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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 Number Portability Service Pack (NP Service Pack) application. It does not include detailed design of the service.

Audience

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

Related documents

The following documents are related to this document:

- NP Service Pack Technical Guide

Prerequisites

Although it is not a prerequisite to 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.
### Document Conventions

#### Typographical Conventions

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

<table>
<thead>
<tr>
<th>Formatting convention</th>
<th>Type of information</th>
</tr>
</thead>
</table>
| **Special Bold**      | Items you must select, such as names of tabs.  
Names of database tables and fields. |
| **Italics**           | Name of a document, chapter, topic or other publication.  
Emphasis within text. |
| **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**         | Examples of code or standard output. |
| **Monospace Bold**    | Text that you must enter.  
**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. |

Specialized terms and acronyms are defined in the *Glossary* at the end of this guide.
Overview

Introduction

This chapter provides a high-level overview of the application. It explains the basic functionality of the system and lists the main components.

It is not intended to advise on any network or service implications of the product.

In this chapter

This chapter contains the following topics.

What is the NP Service Pack

What is the NP Service Pack

Introduction

The Number Portability Service Pack (NP Service Pack), accessed through SMS, provides flexibility and control over call routing of subscribers to the network.

Features

Features of NP Service Pack include:

- The ability to configure ported subscriber information from the screens and/or using the NP Provisioning Interface (PI) commands, and supporting control plan nodes to make services NP/MNP aware
- The ability to configure routing information based on operator assigned number prefixes and supporting control plan nodes to allow services to route to appropriate operators
- Functionality to allow the IN platform to satisfy MNP SRF requirements through a MAP based application (MTA) that can trigger a control plan when a supported message is received. The control plan can then perform MNP and through the appropriate node, instruct the MTA on how to respond (for example, relay, ack or error)
- Simple GTT functionality provided in the MTA for performing relay actions
- Call connection using least cost routing based on predefined carrier selection rule sets
- Home routing for calls within the network
- EDR generation for all calls processed by the network. The EDRs can be used for billing and reporting purposes.

NP feature nodes

The following feature nodes are available for the NP Service within the ACS Control Plan Editor (CPE). You access these feature nodes from the Others group on the feature palette in the CPE:

- NP Destination Selection
Chapter 1

- NP Least Cost Routing
- NP Home Routing
- NP Map Trigger

For more information on NP feature nodes, see *NCC Feature Nodes Reference Guide*.

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

Introduction

This chapter explains how to access the NP Service Pack application and how to use the screens.

In this chapter

This chapter contains the following topics.

Accessing the NP Service Pack Application
Using the Different Types of Fields
Using the Find Screens

Accessing the NP Service Pack Application

Introduction

The NP Service Pack screens, accessed through SMS, let you configure the database on the SMS. To begin configuring the database, the SMS screens must first be configured and running.

SMS main menu

Here is an example of the Service Management System main menu showing the NP Service Pack menu options.
Accessing the screens

Follow these steps to access the NP Service Pack screens.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Select the Services menu from the SMS main screen.</td>
</tr>
</tbody>
</table>
| 2    | Select NP Service.  
  **Result:** You see the list of NP Service menu options. |
| 3    | Choose the menu option you require.  
  **Result:** You see the screen for the chosen option. |

NP Service Pack screens

The NP Service Pack screens let you configure the database. The available screens are:

- Subscriber and Network (on page 11)
- Least Cost Routing (on page 49)
- Home Routing (on page 71)
Example NP screen

Here is an example NP screen, in this case, Subscriber and Network.

![Example NP screen](image)

On-screen buttons

The application uses a set of buttons to start specific actions within each screen. The table below describes the function of each button.

<table>
<thead>
<tr>
<th>Button</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Find</td>
<td>Opens the Find window, enabling you to find records that match the search criteria.</td>
</tr>
</tbody>
</table>
When you click **Find** in the Find screen, an Oracle Like% query is triggered that returns the first 100 records that begin with the selection criteria. For example, if you enter 123 in the Query field, the system will return records such as 123, 1234, 12345, etc.

- **New**
  
  Creates a new record template on the current screen. Click **Save** to save the new record details to the database.

- **Save**
  
  Saves any changes to the record on the current screen to the database.

- **Delete**
  
  Removes the selected record from the database.

- **Clear**
  
  Clears all entries from the screen, enabling you to clear the screen before adding a new record.

- **Help**
  
  Opens context-sensitive Help containing information about the functionality available in the current screen.

- **Return**
  
  Returns you to the previous screen in the screen hierarchy.

**Note:** Any changes that have been made on-screen will not be saved (unless **Save** has been clicked previously).

### Using the Different Types of Fields

#### Introduction

The following field types appear on the screens:

- Drop-down lists
- Text boxes

#### Text box

Use text boxes to type data directly on screen.

<table>
<thead>
<tr>
<th>Name</th>
</tr>
</thead>
</table>

#### Drop-down list box

Drop-down lists are identified from text boxes by a small arrow to the right of the field. When you click on this arrow, you will see a list of values available for this field. You can then select the appropriate value from this list.

<table>
<thead>
<tr>
<th>Language</th>
<th>English</th>
</tr>
</thead>
</table>

### Using the Find Screens

#### Introduction

A find screen enables you to find records that match the selection criteria. All find screens contain the following:

- Buttons
- Query fields
Example NP find screen

Here is an example NP screen in Find mode. You see the available query fields in the screen, and the screen title indicates that you are in Find mode.

![NP/Subscriber and Network - Find mode](image)

Searching the database

Follow these steps to search the database.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Enter selection criteria in one or more query fields and click **Find**.  
If a field is left empty, then the search will retrieve all instances of that field.  
**Result:** This triggers an Oracle Like% query that returns the first 100 records that begin with the selection criteria. For example, if you enter 123 in a query field, the system will return records such as 123, 1234, 12345 ...  
The results appear in the table on the Find result mode screen for the type of record you are querying. |
Note: These are the first 100 records entered in the database, and they display in no particular order. If you do not find the record you are searching for, you need to conduct a more specific search.

2 To view a record in Update mode, highlight the record line and click Select.

Result: You see the record details in Update mode.

3 To delete a record, highlight the record line and click Delete.

Find result mode buttons

The table below describes the function of each button displayed at the bottom of the screens when in Find result mode.

<table>
<thead>
<tr>
<th>Button</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>Previous</td>
<td>Goes back to the previous set of records in the table, if you have used the Next button to display more records.</td>
</tr>
<tr>
<td>Next</td>
<td>Displays the next set of records, if all the Find results cannot be displayed in the table at one time.</td>
</tr>
<tr>
<td>Select</td>
<td>Selects the record highlighted in the table and displays it on the tab in Update mode.</td>
</tr>
<tr>
<td>Export</td>
<td>Exports the Find results to a file.</td>
</tr>
<tr>
<td>Print</td>
<td>Prints the Find results.</td>
</tr>
</tbody>
</table>

Chapter 2

NCC Number Portability Service Pack User's Guide

8
Returns you to the Find mode screen for the tab.
Overview

Introduction

This chapter explains how to define information that is used in an NP/MNP environment using the NP Service Pack Subscriber and Network screens.

