

# Oracle® Communications Convergent Charging Controller

## Number Portability Service Pack Help



Release 15.0.0

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

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Oracle Communications Convergent Charging Controller Number Portability Service Pack Help, Release 15.0.0

F83538-01

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# 1

## Subscriber and Network

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

**This chapter contains the following topics.**

[Subscriber and Network Screen](#)

[Routing Destination](#)

[Routing Number](#)

[PQYZ](#)

[DN Range](#)

[Common Find Panel](#)

### Subscriber and Network Screen

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

### Using the Routing Destination Search Dialog

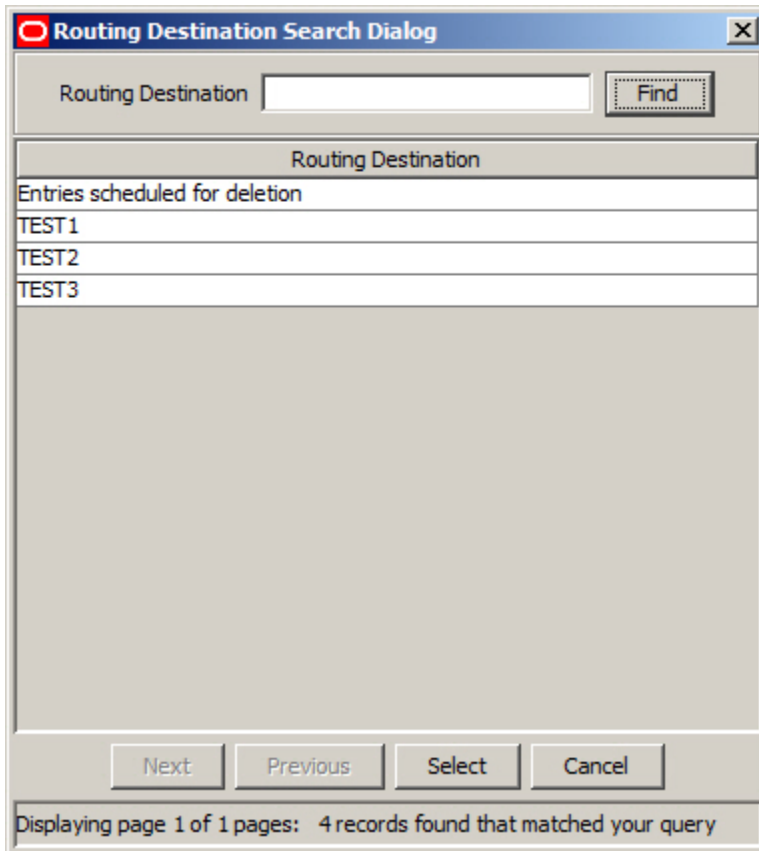
You can use the Routing Destination Search Dialog to find an existing Routing Destination record on any tab that has a search button next to the **Routing Destination** field.

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

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, the search retrieves all Routing Destinations.

**Result:** All routing destinations that match the search criteria are displayed.



3. To select the Routing Destination you want, highlight it in the table and click **Select**.

**Result:** Your selection is inserted into the **Routing Destination** field.

## 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, the available Routing Numbers depend on the Routing Destination selected.

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

1. Click the button to the right of the **Routing Number** field.

**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, the search retrieves all instances of that field.

**Result:** All routing numbers that match the search criteria are displayed.

The image shows a 'Routing Number Search Dialog' window. It has a title bar with a red 'X' icon and the text 'Routing Number Search Dialog'. Below the title bar, there are two input fields: 'Routing Number' and 'Description'. The 'Routing Number' field contains the value '551'. To the right of the 'Routing Number' field is a 'Find' button. Below the input fields is a table with two columns: 'Routing Number' and 'Description'. The table contains one row with the value '551' in the 'Routing Number' column. At the bottom of the dialog, there are four buttons: 'Next', 'Previous', 'Select', and 'Cancel'. Below the buttons, there is a status bar that reads 'Displaying page 1 of 1 pages: 1 records found that matched your query'.

Routing Number	Description
551	

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

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

### Adding a routing destination

Follow these steps to Add a new routing destination.

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.
3. Click **Save**.
4. 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.
5. Click **Return** to go back 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.

1. In Find mode, on the **Routing Destination** tab, find and select the record to delete. For more information about finding and selecting routing destinations, see [Finding a routing destination](#).
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.

