> <p>This field is populated by the <b>Holiday</b> tab. For more information, see <i>Holiday Tariffs</i> (on page 385).</p> <p><b>Note:</b> When set to "None" you will only be able to specify time based overrides for weekly and daily periods. You will not be able to specify time based overrides for holiday periods.</p> |

### Display Filters

| Field                | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Event Sets           | Filters the named events listed in the <b>Named Events</b> table based on the selected event set. When "All Sets" is selected, all the event sets configured for the current service provider will be listed.<br><br>This field is populated by the <b>Named Event</b> tab. For more information, see <i>Named Event</i> (on page 391).                                                                                                                                                                                                                                                                                                                     |
| Event Name           | The name of the specific event to search for in the selected event set.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| Include In Catalogue | Filters the events listed in the named events table based on the selected inclusion option. Select one of: <ul style="list-style-type: none"> <li>• Included - to list only events that have been included in the catalogue</li> <li>• Included in Current and Default - to list only events included in the current and default catalogues</li> <li>• Included &amp; Not Included - to list all events</li> <li>• Not Included - to list only events that are not included in the catalogue</li> </ul> <p><b>Note:</b> This field is disabled for new named event catalogues and therefore appears grayed out in the New Named Event Catalogue screen.</p> |
| Allowed In Catalogue | Filters the events listed in the <b>Named Events</b> table based on whether or not they have been allowed in the named event catalogue. Select one of: <ul style="list-style-type: none"> <li>• Allowed - to list only events that have been allowed in the catalogue</li> <li>• Allowed &amp; Barred - to list both allowed and barred events</li> <li>• Barred - to list only events that are barred in the catalogue</li> </ul> <p><b>Note:</b> This field is disabled for new named event catalogues and therefore appears grayed out in the New Named Event Catalogue screen.</p>                                                                      |
| Max Rows             | Defines the maximum number of rows that will be returned in the <b>Named Events</b> table. Defaults to 999.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| <b>Filter</b> button | Activates the selected filters when clicked.<br><br><b>Result:</b> The <b>Named Events</b> table is populated with the filter results.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

### Named Events grid

| Field       | Description                                                                                                                                                                                                                               |
|-------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Event Set   | List of event set names used.                                                                                                                                                                                                             |
| I           | Included flag. Events with this check box selected will be included in the catalogue.<br><br><b>Note:</b> Included events are automatically allowed in the catalogue. If you want to bar an event you must set up an override to do this. |
| Named Event | List of events grouped by event set name.                                                                                                                                                                                                 |

| Field            | Description                                                                                                                                                                                                                                                                                                                                                                                |
|------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| A                | <p>Allowed flag. Events with this check box selected will be allowed in the catalogue.</p> <p><b>Note:</b></p> <p>This check box cannot be changed in this screen.</p> <p>This check box is automatically set when either or both of the following are configured for the event:</p> <ul style="list-style-type: none"> <li>• General overrides</li> <li>• Time based overrides</li> </ul> |
| Cash Cost        | <p>Lists the cash cost associated with each event.</p> <p><b>Note:</b> This value is automatically updated by general overrides configured for the event.</p>                                                                                                                                                                                                                              |
| Time Cost (Secs) | <p>Lists the time cost associated with each event.</p> <p><b>Note:</b> This value is automatically updated by general overrides configured for the event.</p>                                                                                                                                                                                                                              |
| More Info        | (+) in this column indicates that time based overrides have been configured for the event.                                                                                                                                                                                                                                                                                                 |

**Note:** Cost values of all types (Cash, Time, Data and Unit) are automatically updated by general overrides configured for the event.

#### Named Event Override Configuration grid

| Field            | Description                                                                                                                                                                                                                                        |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Override Name    | Unique name for the event override                                                                                                                                                                                                                 |
| Cash Cost        | The cash amount to charge each time this named event occurs during the override period.                                                                                                                                                            |
| Time Cost (secs) | The time to charge each time this named event occurs during the override period.                                                                                                                                                                   |
| A                | Allowed flag. Events with this check box selected will be allowed in the catalogue.                                                                                                                                                                |
| General          | <p>Flag that indicates a general or time override.</p> <ul style="list-style-type: none"> <li>• <b>Yes</b> - no time based overrides are associated with this override</li> <li>• <b>No</b> - time based overrides have been configured</li> </ul> |

### Adding named event catalogues

Follow these steps to add a new named event catalogue.

| Step | Action                                                                                                                                                       |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                          |
| 2    | On the <b>Named Event Catalogue</b> tab, click <b>New</b> .<br><b>Result:</b> You see the <i>New Named Event Catalogue screen</i> (See example on page 452). |

| Step | Action                                                                                                                                                                                                                                                                                              |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | In the <b>Name</b> field, type a unique name for the new catalogue.<br><b>Warning:</b> Data may be lost up until the <b>Save</b> is clicked.                                                                                                                                                        |
| 4    | To include the default named event catalogue definition, select the <b>Include Default</b> check box.                                                                                                                                                                                               |
| 5    | To specify time based overrides for holiday periods, select the required holiday set from the <b>Use Holiday Set</b> drop down list.                                                                                                                                                                |
| 6    | Optionally, use the <b>Display Filters</b> section in the New or Edit Named Event Catalogue screen to specify the criteria to constrain the entries in the <b>Named Events</b> table.<br>For more information on the fields in this section, see <i>Named Event Catalogue fields</i> (on page 452). |
| 7    | Optionally, click <b>Filter</b> .<br><b>Result:</b> All the events that match the specified filter criteria are listed on the <b>Named Events</b> table. For an example showing a list of filtered events, see <i>Named Events table example</i> (See example on page 457).                         |
| 8    | In the <b>Named Events</b> table, select the check box in the "I" column for the events to include in the catalogue.<br><b>Result:</b> The event is highlighted in bold.                                                                                                                            |
| 9    | Add overrides to the included events as required. For more information on adding: <ul style="list-style-type: none"> <li>• A general override, see <i>Adding a general override</i> (on page 462)</li> <li>• Time based overrides, see <i>Adding a time based override</i> (on page 462)</li> </ul> |
| 10   | Perform one of the following actions: <ul style="list-style-type: none"> <li>• Click <b>Save</b> to save the record without closing the New Named Event Catalogue screen</li> <li>• Click <b>Save and Close</b> to save the record and return to the <b>Named Event Catalogue</b> tab</li> </ul>    |

## Editing named event catalogues

Follow these steps to edit an existing named event catalogue.

| Step | Action                                                                                                                                                                                                                                                                                                                                                        |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                                                                                                                                                                                                                                           |
| 2    | On the <b>Named Event Catalogue</b> tab, select the catalogue to change and click <b>Edit</b> .<br><b>Result:</b> You see the <i>Edit Named Event Catalogue screen</i> (See example on page 452).<br><b>Note:</b> If you are editing the default catalogue you will see a warning at the top of the screen.                                                   |
| 3    | Edit the fields in this screen to reflect the changes you need to make.<br>For more information on the fields in this screen, see <i>Named Event Catalogue fields</i> (on page 452).                                                                                                                                                                          |
| 4    | If you want to include some events that are not currently included in the catalogue, you will need to filter the events list.<br>For details, see <i>Filtering Named events</i> (on page 457).<br><b>Tip:</b> Select "Included and Not Included" from the <b>Include In Catalogue</b> drop down list to see a full list of events for the selected Event Set. |

| Step | Action                                                                                                                                                                                                                                                                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 5    | Select the check box in the "I" column for the events you want to include in the catalogue.                                                                                                                                                                                                   |
| 6    | Add, edit and delete overrides for the included events as required.<br>For more information, see <i>Configuring Overrides</i> (on page 461).                                                                                                                                                  |
|      | <b>Note:</b> Any changes you make to the defined overrides will be shown in the Edit Named Event Catalogue screen. However, they will not be saved to the database until you save the named event catalogue record itself.                                                                    |
| 7    | Perform one of the following actions: <ul style="list-style-type: none"> <li>Click <b>Save</b> to save the record without closing the Edit Named Event Catalogue screen</li> <li>Click <b>Save and Close</b> to save the record and return to the <b>Named Event Catalogue</b> tab</li> </ul> |

## Named Events Grid

### Introduction

The table in the **Named Events** area of the New and the Edit Named Event Catalogue screen displays a list of named events. When you open:

- The New Named Event Catalogue screen, all the available events are displayed
- The Edit Named Events Catalogue screen, only the events currently included in the catalogue are displayed

You can filter the events listed to display a different set of events. For more information on filtering events, see *Filtering named events* (on page 457).

### Event display attributes

Events are displayed with the following attributes:

- bold** – If they are included in the current catalogue
- normal font – If they are included in the default catalogue but have not been included in the current catalogue
- italics* – If they are not included in either the current catalogue or the default catalogue

## Named events grid example

Here is an example table in the **Named Events** area of the New or the Edit Named Event Catalogue screen showing the list of events that match the specified filter criteria.

**Named Events**

**Display Filters**

Event Sets:  Include In Catalogue:  Max Rows:

Event Name:  Allowed in Catalogue:

| Event Set                | I                                   | Named Event              | A                                   | Cash Cost    | Time Cost   | Data Cost | Unit Cost | More Info |
|--------------------------|-------------------------------------|--------------------------|-------------------------------------|--------------|-------------|-----------|-----------|-----------|
| <b>DCA Sample Events</b> | <input checked="" type="checkbox"/> | <b>Cent</b>              | <input checked="" type="checkbox"/> | <b>£0.10</b> |             |           |           | <b>1</b>  |
| <b>FnF FnD Events</b>    | <input checked="" type="checkbox"/> | <b>FnD Config Change</b> | <input checked="" type="checkbox"/> | <b>£0.45</b> | <b>0.25</b> |           |           | <b>1</b>  |
|                          | <input checked="" type="checkbox"/> | <b>FnF Config Change</b> | <input checked="" type="checkbox"/> | <b>£0.50</b> |             |           |           | <b>1</b>  |
| <b>PC Events</b>         | <input checked="" type="checkbox"/> | <b>1_Pound</b>           | <input checked="" type="checkbox"/> | <b>£1.00</b> |             |           |           |           |
|                          | <input type="checkbox"/>            | 50_Pence                 | <input type="checkbox"/>            | £0.50        |             |           |           |           |
|                          | <input type="checkbox"/>            | MUE2                     | <input type="checkbox"/>            | £10.00       | 3000.00     | 22        | 34        |           |
|                          | <input type="checkbox"/>            | Multi_Unit_Event         | <input type="checkbox"/>            | £0.25        | 40.00       | 4         | 2         |           |
|                          | <input type="checkbox"/>            | Negative_Event           | <input type="checkbox"/>            | -£1.50       |             |           |           |           |

## Filtering named events

Follow these steps to filter the events listed in the **Named Events** table so that only relevant events are displayed.

| Step | Action                                                                                                                                                                                                                                                                     |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the fields in the <b>Display Filters</b> section in the New or the Edit Named Event Catalogue screen, specify the criteria to use to filter named events.<br>For more information on the fields in this section, see <i>Named Event Catalogue fields</i> (on page 452). |
| 2    | Click <b>Filter</b> .<br><b>Result:</b> All the events that match the specified filter criteria are listed on the <i>Named Events table</i> (See example on page 457).                                                                                                     |

## Event Details

### Introduction

You can view details for an event selected in the **Named Events** table. The details show the derived values for the event after applying general overrides from the default and current catalogues.

**Note:** The event details do not show how the event will be affected by any time based overrides that have been configured.

## Event Details screen

Here is an example Event Details for *event\_name* screen.

| Event Parameter                        | Derived Value   | Base Event      |
|----------------------------------------|-----------------|-----------------|
| Allowed / Barred Setting               | Allowed         | Allowed         |
| Cost Type                              | Cash Only       | Cash Only       |
| Cash Cost                              | \$0,50          | \$0,50          |
| Time Cost                              | 0,00            | 0,00            |
| Expenditure Plan                       |                 |                 |
| Contributes to Promotional Destination | No              | No              |
| Event Cascade                          |                 |                 |
| Use Single Balance                     | No              | No              |
| Event Subscription                     | No              | No              |
| Subscription Period                    | 0 Days          | 0 Days          |
| Expires At Midnight                    | No              | No              |
| Expiry Notification                    | No Notification | No Notification |

## Viewing event details

Follow these steps to view the details for a selected event.

**Note:** Time based overrides are not taken into account when determining the derived values for the event.

- | Step | Action                                                                                                                                                                                                                                                            |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the <b>Named Events</b> table in the New or the Edit Named Event Catalogue screen, select the event for which you wish to view details.<br><b>Result:</b> The <b>View Details</b> button becomes enabled.                                                      |
| 2    | Click <b>View Details</b> .<br><b>Result:</b> You see the <i>Event Details</i> screen (See example on page 458) for the selected event.<br><b>Note:</b> The columns listed in the screen will vary depending on default and override configuration for the event. |
| 3    | Click <b>Close</b> when you have finished viewing the event details.                                                                                                                                                                                              |

## Event details fields

This table describes the function of each field in the table in the Event Details screen.

| Field columns   | Description                                                                                                                                                                                                           |
|-----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Event Parameter | Lists the names of the event parameters.                                                                                                                                                                              |
| Derived Value   | Lists the derived values for the event parameters after any general overrides have been applied.<br><b>Note:</b> A general override will only be applied if the Allowed parameter for the override is set to Allowed. |



| Field columns            | Description                                                                                                                                                                                                                  |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Current General Override | Lists the general override values configured for this event in the current catalogue.<br><b>Note:</b> This column will only appear if a general override has been configured for the event in the current catalogue.         |
| Default General Override | Lists the general override values configured for this event in the default catalogue.<br><b>Note:</b> This column will only appear if the default catalogue includes this event and a general override is configured for it. |
| Base Event               | Lists the base values configured for the event on the <b>Named Events</b> tab.                                                                                                                                               |

## Named Event Overrides Grid

### Introduction

The table in the **Named Event Override Configuration** area lists the overrides that have been configured for the currently selected Named Event in the New and the Edit Named Event Catalogue screen or defined as a default override for the default catalogue. You can:

- Add, modify and delete non-default overrides for the event in the current catalogue
- View the overrides configured for the event in the default catalogue

For more information about:

- Adding and modifying non-default overrides, see *Configuring Overrides* (on page 461)
- Deleting non-default overrides, see *Deleting overrides* (on page 466)

### Override display attributes

Overrides are displayed in:

- **bold** – If they have been configured for the event in the current catalogue
- *italics* – If they have been configured for the event in the default catalogue

### Default overrides

The overrides configured for the event in the default catalogue will be displayed in the list of overrides if the default catalogue is included in the current catalogue.

If the default catalogue is not included in the current catalogue, then only overrides configured for the event in the current catalogue will be listed.

## Named event override list example

Here is an example **Named Event Override Configuration** area showing the overrides configured for an event.

Named Event Override Configuration

Event Name: Product Type Swap

| Override Name | Cash Cost | Time Cost (Secs) | ...                                 | General |
|---------------|-----------|------------------|-------------------------------------|---------|
| TypeExtra     | £3660.00  | 200.00           | <input checked="" type="checkbox"/> | No      |

New  
Edit  
Delete  
Select All

For more information on the fields in this section, see *Named Event Override Configuration grid* (on page 454).

## Viewing default overrides

Follow these steps to view the override configuration defined for an event in the default catalogue.

| Step | Action                                                                                                                                                                                                                                                    |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the <b>Named Events</b> table select the required event.</p> <p><b>Result:</b> The overrides defined for the event are listed in the table in the Named Event Override Configuration area.</p>                                                      |
| 2    | <p>In the <b>Event Overrides</b> table, select the <i>default override</i> to view.</p> <p><b>Result:</b> The <b>View</b> button replaces the <b>Edit</b> button.</p> <p><b>Note:</b> Default overrides are displayed in the table in <i>italics</i>.</p> |
| 3    | <p>Click <b>View</b>.</p> <p><b>Result:</b> You see the <i>View Named Event Override Dialog screen</i> (See example on page 461).</p> <p><b>Note:</b> This is a non-editable screen.</p>                                                                  |
| 4    | <p>When you have finished viewing the override, click <b>Cancel</b>.</p> <p><b>Result:</b> You are returned to the previous screen.</p>                                                                                                                   |

## View Named Event Override Dialog

Here is an example View Named Event Override Dialog.

**View Named Event Override Dialog**

Help

Override Name:

Class: FnF FnD Events  
Name: FnD Config Change  
Allowed: ☒

**Override Values**

Free Event: ☐

Cash Cost (£):  ☒ Override

Time Cost (secs):  ☐ Override

Data Cost (data units):  ☐ Override

Unit Cost:  ☐ Override

Expenditure Plan:  ☐ Override

Contributes to Promotional Destination: ☐ ☐ Override

Event Cascade:  ☐ Override

Use Single Balance: ☐ ☐ Override

**Time Periods**

| Type | Start Time (Local TZ) | End Time (Local TZ) | Holiday |
|------|-----------------------|---------------------|---------|
|      |                       |                     |         |

New View Delete

Cancel

## Configuring Overrides

### Introduction

You can configure overrides for the events included in the named event catalogue. The override values will be used instead of the base or default values defined for the event. An override can be:

- General

- Time based

## General override

You can configure one general override only for each event included in the current catalogue. This will be active at all times except during the specific periods when a time based override is active.

## Time based override

You can configure any number of time based overrides for the events included in the current catalogue. Each override can have multiple time periods associated with it. These define the time periods during which the override will be active.

## Adding overrides

Follow the procedure below, to add a named event override, depending upon the override being:

- *Adding a general override* (on page 462)
- *Adding a time based override* (on page 462)

### Adding a general override

A general override is one that has no time based overrides.

Follow these steps to add a general override.

| Step | Action                                                                                                                                                                                                                                                                                                          |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | On the <b>Named Events</b> table in the New or the Edit <i>Named Event Catalogue</i> screen (See example on page 452), select the event to add a general override to.<br><b>Note:</b> You will not be able to add more than one general override to an event.                                                   |
| 2    | Ensure the event is included in the catalogue.<br><b>Tip:</b> To include an event, select the I (included) check box for the event.                                                                                                                                                                             |
| 3    | In the <b>Named Event Override Configuration</b> section, click <b>New</b> .<br><b>Result:</b> You see the <i>New Named Event Override Dialog</i> (See example on page 465).                                                                                                                                    |
| 4    | In the <b>Override Name</b> field, type the name of the override.                                                                                                                                                                                                                                               |
| 5    | To bar the event, ensure the <b>Allowed</b> check box is not selected.<br><b>Note:</b> The event will be allowed by default.                                                                                                                                                                                    |
| 6    | In the <b>Override Values</b> section, select the <b>Override</b> check box for fields to override, then specify the required override values.<br>For more information about these fields, see <i>Named event override fields</i> (on page 463).                                                                |
| 7    | Do not add any time period data.                                                                                                                                                                                                                                                                                |
| 8    | Click <b>Update</b> .<br><b>Result:</b> The override will be listed in the <b>Named Event Override Configuration</b> table and the: <ul style="list-style-type: none"> <li>• General column for the override will be set to <b>Yes</b>.</li> <li>• The "A" column for the override will be selected.</li> </ul> |

### Adding a time based override

Follow these steps to add a new time based override.

**Note:** Adding a time based override to a named event, sets the **More Info** column for the event in the **Named Events** table to (+).

| Step | Action                                                                                                                                                                                                                                                                                                                                              |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | On the <b>Named Events</b> table in the New or the Edit <i>Named Event Catalogue</i> screen (See example on page 452), select the event to add the override to.                                                                                                                                                                                     |
| 2    | Ensure the event is included in the catalogue.<br><b>Tip:</b> To include an event, select the I (included) check box for the event.                                                                                                                                                                                                                 |
| 3    | In the <b>Named Event Override Configuration</b> area, click <b>New</b> .<br><b>Result:</b> You see the New <i>Named Event Override Dialog</i> (See example on page 465).                                                                                                                                                                           |
| 4    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Named event override fields</i> (on page 463).                                                                                                                                                                 |
| 5    | In the <b>Time Periods</b> area, add the required time periods.<br>For more information, see <i>Adding time periods</i> (on page 468).                                                                                                                                                                                                              |
| 6    | Click <b>Update</b> .<br><b>Result:</b> The: <ul style="list-style-type: none"> <li>• Override will be listed in the <b>Named Event Override Configuration</b> table.</li> <li>• General column for the override will be set to NO, and</li> <li>• <b>More Info</b> column for the event in the <b>Named Events</b> table is set to (+).</li> </ul> |

## Named event override fields

This table describes the function of each field.

| Field                  | Description                                                                                                                                                                                                                                                                                                                          |
|------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Override Name          | Unique name for the event override                                                                                                                                                                                                                                                                                                   |
| Allowed                | Sets whether the event is allowed or barred when the override is in effect.<br><b>Note:</b> This field will be set to Allowed by default.                                                                                                                                                                                            |
| Free Event             | When selected, this event has zero charge.                                                                                                                                                                                                                                                                                           |
| Override check boxes   | Select these as relevant to enable the override field to be set.                                                                                                                                                                                                                                                                     |
| Cash Cost              | The new cash amount to charge for this named event override.                                                                                                                                                                                                                                                                         |
| Time Cost (secs)       | The new time amount to charge for this named event override.                                                                                                                                                                                                                                                                         |
| Data Cost (data units) | The new data amount to charge for this named event override.                                                                                                                                                                                                                                                                         |
| Unit Cost              | The new units amount to charge for this named event override.<br><b>Note:</b> The Unit Cost is charged for balances that do not have cash, time, or data units (for example, SMSes).                                                                                                                                                 |
| Expenditure Plan       | Sets whether this cost is included in expenditure calculations and defines the expenditure plan to use. To select an expenditure plan from the drop down list, select the <b>Override</b> check box.<br>This field is populated by the <b>Expenditure Plan</b> tab. For more information, see <i>Expenditure Plan</i> (on page 414). |

| Field                                  | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Contributes to Promotional Destination | Sets whether this cost is included in the promotional destination calculations. To enable this field, select the <b>Override</b> check box.                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Event Cascade                          | The balance type cascade that defines the order for using the balances for this named event. To enable this field, select the <b>Override</b> check box.<br>This field is populated by the records on the <b>Balance Type Cascades</b> tab. For more information, see <i>Balance Type Cascades</i> (on page 410).                                                                                                                                                                                                                                                                         |
| Use Single Balance                     | Sets whether the cost of the event should be taken from a single balance. To enable this field, select the <b>Override</b> check box.<br><br><b>Notes:</b> <ul style="list-style-type: none"> <li>If this field is selected and there is no single balance that can cover the entire cost of an event, the event is declined with insufficient credit.</li> <li>If this field is not selected, the event will be accepted, providing its entire cost can be satisfied with the selected cascade. The seconds and cash costs are taken pro-rata as necessary from each balance.</li> </ul> |
| Time Periods table                     | Lists the time periods when these override values will be used instead of base, default or general override values for this event. <ul style="list-style-type: none"> <li>Types – The override type</li> <li>Start Time – The start time when the override values will apply</li> <li>End Time – The end time after which the override values will no longer apply</li> <li>Holiday – The named event catalogue holiday set used</li> </ul> <b>Note:</b> If no time periods are defined, this override configuration will be classed as a general override.                               |

## Editing overrides

Follow these steps to modify an override for an event.

**Tip:** The "(+)" value in the **More Info** column for an event in the **Named Events** table indicates that one or more time based overrides have been defined for it.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | On the <b>Named Events</b> table in the New or the Edit <i>Named Event Catalogue</i> screen (See example on page 452), select the event where the override to modify is defined.<br><b>Result:</b> The overrides that have been defined for the event will be displayed in the <b>Named Event Override Configuration</b> table.<br><b>Note:</b> You must select an event that is included in the catalogue.                                                   |
| 2    | In the <b>Named Event Override Configuration</b> table, select the override to modify and click <b>Edit</b> .<br><b>Result:</b> You see the Edit <i>Named Event Override Dialog</i> (See example on page 465).                                                                                                                                                                                                                                                |
| 3    | Edit the fields in this screen to reflect the changes you need to make.<br>For information on: <ul style="list-style-type: none"> <li>Override fields, see <i>Named event override fields</i> (on page 463)</li> <li>Adding time periods, see <i>Adding time periods</i> (on page 468)</li> <li>Editing time periods, see <i>Editing time periods</i> (on page 468)</li> <li>Deleting time periods, see <i>Deleting time periods</i> (on page 469)</li> </ul> |

| Step | Action                |
|------|-----------------------|
| 4    | Click <b>Update</b> . |

## Named Event Override Dialog

Here is an example Named Event Override Dialog.

**Edit Named Event Override Dialog**

Help

Override Name:

Class: Loyalty  
Name: Point  
Allowed: ☒

**Override Values**

Free Event: ☐

Cash Cost (\$):  ☒ Override

Time Cost (secs):  ☐ Override

Data Cost (data units):  ☐ Override

Unit Cost:  ☒ Override

Expenditure Plan:  ☐ Override

Contributes to Promotional Destination: ☐ ☐ Override

Event Cascade:  ☒ Override

Use Single Balance: ☐ ☐ Override

**Time Periods**

| Type | Start Time (Local TZ) | End Time (Local TZ) | Holiday |
|------|-----------------------|---------------------|---------|
|      |                       |                     |         |
|      |                       |                     |         |
|      |                       |                     |         |
|      |                       |                     |         |
|      |                       |                     |         |
|      |                       |                     |         |
|      |                       |                     |         |
|      |                       |                     |         |
|      |                       |                     |         |
|      |                       |                     |         |

New Edit Delete

Update Cancel

## Deleting overrides

You can delete overrides that have been configured for events. You can delete:

- All the configured overrides for one or more selected events
- One or more selected overrides for a specific event

### Deleting overrides for selected events

Follow these steps to delete all the configured overrides for a selected event or a group of events.

**Tip:** The "(+)" value in the **More Info** column for an event in the **Named Events** table indicates that one or more time based overrides have been defined for it.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>On the <b>Named Events</b> table in the New or the Edit <i>Named Event Catalogue</i> screen (See example on page 452), select the event(s) for which to delete all overrides. To select:</p> <ul style="list-style-type: none"> <li>• All the events in the table, click <b>Select All</b></li> <li>• A group of events in the table, select the first event in the group and then hold down the <b>Shift</b> key while selecting the last event in the group</li> </ul> <p><b>Tip:</b> You can de-select a single event in a group by holding down <b>Ctrl</b> while selecting the event again.</p> |
| 2    | <p>Click <b>Delete Overrides</b>.</p> <p><b>Result:</b> You see the Delete Confirmation prompt for the selected events.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 3    | <p>Click <b>OK</b>.</p> <p><b>Result:</b> The overrides are deleted.</p> <p><b>Note:</b> If you are in the Edit Named Event Catalogue and you close it without saving, then any deletions you have made will be lost.</p>                                                                                                                                                                                                                                                                                                                                                                               |

### Deleting selected overrides

Follow these steps to delete one or more overrides for a selected event.

**Tip:** The "(+)" value in the **More Info** column for an event in the **Named Events** table indicates that one or more time based overrides have been defined for it.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>On the <b>Named Events</b> table in the New or the Edit <i>Named Event Catalogue</i> screen (See example on page 452), select the event where the overrides to delete are configured. You must select an event that is included in the catalogue.</p> <p><b>Result:</b> The overrides that have been configured for the event will be displayed in the <b>Named Events Override Configuration</b> table.</p>                                                                                                                                                                      |
| 2    | <p>In the <b>Named Event Override Configuration</b> table, select the override(s) to delete. You can select more than one. To select:</p> <ul style="list-style-type: none"> <li>• All the overrides, click <b>Select All</b> in the <b>Named Events Override Configuration</b> area</li> <li>• A group of overrides, select the first override in the group and then select the last override in the group while holding down the <b>Shift</b> key</li> </ul> <p><b>Tip:</b> You can de-select an override by pressing <b>Ctrl</b> and selecting the override at the same time.</p> |
| 3    | <p>Click <b>Delete</b>.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          |



| Step | Action                                                                                                                                           |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <b>Result:</b> You see the Delete Confirmation prompt for the selected override(s).                                                              |
|      | Click <b>OK</b> .                                                                                                                                |
|      | <b>Result:</b> The selected overrides are removed from the <b>Named Events Override Configuration</b> table.                                     |
|      | <b>Note:</b> If you are in the Edit Named Event Catalogue screen and you close it without saving, then any deletions you have made will be lost. |

## Time Periods

### Time period fields

This table describes the function of each Time Period field.

| Field                 | Description                                                                                                                                                                                                                                                                                                                                                 |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Type                  | Lists the available time period types. Only relevant fields will be enabled for the selected type. Available types are: <ul style="list-style-type: none"> <li>Daily</li> <li>Weekly</li> <li>Holiday</li> </ul> <b>Note:</b> Holiday type time periods will only be available if a holiday set has been specified in the named event catalogue definition. |
| <b>Holiday fields</b> | <b>Description</b>                                                                                                                                                                                                                                                                                                                                          |
| Holiday               | Lists the available holiday periods.<br>This field is populated from the holidays defined for the named event catalogue's holiday set.                                                                                                                                                                                                                      |
| Start Time (Local TZ) | Sets the start time on the first day of the holiday period when the override will become active.                                                                                                                                                                                                                                                            |
| End Time (Local TZ)   | Sets the end time on the last day of the holiday period after which the override will no longer be active.                                                                                                                                                                                                                                                  |
| <b>Weekly fields</b>  | <b>Description</b>                                                                                                                                                                                                                                                                                                                                          |
| Start Day             | Defines the first day of the week that the override will apply on.                                                                                                                                                                                                                                                                                          |
| End Day               | Defines the last day of the week that the override will apply on.                                                                                                                                                                                                                                                                                           |
| Start Time (Local TZ) | Sets the start time on the first day of the week when the override will become active.                                                                                                                                                                                                                                                                      |
| End Time (Local TZ)   | Sets the end time on the last day of the week after which the override will no longer apply.                                                                                                                                                                                                                                                                |
| <b>Daily fields</b>   | <b>Description</b>                                                                                                                                                                                                                                                                                                                                          |
| Day check boxes       | A select in a check box for a day means that overrides will apply on that day.<br><b>Tip:</b> You can select more than one day.                                                                                                                                                                                                                             |
| Start Time            | Sets the start time when the override values will apply for each day included in Daily periods.                                                                                                                                                                                                                                                             |
| End Time              | Sets the end time after which the override values will no longer apply for each day included in Daily periods.                                                                                                                                                                                                                                              |

## Time Period Dialog

Here is an example Time Period Dialog.

**Edit Time Period Dialog**

Type: Weekly

**Holiday**

Holiday:

Start Time (Local TZ): 00:00 End Time (Local TZ): 00:00

**Weekly**

Start Day: Monday End Day: Friday

Start Time (Local TZ): 08:30 End Time (Local TZ): 12:00

**Daily**

☐ Monday ☐ Tuesday ☐ Wednesday

☐ Thursday ☐ Friday ☐ Saturday ☐ Sunday

Start Time: 00:00 End Time: 00:00

Update Cancel

## Adding time periods

Follow these steps to add a new time period to an event override.

| Step | Action                                                                                                                                                                                                                         |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the <b>Time Periods</b> area in the New or the Edit <i>Named Event Override Dialog</i> (See example on page 465), click <b>New</b> .<br><b>Result:</b> You see the New <i>Time Period Dialog</i> (See example on page 468). |
| 2    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Time period fields</i> (on page 467).                                                     |
| 3    | Click <b>Update</b> .<br><b>Result:</b> The new period is listed in the Time Periods table.                                                                                                                                    |

## Editing time periods

Follow these steps to edit a time period for an event override.

| Step | Action                                                                                                                                                                        |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the <b>Time Periods</b> area in the New or the Edit <i>Named Event Override Dialog</i> (See example on page 465), select the time period to change and click <b>Edit</b> . |

| Step | Action                                                                                                                                                         |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | <b>Result:</b> You see the <i>Edit Time Period Dialog</i> (See example on page 468).                                                                           |
| 2    | Edit the fields to reflect the changes you need to make.<br>For more information about the fields on this screen, see <i>Time period fields</i> (on page 467). |
| 3    | Click <b>Update</b> .                                                                                                                                          |

## Deleting time periods

Follow these steps to delete a time period for an override.

| Step | Action                                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In <b>Time Periods</b> area in the New or the <i>Edit Named Event Override Dialog</i> (See example on page 465), select the time period to delete. |
| 2    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation record.                                                                    |
| 3    | Click <b>OK</b> .                                                                                                                                  |

## Importing and Exporting Named Event Catalogues

### Introduction

The **Import** and **Export** buttons on the **Named Event Catalogue** tab allow you to import and export named event catalogue data. Use this facility to create named event catalogue data externally, using third party tools, before importing it into CCS.

**Note:** Named event catalogue data is exported to file and imported from file in XML format. Refer to the files in the `/IN/html/CCs_Service/xml/productCatalogue` directory on the SMS for more information.

### Data import

Use the import named event catalogue facility to import new named event catalogue definitions from file.

When you import a named event catalogue, the import file is pre-parsed to check that it conforms to the import file specification. If there are any errors in the import file then the import process will fail. Any changes that have been made to the database will be rolled back and the details of the lines/sections in the import file containing the error will be reported to the user.

**Warning:** You cannot update or delete existing named event catalogues using this facility.

### Data export

Use the export facility to export a named event catalogue definition to a specified file.

When you export a named event catalogue definition, all the data that is related to the selected catalogue is exported. This includes the following data:

- The name of the selected catalogue
- Include default value
- Associated holiday set
- Included values
- Allowed values

- Override configuration (general and time-based)

## Importing named event catalogues

Follow these steps to import a named event catalogue from file.

| Step | Action                                                                                                          |
|------|-----------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.             |
| 2    | On the <b>Named Event Catalogue</b> tab, click <b>Import</b> .<br><b>Result:</b> You see an Import screen.      |
| 3    | Select the folder which holds the import file.                                                                  |
| 4    | In the <b>File name</b> field, enter the import file name.<br><b>Warning:</b> The import file type must be XML. |
| 5    | Click <b>Import</b> .<br><b>Result:</b> You see the Confirmation screen.                                        |
| 6    | Click <b>Continue</b> .<br><b>Result:</b> You see an Import successful prompt.                                  |
| 7    | Click <b>OK</b> .                                                                                               |

## Exporting named event catalogues

Follow these steps to export a named event catalogue and its related data to file.

| Step | Action                                                                                                                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Rating Management window, select the service provider from the <b>Service Provider</b> list.                                           |
| 2    | On the <b>Named Event Catalogue</b> tab, select the catalogue to export and click <b>Export</b> .<br><b>Result:</b> You see an Export screen. |
| 3    | Select the folder in which to store the export file.                                                                                          |
| 4    | In the <b>File name</b> field, enter the export file name.<br><b>Warning:</b> The export file type must be set to XML.                        |
| 5    | Click <b>Export</b> .<br><b>Result:</b> You see an Export successful dialog.                                                                  |
| 6    | Click <b>OK</b> .                                                                                                                             |

# Service Management

## Overview

### Introduction

This chapter explains the service management section of CCS.

### In this chapter

---

This chapter contains the following topics.

|                                  |     |
|----------------------------------|-----|
| Service Management Module.....   | 471 |
| Domain .....                     | 475 |
| Currency Code .....              | 486 |
| Currency .....                   | 489 |
| Global Configuration.....        | 499 |
| Exchange Rates .....             | 506 |
| Resource Limits.....             | 509 |
| Barred List .....                | 528 |
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| Number Translation List .....    | 534 |
| MFile Generation .....           | 537 |
| Balance Type Mapping.....        | 540 |
| Security.....                    | 544 |
| About Voucher Security.....      | 544 |
| About Credit Card Security.....  | 550 |
| Splash Screen Configuration..... | 554 |
| Channel .....                    | 559 |

## Service Management Module

### Introduction

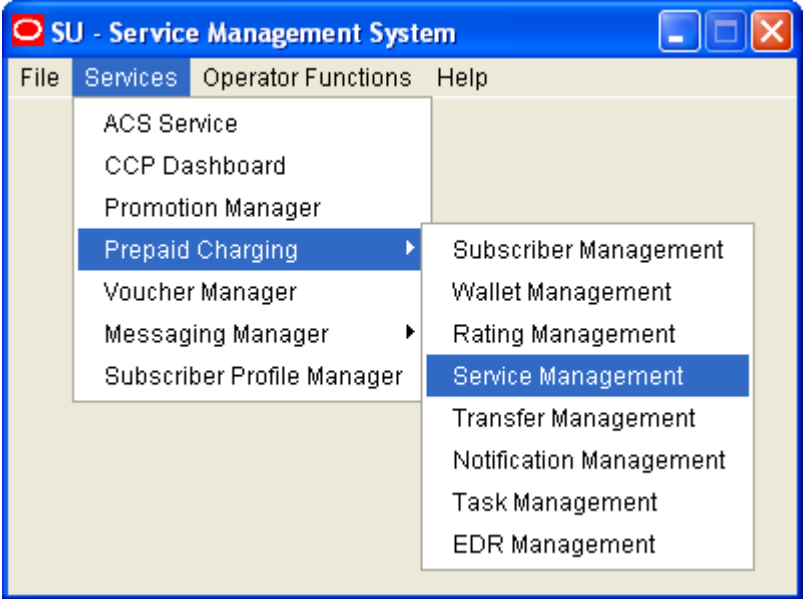
The Service Management screen enables you to configure the service management section of CCS. It contains these tabs:

- *Balance Type Mapping* (on page 540)
- *Barred List* (on page 528)
- *Capability* (on page 530)
- *Channel* (on page 559)
- *Currency* (on page 489)
- *Currency Code* (on page 486)
- *Domain* (on page 475)
- *Exchange Rates* (on page 506)
- *Global Configuration* (on page 499)
- *MFile Generation* (on page 537)

- *Number Translation List* (on page 534)
- *Resource Limits* (on page 509)
- *Security* (on page 544)
- *Splash Screen Configuration* (on page 554)

## Accessing the Service Management screen

Follow these steps to open the Service Management screen.

| Step | Action                                                                                                            |
|------|-------------------------------------------------------------------------------------------------------------------|
| 1    | Select the <b>Services</b> menu from the SMS main screen.                                                         |
|      |                                |
| 2    | Select <b>Prepaid Charging &gt; Service Management</b> .<br><b>Result:</b> You see the Service Management screen. |

## Service Management screen

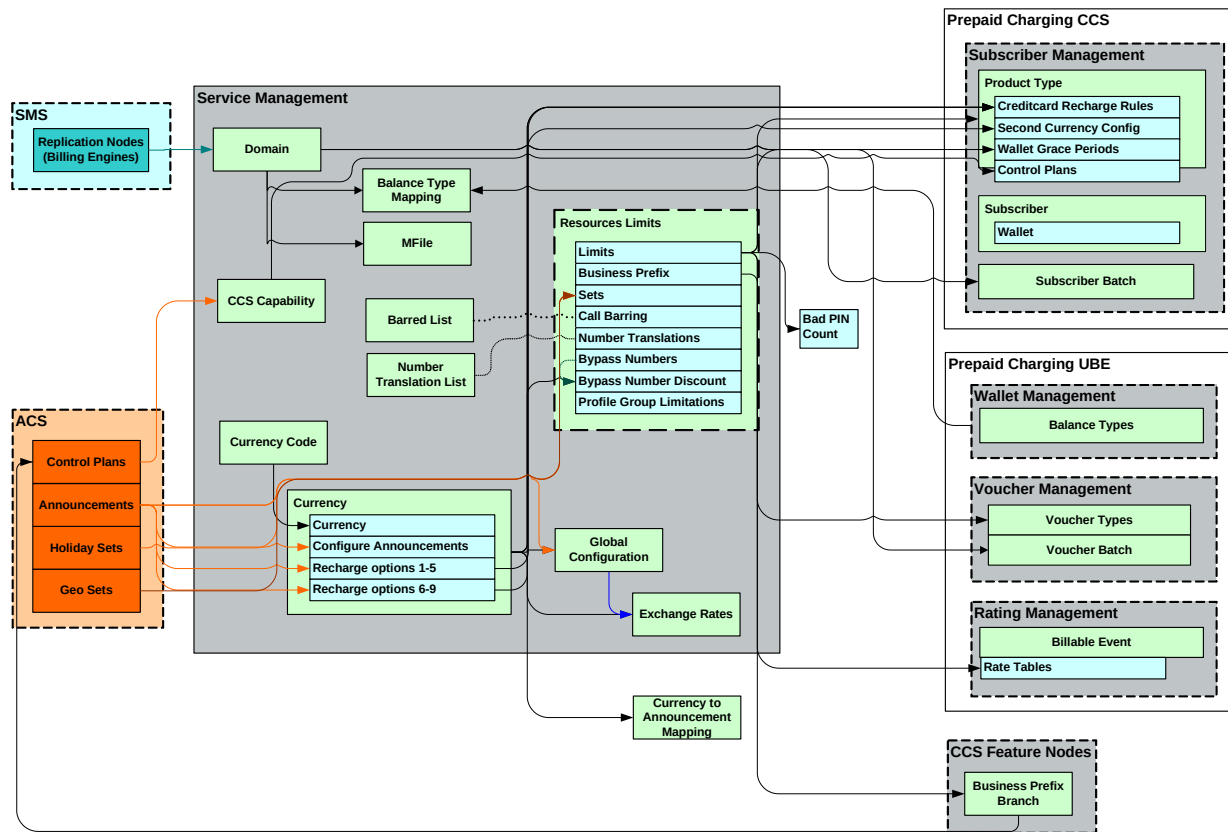
Here is an example Service Management screen. The screen is displayed with the **MFile Generation** tab open by default.

| Billing Engine | Requested Date      | Type                  |                    |
|----------------|---------------------|-----------------------|--------------------|
| 1              | 2015-07-21 04:32:18 | Rating                | Initial MFile      |
| 1              | 2015-07-21 04:32:32 | Named Event Catalogue | Initial MFile      |
| 1              | 2015-08-05 03:20:23 | Rating                | new vws2           |
| 1              | 2015-08-05 03:20:40 | Named Event Catalogue | vws2               |
| 1              | 2015-08-06 02:02:43 | Rating                | new rating         |
| 1              | 2015-08-06 02:03:00 | Named Event Catalogue | new nec            |
| 1              | 2015-08-06 02:34:24 | Rating                | New Rating         |
| 1              | 2015-08-06 02:34:43 | Named Event Catalogue | New Named event    |
| 1              | 2015-08-17 01:22:45 | Rating                | new                |
| 1              | 2015-08-24 04:14:23 | Rating                | rate change        |
| 1              | 2015-09-07 01:33:25 | Rating                | new                |
| 1              | 2015-09-07 01:33:41 | Named Event Catalogue | nec                |
| 1              | 2016-01-13 21:22:24 | Rating                | New trial          |
| 1              | 2016-01-14 01:04:16 | Rating                | Correct Trial name |
| 1              | 2016-01-14 02:39:34 | Rating                | Update             |

**Tip:** Some screens (the **Currency** tab, for example) require scrolling to view all of the columns.

## Service Management relationships

This diagram shows the relationships between the various screens available in the Service Management module.



