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Introduction

This document describes the inputs and modifications commonly used when configuring Cisco Unified Mobility Application known as Mobile Connect, it is also commonly called as Single Number Reach (SNR) with the Cisco Unified Communication Manager Administrator (CUCM) application.

Prerequisites

Requirements

Cisco recommends that you have knowledge of these topics:

- Remote destination Phone cannot be a phone registered to the same cluster,It could be a phone in a different cluster or a PSTN phone across the trunk/gateway .
- Remote destination phone should be reachable from the cluster of the desk phone .

Components Used

The information in this document is based on these software versions:

- Cisco Unified call manager 11.0.1.21900-11

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Background Information

Cisco Unified Mobility application known as Mobile Connect, commonly called Single Number Reach (SNR), provides Cisco Unified Communications users with the ability to be reached via a single enterprise phone number that rings on both their IP desk phone and their cellular phone

(Remote Destination), simultaneously. Mobile Connect users can pick up an incoming call on either of their desk or cellular phones and at any point and can move the in-progress call from one of these phones to the other without interruption.

Configure

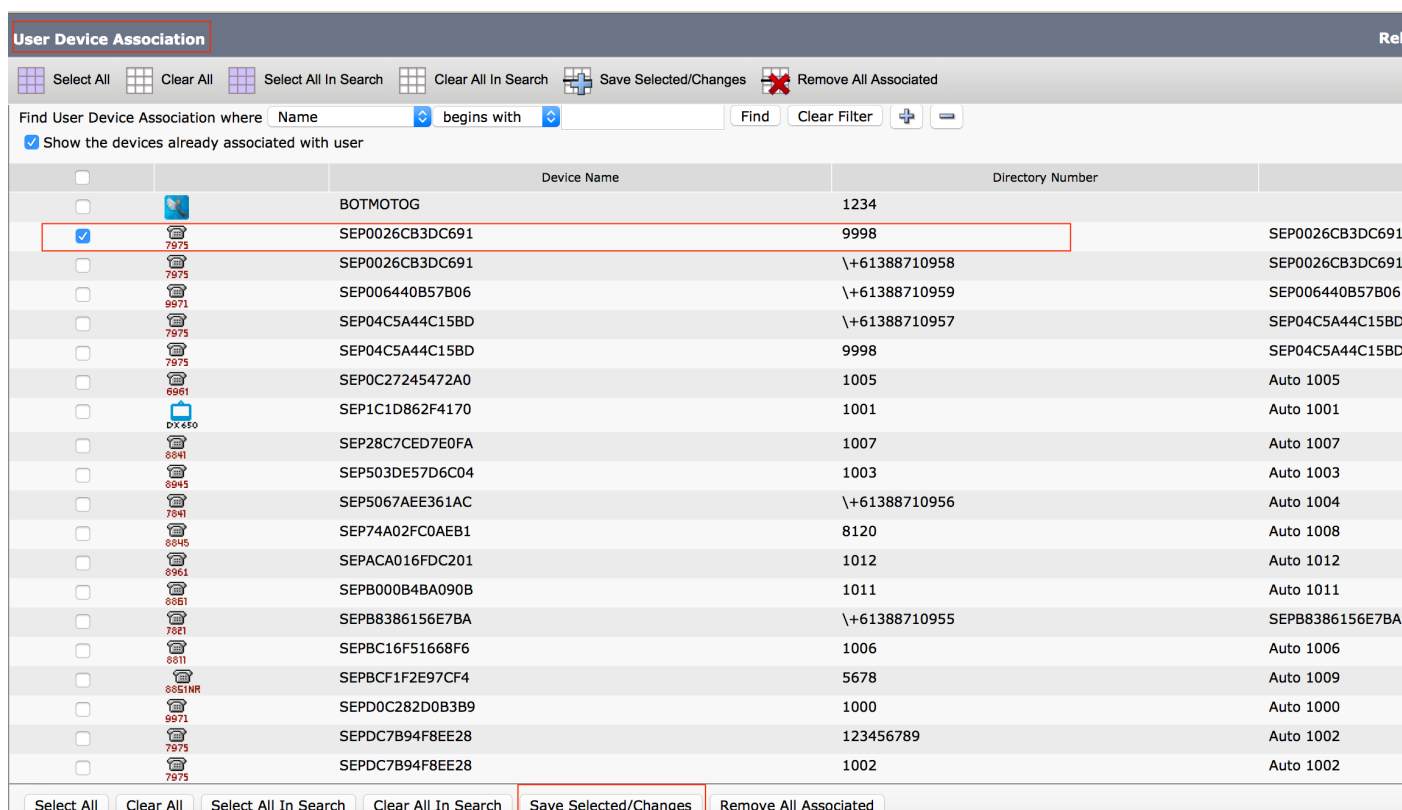
When you work with CUCM, the performed tasks are related to these activities:

- User Configuration
- Remote Destination Profile Configuration
- Remote Destination Configuration

User Configuration



You are directed to a User Device Association page, from where you can select the device which needs to be associated as the deskphone of the user and then click **Save Selected/Changes**, as shown in the image:



Once done, as shown in the image you must see the device name in the section controlled devices.