## Editing a routing destination

Follow these steps to edit a routing destination.

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](#).  
**Result:** The selected record appears in Update mode on the **Routing Destination** tab.
2. Edit the details as described in [Adding a routing destination](#).
3. Click **Save**, and then **Return**, to save your changes and return to the previous screen.

## Finding a routing destination

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

1. Ensure you are in Find mode on the **Routing Destination** tab.
2. Enter the selection criteria in one or more query fields and click **Find**.

If a field is left empty, the search retrieves 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 returns records such as 123, 1234, 12345.

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



Routing Destination	Routing Number	PQYZ	DN Range	Common Find Panel
Routing Destination	Last User	Last Date	ID	
Entries scheduled for deletion	SMF	2014-01-13 16:39:30.0	1	
TEST1	SMF	2014-01-13 18:10:35.0	3	
TEST2	SMF	2014-01-13 18:10:35.0	4	
TEST3	SMF	2014-01-13 18:10:35.0	5	

Messages: Displaying page 1 of 1 pages: 4 records found that matched your query

**Note:** The first 100 records entered in the database are displayed in no particular order. If you do not find the record you are searching for, conduct a more specific search.

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

#### Related topic

[Routing Destination](#)

## Routing Number

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.

## Adding a routing number

Follow these steps to Add a new routing number.

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](#) 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.

1. In Find mode, on the **Routing Number** tab, find and select the record to edit. For more information about 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.

1. In Find mode, on the **Routing Number** tab, find and select the record to delete. For more information about finding and selecting routing numbers, see Finding a routing number.
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

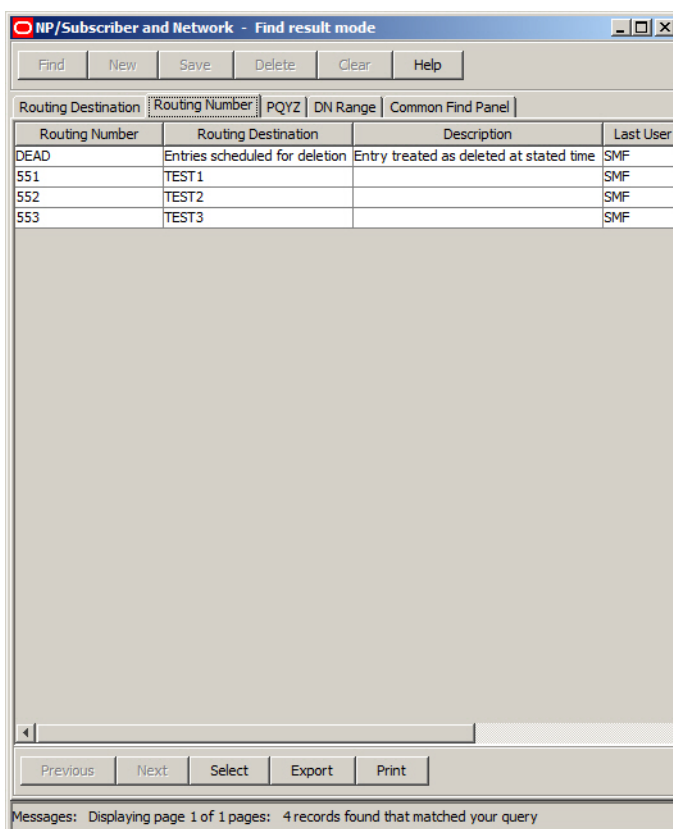
Follow these steps to search the database for a specific routing number.

1. Ensure you are in Find mode on the **Routing Number** tab.
2. Enter the selection criteria in one or more query fields and click **Find**.

If a field is left empty, the search retrieves 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 returns records such as 123, 1234, 12345.

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



The screenshot shows a window titled "NP/Subscriber and Network - Find result mode". At the top, there are buttons for "Find", "New", "Save", "Delete", "Clear", and "Help". Below these are tabs for "Routing Destination", "Routing Number", "PQYZ", "DN Range", and "Common Find Panel". The "Routing Number" tab is active, displaying a table with the following data:

Routing Number	Routing Destination	Description	Last User
DEAD	Entries scheduled for deletion	Entry treated as deleted at stated time	SMF
551	TEST1		SMF
552	TEST2		SMF
553	TEST3		SMF

At the bottom of the window, there are buttons for "Previous", "Next", "Select", "Export", and "Print". A status bar at the very bottom reads: "Messages: Displaying page 1 of 1 pages: 4 records found that matched your query".