In this chapter

This chapter contains the following topics.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subscriber and Network Screen</td>
<td>11</td>
</tr>
<tr>
<td>Routing Destination</td>
<td>16</td>
</tr>
<tr>
<td>Routing Number</td>
<td>20</td>
</tr>
<tr>
<td>PQYZ</td>
<td>24</td>
</tr>
<tr>
<td>DN Range</td>
<td>31</td>
</tr>
<tr>
<td>Common Find Panel</td>
<td>42</td>
</tr>
</tbody>
</table>

Subscriber and Network Screen

Introduction

The NP/Subscriber and Network screen allows you to define:

- Logical operator names
- The network routing numbers associated with operators
- The operator ranges associated with operators (through prefixes or ranges)
- Ported subscriber information.

It also allows you to map operator names and ported subscribers to routing numbers. It contains the following tabs:

- Routing Destination
- Routing Number
- PQYZ
- DN Range
- Common Find Panel

Accessing the Destination Selection screen

Follow these steps to access the Subscriber and Network screen.

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

Result: You see the list of NP Service menu options.
### Chapter 3

#### NCC Number Portability Service Pack User's Guide

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 3    | **Select Subscriber and Network.**  
**Result:** You see the Routing Destination tab on the NP/Subscriber and Network screen in Find mode. |
Using the Routing Destination Search Dialog

You can use the Routing Destination Search Dialog to find an existing Routing Destination record on any tab that has a search button next to the **Routing Destination** field.

Follow these steps to search for a Routing Destination in the Routing Destination Search Dialog.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Click the button to the right of the **Routing Destination** field.  
   **Result:** You see the Routing Destination Search Dialog. |
| 2    | Enter the search criteria in the **Routing Destination** query field and click **Find**.  
   If the field is left empty, then the search retrieves all Routing Destinations.  
   **Result:** The search finds all the Routing Destinations that match the search criteria and displays them in a table in the Routing Destination Search Dialog. |
Chapter 3

Using the Routing Number Search Dialog

You can use the Routing Number Search Dialog to find an existing Routing Number record on any tab that has a search button next to the Routing Number field.

**Note:** If the Routing Destination field is also present on the tab, then the available Routing Numbers will depend on the Routing Destination selected.

Follow these steps to search for a Routing Number in the Routing Number Search Dialog.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Click the button to the right of the Routing Number field.</td>
</tr>
</tbody>
</table>

**Result:** You see the Routing Number Search Dialog.
2. Enter the search criteria in the query fields and click **Find**.

If the field is left empty, then the search retrieves all instances of that field.

**Result:** The search finds all the Routing Numbers that match the search criteria and displays them in a table in the Routing Number Search Dialog.
Step | Action
--- | ---
3 | To select a Routing Number, highlight it in the table and click **Select**.  
**Result:** Your selection is inserted into the **Routing Number** field.

**Routing Destination**

**Introduction**

The **Routing Destination** tab allows you to define the names for operators that are relevant in the operator's environment.
**Routing Destination tab**

Here is an example **Routing Destination** tab in Find mode on the NP/Subscriber and Network screen.

![Routing Destination tab](image)
## Adding a routing destination

Follow these steps to Add a new routing destination.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Select the **Routing Destination** tab in the NP/Subscriber and Network - Find mode screen, and click **New**.  
**Result:** You see the **Routing Destination** tab in New mode. |
| 2    | In the **Routing Destination** field, enter a unique value for the routing destination to add. It can be up to 64 alpha-numeric characters long.  
Click **Save**. |
| 3    | Repeat steps 2 to 3 for each routing destination to add.  
**Note:** When you click **Save**, the saved values remain on the screen. You can create another new record by typing over these values and clicking **Save** again. |
| 4    | Click **Return** to go back to the previous screen. |
Editing a routing destination

Follow these steps to edit a routing destination.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | In Find mode, on the **Routing Destination** tab, find and select the record to edit. For more information on finding and selecting routing destination records, see *Finding a routing destination* (on page 19).  
**Result:** The selected record appears in Update mode on the **Routing Destination** tab. |
| 2    | Edit the details as described in *Adding a routing destination* (on page 18). |
| 3    | Click **Save**, and then **Return**, to save your changes and return to the previous screen. |

Deleting a routing destination

Follow these steps to delete a routing destination.

**Note:** You cannot delete routing destinations that are referenced elsewhere in the system, such as in PQYZ or Routing Number records.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | In Find mode, on the **Routing Destination** tab, find and select the record to delete. For more information on finding and selecting routing destinations, see *Finding a routing destination* (on page 19).  
**Result:** The Confirm Delete Record screen appears. |
| 2    | Click **Delete**.  
**Result:** The record is removed from the database. |
| 3    | Click **Yes** to confirm.  
**Result:** The record is removed from the database. |
| 4    | Click **Return** to return to the previous screen. |

Finding a routing destination

Follow these steps to search the database for a specific routing destination.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ensure you are in Find mode on the <strong>Routing Destination</strong> tab.</td>
</tr>
</tbody>
</table>
| 2    | Enter the selection criteria in one or more query fields and click **Find**.  
If a field is left empty, then the search will retrieve all instances of that field. |
Step | Action
--- | ---
**Result:** | This triggers an Oracle Like% query that returns the first 100 records that begin with the selection criteria. For example, if you enter 123 in a query field, the system will return records such as 123, 1234, 12345, ...

The search results appear in the table on the **Routing Destination** tab in Find result mode.

![Routing Destination Tab](image)

**Note:** These are the first 100 records entered in the database, and they display in no particular order. If you do not find the record you are searching for, you need to conduct a more specific search.

3 | To view a record in Update mode, highlight the record line and click **Select**.
4 | To delete a record, highlight the record line and click **Delete**.

**Routing Number**

**Introduction**

The **Routing Number** tab allows you to define nationally recognized network routing numbers and logical network element numbers (numbers recognized within a network). You can then assign operator names to the routing numbers by associating them with routing destinations.

**Note:** The routing destination must have been previously defined on the **Routing Destination** tab.
DEAD routing number

The 'DEAD' routing number is created automatically during installation. It is a special routing number which when allocated to a subscriber dn range identifies the dn range entry as being scheduled for purging.

Note: The 'DEAD' routing number cannot be modified or deleted.

