Copyright

Voucher Management User's Guide, Release 3.1.8

02.00

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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 CCS Voucher Management feature. It does not include detailed design of the service.

Audience
This guide is written primarily for administrators who are responsible for creating and maintaining Vouchers. However, the overview sections of the document are useful to anyone requiring an introduction.

Pre-requisites
Although there are no pre-requisites 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:

- CCS Feature Node User's Guide
- SPM User's Guide
- CCS Notification Management User's Guide
- CCS Task Management User's Guide
- CCS Transfer Management User's Guide
- CCS User's Guide
- SMS User's Guide
- ACS User's Guide
- CPE User's Guide
- CCS Technical Guide
- CCS Voucher Manager Technical Guide
Document Conventions

Before you start using this guide, it is important to understand the terms and typographical conventions used in the documentation.

Specialised terms and acronyms are defined in the Glossary at the end of this guide.

<table>
<thead>
<tr>
<th>Formatting convention</th>
<th>Type of information</th>
</tr>
</thead>
</table>
| **Special Bold**      | Items you must select such as menu options, or names of tabs.  
                          Emphasis within text.  
                          Names of database tables and fields. |
| **Italics**           | Name of a document, chapter, topic or other publication. |
| **Button**            | The name of a button to click or a key to press.  
                          **Example:** To close the window, either click **Close** or press **Esc**. |
| **Key+Key**           | Key combinations for which the user must press and hold down one key and then press another.  
                          **Example:** **Ctrl+P**, or **Alt+F4**. |
| **Monospace**         | Text that you must type and examples of code or standard output. |
| **variable**          | Used to indicate variables or text that should be replaced. |
| **menu option > menu option >** | Used to indicate the cascading menu option to be selected, or the location path of a file.  
                          **Example:** **Operator Functions > Report Functions**  
                          **Example:** `/IN/html/SMS/Helptext/` |
| **hypertext link**    | Used to indicate a hypertext link on an HTML page. |

**Icons**

The following icons are used as visual cues to draw attention to important information.

- **Note:** Indicates useful and complementary information. Explanation, comment, or short expansion of the text object that is intended to catch your attention.
- **Tip:** Indicates practical but non-essential information that makes the solution easier to use or operate (e.g. keyboard shortcut, alternative way to perform a step in a procedure, etc).
- **Warning:** Indicates a caution. If this information is ignored, it could cause possible and irreversible damage to the equipment, data or software.
Chapter 1

System Overview

Overview

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

In this chapter
This chapter contains the following topics.

- Vouchers Introduction ................................................................. 2
- Security ....................................................................................... 6
- Power Charge Scenarios ........................................................... 7
Vouchers Introduction

Introduction

Vouchers are credit coupons which are used to add value to wallet balances.

Telcos can create and distribute the vouchers according to their preference and need. They can be distributed in card form or as mail-out discount offers. They may be purchased from the Telco.

CCS provides systems for:

• creating Voucher Types and batches
• securing Vouchers (through PIN numbers), and
• redeeming Vouchers
• automatic deletion of archived Vouchers.

Note: Vouchers are sometimes referred to as scratch cards.

CCS component

Note: Vouchers are part of the Prepaid Charging solution and build on functionality provided by CCS. To fully understand how tasks work, you must also refer to the CCS User's Guide.

Voucher data

Each Voucher contains this data:

• Product Types they can be used for
• Balance Type to credit
• Amount to be credited
• Expiry date for each new Bucket
  ▪ Pre-Use Expiry Period sets date a Voucher must first be used or its balance will expire
  ▪ Balance Expiry Period sets the time after a Voucher is first used after which any outstanding Voucher balance will expire

Vouchers used for recharge may affect multiple Balance Types.

Voucher types

Voucher types provide a voucher's core data. It also defines how a recharge can be applied. For more information about voucher types, see CCS User's Guide.

Continued on next page
Vouchers Introduction, Continued

This diagram shows the lifecycle of a voucher.

*Note:* Voucher batches have a slightly different lifecycle.

Here is the list of voucher and voucher batch states:

- Created
- Active, or
- Frozen.

When you create a voucher batch the batch state is set to Created. You must set the batch state to Active if you want to redeem the vouchers in the batch. You may also need to set the state of each voucher within the batch to Active.

*Note:* A voucher may only be redeemed if it is in an active state and the voucher batch it belongs to is also in an active state.
**Vouchers Introduction, Continued**

The status of an individual voucher or a range of vouchers within a batch can be updated. This means that individual vouchers within the batch may have different states to the batch itself. When the batch and voucher states are different, the batch state may override the voucher state so that the reported state of the voucher is different to its actual state.