**Note:** The first 100 records entered in the database are displayed in no particular order. If you do not find the record you are searching for, 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**.

### Related topic

[Routing Number](#)

## PQYZ

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.

### Adding a PQYZ mapping

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

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.
2. In the **PQYZ** field, enter the international called number prefix to map to a routing destination.
3. 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](#) for details.
4. 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](#) for details.  
**Note:** You cannot enter in the routing number directly.
5. From the **Number Type** drop down list, select the number type for the PQYZ entry.
6. If required, enter a **URI** to associate with the PQYZ entry.
7. Click **Save**.
8. Repeat steps 2 to 7 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.
9. Click **Return** to go back to the previous screen.

### Editing a PQYZ mapping

Follow these steps to edit a PQYZ routing destination mapping.

1. In Find mode, on the **PQYZ** tab, find and select the record to edit. For more information about finding and selecting a PQYZ record, see [Finding a PQYZ mapping](#).  
**Result:** The selected record appears in Update mode on the PQYZ tab.
2. 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.

3. 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.

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

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 PQYZ mapping

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

1. Ensure you are on the **PQYZ** tab in Find mode.
2. Enter the selection criteria in one or more query fields and click **Find**.

If a field is left empty, the search retrieves 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 returns records such as 123, 1234, 12345, ...

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

PQYZ	Routing Destination	Routing Number	Number Type	URI	Description	Last User	Last Date
32661	TEST1	551				SMF	2014-01-13 18:10:3...
32662	TEST2	552				SMF	2014-01-13 18:10:3...
32663	TEST3	553				SMF	2014-01-13 18:10:3...

**Note:** The first 100 records entered in the database are displayed in no particular order. If you do not find the record you are searching for, conduct a more specific search.

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

#### Related topic

[PQYZ](#)

## DN Range

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:

- A DN Range can be either an operator type or a subscriber type
- Additional Routing Numbers, Donor ID Numbers, and Port ID Numbers may only be defined for subscriber DN Ranges
- The DN Start and DN End values must be of equal length
- 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 *Number Portability Service Pack Technical Guide*.

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

## Adding a DN range

Follow these steps to add a new DN range.

1. On the **DN Range** tab in the NP/Subscriber and Network - Find mode screen, click **New**.  
**Result:** You see the DN Range tab in the NP/Subscriber and Network screen in New mode.
2. If this DN range provides additional routing for external operator ranges then select the **Entry Type (Tick for Operator)** check box. Leave deselected if this is a subscriber DN range.

**Note:** When this check box is selected you will not be able to specify an:

3. Additional Routing Number
4. Donor ID Number
5. Port ID Number
6. In the **DN Start** field, enter the starting number for the DN range. The number must be between four and 18 digits long.
7. In the **DN End** 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.
8. In the **Activation Date** field, enter the activation date using this format: DD/MM/YYYY HH:MM:SS.

**Example:** "01/15/2008 10:00:00"

9. In the **Routing Number** 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.  
**Note:** 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 [Using the Routing Number Search Dialog](#) for details.
10. If required, in the **Additional Routing Number** 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.  
**Note:** 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 [Using the Additional Routing Number Search Dialog](#) for details.
11. If required, in the **Donor ID Number** field specify the donor ID number.  
**Note:** To search for a valid number using the Donor ID Search Dialog, click the button to the right of this field. See [Using the Donor ID Search Dialog](#) for details.
12. If required, in the **Port ID Number** field enter the number of the port ID for the DN range.  
**Note:** This field is used for auditing purposes (if available) to hold the administrative ID for the port request.
13. From the **Number Type** drop down list, select the number type for the DN range.
14. If required, enter a URI to associate with the DN Range.
15. Click **Save**.  
**Note:** If the DN range rules are broken, a "Save operation failed" error message detailing the problem will be displayed.
16. Repeat steps 2 to 12 to add all the DN ranges 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.
17. Click **Return** to go back to the previous screen.

## Editing a dn range

Follow these steps to edit a DN range.

1. In Find mode, on the **DN Range** tab, find and select the record to edit. For more information about finding and selecting DN ranges, see [Finding a dn range](#).  
**Result:** The selected record appears in Update mode on the DN Range tab.
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.