The arrows show which screen populates a drop down field on the target screen and consequently the order in which screens must be filled in. The objects in shaded boxes are screens in different modules or applications which have a relationship with this module.

## Configuration sequence

This table lists the configuration sequence required to correctly set up the service management part of CCS.

**Note:** Same numbers indicate configuration independence within the sequence.

| Sequence | Data Type                                    |
|----------|----------------------------------------------|
| 1        | <i>Domain</i> (on page 475)                  |
| 1        | <i>Currency Code</i> (on page 486)           |
| 2        | <i>Currency</i> (on page 489)                |
| 3        | <i>Global Configuration</i> (on page 499)    |
| 3        | <i>Resource Limits</i> (on page 509)         |
| 4        | <i>Exchange Rates</i> (on page 506)          |
| 4        | <i>Capability</i> (on page 530)              |
| 5        | <i>Product Type</i> (on page 155)            |
| 6        | <i>Barred List</i> (on page 528)             |
| 6        | <i>Number Translation List</i> (on page 534) |



| Sequence | Data Type                                        |
|----------|--------------------------------------------------|
| 6        | <i>Security</i> (on page 544)                    |
| 6        | <i>Splash Screen Configuration</i> (on page 554) |
| 6        | <i>Balance Type Mapping</i> (on page 540)        |
| 6        | <i>Channel</i> (on page 559)                     |

## Domain

### Introduction to domains

You use the **Domain** tab to configure the following types of domains:

- VWS (Voucher and Wallet Server)
- DIAMETER
- Third-party
- BRM

The tab displays a list of the domains that have been configured. You can configure new domains, and edit, or delete existing domains.

### About Domain Configuration Issues

When you add a new domain or edit an existing domain, the system displays a list of issues in the **Configuration Issues** area of the Domain screen, for any domains that are incorrectly configured. The system automatically updates this list as you resolve the issues by updating the domain configuration. You must resolve all the domain configuration issues before saving the domain.

The following table lists the possible configuration issues, and their resolutions:

| Configuration Issue            | Resolution                                                                                                                   |
|--------------------------------|------------------------------------------------------------------------------------------------------------------------------|
| Invalid Name                   | Specify a unique name for the domain in the <b>Name</b> field.                                                               |
| Not Enough Checkboxes          | Select the check boxes in the <b>Manages</b> area for the features you require. You must select at least one check box.      |
| Invalid Maximum Accounts       | Specify a valid number in the <b>Maximum Accounts</b> field.                                                                 |
| Invalid Maximum Queue Messages | If specified, the value for <b>Maximum Queue Messages</b> must be greater than the value for <b>Minimum Queue Messages</b> . |
| Not Enough Domain Nodes        | For VWS and DIAMETER domains, you must configure at least one domain node in the <b>Nodes / Realms</b> area.                 |
| Invalid Username               | For BCD domains, you must specify a valid user name of at least one character.                                               |
| Invalid Password               | For BCD domains, you must specify a valid password of at least one character.                                                |

## Domain tab

Here is an example of the **Domain** tab contents.

The screenshot shows a window titled "Service Management" with a blue header bar. Below the header, there is a "Service Provider" dropdown menu set to "Boss" and a "Help" button. The "Domain" tab is selected, displaying a table with three columns: "Name", "Type", and "Maximum Accounts". The table contains three rows of data. Below the table is a large empty area for details. At the bottom, there is a navigation bar with "New", "Edit", "Delete", and "Close" buttons.

| Name          | Type | Maximum Accounts |
|---------------|------|------------------|
| UBE Domain    | UBE  | 100000           |
| Test Domain   | UBE  | 1000             |
| Kirk's domain | UBE  | 10000            |

## Domain screen

Here is an example Domain screen.

The screenshot shows the 'Edit Domain' window with the following sections:

- BE Section:**
  - Name: UBE
  - Type: UBE
  - Maximum Accounts: 100
  - ☐ Update Username and Password
  - Username:
  - Password:
- Third-Party Section:**
  - Minimum Queue Messages:
  - Maximum Queue Messages:
  - Connection Retry:
  - Message Timeout:
  - Guidance Cache Size:
  - ☐ Allow Adaptation
  - ☐ Enable Guidance
- Nodes / Realms Section:**

| Name           | Node Num... | Address       | Client Port | Internal Port | ID |
|----------------|-------------|---------------|-------------|---------------|----|
| slc04ipu.us... | 351         | 10.240.150... | 1500        | 1501          | 1  |

Buttons: New, Edit, Delete
- Manages Section:**
  - Wallet Management
    - ☒ Charging
    - ☒ Tracking
    - ☒ Voucher Management
- Configuration Issues Section:** (Empty)

Buttons: Save, Cancel, Help

## Domain fields

This table describes the domain fields in the **BE** area of the Domain screen.

| Field            | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name             | (Required) The unique name of the domain.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                              |
| Type             | <p>(Required) Sets the domain type for this domain. The domain type defines the network element type (such as a Voucher and Wallet Server) for the domain nodes in this domain.</p> <p>The list of available domain types is populated when applications are installed. The domain type for the Voucher and Wallet Server is always available.</p> <p>Once you have added a node to a domain, this field becomes non-editable.</p> <p>For more general information about domain types, see <i>Domain Types</i> (on page 5).</p> <p>For information about the domain type to choose for an additional installed application, see the application's technical guide.</p> |
| Maximum Accounts | (Required) Sets the maximum number of subscriber accounts that can be supported by the domain.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

| Field                        | Description                                                                                                                                                                                                                                                                                                                                                                                                     |
|------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Update Username and Password | Select to allow a BCD Client to connect to the BRM communication managers.                                                                                                                                                                                                                                                                                                                                      |
| Username                     | Sets the username to use to connect to the BRM communication managers.                                                                                                                                                                                                                                                                                                                                          |
| Password                     | Sets the username's password.                                                                                                                                                                                                                                                                                                                                                                                   |
| Wallet Management Charging   | <p>Whether or not wallet management charging functionality is supported for this domain.</p> <p>'Y' means wallet management charging functionality is supported by the domain and 'N' means it is not.</p> <p>For more information about wallet functionality, see:</p> <ul style="list-style-type: none"> <li>• <i>Wallet Management</i> (on page 225)</li> <li>• <i>Edit Wallets</i> (on page 126)</li> </ul> |
| Wallet Management Tracking   | <p>Whether or not wallet management tracking functionality is supported for this domain.</p> <p>'Y' means wallet management tracking functionality is supported by the domain and 'N' means it is not.</p> <p><b>Note:</b> Wallet management tracking is only available to UBE domain types.</p>                                                                                                                |
| Voucher Management           | <p>Whether or not voucher management (including voucher redemption) is supported for this domain.</p> <p>'Y' means voucher functionality is supported by the domain and 'N' means it is not.</p> <p>For more information about voucher functionality, see Voucher Management.</p>                                                                                                                               |

### Third-Party domain fields

This table describes the fields in the **Third-Party** area of the Domain screen. For details on a particular field, see the technical documentation for the application that provides connectivity with the required network element.

| Field                  | Description                                                                                            |
|------------------------|--------------------------------------------------------------------------------------------------------|
| Minimum Queue Messages | Minimum queue messages value for third-party billing.                                                  |
| Maximum Queue Messages | Maximum queue messages allowed before the connection is deemed congested.                              |
| Allow Adaption         | Select if adaption is required for third party billing.                                                |
| Connection Retry       | The number of connection retries allowed.                                                              |
| Enable Guidance        | Select if guidance is required for third-party billing. The guidance cache size field becomes enabled. |
| Message Timeout        | Message timeout value for third-party billing.                                                         |
| Guidance Cache Size    | Guidance cache size for third-party billing.                                                           |

## Creating a Domain

When you add a new domain, the system displays a list of issues in the **Configuration Issues** area of the Domain screen, warning you about any configuration that is incorrect. The system automatically updates this list as you configure the domain. For more information about configuration issues, see *About Domain Configuration Issues* (on page 475).

Follow these steps to add a new domain.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                                                                                                                                                                                                                                                                                                      |
| 2    | Click <b>New</b> on the <b>Domain</b> tab.<br><b>Result:</b> The <i>New Domain screen</i> (on page 477) displays.<br>For information about the fields and check boxes in the New Domain screen, see <i>Domain fields</i> (on page 477).                                                                                                                                                                                                  |
| 3    | In the <b>Name</b> field, enter a unique name for the domain.                                                                                                                                                                                                                                                                                                                                                                            |
| 4    | From the <b>Type</b> list, select one of the following domain types: <ul style="list-style-type: none"> <li>• UBE</li> <li>• A third-party type BE</li> <li>• A domain type with a DIAMETER prefix</li> <li>• BCD (for BRM)</li> </ul> <p>The domain type you select determines which fields are enabled. Fields that are disabled, appear grayed out.</p> <p><b>Note:</b> The domain type for the Voucher and Wallet Server is UBE.</p> |
| 5    | Complete the fields as required. For details about the data to enter for the type of domain you want to create, see: <ul style="list-style-type: none"> <li>• <i>Specifying a UBE Domain</i> (on page 479)</li> <li>• Third-party domain fields</li> <li>• <i>Specifying a Diameter Domain</i> (on page 480)</li> <li>• <i>Specifying a BRM Domain</i> (on page 480)</li> </ul>                                                          |
| 6    | Click <b>Save</b> .<br><b>Result:</b> The new domain is saved, and listed on the <b>Domain</b> tab.                                                                                                                                                                                                                                                                                                                                      |

### Specifying a UBE Domain

To specify a UBE domain, complete the following fields:

- Type the number of allowed accounts in the **Maximum Accounts** field.
- Select the **Manages** check boxes for the features you require.
- Add at least one domain node to this domain. See *Adding nodes to domains* (on page 480).  
You can edit or delete domain nodes as required. For information about editing domain nodes, see *Editing domain nodes* (on page 484). For information about deleting domain nodes, see *Deleting domain nodes or realms* (on page 485).

For more information about the fields and check boxes on the Domain screen, see *Domain fields* (on page 477).

### Specifying a Third-Party Domain

To specify a third-party domain, complete the following fields:

- Type the number of allowed accounts in the **Maximum Accounts** field.
- Select the **Manages** check boxes for the features you require.
- In the **Third-Party** area, fill in the relevant fields, as described in *Third-Party domain fields* (on page 478).
- Add at least one domain node to this domain. See *Adding nodes to domains* (on page 480). You can edit or delete domain nodes as required. For information about editing domain nodes, see *Editing domain nodes* (on page 484). For information about deleting domain nodes, see *Deleting domain nodes or realms* (on page 485).

For more information about the non-third-party fields and check boxes on the Domain screen, see *Domain fields* (on page 477).

### Specifying a Diameter Domain

To specify a Diameter domain, complete the following fields:

- Type the number of allowed accounts in the **Maximum Accounts** field.
- Select the **Manages** check boxes for the required features.
- In the **Third-Party** area, fill in the **Minimum Queue Messages**, **Maximum Queue Messages** and **Connection Retry** fields, as described in *Third-Party domain fields* (on page 478).
- Add at least one realm to this domain. See *Adding realms to domains* (on page 482). You can edit or delete realms as required. For information about editing domain realms, see *Editing domain realms* (on page 485). For information about deleting domain realms, see *Deleting domain nodes or realms* (on page 485).

For more information about the non-third-party fields and check boxes on this screen, see *Domain fields* (on page 477).

### Specifying a BRM Domain

To specify a BRM domain, complete the following fields:

- In the **Name** field, enter **BRM**
- From the **Type** list, select **BCD**
- In the **Maximum Accounts** field, enter the maximum number of accounts in this domain.
- Select the **Update Username and Password** check box and enter values for **Username** and **Password**, which are used by the BCD Client to connect to the BRM communication managers.
- (Optional) In the **Manages** area, select the **Charging** and **Voucher Management** check boxes.

For more information about the fields and check boxes on the Domain screen, see *Domain fields* (on page 477).

### Adding nodes to domains

Follow these steps to add a node to a domain.

| Step | Action                                                                                                                                          |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | From either the New Domain or Edit Domain screen, click <b>New</b> .<br><b>Result:</b> The <i>New Domain Node screen</i> (on page 482) appears. |
| 2    | Type a unique name for the node in the <b>Name</b> field.                                                                                       |

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | <p>Select the <b>Node Number</b> from the drop down list (the node number must be unique). This is a required field for UBE domains, and optional for third-party domains.</p> <p><b>Notes:</b></p> <ul style="list-style-type: none"> <li>• Where there is more than one node for a domain, the primary node has the lower number.</li> <li>• UBE is the domain type for a Voucher and Wallet Server.</li> </ul>       |
| 4    | <p>Type the IP address for the node in the <b>Address</b> field.</p> <p><b>Note:</b> This field is automatically populated if you select a <b>Node Number</b>. You can edit this address if required.</p>                                                                                                                                                                                                               |
| 5    | Type the client port address in the <b>Client Port</b> field.                                                                                                                                                                                                                                                                                                                                                           |
| 6    | Type the internal port address in the <b>Internal Port</b> field.                                                                                                                                                                                                                                                                                                                                                       |
| 7    | <p>If this is a third-party domain, enter values for the following fields. See the relevant third-party billing technical documentation for more information:</p> <ul style="list-style-type: none"> <li>• <b>Minimum Weight</b></li> <li>• <b>Maximum Weight</b></li> <li>• <b>Stable Weight</b></li> <li>• <b>Unstable Weight</b></li> </ul> <p><b>Note:</b> These fields appear grayed out for UBE domain nodes.</p> |
| 8    | <p>Click <b>Save</b>.</p> <p><b>Result:</b> The new node is saved and then listed in the <b>Nodes / Realms</b> area of the New or Edit Domain screen.</p>                                                                                                                                                                                                                                                               |

## Domain Node screen

Here is an example Domain Node screen.

**Edit Domain Node**

Help

Name: UBE (Primary - tpsadevsm)

Node Number: 351

Address: 192.168.25.193

Client Port: 1500

Internal Port: 1501

Minimum Weight:

Maximum Weight:

Stable Weight:

Unstable Weight:

Save Cancel

## Adding realms to domains

Follow these steps to add a realm to a diameter domain.

| Step | Action                                                                                                                                           |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | From either the New Domain or Edit Domain screen, click <b>New</b> .<br><b>Result:</b> The <i>New Domain Realm</i> screen (on page 483) appears. |
| 2    | Type a unique name for the realm in the <b>Name</b> field.                                                                                       |
| 3    | Type the identity of the realm in the <b>Identity</b> field.<br><b>Example:</b> realm1.telcoexample.com                                          |
| 4    | (Optional) Enter a value in the <b>Stable Weight</b> field. Defaults to 1.                                                                       |
| 5    | Click <b>Save</b> .<br><b>Result:</b> The new realm is saved and then listed in the <b>Nodes / Realms</b> area of the New or Edit Domain screen. |



## Domain Realm screen

Here is an example Domain Realm screen.

## Editing Domains

When you edit a domain, the system displays a list of issues in the **Configuration Issues** area of the Domain screen, warning you about any configuration that is incorrect. The system automatically updates this list as you edit the domain configuration. For more information about configuration issues, see *About Domain Configuration Issues* (on page 475).

Follow these steps to edit a domain.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                                                                                                                                                                                                                                                                                                                                                               |
| 2    | Select the domain to edit from the table in the <b>Domain</b> tab.                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> The <i>Edit Domain</i> screen (on page 477) appears.                                                                                                                                                                                                                                                                                                                                                                                                        |
| 4    | Change the following fields as required: <ul style="list-style-type: none"> <li>Domain name in the <b>Name</b> field</li> <li>Maximum number of accounts in the <b>Maximum Accounts</b> field</li> <li><b>Wallet Management Charging</b> and <b>Wallet Management Tracking</b> check boxes (Tracking is not available when Domain Type is BCD)</li> <li><b>Voucher Management</b> check box.</li> </ul> See <i>Domain fields</i> (on page 477) for a description of these fields and check boxes. |
| 5    | If this is a non-UBE domain, you may also change the following fields as required. If the domain is:                                                                                                                                                                                                                                                                                                                                                                                              |

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | <ul style="list-style-type: none"> <li>• BCD: <ul style="list-style-type: none"> <li>– <b>Update Username and Password</b> check box</li> <li>– <b>Username</b></li> <li>– <b>Password</b></li> </ul> </li> <li>• third-party: <ul style="list-style-type: none"> <li>– <b>Minimum Queue Messages</b></li> <li>– <b>Maximum Queue Messages</b></li> <li>– <b>Connection Retry</b></li> <li>– <b>Allow Adaptation</b> check box</li> <li>– <b>Message Timeout</b></li> <li>– <b>Enable Guidance</b> check box and <b>Guidance Cache Size</b></li> </ul> </li> <li>• DIAMETER: <ul style="list-style-type: none"> <li>– <b>Minimum Queue Messages</b></li> <li>– <b>Maximum Queue Messages</b></li> <li>– <b>Connection Retry</b></li> </ul> </li> </ul> <p>For details, see the relevant BCD, third-party billing or Diameter technical documentation.</p> <p><b>Note:</b> UBE is the domain type for a Voucher and Wallet Server.</p> |
| 6    | <p>Depending on the type of domain:</p> <ul style="list-style-type: none"> <li>• For UBE and third-party domains, you can edit the domain nodes as required. See <i>Adding nodes to domains</i> (on page 480), <i>Editing domain nodes</i> (on page 484) or <i>Deleting domain nodes or realms</i> (on page 485) procedures.</li> <li>• For DIAMETER domains, you can edit the domain realms as required. See <i>Adding realms to domains</i> (on page 482), <i>Editing domain realms</i> (on page 485), or <i>Deleting domain nodes or realms</i> (on page 485).</li> </ul>                                                                                                                                                                                                                                                                                                                                                          |
| 7    | <p>Click <b>Save</b>.</p> <p><b>Result:</b> The domain changes are saved and reflected in the <b>Domain</b> tab table.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

## Editing domain nodes

Follow these steps to edit a domain node.

| Step | Action                                                                                                                                                                                                                                                                         |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>From the table in the <b>Nodes / Realms</b> area in either the New Domain or Edit Domain screen, select the node you want to update and click <b>Edit</b>.</p> <p><b>Result:</b> The <i>Edit Domain Node</i> screen (on page 482) appears.</p>                              |
| 2    | <p>Update the following fields as required:</p> <ul style="list-style-type: none"> <li>• Node address in the <b>Address</b> field</li> <li>• Client port address in the <b>Client Port</b> field</li> <li>• Internal port address in the <b>Internal Port</b> field</li> </ul> |

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | <p>If this is a third-party domain, update the following fields as required. See the relevant third-party billing technical documentation for more information:</p> <ul style="list-style-type: none"> <li>• <b>Minimum Weight</b></li> <li>• <b>Maximum Weight</b></li> <li>• <b>Stable Weight</b></li> <li>• <b>Unstable Weight</b></li> </ul> <p><b>Note:</b> These fields appear grayed out for UBE domain nodes.</p> |
| 4    | <p>Click <b>Save</b>.</p> <p><b>Result:</b> The node is saved.</p>                                                                                                                                                                                                                                                                                                                                                        |

## Editing domain realms

Follow these steps to edit a domain realm.

| Step | Action                                                                                                                                                                                                                                              |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>From the table in the <b>Nodes / Realms</b> area of either the New Domain or Edit Domain screen, select the realm you want to update and click <b>Edit</b>.</p> <p><b>Result:</b> The <i>Edit Domain Realm</i> screen (on page 483) appears.</p> |
| 2    | <p>Update the following fields as required:</p> <ul style="list-style-type: none"> <li>• <b>Identity</b></li> <li>• <b>Stable Weight</b></li> </ul>                                                                                                 |
| 3    | <p>Click <b>Save</b>.</p> <p><b>Result:</b> The realm is saved.</p>                                                                                                                                                                                 |

## Deleting domains

Follow these steps to delete a domain.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen. |
| 2    | Select the domain to delete from the table in the <b>Domain</b> tab.                                |
| 3    | Click <b>Delete</b> .                                                                               |
|      | <b>Result:</b> The Delete Confirmation screen appears.                                              |
| 4    | Click <b>OK</b> .                                                                                   |
|      | <b>Result:</b> The domain is deleted from the Domain tab table.                                     |

## Deleting domain nodes or realms

Follow these steps to delete a node or a realm from a domain.

| Step | Action                                                                                                                                                                                                                                            |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>From the table in the <b>Nodes / Realms</b> area of either the New Domain, or Edit Domain screen, select the node or realm that you want to delete, and click <b>Delete</b>.</p> <p><b>Result:</b> The delete confirmation screen appears.</p> |

| Step | Action                                                                                                                                                                                                                                                                                                                           |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <p>Click <b>Apply</b>.</p> <p><b>Result:</b> The node or realm is marked for deletion. It is then deleted from the database when you click <b>Save</b> in the Edit or New Domain screen.</p> <p><b>Note:</b> To be able to save the domain in the Domain screen, the domain must have at least one node or realm configured.</p> |

## Currency Code

### Introduction

The **Currency Code** tab enables you to view, create, edit and delete the currency codes that are available in the system.

## Currency Code tab

Here is an example of the **Currency Code** tab.

Service Management

Service Provider: Boss Help

Currency Code

| Code | Description                                        |
|------|----------------------------------------------------|
| AED  | United Arab Emirates, Dirham (AED)                 |
| AFA  | Afghanistan, Afghani (AFA)                         |
| ALL  | Albania, Lek (ALL)                                 |
| AMD  | Armenia, Dram (AMD)                                |
| ANG  | Sint Eustatius, Netherlands Antilles Guilder (ANG) |
| ANG  | Bonaire, Netherlands Antilles Guilder (ANG)        |
| ANG  | Curaco, Netherlands Antilles Guilder               |
| ANG  | Sint Maarten, Netherlands Antilles Guilder (ANG)   |
| ANG  | Netherlands Antilles, Guilder (ANG)                |
| ANG  | Saba, Netherlands Antilles Guilder (ANG)           |
| ANG  | Aruba, Netherlands Antilles Guilder (ANG)          |
| AOA  | Angola, Angolan Kwanza (AOA)                       |
| ARS  | Argentina, Peso (ARS)                              |
| AUD  | Norfolk Island, Australian Dollar (AUD)            |
| AUD  | Nauru, Australian Dollar (AUD)                     |
| AUD  | Kiribati, Australian Dollar (AUD)                  |
| AUD  | Cocos (Keeling) Islands, Australian Dollar (AUD)   |
| AUD  | Australia, Dollar (AUD)                            |
| AUD  | Christmas Island, Australian Dollar (AUD)          |
| AUD  | Tuvalu, Australian Dollar (AUD)                    |
| AWG  | Aruba, Florin (AWG)                                |
| AZN  | Azerbaijan, Manat (AZN)                            |
| BAK  | Herzegovina and Bosnia, Convertible Mark (BAK)     |
| BAM  | Bosnia and Herzegovina, Convertible Mark (BAM)     |
| BBD  | Barbados, Dollar (BBD)                             |
| BDT  | Bangladesh, Taka (BDT)                             |
| BGN  | Bulgaria, Lev (BGN)                                |

New Edit Delete Close

## Currency Code screen

Here is an example Currency Code screen.

The screenshot shows a standard Windows-style dialog box titled "Edit Currency Code". It contains two text input fields: "Code" with the value "AUD" and "Description" with the value "Australia, Dollar (AUD)". At the bottom of the dialog are two buttons, "Save" and "Cancel". A "Help" button is located in the top right corner of the dialog area.

## Adding a Currency Code

Follow these steps to add a new currency code.

| Step | Action                                                                                                                           |
|------|----------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                              |
| 2    | On the <b>Currency Code</b> tab, click <b>New</b> .<br><b>Result:</b> You see the <i>New Currency Code screen</i> (on page 488). |
| 3    | Enter the three-letter currency code in the <b>Code</b> field.                                                                   |
| 4    | Enter a description of the currency code in the <b>Description</b> field.                                                        |
| 5    | Click <b>Save</b> .                                                                                                              |

## Editing a Currency Code

Follow these steps to edit an existing currency code.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen. |
| 2    | Select the currency code to edit from the table on the <b>Currency Code</b> tab.                    |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the <i>Edit Currency Code screen</i> (on page 488).   |
| 4    | If required, change the three-letter currency code in the <b>Code</b> field.                        |
| 5    | If required, change the description of the currency code in the <b>Description</b> field.           |
| 6    | Click <b>Save</b> .                                                                                 |

## Deleting a Currency Code

Follow these steps to delete an existing currency code.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen. |
| 2    | Select the currency code to delete from the table on the <b>Currency Code</b> tab.                  |

| Step | Action                                                                                                                                |
|------|---------------------------------------------------------------------------------------------------------------------------------------|
| 3    | Click <b>Delete</b> .<br><b>Result:</b> The Delete Confirmation prompt appears.                                                       |
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> The record is deleted and the Currency prompt is displayed. |
| 5    | Click <b>OK</b> .                                                                                                                     |

## Currency

### Introduction

The **Currency** tab enables you to:

- Configure the default system currency
- View currencies which have been set up in the system

When setting up the system for the first time, it is important to set the default currency before configuring the rest of the system (and after configuring the VWSs).

For each new currency entered into the system, a rate of exchange between the new currency and the system currency must be set. This exchange rate is set on the **Exchange Rates** (on page 506) tab of the Service Management screen.

### Currency entry components

When adding a new currency to CCS, a number of inter-related components must be completed before the new currency can be used.

These components are configurable from the New Currency and Edit Currency screens, and are as follows:

- Configure Announcements
- Configuring Recharge Options 1-5
- Configuring Recharge Options 6-9

### Recharging Credit Cards - required components

The following currency components are required for recharging credit cards.

- Configuring Recharge Options 1-5
- Configuring Recharge Options 6-9

The actual recharge options are defined in the **Product Type** tab, Creditcard Recharge Rules.

Each caller has a maximum of nine recharge options per currency available. The announcement entry and set are selected for each option. The option announcements work as follows:

| Caller options | The system will play the balance announcement...                                                                     |
|----------------|----------------------------------------------------------------------------------------------------------------------|
| 1              | followed by the "Press * to cancel" as defined by the announcement set selected in the <b>One option</b> section.    |
| 2              | followed by the "Press * to cancel" as defined by the announcement set selected in the <b>Two options</b> section.   |
| 3              | followed by the "Press * to cancel" as defined by the announcement set selected in the <b>Three options</b> section. |

| Caller options | The system will play the balance announcement...                                                                                                                                                                            |
|----------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4              | followed by the "Press * to cancel" as defined by the announcement set selected in the <b>Four options</b> section.                                                                                                         |
| 5              | followed by the "Press * to cancel" as defined by the announcement set selected in the <b>Five options</b> section.                                                                                                         |
| 6              | as defined by the announcement set selected in the <b>Five options and on</b> section.<br><i>Plus</i> the recharge announcement set selected in the <b>Recharge option six</b> section followed by the "Press * to cancel"  |
| 7              | as defined by the announcement set selected in the <b>Five options and on</b> section.<br><i>Plus</i> the recharge announcement set selected in the <b>Recharge options 6-7</b> section followed by the "Press * to cancel" |
| 8              | as defined by the announcement set selected in the <b>Five options and on</b> section.<br><i>Plus</i> the recharge announcement set selected in the <b>Recharge options 6-8</b> section followed by the "Press * to cancel" |
| 9              | as defined by the announcement set selected in the <b>Five options and on</b> section.<br><i>Plus</i> the recharge announcement set selected in the <b>Recharge options 6-9</b> section followed by the "Press * to cancel" |

### Example announcements

A caller has six options for their account.

The first announcement, defined in the **Five options and on** field, is configured to play the following:

"Your balance is x *Big\_Currency* and y *Small\_Currency*  
 To recharge by *Recharge\_Option\_1 Big\_Currency*, press 1  
 To recharge by *Recharge\_Option\_2 Big\_Currency*, press 2  
 To recharge by *Recharge\_Option\_3 Big\_Currency*, press 3  
 To recharge by *Recharge\_Option\_4 Big\_Currency*, press 4  
 To recharge by *Recharge\_Option\_5 Big\_Currency*, press 5"

The next announcement, defined in the **Recharge option six** field, will play the following:

"To recharge by *Recharge\_Option\_6 Big\_Currency*, press 6  
 Press \* to cancel."

If *Big\_Currency* is dollars and *Small\_Currency* is cents, the announcements played would be like this:

"Your balance is two dollars and twenty five cents

To recharge by five dollars press 1

To recharge by ten dollars press 2

To recharge by twenty dollars press 3

To recharge by fifty dollars press 4

To recharge by one hundred dollars press 5"

"To recharge by two hundred dollars, press 6

Press \* to cancel."



## Currency tab

Here is an example of the **Currency** tab.

The screenshot shows a window titled "Service Management" with a blue header bar. Below the header, there is a "Service Provider" dropdown menu set to "Boss" and a "Help" button. The "Currency" tab is selected, showing a table with four columns: "Big Symbol", "Little Symbol", "Name", and "C". The table contains two entries: "New Zealand, Dollar (NZD)" and "American Samoa, US Dollar ...". At the bottom of the window, there are buttons for "New", "Edit", "Delete", and "Close".

| Big Symbol | Little Symbol | Name                          | C   |
|------------|---------------|-------------------------------|-----|
| \$         | c             | New Zealand, Dollar (NZD)     | NZD |
| \$         | c             | American Samoa, US Dollar ... | USD |

## Currency details

All configuration options must be completed to finalize a currency so it can be used. However, the configuration can be saved at any point by clicking **Save**.

To configure a currency as a default currency for the system, configure the currency here, and then set it as the default in the *Global Configuration* (on page 499) screen.

Follow these steps to add currency details for a new currency.

| Step | Action                                                                                                                                                                                                                                                                                                                                      |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                                                                                                                                                                                                         |
| 2    | On the <b>Currency</b> tab, click <b>New</b> .<br><b>Result:</b> The New Currency screen displays with the Currency options.                                                                                                                                                                                                                |
| 3    | Enter the symbol that represents the main unit of the currency in the <b>Big Symbol</b> field (for example, € for euros).                                                                                                                                                                                                                   |
| 4    | Enter the symbol that represents the subunit of the currency in the <b>Little Symbol</b> field (for example, ¢ for cents).                                                                                                                                                                                                                  |
| 5    | Select the currency name from the <b>Name</b> drop down box.<br><b>Note:</b> Only valid currency names are available from the list.<br><b>Result:</b> The <b>Currency Code</b> field is populated by the system. This shows the currency code that identifies the currency.                                                                 |
| 6    | Enter the separator used to separate the main unit from the subunit of the currency in the <b>Separator</b> field.<br><b>Examples:</b> In the currency of: <ul style="list-style-type: none"> <li>Euros - the separator is a comma (for example, 3,20)</li> <li>Dollars - the separator is a decimal point (for example, \$4.00)</li> </ul> |
| 7    | Enter the ratio of subunits to main units of currency in the <b>Base</b> field.<br><b>Example:</b> 100 cents per euro = a ratio of 100.                                                                                                                                                                                                     |
| 8    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                         |
| 9    | Configure the <i>Announcements</i> (on page 493).                                                                                                                                                                                                                                                                                           |
| 10   | Configure the announcements for <i>Recharge options 1-5</i> (on page 494).                                                                                                                                                                                                                                                                  |
| 11   | Configure the announcements for <i>Recharge options 6-9</i> (on page 496).                                                                                                                                                                                                                                                                  |

## Currency screen

Here is an example Currency screen.

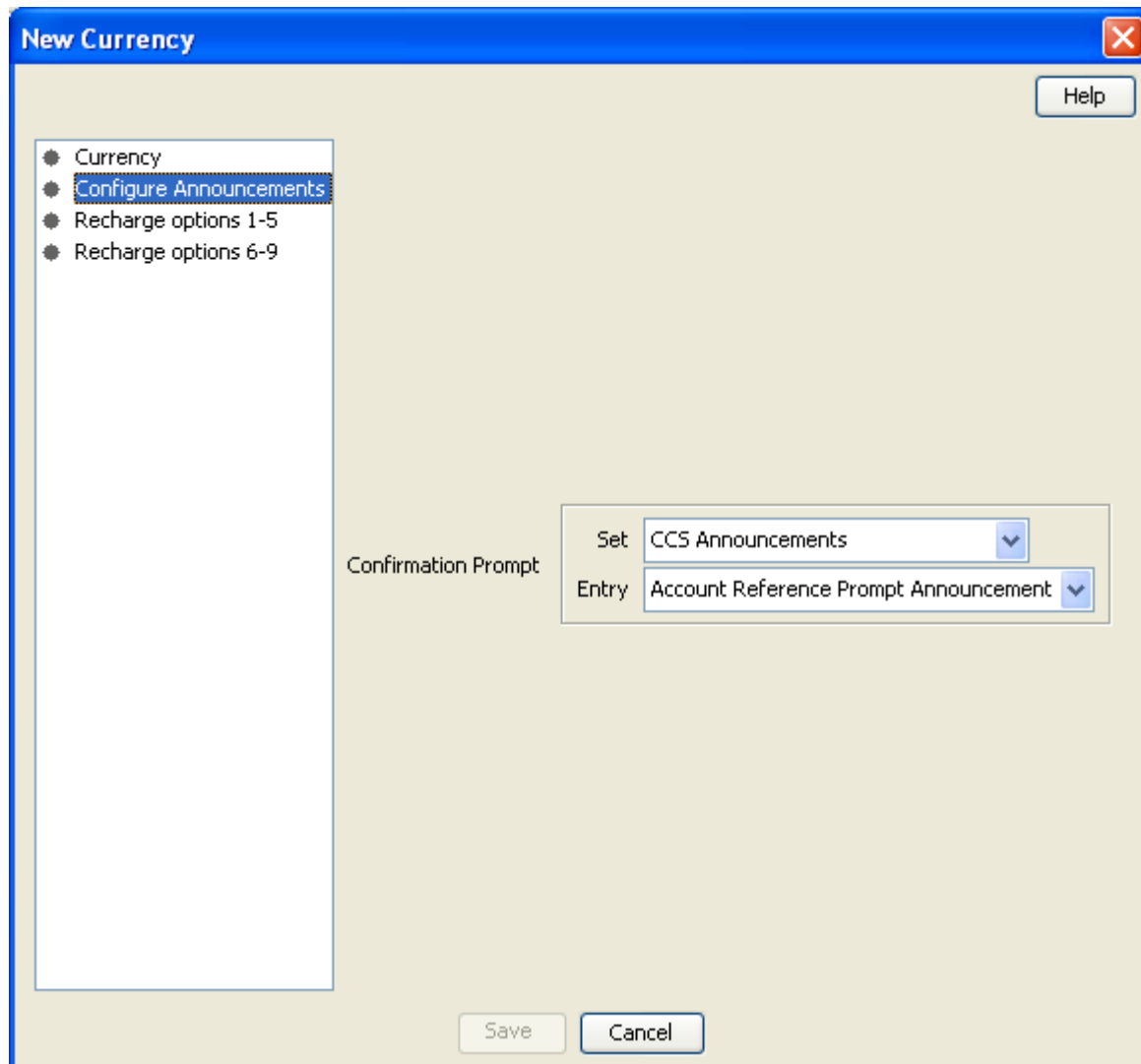
## Announcements

Follow these steps to add the confirmation prompt announcement for a new currency.

| Step | Action                                                                                                                                                                                                                                                                                                                 |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the <b>Configure Announcements</b> option in the New Currency screen.<br><b>Result:</b> You see the <i>Configure Announcements option</i> (on page 494), displaying the Confirmation Prompt configuration.                                                                                                      |
| 2    | Select from the <b>Confirmation Prompt</b> section: <ul style="list-style-type: none"> <li>The Announcement Set from the <b>Set</b> drop down box</li> <li>The Announcement Entry from the <b>Entry</b> drop down box that is to be played to a caller when prompting for caller confirmation of a recharge</li> </ul> |
| 3    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                    |

## Configure Announcements option

Here is an example Configure Announcements option.



## Recharges 1-5

Follow these steps to add the announcements for recharge options 1-5 for a new currency.

| Step | Action                                                                                                                                                                                                                                                                                    |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the <b>Recharge options 1-5</b> option in the New Currency screen.<br><b>Result:</b> You see the <i>Recharge options 1-5</i> (on page 496), displaying announcements for currency Recharge one to five, plus more than five.                                                       |
| 2    | Select from the <b>One option</b> section: <ul style="list-style-type: none"> <li>The Announcement Set from the <b>Set</b> drop down box</li> <li>The Announcement Entry from the <b>Entry</b> drop down box that is to be played to a caller if they have one recharge option</li> </ul> |
| 3    | Select from the <b>Two options</b> section: <ul style="list-style-type: none"> <li>The Announcement Set from the <b>Set</b> drop down box</li> </ul>                                                                                                                                      |

| Step | Action                                                                                                                                                                                                                                                                                                          |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | <ul style="list-style-type: none"> <li>The Announcement Entry from the <b>Entry</b> drop down box that is to be played to a caller if they have two recharge options.</li> </ul>                                                                                                                                |
| 4    | Select from the <b>Three options</b> section: <ul style="list-style-type: none"> <li>The Announcement Set from the <b>Set</b> drop down box</li> <li>The Announcement Entry from the <b>Entry</b> drop down box that is to be played to a caller if they have three recharge options.</li> </ul>                |
| 5    | Select from the <b>Four options</b> section: <ul style="list-style-type: none"> <li>The Announcement Set from the <b>Set</b> drop down box</li> <li>The Announcement Entry from the <b>Entry</b> drop down box that is to be played to a caller if they have four recharge options.</li> </ul>                  |
| 6    | Select from the <b>Five options</b> section: <ul style="list-style-type: none"> <li>The Announcement Set from the <b>Set</b> drop down box</li> <li>The Announcement Entry from the <b>Entry</b> drop down box that is to be played to a caller if they have five recharge options.</li> </ul>                  |
| 7    | Select from the <b>Five options and on</b> section: <ul style="list-style-type: none"> <li>The Announcement Set from the <b>Set</b> drop down box</li> <li>The Announcement Entry from the <b>Entry</b> drop down box that is to be played to a caller if they have more than five recharge options.</li> </ul> |
| 8    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                             |

## Recharge options 1-5

Here is an example Recharge options 1-5.