Routing Number tab

Here is an example Routing Number tab in Find mode on the NP/Subscriber and Network screen.
Adding a routing number

Follow these steps to Add a new routing number.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Select the Routing Number tab in the NP/Subscriber and Network - Find mode screen, and click New.  
**Result:** You see the Routing Number tab in New mode. |
| 2    | In the Routing Number field, enter a unique value for the routing number to add. It can be up to eight hexadecimal characters long. |
| 3    | In the Routing Destination field, enter the routing destination for the routing number. You must enter a valid routing destination (one that already exists in the database).  
**Note:** If you do not know the routing destination, you can click the button to the right of this field to search for it using the Routing Destination Search Dialog. See Using the Routing Destination Search Dialog (on page 13) for details. |
| 4    | If required, in the Description field enter a description for the routing number. |
| 5    | Click Save. |
| 6    | Repeat steps 2 to 5 for each routing number to add.  
**Note:** When you click Save, the saved values remain on the screen. You can create another new record by typing over these values and clicking Save again. |
| 7    | Click Return to go back to the previous screen. |


## Editing a routing number

Follow these steps to edit a routing number.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | In Find mode, on the **Routing Number** tab, find and select the record to edit. For more information on finding and selecting routing numbers, see Finding a routing number.  
**Result:** The selected record appears in Update mode on the Routing Number tab. |

2 Edit the details as described in Adding a routing number.

3 Click **Save**, and then **Return**, to save your changes and return to the previous screen.

## Deleting a routing number

Follow these steps to delete a routing number.

**Note:** You cannot delete routing numbers that are referenced elsewhere in the system, such as in DN Range records.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In Find mode, on the <strong>Routing Number</strong> tab, find and select the record to delete. For more information on finding and selecting routing numbers, see Finding a routing number.</td>
</tr>
</tbody>
</table>

2 Click **Delete**.  
**Result:** The Confirm Delete Record screen appears.

3 Click **Yes** to confirm.  
**Result:** The record is removed from the database.

4 Click **Return** to return to the previous screen.

## Finding a routing number

Follow these steps to search the database for a specific routing number.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ensure you are in Find mode on the <strong>Routing Number</strong> tab.</td>
</tr>
</tbody>
</table>

2 Enter the selection criteria in one or more query fields and click **Find**.  
If a field is left empty, then the search will retrieve all instances of that field.  
**Result:** This triggers an Oracle Like% query that returns the first 100 records that begin with the selection criteria. For example, if you enter 123 in a query field, the system will return records such as 123, 1234, 12345.

The search results appear in a table on the Routing Number tab in Find result mode.
### Introduction

You use the PQYZ tab to map operator range prefixes to the operator names configured in routing destinations.

You can map one or more prefixes to the same routing destination. The routing destination must have been previously defined on the Routing Destination tab.

---

**PQYZ**

**Introduction**

You use the PQYZ tab to map operator range prefixes to the operator names configured in routing destinations.

You can map one or more prefixes to the same routing destination. The routing destination must have been previously defined on the Routing Destination tab.
PQYZ tab

Here is an example PQYZ tab.
## Adding a PQYZ mapping

Follow these steps to Add a new PQYZ routing destination mapping.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>Step</td>
<td>Action</td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
</tr>
</tbody>
</table>
| 1    | On the **PQYZ** tab in the NP/Subscriber and Network - Find mode screen, click **New**.  
*Result:* You see the **PQYZ** tab in the NP/Subscriber and Network screen in New mode. |
<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>In the <strong>PQYZ</strong> field, enter the international called number prefix to map to a routing destination.</td>
</tr>
</tbody>
</table>
In the **Routing Destination** field, enter the routing destination for the PQYZ prefix. You must enter a valid routing destination (one that already exists in the database).

**Note:** If you do not know the routing destination, you can click the button to the right of this field to search for it using the Routing Destination Search Dialog. See *Using the Routing Destination Search Dialog* (on page 13) for details.

If required, click the button to the right of the **Routing Number** field to search for and select the routing number for the PQYZ prefix. See *Using the Routing Number Search Dialog* (on page 14) for details.

**Note:** You cannot enter in the routing number directly.

From the **Number Type** drop down list, select the number type for the PQYZ entry

If required, enter a **URI** to associate with the PQYZ entry.

Click **Save**.

Repeat steps 2 to 5 for all the PQYZ routing destination mappings you require.

**Note:** When you click **Save**, the saved values remain on the screen. You can create another new record by typing over these values and clicking **Save** again.

Click **Return** to go back to the previous screen.

### Editing a PQYZ mapping

Follow these steps to edit a PQYZ routing destination mapping.

#### Step 1

**Action**

In Find mode, on the **PQYZ** tab, find and select the record to edit. For more information on finding and selecting a PQYZ record, see *Finding a PQYZ mapping* (on page 30).

**Result:** The selected record appears in Update mode on the PQYZ tab.

#### Step 2

**Action**

Edit the details as described in Adding a PQYZ mapping.

**Tip:** To delete the routing number from the PQYZ mapping, you must first delete the current value for the routing destination field.

#### Step 3

**Action**

Click **Save**, and then **Return**, to save your changes and return to the previous screen.

### Deleting a PQYZ mapping

Follow these steps to delete a PQYZ routing destination mapping.

#### Step 1

**Action**

In Find mode, on the **PQYZ** tab, find and select the record to delete. For more information on finding and selecting PQYZ records, see *Finding a PQYZ mapping* (on page 30).

#### Step 2

**Action**

Click **Delete**.

**Result:** The Confirm Delete Record screen appears.

#### Step 3

**Action**

Click **Yes** to confirm.

**Result:** The record is removed from the database.

#### Step 4

**Action**

Click **Return** to return to the previous screen.
Chapter 3

Finding a PQYZ mapping

Follow these steps to search the database for a specific PQYZ record.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ensure you are on the PQYZ tab in Find mode.</td>
</tr>
</tbody>
</table>
| 2    | Enter the selection criteria in one or more query fields and click **Find**.  
If a field is left empty, then the search will retrieve all instances of that field. **Result:** This triggers an Oracle Like% query that returns the first 100 records that begin with the selection criteria. For example, if you enter 123 in a query field, the system will return records such as 123, 1234, 12345, ...  
The search results appear in the table on the PQYZ tab in Find result mode.  
**Note:** These are the first 100 records entered in the database, and they display in no particular order. If you do not find the record you are searching for, you need to conduct a more specific search. |
| 3    | To view a record in Update mode, highlight the record line and click **Select**. |
| 4    | To delete a record, highlight the record line and click **Delete**. |
DN Range

Introduction
You use the DN Range tab to represent an individual ported subscriber or range of ported subscribers (such as PBX users) by entering a DN number range and associating it to a specific routing number. This tab can also be used for stating operator ranges.

Rules
These rules apply to DN Ranges:
1. A DN Range can be either an operator type or a subscriber type
2. Additional Routing Numbers, Donor ID Numbers, and Port ID Numbers may only be defined for subscriber DN Ranges
3. The DN Start and DN End values must be of equal length
4. The DN End value must be greater than or equal to the DN Start value
5. The combination of DN Range and Activation Date must be unique and not overlap an existing DN Range, unless the DN Ranges are equal but there is a different Activation Date
6. The Routing Number and the Additional Routing Number must have been previously defined on the Routing Number tab
7. For a particular subscriber range only the most recent 10 activation date entries will be considered during runtime (enforced in service), therefore when provisioning you should not define more than 10 entries per subscriber range.