1. In Find mode, on the **DN Range** tab, find and select the record to delete. For more information about finding and selecting DN ranges, see [Finding a dn range](#).
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 dn range

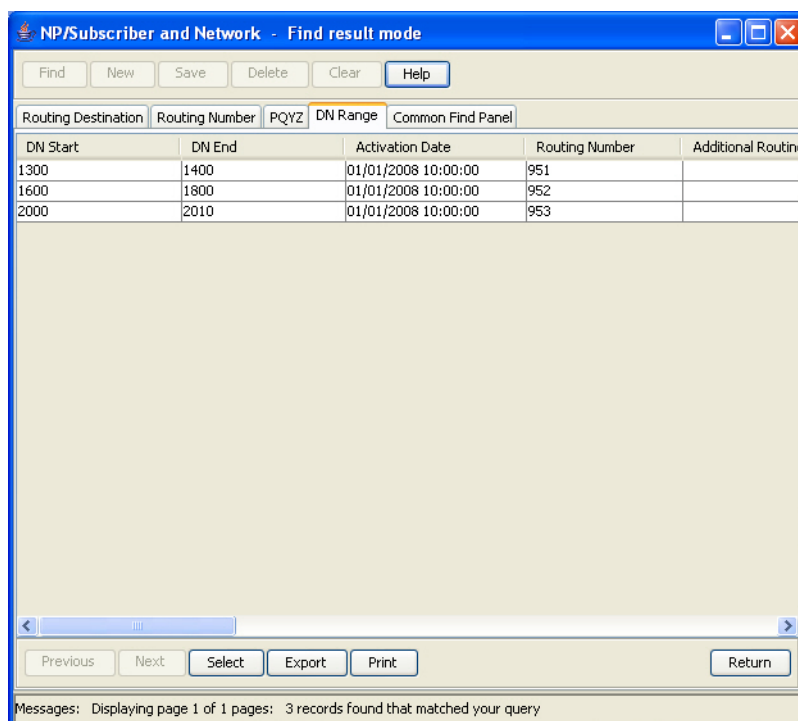
Follow these steps to search the database for a specific DN range.

1. Ensure you are on the **DN Range** tab in Find mode.
2. Enter selection criteria in one or more query fields and click **Find**.

If a field is left empty, the search retrieves 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 returns records such as 123, 1234, 12345, ...

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



The screenshot shows a software window titled "NP/Subscriber and Network - Find result mode". It features a toolbar with buttons for Find, New, Save, Delete, Clear, and Help. Below the toolbar is a tabbed interface with "Routing Destination", "Routing Number", "PQYZ", "DN Range", and "Common Find Panel". The "DN Range" tab is active, displaying a table with the following data:

DN Start	DN End	Activation Date	Routing Number	Additional Routing
1300	1400	01/01/2008 10:00:00	951	
1600	1800	01/01/2008 10:00:00	952	
2000	2010	01/01/2008 10:00:00	953	

At the bottom of the window, there are navigation buttons: Previous, Next, Select, Export, Print, and Return. A status bar at the very bottom reads: "Messages: Displaying page 1 of 1 pages: 3 records found that matched your query".

**Note:** The first 100 records entered in the database are displayed in no particular order. If you do not find the record you are searching for, 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**.

**Related topic**[DN Range](#)

## 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.

1. Click the button to the right of the **Additional Routing Number** field.

**Result:** You see the Additional 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 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.

Additional Routing Number	Description
950	Internal_NotPorted
952	Internal_NotPorted
953	Internal_NotPorted
190	Internal_NotPorted

- 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.

## 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.

- Click the button to the right of the **Donor ID Number** field.

**Result:** You see the Donor ID Search Dialog.

- 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.

Donor ID Number	Description
950	Internal_NotPorted
951	External - Not Ported
952	Internal_NotPorted
953	Internal_NotPorted
954	External - Ported Out
955	External - Ported Out
956	External - Ported Out
957	External - Ported Out
958	

- 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

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 fields

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

Field	Description
Find Number	The number to look for in the PQYZ, DN Range, Routing Number and Routing Destination tables.
DN Start	Displays the start of the matched DN range with the newest activation date.