This table shows what the reported voucher state will be for the available voucher and batch states.

<table>
<thead>
<tr>
<th>Actual Voucher State</th>
<th>Created Batch</th>
<th>Active Batch</th>
<th>Unavailable Batch</th>
</tr>
</thead>
<tbody>
<tr>
<td>Created</td>
<td>Voucher reported as created</td>
<td>Voucher reported as created</td>
<td>Voucher reported as frozen</td>
</tr>
<tr>
<td>Active</td>
<td>Voucher reported as created</td>
<td>Voucher reported as active</td>
<td>Voucher reported as frozen</td>
</tr>
<tr>
<td>Frozen</td>
<td>Voucher reported as created</td>
<td>Voucher reported as frozen</td>
<td>Voucher reported as frozen</td>
</tr>
</tbody>
</table>

**Redeeming vouchers**

Vouchers can be redeemed by:

- providing Voucher details via the IVR menu set up in a control plan, or
- Customer Service Representatives using the Voucher Recharge (on page 26) tab on the Voucher Management screen.

Redeeming a voucher changes wallet balances and voucher status. Voucher recharges add value to the personal Wallet by default. The business Wallet can be selected using normal Wallet selection features. If the subscriber only has one Wallet, their recharge is automatically applied to that Wallet. Wallet balance changes are made using UBE's voucher subsystem.

**Automatic voucher deletion**

Vouchers that have been redeemed will be archived on a weekly basis. The archived vouchers will be automatically deleted from the UBE after a configurable number of weeks have elapsed.

The number of weeks to keep archived vouchers is set on the AVD Configuration (on page 32) tab. This tab also displays the date ranges for which redeemed vouchers will be deleted.

**Voucher node list**

This table lists all the available CCS feature nodes for the Voucher node palette.

<table>
<thead>
<tr>
<th>Node name</th>
<th>Node icon</th>
<th>Node description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Play Voucher</td>
<td></td>
<td>The Play Voucher Redeemed Info node plays the voucher balance to the subscriber.</td>
</tr>
<tr>
<td>Redeemed Info</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Recharge Menu</td>
<td></td>
<td>The Recharge Menu node allows the caller to select a method of recharging an account.</td>
</tr>
<tr>
<td>Scratch Card Recharge</td>
<td></td>
<td>The Scratch Card Recharge node enables a caller to use a scratch card to recharge their account, and to change the Product Type if required.</td>
</tr>
</tbody>
</table>

Continued on next page
# Vouchers Introduction, Continued

## Voucher node list (continued)

<table>
<thead>
<tr>
<th>Node name</th>
<th>Node icon</th>
<th>Node description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Scratch Card Recharge Alternate Subscriber</td>
<td>[Scr - An SCR AS]</td>
<td>The Scratch Card Recharge Alternative Subscriber node enables a caller to use a scratch card to recharge another user's account, and to change the Product Type if required.</td>
</tr>
<tr>
<td>Select Voucher Scenario</td>
<td>[Sel Scenario]</td>
<td>The Select Voucher Scenario node enables a subscriber to select from amongst the different ways the voucher can be redeemed, by choosing a particular scenario.</td>
</tr>
<tr>
<td>Voucher Recharge</td>
<td>[Vhr Rechg]</td>
<td>The Voucher Recharge node allows the caller to recharge their account using a voucher number, and to change their Product Type if required.</td>
</tr>
<tr>
<td>Voucher Redeemed</td>
<td>[VRDM]</td>
<td>The Voucher Redeemed node retrieves a voucher number from the specified location.</td>
</tr>
<tr>
<td>Voucher Type Recharge</td>
<td>[VhrTypeRoh]</td>
<td>The Voucher Type Recharge node invokes the voucher type recharge billing engine action using the configured name of the voucher type.</td>
</tr>
</tbody>
</table>

## User access

User access to the Voucher Manager 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*. 
## Security

### Voucher PINs

Vouchers generally come with a PIN. PINs validate the Voucher by number.

**Note:** Voucher PINs are different from Bad-PIN counts for credit cards. For more information about how PINs are generated and checked, see CCS Technical Guide.

### Generating GPG keys

A public and private GPG key can be generated from a pass-phrase. The private key is held only by the print shop and used only to decode the encrypted batch file. The public key is used to encrypt the file and must therefore be supplied to the operator who will be responsible for generating the voucher batch file.

For more information about using GPG keys with exported files, see Print Shop Operations Guide.

