

Oracle® Communications Network Charging and Control USSD Portal Components Help



Release 15.1
G14427-01
April 2025

ORACLE®

G14427-01

Copyright © 2025, Oracle and/or its affiliates.

This software and related documentation are provided under a license agreement containing restrictions on use and disclosure and are protected by intellectual property laws. Except as expressly permitted in your license agreement or allowed by law, you may not use, copy, reproduce, translate, broadcast, modify, license, transmit, distribute, exhibit, perform, publish, or display any part, in any form, or by any means. Reverse engineering, disassembly, or decompilation of this software, unless required by law for interoperability, is prohibited.

The information contained herein is subject to change without notice and is not warranted to be error-free. If you find any errors, please report them to us in writing.

If this is software, software documentation, data (as defined in the Federal Acquisition Regulation), or related documentation that is delivered to the U.S. Government or anyone licensing it on behalf of the U.S. Government, then the following notice is applicable:

U.S. GOVERNMENT END USERS: Oracle programs (including any operating system, integrated software, any programs embedded, installed, or activated on delivered hardware, and modifications of such programs) and Oracle computer documentation or other Oracle data delivered to or accessed by U.S. Government end users are "commercial computer software," "commercial computer software documentation," or "limited rights data" pursuant to the applicable Federal Acquisition Regulation and agency-specific supplemental regulations. As such, the use, reproduction, duplication, release, display, disclosure, modification, preparation of derivative works, and/or adaptation of i) Oracle programs (including any operating system, integrated software, any programs embedded, installed, or activated on delivered hardware, and modifications of such programs), ii) Oracle computer documentation and/or iii) other Oracle data, is subject to the rights and limitations specified in the license contained in the applicable contract. The terms governing the U.S. Government's use of Oracle cloud services are defined by the applicable contract for such services. No other rights are granted to the U.S. Government.

This software or hardware is developed for general use in a variety of information management applications. It is not developed or intended for use in any inherently dangerous applications, including applications that may create a risk of personal injury. If you use this software or hardware in dangerous applications, then you shall be responsible to take all appropriate fail-safe, backup, redundancy, and other measures to ensure its safe use. Oracle Corporation and its affiliates disclaim any liability for any damages caused by use of this software or hardware in dangerous applications.

Oracle®, Java, MySQL, and NetSuite are registered trademarks of Oracle and/or its affiliates. Other names may be trademarks of their respective owners.

Intel and Intel Inside are trademarks or registered trademarks of Intel Corporation. All SPARC trademarks are used under license and are trademarks or registered trademarks of SPARC International, Inc. AMD, Epyc, and the AMD logo are trademarks or registered trademarks of Advanced Micro Devices. UNIX is a registered trademark of The Open Group.

This software or hardware and documentation may provide access to or information about content, products, and services from third parties. Oracle Corporation and its affiliates are not responsible for and expressly disclaim all warranties of any kind with respect to third-party content, products, and services unless otherwise set forth in an applicable agreement between you and Oracle. Oracle Corporation and its affiliates will not be responsible for any loss, costs, or damages incurred due to your access to or use of third-party content, products, or services, except as set forth in an applicable agreement between you and Oracle.

Contents

1 UPC Portal Screens

USSD Platform User Selection Screens	1-1
Fields - USSD Platform User Selection	1-1
Buttons - USSD Platform User Selection	1-1
Data entry	1-2
USSD Portal Message Class Screens	1-2
Fields - USSD Portal Message Class	1-2
Creating a message class	1-2
Editing records	1-3
Finding a message class	1-3

2 UIS Portal Feature Nodes

Available Feature Nodes	2-1
Language Setting	2-1
Node exits - Language Setting	2-2
Configuring the node - Language Setting	2-2
Send Buffer	2-3
Node exits - Send Buffer	2-3
Configuring the node - Send Buffer	2-4
User Input	2-5
Node exits - User Input	2-5
Configuring the node - User Input	2-5
Setting Variable Part Announcements	2-7
Buffers	2-7
User Selection	2-7
Node exits - User Selection	2-8
Configuring the node - User Selection	2-8
Editing the number of exit branches	2-9
Setting Variable Part Announcements	2-9
Buffers	2-10
Version Branching	2-10
Node exits - Version Branching	2-10

1

UPC Portal Screens

This chapter explains the contents of the UPC Portal screens.