## Recharges 6-9

Follow these steps to add the announcements for recharge options 6-9 for a new currency.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                         |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the <b>Recharge options 6-9</b> option from the New Currency screen.<br><b>Result:</b> You see the <i>Recharge options 6-9</i> (on page 498), displaying announcements for currency recharge six to nine.                                                                                                                                                               |
| 2    | Select from the <b>Recharge option six</b> section: <ul style="list-style-type: none"> <li>The Announcement Set from the <b>Set</b> drop down box</li> <li>The Announcement Entry from the <b>Entry</b> drop down box that is to be played to a caller if they have six recharge options.</li> </ul> This will include the announcements set from <b>Five options and on</b> . |
| 3    | Select from the <b>Recharge options 6-7</b> section: <ul style="list-style-type: none"> <li>The Announcement Set from the <b>Set</b> drop down box</li> </ul>                                                                                                                                                                                                                  |

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                         |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | <ul style="list-style-type: none"> <li>The Announcement Entry from the <b>Entry</b> drop down box that is to be played to a caller if they have seven recharge options.</li> </ul> <p>This will include the announcements set from <b>Five options and on</b>.</p>                                                                                                                             |
| 4    | <p>Select from the <b>Recharge options 6-8</b> section:</p> <ul style="list-style-type: none"> <li>The Announcement Set from the <b>Set</b> drop down box</li> <li>The Announcement Entry from the <b>Entry</b> drop down box that is to be played to a caller if they have eight recharge options.</li> </ul> <p>This will include the announcements set from <b>Five options and on</b>.</p> |
| 5    | <p>Select from the <b>Recharge options 6-9</b> section:</p> <ul style="list-style-type: none"> <li>The Announcement Set from the <b>Set</b> drop down box</li> <li>The Announcement Entry from the <b>Entry</b> drop down box that is to be played to a caller if they have nine recharge options.</li> </ul> <p>This will include the announcements set from <b>Five options and on</b>.</p>  |
| 6    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                            |

## Recharge options 6-9

Here is an example Recharge options 6-9.

The screenshot shows the 'New Currency' dialog box with a sidebar on the left containing a tree view with the following items: Currency, Configure Announcements, Recharge options 1-5, and Recharge options 6-9 (which is selected and highlighted). The main area of the dialog contains four sections, each with a label and two dropdown menus:

- Recharge option six:** Set (CCS Announcements), Entry (Account Reference Prompt Announcement)
- Recharge options 6-7:** Set (CCS Announcements), Entry (Account Reference Prompt Announcement)
- Recharge options 6-8:** Set (CCS Announcements), Entry (Account Reference Prompt Announcement)
- Recharge options 6-9:** Set (CCS Announcements), Entry (Account Reference Prompt Announcement)

At the bottom of the dialog are 'Save' and 'Cancel' buttons. A 'Help' button is located in the top right corner.

## Editing a currency

Follow these steps to edit the details of an existing Currency record.

To configure a Currency as a Default Currency for the system, configure the Currency here, and then set it as the default in the *Global Configuration* (on page 499) screen.

| Step | Action                                                                                                                                          |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                             |
| 2    | Select the record to edit from the <b>Currency</b> tab table.                                                                                   |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> The Edit Currency screen displays, showing the Currency options.                                          |
| 4    | Edit the currency details as described in <i>Currency details</i> (on page 491).<br><b>Warning:</b> You cannot change the <b>Base</b> once set. |



| Step | Action              |
|------|---------------------|
| 5    | Click <b>Save</b> . |

## Deleting a currency

Follow these steps to delete an existing currency configuration record.

To remove a currency as a default currency for the system, see the *Global Configuration* (on page 499) screen.

| Step | Action                                                                                                                            |
|------|-----------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                               |
| 2    | Select the record to delete from the <b>Currency</b> tab table.                                                                   |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                   |
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> The record is deleted and the Currency prompt displays. |
| 5    | Click <b>OK</b> .                                                                                                                 |

## Global Configuration

### Introduction

You set the following global configuration on the **Global Configuration** tab in the Service Management window:

- The system currency. The required currency must have already been added to the system using the procedures in *Currency* (on page 489).
- The mapping of languages that the system currency is announced in. See *Adding or editing a language map* (on page 502) and *Deleting a language map* (on page 503).
- Whether EDR auditing is required. See *EDR Auditing and Reporting* (on page 504) for more information.
- The global masking configuration for displaying EDR fields in the EDR Viewer. See *Editing a Masking Rule* for more information.

You set the following global maximums on the **Global Configuration** tab:

- Credit cards per subscriber
- Subscribers per credit card

For details, see *Setting global credit card maximums* (on page 505).

## Global Configuration tab

Here is an example Global Configuration tab.

The screenshot shows a window titled "Service Management" with a standard Windows-style title bar (minimize, maximize, close buttons). Inside the window, at the top, is a "Service Provider" dropdown menu set to "Boss" and a "Help" button.

Below this is a tabbed interface with the following tabs: "MFile Generation", "Resource Limits", "Capability", "Domain", "Currency", "Currency Code", "Number Translation List", "Splash Screen Configuration", "Security", "Exchange Rates", "Global Configuration" (which is the active tab), "Channel", "Balance Type Mapping", and "Barred List".

The "Global Configuration" tab contains the following settings:

- "System Currency" dropdown menu set to "European EMU, Euro (EUR)".
- "EDR Auditing Required" checkbox, which is checked.
- "Language Menu Option Mapping" section containing a table:

| Language | Key Mapping |
|----------|-------------|
| English  | 1           |
| French   | 2           |

Below the table is an "EDR Viewer Display Masking" section with the following options:

- "No Masking" radio button (unselected).
- "Last Characters" radio button (selected).
- "Regular Expression" radio button (unselected).

Under "Last Characters", there is a text input field containing the number "3". Below this are two more text input fields labeled "Pattern" and "Replacement", both of which are currently empty.

At the bottom of the window, there are two text input fields:

- "Maximum Credit Cards Per Subscriber" with the value "8".
- "Maximum Subscribers Per Credit Card" with the value "8".

At the very bottom of the window are two buttons: "Edit" and "Close".

## System Currency

Here is an example Edit Global Configuration screen, displaying the **System Currency** option.

The screenshot shows a window titled "Edit Global Configuration" with a close button in the top right corner. On the left is a sidebar with a list of configuration options, each preceded by a radio button. The options are:

- System Currency (selected)
- EDR Auditing Required
- Language Menu Option Mapping
- Credit Cards
- EDR Viewer Display Masking

The main content area on the right is light gray and contains the text "System Currency" followed by a dropdown menu. The dropdown menu is currently open, showing the selected value "European EMU, Euro (EUR)". At the bottom of the window are two buttons: "Save" and "Cancel".

## Language Menu Mapping

Here is an example Edit Global Configuration screen, displaying the **Language Menu Option Mapping** option.

The screenshot shows a window titled "Edit Global Configuration". On the left is a sidebar with a list of configuration options: System Currency, EDR Auditing Required, Language Menu Option Mapping (highlighted in blue), Credit Cards, and EDR Viewer Display Masking. The main area on the right is titled "Language Menu Option Mapping" and contains a table with two columns: "Language" and "Key Mapping". The table has two rows: "French" with a key mapping of "2", and "English" with a key mapping of "1". Below the table are three buttons: "Edit", "Insert", and "Delete". At the bottom of the window are two buttons: "Save" and "Cancel".

| Language | Key Mapping |
|----------|-------------|
| French   | 2           |
| English  | 1           |

### Adding or editing a language map

Language maps determine what language the system currency is announced in.

Follow these steps to add a new, or edit an existing language map.

| Step | Action                                                                                                                                                                                                                                                                                                        |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                                                                                                                                                                           |
| 2    | In the <b>Global Configuration</b> tab, click <b>Edit</b> .<br><b>Result:</b> You see the Edit Global Configuration screen.                                                                                                                                                                                   |
| 3    | Select the <i>Language Menu Option Mapping</i> option (See example on page 502).<br><b>Result:</b> The screen displays the Language menu option mapping section.                                                                                                                                              |
| 4    | To add a new mapping: <ul style="list-style-type: none"> <li>Click <b>Insert</b></li> </ul> To edit an existing mapping: <ul style="list-style-type: none"> <li>Select the <b>Language</b> item to change from the table</li> <li>Click <b>Edit</b></li> </ul> <b>Result:</b> You see the Edit/Insert screen. |

| Step | Action                                                                           |
|------|----------------------------------------------------------------------------------|
| 5    | Select the <b>Language</b> from the drop down list.                              |
| 6    | For a new mapping, enter the key mapping number in the <b>Key Mapping</b> field. |
|      | <b>Warning:</b> This cannot be changed once saved.                               |
| 7    | Click <b>Save</b> to update the table.                                           |
| 8    | Click <b>Save</b> to the details to the database.                                |

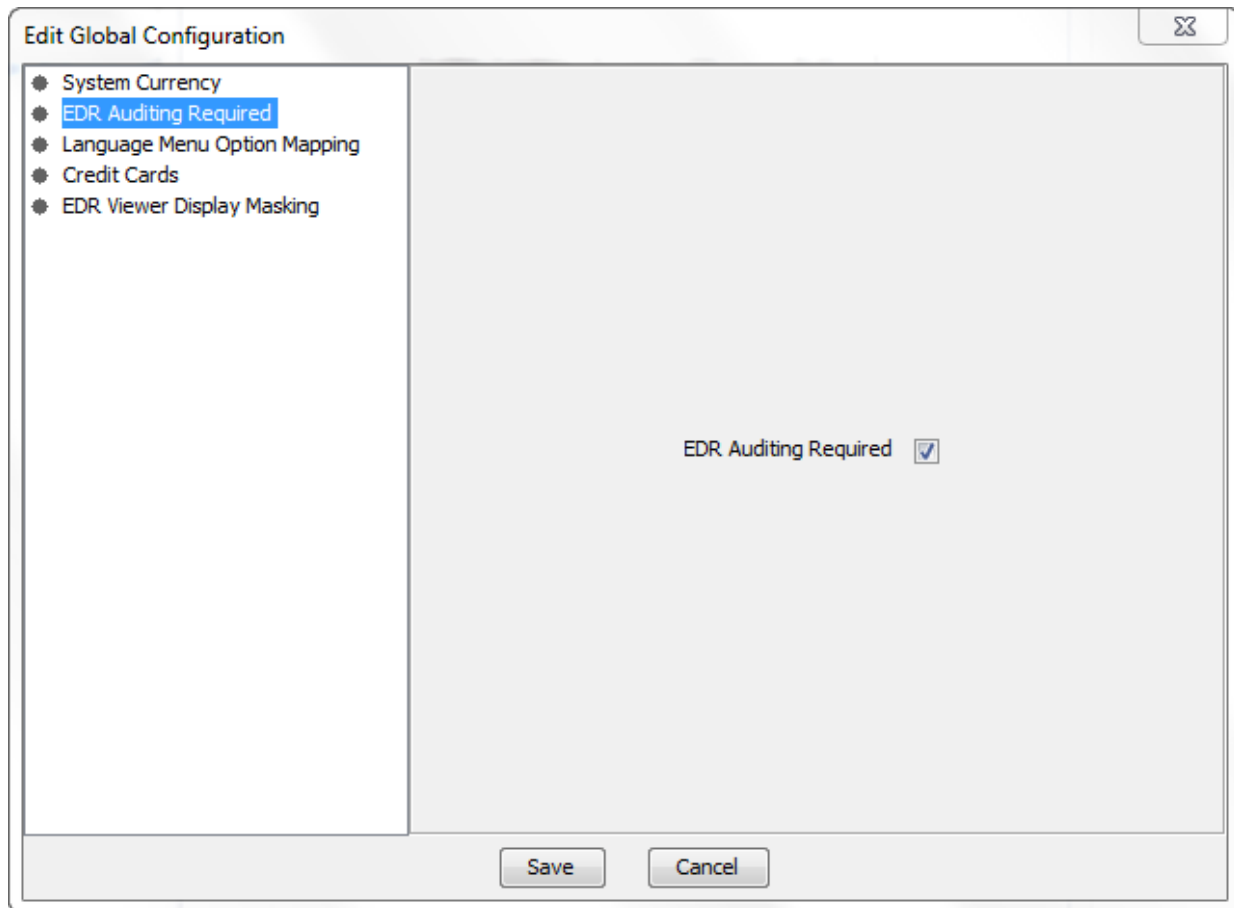
## Deleting a language map

Follow these steps to delete a language map.

| Step | Action                                                                                                                                                           |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                              |
| 2    | In the <b>Global Configuration</b> tab, click <b>Edit</b> .<br><b>Result:</b> You see the Edit Global Configuration screen.                                      |
| 3    | Select the <i>Language Menu Option Mapping option</i> (See example on page 502).<br><b>Result:</b> The screen displays the Language menu option mapping section. |
| 4    | Select the <b>Language</b> item to delete from the table.                                                                                                        |
| 5    | Click <b>Delete</b> .                                                                                                                                            |
| 6    | Click <b>Save</b> to the details to the database.                                                                                                                |

## EDR Auditing Required

Here is an example Edit Global Configuration screen, displaying the **EDR Auditing Required** option.



## EDR Auditing and Reporting

The EDR auditing feature keeps track of changes to subscriber data. When EDR auditing is enabled, a user who is updating a subscriber record is forced to enter a reason in a special **Change Reason** dialog box each time they change the financial status of a subscriber; for example, when:

- Updating a subscriber's wallets
- Updating a subscriber's credit cards

The reason for the change, and the user who made the change are reported in the **Change Reason**, and **Operator Name** fields in the VWS EDR. You can view this information by displaying the VWS EDR in the EDR Viewer.

To enable EDR auditing, select the **EDR Auditing Required** check box in the **Edit Global Configuration** dialog.

**Note:** The EDR Auditing Required profile field in the CCS global profile block is set to true when you enable EDR auditing. For more information about the CCS global profile block, see *CCS Technical Guide*.

## Credit Cards

Here is an example Edit Global Configuration screen, displaying the **Credit Cards** option.

The screenshot shows a window titled "Edit Global Configuration". On the left is a sidebar with a list of configuration options: "System Currency", "EDR Auditing Required", "Language Menu Option Mapping", "Credit Cards" (which is highlighted in blue), and "EDR Viewer Display Masking". The main area of the window is light gray and contains two settings: "Maximum Credit Cards Per Subscriber" with a value of 8, and "Maximum Subscribers Per Credit Card" with a value of 8. At the bottom of the window are two buttons: "Save" and "Cancel".

### Setting global credit card maximums

Follow these steps to set the global maximum number of credit cards per subscriber and subscribers per credit card.

| Step | Action                                                                                                                                                    |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                       |
| 2    | In the <b>Global Configuration</b> tab, click <b>Edit</b> .<br>The Edit Global Configuration screen displays.                                             |
| 3    | Select the Credit Cards option.<br>The screen displays the <i>Credit Cards option</i> (See example on page 505), limits section.                          |
| 4    | In the fields, select the maximum: <ul style="list-style-type: none"> <li>• Credit cards per subscriber</li> <li>• Subscribers per credit card</li> </ul> |
| 5    | Click <b>Save</b> to save the details to the database.                                                                                                    |

**Note:** You can also set credit card maximums per service provider on the **Resource Limits** tab in the Service Management window. The maximums you set for a service provider override the global credit card maximums.

## Editing EDR Viewer Display Masking

The EDR Viewer Display Masking option allows you to globally configure the masking rules that should be applied to EDR fields for which masking is specified. See *EDR Elements tab* (on page 614) for more information about specifying which EDR fields require masking.

Follow these steps to edit the options for EDR Viewer Display Masking.

| Step | Action                                                                                                                                                                                                                                                                                                                                |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                                                                                                                                                                                                   |
| 2    | In the <b>Global Configuration</b> tab, click <b>Edit</b> .<br><b>Result:</b> You see the Edit Global Configuration screen.                                                                                                                                                                                                           |
| 3    | On the Edit Global Configuration screen, select <b>EDR Viewer Display Masking</b> .<br><b>Result:</b> You see the EDR Viewer Display Masking configuration options.                                                                                                                                                                   |
| 4    | Select the masking options you want to use, or select No Masking if you do not want to apply masking to EDR fields.                                                                                                                                                                                                                   |
| 5    | If you selected the Last Characters masking option, then enter the number of characters at the end of the EDR field to mask in the <b>Last Characters</b> field.                                                                                                                                                                      |
| 6    | If you selected the Regular Expression masking option then perform the following steps: <ol style="list-style-type: none"> <li>Enter the regular expression to use to match the characters to be masked in the <b>Pattern</b> field.</li> <li>Enter the characters to use as replacements in the <b>Replacement</b> field.</li> </ol> |
| 7    | Click <b>Save</b> to save the masking rule.                                                                                                                                                                                                                                                                                           |

## Exchange Rates

### Introduction

The **Exchange Rates** tab allows you to view, add, edit and delete the Exchange Rates that are available in the system.

Account balances are stored in the System Currency, then converted to the user's selected Currency by the indirect rate of exchange set in this tab.



## Exchange Rates tab

Here is an example of the **Exchange Rates** tab.

The screenshot shows a window titled "Service Management" with a blue title bar. Inside the window, there is a "Service Provider" dropdown menu set to "Boss" and a "Help" button. Below this is a tabbed interface with the "Exchange Rates" tab selected. The tab contains a table with two columns: "Currency" and "Indirect Rate Of Exchange". The table lists two entries: "Australia, Dollar (AUD)" with a rate of 1.66, and "United States of America, US Dollar (USD)" with a rate of 1.12. At the bottom of the window, there are four buttons: "New", "Edit", "Delete", and "Close".

| Currency                                  | Indirect Rate Of Exchange |
|-------------------------------------------|---------------------------|
| Australia, Dollar (AUD)                   | 1.66                      |
| United States of America, US Dollar (USD) | 1.12                      |

## Exchange Rate screen

Here is an example Exchange Rate screen.

## Adding an exchange rate

Follow these steps to add a new Exchange Rate record.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 2    | In the <b>Exchange Rates</b> tab, click <b>New</b> .<br><b>Result:</b> The <i>New Exchange Rate</i> screen (on page 508) appears with the default System Currency displayed in the <b>System Currency</b> field.                                                                                                                                                                                                                                                                                                                                        |
| 3    | Select the Currency to convert the System Currency to from the <b>Currency</b> drop down box. The list will display all available Currencies that are set up on the <b>Currency</b> tab.                                                                                                                                                                                                                                                                                                                                                                |
| 4    | Type the value which the System Currency will be multiplied by to establish the Currency value in the <b>Indirect Rate of Exchange</b> field.<br>The indirect rate of exchange is the value of 1 unit of System Currency in the selected Currency.<br><b>Example:</b> If the Indirect Rate of Exchange is set to 4, 1 unit of the System Currency will result in 4 of the configured Currency units. Consequently if an Account Balance is 100 Zloty, and the Exchange Rate to Euros is set at 0.22, the Account Balance will be converted to 22 Euros. |
| 5    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## Editing an exchange rate

Follow these steps to edit an existing Exchange Rate.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen. |
| 2    | In the <b>Exchange Rates</b> tab, select the Exchange Rate to edit.                                 |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> The <i>Edit Exchange Rate</i> screen (on page 508) appears.   |

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4    | <p>Enter the value which the System Currency will be multiplied by to establish the Currency value in the <b>Indirect Rate of Exchange</b> field.</p> <p>The indirect rate of exchange is the value of 1 unit of System Currency in the selected Currency.</p> <p><b>Example:</b> If the Indirect Rate of Exchange is set to 4, 1 unit of the System Currency will result in 4 of the configured Currency units. Consequently if an Account Balance is 100 Zloty, and the Exchange Rate to Euros is set at 0.22, the Account Balance will be converted to 22 Euros.</p> |
| 5    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |

## Deleting exchange rates

Follow these steps to delete an existing Exchange Rate record.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen. |
| 2    | In the <b>Exchange Rates</b> tab, select the Exchange Rate to delete.                               |
| 3    | Click <b>Delete</b> .                                                                               |
|      | <b>Result:</b> The Delete Confirmation prompt appears.                                              |
| 4    | Click <b>OK</b> to delete the record from the database.                                             |
|      | <b>Result:</b> The record is deleted and you see the Exchange Rate successfully deleted message.    |
| 5    | Click <b>OK</b> .                                                                                   |

## Resource Limits

### Introduction

The Resource Limits screens enable the service provider's resource limits to be specified. These limits prevent a service provider from using more than the specified number of:

- Product types
- Voucher types
- Rate tables

All configuration options must be completed to finalize a resource limit; however the configuration can be saved at any point by clicking **Save**.

#### Notes:

- All service providers must have resource limits configured for them.
- Resource limits can only be set for existing service providers. Service providers are added as ACS customers in the ACS Customers screen. For more information about adding new service providers, see *ACS User's Guide*.

## Resource Limits tab

Here is an example **Resource Limits** tab.

The screenshot shows a window titled "Service Management" with a standard Windows-style title bar (minimize, maximize, close buttons). Inside the window, there is a "Service Provider" dropdown menu set to "Boss" and a "Help" button. Below this is a tabbed interface with the following tabs: "Number Translation List", "Splash Screen Configuration", "Security", "Exchange Rates", "Global Configuration", "Channel", "Balance Type Mapping", "Barred List", "MFile Generation", "Resource Limits" (which is the active tab), "Capability", "Domain", "Currency", and "Currency Code".

The "Resource Limits" tab contains several configuration fields:

- Maximum Product Types: 0
- Maximum Voucher Types: 0
- Maximum Rate Tables: 0
- Grace Period (seconds): 0
- Maximum Bad PIN Count: 3
- Number of Product Types Used: 0
- Number of Voucher Types Used: 0
- Number of Rate Tables Used: 0
- Number of Promotion SMSs Sent: (empty field)
- Global Business Prefix: (empty field)
- Account Number Prefix: (empty field)

Below these fields is a section titled "EDR Viewer Display Masking" with three radio buttons: "Global Masking" (unselected), "Last Characters" (selected), and "Regular Expression" (unselected). Under "Last Characters", there is a "Last Characters" field with the value "3", and two empty text input fields labeled "Pattern" and "Replacement".

At the bottom of the tab, there are two more fields:

- Maximum Credit Cards Per Subscriber: (empty field)
- Maximum Subscribers Per Credit Card: (empty field)

At the very bottom of the window, there are two buttons: "Edit" and "Close".

## Resource Limits tab fields

The **Resource Limits** tab contains display-only fields, showing the limits and the current usage of the resource. The following table shows where you set the value in each limit field.

| Field                                                                                                                    | Where Set                                                                                                                               |
|--------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------------------------------------------------------|
| Maximum Product Types<br>Maximum Voucher Types<br>Maximum Rate Tables<br>Grace Period (seconds)<br>Maximum Bad PIN Count | Edit Resource Limits screen, <i>Limits</i> (on page 514) option.                                                                        |
| Number of Product Types Used                                                                                             | Subscriber Management screen, <b>Product Type</b> (on page 155) tab.                                                                    |
| Number of Voucher Types Used                                                                                             | Voucher Management screen, <b>Voucher Types</b> tab. For more information about the <i>Voucher Types</i> tab, see <i>Voucher Type</i> . |
| Number of Rate Tables Used                                                                                               | Rating Management screen, <b>Rate Tables</b> (on page 350) tab.                                                                         |
| Number of Promotion Notifications Sent                                                                                   | Subscriber Management, Adding Product Types screen, Activation Credits option.                                                          |
| Number of Promotion SMSs Sent                                                                                            | Displays number of promotion SMS messages that have been sent.                                                                          |
| Global Business Prefix<br>Account Number Prefix                                                                          | Edit Resource Limits screen, Business Prefix option.                                                                                    |
| EDR Viewer Display Masking<br>Last Characters<br>Pattern<br>Replacement                                                  | Edit Resource Limits screen, EDR Viewer Display Masking. See <i>Editing EDR Viewer Display Masking</i> (on page 526).                   |
| Maximum Credit Cards Per Subscriber<br>Maximum Subscribers Per Credit Card                                               | Edit Resource Limits screen, <i>Setting Subscriber Credit Card Limits</i> (on page 527) option.                                         |

## Edit Resource Limits screen

Here is an example Edit Resource Limits screen.

## Configuration options summary

This table lists all the resource limits configuration options and their functionality.

**Note:** The service provider is also known as the customer in ACS.

| Option          | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|-----------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Limits          | Sets the resource limits for a service provider that prevent the service provider from using more than the specified number of product types, voucher types and rate tables.                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Business Prefix | Sets: <ul style="list-style-type: none"> <li>The global business prefix that a subscriber enters at the beginning of a dialed telephone number to ensure that the call charge is logged against the primary business wallet of their account</li> <li>The account number prefix for a service provider. When you create a new subscriber, the first two digits of the subscriber card number are automatically set to the specified account number prefix. You must specify a unique value in the range of 10 to 99, or leave blank if you do not want to use a specified account number prefix.</li> </ul> |
| Sets            | Sets which public resource sets are available to a service provider.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

| Option                     | Description                                                                                                                                                                                                                                                                |
|----------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Call Barring               | Sets the numbers that are allowed or barred at service provider level.                                                                                                                                                                                                     |
| Number Translations        | Sets number translation mappings for the service provider, and displays them in the Short Codes list. The service short codes are mapped to termination numbers. When the short code is dialed, the call is routed to the termination number.                              |
| Bypass Numbers             | Sets the bypass numbers that are allowed or barred at service provider level. A bypass number is a number that has a discount applied to it. The discount that applies to bypass numbers is set in the Bypass Discount panel.                                              |
| Bypass Number Discounts    | Sets the allowed bypass number discounts.<br>To use this feature you must include the Set Discount feature node in the control plan. For more information, see the <i>Feature Nodes Reference Guide</i> .                                                                  |
| Profile Group Limitations  | Sets default limits for LNSTRING and LOPREFIX profile group fields. The limits set for the product type will override the limits set here.<br>For more information about setting product type limits, see <i>Subscriber Profile Limitations</i> (on page 218).             |
| Promotions                 | Lists the global limited liability status for all the available promotions for the service provider.<br>You configure promotions in Promotion Manager.                                                                                                                     |
| EDR Viewer Display Masking | Defines the masking rules that apply on a service provider basis when you display EDRs in the EDR Viewer. You set whether to apply the masking rules to an individual EDR tag in the EDR tag configuration. For more information, see <i>EDR Management</i> (on page 603). |
| Credit Cards               | Sets the maximum number of credit cards per subscriber and maximum number of subscribers per credit card at a service provider level.                                                                                                                                      |

For information on setting each resource limit, see *Editing resource limits* (on page 513).

## Editing resource limits

Follow these steps to edit an existing resource limit.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 2    | Click <b>Edit</b> on the <b>Resource Limits</b> tab.<br>The <i>Edit Resource Limits</i> screen (See example on page 512) displays.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 3    | Select the required options and edit the details of the record. See: <ul style="list-style-type: none"> <li>• <i>Limits</i> (on page 514)</li> <li>• <i>Business Prefix</i> (on page 514)</li> <li>• <i>Sets</i> (on page 515)</li> <li>• <i>Call Barring</i> (on page 516)</li> <li>• <i>Number Translations</i> (on page 518)</li> <li>• <i>Bypass Numbers</i> (on page 520)</li> <li>• <i>Bypass Number Discount</i> (on page 522)</li> <li>• <i>Profile Group Limitations</i> (on page 523)</li> <li>• <i>Promotions</i> (on page 525)</li> <li>• <i>Editing EDR Viewer Display Masking</i> (on page 526)</li> <li>• <i>Setting Subscriber Credit Card Limits</i> (on page 527)</li> </ul> |

| Step | Action              |
|------|---------------------|
| 4    | Click <b>Save</b> . |

## Limits

Follow these steps to add limits to Resource Limits for a service provider.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the customer from the <b>Service Provider</b> drop down box.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 2    | From the <b>Resource Limits</b> tab of the Resources screen, click <b>Edit</b> .<br>The configurable limits display in the <i>Edit Resource Limits</i> screen (See example on page 512). For more information, see <i>Resource Limits tab fields</i> (on page 511).                                                                                                                                                                                                                                                                                                                                         |
| 3    | In the relevant fields, set the maximum number of the following resources that the service provider may use: <ul style="list-style-type: none"> <li>• Product types</li> <li>• Voucher types</li> <li>• Rate tables</li> </ul> <p><b>Tip:</b> It is not possible to set the resources allowed to a value lower than the number of resources already used, as displayed on the <b>Resource Limits</b> tab (on page 510). To reduce the numbers that the service provider may use in the case where the maximum number has been reached, you must first reduce the number that the service provider uses.</p> |
| 4    | In the <b>Grace Period (seconds)</b> field, type the period of time (in seconds) to elapse before a call begins to be charged. If a call ends before the grace period has been reached, the call is free.<br>If a call continues beyond the grace period, the whole call incurs a charge, including the grace period. The grace period applies on a per customer basis.                                                                                                                                                                                                                                     |
| 5    | Set the maximum number of times that an invalid PIN may be entered into the system in the <b>Maximum Bad PIN Count</b> field. If a customer exceeds this number of attempts in a 24 hour period, their account is frozen.                                                                                                                                                                                                                                                                                                                                                                                   |
| 6    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

## Business Prefix

Follow these steps to configure the Global Business Prefix number for the service provider.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select <b>Business Prefix</b> in the left hand menu in the Edit Resource Limits screen.<br>The <i>Business Prefix option</i> (on page 515) fields display.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 2    | (Optional) Specify the global business prefix by entering the digits and special characters for the prefix in the <b>Global Business Prefix</b> field. You can include any of the following allowed values in the prefix: 0-9, #, and *.<br>The subscriber must enter this prefix at the beginning of a dialed telephone number to enable the call to be charged to their business wallet instead of their personal wallet.<br>You must include the Business Prefix Branch feature node in the control plan to enable the global business prefix feature. For more information about control plans, see the <i>CPE User's Guide</i> . For more information about the Business Prefix Branch feature node, see <i>Feature Nodes Reference Guide</i> . |



| Step | Action                                                                                                                                                                                                                                                                                                  |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | (Optional) Specify the prefix that will be prepended to a subscriber's card ID by entering the two digit prefix in the <b>Account Number Prefix</b> field. Specify a value between 10 and 99 that is unique to this service provider, or leave blank if you do not want to use account number prefixes. |
| 4    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                     |

## Business Prefix option

Here is an example Business Prefix option panel on the Edit Resource Limits screen.

Global Business Prefix

Account Number Prefix

## Sets

Follow these steps to configure private reusable data set limits for service providers.

| Step | Action                                                                                                                                                                                                                                                       |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the <b>Sets</b> option from the left hand menu in the Edit Resource Limits screen. The <i>Sets option</i> (on page 516) displays, and shows a list of all the public data sets.                                                                       |
| 2    | In the <b>Allocation Public Geography Sets</b> section, select the check box for each geography set that you want to make available to the service provider.<br>You create geography sets on the <b>Geography</b> tab of the ACS Configuration screen.       |
| 3    | In the <b>Allocate Public Announcement Sets</b> section, select the check box for each announcement set that you want to make available to the service provider.<br>You create announcement on the <b>Announcements</b> tab of the ACS Configuration screen. |
| 4    | In the <b>Allocate Public Holiday Sets</b> section select the check box for each holiday set that you want to make available to the service provider.                                                                                                        |

| Step | Action                                                                              |
|------|-------------------------------------------------------------------------------------|
|      | You create holiday sets on the <b>Holidays</b> tab of the ACS Configuration screen. |
| 5    | Click <b>Save</b> .                                                                 |

For more information about the ACS Configuration screen, see *ACS User's Guide*.

## Sets option

Here is an example Sets option on the Edit Resource Limits screen.

The screenshot shows a dialog box titled "Allocate Public Geography Sets". It is divided into three sections:

- Allocate Public Geography Sets:** Contains four checkboxes: ☒ MJHGS, ☒ TIME\_ZONE\_GEOGRAPHY\_SET, ☒ Access Network, and ☐ Joseph\_Geo\_Set.
- Allocate Public Announcement Sets:** Contains two checkboxes: ☐ Another set and ☐ Joseph\_Announcement.
- Allocate Public Holiday Sets:** Contains one checkbox: ☐ Joseph\_Holiday\_Set.

At the bottom of the dialog box are two buttons: "Save" and "Cancel".

## Call Barring

This manages allowed/ barred lists for service providers.

Allowed/barred lists can also be set at these levels:

- System-wide
- Product type (see the New or the Edit Product Type screen *Call Barring* (on page 172) option)
- Subscriber account (see the New or the Edit Subscriber screen, *Call Barring* (on page 102) option)

Follow these steps to configure call barring for customers.

| Step | Action                                                                                            |
|------|---------------------------------------------------------------------------------------------------|
| 1    | Select the <b>Call Barring</b> option from the left hand menu in the Edit Resource Limits screen. |

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | The <i>Call Barring option</i> (on page 518) displays, showing the Allowed/Barred List configuration for the service provider.                                                                                                                                                                                                                                                                                                                                                       |
| 2    | Select whether the listed numbers will be allowed or barred from the <b>List Type</b> drop down list in the <b>Service Allowed/Barred List</b> section.                                                                                                                                                                                                                                                                                                                              |
|      | <b>Note:</b> All numbers in the list are allowed, or all numbers are barred, according to the list type. It is not possible to have some allowed and some barred numbers in the list.                                                                                                                                                                                                                                                                                                |
| 3    | Select the <b>Ignore</b> check box if you want the service to ignore the allowed/barred list.                                                                                                                                                                                                                                                                                                                                                                                        |
| 4    | Edit the number list in the <b>Service Provider Allowed/Barred List</b> section. To: <ul style="list-style-type: none"> <li>• Add numbers to the list: <ul style="list-style-type: none"> <li>▪ In the <b>New Number</b> field, enter the number</li> <li>▪ Click <b>Add</b>.</li> </ul> </li> <li>• Delete numbers from the list: <ul style="list-style-type: none"> <li>▪ Select the number in the <b>Number List</b> field</li> <li>▪ Click <b>Delete</b>.</li> </ul> </li> </ul> |
| 5    | If required, repeat step 4 until the number list is complete.                                                                                                                                                                                                                                                                                                                                                                                                                        |
| 6    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## Call Barring option

Here is an example Call Barring option on Edit Resource Limits screen.

## Number Translations

This manages number translation lists for service providers.

You can also set number translations at these levels:

- Global
- Product type
- Subscriber account

Follow these steps to configure the number translation list limits for the service provider.

| Step | Action                                                                                                                                                                                                                   |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>Select the <b>Number Translations</b> option from the left hand menu in the Edit Resource Limits screen.</p> <p>The <i>Number Translations option</i> (on page 520) displays, listing the configured short codes.</p> |

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | <p>Edit the number list in the <b>Short Codes</b> section.</p> <p>To add a number to the list:</p> <ol style="list-style-type: none"><li>In the <b>In</b> field, enter the service short code to translate.</li><li>In the <b>Out</b> field, enter the termination number that the short service code translates to.</li><li>Click <b>Add</b>.</li></ol> <p>To delete a number from the list:</p> <ol style="list-style-type: none"><li>Select the number in the <b>Number List</b> table.</li><li>Click <b>Delete</b>.</li></ol> |
| 3    | Repeat step 2 until all the codes are included.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
| 4    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |

## Number Translations option

Here is an example Number Translations-Short Codes option on the Edit Resources screen.

Short Codes

Number List

| In | Out |
|----|-----|
|----|-----|

In

Out

Add Delete

Save Cancel

## Bypass Numbers

Follow these steps to configure the bypass numbers at a service provider level.

**Tip:** Bypass Numbers can also be configured at the following levels:

- Global
- Product type

| Step | Action                                                                                                                                                                                                                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>Select the <b>Bypass Numbers</b> option from the left hand menu in the Edit Resource Limits screen.</p> <p>The <i>Bypass Numbers option</i> (on page 522) displays, showing the bypass numbers configuration for the service provider.</p> |

| Step | Action                                                                                                                                                                                                                                                                                                               |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 2    | Select the <b>List Type</b> from drop down box in the <b>Service Provider Bypass Numbers</b> section.<br><b>Note:</b> The list type determines whether the listed bypass numbers are all barred, or all allowed.                                                                                                     |
| 3    | Select the <b>Ignore</b> check box if the service is to ignore the number list.                                                                                                                                                                                                                                      |
| 4    | Edit the number list in the <b>Service Provider Bypass Numbers</b> section.<br>To add a number to the list:<br>a. Enter a bypass number in the <b>New Number</b> field<br>b. Click <b>Add</b> .<br>To delete a number from the list:<br>a. Select the number from the <b>Number List</b><br>b. Click <b>Delete</b> . |
| 5    | Repeat step 4 until the number list is complete.                                                                                                                                                                                                                                                                     |
| 6    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                  |

## Bypass Numbers option

Here is an example Bypass Numbers option on the Edit Resources screen.

## Bypass Number Discount

Follow these steps to configure the limits for bypass number discounts.

**Tip:** To enable bypass number discounts limits, you must include the Set Discount feature node in the control plan. For more information about the Set Discount feature node, see *Feature Nodes Reference Guide*.

| Step | Action                                                                                                                                                                                                                                                     |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the <b>Bypass Number Discount</b> option from the left hand menu in the Edit Resource Limits screen.<br>The <i>Bypass Number Discount option</i> (on page 523) displays, showing the bypass number discount configuration for the service provider. |
| 2    | Select the currency code in which the <b>Max. Charge</b> field will be displayed from the <b>Display Currency</b> list.                                                                                                                                    |



| Step | Action                                                                                                    |
|------|-----------------------------------------------------------------------------------------------------------|
| 3    | Type the percentage discount to apply during the first discount period in the <b>Period One %</b> field.  |
| 4    | Type the percentage discount to apply during the second discount period in the <b>Period Two %</b> field. |
| 5    | Type the maximum total charge to charge the subscriber for any one call in the <b>Max. Charge</b> field.  |
| 6    | Click <b>Save</b> .                                                                                       |

## Bypass Number Discount option

Here is an example Bypass Number Discount option on the Edit Resource Limits screen.

Bypass Number Discount

Display Currency EUR ▼

Period One %

Period Two %

Max. Charge

Save Cancel

## Profile Group Limitations

Follow these steps to configure the service provider-level limits for LNSTRING and LOPREFIX profile field types.

**Tip:** You can override the limits set here by setting the profile field type limits for the product type.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                 |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Open the <b>Profile Group Limitations</b> group in the Edit Resource Limits screen, and select the profile field that you want to set limits for.<br>The <i>Profile Group Limitations option</i> (on page 525) displays the configuration for the selected field.                                                                                                                      |
| 2    | Select the <b>Ignore Limitations</b> check box if required: <ul style="list-style-type: none"> <li>When selected, the limits are ignored and the system default resource limits are used.</li> <li>When not selected, the limits set here are used.</li> </ul>                                                                                                                         |
| 3    | In the <b>Max Number of Entries</b> field, if present, type the maximum number of prefixes that may be included in the Number List. Defaults to 100 if no value is specified.<br><b>Note:</b> This field is only available for LOPREFIX type fields.                                                                                                                                   |
| 4    | In the <b>Min Number Length</b> field type the minimum numeric value for the Profile Group Field. Defaults to zero if no value is specified.                                                                                                                                                                                                                                           |
| 5    | In the <b>Max Number Length</b> field type the maximum numeric value for the profile group field. Defaults to 255 if no value is specified.                                                                                                                                                                                                                                            |
| 6    | Select the <b>Limitation Prefix Tree Type</b> from the drop down list. If you select: <ul style="list-style-type: none"> <li>Allowed – The profile group field value must match an entry in the Number List.</li> <li>Barred – The profile group field value must not match an entry in the Number List.</li> </ul>                                                                    |
| 7    | Edit the <b>Number List</b> .<br>To add a number to the list: <ol style="list-style-type: none"> <li>Enter a required number in the <b>New Number</b> field.</li> <li>Click <b>Add</b>.</li> </ol> To delete a number from the list: <ol style="list-style-type: none"> <li>Select the number from the <b>Number List</b>, select the number.</li> <li>Click <b>Delete</b>.</li> </ol> |
| 8    | Repeat step 7 until the number list is complete.                                                                                                                                                                                                                                                                                                                                       |
| 9    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                    |

## Profile Group Limitations option

Here is an example Profile Group Limitations option on the Edit Resource Limits screen.

The screenshot shows a software interface for editing resource limits. On the left, a large empty box is labeled 'Number List'. On the right, there are several input fields and a dropdown menu. The 'Ignore Limitations' checkbox is checked. The 'Max Number of Entries' is set to 100, 'Min Number Length' is 0, and 'Max Number Length' is 255. The 'Limitation Prefix Tree Type' is set to 'Barred'. Below these is a 'New Number' section with a text box and 'Add' and 'Delete' buttons. At the bottom of the window are 'Save' and 'Cancel' buttons.