### CB-10 voucher security

If CB-10 Voucher Security functionality has been installed and activated on your system and the HRNGEN private keys have been generated, you will be able to use CB10 and CB10 HRN encryption when creating voucher batches. The authentication rules for generating CB10 and CB10 HRN encryption parameters are configured on the Security tab in the CCS Service Management screen.

**Note:** For more information on CB10 authentication rules, see the CCS User’s Guide. For more information on activating the CB10 Voucher Security feature, see the CCS Installation and Removal Guide.
### Power Charge Scenarios

#### Introduction
A scenario is an alternative set of multiple balances that is associated with a Voucher Type. When a voucher is redeemed, a subscriber can select a particular scenario from the different options available for redeeming the voucher.

**Note:** It is possible for a scenario to increment a balance, or extend the expiry date for the balance, or both.

#### Restricted functionality
The scenarios functionality is only available if you have purchased an appropriate licence and this functionality has been activated on your system. For details on activating scenarios see the *CCS Technical Guide*.

#### Examples of scenarios
A single voucher can be redeemed in multiple ways, depending on the options available at redemption. The subscriber is presented with a list of scenarios and prompted to select one.

For example, a voucher can be redeemed for:

- 120 minutes of international calling (180 minutes during a special promotion), or
- 200 short messages made within a 30 day period (300 SMS during a special promotion).
- Gold customers will receive an additional 10% on their chosen option.

#### Redemption rules
Scenarios are applied/redeemed according to the following rules:

- The default scenario value ‘0’ will always be applied in addition to any selected scenario.
- The scenario name selected by the subscriber must match a scenario defined against the voucher type for the recharge to occur.
- If only one scenario exists against the voucher type, no scenario needs to be selected.

#### Redemption notifications
When a subscriber's account is changed due to a voucher being redeemed, a real-time wallet notification is sometimes sent to the subscriber's handset. For more information about wallet notifications, see *CCS User’s Guide*.

For vouchers which are redeemed with a scenario, a notification template must be configured for each scenario. The notification template is selected by matching the scenario number to the digit on the end of the notification template name.

**Example:** For a basic recharge notification with 2 scenarios, the following two notifications must be configured:

- BasicRecharge1
- BasicRecharge2
# Voucher Management

## Overview

**Introduction**

This chapter explains how to create and manage Vouchers.

**In this chapter**

This chapter contains the following topics.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voucher Manager Module</td>
<td>10</td>
</tr>
<tr>
<td>Voucher Batches</td>
<td>13</td>
</tr>
<tr>
<td>Vouchers</td>
<td>21</td>
</tr>
<tr>
<td>Voucher Validation</td>
<td>24</td>
</tr>
<tr>
<td>Voucher Recharge</td>
<td>26</td>
</tr>
<tr>
<td>Voucher Ranges</td>
<td>28</td>
</tr>
<tr>
<td>GPG Public Keys</td>
<td>30</td>
</tr>
<tr>
<td>AVD Configuration</td>
<td>32</td>
</tr>
</tbody>
</table>
Chapter 2  Commercial In Confidence

**Voucher Manager Module**

**Introduction**

The Voucher Management screen lets you configure Vouchers. It contains these tabs:

- Voucher Type (For more information about Voucher Types, see CCS User's Guide.)
- Voucher Batches (on page 13)
- Vouchers (on page 21)
- Voucher Validation (on page 24)
- Voucher Recharge (on page 26)
- Voucher Ranges (on page 28)
- GPG Public Keys (on page 30), and
- AVD Configuration (on page 32).

**Restricted functionality**

This functionality is only available if you have purchased the Vouchers licence.

Follow these steps to open the Voucher Manager screen.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Select the <strong>Services</strong> menu from the SMS main screen.</td>
</tr>
<tr>
<td>2</td>
<td>Select Voucher Manager.</td>
</tr>
</tbody>
</table>

**Result:** You see the **Voucher Manager** 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.
Voucher Manager Module, Continued

Here is an example Voucher Manager screen.

![Voucher Manager Screen]

Continued on next page
This diagram shows the relationships between the various screens available in the Voucher Manager 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.
Voucher Batches

Introduction

The Voucher Batches tab lets you search, display, create and delete batches of vouchers for the selected Customer.

There is one screen available for creating a new voucher batch:

- New Voucher Batch creates a simple batch file, eliminating the need to generate the batch via the command line.

Tip: Configuration for the voucher tool used to create voucher batches is defined in eserv.config. For more information about eserv.config see the CCS Technical Guide.