Note: Rule 7 is not enforced in the database.

Purging subscriber dn ranges
Periodically a purge facility will run on the database to delete any subscriber DN ranges which are no longer active. The following DN ranges will be deleted:
1. All entries associated with a unique subscriber (that is, entries for the same subscriber but with different activation dates) that are no longer active due to there being an active entry for the subscriber with a more recent activation date.
2. Subscriber entries that are currently active where:
   - The routing number has been set to DEAD
   - There are no entries for the subscriber with activation dates in the future
For more information on the purge facility, refer to the Tools and Utilities chapter in NP Service Pack Technical Guide.

Note: The purge facility will not remove operator DN ranges.
DN Range tab

Here is an example DN Range tab.

![DN Range tab screenshot](image-url)
## Adding a DN range

Follow these steps to add a new DN range.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>On the DN Range tab in the NP/Subscriber and Network - Find mode screen, click <strong>New</strong>. <strong>Result:</strong> You see the DN Range tab in the NP/Subscriber and Network screen in New mode.</td>
</tr>
</tbody>
</table>
2 If this DN range provides additional routing for external operator ranges then select the Entry.
<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>In the <strong>DN Start</strong> field, enter the starting number for the DN range. The number must be between four and 18 digits long.</td>
</tr>
<tr>
<td>4</td>
<td>In the <strong>DN End</strong> field, enter the end number for the DN range. The number must be greater than or equal to the DN Start number and must be the same length.</td>
</tr>
<tr>
<td>5</td>
<td>In the <strong>Activation Date</strong> field, enter the activation date using this format: DD/MM/YYYY HH:MM:SS. <strong>Example:</strong> &quot;01/15/2008 10:00:00&quot;</td>
</tr>
<tr>
<td>6</td>
<td>In the <strong>Routing Number</strong> field, enter the routing number associated to the recipient network that the subscriber is being ported to. You must enter a routing number that has been previously defined in the database. <strong>Note:</strong> If you do not know the routing number, you can click the button to the right of this field to search for it using the Routing Number Search Dialog. See <em>Using the Routing Number Search Dialog</em> (on page 14) for details.</td>
</tr>
<tr>
<td>7</td>
<td>If required, in the <strong>Additional Routing Number</strong> field, specify the additional routing number the DN range maps to. This is the logical routing number for the network element that holds the subscriber information in the recipient network. <strong>Note:</strong> You cannot enter in an additional routing number directly. Click the button to the right of this field to search for it using the Additional Routing Number Search Dialog. See <em>Using the Additional Routing Number Search Dialog</em> (on page 38) for details.</td>
</tr>
<tr>
<td>8</td>
<td>If required, in the <strong>Donor ID Number</strong> field specify the donor ID number. <strong>Note:</strong> To search for a valid number using the Donor ID Search Dialog, click the button to the right of this field. See <em>Using the Donor ID Search Dialog</em> (on page 40) for details.</td>
</tr>
<tr>
<td>9</td>
<td>If required, in the <strong>Port ID Number</strong> field enter the number of the port ID for the DN range. <strong>Note:</strong> This field is used for auditing purposes (if available) to hold the administrative ID for the port request.</td>
</tr>
<tr>
<td>10</td>
<td>From the <strong>Number Type</strong> drop down list, select the number type for the DN range.</td>
</tr>
<tr>
<td>11</td>
<td>If required, enter a URI to associate with the DN Range.</td>
</tr>
<tr>
<td>12</td>
<td>Click <strong>Save</strong>. <strong>Note:</strong> If the DN range rules are broken, a &quot;Save operation failed&quot; error message detailing the problem will be displayed.</td>
</tr>
<tr>
<td>13</td>
<td>Repeat steps 2 to 9 to add all the DN ranges you require. <strong>Note:</strong> When you click <strong>Save</strong>, the saved values remain on the screen. You can create another new record by typing over these values and clicking <strong>Save</strong> again.</td>
</tr>
<tr>
<td>14</td>
<td>Click <strong>Return</strong> to go back to the previous screen.</td>
</tr>
</tbody>
</table>
Editing a DN range

Follow these steps to edit a DN range.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In Find mode, on the DN Range tab, find and select the record to edit. For more information on finding and selecting DN ranges, see Finding a DN range (on page 37). <strong>Result:</strong> The selected record appears in Update mode on the DN Range tab.</td>
</tr>
</tbody>
</table>
| 2    | Edit the details as described in Adding a DN range. **Tips:**  
  - To remove the additional routing number for a DN range, you must first remove the current value in the Routing Number field. This resets the additional routing number to blank.  
  - To mark a DN range for purging, set the Routing Number field to 'DEAD'. |
| 3    | Click Save, and then Return, to save your changes and return to the previous screen. |

Deleting a DN range

Follow these steps to delete a DN range.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In Find mode, on the DN Range tab, find and select the record to delete. For more information on finding and selecting DN ranges, see Finding a DN range (on page 37).</td>
</tr>
<tr>
<td>2</td>
<td>Click Delete. <strong>Result:</strong> The Confirm Delete Record screen appears.</td>
</tr>
<tr>
<td>3</td>
<td>Click Yes to confirm. <strong>Result:</strong> The record is removed from the database.</td>
</tr>
<tr>
<td>4</td>
<td>Click Return to return to the previous screen.</td>
</tr>
</tbody>
</table>

Finding a DN range

Follow these steps to search the database for a specific DN range.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ensure you are on the DN Range tab in Find mode.</td>
</tr>
<tr>
<td>2</td>
<td>Enter selection criteria in one or more query fields and click Find. If a field is left empty, then the search will retrieve all instances of that field. <strong>Result:</strong> This triggers an Oracle Like% query that returns the first 100 records that begin with the selection criteria. For example, if you enter 123 in a query field, the system will return records such as 123, 1234, 12345, ... The results appear in the table on the DN Range tab in Find result mode.</td>
</tr>
</tbody>
</table>
Chapter 3

Step | Action
---|---

38
NCC Number Portability Service Pack User's Guide

Note: These are the first 100 records entered in the database, and they display in no particular order. If you do not find the record you are searching for, you need to conduct a more specific search.

3 To view a record in Update mode, highlight the record line and click Select.

4 To delete a record, highlight the record line and click Delete.

Using the Additional Routing Number Search Dialog

You can use the Additional Routing Number Search Dialog to find an additional routing number record on any tab that has a search button next to the Additional Routing Number field.

Note: The additional routing numbers listed in the search results will depend on the value previously specified in the Routing Number field.

Follow these steps to search for an additional Routing Number in the Additional Routing Number Search Dialog.

Step | Action
---|---
1 Click the button to the right of the Additional Routing Number field.