## Promotions

Follow these steps to view the global limited liability status of the promotions defined for the currently selected service provider.

| Step | Action                                                                                                                                                                                                        |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the <b>Promotions</b> option from the left hand menu in the Edit Resource Limits screen. The <i>Promotions option</i> (on page 526) displays, listing the promotions for the current service provider. |
| 2    | Click <b>Save</b> .                                                                                                                                                                                           |

## Promotions option

Here is an example Promotions option on the Edit Resource Limits screen.

| Promotion                        | Active  | Status | Expiry Date |
|----------------------------------|---------|--------|-------------|
| ATM Recharge_Bronze              | Active  | Unset  |             |
| ATM Recharge_Gold                | Active  | Unset  |             |
| ATM Recharge_Silver              | Active  | Unset  |             |
| Bronze Activation                | Active  | Unset  |             |
| Credit Reward 1 Exp Bronze       | Active  | Unset  |             |
| Credit Reward 1 Exp Gold         | Active  | Unset  |             |
| Credit Reward 1 Exp Silver       | Active  | Unset  |             |
| Credit Reward 2 Exp Bronze       | Active  | Unset  |             |
| Credit Reward 2 Exp Gold         | Active  | Unset  |             |
| Credit Reward 2 Exp Silver       | Active  | Unset  |             |
| Credit Reward 3 Exp Bronze       | Active  | Unset  |             |
| Credit Reward 3 Exp Gold         | Active  | Unset  |             |
| Credit Reward 3 Exp Silver       | Active  | Unset  |             |
| Gold Activation                  | Active  | Unset  |             |
| Loyalty Reward Bronze            | Active  | Unset  |             |
| Loyalty Reward Gold              | Active  | Unset  |             |
| Loyalty Reward Silver            | Active  | Unset  |             |
| Manual Limited Liability Example | Inctive | Unset  |             |
| Overdraft Bonus Bronze           | Active  | Unset  |             |
| Overdraft Bonus Gold             | Active  | Unset  |             |
| Overdraft Bonus Silver           | Active  | Unset  |             |
| Reward Tariff Bronze - Bronze    | Active  | Unset  |             |
| Reward Tariff Bronze - Gold      | Active  | Unset  |             |
| Reward Tariff Bronze - Silver    | Active  | Unset  |             |
| Reward Tariff Gold - Bronze      | Active  | Unset  |             |
| Reward Tariff Gold - Gold        | Active  | Unset  |             |
| Reward Tariff Gold - Silver      | Active  | Unset  |             |
| Reward Tariff Silver - Bronze    | Active  | Unset  |             |
| Reward Tariff Silver - Gold      | Active  | Unset  |             |
| Reward Tariff Silver - Silver    | Active  | Unset  |             |

## Editing EDR Viewer Display Masking

The EDR Viewer Display Masking option allows you to set rules on a service provider basis pertaining to masking EDR fields in the EDR Viewer. See *EDR Elements tab* (on page 614) for information about specifying which EDR fields require masking.

Follow these steps to edit the options for EDR Viewer Display Masking

| Step | Action                                                                                                                                                               |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                                  |
| 2    | In the <b>Resource Limits</b> tab, click <b>Edit</b> .<br><b>Result:</b> The Edit Resource Limits screen displays.                                                   |
| 3    | Select <b>EDR Viewer Display Masking</b> .<br><b>Result:</b> The EDR Viewer Display Masking screen configuration options display in the Edit Resource Limits screen. |

| Step | Action                                                                                                                              |
|------|-------------------------------------------------------------------------------------------------------------------------------------|
| 4    | Select the masking option you want, or select Global Masking to apply the global masking rules set on the Global Configuration tab. |
| 5    | Click <b>Save</b> to save the masking limits.                                                                                       |

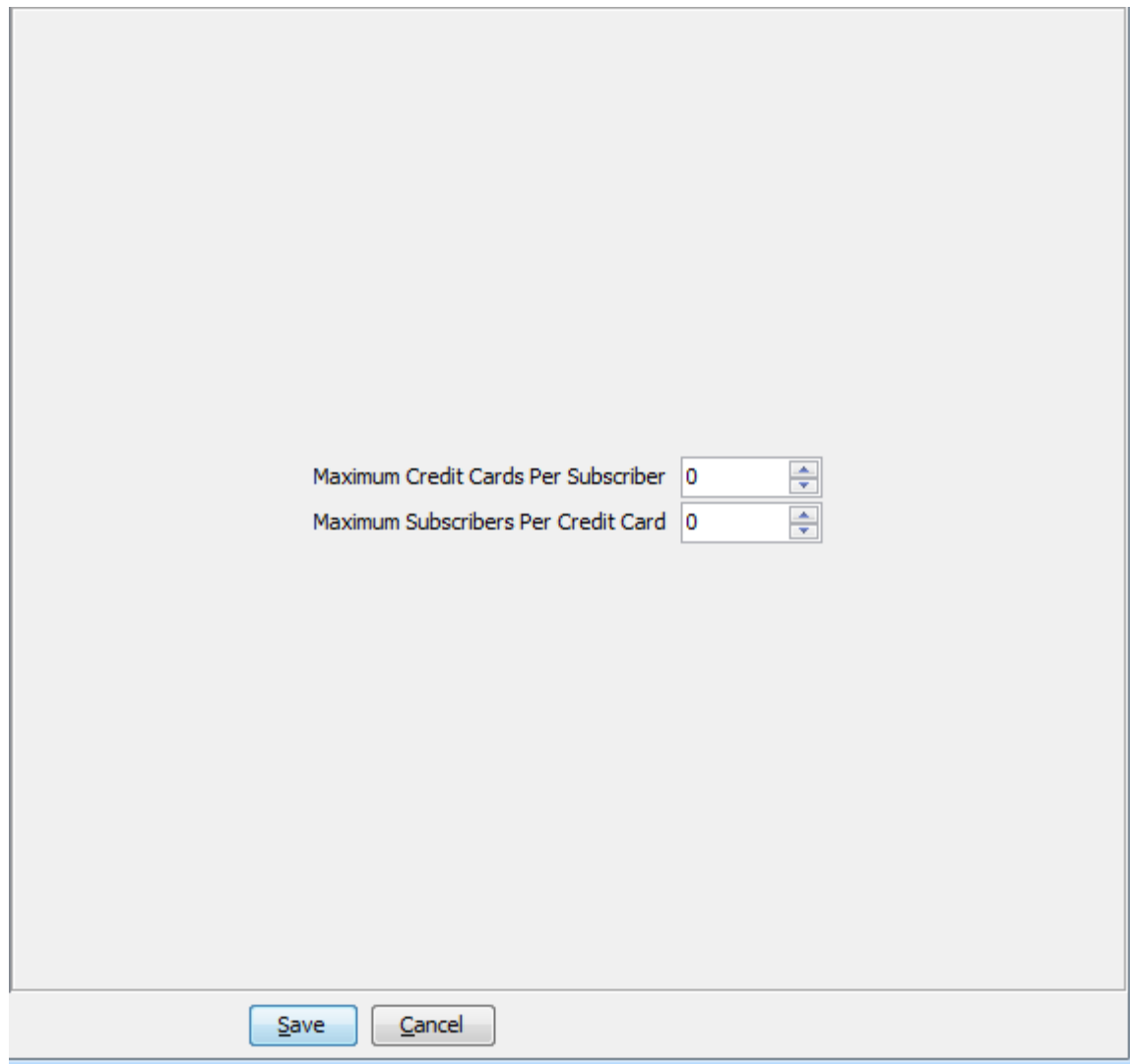
## Setting Subscriber Credit Card Limits

To set the maximum number of credit cards per subscriber and the maximum subscribers per credit card for the service provider:

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                            |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                                                                                                                                                                                                                                                                               |
| 2    | In the <b>Resource Limits</b> tab, click <b>Edit</b> .<br>The Edit Resource Limits screen displays.                                                                                                                                                                                                                                                                                                               |
| 3    | Select the <b>Credit Cards</b> option.                                                                                                                                                                                                                                                                                                                                                                            |
| 4    | Set the required maximums for the selected service provider in the following fields: <ul style="list-style-type: none"> <li>• <b>Maximum Credit Cards Per Subscriber</b></li> <li>• <b>Maximum Subscribers Per Credit Card</b></li> </ul> <p><b>Note:</b> The maximums you set for a service provider override the global credit card maximums. See <i>Setting global credit card maximums</i> (on page 505).</p> |
| 5    | Click <b>Save</b> to save the details to the database.                                                                                                                                                                                                                                                                                                                                                            |

## Credit Cards option

Here is an example Credit Cards option on the Edit Resource Limits screen.



The screenshot shows a dialog box titled "Edit Resource Limits" with a light gray background. In the center, there are two labels with corresponding spinners: "Maximum Credit Cards Per Subscriber" and "Maximum Subscribers Per Credit Card". Both spinners are set to the value "0". At the bottom of the dialog box, there are two buttons: "Save" and "Cancel".

## Deleting resource limits

Customers must have resource limits. You can only change the values, not delete them.

## Barred List

### Introduction

The **Barred List** tab enables you to view, add or delete numbers that are either allowed or barred from use.

This list manages allowed/ barred lists system wide.

You can also set barred allowed lists at these levels:

- Service provider
- Product type. See *Call Barring* (on page 172).

## Barred List tab

Here is an example of the **Barred List** tab.

The screenshot shows a window titled "Service Management" with a blue title bar. Inside the window, there is a "Service Provider" dropdown menu set to "Boss" and a "Help" button. Below this is a tab labeled "Barred List". Under the tab, there is a section titled "Service Allowed/Barred Numbers" with a text input field containing the number "123456789". At the bottom of the window, there are "Edit" and "Close" buttons.

## Adding numbers to the barred list

Follow these steps to edit the service allowed/barred numbers list.

| Step | Action                                                                                                                                                                        |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | From the <b>Barred List</b> tab, click <b>Edit</b> .<br><b>Result:</b> You see the <i>Edit Service Allowed/Barred Numbers List</i> screen (on page 530).                      |
| 2    | In the <b>Service Allowed/Barred List</b> section, select the <b>List Type</b> from the drop down list. This determines whether the listed numbers will be allowed or barred. |

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                               |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | <b>Note:</b> All numbers in the list are allowed, or all numbers are barred, according to the list type. It is not possible to have some allowed and some barred numbers in the list.                                                                                                                                                                                                                |
| 3    | If you want the service to ignore the allowed/barred list, select the <b>Ignore</b> check box.                                                                                                                                                                                                                                                                                                       |
| 4    | To edit the <b>Number List</b> : <ul style="list-style-type: none"> <li>• Add a number: <ul style="list-style-type: none"> <li>▪ Enter the number to add in the <b>New Number</b> field</li> <li>▪ Click <b>Add</b></li> </ul> </li> <li>• Delete a number: <ul style="list-style-type: none"> <li>▪ Select the number to remove from the list</li> <li>▪ Click <b>Delete</b></li> </ul> </li> </ul> |
| 5    | If required, repeat step 4 until all the numbers are listed.                                                                                                                                                                                                                                                                                                                                         |
| 6    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                                  |

## Edit Service Allowed/Barred Numbers List screen

Here is an example Edit Service Allowed/Barred Numbers List screen.

## Capability

### Introduction

The **Capability** tab allows you to define global capabilities. You can specify the default control plan for the capability, the service trigger, called party number, and the EDR type to output.

Capabilities are associated with *control plans* (on page 165) in the Product Type screen.

The default capabilities are VOICE\_MO (originating) and VOICE\_MT (terminating).



## Capability tab

Here is an example **Capability** tab.

| Name                  | Service          |
|-----------------------|------------------|
| ACS_Notification      | ACS_Notification |
| BPL                   | CCS_BPL          |
| Callback              | USSDCB_BLeg      |
| Callback (A-leg)      | USSDCB_ALeg      |
| Calling Card          | CCS              |
| HPLMN MO              | CCS              |
| IVR Self Care         | CCS              |
| NGN                   | NGN              |
| NGN SMSMO             | NGN_SM_MO        |
| SMSMO                 | CCS_SM_MO        |
| USSD Balance Status   | USC              |
| USSD Self Care        | USC              |
| USSD Voucher Recharge | USC              |
| VPLMN MO              | CCS_VPLMN_MO     |
| VPLMN MT              | CCS_ROAM         |

## Capability fields

This table describes the function of each field.

| Field | Description                                                                                                                                                      |
|-------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name  | The name given to this capability definition.<br>The name is used as the identifier in the <i>Control Plans</i> (on page 165) option in the Product Type screen. |

| Field                                              | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|----------------------------------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Service                                            | <p>The service name that triggers this capability.</p> <p>Service names are defined in <code>/IN/service_packages/ACS/etc/acs.conf</code></p> <p>For more information about configuring service names, see <i>ACS Technical Guide</i>.</p>                                                                                                                                                                                                                                                                                                                                |
| CdPN (Called Party Number on New and Edit screens) | <p>The called party number used when matching the capability definition. (Optional.)</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Default Control Plan                               | <p>The default control plan invoked by this capability definition. The default control plan is run when the calling party number is not a known subscriber.</p> <p>The control plan drop down list displays all the control plans a subscriber can use.</p> <p><b>Tip:</b> This list can be shortened by using the <b>Search By</b> field and then <b>Search</b>.</p>                                                                                                                                                                                                     |
| Search By                                          | <p>Use initial characters of the control plan name or combine with % (match on any number of characters), or _ (match on a single character).</p> <p><b>Examples:</b></p> <p>Search for <code>e%SMS</code> will find all control plan names beginning with e and containing SMS.</p> <p>Search for <code>e_han%SMS</code> will find all control plan names beginning with e, containing the string han in positions 3 to 5, and containing SMS.</p> <p>The list can be further restricted by entering a maximum number of names to show in the <b>Max Rows</b> field.</p> |
| Statistics Category                                | <p>In license reports, calls on this capability will be reported against the service specified in this field.</p> <p>For more information about License reports, see <i>License</i> (on page 636).</p>                                                                                                                                                                                                                                                                                                                                                                    |
| Statistics Protocol                                | <p>In license reports, calls on this capability will be reported against the protocol specified in this field.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Bearer Capability                                  | <p>The bearer capability (InitialDP itc field (information transfer capability)) used when matching the capability definition. (Optional.)</p>                                                                                                                                                                                                                                                                                                                                                                                                                            |
| CDR Type                                           | <p>The regular call EDR type to use for the capability.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| In-Session Notifications                           | <p>You can select an in-session notifications trigger for the call capability, if required. The trigger defines the control plan to invoke, and the associated session data to pass to it to handle in-session notifications reported by the charging system.</p>                                                                                                                                                                                                                                                                                                         |

## Capability Screen

Here is an example Capability screen.

The screenshot shows the 'Edit Capability' window. It contains the following fields and controls:

- Name:** SMSMO
- Service:** CCS\_SM\_MO
- Called Party Number:** (empty text box)
- Default Control Plan:** Postpaid (dropdown menu)
- Search By:** Postpaid (text box)
- Search:** (button)
- Max Rows:** 200 (text box)
- Statistics Category:** SMS (dropdown menu)
- Statistics Protocol:** MAP (dropdown menu)
- Bearer Capability:** (empty text box)
- CDR Type:** (empty text box)
- In-Session Notifications:** <none> (dropdown menu)
- Buttons:** Save, Cancel

## Adding a capability

Follow these steps to add a new Capability definition.

| Step | Action                                                                                                                                                                                      |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                                                         |
| 2    | On the <b>Capability</b> tab, click <b>New</b> .<br><b>Result:</b> You see the New <i>Capability Screen</i> (on page 533).                                                                  |
| 3    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Capability fields</i> (on page 531).                   |
| 4    | Click <b>Save</b> .<br><b>Warning:</b> You must restart the SLEE in order for the changes to take effect. For more information about restarting the SLEE, see <i>SLEE Technical Guide</i> . |

## Editing a capability

Follow these steps to edit a Capability definition.

| Step | Action                                                                                                                                                             |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                                |
| 2    | On table on the <b>Capability</b> tab select the record to edit and click <b>Edit</b> .<br><b>Result:</b> You see the Edit <i>Capability Screen</i> (on page 533). |
| 3    | Edit the fields to reflect the required changes.<br>For more information about the fields on this screen, see <i>Capability fields</i> (on page 531).              |
| 4    | Click <b>Save</b> .<br><b>Warning:</b> The SLEE will need to be restarted in order for the changes to take effect.                                                 |

## Deleting a capability

Follow these steps to delete an existing Capability definition.

**Warning:** Caution should be used when deleting existing capabilities as the system may become unstable if a capability is deleted that is used by a configured service, such as CCS\_BPL.

| Step | Action                                                                                                                                                                                    |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                                                       |
| 2    | Select the record to delete from the table on the <b>Capability</b> tab.                                                                                                                  |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> The Delete Confirmation displays.                                                                                                                 |
| 4    | Click <b>OK</b> .<br><b>Results:</b> <ul style="list-style-type: none"> <li>• The record is deleted from the database.</li> <li>• The Capability confirmation prompt displays.</li> </ul> |
| 5    | Click <b>OK</b> .<br><b>Warning:</b> The SLEE will need to be restarted in order for the changes to take effect.                                                                          |

## Number Translation List

### Introduction

The **Number Translation List** tab enables you to view, add, edit and delete the service short codes that are mapped to specific termination numbers within the CCS service.

In this tab, the numbers which are displayed in the **In** column are service short codes which are mapped to the termination numbers displayed in the **Out** column. Incoming calls use the service short codes, which are then routed to the outgoing termination numbers.

This manages number translation lists system-wide.

The translation list exists at three other levels, in the order they are set. These are:

- Level 1 Service Provider
- Level 2 Product Type

- Level 3 Subscriber account Level

These are checked in the order they are placed in the control plan.

### Number Translation List tab

Here is an example **Number Translation List** tab.

The screenshot shows a window titled "Service Management" with a blue title bar. Inside the window, there is a "Service Provider" dropdown menu set to "Boss" and a "Help" button. Below this is a tab labeled "Number Translation List". The tab contains a table with two columns: "In" and "Out". The table has two rows of data: "A1234" mapping to "123459271" and "B999" mapping to "1234519476". At the bottom of the window, there are "Edit" and "Close" buttons.

| In    | Out        |
|-------|------------|
| A1234 | 123459271  |
| B999  | 1234519476 |

## Edit Service Short Codes/Number Translation List screen

Here is an example Edit Service Short Codes/Number Translation List screen.

**Edit Service Short Codes/Number Translation List**

Help

Short Codes

Number List

| In  | Out |
|-----|-----|
| 324 | 765 |
| 678 | 789 |

In

Out

Add Delete

Save Cancel

### Editing numbers in the translation list

Follow these steps to edit the numbers on the Number Translation List.

- | Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 2    | From the <b>Number Translation List</b> tab, click <b>Edit</b> .<br><b>Result:</b> You see the <i>Edit Service Short Codes/Number Translation List</i> screen (on page 536).                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 3    | In the <b>Service Short Codes</b> section, edit the Number List as required. To: <ul style="list-style-type: none"> <li>• Add a number pair: <ul style="list-style-type: none"> <li>▪ In the <b>In</b> field, enter the service short code you want to map to a termination number</li> <li>▪ In the <b>Out</b> field, enter the termination number you want to translate the short service code to</li> <li>▪ Click <b>Add</b></li> </ul> </li> <li>• Delete a number pair: <ul style="list-style-type: none"> <li>▪ In the Number List table, select the number</li> <li>▪ Click <b>Delete</b>.</li> </ul> </li> </ul> |
| 4    | If required, repeat step 3 to add/delete more numbers in the Number List.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |

| Step | Action              |
|------|---------------------|
| 5    | Click <b>Save</b> . |

## MFile Generation

### Introduction

MFiles are used to store data which is not changed very often (for example, tariffs). MFiles are compiled on the Voucher and Wallet Server nodes to provide a fast lookup for a subset of the data in the E2BE database. You can generate a separate CCS Rating MFile and CCS Product Catalogue MFile for each service provider. This enables you to manage MFiles separately for each service provider. You generate MFiles from the **MFile Generation** tab.

**Note:** All the relevant tariff information must be established before the **MFile Generation** tab is available.

For more information about MFiles, see *VWS Technical Guide*.

### MFile distribution process

This table describes the MFile distribution process.

| Stage | Description                                                                                                                                                                                                               |
|-------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1     | Through the New or Edit MFile Generation screen, the administrator updates the details contained in the MFile and clicks <b>Save</b> .<br><b>Result:</b> The data and an update request are transferred to the VWS nodes. |
| 2     | When the update request arrives on the VWS, <b>ccsMFileCompiler</b> :<br>a. Creates a new MFile from the updated data in the E2BE database<br>b. Sends a request to the beServer to reload the MFile                      |
| 3     | Then <b>ccsMFileLoader</b> :<br>a. Reloads the new MFile<br>b. Updates the E2BE database to indicate that the new MFile has been reloaded                                                                                 |

## MFile Generation Tab

Here is an example **MFile Generation** tab. The **MFile Generation** tab displays the list of MFiles that have been generated for the service provider.

Service Management

Service Provider: OCNCCtemplate

Help

| Number Translation List |                      | Splash Screen Configuration |                      | Security    |               |
|-------------------------|----------------------|-----------------------------|----------------------|-------------|---------------|
| Exchange Rates          | Global Configuration | Channel                     | Balance Type Mapping | Barred List |               |
| MFile Generation        | Resource Limits      | Capability                  | Domain               | Currency    | Currency Code |
| Billing Engine          | Requested Date       | Type                        | Des                  |             |               |
| 1                       | 2015-05-07 15:34:10  | Named Event Catalogue       | Prod                 |             |               |
| 1                       | 2015-05-07 15:34:10  | Rating                      | Ratir                |             |               |
| 1                       | 2015-05-08 11:53:07  | Rating                      | tony                 |             |               |
| 1                       | 2015-05-08 11:53:17  | Named Event Catalogue       | tony                 |             |               |

New Edit Delete Close



## MFile Fields

This table describes the function of each field.

| Field        | Description                                                                                                                                                                                  |
|--------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Domain       | The Voucher and Wallet Server pair you will send the MFile to.<br>This field is populated by the <b>Domain</b> (on page 475) tab.<br>This field cannot be edited once it is initially saved. |
| Description  | The description of the MFile.                                                                                                                                                                |
| Request Date | The date the MFile was last requested to run.<br><b>Note:</b> This field is only available on the Edit MFile screen.                                                                         |
| Type         | Whether the MFile is for: <ul style="list-style-type: none"> <li>• Rating</li> <li>• Named event catalogue</li> </ul>                                                                        |

## MFile Configuration screen

Here is an example Edit MFile Configuration screen.

## Adding an MFile

Follow these steps to add a new MFile for a selected service provider.

| Step | Action                                                                                                                                                               |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                                  |
| 2    | From the <b>MFile Generation</b> tab, click <b>New</b> .<br><b>Result:</b> You see the New <i>MFile Configuration</i> screen (on page 539).                          |
| 3    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>MFile Fields</i> (on page 539). |
| 4    | Click <b>Save</b> .                                                                                                                                                  |

| Step | Action                                                                                                                          |
|------|---------------------------------------------------------------------------------------------------------------------------------|
|      | <b>Result:</b> ccsMFileCompiler on the VWS nodes within the chosen domain builds up a new MFile and notifies the VWS processes. |

## Editing an MFile

Follow these steps to edit an existing MFile generation record.

| Step | Action                                                                                                                                                                |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                                   |
| 2    | In the table on the <b>MFile Generation</b> tab, select the MFile generation record to edit.                                                                          |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the Edit <i>MFile Configuration</i> screen (on page 539).                                                               |
| 4    | In the <b>Description</b> field, update the description of the MFile.<br>For more information about the fields in this screen, see <i>MFile Fields</i> (on page 539). |
| 5    | Click <b>Save</b> .                                                                                                                                                   |

## Deleting an MFile

Follow these steps to delete an existing MFile generation record.

**Note:** There must be a current MFile when the Voucher and Wallet Servers are restarted.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen. |
| 2    | In the table on the <b>MFile Generation</b> tab, select the MFile to delete.                        |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                     |
| 4    | Click <b>OK</b> .<br><b>Result:</b> You see the MFiles confirmed delete prompt.                     |
| 5    | Click <b>OK</b> .                                                                                   |

## Balance Type Mapping

### Introduction

The **Balance Type Mapping** tab is used for:

- Mapping third-party balance types to NCC balance types (for example, from ECE balance types to NCC balance types)
- Filtering wallet recharges for wallets distributed across a third-party charging domain and a VWS tracking domain

Balance type mapping allows the feature nodes that operate against Balance Types to function for third-party balance types as well as those on the VWS.

**Note:** If balance type mapping is not defined for a Balance Type, wallet recharges are sent to the VWS by default.

## Balance Type Mapping tab

Here is an example **Balance Type Mapping** tab.

The screenshot shows a window titled "Service Management" with a "Service Provider" dropdown set to "Boss" and a "Help" button. Below the tabs, the "Balance Type Mapping" tab is active, displaying a table with the following data:

| Balance Type | Third-Party Resource | Third-Party Resource Scale | Domain Type       |
|--------------|----------------------|----------------------------|-------------------|
| General Cash | 10052                | -100                       | DIAMETER_Diameter |
| More Cash    | 10051                | -.05                       | DIAMETER_Diameter |

At the bottom of the window are buttons for "New", "Edit", "Delete", and "Close".

## Balance type mapping fields

This table describes the function of each field.

| Field                      | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
|----------------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Balance Type               | List of available balance types. This list is restricted to chargeable balance types.<br>When you select None, NCC uses the balance type mapping configuration for filtering wallet recharges through the charging and/or tracking domain. See Scenarios.                                                                                                                                                                                                                                                                                                                         |
| Third-Party Resource       | The third-party balance ID to map to the NCC balance type.<br>This text field accepts letters, digits, and spaces.                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| Third-Party Resource Scale | The scaling factor for converting balance values between NCC balance types and third-party balance types.<br>For example, if NCC uses hundredths of seconds for time balances, but the BRM equivalent uses seconds, the scaling factor converts the BRM seconds to the NCC hundredths of seconds.<br><b>Note:</b> This field accepts: <ul style="list-style-type: none"> <li>Positive and negative numbers. A negative number means to apply sign inversion to the calculated value.</li> <li>Number values up to 10000.</li> <li>Numbers with up to 5 decimal places.</li> </ul> |
| Domain Type                | List of available non-VWS domain types. This field associates the balance type mapping configuration with the specified domain.                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## Scenarios

This table describes the results of voucher redemptions in different balance type mapping scenarios.

| Voucher Type                                   | Result                                                                                                                                                                                                                                                   |
|------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Subscriber applies a split domain voucher type | Given a subscriber who has a wallet in both the VWS and BCD domains and a balance type that has balances defined in both domains:<br>When the voucher is applied to the subscriber's wallet, the balances in both domains are modified at the same time. |
| Subscriber applies a VWS domain voucher type   | Given a subscriber who has a wallet in both the VWS and BCD domains and a voucher that has balances only in the VWS domain:<br>When the voucher is applied to the subscriber's wallet, only balances in the VWS domain are modified.                     |
| Subscriber applies a BCD domain voucher type   | Given a subscriber who has a wallet in both the VWS and BCD domains and a voucher type that has balances in the BCD wallet domain:<br>When the voucher is applied to the subscriber's wallet, only the balances in the BCD domain are modified.          |

This table describes the results of actions by a screen user who wants to associate a chargeable balance type with a domain.

| Scenario                                                                      | Result                                                                                                                                                            |
|-------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Create a new mapping between a chargeable balance type and a domain           | When the user selects a chargeable balance type and a domain type and clicks the <b>Save</b> button, the balance type will be associated with the domain type.    |
| Creating a new mapping between a chargeable balance type and a non-VWS domain | When the user selects a chargeable balance type and a non-VWS domain and clicks the <b>Save</b> button, the balance type will be associated with the domain type. |

## New Balance Type Mapping dialog box

Here is an example New Balance Type Mapping dialog box.

## Adding balance type mapping

Follow these steps to add a new balance type mapping.

| Step | Action                                                                                                                                                   |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                      |
| 2    | On the <b>Balance Type Mapping</b> tab, click <b>New</b> .<br><b>Result:</b> You see the New Balance Type Mapping Configuration screen.                  |
| 3    | Configure this record by entering data in the fields on this screen.<br>For more information about these fields, see Balance type mapping fields fields. |
| 4    | Click <b>Save</b> .                                                                                                                                      |

## Editing balance type mapping

Follow these steps to edit an existing balance type mapping.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen. |

| Step | Action                                                                                                                       |
|------|------------------------------------------------------------------------------------------------------------------------------|
| 2    | Select the record to edit from the table on the <b>Balance Type Mapping</b> tab.                                             |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the Edit Balance Type Mapping Configuration screen.                            |
| 4    | Edit the fields to reflect the required changes.<br>For more information about this screen, see Balance type mapping fields. |
| 5    | Click <b>Save</b> .                                                                                                          |

## Deleting balance type mapping

Follow these steps to delete an existing balance type mapping.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen. |
| 2    | Select the record to delete from the table on the <b>Balance Type Mapping</b> tab.                  |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> The Delete Confirmation displays.                           |
| 4    | Click <b>OK</b> .                                                                                   |

## Security

### Introduction

Please select which security function you wish to view the help for.

Select from:

- *About Voucher Security* (on page 544)
- *About Credit Card Security* (on page 550)

### Introduction to security

The **Security** tab allows you to configure the security for vouchers and credit cards.

## About Voucher Security

### Introduction to voucher security

Authentication rules are used to ensure voucher security. Authentication rules must be created before they can be used for voucher batches.

For more information about vouchers, see *Voucher Manager User's Guide*.

The CB-10 voucher security features enable you to define authentication rules for CB-10 HRN SHA256, CB-10 HRN SHA512 and CB-10 HRN AES256 encryptions. Specify the encryption method when creating voucher batches and redeeming vouchers.

Ensure the following are installed and activated on your system to be visible on your screens:

- CB-10 voucher security features
- CB10 HRN SHA256 authentication module

- CB10 HRN SHA512 authentication module
- CB10 HRN AES256 authentication module

**Note:** CB-10 voucher security will only be available to you if you have an appropriate license.

## Voucher Security Tab

Here is an example of the **Voucher Security** tab in the **Security** tab.

Voucher Security
Credit Card Security

CB 10 HRN AES256 Key Generation  
Generate

CB 10 HRN SHA256 Key Generation  
Generate

CB 10 HRN SHA512 Key Generation  
Generate

SDK Alnum HRN SHA512 Key Generation  
Generate

SDK Full Custom Key Generation  
Generate

SDK ccsAuthPlugin Key Generation  
Generate

| Authentication Rules |                   |            |               |            |      |    |
|----------------------|-------------------|------------|---------------|------------|------|----|
| Name                 | PAM               | Iterations | Number Length | PIN Length | Salt | S  |
| SHA512_1_Mod         | CB 10 HRN SHA512  | 23         | 14            | 0          |      | 4  |
| AES256_1_Mod         | CB 10 HRN AES256  | 0          | 12            | 0          |      | 4  |
| SHA256_2             | CB 10 HRN SHA256  | 10         | 11            | 0          |      | 3  |
| SHA256_3 NL=8        | CB 10 HRN SHA512  | 1          | 8             | 0          |      | 3  |
| SHA512_2_Mod NL=10   | CB 10 HRN SHA512  | 20         | 10            | 0          |      | 4  |
| AES256_2 NL=10       | CB 10 HRN AES256  | 0          | 10            | 0          |      | 3  |
| SDK Full Custom3     | SDK Full Custom   | 0          | 10            | 0          |      | 4  |
| AES256_3 NL=10       | CB 10 HRN AES256  | 0          | 10            | 0          |      | 4  |
| SDK example NL=14    | SDK ccsAuthPlugin | 0          | 14            | 0          |      | 4  |
| SHA512_3 NL=14       | CB 10 HRN SHA512  | 1          | 14            | 0          |      | 4  |
| SDK example2 NL=10   | SDK ccsAuthPlugin | 0          | 10            | 0          |      | 4  |
| SDK Custom NL=20     | SDK Full Custom   | 0          | 18            | 0          |      | 12 |

Up
Down
Save

New
Edit
Delete
Close

## Security fields

This table describes the function of each field.

**Note:** The S, R1, R2, and R3 fields apply to CB10 HRN and SDK-developed PAMs only and will only be visible in the screens if the CB-10 Voucher Security features have been activated. For more information about how these fields are related to each other, and how they are used in CB-10 authentication rules, see CB-10 field relationship diagram.

| Field                     | Description                                                                                                                                                                                                                                                                                                                                                                                                               |                                             |  |     |              |                          |            |    |     |                       |        |    |                           |        |                                             |
|---------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|--|-----|--------------|--------------------------|------------|----|-----|-----------------------|--------|----|---------------------------|--------|---------------------------------------------|
| Name                      | Name for the authentication rule. Maximum length 50 characters.                                                                                                                                                                                                                                                                                                                                                           |                                             |  |     |              |                          |            |    |     |                       |        |    |                           |        |                                             |
| PAM                       | <p>Pluggable Authentication Module name.</p> <p>This field is populated by the system with the PAMs which have been enabled on this platform.</p> <p><b>Note:</b> The full list of PAM is a combination of a fixed list of product-provided PAMs plus any SDK-developed PAMs that have been installed.</p>                                                                                                                |                                             |  |     |              |                          |            |    |     |                       |        |    |                           |        |                                             |
| Number Length             | <p>Voucher number length. This field may only be edited for DES/DES Deprecated PAMs.</p> <table><tr><th>PAM</th><th>Valid Values</th><th>Automatically Generated?</th></tr><tr><td>AltAuthMod</td><td>14</td><td>Yes</td></tr><tr><td>DES<br/>DES Deprecated</td><td>4 - 20</td><td>No</td></tr><tr><td>CB10 HRN<br/>SDK-developed</td><td>4 - 22</td><td>Yes.<br/>This field is set to:<br/>S+R1+R2+R3</td></tr></table> |                                             |  | PAM | Valid Values | Automatically Generated? | AltAuthMod | 14 | Yes | DES<br>DES Deprecated | 4 - 20 | No | CB10 HRN<br>SDK-developed | 4 - 22 | Yes.<br>This field is set to:<br>S+R1+R2+R3 |
| PAM                       | Valid Values                                                                                                                                                                                                                                                                                                                                                                                                              | Automatically Generated?                    |  |     |              |                          |            |    |     |                       |        |    |                           |        |                                             |
| AltAuthMod                | 14                                                                                                                                                                                                                                                                                                                                                                                                                        | Yes                                         |  |     |              |                          |            |    |     |                       |        |    |                           |        |                                             |
| DES<br>DES Deprecated     | 4 - 20                                                                                                                                                                                                                                                                                                                                                                                                                    | No                                          |  |     |              |                          |            |    |     |                       |        |    |                           |        |                                             |
| CB10 HRN<br>SDK-developed | 4 - 22                                                                                                                                                                                                                                                                                                                                                                                                                    | Yes.<br>This field is set to:<br>S+R1+R2+R3 |  |     |              |                          |            |    |     |                       |        |    |                           |        |                                             |
| PIN Length                | Voucher PIN length (digits). If the PAM is AltAuthMod then this field is automatically set to 0. For DES/DES Deprecated PAMs enter a value between 4 to 20.                                                                                                                                                                                                                                                               |                                             |  |     |              |                          |            |    |     |                       |        |    |                           |        |                                             |
| Salt                      | <p>This field applies to DES rule definition only. It is used to generate the voucher pin and will be automatically generated if left blank. It can be set to any 2 alpha-numeric characters.</p> <p>This field is not used with authentication rules that specify a CB10 HRN or SDK-developed PAM.</p>                                                                                                                   |                                             |  |     |              |                          |            |    |     |                       |        |    |                           |        |                                             |
| S                         | Length of the serial number (the number must be between 0 and 20).                                                                                                                                                                                                                                                                                                                                                        |                                             |  |     |              |                          |            |    |     |                       |        |    |                           |        |                                             |
| R1                        | Length of the first redundancy layer (must be between 0 and 20). A higher number provides a greater level of security.                                                                                                                                                                                                                                                                                                    |                                             |  |     |              |                          |            |    |     |                       |        |    |                           |        |                                             |
| R2                        | Length of the second redundancy layer (must be between 0 and 20). A higher number provides a greater level of security.                                                                                                                                                                                                                                                                                                   |                                             |  |     |              |                          |            |    |     |                       |        |    |                           |        |                                             |
| R3                        | Length of the third redundancy layer (must be set to 0, 1 or 2). A higher number provides a greater level of security.                                                                                                                                                                                                                                                                                                    |                                             |  |     |              |                          |            |    |     |                       |        |    |                           |        |                                             |
| SDK P1                    | Optional integer field that is passed as part of the Authentication Rule information given to an SDK ccsAuth plugin and can be used to supply extra parameters used when generating a secret (HRN).                                                                                                                                                                                                                       |                                             |  |     |              |                          |            |    |     |                       |        |    |                           |        |                                             |
| SDK P2                    | Optional integer field that is passed as part of the Authentication Rule information given to an SDK ccsAuth plugin and can be used to supply extra parameters used when generating a secret (HRN).                                                                                                                                                                                                                       |                                             |  |     |              |                          |            |    |     |                       |        |    |                           |        |                                             |
| SDK P3                    | Optional integer field that is passed as part of the Authentication Rule information given to an SDK ccsAuth plugin and can be used to supply extra parameters used when generating a secret (HRN).                                                                                                                                                                                                                       |                                             |  |     |              |                          |            |    |     |                       |        |    |                           |        |                                             |



| Field                    | Description                                                                                                                                                                                                                                                                                                                                                                              |
|--------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| SDK Custom Secret Length | <p>The length of the string to produce for the final HRN.</p> <p>This is used when the SDK ccsAuth plugin is implementing a custom method for generating an HRN (on top of the product-provided CB10 algorithm).</p> <p><b>Note:</b> It is enabled only if the plugin has been installed in the database specifying CustomHRN as Y in the database installer specification XML file.</p> |

## Authentication rules

Authentication rules are used by the voucher batch creation and voucher redemption processes. The authentication rule associated with a voucher batch determines which encryption algorithm to use when generating the voucher numbers in the batch. Following encryption algorithms are supported:

- CB10 HRN SHA256
- CB10 HRN SHA512
- CB10 HRN AES256

**Note:** You cannot edit or delete an authentication rule that is used to create a voucher batch. Voucher batches created in previous versions of the product can continue to use the old rules they were created with. Old authentication rules are not available for new voucher batches.

## CB-10 HRN Creation

The CB10 HRN creation provided by the CB10 HRN authentication module generates voucher numbers using the:

- CB-10 HRN private keys (K1, K2 and K3) for the service provider
- S, R1, R2 and R3 security parameters defined for the authentication rule

The CB-10 HRN creation algorithm does not support voucher PINs and therefore the PIN length is always set to 0.

A unique set of CB-10 HRN private keys (K1, K2 and K3) is required for each service provider. These keys are generated in one of the following ways:

- Generated automatically when a new service provider is created
- Generated or regenerated for service providers who existed before the CB-10 HRN authentication was activated using the **Generate** button for one of the CB10 HRN SHA or AES PAM modules

**Note:** If a voucher batch is already created for a service provider using the CB-10 creation algorithm then you cannot:

- Regenerate the K1, K2, and K3 private keys for the selected service provider
- Edit the associated authentication rule

## CB-10 HRN SHA Hashing

CB-10 HRN private keys are created when:

- a new service provider is created
- a **Generate** button is clicked for a CB10 or SDK PAM Authentication module and the service provider does not have any CB-10 vouchers created yet

Clicking a **Generate** button also generates hash/encryption keys for the specific PAM Authentication module that are used for hashing/encrypting the CB10 or SDK-created HRN. **Generate** buttons are disabled if the service provider already has a voucher batch created using the specific PAM Authentication module.

For example, after a voucher batch is created for a service provider using an authentication rule specifying a PAM of CB10 HRN SHA256, you cannot change or update the hash key for CB10 HRN SHA256.

PAMs that use SHA hashing can specify the number of hash iterations to apply, the default is 1 iteration.

Decryption to retrieve the HRN is not supported for SHA-based PAMs as the SHA operation is not reversible.

## CB-10 HRN AES Encryption

Similar to CB-10 HRN SHA hashing, AES encryption keys are created when the **Generate** button for the CB10 HRN AES256 PAM or a SDK-developed PAM using AES Encryption is clicked.

Once a service provider has a voucher batch created with Authentication Rules using the PAM, the Generate button for the PAM is no longer enabled.

PAMs that use AES encryption do not use iterations and in this case the **Iterations** field for the Authentication Rule is set to 1.

Because AES-256 is a symmetric encryption algorithm, its encrypted value can be decrypted. If the capability of decrypting voucher private secrets is required those vouchers must be created using an Authentication rule that specifies either a PAM of CB10 HRN AES256 or an SDK-developed PAM that supports decryption.