Voucher Batches tab

Here is an example Voucher Batches tab.
### Voucher Batches, Continued

This table describes the function of each field on the Voucher Batches tab.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batch Code</td>
<td>The identifier which will be used to group the vouchers in this batch. This field can be used to group vouchers from several batches. This field is not available on the Edit Voucher Batch screen, and cannot be changed after the batch is generated.</td>
</tr>
<tr>
<td>Batch Id</td>
<td>The batch ID for the voucher batch. This field is automatically populated when the vouchers are first generated. It cannot be changed and is only visible on the Voucher Batches tab.</td>
</tr>
<tr>
<td>Domain</td>
<td>The domain to create the voucher batch on. This field is only available on the New Voucher Batch screen.</td>
</tr>
<tr>
<td>Batch Name</td>
<td>The unique name for the Batch. It can be up to 50 characters long and is optional.</td>
</tr>
<tr>
<td>Activation Date</td>
<td>Activation date of the voucher batch. This field cannot be changed after the batch is activated. This field is not available on the New Voucher Batch screen.</td>
</tr>
<tr>
<td>Voucher Type</td>
<td>The type of the vouchers in this batch. This field is populated by the Voucher Types tab. For more information about Voucher Types, see CCS User's Guide. This field cannot be changed after the batch is generated.</td>
</tr>
<tr>
<td>State Voucher Batch Status</td>
<td>Displays the state of the voucher batch. Available states are: • Active • Created • Unavailable</td>
</tr>
<tr>
<td>Note:</td>
<td>This is different to the state of the individual vouchers within the batch. These fields are not available on the New Voucher Batch screen.</td>
</tr>
<tr>
<td>Initial Voucher State</td>
<td>The state new vouchers in a batch will be in when they are first generated. Note: This is different to the state of the voucher batch (which is automatically set to Created when the batch is first generated).</td>
</tr>
<tr>
<td>Note:</td>
<td>This field is only available in the New Voucher Batch screen.</td>
</tr>
</tbody>
</table>

Continued on next page
**Voucher Batches, Continued**

**Voucher Batch fields (continued)**

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Voucher Number</td>
<td>The number of digits in the voucher number. This is set by the authentication rule for this voucher batch and cannot be changed after the batch is generated. This field is only displayed on the New Voucher Batch screen.</td>
</tr>
<tr>
<td>Length</td>
<td></td>
</tr>
<tr>
<td>Start Voucher Number</td>
<td>Displays the number of the first voucher in the batch and the starting point for the voucher number range. Note: The length of the voucher number must match the voucher number length defined for the authentication rule being used. If the AltAuthMod authentication rule is being used, this will be 14 characters long. A voucher number range can be used more than once for: • DES encrypted vouchers with GPG selected, and • CB10 HRN encrypted vouchers with or without GPG selected Voucher are generated from unused voucher numbers from the range. This field cannot be changed after the batch is generated.</td>
</tr>
<tr>
<td>End Voucher Number</td>
<td>Displays the number of the last voucher in the batch and the ending point for the number range. The value must be greater than the Start of Range value and have a matching number of digits. This field cannot be changed after the batch is generated.</td>
</tr>
<tr>
<td>Start Serial Number</td>
<td>Displays the serial number of the first voucher in the batch. This field is automatically populated and cannot be changed after the batch is generated. It is not available on the New Voucher Batch screen.</td>
</tr>
<tr>
<td>End Serial Number</td>
<td>Displays the serial number of the last voucher in the batch. This field is automatically populated and cannot be changed after the batch is generated. It is not available on the New Voucher Batch screen.</td>
</tr>
<tr>
<td>Batch Size Original Count</td>
<td>The number of vouchers in this batch. This can be equal to or less than the difference between the Start Voucher Number and the End Voucher Number. This field cannot be changed after the batch is generated.</td>
</tr>
<tr>
<td>Authentication Rule</td>
<td>Indicates which encryption scheme the voucher batch has been created with. This field cannot be changed after the batch is generated. This list is populated by records from the Security tab in the Service Management screen. For more information about the Security tab, see <strong>CCS User's Guide</strong>.</td>
</tr>
</tbody>
</table>

*Continued on next page*
Voucher Batches, Continued

Voucher Batch fields (continued)

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>GPG Public Key</td>
<td>The GPG Public key to use to encrypt the voucher batch export file. The key must have been imported and verified on the USMS. If you don't want to use a GPG Public key, select the blank entry. <strong>Note:</strong> This field is only available for voucher batch files generated using an authentication rule based on DES PIN encryption or CB10 HRN encryption. For more information about GPG public keys, see GPG Public Keys (on page 30). This field is only available on the New Voucher Batch screen.</td>
</tr>
<tr>
<td>Pause Time</td>
<td>The time in seconds to pause after loading each 100 vouchers for writing to the export file. This field is only available on the New Voucher Batch screen.</td>
</tr>
<tr>
<td>CDR Description</td>
<td>Description to use for this voucher batch in any EDRs that are created for vouchers from this batch.</td>
</tr>
<tr>
<td>Remote Filename</td>
<td>The name of the voucher batch export file to write the details of the generated vouchers to. This field is only available on the New Voucher Batch screen.</td>
</tr>
</tbody>
</table>