This chapter contains the following topics.

[USSD Platform User Selection Screens](#)

[USSD Portal Message Class Screens](#)

USSD Platform User Selection Screens

The User Selection configuration screen allows you to enter keyword specific text for a given menu exit branch. MAP 1 and MAP 2 keywords can be different. This screen is used with the [User Selection](#) node.

Fields - USSD Platform User Selection

Here is a description of the fields.

Field	Description
Service	This field is populated with all the NAMEs created by the USSD Gateway Base Configuration Screen Service Interface tab. By selecting a Service, all the menus associated with this Service populates the Menu field.
Menu	By selecting a Service, all the menus associated with this Service populate this field.
Language	This is populated with the language associated with the selected menu.
MAP 1 MAP 2 options	Selecting MAP 1 or MAP 2 shows which keyword corresponds to which MAP version.
Branch	After selecting the menu in the Menu field, this field is populated by the branch number.
Keyword	This field is populated by the keyword for that branch. You can edit this field and modify an existing entry or create a new one.

Buttons - USSD Platform User Selection

Here is a description of the buttons.

Field	Description
Update	Has no function in this case.
Search	Entering a menu name in the menu field and clicking the Search button will display the menu for the selected service, if it exists in the database.

Data entry

Follow these steps to update a menu.

1. Click **Clear** to clear the screen of previous data.
2. By selecting a Service, all the menus associated with this Service will populate the Menu listing box. After selecting the menu in the **Menu** field, you can enter keywords associated for each branch.
3. Enter new data and click **Save**.
4. **Note:** When editing keywords, you must **Save** before selecting the other MAP version to edit.

USSD Portal Message Class Screens

Fields - USSD Portal Message Class

This table describes the function of each field.

Field	Description
Class	<p>Specifies the SMS message class type. This field is mandatory.</p> <p>The valid values are described below:</p> <ul style="list-style-type: none">• 0 – Class 0 SMS message class type. This message type is only displayed on the mobile screen. It is not saved in the message store or on the SIM card, unless explicitly saved by the user.• 1 – Class 1 SMS message class type. This message type is stored in the device memory or on the SIM card, depending on available memory.• 2 – Class 2 SMS message class type. This message type carries SIM card data.• 3 – Class 3 SMS message class type. This message type is forwarded from the receiving entity to an external device.
Description	<p>Describes the SMS message class. This field is mandatory.</p>

Creating a message class

Follow these steps to create a message class.

1. On the **Message Class** tab, click **Clear** to clear the screen of previous data.
2. In the **Class** field, enter a value of 0, 1, 2, or 3.
3. In the **Description** field, enter a description for this message class.
4. In the **Comment** field, optionally enter a comment for this message class.
5. Click **Save**.

Result: The new message class is saved.

Editing records

Follow the steps below to edit a record.

1. In the Find screen, select the row you want to edit.
Result: The associated screen is populated with this data, which you can edit.
2. On the editing screen, make the changes to the data.
3. Click **Save**.
Result: The edited screen is saved.

Finding a message class

Follow these steps to find a message class.

1. On the **Message Class** tab, click **Find**.
Result: The Find Screen is displayed.
2. Enter a search query string in the **Class** or **Description** field and click **Search**.
Result: The grid will display all records matching the query.
Note: Leaving both fields blank will return all records.
3. Select the record in the grid.
Result: The record is displayed on the **Message Class** tab.
4. Click **Close**.

Related topic

[USSD Portal Message Class Screens](#)

2

UIS Portal Feature Nodes

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

This chapter contains the following topics.

[Available Feature Nodes](#)

[Language Setting](#)

[Send Buffer](#)

[User Input](#)

[User Selection](#)

[Version Branching](#)

Available Feature Nodes

This table lists the USSD Gateway feature nodes available from the UIS Portal palette group and the fast key for each feature node in the list. You can use fast keys to search for feature nodes in the palette or the canvas.

