Oracle® Communications Network Charging and Control
ENUM Control Agent Help

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Oracle Communications Network Charging and Control ENUM Control Agent Help, Release 12.0.6

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Find Mode

This chapter explains how to find records in the ENUM database for editing.

This chapter contains the following topics.

Finding flag records

Follow these steps to find flag records in the database.

1. Select the **Flags** tab.

2. Ensure the current mode shown in the screen title is **Find Mode**.

   Tip: Click **Return** until the screen title shows - Find mode.

3. Enter search criteria in any (or none) of the fields in the tab.

   Tip: Leaving all fields empty will return all flag records in the database.

4. By entering data in the fields at the bottom of the tab, select the filter and sort criteria.

5. Click **Find**.

   Result: The database is searched and all matching records are collated and displayed in Find Flag Results.

Filtering and sorting results

Follow these steps to set the criteria to filter and sort the find results.

1. Filter the search by entering user or date value in the **Last User** and/or the **Last Date** fields.

   Tip: Leave both fields empty to return records for all users and all dates of the type according to the selected tab.

2. Set the sort order of the results by selecting the field in the **Order by** drop down list.

   Note:

   - This list represents all the columns that can be seen on the tabulated results screen in Find Results Mode.

   - Default is first column.

   - For any column, the sort order is ascending.

Finding service records

Follow these steps to find service records in the database.

1. Select the **Service** tab.

2. Ensure the current mode shown in the screen title is **Find Mode**.

   Tip: Click **Return** until the screen title shows - Find mode.

3. Enter search criteria in any (or none) of the fields displayed in the tab.

   Tip: Leave all fields empty to return all service records in the database.

4. By entering data in the fields at the bottom of the tab, select the filter and sort criteria.

5. Click **Find**.

   Result: The database is searched and all matching records are collated and displayed in Find Services Results.

Filtering and sorting results

Follow these steps to set the criteria to filter and sort the find results.

1. Filter the search by entering user or date value in the **Last User** and/or the **Last Date** fields.

   Tip: Leave both fields empty to return records for all users and all dates of the type according to the selected tab.

2. Set the sort order of the results by selecting the field in the **Order by** drop down list.

   Note:

   • This list represents all the columns that can be seen on the tabulated results screen in Find Results Mode.

   • Default is first column.

   • For any column, the sort order is ascending.

Finding subscriber or operator records

Follow these steps to find subscriber or operator records in the database.

1. Select the **Subscriber/Operator** tab.

2. Ensure the current mode shown in the screen title is **Find Mode**.

   Tip: Click **Return** until the screen title shows - Find mode.

3. Enter search criteria in any (or none) of the fields displayed in the tab.

   Note: Select the **Entry Type** check box to find operator records, otherwise subscriber records are found.

   Tip: Leave all fields empty to return all subscriber or operator records in the database.

4.   By entering data in the fields at the bottom of the tab, select the filter and sort criteria.

5.   Click **Find**.

Result: The database is searched and all matching records are collated and displayed in Find Subscriber or Operator Results.

Filtering and sorting results

Follow these steps to set the criteria to filter and sort the find results.

1.   Filter the search by entering user or date value in the **Last User** and/or the **Last Date** fields.

Tip: Leave both fields empty to return records for all users and all dates of the type according to the selected tab.

2.   Set the sort order of the results by selecting the field in the **Order by** drop down list.

Note:

•   This list represents all the columns that can be seen on the tabulated results screen in Find Results Mode.

•   Default is first column.

•   For any column, the sort order is ascending.

Finding NAPTR Records

Follow these steps to find NAPTR records in the database.

1.   Select the **NAPTR Records** tab.

2.   Ensure the current mode shown in the screen title is **Find Mode**.

Tip: Click **Return** until the screen title shows - Find mode.

3.   Enter search criteria in any (or none) of the fields displayed in the tab.

Tip: Leaving all fields empty will return all NAPTR records in the database.

a.   You can search for the search criteria to include in the following fields:

•   **Subscriber/Operator**

•   **Flag**

•   **Service**

To search the field, click [...] to the right of the corresponding field.

Result: The Search Dialog for that type of record selected displays.

b.   To reduce the number of database records searched, enter in the fields, as required, for:

•   Subscriber/Operator - a **Name** or **Dialed Number**

•   Flag - a **Flag** or **Description**

•   Service - a **Service** or **Description**

c.   Click **Find**.

Result: The results are returned in the grid.

> d. Click on the required record and click **Select**.
>
> **Result:** That service is added to the search fields.

4. By entering data in the fields at the bottom of the tab, select the filter and sort criteria.

5. Click **Find**.

   Result: The database is searched and all matching records are collated and displayed in Find NAPTR Records Results.