Finding voucher batches

Follow these steps to search for an existing Voucher Batch.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In the Voucher Manager screen, choose the Service Provider from the drop down list.</td>
</tr>
</tbody>
</table>
| 2    | On the Voucher Batches tab, enter the search strings you are using to find the required batch. Either:  
  - enter the first few characters of the specified batch code in the Code field and click Search, or  
  - select the Voucher Batch state from the State drop down box and click Search.  
**Note:** There are three states:  
  - Active  
  - Created, and  
  - Unavailable.  
**Result:** The Voucher Batches grid will display the first 100 records matching the search criteria.  
| 3    | If the required Voucher Batch is not displayed and more than 100 records were returned, enter a longer search string and click Search again.                                                                                                                                                                                                                                                                                                                                                       |
Follow these steps to add a new Voucher Batch.

**Note:** The values for Voucher Number Length and Voucher PIN Length are determined by the Authentication Rule selected and cannot be edited. The GPG Public Key Description field is for information only.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In the Voucher Manager screen, select the Service Provider from the drop down box.</td>
</tr>
<tr>
<td>2</td>
<td>From the Voucher Batches tab, click New. <strong>Result:</strong> You see the New Voucher Batch screen.</td>
</tr>
<tr>
<td>3</td>
<td>Configure this record by entering data in the fields on this screen. <strong>For more information about the fields on this screen, see Voucher Batch fields (on page 14).</strong></td>
</tr>
</tbody>
</table>
### Voucher Batches, Continued

#### Adding voucher batches (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 4    | Click **Save**.  
**Result:** The batch generation process is started and you see the **Voucher Batch Generation** prompt. |

| 5    | Click **OK**.  
**Result:** You see the **Voucher Batch Progress** bar. The **COMPLETE** message is displayed in the bar once the batch has been successfully created. |

| 6    | Click 'x' to close the progress bar. |

#### Checking voucher batch status

Follow these steps to check the status of an existing Voucher Batch.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Read the ccsSmsORB output log. For more information about the ccsSmsORB, see <em>CCS Technical Guide</em>.</td>
</tr>
<tr>
<td>2</td>
<td>Check for any error messages from the actual voucher-creation process.</td>
</tr>
<tr>
<td>3</td>
<td>Go to the following directory: <code>/IN/service_packages/CCS/voucher/export/</code></td>
</tr>
</tbody>
</table>
| 4    | Check that the following file exists: ```<remote_filename>.lst.print```  
**Where:**  
*<remote_filename>* is the name entered in the Remote Filename field of the New Voucher Batch screen. |
| 5    | If the file exists, is larger than 0 bytes in size and contains full records, the voucher batch job has been created successfully.  
If the file does not exist, is 0 bytes in size or only contains headers, the voucher batch job has failed. You will need to repeat the procedure in *Adding voucher batches* (on page 17). |
### Editing Voucher Batches

Follow these steps to edit an existing Voucher Batch.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In the Voucher Manager screen, select the <strong>Service Provider</strong> from the drop down box.</td>
</tr>
<tr>
<td>2</td>
<td>On the <strong>Voucher Batches</strong> tab enter the search criteria for the required voucher batch in the search fields and click Search. For details on finding voucher batches, see <strong>Finding voucher batches</strong> (on page 16).</td>
</tr>
<tr>
<td>3</td>
<td>In the grid on the tab, select the record you want to edit and click Edit. <strong>Result:</strong> You see the Edit Voucher Batch screen.</td>
</tr>
</tbody>
</table>

![Edit Voucher Batch](image)

4 Edit the fields to reflect the changes you need to make. The only values you can change are:
- **CDR Description**
- **Batch Name**, and
- **Voucher Batch Status**.

**Tip:** For descriptions of voucher batches fields, see **Voucher Batch fields** (on page 14).

5 Click **Save**.

*Continued on next page*
### Voucher Batches, Continued

Follow these steps to delete an existing Voucher Batch.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In the Voucher Manager screen, select the <strong>Service Provider</strong> from the drop down box.</td>
</tr>
</tbody>
</table>
| 2    | On the **Voucher Batches** tab enter the search criteria for the voucher batch you want to delete and click **Search**.  
For more information on finding voucher batches, see *Finding voucher batches* (on page 16). |
| 3    | In the grid on the tab, select the record you want to delete. |
| 4    | Click **Delete**.  
**Result:** You see the Delete Confirmation prompt. |
| 5    | Click **OK**. |
Vouchers

Introduction

The Vouchers tab allows you to select a voucher owned by the selected Service Provider and set it to an Active or Frozen state.