Field	Description
DN End	Displays the end of the matched DN range with the newest activation date.
Activation Date	Displays the activation date of the matched DN range.
Additional Routing Num	Displays the additional routing number of the matched DN range.
Donor ID Number	Displays the donor id of the matched DN range.
Port ID Number	Displays the port id of the matched DN range.
Entry Type (Tick for Operator)	Displays the entry type for the matched DN range. Valid values are: O - external operator range S - subscriber range
Number Type	Displays the number type for the matched DN range or PQYZ entry. Valid values are: <ul style="list-style-type: none"> <li>• F - fixed</li> <li>• M - mobile</li> <li>• E - empty (not used)</li> </ul>
URI (DN Range)	Displays the URI of the matched DN range.
Routing Number	Displays the Routing Number that is linked to the matched DN range and shows its description in the text box below.
PQYZ	Displays the PQYZ prefix that matches the Find Number value and shows its description in the text box below.
URI (PQYZ)	Displays the URI of the matching PQYZ entry.
Routing Destination	Displays the routing destination for the matching PQYZ prefix or Routing Number.

## Using the Common Find Panel

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

1. Select the **Common Find Panel** in the NP/Subscriber and Network screen.
2. In the **Find Number** field, enter the number to search for, and click **Find**.

**Result:** A list of the records that match the Find Number value displays.

# 2

## Least Cost Routing

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

**This chapter contains the following topics.**

[Least Cost Routing Screen](#)

[Rule Set](#)

[Rule](#)

[Carrier](#)

### Least Cost Routing Screen

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

### Rule Set

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

#### Adding a rule set

Follow these steps to Add a new rule set.

1. Select the **Rule Set** tab in the NP/Least Cost Routing - Find mode screen, and click **New**.  
**Result:** You see the **Rule Set** tab in New mode.
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.

1. In Find mode, on the **Rule Set** tab, find and select the record to edit. For more information about finding and selecting rule sets, see [Finding a rule set](#).  
**Result:** The selected record appears in Update mode on the **Rule Set** tab.
2. Edit the details as described in [Adding a rule set](#).
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.

1. In Find mode, on the **Rule Set** tab, find and select the record to delete. For more information on finding and selecting rule sets, see [Finding a rule set](#).
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.

1. Ensure you are in Find mode on the **Rule Set** tab.
2. Enter the selection criteria in one or more query fields and click **Find**.

If a field is left empty, the search retrieves 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 returns 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:** The first 100 records entered in the database are displayed in no particular order. If you do not find the record you are searching for, conduct a more specific search.

Name	Last User	Last Date
Rule Set 0	SU	21/05/2008 13:27:10
Rule Set 1	SU	21/05/2008 13:27:15
Rule Set 10	SU	21/05/2008 13:27:19
Rule Set 11	SU	21/05/2008 13:27:23
Rule Set 2	SU	21/05/2008 13:27:28
Rule Set 21	SU	21/05/2008 13:27:32
Rule Set 22	SU	21/05/2008 13:27:35
Test	SU	20/05/2008 13:48:41

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**.

#### Related topic

[Rule Set](#)

## Rule

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

## 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.

1. On the **Rule** tab, click the button to the right of the relevant **Carrier** field.  
**Result:** You see the Carrier Search Dialog.
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.



Carrier Search Dialog

Carrier  Find

Description

Carrier	Description
C1	
Carrier 1	National carrier 1
Carrier 2	National carrier 2

Next Previous Select Cancel

Displaying page 1 of 1 pages: 3 records found that matched your query

3. 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.

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.

2. In the **Rule Set** field, select the rule set to assign the rule to.
3. 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).

**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](#) for details.

4. In the **Carrier 1** field, enter the first carrier to try when the rule is invoked. This is a required field.

**Note:** 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 [Using the Carrier Search Dialog](#) for details.

5. 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.  
**Note:** You must supply at least one carrier.
6. Click **Save**.
7. Repeat steps 2 to 6 for each rule 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 rule

Follow these steps to edit a rule.

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](#).  
**Result:** The selected record appears in Update mode on the Rule tab.
2. Edit the details as described in [Adding a rule](#).
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.

1. 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](#).
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.

1. Ensure you are in Find mode on the **Rule** tab.
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 **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.

Rule Set	Routing Destination	Carrier 1
Rule Set 1	rd1	Carrier 1
Rule Set 10	rd1	Carrier 2
Test	rd1	C1

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**.

#### Related topic

[Rule](#)

## Carrier

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

### Adding a carrier

Follow these steps to add a new carrier.