Result: You see the Additional Routing Number Search Dialog.
<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>Enter the search criteria in the query fields and click <strong>Find</strong>. If the field is left empty, then the search retrieves all instances of that field. <strong>Result:</strong> The search finds all the available additional routing numbers for the previously specified routing number and that match the search criteria. The results are displayed in the grid in the Additional Routing Number Search Dialog.</td>
</tr>
<tr>
<td>Step</td>
<td>Action</td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
</tr>
<tr>
<td>3</td>
<td>To select an additional routing number, highlight it in the grid and click Select. Result: Your selection is inserted into the Additional Routing Number field.</td>
</tr>
</tbody>
</table>

**Using the Donor ID Search Dialog**

You can use the Donor ID Search Dialog to find a donor id number record on any tab that has a search button next to the Donor ID Number field.
Follow these steps to search for a donor ID number in the Donor ID Search Dialog.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Click the button to the right of the **Donor ID Number** field.  
**Result:** You see the Donor ID Search Dialog. |
| 2    | Enter the search criteria in the query fields and click **Find**.  
If the field is left empty, then the search retrieves all instances of that field.  
**Result:** The search finds all the donor id numbers that match the search criteria and displays the results in the table in the Donor ID Search Dialog. |
To select a donor ID number, highlight it in the table and click **Select**.  
**Result:** Your selection is inserted into the **Donor ID Number** field.

---

**Common Find Panel**

**Introduction**

The **Common Find Panel** allows you to look for commonly required data from the following tables and view the results on the same screen:

- DN Range
- Routing Number
- PQYZ
- Routing Destination

**Common Find Panel logic**

The search is based on the prefix you enter in the **Find Number** field. If it:

- **Matches** at least one defined DN range with an Activation Date in the past, then the following data will be displayed:
  - Start and End of the matched DN range with the newest Activation Date
  - Activation Date of the matched DN range
  - Additional Routing Number, Donor ID Number, Port ID Number and Routing Number that is linked to the matched DN range
- Entry Type of the matched DN Range
- Number Type of the matched DN Range
- Routing Destination that is linked to this Routing Number
- PQYZ information shall be displayed as “Not Applicable”
- URI of the matched DN Range

- *Does not match any range in the conditions described above (because there is no range match or because the matched ranges have their Activation Date in the future), then the PQYZ is queried. If a match is found the following data will be displayed:
  - PQYZ of the matching PQYZ entry
  - Routing Destination that is linked to the matching PQYZ entry
  - DN range information shall be displayed as “Not found”
  - Activation Date information shall be displayed as “Not found”
  - Routing Number information shall be displayed as “Not applicable”
  - Number Type of the matching PQYZ entry
  - URI of the matching PQYZ entry

In any other case all the information fields will be displayed as “Not found”
**Common Find Panel tab**

Here is an example **Common Find Panel** tab in the NP/Subscriber and Network screen.

![Common Find Panel tab](image)

**Common Find Panel fields**

This table describes the function of each field in the Common Find Panel.

<table>
<thead>
<tr>
<th>Field</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Find Number</td>
<td>The number to look for in the PQYZ, DN Range, Routing Number and Routing Destination tables.</td>
</tr>
<tr>
<td>DN Start</td>
<td>Displays the start of the matched DN range with the newest activation date.</td>
</tr>
<tr>
<td>DN End</td>
<td>Displays the end of the matched DN range with the newest activation date.</td>
</tr>
<tr>
<td>Field</td>
<td>Description</td>
</tr>
<tr>
<td>-----------------------------</td>
<td>-----------------------------------------------------------------------------</td>
</tr>
<tr>
<td>Activation Date</td>
<td>Displays the activation date of the matched DN range.</td>
</tr>
<tr>
<td>Additional Routing Num</td>
<td>Displays the additional routing number of the matched DN range.</td>
</tr>
<tr>
<td>Donor ID Number</td>
<td>Displays the donor id of the matched DN range.</td>
</tr>
<tr>
<td>Port ID Number</td>
<td>Displays the port id of the matched DN range.</td>
</tr>
<tr>
<td>Entry Type (Tick for Operator)</td>
<td>Displays the entry type for the matched DN range.  Valid values are:</td>
</tr>
<tr>
<td></td>
<td>O - external operator range</td>
</tr>
<tr>
<td></td>
<td>S - subscriber range</td>
</tr>
<tr>
<td>Number Type</td>
<td>Displays the number type for the matched DN range or PQYZ entry.  Valid</td>
</tr>
<tr>
<td></td>
<td>values are:</td>
</tr>
<tr>
<td></td>
<td>• F - fixed</td>
</tr>
<tr>
<td></td>
<td>• M - mobile</td>
</tr>
<tr>
<td></td>
<td>• E - empty (not used)</td>
</tr>
<tr>
<td>URI (DN Range)</td>
<td>Displays the URI of the matched DN range.</td>
</tr>
<tr>
<td>Routing Number</td>
<td>Displays the Routing Number that is linked to the matched DN range and</td>
</tr>
<tr>
<td></td>
<td>shows its description in the text box below.</td>
</tr>
<tr>
<td>PQYZ</td>
<td>Displays the PQYZ prefix that matches the Find Number value and shows</td>
</tr>
<tr>
<td></td>
<td>its description in the text box below.</td>
</tr>
<tr>
<td>URI (PQYZ)</td>
<td>Displays the URI of the matching PQYZ entry.</td>
</tr>
<tr>
<td>Routing Destination</td>
<td>Displays the routing destination for the matching PQYZ prefix or Routing</td>
</tr>
<tr>
<td></td>
<td>Number.</td>
</tr>
</tbody>
</table>

**Using the Common Find Panel**

Follow these steps to find and view data using a common number prefix.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Select the <strong>Common Find Panel</strong> in the NP/Subscriber and Network screen.</td>
</tr>
<tr>
<td>Step</td>
<td>Action</td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
</tr>
</tbody>
</table>
| 2    | In the **Find Number** field, enter the number to search for, and click **Find**.  
**Result:** You see the records that match the Find Number value. |
Overview

Introduction
This chapter explains how to define least cost routing rules and carriers.

In this chapter

This chapter contains the following topics.

Least Cost Routing Screen 49
Rule Set 51
Rule 55
Carrier 63

Least Cost Routing Screen

Introduction
The NP/Least Cost Routing screen allows you to define the carriers for least cost routing and the rules that determine which carrier will be used. The least cost routing functionality is optionally used after destination selection has been performed.

It contains the following tabs:

- Rule Set
- Rule
- Carrier

Accessing the Least Cost Routing screen

Follow these steps to access the Least Cost Routing screen.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Select Services from the SMS main screen.</td>
</tr>
<tr>
<td>Step</td>
<td>Action</td>
</tr>
<tr>
<td>------</td>
<td>--------</td>
</tr>
</tbody>
</table>
| 2    | Select **NP Service**.  
**Result:** You see the list of NP Service menu options. |
| 3    | Select **Least Cost Routing**.  
**Result:** You see the **Rule Set** tab in the NP/Least Cost Routing screen in Find mode. |
## Rule Set

### Introduction

You use the Rule Set tab to define the available rule sets for least cost routing.