Filtering and sorting results

Follow these steps to set the criteria to filter and sort the find results.

1. Filter the search by entering user or date value in the **Last User** and/or the **Last Date** fields.

   Tip: Leave both fields empty to return records for all users and all dates of the type according to the selected tab.

2. Set the sort order of the results by selecting the field in the **Order by** drop down list.

   Note:

   • This list represents all the columns that can be seen on the tabulated results screen in Find Results Mode.

   • Default is first column.

   • For any column, the sort order is ascending.

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Find Results Mode

This chapter explains how to use the find results.

This chapter contains the following topics.

Find Flag Results

This table describes the content of each column.

Column	Description
Flag	The unique flag name.
Description	Flag description.
Last User	Name of last user to amend (or add) this record
Last Date	Date when this record was added or amended
ID	Record number within the database table

Selecting record for update

To amend any of the records in the results list, click on the row to change, then click **Select**.

Result: The record detail is displayed in Update Mode.

Exporting results list

The export function downloads all the information displayed in the results list.

To export, click **Export**, then follow the prompts for what to name the file and where to save it to.

You can view the saved file using a text processor.

Printing flag results list

Click **Print** to print the results list.

Page setup and printer selection panels prompt for what and where to print.

Find Services Results

This table describes the content of each column.

Column	Description
Service	The unique name of the service.
Description	A brief description of the service.
Last User	Name of last user to amend (or add) this record
Last Date	Date when this record was added or amended
ID	Record number within the database table

Selecting record for update

To amend any of the records in the results list, click on the row to change, then click **Select**.

Result: The record detail is displayed in Update Mode.

Exporting results list

The export function downloads all the information displayed in the results list.

To export, click **Export**, then follow the prompts for what to name the file and where to save it to.

You can view the saved file using a text processor.

Printing flag results list

Click **Print** to print the results list.

Page setup and printer selection panels prompt for what and where to print.

Find Subscriber or Operator Results

This table describes the content of each column.

Column	Description
Name	The operator or subscriber name, depending on the option selected.
Number Start	The start of number in a range for this operator or subscriber.
Number End	The last number in a range for this operator or subscriber.
Entry Type	Indicator of type of list, either O(perator), or S(ubscriber).
Last User	Name of last user to amend (or add) this record

Column	Description
Last Date	Date when this record was added or amended
ID	Record number within the database table

Selecting record for update

To amend any of the records in the results list, click on the row to change, then click **Select**.

Result: The record detail is displayed in Update Mode.

Exporting results list

The export function downloads all the information displayed in the results list.

To export, click **Export**, then follow the prompts for what to name the file and where to save it to.

You can view the saved file using a text processor.

Printing flag results list

Click **Print** to print the results list.

Page setup and printer selection panels prompt for what and where to print.

Find NAPTR Records Results

This table describes the content of each column.

Column	Description
Subscriber/Operator	The subscriber or operator name
Description	Description of the record.
Order	A 16-bit unsigned integer that specifies the processing order of the NAPTR records, with lower-numbered records processed before higher-numbered records.
Preference	A 16-bit unsigned integer that specifies a processing preference within NAPTR records that have equal order values. The distinction between the order and preference values is that a client can process records having the same order number but different preference numbers, but cannot process records with a different order number after a match is found.

Column	Description
Flag	A character that governs the interpretation and rewriting of the record's fields. Letters can be either uppercase or lowercase.
	Only values S, A, U, and P are defined. The S, A and U flags indicate that the current NAPTR record is the last one and they determine what the next action will be.
	• The letter S specifies that the next lookup is for SRV records.
	• The letter A specifies that the next lookup is for an A, AAAA, or A6 record.
	• The letter U specifies that the output of the Regexp field is a URI. Because some applications also lookup aspects of URIs, developers should understand that this can create loop conditions and take appropriate measures.
	The letter P specifies that the rest of the application algorithm is executed in a manner that is consistent with a specified protocol. The rules are identified by the protocol specified in the Services field.
	See the standards documentation for the naming authority pointing dns resource record for more information on these values.
Service	The service name.
Regular Expression	A string that holds a regular expression to apply to the client's original string to create the next domain name to look up. See the standards documentation for the Naming Authority Pointer DNS Resource Record for information on the substitution rules
	The regular expression must be applied only to the client's original string and not to a domain name that was produced by a previous NAPTR rewrite.
Replacement	The next name to query for NAPTR, SRV, or address records depending on the value of the Flag field. This must be a fully qualified domain-name
Last User	Name of last user to amend (or add) this record
Last Date	Date when this record was added or amended
ID	Record number within the database table

Selecting record for update

To amend any of the records in the results list, click on the row to change, then click **Select**.