If you set a voucher from an 'active' voucher batch to 'frozen', then the voucher can no longer be redeemed. If a voucher batch is in a 'created' or 'unavailable' state, then although you will be able to set a voucher within the batch to an 'active' state in this screen, you will not be able to redeem it. You may only redeem an active voucher if the voucher batch it belongs to is also in an 'Active' state.

Note: If Scenarios have been installed and activated on your system, then the Scenario field will be visible in the Vouchers tab. Otherwise this field will not be visible. For more information on installing and activating Scenarios, see the CCS Technical Guide.

Vouchers tab

Here is an example Vouchers tab.

![Voucher Manager](image)

Continued on next page
Follow these steps to change the state of an existing Voucher.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In the Voucher Manager screen, select the Service Provider from the drop down box.</td>
</tr>
</tbody>
</table>
| 2    | In the Vouchers tab, type either the:  
  - Voucher Number or HRN in the Voucher Number field, or  
  - voucher Serial Number in the Serial Number field and click Search.  

**Tip:** When searching on the Voucher Number, the number entered must be the length of the voucher number as defined for the authentication rule for this voucher.  

**Result:** The fields on the tab will display the details for the Voucher searched for.
Vouchers, Continued

Changing voucher states (continued)

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>From the <strong>Voucher Status</strong> drop down box, select the Voucher Status the Voucher should have.</td>
</tr>
</tbody>
</table>

**Note:** If you want to be able to redeem the voucher, set its status to Active. If the voucher has been redeemed already:
- this field is greyed out (indicating the value cannot be changed), and
- the status will be 'Used'.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>4</td>
<td>Click <strong>Save</strong>.</td>
</tr>
</tbody>
</table>
Voucher Validation

Use the Voucher Validation tab to test whether a given voucher signature (the voucher number and secret digits) is valid.

**Note:** You will only have access to this facility if you have sufficient user privileges.

Here is an example Voucher Validation tab.

![Voucher Validation Tab](image)

*Continued on next page*
**Voucher Validation**, Continued

### Validating a Voucher

Follow these steps to validate a Voucher.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In the Voucher Manager screen, select the <strong>Service Provider</strong> from the drop down box.</td>
</tr>
</tbody>
</table>
| 2    | In the **Voucher Signature** field in the **Voucher Validation** tab type the voucher number or HRN. Do not include any spaces.  
**Tip:** The voucher number to use for searching must be the length of the voucher number as defined for the authentication rule for this voucher. |
| 3    | Click **Validate**.  
**Result:** The Voucher Status button shows the validity of the voucher. |

### Voucher Validation Results

This table lists the possible messages displayed when you validate a Voucher.

<table>
<thead>
<tr>
<th>Message</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Voucher to Check</td>
<td>You clicked <strong>Validate</strong> before entering the voucher signature.</td>
</tr>
<tr>
<td>Voucher Is Valid</td>
<td>The signature has been confirmed by the USMS.</td>
</tr>
<tr>
<td>Voucher Is Not Valid</td>
<td>The signature was not recognised by the USMS.</td>
</tr>
</tbody>
</table>
Voucher Recharge

The Voucher Recharge tab lets you recharge a voucher owned by the selected Service Provider.

Here is an example Voucher Recharge tab.

Continued on next page
Voucher Recharge, Continued

Follow these steps to recharge an existing Voucher.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In the Voucher Manager screen, select the Service Provider from the drop down box.</td>
</tr>
</tbody>
</table>
| 2    | In the Voucher Signature field on the Voucher Recharge tab, type in the signature of the voucher you want to recharge.  
Note: The voucher signature is the voucher number and (depending on the encryption algorithm selected for the voucher batch) the PIN number, or the HRN. If the encryption algorithm is 'DES' then the voucher PIN must be appended to the voucher number, otherwise the voucher PIN will not be appended to the end of the voucher number.  
For more information about encryption algorithms, see CCS Technical Guide. |
| 3    | In the Subscriber ID field, type the ID for the subscriber. |
| 4    | If a Scenario is required, click Refresh.  
Result: The Scenario drop down list will be populated with all valid scenarios for the voucher specified in the Voucher Signature field. |
| 5    | From the Scenario drop down list, select the Scenario to use with this redemption. |
| 6    | From the Primary and Secondary option buttons, select the wallet type for the Voucher Recharge. |
| 7    | Click Recharge.  
Result: The system will attempt to recharge the subscriber with the voucher. If it is successful, the Success prompt will appear. |
| 8    | Click OK. |
Chapter 2  Commercial In Confidence

Voucher Ranges

Introduction

The Voucher Ranges tab enables you to change the state of a group of vouchers. The vouchers are a defined range of voucher numbers.