### Rule Set tab

Here is an example Rule Set tab in Find mode in the NP/Least Cost Routing screen.

![Example Rule Set Tab](image-url)
Adding a rule set

Follow these steps to Add a new rule set.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Select the Rule Set tab in the NP/Least Cost Routing - Find mode screen, and click <strong>New</strong>. Result: You see the Rule Set tab in New mode.</td>
</tr>
</tbody>
</table>
2. In the **Name** field, enter a unique name for the new rule set. The rule set name can be up to 30 alphanumeric characters long and is required.

3. Click **Save**.

4. Repeat steps 2 to 3 for each rule set to add.

   **Note:** When you click **Save**, the saved values remain on the screen. You can create another new record by typing over these values and clicking **Save** again.

5. Click **Return** to go back to the previous screen.

---

**Editing a rule set**

Follow these steps to edit a rule set.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In Find mode, on the <strong>Rule Set</strong> tab, find and select the record to edit. For more information on finding and selecting rule sets, see <em>Finding a rule set</em> (on page 54). <strong>Result:</strong> The selected record appears in Update mode on the <strong>Rule Set</strong> tab.</td>
</tr>
</tbody>
</table>

2. Edit the details as described in *Adding a rule set* (on page 52).

3. Click **Save**, then **Return**, to save your changes and return to the previous screen.
Deleting a rule set

Follow these steps to delete a rule set.

**Note:** You cannot delete rule sets that are referenced elsewhere in the system, such as in Rule records.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In Find mode, on the <strong>Rule Set</strong> tab, find and select the record to delete. For more information on finding and selecting rule sets, see <em>Finding a rule set</em> (on page 54).</td>
</tr>
</tbody>
</table>
| 2    | Click **Delete**.  
**Result:** The Confirm Delete Record screen appears |
| 3    | Click **Yes** to confirm.  
**Result:** The record is removed from the database. |
| 4    | Click **Return** to return to the previous screen. |

Finding a rule set

Follow these steps to search the database for a specific rule set.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ensure you are in Find mode on the <strong>Rule Set</strong> tab.</td>
</tr>
</tbody>
</table>
| 2    | Enter the selection criteria in one or more query fields and click **Find**.  
If a field is left empty, then the search will retrieve all instances of that field.  
**Result:** This triggers an Oracle Like% query that returns the first 100 records that begin with the selection criteria. For example, if you enter 123 in a query field, the system will return records such as 123, 1234, 12345, ...  
The results appear in the table on the Find result mode screen for the type of record you are querying.  
**Note:** These are the first 100 records entered in the database, and they display in no particular order. If you do not find the record you are searching for, you need to conduct a more specific search. |
Chapter 4

Step | Action
--- | ---
3 | To view a record in Update mode, highlight the record line and click **Select**.
4 | To delete a record, highlight the record line and click **Delete**.

Rule

Introduction

You use the **Rule** tab to specify the rules associated with each rule set. You can specify more than one rule per rule set. Each rule consists of:

- Rule set itself
- List of carriers and the order in which they should be tried
- Routing destination
**Rule tab**

Here is an example Rule tab in Find mode in the NP/Least Cost Routing screen.

![Rule tab in Find mode](image)

**Using the Carrier Search Dialog**

You can invoke the Carrier Search Dialog from the Rule tab in the Least Cost Routing screen in Find, New, or Update mode. You use it to find a carrier, when you do not know the carrier name.
Follow these steps to search for a carrier in the Carrier Search Dialog.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | On the **Rule** tab, click the button to the right of the relevant **Carrier** field.  
**Result:** You see the Carrier Search Dialog. |

```
Carrier Search Dialog
```

<table>
<thead>
<tr>
<th>Carrier</th>
<th>Description</th>
</tr>
</thead>
</table>

| 2    | Enter the search criteria in the **Carrier** and **Description** query fields and click **Find**.  
If a field is left empty, then the search retrieves all instances of that field.  
**Result:** The search finds all the carriers that match the search criteria and displays them in a table in the Carrier Search Dialog. |
To select the carrier you want, highlight it in the table and click **Select**.

**Result:** You are returned to the **Rule** tab and the selected carrier name is inserted into relevant Carrier field.
Adding a rule

Follow these steps to Add a new rule to a rule set.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Select the **Rule** tab in the NP/Destination Selection - Find mode screen, and click **New**.  
**Result:** You see the **Rule** tab in New mode. |
<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>In the Rule Set field, select the rule set to assign the rule to.</td>
</tr>
<tr>
<td>3</td>
<td>In the Routing Destination field, enter the routing destination for the rule. You must enter a valid routing destination (one that already exists in the database). &lt;br&gt;<strong>Note:</strong> If you do not know the routing destination, you can click the button to the right of this field to search for it using the Routing Destination Search Dialog. See <em>Using the Routing Destination Search Dialog</em> (on page 13) for details.</td>
</tr>
<tr>
<td>4</td>
<td>In the Carrier 1 field, enter the first carrier to try when the rule is invoked. This is a required field. &lt;br&gt;<strong>Note:</strong> You must enter a valid carrier (one that already exists in the database). To search for a carrier, click the button to the right of the Carrier field. See <em>Using the Carrier Search Dialog</em> (on page 56) for details.</td>
</tr>
<tr>
<td>5</td>
<td>In the other Carrier fields, enter the carriers to try, in the sequence in which they should be tried, if the first carrier is unavailable. &lt;br&gt;<strong>Note:</strong> You must supply at least one carrier.</td>
</tr>
<tr>
<td>6</td>
<td>Click Save.</td>
</tr>
<tr>
<td>7</td>
<td>Repeat steps 2 to 6 for each rule to add. &lt;br&gt;<strong>Note:</strong> When you click Save, the saved values remain on the screen. You can create another new record by typing over these values and clicking Save again.</td>
</tr>
<tr>
<td>8</td>
<td>Click Return to go back to the previous screen.</td>
</tr>
</tbody>
</table>
Editing a rule

Follow these steps to edit a rule.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | In Find mode, on the Rule tab, find and select the record to edit. For more information on finding and selecting rule records, see Finding a rule (on page 61).  
**Result:** The selected record appears in Update mode on the Rule tab. |
| 2    | Edit the details as described in Adding a rule (on page 59). |
| 3    | Click **Save**, then **Return**, to save your changes and return to the previous screen. |

Deleting a rule

Follow these steps to delete a rule.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In Find mode, on the Rule tab, find and select the record to delete. For more information on finding and selecting rule records, see Finding a rule (on page 61).</td>
</tr>
</tbody>
</table>
| 2    | Click **Delete**.  
**Result:** The Confirm Delete Record screen appears. |
| 3    | Click **Yes** to confirm.  
**Result:** The record is removed from the database. |
| 4    | Click **Return** to return to the previous screen. |

Finding a rule

Follow these steps to search the database for a specific rule.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ensure you are in Find mode on the Rule tab.</td>
</tr>
</tbody>
</table>
| 2    | Enter the selection criteria in one or more query fields and click **Find**.  
If a field is left empty, then the search will retrieve all instances of that field. |
<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>

**Result:** This triggers an Oracle Like% query that returns the first 100 records that begin with the selection criteria. For example, if you enter 123 in a query field, the system will return records such as 123, 1234, 12345, ...