## Generating CB-10 HRN keys and SHA/AES hash/encryption keys

Follow these steps to generate or regenerate CB-10 HRNGEN private keys, SHA hash keys and AES keys for a service provider.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the customer from the <b>Service Provider</b> drop down box.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
| 2    | On the <b>Security</b> tab, click <b>Generate</b> for one of the following: <ul style="list-style-type: none"> <li>• CB10 HRN SHA256 Key Generation</li> <li>• CB10 HRN SHA512 Key Generation</li> <li>• CB10 HRN AES256 Key Generation</li> <li>• SDK <i>Display Name</i> Key Generation</li> </ul> <p><b>Note:</b> <i>Display Name</i> is the chosen name for a PAM plugin developed with the SDK. The buttons are visible on the tab if the CB-10 Voucher Security features are activated. <b>Generate</b> buttons are disabled if a voucher is already created for the service provider using the associated voucher authentication PAM module.</p> <p><b>Result:</b> You see the appropriate Key Generation completed message box appear.</p> |
| 3    | Click <b>OK</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |

## Rule priority

When redeeming vouchers the different encryption algorithms are matched against the voucher HRN (hidden resource number) based on the length of the HRN. If the length of the HRN cannot be uniquely matched to an encryption algorithm, then an attempted match is made against each authentication rule in turn. The priority given to each authentication rule is determined by the order in which they appear in the table in the tab.

## Changing rule priority

Follow these steps to change the order of priority for an authentication rule.

| Step | Action                                                                                                                                                                                                  |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                                                                     |
| 2    | In the table on the <b>Voucher Security</b> tab, select the authentication rule to move.                                                                                                                |
| 3    | Click: <ul style="list-style-type: none"> <li>• <b>Up</b> - to move the rule up one row and raise its priority</li> <li>• <b>Down</b> - to move the rule down one row and lower its priority</li> </ul> |
| 4    | Click <b>Save</b> .                                                                                                                                                                                     |

## Authentication Rule screen

Here is an example Authentication Rule screen.

**Edit Authentication Rule**

Help

Name: SDK Custom NL=20

PAM: SDK Full Custom

Iterations:

Number Length: 18

PIN Length: 0

Salt:

S: 12

R1: 2

R2: 2

R3: 2

SDK P1: 3

SDK P2: 3

SDK P3: 3

SDK Custom Secret Length: 20

Save Cancel

## Adding an authentication rule

Follow these steps to add a new authentication rule.

| Step                                                                                                                                                                                                                    | Action                                                                                                                                                                  |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1                                                                                                                                                                                                                       | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                                     |
| 2                                                                                                                                                                                                                       | On the <b>Security</b> tab, select the <b>Voucher Security</b> tab, then click <b>New</b> .<br><b>Result:</b> You see the New Authentication Rule screen.               |
| 3                                                                                                                                                                                                                       | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Security fields</i> (on page 545). |
| <b>Notes:</b> <ul style="list-style-type: none"> <li>• To use the selected PAM, you must first complete key generation. See <i>Generating CB-10 HRN keys and SHA/AES hash/encryption keys</i> (on page 548).</li> </ul> |                                                                                                                                                                         |

| Step | Action                                                                                                                                                                                                                                |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      | <ul style="list-style-type: none"> <li>Different fields will be enabled depending on which authentication module you select and in the case of an SDK-developed authentication module how that module has been configured.</li> </ul> |
| 4    | Click <b>Save</b> .                                                                                                                                                                                                                   |

## Editing an authentication rule

Follow these steps to edit an authentication rule.

**Note:** You will not be able to edit a rule for which there is an associated voucher batch.

| Step | Action                                                                                                                                                                                                                                                            |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the <b>Service Provider</b> from the drop down box.                                                                                                                                                                                                        |
| 2    | Select the rule to edit from the table on the <b>Voucher Security</b> tab.                                                                                                                                                                                        |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the Edit Authentication Rule screen.                                                                                                                                                                                |
| 4    | Edit the fields to reflect the changes you need to make.<br>For more information about the fields on this screen, see <i>Security fields</i> (on page 545).<br><b>Note:</b> Different fields will be enabled depending on which authentication module you select. |
| 5    | Click <b>Save</b> .                                                                                                                                                                                                                                               |

## Deleting an authentication rule

Follow these steps to delete an existing authentication rule.

**Note:** You will not be able to delete a rule for which there is an associated voucher batch.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen. |
| 2    | In the table on the <b>Voucher Security</b> tab, select the authentication rule to delete.          |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                     |
| 4    | Click <b>OK</b> .                                                                                   |

## About Credit Card Security

### About Masking Rules for Credit Card Security

You configure masking rules for credit card security to prevent full credit card numbers from being displayed. A global masking rule is configured at installation. You can modify the global masking rule, if required, but you cannot delete it.

You can also define masking rules for service providers. A service provider masking rule is used instead of the global masking rule. You define masking rules on the **Security** tab in the Service Management window.

**Global Masking Rule**

The global masking rule is configured at installation to use the following defaults:

- Four digit suffix length
- No prefix
- Star (\*) pad character to mask the credit card number display
- Allow tokenized card number searches

When displaying a credit card number, the total length of the number is 19 characters, including masked characters. For example, if the full credit card number is 4535123456789876, then the number displayed after applying the global masking rule is \*\*\*\*\*9876.

## Credit card security tab

Here is an example of the **Credit Card Security** tab in the **Security** tab.

Service Management

Service Provider: Boss Help

Security

Voucher Security **Credit Card Security**

Credit Card Masking Rules

| Name                  | Suffix Length | Prefix Length | Pad Character |
|-----------------------|---------------|---------------|---------------|
| Global- Suffix: 4     | 4             |               | *             |
| Prefix: 2 / Suffix: 4 | 4             | 2             | #             |

New Edit Delete Close

## Credit card security fields

This table describes the function of each field and area.

| Field         | Description                                                                                                                 |
|---------------|-----------------------------------------------------------------------------------------------------------------------------|
| Warning label | Indicates that a rule has a prefix + suffix length greater than 12.                                                         |
| Table         | Shows the current masking rules, one per row. The table shows rules for this service provider plus the global masking rule. |

| Field                       | Description                                                                                                                                                                                 |
|-----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name                        | The generated name of the masking rule, in the format -<br>Prefix: <i>value</i> /Suffix: <i>value</i>                                                                                       |
| Suffix Length               | The number of digits displayed at the end of the display number. Valid values are numbers 1 through 10.                                                                                     |
| Prefix Length               | The number of digits displayed at the start of the display number. Valid values are numbers 1 through 9. Optional, defaults to no value.                                                    |
| Pad Character               | The pad character, which is the substitute character to display in the display number when not in the prefix or suffix. Valid values are any non-numeric character. Optional. Default is *. |
| Searchable Tokenised Number | The tokenized credit card number can be searched for the rule if a tick is displayed. You can search on the <i>Finding credit cards</i> (on page 47), for example.                          |

## Masking Rule screen

Here is an example of the Edit Masking Rule screen. The new screen is very similar.

## Adding a masking rule

Follow these steps to add a masking rule.

| Step | Action                                                                                                                                                                                  |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                                                     |
| 2    | On the <b>Security</b> tab, select the <b>Credit Card Security</b> tab, then click <b>New</b> .<br><b>Result:</b> You see the <i>New Masking Rule screen</i> (See example on page 553). |
| 3    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Credit card security fields</i> (on page 552).     |
| 4    | Click <b>Save</b> .                                                                                                                                                                     |

## Editing a masking rule

Follow these steps to edit a masking rule.

| Step | Action                                                                                                                                                                  |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the <b>Service Provider</b> from the drop down box.                                                                                                              |
| 2    | Select the rule to edit from the table on the <b>Credit Card Security</b> tab.                                                                                          |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the <i>Edit Masking Rule</i> screen (See example on page 553).                                                            |
| 4    | Edit the fields to reflect the changes you need to make.<br>For more information about the fields on this screen, see <i>Credit card security fields</i> (on page 552). |
| 5    | Click <b>Save</b> .                                                                                                                                                     |

## Deleting a masking rule

Follow these steps to delete an existing masking rule.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen. |
| 2    | In the table on the <b>Credit Card Security</b> tab, select the rule to delete.                     |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                     |
| 4    | Click <b>OK</b> .                                                                                   |

# Splash Screen Configuration

## Introduction

The **Splash Screen Config** tab enables you to configure the splash screens which are displayed when a user logs into the Customer Care Portal.

**Note:** You can only configure one message of the day and one security warning message for a service provider. This means that you may not be able to add a splash screen configuration record, or you may not be able to change the message type of an existing message.



## Splash Screen Configuration tab

Here is an example **Splash Screen Configuration** tab.

The screenshot shows a window titled "Service Management" with a blue title bar. Inside, there's a "Service Provider" dropdown menu set to "Boss" and a "Help" button. Below this is a tab labeled "Splash Screen Configuration". The tab contains a table with two columns: "Message Type" and "Message Text". The table has two rows: "Message of the Day" and "Security Warning", both with the same HTML/CSS code in the "Message Text" column. At the bottom of the window are buttons for "New", "Edit", "Delete", and "Close".

| Message Type       | Message Text                                                 |
|--------------------|--------------------------------------------------------------|
| Message of the Day | < html><head><style type="text/css"> div.color { background: |
| Security Warning   | < html><head><style type="text/css"> div.color { background: |

## Splash Screen configuration fields

This table describes the function of each field.

| Field        | Description                                     |
|--------------|-------------------------------------------------|
| Message Type | The type of splash screen message to configure. |

| Field                      | Description                                                                                                                                                                                                                                                                               |
|----------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                            | <b>Note:</b> There are only two options in this field. The system only supports one message of each type. You can only select a value in this field when no splash screen config is currently configured. Otherwise, this field will automatically be populated with the available value. |
| Message Text (HTML Editor) | The source html markup and text which defines the message which is displayed on the splash screen message when users log into the Customer Care Portal.                                                                                                                                   |

## Splash Screen Configuration screen

Here is an example Splash Screen Configuration screen.

**Edit Splash Screen Configuration**

Message Type: Message of the Day

Help

Message Text (HTML Editor)

```
<html><head><style type="text/css"> div.color { background: rgb(51,153,0); color
<title>Message of the Day</title>
</head>
<body><p> This is the Message Of The Day screen. Please configure as required, o
<p><i>A possible example is given below.</i>
</p>
<div class="color">The system will be shut down at 18:00hrs GMT today for system
</body>
</html>
```

Load Preview Revert Save Cancel

## Adding splash screen configuration

Follow these steps to add a new splash screen configuration.

| Step | Action                                                                                                                                                                                     |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the <b>Service Provider</b> from the drop down box.                                                                                                                                 |
| 2    | On the <b>Splash Screen Configuration</b> tab, click <b>New</b> .<br><b>Result:</b> You see the New <i>Splash Screen Configuration</i> screen (on page 556).                               |
| 3    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Splash Screen configuration fields</i> (on page 555). |
| 4    | You can load the message from an external file. For more information, see <i>Importing a message from file</i> (on page 557).                                                              |
| 5    | You can preview the message. For more information, see <i>Previewing the message</i> (on page 557).                                                                                        |
| 6    | Click <b>Save</b> .                                                                                                                                                                        |

## Importing a message from file

Follow these steps to import the source html markup and text from an external file.

**Note:** The Message Text (HTML Editor) does not:

- Support any non-standard HTML 3.2 constructs
- Handle any complex HTML generated by Microsoft Word.

| Step | Action                                                                                                                   |
|------|--------------------------------------------------------------------------------------------------------------------------|
| 1    | On the Splash Screen Configuration screen, click <b>Load</b> .<br><b>Result:</b> You will see the Open screen.           |
| 2    | Browse to the file which holds the html to import and select it.                                                         |
| 3    | Click <b>Open</b> .<br><b>Result:</b> The html from the file will be displayed in the Message Text (HTML Editor) screen. |

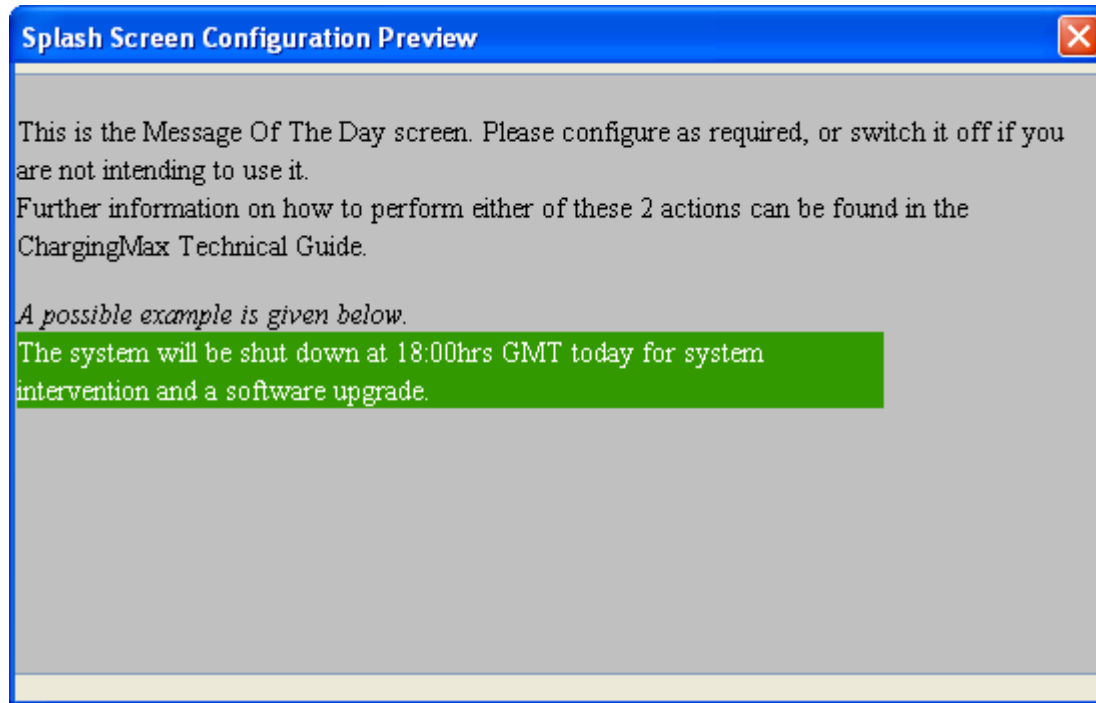
## Previewing the message

Follow these steps to view an example of how the message will look to users who are logging into the CCP.

| Step | Action                                                                                                                                                                                                                                                       |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | To see what the splash screen will look like, click <b>Preview</b> .<br><b>Result:</b> The <i>Splash Screen Configuration Preview</i> (on page 558) window opens displaying the splash screen. Close the screen when you have finished checking the message. |
| 2    | When you have finished viewing the preview, close the window by clicking the <b>x</b> in the top right corner of the screen.                                                                                                                                 |

## Splash Screen Configuration Preview

Here is an example Splash Screen Configuration Preview window.



## Editing splash screen configuration

Follow these steps to edit an existing splash screen configuration record.

| Step | Action                                                                                                                                                                                               |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                                                                  |
| 2    | On table on the <b>Splash Screen Configuration</b> tab select the record to edit and click <b>Edit</b> .<br><b>Result:</b> You see the <i>Edit Splash Screen Configuration</i> screen (on page 556). |
| 3    | Edit the fields to reflect the changes you need to make.<br>For more information about the fields in this screen, see <i>Splash Screen configuration fields</i> (on page 555).                       |
| 4    | You can load the new message from an external file. For more information, see <i>Importing a message from file</i> (on page 557).                                                                    |
| 5    | You can preview the message. For more information, see <i>Previewing the message</i> (on page 557).                                                                                                  |
| 6    | Click <b>Save</b> .                                                                                                                                                                                  |

## Deleting splash screen configuration

Follow these steps to delete an existing splash screen configuration.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen. |
| 2    | Select the record to delete from the table on the <b>Splash Screen Configuration</b> tab.           |

| Step | Action                                                                        |
|------|-------------------------------------------------------------------------------|
| 3    | Click <b>Delete</b> .<br><b>Result:</b> The Delete Confirmation displays.     |
| 4    | Click <b>OK</b> .<br><b>Results:</b> The record is deleted from the database. |

## Channel

### Introduction

The **Channel** tab allows you to configure the promotion channels for the Balance Recharge event in Promotion Manager.

## Channel tab

Here is an example **Channel** tab.

The screenshot shows a window titled "Service Management" with a blue title bar. Inside the window, there is a "Service Provider" dropdown menu set to "Boss" and a "Help" button. Below this is a tabbed interface with the "Channel" tab selected. The "Channel" tab contains a table with three columns: "Channel", "Global", and "Description". The table lists five channels: ATM, Any, MPoS, Other, and Voucher, all of which are marked as "Global". Below the table is a large empty area for additional information or actions. At the bottom of the window, there are four buttons: "New", "Edit", "Delete", and "Close".

| Channel | Global | Description      |
|---------|--------|------------------|
| ATM     | Yes    | ATM (Global)     |
| Any     | Yes    | Any (Global)     |
| MPoS    | Yes    | MPoS (Global)    |
| Other   | Yes    | Other (Global)   |
| Voucher | Yes    | Voucher (Global) |

## Channel screen

Here is an example Channel screen.

## Security fields

This table describes the function of each field.

**Note:** The S, R1, R2, and R3 fields apply to CB10 HRN and SDK-developed PAMs only and will only be visible in the screens if the CB-10 Voucher Security features have been activated. For more information about how these fields are related to each other, and how they are used in CB-10 authentication rules, see CB-10 field relationship diagram.

| Field         | Description                                                                                                                                                                                                                                                                                               |
|---------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Name          | Name for the authentication rule. Maximum length 50 characters.                                                                                                                                                                                                                                           |
| PAM           | <p>Pluggable Authentication Module name.</p> <p>This field is populated by the system with the PAMs which have been enabled on this platform.</p> <p><b>Note:</b> The full list of PAMs is a combination of fixed list of product-provided PAMs plus any SDK-developed PAMs that have been installed.</p> |
| Iterations    | The number of hash iterations to use for PAM of CB10 HRN SHA256 or CB10 HRN SHA512. Default is 1. Can be a positive number up to 99999. This field is used if a CB10 HRN SHA PAM is selected.                                                                                                             |
| Number Length | Voucher number length. This field is non-editable and is calculated for a PAM of CB10 HRN SHA256 or CB10 HRN SHA512 as the sum of S+R1+R2+R3.                                                                                                                                                             |
| PIN Length    | Voucher PIN length (digits). This field is available only for existing vouchers and is non-editable.                                                                                                                                                                                                      |
| Salt          | This field applies to DES rule definition only. This field is available only for existing vouchers and is non-editable.                                                                                                                                                                                   |
| S             | Length of the serial number (the number must be between 0 and 20).                                                                                                                                                                                                                                        |
| R1            | Length of the first redundancy layer (must be between 0 and 20). A higher number provides a greater level of security.                                                                                                                                                                                    |

| Field | Description                                                                                                             |
|-------|-------------------------------------------------------------------------------------------------------------------------|
| R2    | Length of the second redundancy layer (must be between 0 and 20). A higher number provides a greater level of security. |
| R3    | Length of the third redundancy layer (must be set to 0, 1 or 2). A higher number provides a greater level of security.  |

## Channel fields

This table describes the function of each field.

| Field       | Description                                                                                                                                                                                                                           |
|-------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Channel     | The name of the promotional channel.<br>The following global channels are preconfigured upon installation: <ul style="list-style-type: none"> <li>• ATM</li> <li>• Any</li> <li>• MPOS</li> <li>• Other</li> <li>• Voucher</li> </ul> |
| Description | A description of the channel                                                                                                                                                                                                          |
| Global      | If selected, the channel is global, rather than specific to the selected service provider.                                                                                                                                            |

## Adding a Channel

Follow these steps to add a new channel.

| Step | Action                                                                                                                                                                 |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the <b>Service Provider</b> from the drop down box.                                                                                                             |
| 2    | On the <b>Channel</b> tab, click <b>New</b> .<br><b>Result:</b> You see the New Channel screen.                                                                        |
| 3    | Configure this record by entering data in the fields on this screen.<br>For more information about the fields on this screen, see <i>Channel fields</i> (on page 562). |
| 4    | Click <b>Save</b> .                                                                                                                                                    |

## Editing a Channel

Follow these steps to edit an existing channel.

| Step | Action                                                                                                                                                     |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen.                                                        |
| 2    | Select the record to edit from the table on the <b>Channel</b> tab.                                                                                        |
| 3    | Click <b>Edit</b> .<br><b>Result:</b> You see the Edit Channel screen.                                                                                     |
| 4    | Edit the fields to reflect the changes you need to make.<br>For more information about the fields on this screen, see <i>Channel fields</i> (on page 562). |
| 5    | Click <b>Save</b> .                                                                                                                                        |



## Deleting a Channel

Follow these steps to delete an existing channel.

| Step | Action                                                                                              |
|------|-----------------------------------------------------------------------------------------------------|
| 1    | Select the service provider from the <b>Service Provider</b> list in the Service Management screen. |
| 2    | Select the record to delete from the table on the <b>Channel</b> tab.                               |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> The Delete Confirmation displays.                           |
| 4    | Click <b>OK</b> .<br><b>Results:</b> The record is deleted from the database.                       |



# Transfer Management

## Overview

### Introduction

This chapter explains how to configure Credit Transfers.

### In this chapter

---

This chapter contains the following topics.

|                                        |     |
|----------------------------------------|-----|
| Transfer Management Module .....       | 565 |
| Credit Transfer Definition .....       | 567 |
| Credit Transfer Response Mapping ..... | 571 |

## Transfer Management Module

### Introduction

The **Transfer Management** screen lets you configure Credit Transfers. These can be used to convert cash credit into an alternative balance type for a Subscriber's own account or the account of another Subscriber.

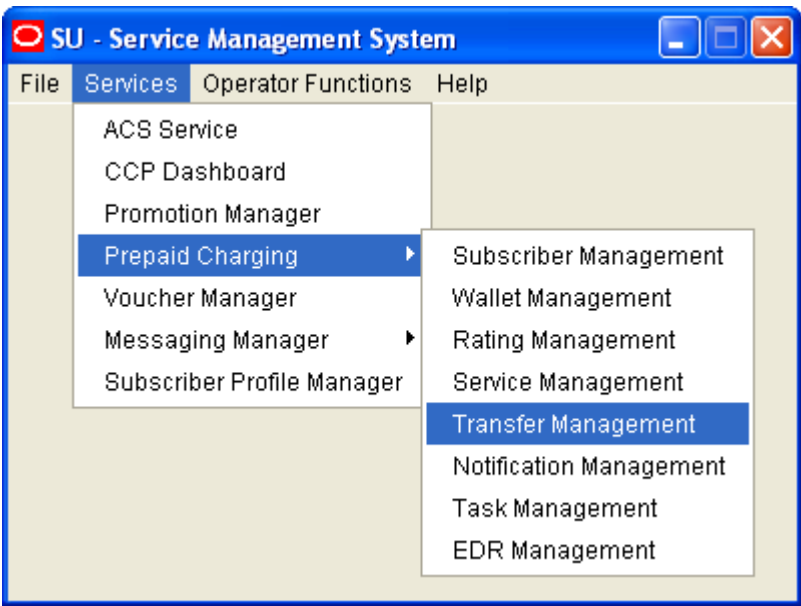
The Transfer Management screen contains these tabs:

- *Credit Transfer Definition* (on page 567), and
- *Credit Transfer Response Mapping* (on page 571).

### Accessing the Transfer Management screen

Follow these steps to open the Transfer Management screen.

| Step | Action                                                    |
|------|-----------------------------------------------------------|
| 1    | Select the <b>Services</b> menu from the SMS main screen. |

| Step | Action                                                                                                                        |
|------|-------------------------------------------------------------------------------------------------------------------------------|
|      |                                             |
| 2    | <p>Select <b>Prepaid Charging &gt; Transfer Management</b>.</p> <p><b>Result:</b> You see the Transfer Management screen.</p> |

## Transfer Management screen

Here is an example Transfer Management screen.

Service Provider:

**Credit Transfer Definition** | Credit Transfer Response Mapping

| Name              | Short Name      | Charging Event | Voucher Type | Transfer |
|-------------------|-----------------|----------------|--------------|----------|
| Crazy SMS Bronze  | crazysmsbronze  | SB1 Bronze     | SB1 Bronze   | S        |
| Crazy SMS Gold    | crazysmsgold    | SB1 Gold       | SB1 Gold     | S        |
| Crazy SMS Silver  | crazysmssilver  | SB1 Silver     | SB1 Silver   | S        |
| Crazy Time Bronze | crazytimebronze | SB2 Bronze     | SB2 Bronze   | S        |

Access to elements of this screen are controlled by user permissions. If you cannot see some of the functionality described for this screen, your permissions may have been set to restrict access to that element.

## Credit Transfer Definition

### Introduction

The **Credit Transfer Definition** tab lets you add, modify or delete credit transfer definitions. The Credit Transfer can then be invoked either from the Edit Subscriber screen or through the PI.

## Credit Transfer Definition tab

Here is an example **Credit Transfer Definition** tab.

The screenshot shows a window titled "Transfer Management" with a blue header bar. Below the header, there is a "Service Provider" dropdown menu set to "Boss" and a "Help" button. The "Credit Transfer Definition" tab is selected, displaying a table with the following data:

| Name              | Short Name      | Charging Event | Voucher Type | Transf |
|-------------------|-----------------|----------------|--------------|--------|
| Crazy SMS Bronze  | crazysmsbronze  | SB1 Bronze     | SB1 Bronze   | S      |
| Crazy SMS Gold    | crazysmsgold    | SB1 Gold       | SB1 Gold     | S      |
| Crazy SMS Silver  | crazysmssilver  | SB1 Silver     | SB1 Silver   | S      |
| Crazy Time Bronze | crazytimebronze | SB2 Bronze     | SB2 Bronze   | S      |

Below the table is a large empty area. At the bottom of the window, there is a navigation bar with buttons for "New", "Edit", "Delete", and "Close".

## Adding credit transfers

Follow these steps to add a new credit transfer definition.

| Step | Action                                                                                                                     |
|------|----------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Transfer Management screen, select service provider from the <b>Service Provider</b> drop down box.                 |
| 2    | On the <b>Credit Transfer Definition</b> tab, click <b>New</b> .<br><b>Result:</b> You see the New Credit Transfer screen. |

| Step | Action |
|------|--------|
|------|--------|

- 3 In the **Name** field, enter a unique name for the credit transfer.

**Note:** The system automatically generates the value for the short name from the value you enter in the **Name** field.

- 4 From the **Transfer Type** area, select whether the credit transfer definition is for Peer to Peer or Service Bundle credit transfers.  
For more information about Transfer Types, see *Credit transfer types*.
- 5 From the **Charging Class** drop down list, select the charging class to use when charging the purchaser of the credit transfer.  
This drop down list is populated by the Billing Event Sets configured in the Wallet Management screen.
- 6 From the **Charging Event** drop down list, select the charging event to use when charging the purchaser of the credit transfer.  
This drop down list is populated by the Billing Events configured in the Wallet Management screen.
- 7 From the **Voucher Type** drop down list, select the voucher type to use for the credit transfer.  
For more information about Voucher Types, see *Voucher Management*.
- 8 If PIN authorization is required when performing this credit transfer, select the **PIN Required** check box.
- 9 If the recipient wallet type must be specified when performing this credit transfer, select the **Recipient Wallet Type Required** check box.
- 10 If the purchasing wallet type must be specified when performing this credit transfer, select the **Purchasing Wallet Type Required** check box.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 11   | From the Transfer Announcement area, select the announcement set and announcement entry to associate with the credit transfer. This announcement is played to the calling party when the call passes through the Select Credit Transfer node.                                                                                                                                                                                                                                                                                                                                                                                                                         |
| 12   | <p>If you want to send a notification when this credit transfer occurs, perform the following in the SMS Notifications area:</p> <ul style="list-style-type: none"> <li>• Select the <b>Send SMS</b> check box</li> <li>• Select the SMS messages to send from the drop down lists</li> </ul> <p>The drop down lists are populated by the notifications configured in the <b>Notifications</b> tab of the ACS Configuration screen. For more information, see <i>ACS User's Guide</i>.</p> <p><b>Note:</b> When the credit transfer fails, a combined failure notification is also sent to the purchaser when the purchaser and recipient have different MSISDNs.</p> |
| 13   | <p>If you want to limit the <b>Product Types</b> for which the credit transfer is available, select the Product Types from the <b>Available Product Types</b> list and move them to the <b>Limited Product Types</b> list.</p> <p>To move a product type from one list to the other, select it in the list and click the appropriate double arrow (&gt;&gt; or &lt;&lt;) button.</p> <p><b>Tip:</b> If the Limited Product Types list is empty, the credit transfer will be available to all product types.</p>                                                                                                                                                       |
| 14   | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |

## Editing credit transfers

Follow these steps to edit an existing credit transfer definition.

| Step | Action                                                                                        |
|------|-----------------------------------------------------------------------------------------------|
| 1    | In the Transfer Management screen, select the <b>Service Provider</b> from the drop down box. |
| 2    | On the <b>Credit Transfer Definition</b> tab, select the record to edit.                      |
| 3    | Click <b>Edit</b> .                                                                           |
|      | <b>Result:</b> You see the Edit Credit Transfer screen.                                       |



| Step | Action                                                    |
|------|-----------------------------------------------------------|
| 4    | Edit the details as described in Adding credit transfers. |
| 5    | Click <b>Save</b> .                                       |

- 4 Edit the details as described in Adding credit transfers.
- 5 Click **Save**.

## Deleting credit transfers

Follow these steps to delete an existing credit transfer definition.

| Step | Action                                                                                                                                  |
|------|-----------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Transfer Management screen, select the <b>Service Provider</b> from the drop down box.                                           |
| 2    | In the table on the <b>Credit Transfer Definition</b> tab, select the record to delete.                                                 |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                         |
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> The record is deleted and you see the Credit Transfer prompt. |
| 5    | Click <b>OK</b> .                                                                                                                       |

## Credit Transfer Response Mapping

### Introduction

The **Credit Transfer Response Mapping** tab lets you add, modify or delete credit transfer responses. Credit transfer responses are the error messages defined for credit transfers. It also lets you add, modify and delete the display message translations mapped to each response.

**Warning:** You must specify a display message in each language used and for each response.

## Credit Transfer Response Mapping tab

Here is an example **Credit Transfer Response Mapping** tab.

The screenshot shows a window titled "Transfer Management" with a blue header bar. Below the header, there is a "Service Provider" dropdown menu set to "Boss" and a "Help" button. The window has two tabs: "Credit Transfer Definition" and "Credit Transfer Response Mapping", with the latter being selected. Under the selected tab, there is a "Response" dropdown menu set to "Not Acceptable (INAP 1)". Below this are three buttons: "New Response", "Edit Response", and "Delete Response". A table is displayed below the buttons with the following content:

| Language | Display Message                  | Change Use |
|----------|----------------------------------|------------|
| English  | Credit Transfer is Not Supported | SMF        |

At the bottom of the window, there are four buttons: "New Message", "Edit Message", "Delete Message", and "Close".

## Adding a credit transfer response

Follow these steps to add a new credit transfer response.

**Tip:** After you add a credit transfer response, you can add the message translations for it.

| Step | Action                                                                                        |
|------|-----------------------------------------------------------------------------------------------|
| 1    | In the Transfer Management screen, select the <b>Service Provider</b> from the drop down box. |
| 2    | On the <b>Credit Transfer Response Mapping</b> tab, click <b>New Response</b> .               |
|      | <b>Result:</b> You see the New Credit Transfer Response screen.                               |

| Step | Action |
|------|--------|
|------|--------|

3 From the drop down list, select the **Response Template** for which to add message translation mappings.

4 If the **Response Number** field is available, type in the response number.

**Notes:**

- You can add response numbers only to DAP templates that contain a variable. To create a variable in the DAP template, add the "%d" string to the template.
- You will only be able to use DAP templates if you have DAP installed.

For more information about:

- Notifications, see *ACS User's Guide*
- DAP templates, see *DAP User's Guide*

5 Click **Save**.

## Editing a credit transfer response

Follow these steps to edit an existing credit transfer response.

| Step | Action |
|------|--------|
|------|--------|

1 In the Transfer Management screen, select the **Service Provider** from the drop down box.

2 From the **Response** drop down list on the **Credit Transfer Response Mapping** tab, select the record to edit.

3 Click **Edit**.

**Result:** You see the Edit Credit Transfer Response screen.

4 Edit the details as described in *Adding a credit transfer response* (on page 572).

5 Click **Save**.

## Deleting a credit transfer response

Follow these steps to delete a credit transfer response and its related message mappings.

| Step | Action                                                                                                                                            |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Transfer Management screen, select the <b>Service Provider</b> from the drop down box.                                                     |
| 2    | On the <b>Credit Transfer Response Mapping</b> tab, select the <b>Response</b> to delete from the drop down list.                                 |
| 3    | Click <b>Delete Response</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                          |
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> The record is deleted and you see the Credit Transfer Responses prompt. |
| 5    | Click <b>OK</b> .                                                                                                                                 |

## Adding credit transfer response mappings

Follow these steps to add a new message mapping to a credit transfer response.

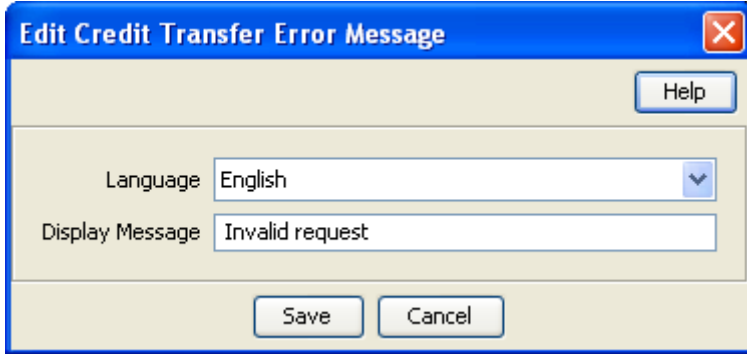
| Step | Action                                                                                                                                                              |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Transfer Management screen, select the <b>Service Provider</b> from the drop down box.                                                                       |
| 2    | From the <b>Response</b> drop down list on the <b>Credit Transfer Response Mapping</b> tab, select the response for which you want to create a new message mapping. |
| 3    | Click <b>New Message</b> .<br><b>Result:</b> You see the New Credit Transfer Error Message screen.                                                                  |

|   |                                                                                                                                                                 |
|---|-----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 4 | From the drop down list, select the <b>Language</b> for the Display Message.<br>For more information about configuring languages, see <i>ACS User's Guide</i> . |
| 5 | In the <b>Display Message</b> field, type in the message that maps to the selected response in the selected language.                                           |
| 6 | Click <b>Save</b> .                                                                                                                                             |

## Editing credit transfer response mappings

Follow these steps to edit an existing message mapping to credit transfer response.

| Step | Action                                                                                                                                                 |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Transfer Management screen, select the <b>Service Provider</b> from the drop down box.                                                          |
| 2    | From the <b>Response</b> drop down list on the <b>Credit Transfer Response Mapping</b> tab, select the response which has the message mapping to edit. |

| Step | Action                                                                                               |
|------|------------------------------------------------------------------------------------------------------|
| 3    | Click <b>Edit Message</b> .<br><b>Result:</b> You see the Edit Credit Transfer Error Message screen. |
|      |                    |
| 4    | If required, select a different <b>Language</b> for the Display Message from the drop down list.     |
| 5    | If required, edit the <b>Display Message</b> using the selected language.                            |
| 6    | Click <b>Save</b> .                                                                                  |

## Deleting credit transfer response mappings

Follow these steps to delete a credit transfer response mapping

**Warning:** Caution should be used when deleting credit transfer response mappings. If all the mappings for a specific response are deleted, then the default smsTrigDaemon response will be output. The default messages may be hard for customers to understand.

For more information about the smsTrigDaemon, see *SMS Technical Guide*.

| Step | Action                                                                                                                                                   |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Transfer Management screen, select the <b>Service Provider</b> from the drop down box.                                                            |
| 2    | From the <b>Response</b> drop down list on the <b>Credit Transfer Response Mapping</b> tab, select the Response which has the message mapping to delete. |
| 3    | On the table, select the Display Message to delete and click <b>Delete Message</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.           |
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> The record is deleted and you see the Credit Transfer Response Mapping prompt. |
| 5    | Click <b>OK</b> .                                                                                                                                        |



# Notifications Management

## Overview

### Introduction

This chapter explains how to configure Profile Notifications.

### In this chapter

---

This chapter contains the following topics.

|                                      |     |
|--------------------------------------|-----|
| Notifications Introduction .....     | 577 |
| Notification Management Module ..... | 579 |
| Profile Notifications.....           | 580 |

## Notifications Introduction

### Profile Notifications

Profile notifications are SMSs which are sent to subscribers when their profile fields are changed. They can be used to inform subscribers about events which have happened to their accounts.

Profile notifications are different from real-time wallet notifications, control plan feature node notifications or periodic charge notifications, though all these notifications use SMS notifications and DAP templates.

Notifications can be delivered through the ACS Notifications subsystem, or the Data Access Pack notifications subsystem. To use the DAP notifications, you must have DAP installed.

For more information about how profile notifications are delivered, see *CCS Technical Guide*.

### CCS component

Profile notifications are part of the Prepaid Charging solution and build on functionality provided by CCS. To fully understand how notifications work, you must also refer to *CCS User's Guide*.

### Preconditions

Preconditions are used to determine when an update to the Subscriber profile will trigger a Profile Notification message. Each precondition is evaluated based on a selected profile field and the Precondition Type configured for it.

You can specify more than one precondition per notification message. If you specify more than one precondition, then these must all be joined together, either using an 'And' or an 'Or' operator. Use:

- And to generate the notification only if all the preconditions are met.
- Or to generate the notification if any of the preconditions are met.

**Tip:** If you do not specify any preconditions for the notification message, then it will be triggered unconditionally.

This table describes the available Precondition Types.

| Precondition Type                        | Availability                                                   | Description                                                                                                                                              |
|------------------------------------------|----------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------|
| Field Created                            | All field types                                                | The precondition is met when the selected profile field is not present in the old subscriber profile but is present in the new subscriber profile.       |
| Field Modified                           | All field types                                                | The precondition is met when the old and new values for the selected profile field are different.                                                        |
| Field Removed                            | All field types                                                | The precondition is met when the selected profile field is present in the old subscriber profile but is no longer present in the new subscriber profile. |
| Check Old Value<br>or<br>Check New Value | Only available for integer, byte, Boolean and date field types | Compares the old or new value for the selected profile field with a specified value. See <i>Checking profile field values</i> (on page 578) for details. |

## Checking profile field values

The Check Old Value and Check New Value precondition types provide the facility to trigger Profile Notifications based on a precondition expression that compares the selected Profile Field with a specified value.

Precondition expressions have one of the following formats:

- 1 <Profile Field Value> <Compare Operator> <Compare Value 1>
- 2 (<Profile Field Value> '>' <Compare Value 1>) And (<Profile Field Value> '<' <Compare Value 2>)

### Tips:

- If the selected Profile Field is a Boolean field, then its value may only be compared with the Boolean values 'True' or 'False'. The precondition is met if the Profile Field value matches the specified Boolean value.
- For format 2, the precondition is met if the profile field value is between 'Compare Value 1' and 'Compare Value 2'.

This table describes the parameters used in precondition expressions.

| Parameter           | Description                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
|---------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Profile Field Value | The value for the selected Profile Field from either the old or the new subscriber profile, depending on the Precondition Type.                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| Compare Operator    | Determines how the comparison is made. If you select:<br>= the expression evaluates to true if the value from the Profile Field is equal to the specified Compare Value<br>!= the expression evaluates to true if the value from the Profile Field is not equal to the specified Compare Value<br>< the expression evaluates to true if the value from the Profile Field is less than the specified Compare Value<br>> the expression evaluates to true if the value from the Profile Field is greater than the specified Compare Value<br><b>Note:</b> If you select Not Used, no comparison will be made. |
| Compare Value 1     | The first value against which the Profile Field Value will be compared.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |



| Parameter       | Description                                                                                                                                                                                                                           |
|-----------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Compare Value 2 | The second value against which the Profile Field Value will be compared. This must be greater than Compare Value 1.<br><br><b>Note:</b> Compare Value 2 may only be set if you selected the '>' Compare Operator for Compare Value 1. |

## User access

User access to the Notification Management functionality is managed through the User Templates defined in the SMS User Management screen. For more information on creating and maintaining user templates, refer to the *SMS User's Guide*.

# Notification Management Module

## Introduction

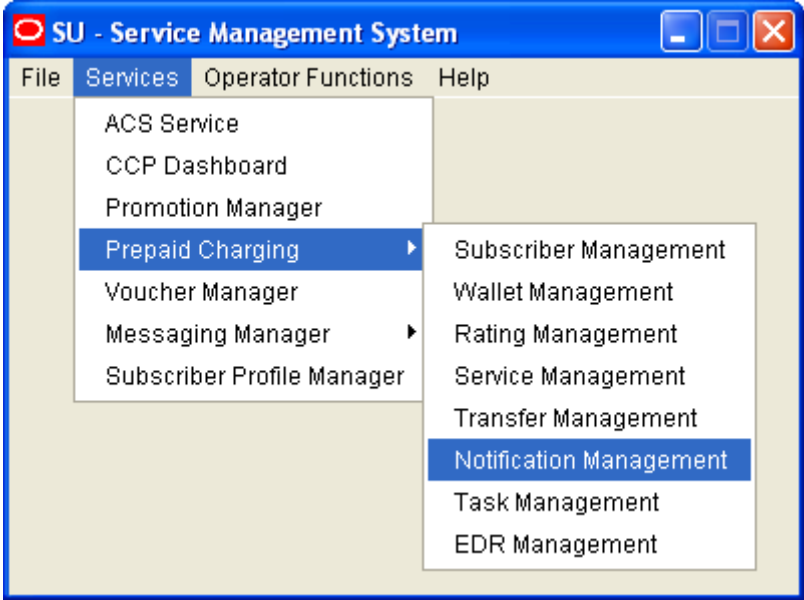
The **Notification Management** screen lets you configure Profile Notifications.