Note: If any custom feature nodes have been created and installed to fit your specific customer requirements, they will not appear in this list.

Node name	Node description
Language Setting	Enables the caller to select the language they want to use for this service. Fast key: UPC3
Send Buffer	Sends data to the SMSC. Fast key: UPC5
User Input	Collects input from the calling party. Fast key: UPC4
User Selection	Enables user selection from a menu. Fast key: UPC2
Version Branching	Branches on the Version of MAP used. Fast key: UPC1

Language Setting

The Language Setting node enables the subscriber to select one of a set of configured languages.

This node plays an announcement to the user, prompting them to select a language to use for the USSD call. This user's temporary profile is updated with the selected language.

Note: The selection only lasts for the duration of the call.

Node exits - Language Setting

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

Exit	Cause	Description
1	Error	Node encountered an error during execution. The Error or Timeout announcement will be played.
2	Improper User Input	User entered a digit which does not map to a language.
3	Success	Temporary profile updated with selected language.

Configuring the node - Language Setting

Follow these steps to edit the node configuration.

1. In the Language Menu Announcement area, select the **Announcement Set** which contains the language menu announcement you want to play to the caller.
Result: The **Announcement Entry** field is populated with the entries for the selected set.
2. From the **Announcement Entry** drop-down list, select the announcement you want to play to the caller.
3. In the Error Announcement area, select the Announcement Set and Announcement Entry you wish to play for an error.
4. In the Improper User Input Announcement area, select the Announcement Set and Announcement Entry you wish to play if the user has input incorrectly.
5. In the **PACUI Duration** field type the number of seconds' duration to play announcement and collect user information.
6. Click **Edit Mapping**.

Result: You see the Language Position Mapping Dialog.

7. Use the Language Position Mapping Dialog screen to construct a list of ordered languages. This screen displays a grid populated with all of the available languages. The grid has three columns:
 - Value - This column contains the language id / value that is sent to the gateway interface. This value will be a number between 0 and 19. Any changes you make to this column will be ignored.
 - Name - The language name, for example English, French, or German. Any changes you make to this column will be ignored.
 - Position - The position column is used to determine which languages will be included in the list and in what order.

A valid list will contain:

- At least one language (starting at position 1)
- The positions numbered consecutively, for example. 1, 2 and 3

- No more than one language for any given position. If more than one language is mapped to the same position then an error will be generated when **OK** is clicked

You can map the positions of the languages in one of the following ways:

- Manually
- Automatically

8. To manually map the languages:

- a. Click on the Position cell in the row for the language.
- b. Type the number in the cell
- c. Repeat for each language.

To automatically map the language positions:

- a. Click **Auto Map Language Position**.

Result: A list will be generated which contains all of the available languages, positioned in the order that they are stored in the system database. You can subsequently manually edit this configuration if required.

9. Click **OK**.

Result: Validation checks are carried out to determine whether or not the criteria detailed above has been met. If not, you will be informed via an error dialog. If the validation checks are successful, then the dialog box will close, and the language list on the Configure Language Setting screen will be updated.

Send Buffer

The Send Buffer node sends the final selection buffer that has been built through the various Menu Selection and User Entry macro nodes to an SMSC through the UCP Interface.

Once the final selection buffer has been sent, the Send Buffer node writes an EDR to record the transaction.

Node exits - Send Buffer

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

Exit	Cause	Description
1	Success	Both the final selection buffer, and the CDR have been successfully sent.
2	Error	Node encountered an error receiving or sending data.
3	Empty Buffer	Final selection buffer retrieved from the configured ProfileTag has been allocated but is empty. This situation will occur if the previous node in the call plan was a menu selection node that was set to clear the buffer.
4	No Buffer	Final selection buffer does not exist. Suggests a configuration error in the CPE.

Exit	Cause	Description
5	Length Exceeded	Received buffer length exceeded 255 characters.

Configuring the node - Send Buffer

Follow these steps to edit the node configuration.