The results appear in the table on the **Rule** tab in Find result mode.

**Note:** These are the first 100 records entered in the database, and they display in no particular order. If you do not find the record you are searching for, you need to conduct a more specific search.
### Carrier

#### Introduction

The Carrier tab allows you to define the carriers for least cost routing rules.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>To view a record in Update mode, highlight the record line and click <strong>Select</strong>.</td>
</tr>
<tr>
<td>4</td>
<td>To delete a record, highlight the record line and click <strong>Delete</strong>.</td>
</tr>
</tbody>
</table>
Chapter 4

Carrier tab

Here is an example Carrier tab in Find mode in the NP/Least Cost Routing screen.
Adding a carrier

Follow these steps to add a new carrier.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | Select the Carrier tab in the NP/Least Cost Routing - Find mode screen, and click **New**.  
Result: You see the Carrier tab in New mode. |
<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>In the Name field, enter a unique name for the new carrier. The carrier name can be up to 30 alphanumeric characters long and is required.</td>
</tr>
<tr>
<td>3</td>
<td>In the Format field select the preferred format for the carrier.</td>
</tr>
<tr>
<td>4</td>
<td>In the Override Noa field, enter the appropriate value. Valid values are a single digit in the range 0 through 7.</td>
</tr>
<tr>
<td>5</td>
<td>In the Description field, enter a description for the carrier, if required. The description can be up to 64 alphanumeric characters long.</td>
</tr>
<tr>
<td>6</td>
<td>In the Statistics ID field, select the relevant statistic.</td>
</tr>
<tr>
<td>4</td>
<td>In the Carrier Code field, enter the carrier code. The carrier code must be four characters long and is required.</td>
</tr>
<tr>
<td>5</td>
<td>In the Country Code field, enter the country code for the carrier. The country code can be up to four decimal digits long and is required.</td>
</tr>
<tr>
<td>6</td>
<td>In the CLD PTY Prefix field, enter the CLD PTY prefix if required. The CLD PTY prefix can be up to four hexadecimal digits long.</td>
</tr>
<tr>
<td>7</td>
<td>Select the Send Routing Number check box to send the routing number when using this carrier.</td>
</tr>
<tr>
<td>8</td>
<td>In the Application ID field, select the ID of the application used by the carrier.</td>
</tr>
<tr>
<td>9</td>
<td>Click Save.</td>
</tr>
<tr>
<td>10</td>
<td>Repeat steps 2 through 9 for each carrier to add.</td>
</tr>
<tr>
<td></td>
<td><strong>Note:</strong> When you click Save, the saved values remain on the screen. You can create another new record by typing over these values and clicking Save again.</td>
</tr>
<tr>
<td>11</td>
<td>Click Return to go back to the previous screen.</td>
</tr>
</tbody>
</table>
Editing a carrier

Follow these steps to edit carrier details.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In Find mode, on the Carrier tab, find and select the record to edit. For more information on finding and selecting Carriers, see Finding a carrier (on page 67). &lt;br&gt;&lt;br&gt;<strong>Result:</strong> The selected record appears in Update mode on the Carrier tab.</td>
</tr>
<tr>
<td>2</td>
<td>Edit the details as described in Adding a carrier (on page 65).</td>
</tr>
<tr>
<td>3</td>
<td>Click Save, and then Return, to save your changes and return to the previous screen.</td>
</tr>
</tbody>
</table>

Deleting a carrier

Follow these steps to delete a Carrier.

**Note:** You cannot delete carriers that are referenced elsewhere in the system, such as in Rule records.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In Find mode, on the Carrier tab, find and select the record to delete. For more information on finding and selecting Carriers, see Finding a carrier (on page 67).</td>
</tr>
<tr>
<td>2</td>
<td>Click Delete. &lt;br&gt;&lt;br&gt;<strong>Result:</strong> The Confirm Delete Record screen appears.</td>
</tr>
<tr>
<td>3</td>
<td>Click Yes to confirm. &lt;br&gt;&lt;br&gt;<strong>Result:</strong> The record is removed from the database.</td>
</tr>
<tr>
<td>4</td>
<td>Click Return to return to the previous screen.</td>
</tr>
</tbody>
</table>

Finding a carrier

Follow these steps to search the database for a specific carrier.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ensure you are on the Carrier tab in Find mode.</td>
</tr>
<tr>
<td>2</td>
<td>Enter the selection criteria in one or more query fields and click Find. &lt;br&gt;If a field is left empty, then the search will retrieve all instances of that field.</td>
</tr>
</tbody>
</table>
**Result:** This triggers an Oracle Like% query that returns the first 100 records that begin with the selection criteria. For example, if you enter 123 in a query field, the system will return records such as 123, 1234, 12345, ...

The results appear in the table on Carrier tab in Find result mode.

**Note:** These are the first 100 records entered in the database, and they display in no particular order. If you do not find the record you are searching for, you need to conduct a more specific search.
3. To view a record in Update mode, highlight the record line and click **Select**.

4. To delete a record, highlight the record line and click **Delete**.
Overview

Introduction

This chapter explains how to define home routing destinations.

In this chapter

This chapter contains the following topics.

<table>
<thead>
<tr>
<th>Topic</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
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<td>71</td>
</tr>
<tr>
<td>Home Routing</td>
<td>73</td>
</tr>
<tr>
<td>Home Routing Search</td>
<td>76</td>
</tr>
</tbody>
</table>

Home Routing Screen

Introduction

The NP/Home Routing screen allows you to define the range of called numbers and routing destinations for calls within the network. It also allows you to search for home routing. It contains the following tabs:

- Home Routing
- Home Routing Search

Accessing the Home Routing screen

Follow these steps to access the Home Routing screen.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Select <strong>Services</strong> from the SMS main screen.</td>
</tr>
</tbody>
</table>
Step 2: Select NP Service.
Result: You see the list of NP Service menu options.

Step 3: Select Home Routing.
Result: You see the Home Routing tab on the NP/Home Routing screen in Find mode.
Home Routing

Introduction
You use the Home Routing tab to define the range of called numbers and routing destinations for calls within your network.

Home Routing tab
Here is an example Home Routing tab in Find mode in the NP/Home Routing screen.