The Notification Management screen contains this tab:

- *Profile Notifications* (on page 580).

## Accessing the Notification Management screen

Follow these steps to open the Notification Management screen.

| Step | Action                                                                                                                      |
|------|-----------------------------------------------------------------------------------------------------------------------------|
| 1    | Select the <b>Services</b> menu from the SMS main screen.                                                                   |
|      |                                         |
| 2    | Select <b>Prepaid Charging &gt; Notification Management</b> .<br><b>Result:</b> You see the Notification Management screen. |

## Notification Management screen

Here is an example Notification Management screen.

Notification Management

Service Provider: Boss

Help

Profile Notifications

| Name                | DAP Operation | Suppress DAP | Precondition Join |
|---------------------|---------------|--------------|-------------------|
| Date 1 Notification |               |              | And               |

New Edit Delete Close

## Profile Notifications

### Introduction

The **Profile Notifications** tab lets you configure Profile Notifications that are triggered by changes to subscriber profiles.

Each profile notification is configured by specifying:

- whether a DAP and/or a notification is sent
- the Preconditions used to qualify when the notification will be triggered
- the DAP Template used to generate the DAP notification message, and
- the Profile Notification Fields that will be substituted for the parameters defined in the DAP Template.

For more information about configuring Notifications, see *ACS User's Guide*.

For more information about configuring DAP Templates, see *DAP User's Guide*.

## Profile Notifications tab

Here is an example **Profile Notifications** tab.

The screenshot shows a window titled "Notification Management" with a blue header bar. Below the header, there is a "Service Provider" dropdown menu set to "Boss" and a "Help" button. The "Profile Notifications" tab is selected, displaying a table with the following columns: Name, DAP Operation, Suppress DAP, and Precondition Join. The table contains one row: "Date 1 Notification", an empty cell, an empty cell, and "And". Below the table is a large empty area. At the bottom of the window, there are four buttons: "New", "Edit", "Delete", and "Close".

| Name                | DAP Operation | Suppress DAP | Precondition Join |
|---------------------|---------------|--------------|-------------------|
| Date 1 Notification |               |              | And               |

## Adding profile notifications

Follow these steps to add a new Profile Notification. This can trigger the relevant type of notification from the system.

| Step                                                        | Action                                                                                            |
|-------------------------------------------------------------|---------------------------------------------------------------------------------------------------|
| 1                                                           | In the Notification Management screen, select the <b>Service Provider</b> from the drop down box. |
| 2                                                           | On the <b>Profile Notifications</b> tab, click <b>New</b> .                                       |
| <b>Result:</b> You see the New Profile Notification screen. |                                                                                                   |

| Step                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 | Action         |                  |                   |                  |                 |                 |             |  |  |  |  |  |  |            |                |               |                   |             |         |    |  |  |  |  |  |  |  |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------|------------------|-------------------|------------------|-----------------|-----------------|-------------|--|--|--|--|--|--|------------|----------------|---------------|-------------------|-------------|---------|----|--|--|--|--|--|--|--|
| <div> <div> <div>New Profile Notification</div> <div> <div>Help</div> </div> </div> <div> <div> <div>Name</div> <div></div> </div> <div> <div>DAP Operation</div> <div>-- No DAP --</div> </div> </div> <div> <div> <div>Suppress DAP Notification</div> <div>-- Not Used --</div> </div> <div> <div>SMS Template</div> <div>-- No SMS --</div> </div> </div> <div> <div> <div>Suppress Notification</div> <div>-- Not Used --</div> </div> <div> <div>Precondition Join</div> <div>And</div> </div> </div> <div> <div>Preconditions</div> <table border="1"> <thead> <tr> <th>Field</th> <th>Type</th> <th>Compare Operator</th> <th>Compare Value 1</th> <th>Compare Value 2</th> <th>Change User</th> </tr> </thead> <tbody> <tr> <td colspan="6"></td> </tr> </tbody> </table> <div> <div>Add</div> <div>Edit</div> <div>Delete</div> </div> </div> <div> <div>Fields</div> <table border="1"> <thead> <tr> <th>Field Name</th> <th>Source Profile</th> <th>DAP Parameter</th> <th>Use Subscriber ID</th> <th>Change Date</th> <th>Chan...</th> <th>ID</th> </tr> </thead> <tbody> <tr> <td colspan="7"></td> </tr> </tbody> </table> <div> <div>Add</div> <div>Edit</div> <div>Delete</div> </div> </div> <div> <div>Save</div> <div>Cancel</div> </div> </div> |                | Field            | Type              | Compare Operator | Compare Value 1 | Compare Value 2 | Change User |  |  |  |  |  |  | Field Name | Source Profile | DAP Parameter | Use Subscriber ID | Change Date | Chan... | ID |  |  |  |  |  |  |  |
| Field                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Type           | Compare Operator | Compare Value 1   | Compare Value 2  | Change User     |                 |             |  |  |  |  |  |  |            |                |               |                   |             |         |    |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                |                  |                   |                  |                 |                 |             |  |  |  |  |  |  |            |                |               |                   |             |         |    |  |  |  |  |  |  |  |
| Field Name                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           | Source Profile | DAP Parameter    | Use Subscriber ID | Change Date      | Chan...         | ID              |             |  |  |  |  |  |  |            |                |               |                   |             |         |    |  |  |  |  |  |  |  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |                |                  |                   |                  |                 |                 |             |  |  |  |  |  |  |            |                |               |                   |             |         |    |  |  |  |  |  |  |  |

3 In the **Name** field, type the Profile Notification name.

4 Select the **DAP Operation** you want to use to construct the DAP notification message.

**Tip:** If you selected **No DAP** then a DAP notification will not be triggered and you must select an SMS Template for the notification instead.

5 From the **Suppress DAP Notification** drop down list, select **Not Used** if you do not want to suppress DAP notifications. To suppress DAP notifications, select the **Suppress Notification** field. All notifications for a profile update that include this field with a value set to True will be suppressed.

**Note:** The suppress field will be reset to false when a notification has been suppressed.

6 Select the **SMS Template** you want to use to construct the notification message.

**Tip:** If you selected **No SMS** then a notification will not be triggered and you must ensure a DAP Template is selected for the notification instead.

7 From the **Suppress Notification** drop down list, select **Not Used** if you do not want to suppress notifications. To suppress notifications, select the **Suppress Notification** field. All notifications for a profile update that include this field with a value set to True will be suppressed.

**Note:** The suppress field will be reset to false when a notification has been suppressed.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                         |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8    | In the <b>Precondition Join</b> field select the operator to use to join the preconditions listed in the Preconditions table. Choose: <ul style="list-style-type: none"> <li>• <b>And</b> to trigger a notification only when all the preconditions evaluate to true.</li> <li>• <b>Or</b> to trigger a notification if any of the preconditions evaluates to true.</li> </ul> |
| 9    | In the <b>Preconditions</b> panel, specify the preconditions that will trigger the profile notification. For details, see <i>Adding profile preconditions</i> (on page 585).                                                                                                                                                                                                   |
| 10   | In the <b>Fields</b> panel, configure a profile notification field for each parameter defined in the DAP Template. For details, see <i>Adding profile notification fields</i> (on page 587). <p><b>Tip:</b> It is recommended that you use the fields evaluated by the preconditions.</p>                                                                                      |
| 11   | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                            |

## Editing profile notifications

Follow these steps to edit an existing Profile Notification.

| Step | Action                                                                                            |
|------|---------------------------------------------------------------------------------------------------|
| 1    | In the Notification Management screen, select the <b>Service Provider</b> from the drop down box. |
| 2    | On the <b>Profile Notifications</b> tab, select the Profile Notification to edit.                 |
| 3    | Click <b>Edit</b> . <p><b>Result:</b> You see the Edit Profile Notification screen.</p>           |

| Step | Action                                                                                    |
|------|-------------------------------------------------------------------------------------------|
| 4    | Edit the profile notification configuration as described in Adding profile notifications. |
| 5    | Click <b>Save</b> .                                                                       |

- 4 Edit the profile notification configuration as described in Adding profile notifications.
- 5 Click **Save**.

## Deleting profile notifications

Follow these steps to delete an existing Profile Notification.

- | Step | Action                                                                                                                   |
|------|--------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Notification Management screen, select the <b>Service Provider</b> from the drop down box.                        |
| 2    | On the <b>Profile Notifications</b> tab, select the Profile Notification to delete.                                      |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                          |
| 4    | Click <b>OK</b> to delete the record from the database.<br><b>Result:</b> You see the Profile Notifications message box. |
| 5    | Click <b>OK</b> .                                                                                                        |

## Adding profile preconditions

Follow these steps to add a precondition to a profile notification.

| Step | Action                                                                                                                                                            |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | On the <b>Preconditions</b> panel in the New Profile Notification screen, click <b>Add</b> .<br><b>Result:</b> You see the Add Profile Precondition Field screen. |

**Add Profile Precondition Field**

Help

Profile Field: BS warning threshold (INTEGER) ▼

Precondition Type: Check Old Value ▼

Compare Operator: = ▼

Compare Value 1: 4

(and >) Compare Value 2:

Ok Cancel

- 2 Select the **Profile Field** to evaluate in the precondition.
- 3 Select the **Precondition Type** from the drop down list. For more information on precondition types, see *Preconditions* (on page 577).

**Note:** The list of available precondition types depends on the data type of the selected profile field.

- 4 If you selected either **Check Old Value** or **Check New Value**, follow steps 5 to 9. Otherwise go to step 9.
- 5 If the selected Profile Field is a BOOLEAN field, select True or False from the drop down list and go to step 9. Otherwise go to step 6.

**Note:** The precondition is met if the Profile Field value and the selected BOOLEAN value are the same.

- 6 Select the **Compare Operator** from the drop down list.

**Note:** If you select Not Used, no comparison will be made.

- 7 In the **Compare Value 1** field, enter the value you want to compare with the value from the subscriber profile field. In the case of DATE type profile fields, select the date you want from the drop down lists.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                   |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 8    | <p>If you selected the '&gt;' Compare Operator, then you may enter a second compare value in the <b>Compare Value 2</b> field if required. To enter a date in the Compare Value 2 field, select the <b>Use Date</b> check box.</p> <p><b>Note:</b> The precondition is met if the profile field value is greater than Compare Value 1 and less than Compare Value 2.</p> |
| 9    | Click <b>Ok</b> .                                                                                                                                                                                                                                                                                                                                                        |

## Editing profile preconditions

Follow these steps to edit an existing Precondition for a Profile Notification.

| Step | Action                                                                                                                       |
|------|------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the <b>Preconditions</b> panel in the New/Edit Profile Notification screen, select the row for the Precondition you want. |
| 2    | Click <b>Edit</b> .                                                                                                          |

**Result:** You see the Edit Profile Precondition Field screen.

- 3 Edit the precondition details as described in *Adding profile preconditions* (on page 585).
- 4 Click **Ok**.

## Deleting profile preconditions

Follow these steps to delete an existing Precondition for a Profile Notification.

| Step | Action                                                                                                                        |
|------|-------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the <b>Preconditions</b> panel on the New/Edit Profile Notification screen, select the row for the Precondition to delete. |
| 2    | Click <b>Delete</b> .                                                                                                         |
| 3    | Click <b>Save</b> .                                                                                                           |

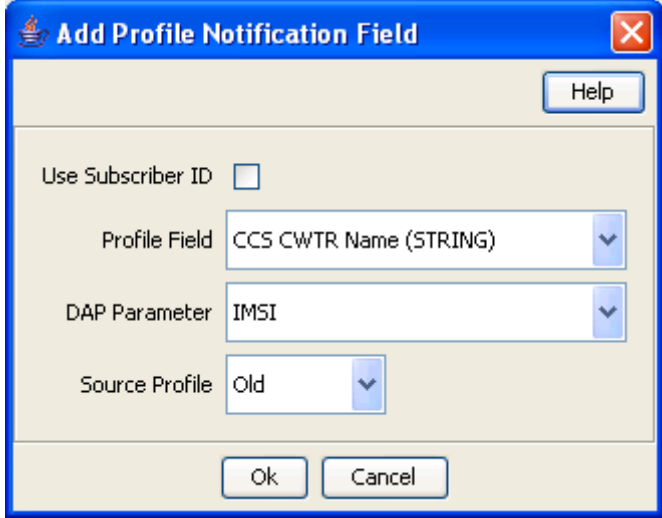
**Result:** The record is deleted from the database.

**Tip:** The record is not deleted from the database until you click **Save**. Prior to this point you can reverse any changes by clicking **Cancel**.



## Adding profile notification fields

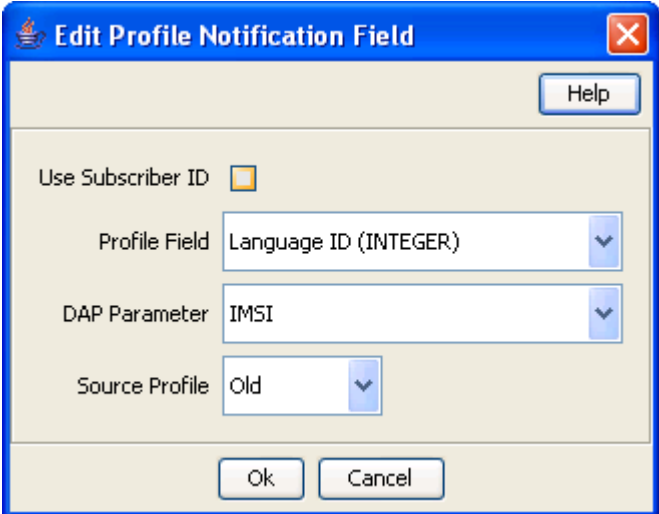
Follow these steps to add a field to a profile notification.

| Step | Action                                                                                                                                                                                                                                                                                                                                  |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>On the <b>Fields</b> panel in the New Profile Notification screen, click <b>Add</b>.</p> <p><b>Result:</b> You see the Add Profile Notification Field screen.</p>                                                                                  |
| 2    | <p>If you need the MSISDN (subscriber ID) to be made available to DAP for the XML request, select the <b>Use Subscriber ID</b> check box.</p>                                                                                                                                                                                           |
| 3    | <p>Select the <b>Profile Field</b> to use in the notification message.</p>                                                                                                                                                                                                                                                              |
| 4    | <p>Select the <b>DAP Parameter</b> from the drop down list.</p> <p><b>Warning:</b> You must configure a profile notification field for all the DAP parameters defined in the DAP template. Once a DAP parameter has been used it is removed from the list of available parameters.</p>                                                  |
| 5    | <p>Select the <b>Source Profile</b>. Select:</p> <ul style="list-style-type: none"> <li>• Old - to substitute the Profile Field value from the old subscriber profile for the selected DAP parameter.</li> <li>• New - to substitute the Profile Field value from the new subscriber profile for the selected DAP parameter.</li> </ul> |
| 6    | <p>Click <b>Ok</b>.</p>                                                                                                                                                                                                                                                                                                                 |

## Editing profile notification fields

Follow these steps to edit the configuration for a Profile Notification field.

| Step | Action                                                                                                                                             |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>On the <b>Fields</b> panel in the New/Edit Profile Notification screen, select the row for the Profile Notification Field you want to edit.</p> |
| 2    | <p>Click <b>Edit</b>.</p> <p><b>Result:</b> You see the Edit Profile Notification Field screen.</p>                                                |

| Step                                                                              | Action |
|-----------------------------------------------------------------------------------|--------|
|  |        |

- 3 Edit the details as described in *Adding profile notification fields* (on page 587).
- 4 Click **Ok**.

## Deleting profile notification fields

Follow these steps to delete an existing Field for a Profile Notification.

| Step | Action                                                                                                                                                            |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the <b>Fields</b> panel on the New/Edit Profile Notification screen, select the row for the field to delete.                                                   |
| 2    | Click <b>Delete</b> .                                                                                                                                             |
| 3    | Click <b>Save</b> .                                                                                                                                               |
|      | <b>Result:</b> The record is deleted from the database.                                                                                                           |
|      | <b>Tip:</b> The record is not deleted from the database until you click <b>Save</b> . Prior to this point you can reverse any changes by clicking <b>Cancel</b> . |

# Task Management

## Overview

### Introduction

This chapter explains how to configure BPL tasks.

### In this chapter

---

This chapter contains the following topics.

|                                           |     |
|-------------------------------------------|-----|
| Task Management Module .....              | 589 |
| Business Process Logic .....              | 591 |
| BPL Response Mapping.....                 | 597 |
| Response Mappings and Control Plans ..... | 601 |

## Task Management Module

### Introduction

The **Task Management** screen lets you configure Business Process Logic tasks. BPL tasks can be used to execute tasks specified in control plans.

The Task Management screen contains these tabs:

- *Business Process Logic* (on page 591), and
- *BPL Response Mapping* (on page 597).

### Configuring BPL tasks overview

CCS enables you to configure complex actions which can be triggered from the Edit Subscriber screen using the Business Process Logic (BPL) task buttons. A BPL task executes a set of pre-configured actions which are defined in an associated control plan.

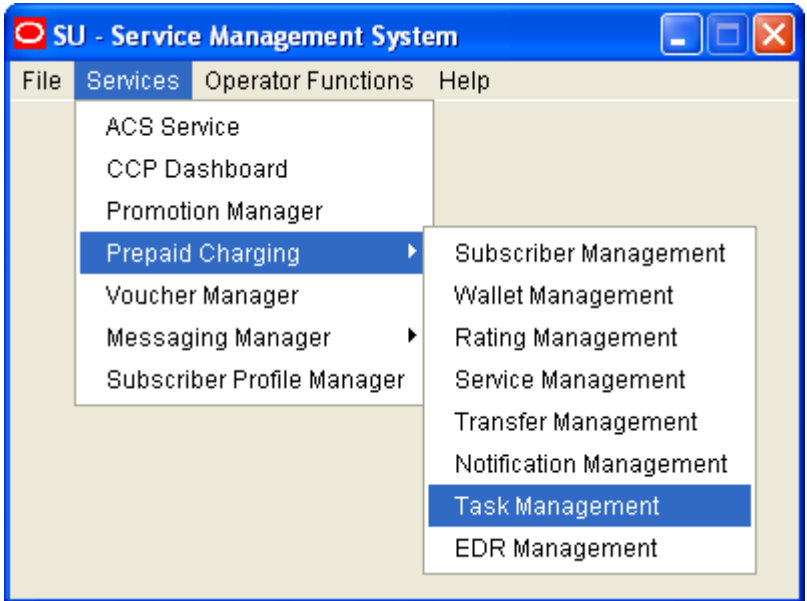
To configure a BPL task, complete following steps:

| Step | Action                                                                                                                                                                                                                                                            |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | Configure the background building blocks required to set up the BPL's control plan, for example: <ul style="list-style-type: none"> <li>• Profile fields</li> <li>• Notifications</li> <li>• Named events</li> <li>• Balance types</li> </ul>                     |
| 2    | Using the CPE, build the control plan the BPL task will run. Note, the control plan defines the BPL logic. Feature nodes which require interaction cannot be used in BPL task control plans.<br>For more information about the CPE, see <i>CPE User's Guide</i> . |

| Step | Action                                                                                                                                                                                                                           |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | On the <i>Business Process Logic</i> (on page 591) tab, define the BPL task (including mapping the control plan to the BPL).                                                                                                     |
| 4    | On the <i>BPL Response Mapping</i> (on page 597) tab, configure the BPL Responses that translate the success and failure responses returned by the control plan into messages for the user who triggers the BPL task.            |
| 5    | Using the Subscriber Profile Manager, configure the BPL task to appear on the Edit Subscriber screen from where it can be triggered.<br>For more information about the Subscriber Profile Manager, see <i>SPM User's Guide</i> . |

## Accessing the Task Management screen

Follow these steps to open the Task Management screen.

| Step | Action                                                                                                      |
|------|-------------------------------------------------------------------------------------------------------------|
| 1    | Select the <b>Services</b> menu from the SMS main screen.                                                   |
|      |                          |
| 2    | Select <b>Prepaid Charging &gt; Task Management</b> .<br><b>Result:</b> You see the Task Management screen. |

## Task Management screen

Here is an example Task Management screen.

The screenshot shows a window titled "Task Management" with a blue title bar. Inside, there's a "Service Provider" dropdown menu set to "Boss" and a "Help" button. Below this are two tabs: "Business Process Logic" (selected) and "BPL Response Mapping". The main area contains a table with three columns: "Short Name", "Full Name", and "Call Plan". The table lists various business processes like BOOSTACT, CSACT, FFACT, etc. At the bottom, there are "New", "Edit", "Delete", and "Close" buttons.

| Short Name    | Full Name                                   | Call Plan                |
|---------------|---------------------------------------------|--------------------------|
| BOOSTDACT     | Booster - Deactivation                      | BOOST Deactivation - BPL |
| BOOSTACT      | Booster - Purchase                          | BOOST Activation - BPL   |
| BOOSTSUBS     | Booster - Subscribe                         | BOOST Subscription - BPL |
| CSACT         | Community Services - Activation             | CS Activation - BPL      |
| CSCHG         | Community Services - Change Community       | CS Change - BPL          |
| CSDACT        | Community Services - Deactivation           | CS Deactivation - BPL    |
| FDACT         | Favourite Destination - Activation          | FD Activation - BPL      |
| FDCHG         | Favourite Destination - Change FD           | FD Change - BPL          |
| FDDACT        | Favourite Destination - Deactivation        | FD Deactivation - BPL    |
| FFACT         | Friends & Family - Activation               | FF Activation - BPL      |
| FFADD         | Friends & Family - Add number               | FF Add - BPL             |
| FFDACT        | Friends & Family - Deactivation             | FF Deactivation - BPL    |
| FFDEL         | Friends & Family - Delete number            | FF Delete - BPL          |
| BFCHG         | Friends & Family - Set Best Friend          | BF Change - BPL          |
| HBCHG         | Happy Birthday - set birthday               | HB Change - BPL          |
| SBSUBSCRIBE   | Service Bundle - Subscribe                  | SB Subscribe - BPL       |
| SBUNSUBSCRIBE | Service Bundle - Unsubscribe                | SB Unsubscribe - BPL     |
| SCADD         | Sponsored Calling - Add sponsored number    | SC Add - BPL             |
| SCDEL         | Sponsored Calling - Delete sponsored num... | SC Delete - BPL          |
| TEST          | Test BPL                                    | testbpl                  |

## Business Process Logic

### Introduction

The **Business Process Logic** tab lets you configure the business processes that may be executed either through the Edit Subscriber screens or through the PI.

## Business Process Logic tab

Here is an example **Business Process Logic** tab.



## Business Process Logic screen

Here is an example Business Process Logic screen.

## Adding business process logic tasks

Follow these steps to add a new business process logic (BPL) task.

| Step | Action                                                                                         |
|------|------------------------------------------------------------------------------------------------|
| 1    | In the Task Management screen, select the <b>Service Provider</b> from the drop down box.      |
| 2    | On the <b>Business Process Logic</b> tab, click <b>New</b> .                                   |
|      | <b>Result:</b> You see the <i>New Business Process Logic screen</i> (See example on page 593). |

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 3    | <p>In the <b>Short Name</b> field, enter a unique name for the BPL task. This can be up to 16 characters long. The short name is used to identify the BPL task in BPL execution requests to the smsTrigDaemon.</p> <p><b>Note:</b> It is also used by the PI when initiating a BPL request using the CCSBPL=EXE command.</p>                                                                                                                                                                               |
| 4    | <p>In the <b>Full Name</b> field, enter a unique full name for the BPL task. It can be up to 64 characters long.</p> <p>The full name appears in the Edit Subscriber screen on the label of the button associated with the BPL task.</p>                                                                                                                                                                                                                                                                   |
| 5    | <p>From the <b>Control Plan</b> drop down list, select the control plan to be executed by the BPL task.</p> <p>The drop down list displays all the control plans a subscriber can use.</p> <p><b>Tip:</b> This list can be shortened by using the <b>Search By</b> field and then <b>Search</b>.</p>                                                                                                                                                                                                       |
| 6    | In the <b>Description</b> field, enter a description for the BPL task.                                                                                                                                                                                                                                                                                                                                                                                                                                     |
| 7    | <p>In the <b>Service Handle</b> field, enter the BPL service application name on the SLC.</p> <p><b>Warning:</b> This field is required. It should be set to 'CCS_BPL' unless you are using a non-default configuration. In this case additional configuration of xmlTrigDaemon, SLEE and slee_acs is required. Refer to <i>XML TCAP Interface Technical Guide</i> for details.</p>                                                                                                                        |
| 8    | <p>In the <b>PI Security Level</b> field, enter the PI security level number. Valid values are in the range 0 to 99.</p> <p><b>Note:</b> The PI security level is used to limit which users may execute the BPL task through the PI. Users who have a PI security level that is lower than the PI security level for the BPL task will not be able to execute it.</p> <p>For more information about the PI, see <i>PI User's Guide</i>.</p>                                                                |
| 9    | Select the <b>Wallet Selection</b> check box if you want to be able to select the wallet the BPL task applies to, when the BPL task is executed through the screens.                                                                                                                                                                                                                                                                                                                                       |
| 10   | <p>Add any BPL parameters that may be required during execution of the BPL task. You can add up to six parameters.</p> <p>These parameters are filled out by the user on the Confirm Execute BPL prompt when the BPL is executed. For details see Adding a BPL parameter.</p> <p><b>Warning:</b> BPLparameters must correspond to the extension parameters (4 to 9) defined in the <b>acs.conf</b> configuration file. For more information about the <b>acs.conf</b>, see <i>ACS Technical Guide</i>.</p> |
| 11   | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |

## Editing business process logic tasks

Follow these steps to edit an existing business process logic task.

| Step | Action                                                                                          |
|------|-------------------------------------------------------------------------------------------------|
| 1    | In the Task Management screen, select the <b>Service Provider</b> from the drop down box.       |
| 2    | In the table on the <b>Business Process Logic</b> tab, select the task to edit.                 |
| 3    | Click <b>Edit</b> .                                                                             |
|      | <b>Result:</b> You see the Edit <i>Business Process Logic</i> screen (See example on page 593). |
| 4    | Edit the details as described in <i>Adding business process logic tasks</i> (on page 593).      |



| Step | Action              |
|------|---------------------|
| 5    | Click <b>Save</b> . |

## Deleting business process logic tasks

Follow these steps to delete an existing business process logic task.

| Step | Action                                                                                                                                                      |
|------|-------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Task Management screen, select the <b>Service Provider</b> from the drop down box.                                                                   |
| 2    | In the table on the <b>Business Process Logic</b> tab, select the task to delete.                                                                           |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                                             |
| 4    | Click <b>OK</b> .<br><b>Result:</b> The BPL task and any associated BPL parameters are deleted from the database, and you see the Delete Successful prompt. |
| 5    | Click <b>OK</b> .                                                                                                                                           |

## Adding BPL parameters

Follow these steps to add a new parameter to a BPL task.

**Warning:** This parameter must correspond to an INAP extension parameter configured in **acs.conf**. For more information about this configuration, see *ACS Technical Guide*.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
|------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New or the Edit Business Process Logic screen, click <b>New</b> .<br><b>Result:</b> You see the New <i>BPL Parameter</i> screen (See example on page 596).                                                                                                                                                                                                                                                                                                                                                                                    |
| 2    | In the <b>Display Name</b> field enter the parameter's name. This will be displayed next to a data entry box on the Confirm Execute BPL prompt when you execute the BPL task.<br>For more information about executing BPL tasks, see <i>CCS User's Guide</i> .                                                                                                                                                                                                                                                                                       |
| 3    | If a value must be supplied for this parameter in order to execute this BPL task, select the <b>Mandatory</b> check box.                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 4    | Click <b>Ok</b> .<br><b>Result:</b> The new parameter appears in the BPL Parameters table.                                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 5    | To change the order in which the parameter appears in the table, select it in the table and then: <ul style="list-style-type: none"> <li>Click <b>Up</b> to move the parameter up one row.</li> <li>Click <b>Down</b> to move it down one row.</li> </ul> <p><b>Tip:</b> The order in which the parameters appear in the table determines which INAP extension parameter they correspond to. The parameter in the first row corresponds to extension parameter 4. The parameter in the next row corresponds to extension parameter 5, and so on.</p> |
| 6    | Click <b>Save</b> .<br><b>Result:</b> The changes are saved to the database.                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |

## BPL Parameter screen

Here is an example BPL Parameter screen.

## Editing a BPL parameter

Follow these steps to edit an existing BPL parameter.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the New or the Edit Business Process Logic screen, select the record to edit in the BPL Parameters table.                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| 2    | Click <b>Edit</b> .<br><b>Result:</b> You see the <i>Edit BPL Parameter screen</i> (See example on page 596).                                                                                                                                                                                                                                                                                                                                                                                                                                           |
| 3    | In the <b>Display Name</b> field enter a new name for the parameter, if required.                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 4    | Select or deselect the <b>Mandatory</b> check box as required.<br><b>Warning:</b> You must supply a value for this parameter at run time if this field is selected.                                                                                                                                                                                                                                                                                                                                                                                     |
| 5    | Click <b>Ok</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                       |
| 6    | To change the order in which the parameter appears in the table, use the <b>Up</b> and <b>Down</b> buttons: <ul style="list-style-type: none"> <li>Click <b>Up</b> to move the parameter up one row.</li> <li>Click <b>Down</b> to move it down one row.</li> </ul> <b>Tip:</b> The order in which the parameters appear in the table determines which INAP extension parameter they correspond to. The parameter in the first row corresponds to extension parameter 4. The parameter in the next row corresponds to extension parameter 5, and so on. |
| 7    | Click <b>Save</b> .<br><b>Result:</b> The changes are saved to the database.                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |

## Deleting BPL parameters

Follow these steps to delete an existing BPL parameter.

| Step | Action                                                                                                                                                                                                                                              |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the BPL Parameters table on the New or the Edit Business Process Logic screen, select the BPL parameter to delete.                                                                                                                               |
| 2    | Click <b>Delete</b> .                                                                                                                                                                                                                               |
| 3    | Click <b>Save</b> .<br><b>Result:</b> The record is deleted from the database.<br><b>Tip:</b> The record is not deleted from the database until you click <b>Save</b> . Prior to this point you can reverse any changes by clicking <b>Cancel</b> . |

## BPL Response Mapping

### Introduction

The **BPL Response Mapping** tab lets you map user friendly messages and their translations to the responses received from the SLC when a BPL task is executed.

### BPL Response Mapping tab

Here is an example BPL Response Mapping tab.

Task Management

Service Provider: Boss

Help

BPL Response Mapping

BPL: Booster - Deactivation

Response: Found (100)

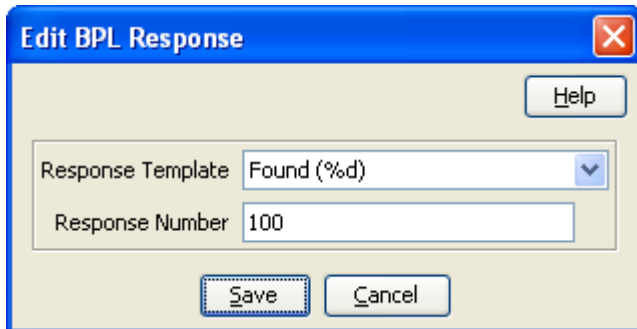
New Response Edit Response Delete Response

| Language | Display Message     | Change l |
|----------|---------------------|----------|
| English  | Service deactivated | SMF      |
| French   | Service deactivated | SMF      |

New Message Edit Message Delete Message Close

## BPL Response screen

Here is an example BPL Response screen.



## Adding BPL responses

Follow these steps to add a new BPL response.

| Step | Action                                                                                                                                                                                                                                                   |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Task Management screen, select the <b>Service Provider</b> from the drop down box.                                                                                                                                                                |
| 2    | Select the <b>BPL Response Mapping</b> tab.                                                                                                                                                                                                              |
| 3    | From the <b>BPL</b> drop down box, select the BPL task for which to configure a new response, and click <b>New Response</b> .<br><b>Result:</b> You see the <i>New BPL Response screen</i> (See example on page 598).                                    |
| 4    | From the <b>Response Template</b> drop down list, select the BPL response to configure.                                                                                                                                                                  |
| 5    | If the <b>Response Number</b> field is available, enter the response number.<br><b>Tip:</b> This field is only available where the response template contains the '%d' variable. The '%d' is replaced by the response number when you save the response. |
| 6    | Click <b>Save</b> .                                                                                                                                                                                                                                      |

## Editing BPL responses

Follow these steps to edit an existing BPL response.

| Step | Action                                                                                                                                                                               |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Task Management screen, select the service provider from the <b>Service Provider</b> list.                                                                                    |
| 2    | Select the <b>BPL Response Mapping</b> tab.                                                                                                                                          |
| 3    | From the <b>BPL</b> list, select the BPL task for which the response is configured.                                                                                                  |
| 4    | From the <b>Response</b> list, select the response to edit and click <b>Edit Response</b> .<br><b>Result:</b> You see the <i>Edit BPL Response screen</i> (See example on page 598). |
| 5    | If required, select a different <b>Response Template</b> .                                                                                                                           |
| 6    | If required, specify a different <b>Response Number</b> .                                                                                                                            |
| 7    | Click <b>Save</b> .                                                                                                                                                                  |

## Deleting BPL responses

Follow these steps to delete an existing BPL response and any related message mappings.

| Step | Action                                                                                                                                                                     |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the Task Management screen, select the <b>Service Provider</b> from the drop down box.                                                                                  |
| 2    | Select the <b>BPL Response Mapping</b> tab.                                                                                                                                |
| 3    | From the <b>BPL</b> drop down list, select the BPL task which has the error to delete.<br>From the <b>Response</b> drop down list, select the response you want to delete. |
| 4    | Click <b>Delete Response</b> .<br><b>Result:</b> You see the Delete Confirmation prompt.                                                                                   |
| 5    | Click <b>OK</b> .<br><b>Result:</b> You see the BPL Responses delete success prompt.                                                                                       |
| 6    | Click <b>OK</b> .<br><b>Result:</b> The BPL response and any related message translations are deleted from the database.                                                   |

## Adding translations for BPL responses

Follow these steps to add a new translation for a BPL response.

| Step | Action                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | On the <b>BPL Response Mapping</b> tab in the Task Management screen, select the <b>BPL</b> from the drop down box.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| 2    | From the <b>Response</b> drop down list, select the response for which to map a new message translation.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                 |
| 3    | Click <b>New Message</b> .<br><b>Result:</b> You see the <i>New BPL Response Message screen</i> (See example on page 600).                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| 4    | From the <b>Language</b> drop down box, select the language for the response message.<br><br><b>Tip:</b> The language to use is configured in the ACS Tools screen, <b>Language</b> tab. During execution, the configured screens runtime language will determine which message is shown. If a language is not specifically configured then the default screens language is used. This will be either the default language for the service provider, or the global default language (as configured in the ACS Tools screen). For more information about setting languages, see <i>ACS User's Guide</i> . |
| 5    | In the <b>Display Message</b> field, enter the message text.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
| 6    | Click <b>Save</b> .                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                      |

## BPL Response Message screen

Here is an example BPL Response Message screen.

## Editing translations for BPL responses

Follow these steps to edit a translation for a BPL response message.

| Step | Action                                                                                                                                                                                |
|------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | On the <b>BPL Response Mapping</b> tab in the Task Management screen, select the <b>BPL</b> from the drop down box.                                                                   |
| 2    | From the <b>Response</b> drop down list, select the response.                                                                                                                         |
| 3    | In the table, select the message translation to edit and click <b>Edit Message</b> .<br><b>Result:</b> You see the Edit <i>BPL Response Message</i> screen (See example on page 600). |
| 4    | From the <b>Language</b> drop down box, select a different language if required.                                                                                                      |
| 5    | Edit the <b>Display Message</b> as required.                                                                                                                                          |
| 6    | Click <b>Save</b> .                                                                                                                                                                   |

## Deleting translations for BPL responses

Follow these steps to delete message mapping for a BPL response.

| Step | Action                                                                                                                                                    |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | On the <b>BPL Response Mapping</b> tab in the Task Management screen, select the <b>BPL</b> from the drop down box.                                       |
| 2    | From the drop down list, select the <b>Response</b> you want.                                                                                             |
| 3    | Select the row in the table for the message mapping to delete and click <b>Delete Message</b> .<br><b>Result:</b> You see the Delete Confirmation prompt. |
| 4    | Click <b>OK</b> .<br><b>Result:</b> You see the BPL Response Mapping prompt.                                                                              |
| 5    | Click <b>OK</b> .<br><b>Result:</b> The record is deleted from the database.                                                                              |

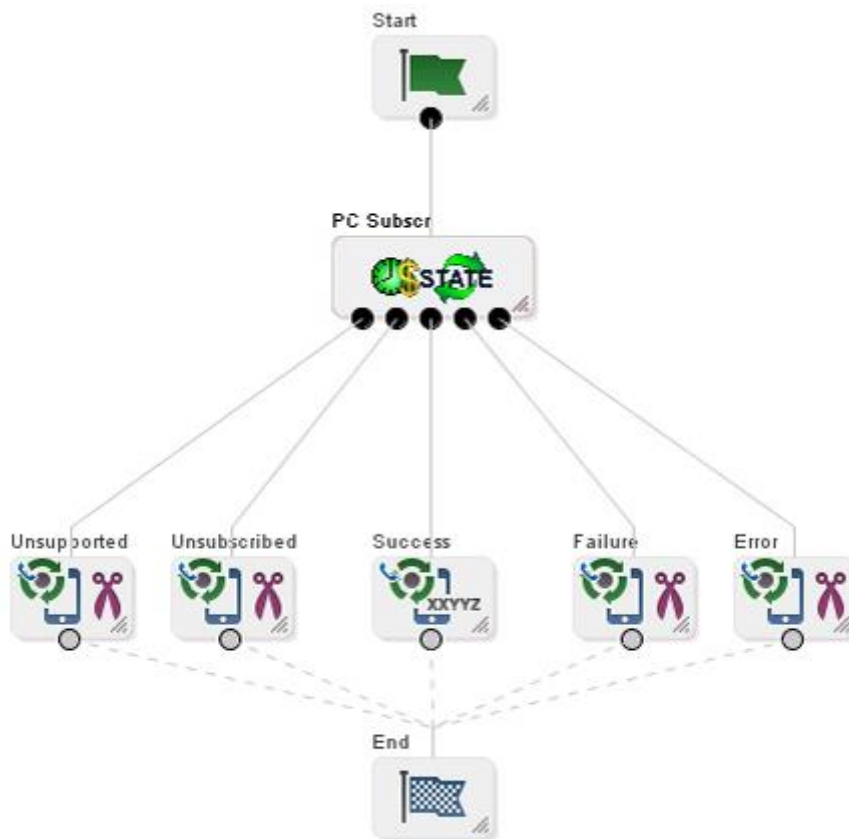
## Response Mappings and Control Plans

### Introduction

This section shows an example BPL control plan for a periodic charge subscription. It explains how to correctly set up the nodes in the control plan in conjunction with the response mappings configured in the Task Management screen.

### Example Control Plan

Here is an example BPL control plan for a periodic charge subscription.



### Success response mapping

In the example, the Success branch of the Periodic Charge Subscription node connects to a Terminate Unchanged feature node. When the control plan executes successfully a '200 OK' message will be returned to the triggering daemon. This is reported as a simple Success response for which no mapping is required.

**Note:** An alternative is to use a Found response to convey a particular message for success scenarios. This is triggered by the Unconditional Termination feature node entering your Connect To number (Termination Number), which will be used in the Found mapping.

## Disconnect call response mappings

In the example, a Disconnect Call node is connected to each of the other exits from the Periodic Charge Subscription node:

- Not supported
- Unsubscribed
- Failure
- Error

When a Disconnect node exit is taken, this results in a '406 Not Acceptable' response with the configured Cause value. This means that the configured Cause value must be mapped to a Not Acceptable response mapping.

**Note:** You should not set the Cause value to 31 as this has a special meaning. It is interpreted as '404 Not Found' by the triggering daemon, which means that either the subscriber or the control plan has not been found. If you use this code then you will not be able to determine whether the error means one of the following:

- There has been an unexpected control plan error.
- The subscriber has not been found.