Result: The record detail is displayed in Update Mode.

Exporting results list

The export function downloads all the information displayed in the results list.

To export, click **Export**, then follow the prompts for what to name the file and where to save it to.

You can view the saved file using a text processor.

Printing flag results list

Click **Print** to print the results list.

Page setup and printer selection panels prompt for what and where to print.

3

New Mode

This chapter explains how to add new records to the ENUM database.

This chapter contains the following topics.

New Flags

New Services

New Subscriber or Operator

New NAPTR Records

New Flags

Follow these steps to add a new flag record.

1. Ensure the current mode shown in the screen title is**Find Mode**.

   Result: The **New**button becomes available.

   Tip: Click **Return**until the screen title shows - Find mode.

2. Select the**Flags**tab.

3. Click**New**.

   Results:

   • The screen title changes to New mode.

   • The allowed new mode buttons are active and disallowed buttons grayed out.

   • The last Used Data section is grayed out.

4. Enter the flag name in the**Flag**field.

5. Enter the flag description in the**Description**field.

6. Click**Save**.

   Result: A saved confirmation message appears at the bottom of the screen.

7. Click one of the following:

   • **Return**- to return to the Find Mode

   • **Clear**- to add another record

New Services

Follow these steps to add a new service record.

1. Ensure the current mode shown in the screen title is **Find Mode**.

   Result: The **New** button becomes available.

   Tip: Click **Return** until the screen title shows Find Mode.

2. Select the **Service** tab.

3. Click **New**.

   Results:

   - The screen title changes to New Mode.

   - The allowed new mode buttons are active and disallowed buttons grayed out.

   - The last Used Data section is grayed out.

4. Enter the service name in the **Service** field.

5. Enter the service description in the **Description** field.

6. Click **Save**.

   Result: A saved confirmation message appears at the bottom of the screen.

7. Click one of the following:

   - **Return** - to return to the Find Mode

   - **Clear** - to add another record

New Subscriber or Operator

Follow these steps to add a new subscriber/operator record.

1. Ensure the current mode shown in the screen title is **Find Mode**.

   Result: The **New** button becomes available.

   Tip: Click **Return** until the screen title shows - Find mode.

2. Select **Subscriber/Operator** tab.

3. Click **New**.

   Results:

   - The screen title changes to New mode.

   - The allowed new mode buttons are active and disallowed buttons grayed out.

   - The last Used Data section is grayed out.

4. To add:

   - **operator** record, tick the **Entry Type** check box.

   - **subscriber** record, clear the **Entry Type** check box

5. Type the subscriber/operator name in the **Name** field.

6. Type the start of range number in the **Number Start** field.

7. Type the End of range number in the **Number End** field.

8. Click **Save**.

   Result: A saved confirmation message appears at the bottom of the screen.

9. Click one of the following:

   - **Return** - to return to the Find Mode

   - **Clear** - to add another record

New NAPTR Records

Follow these steps to add a new NAPTR record.

1. Ensure the current mode shown in the screen title is **Find Mode**.

   Result: The **New** button becomes available.

   Tip: Click **Return** until the screen title shows - Find mode.

2. Select the **NAPTR** tab.

3. Click **New**.

   Results:

   - The screen title changes to New mode.

   - The allowed new mode buttons are active and disallowed buttons grayed out.

   - The last Used Data section is grayed out.

4. Select a Subscriber/Operator, by clicking ⊡ next to the **Subscriber/Operator** field.

   Result: The Subscriber/Operator Search Dialog displays.

5. Enter a **Name** or **Dialed Number** as required to reduce the number of database hits.

   Click **Find**.

6. Click on required record and click **Select**.

   Result: That subscriber/operator is added to the NAPTR record.

7. Enter a brief description of the record in the **Description** field.

8. Enter the NAPTR order in the Order field. This is the order in which records must be processed to ensure the correct ordering of rules. Low numbers are processed before high numbers.

9. Enter the NAPTR preference in the Preference field. This is the order in which NAPTR records with equal "order" values should be processed, low numbers being processed before high numbers.

10. Select a flag by clicking ⊡ next to the **Flag** field.

    Result: The Flags Search Dialog displays.

11. Enter a **Flag** or **Description** as required to reduce the number of database hits.

    Click **Find**.

12. Click on required record and click **Select**.

    Result: That flag is added to the NAPTR record.

13. Select a service by clicking ⊡ next to the **Service** field.

    Result: The Service Search Dialog displays.