Voucher Ranges tab

Here is an example Voucher Ranges tab.

![Voucher Manager interface](image)

Continued on next page
Follow these steps to change the state of a range of vouchers.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In the Voucher Manager screen, select the <strong>Service Provider</strong> from the drop down box.</td>
</tr>
</tbody>
</table>
| 2    | On the Voucher Ranges tab, from the **Voucher Batch** drop down list, select the voucher batch which contains the range you want to change.  
**Note:** The Voucher Batch corresponds with the Batch ID field in the Voucher Batches screen. |
| 3    | From the **Voucher State** drop down list, select the new state the vouchers in the range should be.  
**Note:** If you want to be able to redeem the vouchers you must set the Voucher State to Active. |
| 4    | In the **Start Serial No** field, enter the lowest voucher serial number in the voucher range you want to change. |
| 5    | In the **End Serial No** field, enter the highest voucher serial number in the voucher range you want to change.  
**Note:** The range must be 10,000 vouchers or less. |
| 6    | Click **Change**.  
**Result:** The Confirm Voucher Change Operation prompt will appear. |
| 7    | Click **OK**.  
**Result:** The Voucher Change State prompt will appear. |
| 8    | Click **OK**. |
GPG Public Keys

Introduction

The GPG Public Keys tab lets you:

- import new GPG public keys into CCS, and
- verify imported keys.

GPG keys are used to increase security when creating voucher batch export files for printing.

Once a public key has been verified it can be used as part of the security mechanism for creating voucher batches.

Note: You cannot remove public keys from the SMF database or from the GPG key-ring store on the USMS.

Public Keys tab

Here is an example GPG Public Keys tab.

<table>
<thead>
<tr>
<th>GPG Key</th>
<th>Verified</th>
<th>Expiry Date</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>386BA945</td>
<td>N</td>
<td>No Expiry Date</td>
<td>andrew (test!) &lt;andrew</td>
</tr>
<tr>
<td>8F994BB3</td>
<td>N</td>
<td>No Expiry Date</td>
<td>andrew (my test key) &lt;</td>
</tr>
<tr>
<td>57698D71</td>
<td>N</td>
<td>No Expiry Date</td>
<td>king fred (second test)</td>
</tr>
<tr>
<td>16A56E7D</td>
<td>Y</td>
<td>No Expiry Date</td>
<td>$kupch (test new script)</td>
</tr>
<tr>
<td>C3B89F7F</td>
<td>Y</td>
<td>No Expiry Date</td>
<td>costum (test again 3rd)</td>
</tr>
</tbody>
</table>
GPG Public Keys, Continued

Importing public keys

Follow these steps to import new GPG public keys from a specified file.

**Warning:** GPG Public keys cannot be deleted once they have been imported.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In the Voucher Manager screen, select the Service Provider from the dropdown box.</td>
</tr>
<tr>
<td>2</td>
<td>Select the GPG Public Keys tab.</td>
</tr>
<tr>
<td>3</td>
<td>In the Import File field, enter the path and filename of the file containing the new GPG public keys, or click Browse to select the file.</td>
</tr>
</tbody>
</table>
| 4    | Click Import Keys.  

**Note:** This button becomes enabled once the import file has been specified.

**Result:** Any keys not currently in the system are imported from the file and you see the GPG Key Importation prompt.

4 Click OK.

**Result:** The GPG Public Keys tab is refreshed to include the new keys.

Verifying public keys

Follow these steps to verify a GPG public key.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In the Voucher Manager screen, select the Service Provider from the drop down box.</td>
</tr>
</tbody>
</table>
| 2    | On the grid on the GPG Public Keys tab, select the GPG Key you want to verify.  

**Tip:** If the value in the Verified column for this key is 'Y', then it has already been verified.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 3    | Click Verify Key.  

**Result:** You see the GPG Key Importation validation prompt.

4 Click OK.
AVD Configuration

Introduction

The AVD Configuration tab lets you:

- update the common configuration that will be used across all UBE voucher domains by the automatic voucher delete process, and
- view the date ranges for which vouchers will be deleted for each of the configured domain nodes.