1. In the **Originating Address** field, select an address from the list:
 - Called Party Number
 - Calling Party Number
 - Normalised Called Party Number
 - Normalised Calling Party Number
 - Pending TN Buffer
 - Application Buffer
 - Manually Inserted
2. For details on normalization, refer to either the *USSD Gateway*, or the *ACS Technical Guide*.
3. If you selected:
 - Application Buffer, select the buffer value from the drop down list to the far right of the field.
 - Manually Inserted, type the originating address in the text field to the right of the field. Maximum of 31 characters.
4. In the **Destination Address** field, select an address from the list. This will normally contain the MSISDN of the subscriber using the service.

The available options are the same as for the originating address.
5. Select the **Generate CDRs** check box if you wish to generate CDRs.

Note: You can view these CDRs on the UPC CDR Viewer Screen.
6. Select the **Charge CDR** check box if you wish to charge CDRs.
7. Select the **Strip Last Space** check box if you wish to strip the last space from the buffer.
8. Type the name of the UCP interface to be used.

This alphanumeric field can be populated with up to 19 characters.
9. The **Send Text** option allows you to enter hard coded text, in the text field, which is sent to the UCP interface at run time.
10. The **Send Buffer ID** option allows you to select the buffer, in the drop down box, in which data is collected.
11. The **Message Class** drop-down menu selects "Not Set".

Note: This feature is for future enhancements.
12. Click **Save**.

User Input

This node plays an announcement to the subscriber which prompts them for input. It then collects the input and appends it to the configured selection buffer.

Node exits - User Input

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

Exit	Cause	Description
1	Error	Node encountered an error during execution.
2	Improper User Input	There was a problem with the user's input.
3	Success	Node executed correctly.
4	VA type non-digit	Problem using the Variable Part Announcements configuration.

Configuring the node - User Input

Follow these steps to edit the node configuration.

1. In the **Service IF** field, select the service from the drop down list.

Note: The list is populated with all the Service Interface names created by the USSD Gateway Base Configuration screen, Service Interface tab.

2. In the **Menu** field, select the menu from the drop down list.

The list is populated with all the Menu names created by the USSD Gateway Menu Configuration screen, Menu Info tab which was created for a particular Service Interface.

Note: If the menu has been set up containing variable parts, but a different number of variables have been set up in the text for MAP 1 and MAP 2, you will see an error, for example:



In this example, the MAP 1 menu has 3 variables, but the MAP 2 has only 2.

You must correct this using the Menu Language tab before you can select the menu.

3. The field to the right of the Variable Parts button displays the number of variable parts contained within the selected menu.

If the value displayed in the field is not 0, then the menu item contains variable parts. These are displayed in the MAP 1 and MAP 2 text display boxes, as pairs of percentage symbols (%%). See Menu Language for details.

You must click **Variable Parts** to open the Variable Part Announcement screen and insert substitutions for each variable part in the message. See [Setting Variable Part Announcements](#).

4. Select the option of where to store the user input:
 - Profile - This allows you to select Profile Blocks and Primary Tags
 - Buffer - This allows you to enter information into a buffer.

5. If you selected:
 - Profile option, select the:
 - **Pattern List Profile Block** and
 - **Pattern List Primary Tag**.

For the USSD Gateway service, the following profiles are writable to the database:

- Customer
- Call Plan
- CLI Subscriber
- Service Number

In addition the following is specified as a temporary profile, stored in memory:

- Application Specific 7

For more information on Profile Blocks and tags, refer to the *CPE User's Guide*.

- Buffer option - fill in the following field:
 - **Buffer ID** - This drop-down menu allows you to select which buffer to use to store the user input.

Note: The USSD Gateway Portal run-time system uses ten data buffers to store data.

6. In the **Duration** field, set the length of time, in seconds that the user has to enter their selection.

If the duration in the node is set to 0, and the Menu used in the node as described above in step 2 is also configured with duration as 0, node will just play an announcement to the user and will not prompt for any input. Node will take 'improper user input' exit in this case.

Note: Optional

7. In the **Min Digits** and **Max Digits** fields, set the minimum and maximum number of digits the user is required to input.
8. Ticking the **Add Space** check box will add a space at the end of the string entered into the buffer.
9. Ticking the **Clear Buffer** check box will clear any value entered into the buffer before any selection has been entered.
10. In the **Language** field, select the language to use.