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.
2. 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.
3. In the **Format** field select the preferred format for the carrier.
4. In the **Override Noa** field, enter the appropriate value. Valid values are a single digit in the range 0 through 7.
5. In the **Description** field, enter a description for the carrier, if required. The description can be up to 64 alphanumeric characters long.  
In the **Statistics ID** field, select the relevant statistic.
6. In the **Carrier Code** field, enter the carrier code. The carrier code must be four characters long and is required.
7. 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.

8. 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.
9. Select the **Send Routing Number** check box to send the routing number when using this carrier.
10. In the **Application ID** field, select the ID of the application used by the carrier.
11. Click **Save**.
12. Repeat steps 2 through 9 for each carrier 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.
13. Click **Return** to go back to the previous screen.

## Editing a carrier

Follow these steps to edit carrier details.

1. 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](#).  
**Result:** The selected record appears in Update mode on the **Carrier** tab.
2. Edit the details as described in [Adding a carrier](#).
3. Click **Save**, and then **Return**, to save your changes and return to the previous screen.

## 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.

1. 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](#).
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 carrier

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

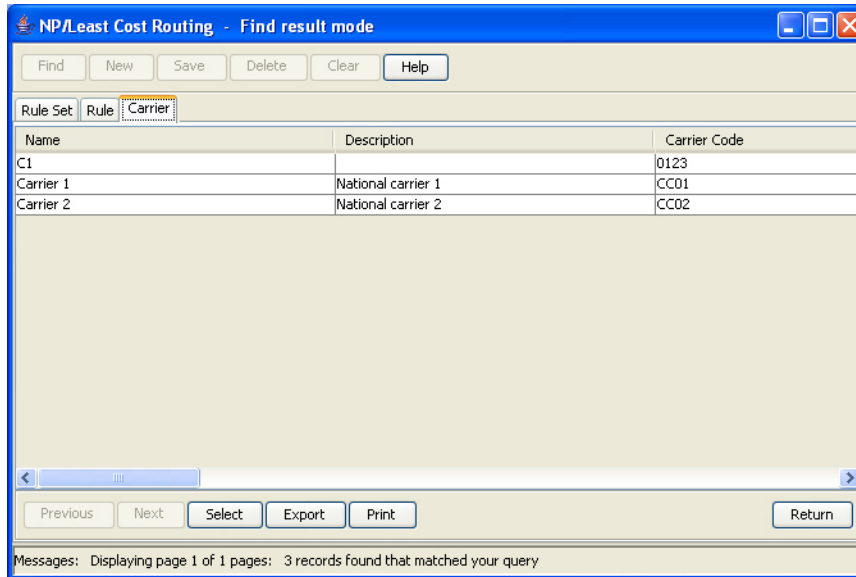
1. Ensure you are on the **Carrier** tab in Find mode.
2. Enter the selection criteria in one or more query fields and click **Find**.

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 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**.

#### Related topic

[Carrier](#)

# 3

## Home Routing

This chapter explains how to define home routing destinations.

**This chapter contains the following topics.**

[Home Routing Screen](#)

[Home Routing](#)

[Home Routing Search](#)

### Home Routing Screen

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

### Home Routing

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

### Adding a home routing

Follow these steps to Add a new home routing definition.

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

1. Select the **Home Routing** tab in the NP/Home Routing - Find mode screen, and click **New**.

**Result:** You see the **Home Routing** tab in New mode.

2. In the **DN Start** field enter the start number for the DN range. The DN Start number must be between four and 18 digits long, and is required.
3. In the **DN End** 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.
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. It is a required field.

**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](#) 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.

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](#).

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

2. Edit the details as described in [Adding a home routing](#).
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.

1. In Find mode, on the **Home Routing** tab, find and select the record to delete. For more information on finding and selecting home routing records, see [Finding a home routing record](#).

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.

1. Ensure you are in Find mode on the **Home Routing** tab.
2. Enter the selection criteria in one or more query fields and click **Find**.

If a field is left empty, the search retrieves 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 returns records such as 123, 1234, 12345, ...

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



**Note:** The first 100 records entered in the database are displayed in no particular order. If you do not find the record you are searching for, conduct a more specific search.

3. 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.

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

#### Related topic

[Home Routing](#)

## Home Routing Search

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

### Finding home routing details

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

1. Select the **Home Routing Search** tab in the NP/Home Routing screen.
2. 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, the details are displayed in the screen. Otherwise, `No match found` is displayed.