# EDR Management

## Overview

### Introduction

This chapter explains how to configure the components used to manage EDRs.

**Warning:** The EDR Management screens are only available if the Subscriber Management module has been installed on your system and if you are using the VWS domain. If you are using a third party domain, then you will not be able to access these screens.

### In this chapter

---

This chapter contains the following topics.

|                             |     |
|-----------------------------|-----|
| EDR Management Module ..... | 603 |
| EDR Types .....             | 606 |
| EDR Categories.....         | 609 |
| EDR Elements.....           | 613 |
| EDR Templates .....         | 618 |
| EDR Viewer Columns.....     | 624 |

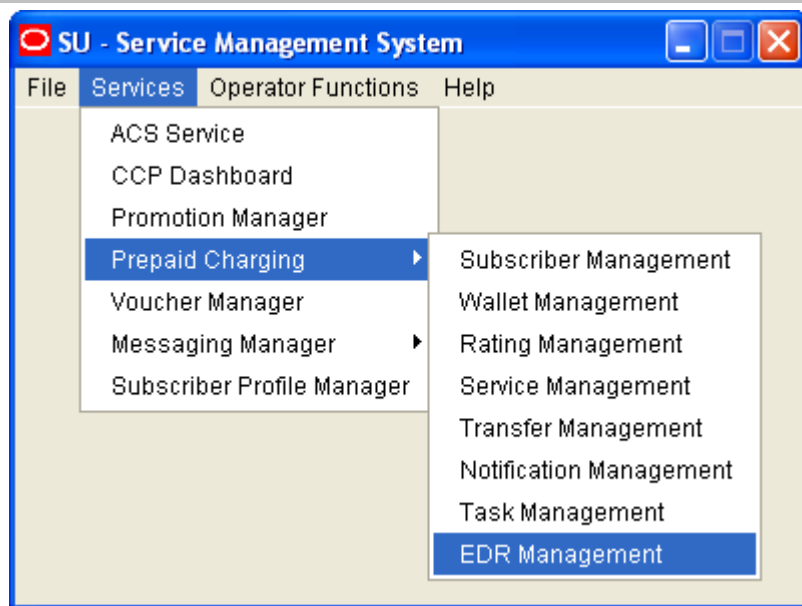
## EDR Management Module

### Accessing the EDR Management screen

Follow these steps to open the EDR Management screen.

| Step | Action                                                    |
|------|-----------------------------------------------------------|
| 1    | Select the <b>Services</b> menu from the SMS main screen. |

| Step | Action |
|------|--------|
|------|--------|

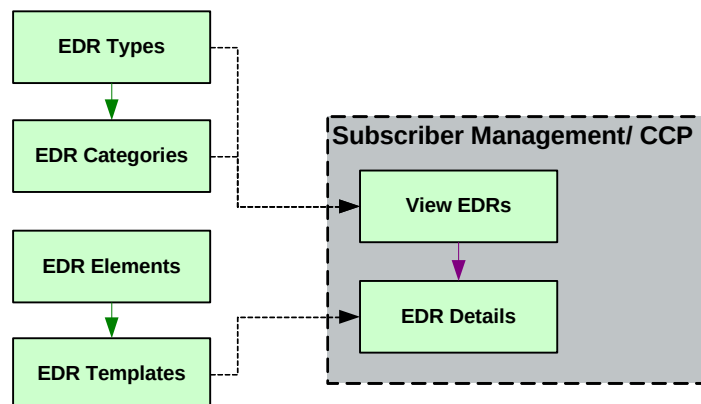


- 2 Select **Prepaid Charging > EDR Management**.  
**Result:** You see the EDR Management screen.

## EDR Management relationships

This diagram shows the relationships between the various screens available in the EDR Management module.

**Note:** The lines are colored differently for clarity and have no other meaning.



## EDR Management screen

Here is an example EDR Management screen.

| Name                                       | Type | Change User | Change    |
|--------------------------------------------|------|-------------|-----------|
| Regular Call                               | 1    | SMF         | 2011-01-1 |
| Operator Update                            | 2    | SMF         | 2011-01-1 |
| Expiration                                 | 3    | SMF         | 2011-01-1 |
| Recharge                                   | 4    | SMF         | 2011-01-1 |
| Event Charge                               | 5    | SMF         | 2011-01-1 |
| Amount Charge                              | 6    | SMF         | 2011-01-1 |
| Control Plan Service Invoke                | 7    | SMF         | 2011-01-1 |
| Free Form Recharge                         | 8    | SMF         | 2011-01-1 |
| Credit Card Free Form Recharge             | 9    | SMF         | 2011-01-1 |
| Voucher Free Form Recharge                 | 10   | SMF         | 2011-01-1 |
| Roaming Call                               | 11   | SMF         | 2011-01-1 |
| Short Message Named Event                  | 12   | SMF         | 2011-01-1 |
| Short Message Tariffed                     | 13   | SMF         | 2011-01-1 |
| Prepaid Data                               | 14   | SMF         | 2011-01-1 |
| Voucher Redeem                             | 15   | SMF         | 2011-01-1 |
| Rewards                                    | 16   | SMF         | 2011-01-1 |
| OSA CHAM Reservation Amount                | 21   | SMF         | 2011-01-1 |
| OSA CHAM Direct Amount                     | 23   | SMF         | 2011-01-1 |
| OSA CHAM Reservation Seconds               | 24   | SMF         | 2011-01-1 |
| OSA CHAM Reservation Named Events          | 25   | SMF         | 2011-01-1 |
| OSA CHAM Direct Seconds                    | 26   | SMF         | 2011-01-1 |
| OSA CHAM Direct Named Events               | 27   | SMF         | 2011-01-1 |
| Friends and Family Changes                 | 28   | SMF         | 2011-01-1 |
| Setting Disable Incoming Calls while Ro... | 29   | SMF         | 2011-01-1 |
| Call Barring Changes                       | 30   | SMF         | 2011-01-1 |
| Product Type Swap                          | 31   | SMF         | 2011-01-1 |
| PTS - Billing Event                        | 32   | SMF         | 2011-01-1 |
| Bad Pin                                    | 33   | SMF         | 2011-01-1 |
| Voucher Type Recharge                      | 47   | SMF         | 2011-01-1 |

## Introduction

The EDR Management screen lets you configure how EDRs are searched for and displayed in the *View EDRs* (on page 142) screen. It contains these tabs:

- *EDR Types* (on page 606)
- *EDR Categories* (on page 609)
- *EDR Elements* (on page 613)
- *EDR Templates* (on page 618)

- EDR Viewer Columns

# EDR Types

## Introduction

This screen enables you to add, modify or delete EDR types.

EDR types set records for each EDR type based on EDR type number. The EDR type number is reported as the CDR\_TYPE field in each EDR.

**Note:** The standard CCS EDR types are configured on installation.

## Example EDR 1 for single tariff rated call

```
BILLING_ENGINE_ID=21|SCP_ID=366273322|SEQUENCE_NUMBER=487291|CDR_TYPE=1|RECORD_DATE=
20070423190107|ACCT_ID=83|
ACCT_REF_ID=83|CLI=01206233252|ACS_CUST_ID=1|BALANCE_TYPES=1|BALANCES=49880|COSTS=12
0|ACCOUNT_TYPE=22|CASCADE_ID=44|RATES=60|LENGTHS=2810.00|DISCOUNTS=0|
MAX_CHARGE=500|DURATION=120.00|DURATION_CHARGED=120.00|TN=01473|TCS=20070423181310|
TCE=20070423181510|CS=S|DISCOUNT_TYPE=S*W*R|WALLET_TYPE=1|FCA=01473254338|END_CALL_R
EASON=14
```

## EDR Types tab

Here is an example **EDR Types** tab.

EDR Management

Service Provider: **Boss** Help

**EDR Types**

| Name                                       | Type | Change User | Change    |
|--------------------------------------------|------|-------------|-----------|
| Regular Call                               | 1    | SMF         | 2011-01-1 |
| Operator Update                            | 2    | SMF         | 2011-01-1 |
| Expiration                                 | 3    | SMF         | 2011-01-1 |
| Recharge                                   | 4    | SMF         | 2011-01-1 |
| Event Charge                               | 5    | SMF         | 2011-01-1 |
| Amount Charge                              | 6    | SMF         | 2011-01-1 |
| Control Plan Service Invoke                | 7    | SMF         | 2011-01-1 |
| Free Form Recharge                         | 8    | SMF         | 2011-01-1 |
| Credit Card Free Form Recharge             | 9    | SMF         | 2011-01-1 |
| Voucher Free Form Recharge                 | 10   | SMF         | 2011-01-1 |
| Roaming Call                               | 11   | SMF         | 2011-01-1 |
| Short Message Named Event                  | 12   | SMF         | 2011-01-1 |
| Short Message Tariffed                     | 13   | SMF         | 2011-01-1 |
| Prepaid Data                               | 14   | SMF         | 2011-01-1 |
| Voucher Redeem                             | 15   | SMF         | 2011-01-1 |
| Rewards                                    | 16   | SMF         | 2011-01-1 |
| OSA CHAM Reservation Amount                | 21   | SMF         | 2011-01-1 |
| OSA CHAM Direct Amount                     | 23   | SMF         | 2011-01-1 |
| OSA CHAM Reservation Seconds               | 24   | SMF         | 2011-01-1 |
| OSA CHAM Reservation Named Events          | 25   | SMF         | 2011-01-1 |
| OSA CHAM Direct Seconds                    | 26   | SMF         | 2011-01-1 |
| OSA CHAM Direct Named Events               | 27   | SMF         | 2011-01-1 |
| Friends and Family Changes                 | 28   | SMF         | 2011-01-1 |
| Setting Disable Incoming Calls while Ro... | 29   | SMF         | 2011-01-1 |
| Call Barring Changes                       | 30   | SMF         | 2011-01-1 |
| Product Type Swap                          | 31   | SMF         | 2011-01-1 |
| PTS - Billing Event                        | 32   | SMF         | 2011-01-1 |
| Bad Pin                                    | 33   | SMF         | 2011-01-1 |
| Voucher Type Recharge                      | 47   | SMF         | 2011-01-1 |

New Edit Delete Close

## Adding EDR types

Follow these steps to add a new EDR type.

| Step                                            | Action                                                                                   |
|-------------------------------------------------|------------------------------------------------------------------------------------------|
| 1                                               | In the EDR Management screen, select the <b>Service Provider</b> from the drop down box. |
| 2                                               | On EDR Types tab, click <b>New</b> .                                                     |
| <b>Result:</b> You see the New EDR Type screen. |                                                                                          |

| Step | Action |
|------|--------|
|------|--------|

- 3 In the **Name** field, type a unique name for this EDR type.
- 4 In the **EDR Type** field, type a unique EDR type number. This must correspond to the value of the CDR\_TYPE in EDRs of this type.  
For more information about EDR type numbers, see *EDR Definitions Operations Guide*.
- 5 Click **Save**.

## Editing EDR types

Follow these steps to edit an existing EDR type.

| Step | Action |
|------|--------|
|------|--------|

- 1 In the EDR Management screen, select the **Service Provider** from the drop down box.
- 2 On the EDR Types tab, select the EDR type you want to edit.
- 3 Click **Edit**.

**Result:** You see the Edit EDR Type screen.

- 4 Edit the details as described in *Adding EDR types* (on page 607).
- 5 Click **Save**.

## Deleting EDR types

Follow these steps to delete an existing EDR type.

| Step | Action |
|------|--------|
|------|--------|

- 1 In the EDR Management screen, select the **Service Provider** from the drop down box.
- 2 On the EDR Types tab, select the EDR type you want to delete.
- 3 Click **Delete**.

**Result:** A Delete Confirmation prompt appears.

| Step | Action                                                                                       |
|------|----------------------------------------------------------------------------------------------|
| 4    | Click <b>OK</b> .<br><b>Result:</b> The record is deleted and a confirmation prompt appears. |
| 5    | Click <b>OK</b> .                                                                            |

## EDR Categories

### Introduction

This screen enables you to add, modify or delete EDR categories.

EDR categories group EDR types into sets. You can search on EDR Category in the View EDRs for Subscriber screen.

**Note:** The standard CCS EDR categories are configured on installation.

## EDR Categories tab

Here is an example EDR Categories tab.

EDR Management

Service Provider: Boss

EDR Categories

| Name                                       | Change User | Change Date         |
|--------------------------------------------|-------------|---------------------|
| Amount Charge                              | SMF         | 2011-01-18 23:17:56 |
| Bad Pin                                    | SMF         | 2011-01-18 23:17:57 |
| Call Barring Changes                       | SMF         | 2011-01-18 23:17:57 |
| Control Plan Service Invoke                | SMF         | 2011-01-18 23:17:56 |
| Credit Card Free Form Recharge             | SMF         | 2011-01-18 23:17:56 |
| Data Call                                  | SMF         | 2011-01-18 23:17:57 |
| Event Charge                               | SMF         | 2011-01-18 23:17:56 |
| Expiration                                 | SMF         | 2011-01-18 23:17:56 |
| Free Form Recharge                         | SMF         | 2011-01-18 23:17:56 |
| Friends and Family Changes                 | SMF         | 2011-01-18 23:17:57 |
| OSA CHAM Direct Amount                     | SMF         | 2011-01-18 23:17:57 |
| OSA CHAM Direct Named Events               | SMF         | 2011-01-18 23:17:57 |
| OSA CHAM Direct Seconds                    | SMF         | 2011-01-18 23:17:57 |
| OSA CHAM Reservation Amount                | SMF         | 2011-01-18 23:17:57 |
| OSA CHAM Reservation Named Events          | SMF         | 2011-01-18 23:17:57 |
| OSA CHAM Reservation Seconds               | SMF         | 2011-01-18 23:17:57 |
| Operator Update                            | SMF         | 2011-01-18 23:17:56 |
| PTS - Billing Event                        | SMF         | 2011-01-18 23:17:57 |
| Periodic Charging State                    | SMF         | 2011-01-18 23:17:57 |
| Periodic Recharge                          | SMF         | 2011-01-18 23:17:57 |
| Prepaid Data                               | SMF         | 2011-01-18 23:17:57 |
| Product Type Swap                          | SMF         | 2011-01-18 23:17:57 |
| Recharge                                   | SMF         | 2011-01-18 23:17:56 |
| Regular Call                               | SMF         | 2011-01-18 23:17:56 |
| Rewards                                    | SMF         | 2011-01-18 23:17:57 |
| Roaming Call                               | SMF         | 2011-01-18 23:17:56 |
| Setting Disable Incoming Calls while Ro... | SMF         | 2011-01-18 23:17:57 |
| Short Message Named Event                  | SMF         | 2011-01-18 23:17:57 |
| Short Message Tariffed                     | SMF         | 2011-01-18 23:17:57 |
| Video Call                                 | SMF         | 2011-01-18 23:17:57 |

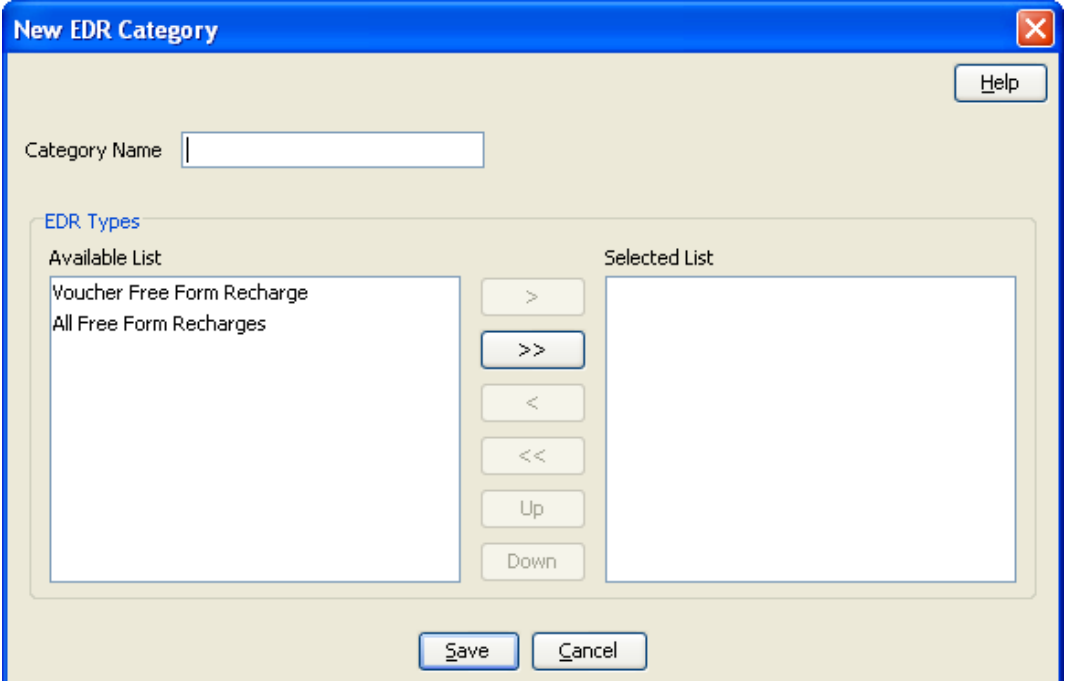
New Edit Delete Close

## Adding EDR categories

Follow these steps to add a new EDR category.

| Step | Action                                                                                   |
|------|------------------------------------------------------------------------------------------|
| 1    | In the EDR Management screen, select the <b>Service Provider</b> from the drop down box. |
| 2    | On EDR Category tab, click <b>New</b> .                                                  |
|      | <b>Result:</b> You see the New EDR Category screen.                                      |



| Step                                                                               | Action |
|------------------------------------------------------------------------------------|--------|
|  |        |

3 In the **Category Name** field, type a unique name for this EDR category.

4 From the **Available List** field, select an EDR type to add to this EDR category.

**Notes:**

- The Available List is populated by the entries in the EDR Types tab.
- It will display any EDR type which has not been used for any other EDR category.

5 Click **>**.

**Result:** The EDR type highlighted in step 4 will be moved to the **Selected** list.

**Note:** To move all EDR types to the Selected List, click **>>**.

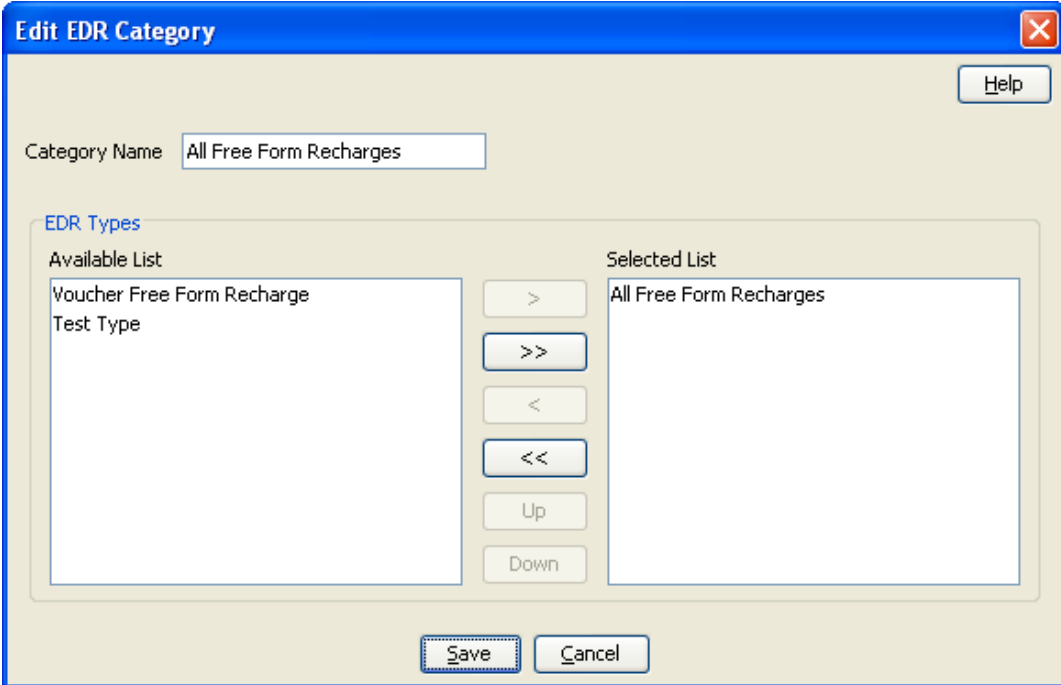
6 Repeat steps 4 and 5 until you have moved all the EDR types which should be part of this EDR category are in the Selected List.

7 Click **Save**.

## Editing EDR categories

Follow these steps to edit an existing EDR category.

| Step | Action                                                                                   |
|------|------------------------------------------------------------------------------------------|
| 1    | In the EDR Management screen, select the <b>Service Provider</b> from the drop down box. |
| 2    | On the EDR Categories tab, select the EDR category you want to edit.                     |
| 3    | Click <b>Edit</b> .                                                                      |
|      | <b>Result:</b> You see the Edit EDR Category screen.                                     |

| Step                                                                               | Action |
|------------------------------------------------------------------------------------|--------|
|  |        |

4 Add any new EDR types to this EDR category as described in *Adding EDR categories* (on page 610).

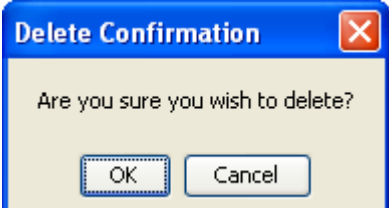
5 If you want to remove any EDR types from this EDR category, select it from the Selected List and click <.

**Note:** To remove all EDR types from the list, click <<.

6 Click **Save**.

## Deleting EDR categories

Follow these steps to delete an existing EDR category.

| Step                                                                                | Action                                                                                   |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------|
| 1                                                                                   | In the EDR Management screen, select the <b>Service Provider</b> from the drop down box. |
| 2                                                                                   | On the EDR Categories tab, select the EDR category you want to delete.                   |
| 3                                                                                   | Click <b>Delete</b> .<br><b>Result:</b> A Delete confirmation prompt appears.            |
|  |                                                                                          |

4 Click **OK**.

**Result:** The EDR category is deleted and the EDR Categories prompt appears.

| Step | Action                                                                                                       |
|------|--------------------------------------------------------------------------------------------------------------|
| 5    | <div>Click <b>OK</b>.</div> |

## EDR Elements

### Introduction

This screen enables you to add, modify or delete EDR elements. EDR elements define how data is handled in the graphic elements on the EDR Details for Subscriber screen. They are reusable and are used to define EDR templates.

**Note:** The standard CCS EDR elements are configured on installation.

## EDR Elements tab

Here is an example EDR Elements tab.

Service Provider: DCNCCtemplate

EDR Elements

| Name                       | Field Type            | EDR Tag                               | Display Masked |
|----------------------------|-----------------------|---------------------------------------|----------------|
| Bad Pins                   | CDR Text Field        | BAD_PINS                              |                |
| Balance Costs              | Balances Table        | BALANCE_TYPES,BALANCES,COSTS          |                |
| Balance Costs and Expiries | Balances Table        | BALANCE_TYPES,BALANCES,COSTS,OLD_B... |                |
| Balance Names              | CDR Text Field        | BALANCE_NAMES                         |                |
| Barred List Type           | CDR Text Field        | BARRED_LIST_TYPE                      |                |
| Bonus                      | General Table         | RELOAD_BONUS,RELOAD_BONUS_AMOUN...    |                |
| CLI                        | CLI Table             | CLI                                   |                |
| Call Duration              | CDR Text Field        | DURATION                              |                |
| Call End Time              | Date Field            | TCE                                   |                |
| Call Start Time            | Date Field            | TCS                                   |                |
| Call Status                | Call Status Field     | CS                                    |                |
| Called Number              | CDR Text Field        | CALLED_NUMBER                         |                |
| Calling Party              | CDR Text Field        | CALLING_PARTY                         |                |
| Cascade Id                 | CDR Text Field        | CASCADE_ID                            |                |
| Change Reason              | Scrollable Text Field | REASON                                |                |
| Changed Tags               | Profile Changed T...  | CHANGED_TAGS                          |                |
| Charged Call Duration      | CDR Text Field        | DURATION_CHARGE                       |                |
| Closed User Group          | CDR Text Field        | CUG_NAME                              |                |
| Control Plan               | CDR Text Field        | CONTROL_PLAN                          |                |
| Credit Transfer Name       | CDR Text Field        | CT_NAME                               |                |
| Credit Transfer Type       | CDR Text Field        | CT_TYPE                               |                |
| Cross Balance Cascade Id   | CBTD Cascade Ta...    | CBTD_CASCADE_ID                       |                |
| Cross Balance Costs        | Cross Balance Table   | CBTD_BALANCE_TYPES,CBTD_BALANCES,...  |                |
| Deleted Balance            | CDR Text Field        | DELETED_BALANCE                       |                |
| Destination                | CDR Text Field        | DESTINATION                           |                |
| Discount                   | Discount Field        | DISCOUNT                              |                |
| Discount Type              | CDR Text Field        | DISCOUNT_TYPE                         |                |
| End Call Reason            | CDR Text Field        | END_CALL_REASON                       |                |
| Event Class                | CDR Text Field        | EVENT_CLASS                           |                |

Buttons: New, Edit, Delete, Close

## Adding EDR elements

Follow these steps to add a new EDR element.

| Step | Action                                                                                   |
|------|------------------------------------------------------------------------------------------|
| 1    | In the EDR Management screen, select the <b>Service Provider</b> from the drop down box. |
| 2    | On EDR Elements tab, click <b>New</b> .                                                  |
|      | <b>Result:</b> You see the New EDR Element screen.                                       |

**Step****Action**

- 3 In the **Element Name** field, type a unique name for this EDR element. This string will be used as the field name for this element in the EDR Details for Subscriber screen.
- 4 From the **Field Type** list, select the type of EDR field this element will correlate to.
- 5 If you selected a text field type from the **Field Type** list, enter the tag from the EDR in the **EDR Tag** field. This string must match the name of a field in an EDR exactly.  
For more information about the fields included in EDRs, see *EDR Definitions Operations Guide*.
- 6 If you would like to mask the field for users who do not have permission to view the content, select the Display Masked checkbox.
- 7 If you selected a table field type from the Field Type drop down list, complete the EDR Tags table as described in *Adding EDR Tag entries* (on page 616).
- 8 Click **Save**.

## Editing EDR elements

Follow these steps to edit an existing EDR element.

**Step****Action**

- 1 In the EDR Management screen, select the **Service Provider** from the drop down box.
- 2 On the EDR Elements tab, select the EDR element you want to edit.
- 3 Click **Edit**.  
**Result:** You see the Edit EDR Element screen.

| Step | Action |
|------|--------|
|------|--------|

- 4 Edit the details as described in Adding EDR elements.
- 5 Click **Save**.

## Deleting EDR elements

Follow these steps to delete an existing EDR element.

| Step | Action |
|------|--------|
|------|--------|

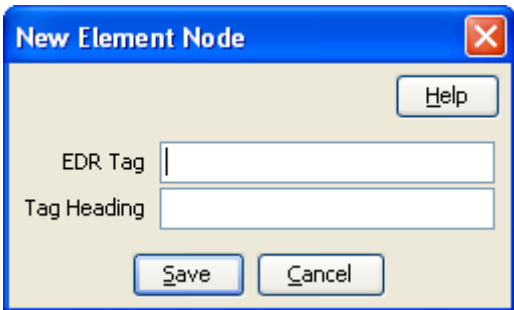
- 1 In the EDR Management screen, select the **Service Provider** from the drop down box.
- 2 On the EDR Elements tab, select the EDR element you want to delete.
- 3 Click **Delete**.  
**Result:** A Delete confirmation prompt appears.
- 4 Click **OK**.  
**Result:** The EDR element is deleted and the EDR Elements prompt appears.
- 5 Click **OK**.

## Adding EDR Tag entries

Follow these steps to add a new record to the EDR Tags table.

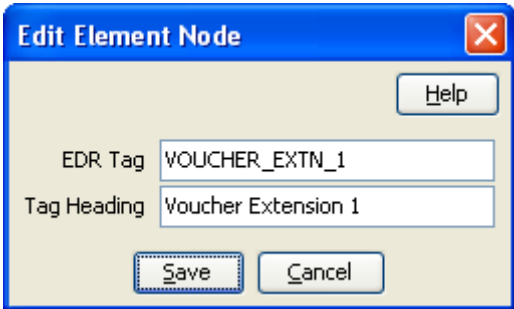
| Step | Action |
|------|--------|
|------|--------|

- 1 In the New EDR Element screen or the Edit EDR Element screen, click **New** in the EDR Tags area.  
**Result:** The New Element Node screen will appear.

| Step | Action                                                                                                                                                                                                                                        |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|      |                                                                                                                                                              |
| 2    | <p>In the <b>EDR Tag</b> field, enter the tag from the EDR. This string must match the name of a field in an EDR exactly.</p> <p>For more information about the fields which appear in EDRs, see <i>EDR Definitions Operations Guide</i>.</p> |
| 3    | <p>In the <b>Tag Heading</b> field, enter the name of the column this tag's details will appear under in the EDR Details for Subscriber screen.</p>                                                                                           |
| 4    | <p>Click <b>Save</b>.</p> <p><b>Result:</b> The EDR element node will be added to the EDR Tags table in the New EDR Element screen.</p>                                                                                                       |

## Editing EDR Tag entries

Follow these steps to add a new record to the EDR Tags table.

| Step | Action                                                                                                                                                                                                                                                                                                       |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the New EDR Element screen or the Edit EDR Element screen, select the EDR tag you want to edit from the EDR Tags table, and click <b>Edit</b>.</p> <p><b>Result:</b> The Edit Element Node screen will appear.</p>  |
| 2    | <p>Edit the fields as described in <i>Adding EDR Tag entries</i> (on page 616).</p>                                                                                                                                                                                                                          |
| 3    | <p>Click <b>Save</b>.</p>                                                                                                                                                                                                                                                                                    |

## Deleting EDR Tag entries

Follow these steps to add a new EDR element.

| Step | Action                                                                                                                                                                                                                         |
|------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | <p>In the New EDR Element screen or the Edit EDR Element screen, select the EDR tag you want to delete from the EDR Tags table, and click <b>Delete</b>.</p> <p><b>Result:</b> The Delete Confirmation prompt will appear.</p> |

| Step | Action            |
|------|-------------------|
| 2    | Click <b>OK</b> . |

## EDR Templates

### Introduction

This screen enables you to add, modify or delete EDR templates. EDR templates are used on the EDR Details for Subscriber screen to display the information in the EDR.

**Note:** The standard CCS EDR templates are configured on installation.



## EDR Templates tab

Here is an example **EDR Templates** tab.

EDR Management

Service Provider: Boss

EDR Templates

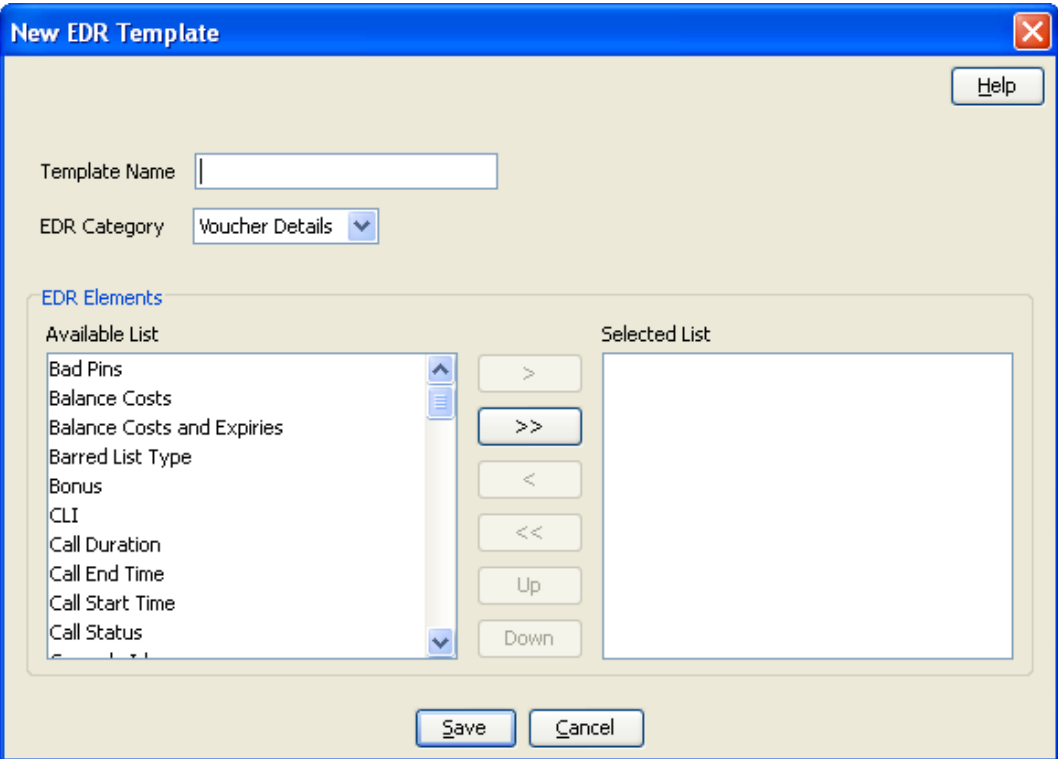
| Name                                       | Category              | Change User | Change    |
|--------------------------------------------|-----------------------|-------------|-----------|
| Amount Charge                              | Amount Charge         | SMF         | 2011-01-2 |
| Bad Pin                                    | Bad Pin               | SMF         | 2011-01-2 |
| Call Barring Changes                       | Call Barring Chan...  | SMF         | 2011-01-2 |
| Control Plan Service Invoke                | Control Plan Servi... | SMF         | 2011-01-2 |
| Credit Card Free Form Recharge             | Credit Card Free ...  | SMF         | 2011-01-2 |
| Data Call                                  | Data Call             | SMF         | 2011-01-2 |
| Event Charge                               | Event Charge          | SMF         | 2011-01-2 |
| Expiration                                 | Expiration            | SMF         | 2011-01-2 |
| Free Form Recharge                         | Free Form Recha...    | SMF         | 2011-01-2 |
| Friends and Family Changes                 | Friends and Famil...  | SMF         | 2011-01-2 |
| OSA CHAM Direct Amount                     | OSA CHAM Direct...    | SMF         | 2011-01-2 |
| OSA CHAM Direct Named Events               | OSA CHAM Direct...    | SMF         | 2011-01-2 |
| OSA CHAM Direct Seconds                    | OSA CHAM Direct...    | SMF         | 2011-01-2 |
| OSA CHAM Reservation Amount                | OSA CHAM Reser...     | SMF         | 2011-01-2 |
| OSA CHAM Reservation Named Events          | OSA CHAM Reser...     | SMF         | 2011-01-2 |
| OSA CHAM Reservation Seconds               | OSA CHAM Reser...     | SMF         | 2011-01-2 |
| Operator Update                            | Operator Update       | SMF         | 2011-01-2 |
| PTS - Billing Event                        | PTS - Billing Event   | SMF         | 2011-01-2 |
| Periodic Charging State                    | Periodic Charging...  | SMF         | 2011-01-2 |
| Periodic Recharge                          | Periodic Recharge     | SMF         | 2011-01-2 |
| Prepaid Data                               | Prepaid Data          | SMF         | 2011-01-2 |
| Product Type Swap                          | Product Type Swap     | SMF         | 2011-01-2 |
| Recharge                                   | Recharge              | SMF         | 2011-01-2 |
| Regular Call                               | Regular Call          | SMF         | 2011-01-2 |
| Rewards                                    | Rewards               | SMF         | 2011-01-2 |
| Roaming Call                               | Roaming Call          | SMF         | 2011-01-2 |
| Setting Disable Incoming Calls while Ro... | Setting Disable In... | SMF         | 2011-01-2 |
| Short Message Named Event                  | Short Message N...    | SMF         | 2011-01-2 |
| Short Message Tariffed                     | Short Message T...    | SMF         | 2011-01-2 |

New Edit Delete Close

## Adding EDR templates

Follow these steps to add a new EDR template.

| Step                                                     | Action                                                                                    |
|----------------------------------------------------------|-------------------------------------------------------------------------------------------|
| 1                                                        | In the EDR Management screen, select the service provider from the Service Provider List. |
| 2                                                        | On <b>EDR Templates</b> tab, click <b>New</b> .                                           |
| <b>Result:</b> The New EDR Template screen is displayed. |                                                                                           |

| Step                                                                               | Action |
|------------------------------------------------------------------------------------|--------|
|  |        |

- 3 In the **Template Name** field, type a unique name for this template.
- 4 From the **EDR Category** list, select the category EDRs with this template should be associated with.
- 5 From the **Available List** field, select an EDR element you want to display in this template and click **>**.

**Note:** To use all the EDR elements in the Available List, click **>>**.

- 6 The display order of the elements in the Selected List is used to set the order in which the fields appear in the View EDRs for Subscriber screen.  
To change the display order for an element in the Selected List, select the element you want to move, and click the **Up** or **Down** button.
- 7 Click **Save**.

## Example template

These two screens show an EDR template, and the EDR Details screen using that EDR template.

**Edit EDR Template**

Help

Template Name

EDR Category

**EDR Elements**

| Available List   |      | Selected List              |
|------------------|------|----------------------------|
| Bad Pins         | >    | Operator Name              |
| Balance Costs    | >>   | Wallet Type                |
| Balance Names    | <    | Record Date                |
| Barred List Type | <<   | Balance Costs and Expiries |
| Bonus            | Up   | Product Type               |
| CLI              | Down | Previous State             |
| Call Duration    |      | New State                  |
| Call End Time    |      | Old Wallet Expiry          |
| Call Start Time  |      | New Wallet Expiry          |
| Call Status      |      | Pi Identification          |

Save Cancel

EDR Details for Subscriber 1234

Help

EDR Details

EDR Type: Operator Update Display Currency: EUR

Operator Name: SU

Wallet Type:

Record Date: 2014-02-21 11:05:24

Balance Costs and Expiries

| Balance Name     | Original Value | Cost  | Old Expiry Date | New Expi |
|------------------|----------------|-------|-----------------|----------|
| Bad Pin          | 0              | 0     |                 |          |
| Data             | 0              | 0     |                 |          |
| Free SMS         | 0              | 0     |                 |          |
| General Cash     | 0.00           | -5.00 |                 |          |
| Monthly Exp      | 0.00           | 0.00  |                 |          |
| Promotional Cash | 0.00           | 0.00  |                 |          |
| Wallet Exp       | 0.00           | 0.00  |                 |          |
| Yearly Exp       | 0.00           | 0.00  |                 |          |

Product Type: Bronze

Previous State:

New State: Pre-use

Old Wallet Expiry:

New Wallet Expiry: Never Expires

Pi Identification:

Subscriber IDs: 1234

Change Reason:

Close

## Editing EDR templates

Follow these steps to edit an existing EDR template.

- | Step | Action                                                                                   |
|------|------------------------------------------------------------------------------------------|
| 1    | In the EDR Management screen, select the <b>Service Provider</b> from the drop down box. |
| 2    | On the <b>EDR Templates</b> tab, select the EDR template you want to edit.               |
| 3    | Click <b>Edit</b> .                                                                      |
- Result:** You see the Edit EDR Template screen.

| Step | Action |
|------|--------|
|      |        |

- 4 Edit the details as described in *Adding EDR templates* (on page 619).
- 5 If you want to remove any EDR elements from this EDR template, select it from the Selected List and click <.

**Note:** To remove all EDR elements from the list, click <<.

- 6 Click **Save**.

## Deleting EDR templates

Follow these steps to delete an existing EDR template.

| Step | Action                                                                                                |
|------|-------------------------------------------------------------------------------------------------------|
| 1    | In the EDR Management screen, select the <b>Service Provider</b> from the drop down box.              |
| 2    | On the EDR Templates tab, select the EDR template you want to delete.                                 |
| 3    | Click <b>Delete</b> .<br><b>Result:</b> A Delete confirmation prompt appears.                         |
| 4    | Click <b>OK</b> .<br><b>Result:</b> The EDR template is deleted and the EDR Templates prompt appears. |
| 5    | Click <b>OK</b> .                                                                                     |

## EDR Viewer Columns

### Introduction

The EDR Viewer Columns tab enables you to edit the list of optional EDR fields that you can display in the EDR Viewer in addition to the standard fields that are displayed for each type of EDR. You access the EDR Viewer from the Edit Subscriber screen.

### EDR Viewer Columns tab

Here is an example **EDR Viewer Columns** tab.