This is populated with the language names created by the USSD Gateway Base Configuration screen, Language tab.

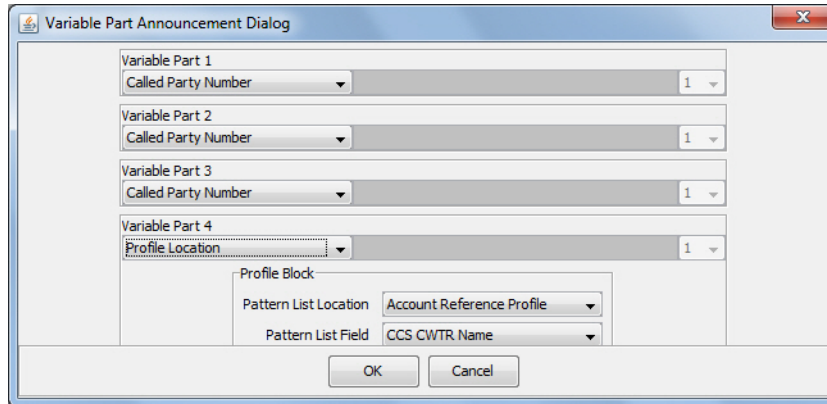
The **MAP 1** and **MAP 2** fields will display the text information presented to the user using a MAP1 or MAP2 version device, in the selected language.

11. Click **Save**.

Setting Variable Part Announcements

If the menu contains one or more variable announcement parts, use the Variable Part Announcement screen to define each variable part.

Here is an example Variable Part Announcement Dialog.



This example contains four variable parts, each illustrating a different option from the list of buffers.

Buffers

Here are the buffers available in the Variable Part Announcements Dialog and the action to perform when the buffer is selected.

Buffer	Action
Called Party Number Calling Party Number Normalised Called Party Number Normalised Calling Party Number Pending TN Buffer	No further action required
Application Buffer	Select the buffer used to store the user input in the drop down list
Manually inserted	Type a value in the text field.
Profile Location.	Select the: <ul style="list-style-type: none">• Pattern List Profile Block and• Pattern List Primary Tag. For more information on Profile Blocks and tags, refer to <i>CPE User's Guide</i> .

For a description of the buffers, refer to *CPE User's Guide*.

User Selection

The User Selection node displays a menu and collects the user's choice. The node matches the choice to a keyword in the UPC menu string. If a keyword matches, it is appended to the final selection buffer.

Node exits - User Selection

The User Selection node has one entry and may have 5 through 25 exits. Each exit is mapped to a day of week range, and must be connected to an appropriate node. You can configure the number of exits using the [Editing the number of exit branches](#).

Exit	Cause	Description
1	Error	Node encountered an error during execution.
2	Improper User Input	User Selection doesn't match keyword choice.
3	VA type non-digit	Problem using the Variable Part Announcements configuration.
4	0	User selected 0.
5	*	User selected *.

Configuring the node - User Selection

Follow these steps to edit the node configuration.

1. In the **Service IF** field, select the service from the drop down list.

Note: The list is populated with all the Service Interface names created by the USSD Gateway Base Configuration screen, Service Interface tab.

2. In the **Menu** field, select the menu from the drop down list.

The list is populated with all the Menu names created by the USSD Gateway Menu Display screen, Menu Language tab which was created for a particular Service Interface.

Note: If the menu has been set up containing variable parts, but a different number of variables have been set up in the text for MAP 1 and MAP 2, you will see an error, for example:



In this example, the MAP 1 menu has 3 variables, but the MAP 2 has only 2.

You must correct this using the Menu Language tab before you can select the menu.

3. Fill in the **Buffer ID** field. This drop-down menu allows you to select which buffer that the user input has been stored in.

Note: The USSD Gateway Portal run-time system uses ten data buffers to store data.