14. Enter a **Service** or **Description** as required to reduce the number of database hits.

    Click **Find**.

15. Click on required record and click **Select**.

    Result: That service is added to the NAPTR record.

16. Enter one of the following:

    - The NAPTR regular expression in the Regular Expression field. This is a string containing a substitution expression that is applied to the original string held by the client in order to construct the next domain name to lookup

    - The NAPTR replacement in the Replacement field. This is the next NAME to query for NAPTR, SRV, or address records depending on the value of the flags field.

17. Click **Save**.

    Result: A saved confirmation message appears at the bottom of the screen.

18. Click one of the following:

    - **Return** - to return to the Find Mode

    - **Clear** - to add another record

4

Update Mode

This chapter explains how to update ENUM records.

This chapter contains the following topics.

Update Flags

Update Services

Update Subscriber or Operator

Update NAPTR Records

Update Flags

Follow these steps to amend or delete a flag record.

1. List the flag records. See Finding flag records.

2. Click on the record to amend.

3. Click **Select**.

   Result: The record detail is displayed in Update mode.

4. To delete the record, click **Delete**.

   Result: The Confirm Delete Record appears.

   Click one of the following:

   • **Yes** to delete the record

   • **No** to keep the record.

5. Change fields as required.

6. Click **Save**.

   Result: A saved confirmation message appears at the bottom of the screen.

7. If required, click **Check Consistency** to check that the currently selected record matches those held upon any replication targets.

Update Services

Follow these steps to amend or delete a Service record.

1. List the service records. See Finding service records.

2. Click on the record to amend.

3. Click **Select**.

   Result: The record detail is displayed in Update mode.

4. To delete the record, click **Delete**.

Result: The Confirm Delete Record appears.

Click one of the following:

- **Yes** to delete the record
- **No** to keep the record

5. Change fields as required.

6. Click **Save**.

   Result: A saved confirmation message appears at the bottom of the screen.

7. If required, click **Check Consistency** to check that the currently selected record matches those held upon any replication targets.

Update Subscriber or Operator

Follow these steps to amend or delete a Subscriber or Operator record.

1. List the Subscriber or Operator records. See Finding subscriber or operator records.

2. Click on the record to amend.

3. Click **Select**.

   Result: The record detail is displayed in Update mode.

4. To delete the record, click **Delete**.

   Result: The Confirm Delete Record appears.

   Click one of the following:

   - **Yes** to delete the record
   - **No** to keep the record

5. Change fields as required.

6. Click **Save**.

   Result: A saved confirmation message appears at the bottom of the screen.

7. If required, click **Check Consistency** to check that the currently selected record matches those held upon any replication targets.

Update NAPTR Records

Follow these steps to amend or delete a NAPTR record.

1. List the NAPTR records. See Finding NAPTR Records.

2. Click on the record to amend.

3. Click **Select**.

   Result: The record detail is displayed in Update mode.

4. To delete the record, click **Delete**.

   Result: The Confirm Delete Record appears.

   Click one of the following:

- • **Yes** to delete the record

- • **No** to keep the record.

5. Change fields as required.

6. Click **Save**.

   Result: A saved confirmation message appears at the bottom of the screen.

7. If required, click **Check Consistency** to check that the currently selected record matches those held upon any replication targets.

5

ENUM Feature Nodes

This chapter describes the Oracle Communications Network Charging and Control (NCC) ENUM Control Agent feature nodes.

This chapter contains the following topics.

Available Feature Nodes

ENUM Call Out

ENUM Naptr Response

ENUM Query

Available Feature Nodes

This table lists the feature nodes available from the ENUM palette group in the ACS Control Plan Editor and the fast key for each feature node in the list. You can use the fast key to search for a feature node in the palette or the canvas.

Node name	Node description
ENUM Call Out	The ENUM Call Out node performs an ENUM lookup using the ENCA interface. Fast key: enco
ENUM Naptr Response	The ENUM NAPTR Response node processes a previously retrieved NAPTR response to extract specific records. Fast key: ennr
ENUM Query	The ENUM Query node is used to query the ENUM database. Fast key: enqr

ENUM Call Out

The ENUM Call Out node performs an ENUM lookup using the ENCA interface.

Node exits

This node has one entry and ten exits. The number of exits cannot be changed.

Exit	Cause	Description
1	Success	ENCA return code = 0
2	Too Few Parameters	No number was given in the call-out ENCA request (number is blank).