Adding a home routing
Follow these steps to Add a new home routing definition.
Chapter 5

Note: When specifying the DN Start and DN End fields, you must enter a range that does not overlap an existing DN range.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Select the <strong>Home Routing</strong> tab in the NP/Home Routing - Find mode screen, and click <strong>New</strong>.  <strong>Result:</strong> You see the <strong>Home Routing</strong> tab in New mode.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>In the <strong>DN Start</strong> field enter the start number for the DN range. The DN Start number must be between four and 18 digits long, and is required.</td>
</tr>
<tr>
<td>3</td>
<td>In the <strong>DN End</strong> field enter the end number for the DN range. The DN End number must be greater than the DN Start number, and the same length. It is a required field.</td>
</tr>
</tbody>
</table>
| 4    | In the **DN Type** field, select one of the following:  
  - **HOME** - for destinations within your network  
  - **SPECIAL** - for called numbers outside the network with special status |
| 5    | In the **Routing Destination** field, enter the routing destination. **Note:** If you do not know the routing destination, click the button to the right of this field to search for it using the Routing Destination Search Dialog. See **Using the Routing Destination Search Dialog** (on page 13) for details. |
| 6    | Click **Save**. |
| 7    | Repeat steps 2 through 6 for each home routing to add. **Note:** When you click **Save**, the saved values remain on the screen. You can create another new record by typing over these values and clicking **Save** again. |
| 8    | Click **Return** to go back to the previous screen. |
### Editing a home routing

Follow these steps to edit a home routing definition.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
</table>
| 1    | In Find mode, on the **Home Routing** tab, find and select the record to edit. For more information on finding and selecting home routing records, see *Finding a home routing record* (on page 75).  
**Result:** The selected record appears in Update mode on the Home Routing tab. |
| 2    | Edit the details as described in *Adding a home routing* (on page 73). |
| 3    | Click **Save**, and then **Return**, to save your changes and return to the previous screen. |

### Deleting a home routing

Follow these steps to delete a home routing.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>In Find mode, on the <strong>Home Routing</strong> tab, find and select the record to delete. For more information on finding and selecting home routing records, see <em>Finding a home routing record</em> (on page 75).</td>
</tr>
</tbody>
</table>
| 2    | Click **Delete**.  
**Result:** The Confirm Delete Record screen appears. |
| 3    | Click **Yes** to confirm.  
**Result:** The record is removed from the database. |
| 4    | Click **Return** to return to the previous screen. |

### Finding a home routing record

Follow these steps to search the database for a specific home routing record.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Ensure you are in Find mode on the <strong>Home Routing</strong> tab.</td>
</tr>
</tbody>
</table>
| 2    | Enter the selection criteria in one or more query fields and click **Find**.  
If a field is left empty, then the search will retrieve all instances of that field.  
**Result:** This triggers an Oracle Like% query that returns the first 100 records that begin with the selection criteria. For example, if you enter 123 in a query field, the system will return records such as 123, 1234, 12345, ...  
The results appear in the table on **Home Routing** tab in Find result mode. |
Chapter 5

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>To view a record in Update mode, highlight the record line and click Select. Result: You see the record details on the tab for the selected record type, in Update mode.</td>
</tr>
<tr>
<td>3</td>
<td>To delete a record, highlight the record line and click Delete.</td>
</tr>
</tbody>
</table>

**Home Routing Search**

**Introduction**

You use the Home Routing Search tab to find the home routing details for a specified number.
Home Routing Search tab

Here is an example Home Routing Search tab in the NP/Home Routing screen.

Finding home routing details

Follow these steps to find the home routing details for a specified number.

<table>
<thead>
<tr>
<th>Step</th>
<th>Action</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Select the Home Routing Search tab in the NP/Home Routing screen.</td>
</tr>
<tr>
<td>2</td>
<td>In the Find Number field, enter the number for which to find home routing details and click Find. Result: If home routing has been defined for a DN range that includes the specified find number, then the details are displayed in the screen. Otherwise No match found is displayed.</td>
</tr>
</tbody>
</table>
NCC Glossary of Terms

ACS
Advanced Control Services configuration platform.

AS
Application Server. The logical entity serving a SUA routing key. An AS is equivalent to an SS7 end point (for example, HLR, MSC,…). An AS contains, at least, one ASP.

CPE
Control Plan Editor (previously Call Plan Editor) - software used to define the logic and data associated with a call - for example, "if the subscriber calls 0800 nnnnnn from a phone at location xxx then put the call through to bb bbb bbbb".

cron
Unix utility for scheduling tasks.

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.

EDR
Event Detail Record
Note: Previously CDR. The industry standard for CDR is EDR (Event Detail Record). Over time EDR will replace CDR in the NCC documentation.

GPRS
General Packet Radio Service - employed to connect mobile cellular users to PDN (Public Data Network- for example the Internet).

GUI
Graphical User Interface

HLR
The Home Location Register is a database within the HPLMN (Home Public Land Mobile Network). It provides routing information for MT calls and SMS. It is also responsible for the maintenance of user subscription information. This is distributed to the relevant VLR, or SGSN (Serving GPRS Support Node) through the attach process and mobility management procedures such as Location Area and Routing Area updates.

HPLMN
Home PLMN
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.

IN
Intelligent Network

IP
1) Internet Protocol
2) Intelligent Peripheral - This is a node in an Intelligent Network containing a Specialized Resource Function (SRF).

MAP
Mobile Application Part - a protocol which enables real time communication between nodes in a mobile cellular network. A typical usage of the protocol would be for the transfer of location information from the VLR to the HLR.

Messaging Manager
The Messaging Manager service and the Short Message Service components of Oracle Communications Network Charging and Control product. Component acronym is MM (formerly MMX).

MM
Messaging Manager. Formerly MMX, see also XMS (on page 82) and Messaging Manager (on page 80).

MNP
Mobile Number Portability

MS
Mobile Station

MT
Mobile Terminated

NP
Number Portability

Oracle
Oracle Corporation

PI
Provisioning Interface - used for bulk database updates/configuration instead of GUI based configuration.
PLMN
Public Land Mobile Network

SGML

SGSN
Serving GPRS Support Node

SLC
Service Logic Controller (formerly UAS).

SMS
Depending on context, can be:
- Short Message Service
- Service Management System platform
- NCC Service Management System application

SN
Service Number

SRF
Specialized Resource Function - This is a node on an IN which can connect to both the SSP and the SLC and delivers additional special resources into the call, mostly related to voice data, for example play voice announcements or collect DTMF tones from the user. Can be present on an SSP or an Intelligent Peripheral (IP).

SSP
Service Switching Point

Switching Point
Anything that can send and receive C7 messages.

URI
Uniform Resource Identifier.

VLR
Visitor Location Register - contains all subscriber data required for call handling and mobility management for mobile subscribers currently located in the area controlled by the VLR.
XMS

Three letter code used to designate some components and path locations used by the Oracle Communications Network Charging and Control Messaging Manager (on page 80) service and the Short Message Service. The published code is MM (on page 80) (formerly MMX).
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