4. In the **Duration** field, set the length of time, in seconds that the user has to enter their selection.

Note: Optional

5. Ticking the **Add Space** check box will add a space at the end of the string entered into the buffer.
6. Ticking the **Clear Buffer** check box will clear any value entered into the buffer before any selection has been entered.
7. The field to the left of the Parts button displays the number of exits listed in the field below the **Language** field, which displays the Exit-Keyword mapping set up in the [User Selection](#) tab.
Note: To make these exits available, you must add the required number of exits to the node. See [Editing the number of exit branches](#).
8. The field to the right of the Parts button (**Num Selections**) displays the number of variable parts contained within the selected menu.
If the value displayed in the field is not 0, then the menu item contains variable parts. These are displayed in the MAP 1 and MAP 2 text display boxes, as pairs of percentage symbols (%%). See Menu Language for details.
You must click **Parts** to open the Variable Part Announcement screen and insert substitutions for each variable part in the message. See [Setting Variable Part Announcements](#).
9. In the **Language** field, select the language to use.
This is populated with the language names created by the USSD Gateway Base Configuration screen, Language tab.
10. Selecting the **MAP 1** and **MAP 2** options will display, in the field below, the text information presented to the user using a MAP1 or MAP2 version device, in the selected language.
11. Click **Save**.

Editing the number of exit branches

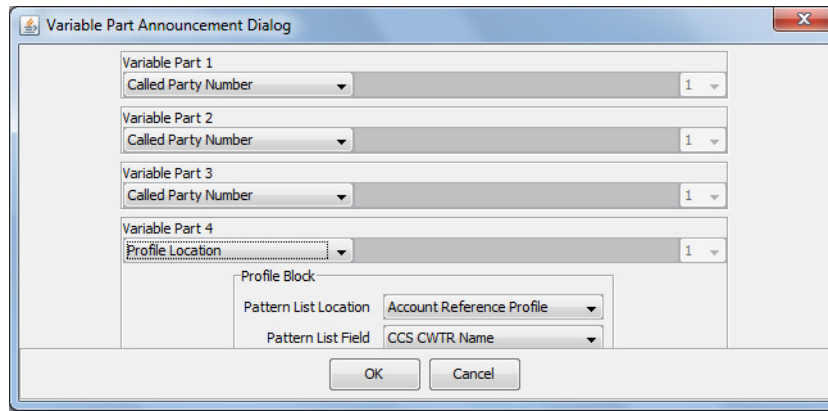
Follow these steps to edit the number of exit branches of a node.

1. Ensure Call Plan Editor is in Graphical mode.
2. Right-click on node you want to change the number exits for.
Result: You see a shortcut menu.
3. Click **Edit Node Exits**.
Result: You see the Edit Node Structure screen.
4. Use the arrows to change the number displayed. The up arrow will increase the displayed number and the down arrow will decrease the displayed number.
The number of exits on the node will now reflect the number that was entered into the Edit Node Structure screen.
5. Click **Save**.
Result: The Edit Node Structure screen will close.

Setting Variable Part Announcements

If the menu contains one or more variable announcement parts, use the Variable Part Announcement screen to define each variable part.

Here is an example Variable Part Announcement Dialog.



This example contains four variable parts, each illustrating a different option from the list of buffers.

Buffers

Here are the buffers available in the Variable Part Announcements Dialog and the action to perform when the buffer is selected.

Buffer	Action
Called Party Number Calling Party Number Normalised Called Party Number Normalised Calling Party Number Pending TN Buffer	No further action required
Application Buffer	Select the buffer used to store the user input in the drop down list
Manually inserted	Type a value in the text field.
Profile Location.	Select the: <ul style="list-style-type: none">• Pattern List Profile Block and• Pattern List Primary Tag. For more information on Profile Blocks and tags, refer to <i>CPE User's Guide</i> .

For a description of the buffers, refer to *CPE User's Guide*.

Version Branching

The Version Branching node attempts to determine which version of MAP is being used for the call. It branches on MAP version or takes a default exit if a version cannot be determined.

The node determines the subscriber's MAP version by querying the Additional Calling Party Number using the IDP Query action.

Node exits - Version Branching

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

Exit	Cause	Description
1	MAP 1 version	Call is using MAP1.
2	MAP 2 version	Call is using MAP2.
3	Undetermined version	MAP version could not be determined.

Configuring the node - Version Branching

This node may have a Tracking String added. It does not require any other configuration.

Click **Save** to save the node.