EDR Management

Service Provider:  Help

EDR Types | EDR Categories | EDR Elements | EDR Templates | **EDR Viewer Columns**

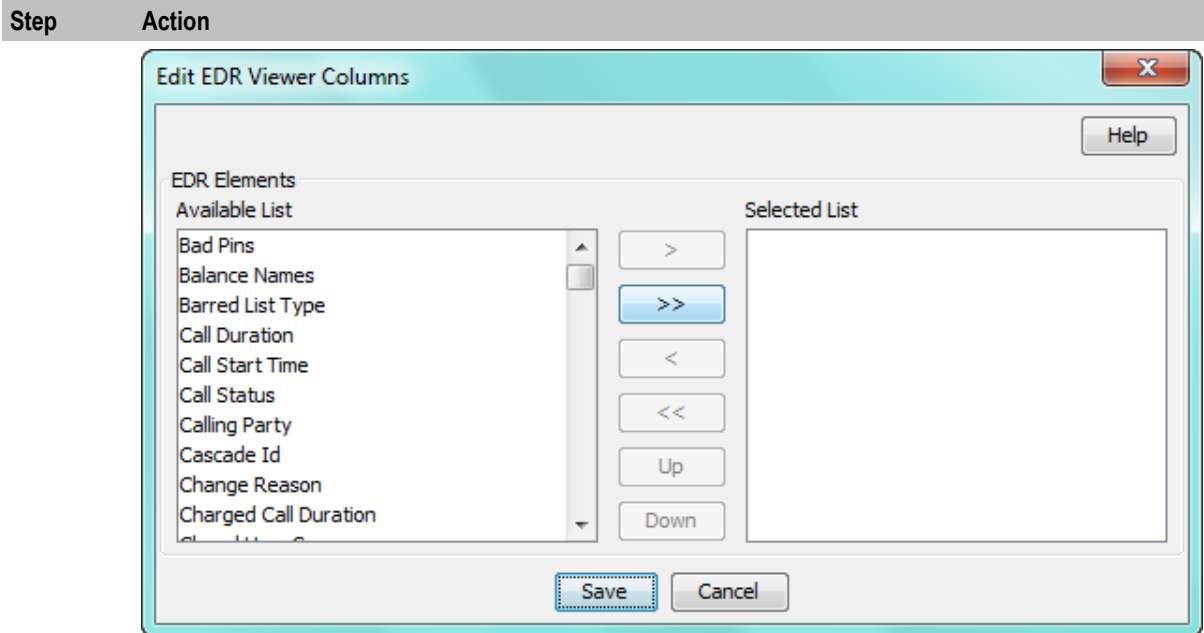
| Column Name   | Change User | Change Date         |
|---------------|-------------|---------------------|
| Balance Names | SU          | 2014-05-06 10:18:00 |
| Call Duration | SU          | 2014-05-06 10:18:00 |
| Calling Party | SU          | 2014-05-06 10:18:00 |
| Called Number | SU          | 2014-05-06 10:18:00 |
| Control Plan  | SU          | 2014-05-06 10:18:00 |

Edit Close

### Editing optional EDR columns for display in the EDR Viewer

Follow these steps to edit the list of additional EDR elements that you can display in the EDR Viewer.

| Step | Action                                                                                                                                                                      |
|------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1    | In the EDR Management screen, select the service provider from the Service Provider List.                                                                                   |
| 2    | On the <b>EDR Viewer Columns</b> tab, click <b>Edit</b> .<br><b>Result:</b> The Edit EDR Viewer Columns screen dialog opens and displays a predefined list of EDR elements. |



- 3 Select each EDR element that you want to display in the EDR Viewer from the **Available List** in turn and move it to the **Selected List** by clicking **>**.

**Note:** To use all the EDR elements in the **Available List**, click **>>**. To remove an EDR element from the Selected List click **<**, or click **<<** to remove all the selected EDR elements

- 4 The display order of the elements in the **Selected List** is used to set the order in which the fields appear in the EDR Viewer.  
To change the display order for an element in the **Selected List**, select the element you want to move, and click the **Up** or **Down** button.
- 5 Click **Save**.





# CCS Reports

## Overview

### Introduction

This chapter explains how to perform CCS reports.

### In this chapter

---

This chapter contains the following topics.

|                           |     |
|---------------------------|-----|
| Running CCS Reports ..... | 627 |
| CCS Reports .....         | 629 |

## Running CCS Reports

### Introduction

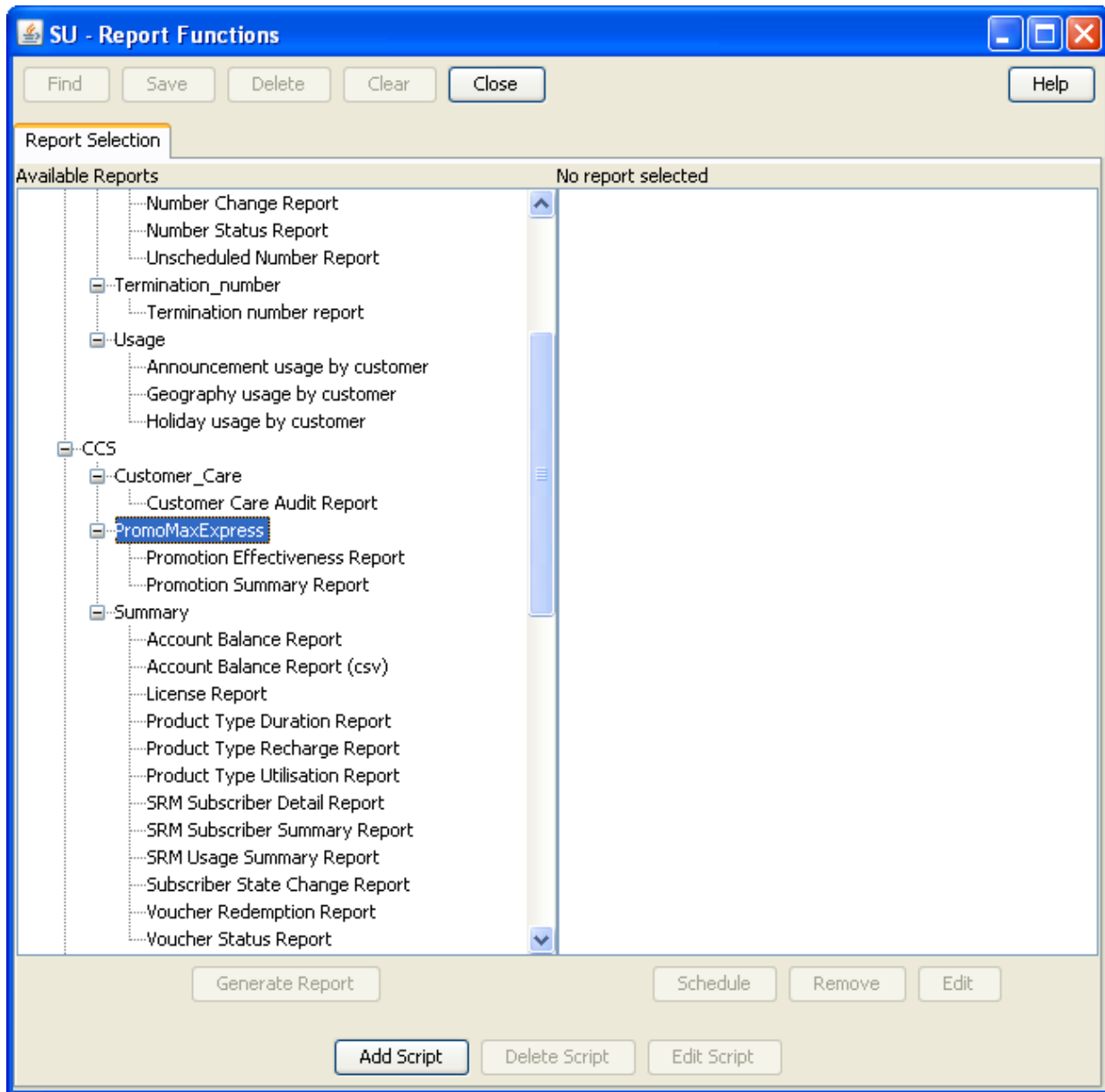
CCS provides a series of reports which enable operators to report on system activity. These reports are managed and run using the **Reports Function** screen.

### Accessing the Report Functions menu

For instructions about how to access the Report Functions menu and how to use the reporting options, refer to the The Report Functions chapter in the *SMS User's Guide*.

## Report Functions screen

CCS Reports are listed on the Report Functions screen under the CCS branch of the Available Reports tree.



## Date ranges

The following EDR-based reports all have start and end date parameters:

- Product Type Utilisation
- Product Type Duration
- Product Type Recharge
- Reward Application Report
- Subscriber State Change
- Voucher Redemption

The start date specifies the beginning of the date range and is inclusive.

The end date specifies the end of the date range and is exclusive.

For example, 1/3/2006 – 1/4/2006 will include all EDRs in March, but none from April.

Date formats can be one of the following:

- YYYYMMDD
- Relative dates

## Relative dates

To schedule periodic reports, a date range relative to the current date can be specified by using one of the following formats:

- 9991MMDD  
MM and DD specify a number of months and days to go back from today's date
- 9992MMDD  
MM and DD specify a number of months and days to go back from the start of the current month

## Examples

Daily report: To report on the previous day:

- Start date: 99910001
- End date: 99910000

Weekly report: To report on the previous week:

- Start date: 99910007
- End date: 99910000

Monthly report: To report on the previous month:

- Start date: 99920100
- End date: 99920000

# CCS Reports

## Unit values all reports

For any reports:

- Monetary values are reported in system major currency; for example, US \$1.10 is reported as **1.10** where the currency base is 100 and the number of decimal places is 2.
- Dates are reported in YYYYMMDDHHMMSS format.
- Time values are reported in hundredths of seconds (1/100 seconds).
- SMS values are reported in numbers of SMS messages.

**Note:** Time values are stored in the database in hundredths of seconds, however, the PI outputs, and the UI displays time values in seconds.

## Customer Care Audit

The Customer Care Audit report provides basic reporting detailing potentially suspicious account activity based around user screen operations.

This report uses the following EDR types to collate the information:

- 2 Operator Update

- 3 Account Delete
- 4 Recharge
- 8 Freeform Recharge
- 9 Credit Card Recharge
- 10 Freeform Voucher
- 33 Bad PIN
- 48 Voucher Update

The Generate Report screen has several optional fields that may be used to restrict the report information.

**Notes:**

- If either the "USER" or "MSISDN" fields are provided, the "Transaction Threshold" parameter will additionally limit the reporting information to the User Agent/ specified MSISDN combinations which exceed the threshold activity limit during the reporting period for all screen initiated operations.
- If "Transaction Threshold" is specified without "USER" or "MSISDN" values then the report will report only on those User Agents/MSISDN combinations which have breached the threshold activity limit during the reporting period.
- If the "Terminal" parameter is specified then the report will be based on values for the terminal whose ip address is specified. The ip address can include wildcards.
- The optional parameters may be used in any combination to generate the required report.
- The report will collate the results and group by User Agent and then MSISDN.
- The report may be run multiple times in parallel with various parameter combinations.
- If scheduling the report it will be possible to specify the period of the report without setting dates (for example: last 2 months, last 2 weeks).
- If there is no activity for a User Agent then the User Agent will not be reported upon.

**Report example 1**

**Customer Care Report with optional MSISDN set.**

PrePaid Charging - Customer Care Audit Report  
 =====  
 Reporting Period: January 2008 - January 2008

User Agent : All  
 MSISDN : 441234567890  
 Threshold : 0

JANUARY 2008

USER: ACS\_ADMIN

| MSISDN<br>===== | All<br>===== | Standard<br>===== | Adjustments<br>===== | Reversals<br>===== |
|-----------------|--------------|-------------------|----------------------|--------------------|
| 441234567890    | 1            | 0                 | 0                    | 0                  |
| -----           | -----        | -----             | -----                | -----              |
| Sub-total:      | 1            | 0                 | 0                    | 0                  |

USER: ADMINISTRATOR

| MSISDN<br>===== | All<br>===== | Standard<br>===== | Adjustments<br>===== | Reversals<br>===== |
|-----------------|--------------|-------------------|----------------------|--------------------|
| 441234567890    | 0            | 1                 | 1                    | 0                  |
| -----           | -----        | -----             | -----                | -----              |
| Sub-total:      | 0            | 1                 | 1                    | 0                  |

USER: ALEX

| MSISDN       | All   | Standard | Adjustments | Reversals |
|--------------|-------|----------|-------------|-----------|
| =====        | ===== | =====    | =====       | =====     |
| 441234567890 | 0     | 0        | 0           | 0         |
| -----        | ----- | -----    | -----       | -----     |
| Sub-total:   | 0     | 0        | 0           | 0         |

USER: CCS\_ADMIN

| MSISDN       | All   | Standard | Adjustments | Reversals |
|--------------|-------|----------|-------------|-----------|
| =====        | ===== | =====    | =====       | =====     |
| 441234567890 | 0     | 0        | 0           | 1         |
| -----        | ----- | -----    | -----       | -----     |
| Sub-total:   | 0     | 0        | 0           | 1         |

|        |       |       |       |       |
|--------|-------|-------|-------|-------|
| =====  | ===== | ===== | ===== | ===== |
| Total: | 1     | 1     | 1     | 1     |

## Report example 2

### Customer Care Report with no optional parameters set.

PrePaid Charging - Customer Care Audit Report

=====

Reporting Period: 2 January 2008 - 3 January 2008

User Agent : All  
 MSISDN : All  
 Threshold : 0

JANUARY 2008

USER: ACS\_ADMIN

| MSISDN       | All   | Standard | Adjustments | Reversals |
|--------------|-------|----------|-------------|-----------|
| =====        | ===== | =====    | =====       | =====     |
| 441234567890 | 3     | 0        | 0           | 0         |
| 441234567891 | 0     | 2        | 0           | 0         |
| 441234567892 | 8     | 0        | 2           | 0         |
| 441234567893 | 7     | 0        | 1           | 2         |
| -----        | ----- | -----    | -----       | -----     |
| Sub-total:   | 18    | 2        | 3           | 2         |

USER: ADMINISTRATOR

| MSISDN       | All   | Standard | Adjustments | Reversals |
|--------------|-------|----------|-------------|-----------|
| =====        | ===== | =====    | =====       | =====     |
| 441234567890 | 0     | 0        | 0           | 4         |
| 441234567894 | 0     | 0        | 2           | 0         |
| -----        | ----- | -----    | -----       | -----     |
| Sub-total:   | 0     | 0        | 2           | 4         |

|        |       |       |       |       |
|--------|-------|-------|-------|-------|
| =====  | ===== | ===== | ===== | ===== |
| Total: | 18    | 2     | 5     | 6     |

## Report example 3

### Customer Care Report with optional Terminal set.

PrePaid Charging - Customer Care Audit Report

=====

Reporting Period: 1 January 2008 - 31 January 2008

User Agent : All  
 MSISDN : All  
 Threshold : 0  
 Terminal : 192.168.24.57

JANUARY 2008

User Agent : SU

Terminal : 192.168.24.57

| MSISDN          | All   | Standard | Adjustments | Reversals |
|-----------------|-------|----------|-------------|-----------|
| =====           | ===== | =====    | =====       | =====     |
| 3214123         | 1     | 1        | 0           | 0         |
| 448888          | 12    | 12       | 0           | 0         |
| 448889          | 1     | 1        | 0           | 0         |
| User Agent : SU |       |          |             |           |
| -----           | ----- | -----    | -----       | -----     |
| Sub-total:      | 14    | 14       | 0           | 0         |
| =====           | ===== | =====    | =====       | =====     |
| Total:          | 14    | 14       | 0           | 0         |

## Promotion Effectiveness Report

This Promotion Effectiveness Report provides statistics on the effectiveness of promotion within the group of affected subscribers (subscribers that received promotion).

Promotion effectiveness is computed by comparing the number of subscribers eligible for the promotion to the number of subscribers who received the promotion.

The effectiveness report includes the following information:

- Promotion name
- Number of subscribers eligible for promotion, calculated when report is run.
- Number of subscribers who received a reward from the promotion, calculated when the report is run.
- Percentage figure indicating the effectiveness.

### Example

Prepaid Charging - Promotion Effectiveness Report

=====

Reporting Period: 1 January 2009 - 1 January 2009

JANUARY 2009

Service Name: Boss

=====

| Promotion Name | Eligible Subscribers | Promotions Applied |
|----------------|----------------------|--------------------|
| Effectiveness  |                      |                    |

-----

|                                     |    |   |
|-------------------------------------|----|---|
| Monthly >10 Reward then Gen Cash +1 | 90 | 0 |
| 0 %                                 |    |   |
| Monthly > 20 then Gen cash +1-50    | 90 | 0 |
| 0 %                                 |    |   |
| sanity test                         | 90 | 0 |
| 0 %                                 |    |   |
| MJH_Reward                          | 90 | 0 |
| 0 %                                 |    |   |
| SL Reward 01                        | 90 | 0 |
| 0 %                                 |    |   |
| SL Reward 02                        | 90 | 0 |
| 0 %                                 |    |   |
| test reward                         | 90 | 0 |
| 0 %                                 |    |   |
| SL Test                             | 90 | 0 |
| 0 %                                 |    |   |
| TP_Promol                           | 90 | 0 |
| 0 %                                 |    |   |
| SL Test 2                           | 90 | 0 |
| 0 %                                 |    |   |
| SL Test ME 10                       | 90 | 0 |
| 0 %                                 |    |   |
| SL Test ME 20                       | 90 | 0 |
| 0 %                                 |    |   |

|                       |    |   |
|-----------------------|----|---|
| Tony1                 | 90 | 0 |
| 0 %                   |    |   |
| testmbv-21            | 90 | 0 |
| 0 %                   |    |   |
| Activation Credit-106 | 90 | 0 |
| 0 %                   |    |   |
| MJH_11-21             | 90 | 0 |
| 0 %                   |    |   |
| act test-83           | 90 | 0 |
| 0 %                   |    |   |
| Daily Start 21 Expiry | 90 | 0 |
| 0 %                   |    |   |

Service Name: MigrationSP

=====

| Promotion Name | Eligible Subscribers | Promotions Applied |
|----------------|----------------------|--------------------|
| Effectiveness  |                      |                    |

-----

|                                |   |   |
|--------------------------------|---|---|
| SL Test 04 with Reward Product | 2 | 0 |
| 0 %                            |   |   |
| MIG_Daily_EXP_010              | 2 | 0 |
| 0 %                            |   |   |
| MIG_BV010                      | 2 | 0 |
| 0 %                            |   |   |
| MIG_BV0101                     | 2 | 0 |
| 0 %                            |   |   |
| MIG_BV0102                     | 2 | 0 |
| 0 %                            |   |   |
| MIG_BV0103                     | 2 | 0 |
| 0 %                            |   |   |
| MIG_BV0104                     | 2 | 0 |
| 0 %                            |   |   |
| MIG_BV020                      | 2 | 0 |
| 0 %                            |   |   |
| MIG_BV0201                     | 2 | 0 |
| 0 %                            |   |   |
| MIG_BV0202                     | 2 | 0 |
| 0 %                            |   |   |
| SL Test                        | 2 | 0 |
| 0 %                            |   |   |
| SL Test1                       | 2 | 0 |
| 0 %                            |   |   |
| SL Test2                       | 2 | 0 |
| 0 %                            |   |   |
| MIG_Daily_Time_RTR_020         | 2 | 0 |
| 0 %                            |   |   |
| MIG_Wallet_SMS_RTR_030         | 2 | 0 |
| 0 %                            |   |   |
| MIG_Act_4-109                  | 2 | 0 |
| 0 %                            |   |   |
| MIG_Act_1-108                  | 2 | 0 |
| 0 %                            |   |   |
| MIG_Act_2-108                  | 2 | 0 |
| 0 %                            |   |   |
| MIG_Act_3-108                  | 2 | 0 |
| 0 %                            |   |   |
| MIG_Credit_4-1564              | 2 | 0 |
| 0 %                            |   |   |
| MIG_Credit_1-1567              | 2 | 0 |
| 0 %                            |   |   |
| MIG_Credit_2-1567              | 2 | 0 |
| 0 %                            |   |   |
| MIG_Credit_3 -1567             | 2 | 0 |
| 0 %                            |   |   |
| test01                         | 2 | 0 |
| 0 %                            |   |   |

## Promotion Summary Report

The Promotion Summary Report provides promotion information over a specified period.

The summary report includes the following information:

- Promotion name
- Promotion status (Active or Inactive)
- Promotion global limited liability status (Unset, Eligible, Not Eligible)
- Promotion start date
- Promotion end date
- Total number of promotion rewards applied for the current promotion, calculated when the report is run.
- Total value of multi-balance rewards applied for the current promotion, calculated when the report is run.
- Total number of product type swaps for the current promotion, calculated when the report is run.

### Example

Prepaid Charging - Promotion Summary Report

Reporting Period: 1 January 2009 - 1 January 2009

JANUARY 2009

Service Name: Boss

| Promotion Name                      | Active   | GLL Status | Start Date     | End  |
|-------------------------------------|----------|------------|----------------|------|
| Date Num Promos Value Prod Swaps    |          |            |                |      |
| Monthly >10 Reward then Gen Cash +1 | Inactive | Unset      | 20091026000000 |      |
| 20101026000000 0 0 0                |          |            |                |      |
| Monthly > 20 then Gen cash +1-50    | Inactive | Unset      | 20090926000000 |      |
| 20091224000000 0 0 0                |          |            |                |      |
| sanity test                         | Inactive | Unset      | 20091124000000 |      |
| 20091224000000 0 0 0                |          |            |                |      |
| MJH_Reward                          | Inactive | Unset      | 20090820000000 |      |
| 20091120000000 0 0 0                |          |            |                |      |
| SL Reward 01                        | Inactive | Unset      | 20081028000000 |      |
| 20101028000000 0 0 0                |          |            |                |      |
| SL Reward 02                        | Inactive | Unset      | 20081028000000 |      |
| 20101028000000 0 0 0                |          |            |                |      |
| test reward                         | Inactive | Unset      | 20091028000000 |      |
| 20111028000000 0 0 0                |          |            |                |      |
| SL Test                             | Inactive | Unset      | NULL           | NULL |
| 0 0 0                               |          |            |                |      |
| TP_Promol                           | Inactive | Unset      | NULL           | NULL |
| 0 0 0                               |          |            |                |      |
| SL Test 2                           | Inactive | Unset      | NULL           | NULL |
| 0 0 0                               |          |            |                |      |
| SL Test ME 10                       | Active   | Unset      | NULL           | NULL |
| 0 0 0                               |          |            |                |      |
| SL Test ME 20                       | Active   | Unset      | NULL           | NULL |
| 0 0 0                               |          |            |                |      |
| Tony1                               | Inactive | Unset      | NULL           | NULL |
| 0 0 0                               |          |            |                |      |
| testmbv-21                          | Inactive | Unset      | 20090819130016 |      |
| 20090823170016 0 0 0                |          |            |                |      |
| Activation Credit-106               | Inactive | Unset      | 20081123160027 |      |
| 20101123160027 0 0 0                |          |            |                |      |
| MJH_11-21                           | Inactive | Unset      | 20091027060055 |      |
| 20101027060055 0 0 0                |          |            |                |      |
| act test-83                         | Inactive | Unset      | 20081028100016 |      |
| 20100828100016 0 0 0                |          |            |                |      |
| Daily Start 21 Expiry               | Inactive | Unset      | 20091026000000 |      |
| 20101026000000 0 0 0                |          |            |                |      |

Service Name: MigrationSP



| =====                            |        |            |                |      |  |  |  |
|----------------------------------|--------|------------|----------------|------|--|--|--|
| Promotion Name                   | Active | GLL Status | Start Date     | End  |  |  |  |
| Date Num Promos Value Prod Swaps |        |            |                |      |  |  |  |
| SL Test 04 with Reward Product   | Active | Unset      | 20091115000000 |      |  |  |  |
| 20101130000000 0 0 0             |        |            |                |      |  |  |  |
| MIG_Daily_EXP_010                | Active | Unset      | 20091015000000 |      |  |  |  |
| 20101015000000 0 0 0             |        |            |                |      |  |  |  |
| MIG_BV010                        | Active | Unset      | NULL           | NULL |  |  |  |
| 0 0 0                            |        |            |                |      |  |  |  |
| MIG_BV0101                       | Active | Unset      | NULL           | NULL |  |  |  |
| 0 0 0                            |        |            |                |      |  |  |  |
| MIG_BV0102                       | Active | Unset      | NULL           | NULL |  |  |  |
| 0 0 0                            |        |            |                |      |  |  |  |
| MIG_BV0103                       | Active | Unset      | NULL           | NULL |  |  |  |
| 0 0 0                            |        |            |                |      |  |  |  |
| MIG_BV0104                       | Active | Unset      | NULL           | NULL |  |  |  |
| 0 0 0                            |        |            |                |      |  |  |  |
| MIG_BV020                        | Active | Unset      | NULL           | NULL |  |  |  |
| 0 0 0                            |        |            |                |      |  |  |  |
| MIG_BV0201                       | Active | Unset      | NULL           | NULL |  |  |  |
| 0 0 0                            |        |            |                |      |  |  |  |
| MIG_BV0202                       | Active | Unset      | NULL           | NULL |  |  |  |
| 0 0 0                            |        |            |                |      |  |  |  |
| SL Test                          | Active | Unset      | NULL           | NULL |  |  |  |
| 0 0 0                            |        |            |                |      |  |  |  |
| SL Test1                         | Active | Unset      | NULL           | NULL |  |  |  |
| 0 0 0                            |        |            |                |      |  |  |  |
| SL Test2                         | Active | Unset      | NULL           | NULL |  |  |  |
| 0 0 0                            |        |            |                |      |  |  |  |
| MIG_Daily_Time_RTR_020           | Active | Unset      | 20091015000000 |      |  |  |  |
| 20101015000000 0 0 0             |        |            |                |      |  |  |  |
| MIG_Wallet_SMS_RTR_030           | Active | Unset      | 20091015000000 |      |  |  |  |
| 20101015000000 0 0 0             |        |            |                |      |  |  |  |
| MIG_Act_4-109                    | Active | Unset      | 20091102110031 |      |  |  |  |
| 20091128110031 0 0 0             |        |            |                |      |  |  |  |
| MIG_Act_1-108                    | Active | Unset      | 20090926110035 |      |  |  |  |
| 20100126150035 0 0 0             |        |            |                |      |  |  |  |
| MIG_Act_2-108                    | Active | Unset      | 20091026110042 |      |  |  |  |
| 20101026110042 0 0 0             |        |            |                |      |  |  |  |
| MIG_Act_3-108                    | Active | Unset      | 20091026110042 |      |  |  |  |
| 20091231230042 0 0 0             |        |            |                |      |  |  |  |
| MIG_Credit_4-1564                | Active | Unset      | 20091026110058 |      |  |  |  |
| 20101026110058 0 0 0             |        |            |                |      |  |  |  |
| MIG_Credit_1-1567                | Active | Unset      | 20091026110005 |      |  |  |  |
| 20101026110005 0 0 0             |        |            |                |      |  |  |  |
| MIG_Credit_2-1567                | Active | Unset      | 20091026110009 |      |  |  |  |
| 20101026110009 0 0 0             |        |            |                |      |  |  |  |
| MIG_Credit_3 -1567               | Active | Unset      | 20091026120000 |      |  |  |  |
| 20101026120000 0 0 0             |        |            |                |      |  |  |  |
| test01                           | Active | Unset      | 20090901000000 |      |  |  |  |
| 20100904000000 0 0 0             |        |            |                |      |  |  |  |

## Account Balance

The Account Balance report details the wallet information for each subscriber. It is ordered by Product Type and Wallet State.

The report shows the current status of wallets at the time it was run. This means you may not get the same results if the report is re-run.

**Tip:** Balances for shared wallets will be identified by enclosing the Wallet ID in square brackets [ ].

## Account Balance (csv)

The Account Balance (csv) report lists the following wallet information for each subscriber. Items in the report are comma separated:

CLI, wallet ID, product type name, wallet state, wallet expiry date, balance type name, balance value [, balance type name, balance value]

The balance type name and balance value is repeated for each balance. Values for:

- Monetary balances, are reported in system major currency; for example, US \$1.10 is reported as **1.10** where the currency base is 100 and the number of decimal places is 2.
- Time balances are reported in hundredths of seconds (1/100 seconds).
- SMS balances are reported in numbers of SMS messages; for example, the Free SMS balance would be the number of free SMS messages.

**Note:** No header or footer information is provided as this report is intended for use by third parties only.

## License

The report provides statistics on licensable elements of CCS, such as:

- throughput figures for various protocols, and
- use of specific software components.

In this report, any lines of the following format are set by the Statistics Category field in the Capability configuration:

PrePaid Charging <Type>, Protocol=<protocol>, Domain Type=<domain>

For more information about configuring these entries, see *Capability* (on page 530).

## Example

PrePaid Charging - License Report  
=====

Reporting Period: 23 August 2007 - 21 November 2007

| Service<br>-----                                       | Metric<br>----- | Value<br>----- |
|--------------------------------------------------------|-----------------|----------------|
| Universal Service Management System                    | Users           | 88784          |
| Universal Service Management System - Cluster Pack     | Users           | 0              |
| Universal Application Server                           | Users           | 88784          |
| Control Plan Editor                                    | Feature         | Enabled        |
| PrePaid Charging Subscriber Profile Manager            | Feature         | Enabled        |
| PrePaid Charging Voucher Management                    | Users           | 88784          |
| PrePaid Charging Rewards                               | Users           | 0              |
| PrePaid Charging Service Bundles                       | Users           | 88784          |
| PrePaid Charging Peer to Peer                          | Users           | 88784          |
| PrePaid Charging Data, Protocol=SMPP, Domain Type=UBE  | SMAPS           | 0              |
| PrePaid Charging Voice, Protocol=CAP3, Domain Type=UBE | CAPS            | 0              |
| PrePaid Charging Voice, Protocol=CS1, Domain Type=UBE  | CAPS            | 0              |
| PrePaid Charging Voice, Protocol=ISUP, Domain Type=UBE | CAPS            | 0              |
| USSD Self Care                                         | Users           | 0              |
| SMS Self Care                                          | Users           | 0              |

## Product Type Duration

The Product Type Duration report details the total call duration per month. This report documents the sum of the duration of inter-net (roaming) and intra-net (non-roaming) calls per month per product type.

The following EDR types are used:

- 1 Regular Call, and
- 11 Roaming Call.

**Note:** Partial EDR records may be produced for data charging when config parameter `createEDRForMidSessionCommit` is set to True. Partial EDR records are recognised by the tag and value `MID_SESSION=True`. These records are ignored for this report.

## Product Type Recharge

The Product Type Recharge report details the number and amount of voucher recharges and other types of recharges (such as credit card recharge) per month per product type per balance type. The amount for each balance type is shown in a separate column.

**Tip:** Recharges for deleted balance types are listed under "Other Balance Type".

The following EDR types are used:

- 4 Voucher Recharge
- 8 Freeform Recharge
- 9 Creditcard Recharge
- 10 Voucher Freeform Recharge
- 15 Voucher Redeem, and
- 16 Rewards.

**Note:** Partial EDR records may be produced for data charging when config parameter `createEDRForMidSessionCommit` is set to True. Partial EDR records are recognised by the tag and value `MID_SESSION=True`. These records are ignored for this report.

## Product Type Utilisation

The Product Type Utilisation report details the number of calls and notifications per month based on whether or not they are roaming.

This reports on the number of calls per month per product type for the following:

- Intra-net Calls (EDR type 1)
- Inter-net Calls (EDR type 11)
- Intra-net Notifications (EDR type 12)
- Inter-net Notifications (EDR type 13)

**Note:** Partial EDR records may be produced for data charging when config parameter `createEDRForMidSessionCommit` is set to True. Partial EDR records are recognised by the tag and value `MID_SESSION=True`. These records are ignored for this report.

## Reward Application Report

The Reward Application Report details the number of rewards by Service Provider per Product Type for the date range.

When collating the report details, totals will be generated on the service provider boundary covering all product types within the service providers.

If a Product Type does not have any rewards applied it will still be detailed within the report count, with the value set to 0.

The following EDR types are used:

- 1 Regular Call.

**Note:** Partial EDR records may be produced for data charging when config parameter `createEDRForMidSessionCommit` is set to True. Partial EDR records are recognised by the tag and value `MID_SESSION=True`. These records are ignored for this report.

## Report example

UBE WM - Reward Recharge  
=====

Reporting Period: September 2006 - September 2006

SEPTEMBER 2006

Service Name: MVNO Alpha

| Product Type | General | SMS   | Data  |
|--------------|---------|-------|-------|
| =====        | =====   | ===== | ===== |
| Bronze       | 100     | 254   | 123   |
| Silver       | 1432    | 432   | 54    |
| Gold         | 6523    | 4321  | 1432  |
| Hybrid       | 652     | 432   | 21    |
| Student      | 21      | 120   | 0     |
| =====        | =====   | ===== | ===== |
| Total        | 8728    | 5559  | 1630  |

Service Name: MVNO Beta

| Product Type | Basic Reward | Product Swap | Mixed |
|--------------|--------------|--------------|-------|
| =====        | =====        | =====        | ===== |
| Basic        | 0            | 0            | 123   |
| Executive    | 1245         | 34           | 5234  |
| =====        | =====        | =====        | ===== |
| Total        | 1245         | 34           | 5357  |

## Subscriber State Change

The Subscriber State Change report indicates the number of subscribers that changed to a particular state per product type per month. If a subscriber has moved to the new state more than once in the reporting period, then each instance will be reported.

This report has a third report parameter (after start and end dates) that provides a drop-down list for selecting the new state to be reported on.

For example, selecting **Active** as the state will generate a report showing the number of subscribers that were activated.

The following EDR types are used:

- 1 Regular Call
- 2 Operator Updates
- 3 Expiration
- 4 Voucher Recharge
- 5 Friends & Family, Friends & Destination Config Change
- 6 Direct Amount Charge
- 8 Freeform Recharge
- 11 Roaming Call
- 12 Intra-net Notifications
- 13 Inter-net Notifications
- 14 GPRS Volume/Duration Charge
- 16 Rewards
- 31 Product Type Swap
- 32 Product Type Swap
- 33 Read Secret Code
- 49 Periodic Charge

### Note:

- A subscriber may not be in the new state at the time this report is run, therefore no direct comparison with the results of this report and the current subscriber state can be made.

- Partial EDR records may be produced for data charging when config parameter **createEDRForMidSessionCommit** is set to True. Partial EDR records are recognised by the tag and value **MID\_SESSION=True**. These records are ignored for this report.

## Entering Relative Dates

Relative dates can be used in **Start Date (YYYYMMDD)** and **End Date (YYYYMMDD)** when configuring the **Generate Report 'Subscriber State Change Report'** parameters.

The fields accept a **YYYYMMDD** date format where **YYYY**, **MM**, and **DD** specify the Year, Month and Day, respectively. Setting the year as **9991** will allow you to set a relative date **MM** months and **DD** days before today. Setting the year as **9992** will allow you to set a relative date **MM** months and **DD** days before the first day of this month.

The following are some relative date input examples:

- 99910001** specifies yesterday (0 months and 1 day before today)
- 99910000** specifies today (0 months and 0 days before today)
- 99920100** specifies the first day of last month (1 month and 0 days before the first day of this month)
- 99920001** specifies the last day of last month (0 months and 1 day before the first day of this month)

## Voucher Activity

The Voucher Activity report details all user activity associated with the creation and modification of vouchers.

### Report example

This is an example Voucher Activity report with only dates set.

Voucher Activity Report  
=====

Reporting Period: 17 January 2011 - 17 February 2011

User Name: OPS\$SMF\_OPER

=====

| Date of Change          | Time of Change | Action |
|-------------------------|----------------|--------|
| Voucher Number or Range |                |        |

|                 |       |                          |
|-----------------|-------|--------------------------|
| 30-JAN-11       | 20:15 | Voucher Batch Created () |
| 1000012/1000020 |       |                          |
| 30-JAN-11       | 21:35 | Voucher Batch Created () |
| 9100000/9100100 |       |                          |
| 30-JAN-11       | 21:43 | Voucher Batch Created () |
| 9100000/9100100 |       |                          |
| 30-JAN-11       | 21:45 | Voucher Batch Created () |
| 9100000/9100100 |       |                          |
| 30-JAN-11       | 22:26 | Voucher Batch Created () |
| 8800000/8800100 |       |                          |
| 31-JAN-11       | 00:12 | Voucher Batch Created () |
| 9100000/9100100 |       |                          |
| 31-JAN-11       | 00:23 | Voucher Batch Created () |
| 8800000/8800100 |       |                          |
| 31-JAN-11       | 03:18 | Voucher Batch Created () |
| 7700000/7700100 |       |                          |
| 31-JAN-11       | 03:21 | Voucher Batch Created () |
| 7700000/7700100 |       |                          |
| 31-JAN-11       | 03:28 | Voucher Batch Created () |
| 6600000/6600100 |       |                          |

## Chapter 16

01-FEB-11 05:28 Voucher Batch Created ()  
6100000/6100100

User Name: SU

=====

| Date of Change          | Time of Change | Action |
|-------------------------|----------------|--------|
| Voucher Number or Range |                |        |

[illegible]

|             |       |                             |
|-------------|-------|-----------------------------|
| 17-FEB-11   | 04:01 | Voucher Recharged (Failure) |
| 33300017165 |       |                             |
| 17-FEB-11   | 04:02 | Voucher Recharged (Failure) |
| 33300017165 |       |                             |
| 17-FEB-11   | 04:04 | Voucher Recharged (Failure) |
| 33300053126 |       |                             |
| 17-FEB-11   | 04:08 | Voucher State Changed (A:)  |
| 3000025     |       |                             |
| 17-FEB-11   | 04:14 | Voucher Recharged (Failure) |
| 33300047331 |       |                             |
| 17-FEB-11   | 04:24 | Voucher Recharged (Failure) |
| 79790017616 |       |                             |
| 17-FEB-11   | 04:27 | Voucher Recharged (Failure) |
| 79790017616 |       |                             |

## Voucher Redemption

The Voucher Redemption report details the number of vouchers redeemed per month per product type per voucher type. It also shows totals for each Voucher Type Scenario.

The following EDR type is used:

- 15 Voucher Redeem.

### Note:

- Redemptions of deleted voucher types are listed under "Other Type".
- Partial EDR records may be produced for data charging when config parameter **createEDRForMidSessionCommit** is set to True. Partial EDR records are recognised by the tag and value **MID\_SESSION=True**. These records are ignored for this report.

## Report example

This is an example Vouchers report with only dates set.

UBE WM - Voucher Redemption Recharge

=====

Reporting Period: 1 January 2008 - 10 January 2008

JANUARY 2008

=====

Service Name: Boss

| Product Type         | Basic Recharge | Multi-Balance |
|----------------------|----------------|---------------|
| Local Product        | 46             | 39            |
| Standard Product     | 123            | 378           |
| Premium Product      | 92             | 85            |
| Premium Plus Product | 2              | 5             |
| Total:               | 243            | 507           |

Service Name: Test

| Product Type | Test Voucher |
|--------------|--------------|
| Test Product | 11           |
| Total:       | 11           |

## Voucher Status

The Voucher Status report details all vouchers in the system with details about their current state.

The generation of each report results in the creation of two files, namely a detail file and a control file. The format of the detail file is a CSV file.

## Report example

This is an example Voucher Status report CSV data imported into a spreadsheet program.

| VoucherNumber | VoucherState | VoucherRedeemingCLI | VoucherTopUpTime | VoucherBatchID | PreUseExpiryDate | VoucherType         |
|---------------|--------------|---------------------|------------------|----------------|------------------|---------------------|
| 1000000008    | R            | 888888888892        | 2805201322003200 | 81             | 2805201415001400 | \$10 Cash \$5 promo |
| 1000000001    | R            | 888888888892        | 2805201322052000 | 81             | 2805201415001400 | \$10 Cash \$5 promo |
| 1000000000    | R            | 888888888892        | 2805201322223600 | 81             | 2805201415001400 | \$10 Cash \$5 promo |
| 1000000005    | R            | 888888888892        | 2805201322414400 | 81             | 2805201415001400 | \$10 Cash \$5 promo |
| 1000000010    | R            | 888888888892        | 2805201322911100 | 81             | 2805201415001400 | \$10 Cash \$5 promo |
| 1000000003    | A            |                     |                  | 81             | 2805201415001400 | \$10 Cash \$5 promo |
| 1000000002    | A            |                     |                  | 81             | 2805201415001400 | \$10 Cash \$5 promo |
| 1000000004    | A            |                     |                  | 81             | 2805201415001400 | \$10 Cash \$5 promo |
| 1000000006    | A            |                     |                  | 81             | 2805201415001400 | \$10 Cash \$5 promo |
| 1000000007    | A            |                     |                  | 81             | 2805201415001400 | \$10 Cash \$5 promo |
| 3302000000    | C            |                     |                  | 101            |                  | \$10 Cash \$5 promo |
| 3302000001    | C            |                     |                  | 101            |                  | \$10 Cash \$5 promo |
| 3302000002    | C            |                     |                  | 101            |                  | \$10 Cash \$5 promo |