Exit	Cause	Description
3	Failed Translation	ENCA DNS response translation failed.
4	DNS Timeout	DNS server(s) failed to respond within the configured time-limit.
5	DNS Format Error	DNS served responded with message: "Format Error".
6	DNS Server Failure	DNS served responded with message: "Server Failure".
7	DNS Name Error	DNS served responded with message: "Name Error".
8	DNS Not Implemented	DNS served responded with message: "Not Implemented".
9	DNS Refused	DNS served responded with message: "Refused".
10	ENCA Fail	ENCA failure (out of resources / bad domain name / any other error).

Configuring the node

Follow these steps to configure the node.

1. Select where the number to convert will be sourced from, one of:

   - **Profile** (from a profile block and tag)

   - **Freeform** (from this configuration screen)

2. **Result:** The relevant Number Location fields are made available.

3. Depending on what was selected at step 1, one of:

   - Select the Number Location from the **Number Location** and **Number Field** drop down lists

   - Enter the number in the **Number** field

4. If the number is to be converted to FQDN format, select the **Convert to FQDN** check box.

5. Select where the domain name will be sourced from, one of:

   - **Profile** (from a profile block and tag)

   - **Freeform** (from this configuration screen)

6. **Result:** The relevant Domain Name fields are made available.

7. Depending on what was selected at step 4, one of:

   - Select the Domain Name from the **Domain Name Location** and **Domain Name Field** drop down lists, or

   - Enter the domain name in the **Domain Name** field.

8. Click **Save**.

ENUM Naptr Response

The ENUM NAPTR Response node processes a previously retrieved NAPTR response to extract specific records.

When extracting AUS (Application Unique String) type, the presence of the AUS is detected by a '+' character found, followed by one or more numerical characters terminated with '@' (for example "!^.*$!+441473289900@oracle.com!")

Node exits

This node has one entry and four exits. The number of exits cannot be changed.

Exit	Cause	Description
1	Success	The record was extracted and saved.
2	No Match NAPTR	The required record could not be found.
3	No Match AUS	An AUS format number could not be found.
4	Error	Any other error situation.

Configuring the node

Follow these steps to configure the node.

1. In the **Search String** section, set the search criteria to match records against.

    •   Enter the record type to extract in the **Search String** field

    •   Enter the record number to extract in the **Index** field

2. In the **Active Record Save Location**, identify where the found record is to be saved, one of:

    •   A new location, select from the **Profile Location** and **Profile Field** drop down lists

    •   Same location, select the **Overwrite NAPTR** check box

    Note: selecting this check box over-rides any profile selection.

3. In the **Regular Expression Substitution** section, to invoke the regular expression substitution, check the **Perform Substitution** check box, then:

    •   Identify incoming profile location, one of:

        –   Select an incoming AUS value from the **Incoming Profile Location** and **Incoming Profile Field** drop down lists

        –   Select the **Use Default Profile** check box

    •   Select a save location from the **Outgoing Profile Location** and **Outgoing Profile Field** drop down lists

4. In the **AUS Processing** section, for AUS format numbers extracted:

    •   Select the **Extract AUS** check box

    •   If required, select the **Remove +** check box to remove the preceding +

- • If required, select the **Remove -** check box to remove the preceding -

5. In the **AUS Save Location** section, for AUS format numbers, select the save location from the **Profile Location** and **Profile Field** drop down lists.

6. Click **Save**.

ENUM Query

The ENUM Query node is used to query the ENUM database.

Node exits

This node has one entry and five exits. The number of exits cannot be changed.

Exit	Cause	Description
1	Subscriber records	Search key found subscriber records that matched the search key (dialed number within a record number range) and may have matched the optional **Service** criteria. **Note:** The search key is used to find subscribers/operators. This is a dialed number (for example, 1234567) that is searched for between a range of numbers.
2	Operator records	Search key did not find any subscriber records, but did find operator records that matched the search key (dialed number within a record number range) and may have matched the optional **Service** criteria.
3	No NAPTR Records	Search key did find subscriber or operator records that matched the search key but did not find any NAPTR records.
4	No SUB/OP info	Search key did not find any subscriber or operator records that matched the search key.
5	Error	Database or I/O error.

Note: The **Service** criteria is an optional delimiter for the NAPTR record returned. By specifying the service you can delimit on the service of a NATPR records (that is, only return records of E2U+sip type). The search key is still the primary search criteria.

Configuring the node

Follow these steps to configure the node.

1. Select the **Search Key Location**, one of:

- Select from the **drop down lists**
- Select the **Use Default Profile** check box

2. To optionally specify a **Service Type**:

- Select the **Specify Type** check box
- Select the **Service Type** from the drop down list

Note: The Service Type list is configured in **SMS > Services > ENUM service > NAPTR Record Management > Service** tab/screens.

3. Select the **Outgoing Destination** location using the drop down lists.

4. Click **Save**.