Note: Automatic voucher deletion (AVD) is performed on a regular basis by the ccsBeAvd binary. See the CCS Technical Guide for details.

Here is an example AVD Configuration tab.

Continued on next page
**AVD Configuration**, Continued

### Common Configuration fields

This table describes the function of each field in the Common Configuration section of the **AVD Configuration** tab.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>USMS Archive / Delete Interval</td>
<td>Sets the number of weeks for which redeemed voucher records will be kept. Must be between 1 and 26 weeks.</td>
</tr>
<tr>
<td>Max Records to Process</td>
<td>Sets the maximum number of voucher records to process. Must be between 1 and 999999.</td>
</tr>
<tr>
<td>Commit After Num Rows</td>
<td>Sets the number of records to process before committing the voucher deletions to the database. Must be between 1 and 9999.</td>
</tr>
</tbody>
</table>

**Note:** It is not possible to roll back changes once they have been committed.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Batch Size</td>
<td>Sets the maximum number of voucher records to include in a batch. Must be between 1 and 999999.</td>
</tr>
<tr>
<td>Sleep Time</td>
<td>Sets the amount of time (in seconds) to wait after committing changes before processing will resume. Must be between 1 and 9999 seconds.</td>
</tr>
</tbody>
</table>

**Note:** This allows the system processing time for other jobs.

### Node Configuration fields

**Note:** These fields are read only and cannot be changed. The values in these fields will be automatically updated by the AVD process scripts.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Domain Name</td>
<td>Lists the available voucher domains.</td>
</tr>
</tbody>
</table>

**Note:** Domains are configured on the Domain tab in the Service Management screen. See the Service Management chapter in the **CCS User's Guide** for details.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Node Name</td>
<td>Lists the defined domain nodes from which voucher records will be deleted.</td>
</tr>
<tr>
<td>Redeem Start Date</td>
<td>Lists the start date of the date range for which redeemed vouchers will be deleted.</td>
</tr>
<tr>
<td>Redeem End Date</td>
<td>Lists the end date of the date range for which redeemed vouchers will be deleted.</td>
</tr>
</tbody>
</table>

*Continued on next page*
### AVD Configuration, Continued

Follow these steps to change AVD common configuration.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | In the Voucher Manager screen, click on the **AVD Configuration** tab.  
**Result:** You see the current AVD Configuration details. See *AVD Configuration tab* (on page 32). |
| 2    | Edit the Common Configuration fields to reflect the changes you need to make.  
For more information about the fields in this screen, see *Common Configuration fields* (on page 33). |
| 3    | Click **Save**. |
Appendix

Overview

In this appendix

This appendix contains the following topics.

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## Glossary of Terms

<table>
<thead>
<tr>
<th>Term</th>
<th>Definition</th>
</tr>
</thead>
<tbody>
<tr>
<td>ACS</td>
<td>Advanced Control Services configuration platform.</td>
</tr>
</tbody>
</table>
| CCS  | 1) Charging Control Services (or Prepaid Charging) component.  
2) Common Channel Signalling. A signalling system used in telephone networks that separates signalling information from user data. |
| CDR  | Call Detail Record  
**Note:** The industry standard for CDR is EDR (Event Detail Record). Over time EDR will replace CDR in the Oracle documentation. |
| CPE  | Control Plan Editor (previously Call Plan Editor) - software used to define the logic and data associated with a call - e.g. "if the subscriber calls 0800 nnnnn from a phone at location xxx then put the call through to bb bbb bbbb". |
| DTMF | Dual Tone Multi-Frequency - system used by touch tone telephones where one high and one low frequency, or tone, is assigned to each touch tone button on the phone. |
| HRN  | Hidden Reload Number |
| HTML | HyperText Markup Language, a small application of SGML used on the World Wide Web.  
It defines a very simple class of report-style documents, with section headings, paragraphs, lists, tables, and illustrations, with a few informational and presentational items, and some hypertext and multimedia. |
| IVR  | Interactive Voice Response - systems that provide information in the form of recorded messages over telephone lines in response to user input in the form of spoken words or, more commonly, DTMF signalling. |
| Oracle | Oracle Corporation |
| PIN  | Personal Identification Number |
| Service Provider | See Telco. |
| SMS  | Short Message Service. |
| Telco | Telecommunications Provider. This is the company that provides the telephone service to customers. |
| Telecommunications Provider UBE | See Telco. |
| UBE  | Universal Billing Engine for Oracle Communications Network Control and Charging.  
Oracle Communications Network Control and Charging. |
| USMS | Universal Service Management System hardware platform. |
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