The screenshot shows the 'End User Configuration' interface. At the top, there are buttons for 'Save', 'Delete', and 'Add New'. Below this is the 'Device Information' section. A red box highlights the 'Controlled Devices' field, which contains the value 'SEP0026CB3DC691'. To the right of this field, there are two buttons: 'Device Association' and 'Line Appearance Association for Presence'. Below the 'Controlled Devices' field, there is a partially visible 'Available Profiles' section.

As shown in the image select the Primary extension for the device.

The screenshot shows the 'Directory Number Associations' section. A red box highlights the 'Primary Extension' field, which contains the value '9998'. To the right of this field is a blue dropdown arrow.

Check the **Enable Mobility** check box. You can also, modify the Maximum Wait Time for Desk Pickup and Remote Destination Limit if required. Moreover, the default values can be seen in the image.

The screenshot shows the 'Mobility Information' section. A red box highlights the 'Enable Mobility' checkbox, which is checked. Below it are two other checkboxes: 'Enable Mobile Voice Access' (unchecked). There are two input fields: 'Maximum Wait Time for Desk Pickup*' with the value '10000' and 'Remote Destination Limit*' with the value '4'.

Remote Destination Profile Configuration

Create a Remote Destination Profile (RDP) for the end user .

In order to create a new RDP profile, navigate to **Device > Device Settings > Remote Destination Profile > Add new.**

The screenshot shows the 'Remote Destination Profile Configuration' interface. At the top, there is a 'Save' button. Below it is a status indicator showing 'Status: Ready'. The main section is 'Remote Destination Profile Information'. A red box highlights the 'Name*' field, which contains 'RDP-Sankalp'. Below it is the 'Description' field. The 'User ID*' field contains 'sankalp'. The 'Device Pool*' field is set to 'Default'. There are several dropdown menus for 'Calling Search Space', 'AAR Calling Search Space', 'User Hold Audio Source', 'Network Hold MOH Audio Source', 'Privacy*', 'Rerouting Calling Search Space', 'Calling Party Transformation CSS', 'User Locale', and 'Network Locale'. The 'Use Device Pool Calling Party Transformation CSS' checkbox is checked. At the bottom, there is a 'Do Not Disturb' section with a 'DND Option*' dropdown set to 'Call Reject'. A 'Save' button is at the bottom left.

Click **Save**, now you can see an option to add a new Directory number (DN) .

Click **Add a new DN** to navigate to directory number configuration, where you need to specify the directory number of the desk phone with which you need to associate the RDP and then click **Save**.

Remote Destination Profile Configuration

Save Delete Copy Add New

Add successful

Association Information

1	Line [1] - Add a new DN
---	---

Remote Destination Profile Information

Name*

Description

User ID*

Device Pool*

Calling Search Space

AAR Calling Search Space

User Hold Audio Source

Network Hold MOH Audio Source

Privacy*

Rerouting Calling Search Space

Calling Party Transformation CSS

Use Device Pool Calling Party Transformation CSS

User Locale

Network Locale

Ignore Presentation Indicators (internal calls only)

Associated Remote Destinations

[Add a New Remote Destination](#)

Do Not Disturb

Do Not Disturb

DND Option*

It is also important to note that the CUCM attempts to reach the remote destination through the **Rerouting calling search Space**.

Directory Number Configuration

Save Delete Reset Apply Config Add New

Update successful

Directory Number Information

Directory Number* Urgent Priority

After you save the directory number, specify the correct CSS against Rerouting calling search space, click **Add a New Remote Destination**, as shown in the image:

Remote Destination Profile Configuration

Save Delete Copy Add New

Status
Status: Ready

Association Information

1	7718 Line [1] - 9998 (no partition)
2	7718 Line [2] - Add a new DN

Remote Destination Profile Information

Name*	RDP-Sankalp
Description	
User ID*	sankalp
Device Pool*	Default
Calling Search Space	test
AAR Calling Search Space	< None >
User Hold Audio Source	1-SampleAudioSource
Network Hold MOH Audio Source	1-SampleAudioSource
Privacy*	Default
Rerouting Calling Search Space	test
Calling Party Transformation CSS	test
<input checked="" type="checkbox"/> Use Device Pool Calling Party Transformation CSS	
User Locale	< None >
Network Locale	< None >
<input type="checkbox"/> Ignore Presentation Indicators (internal calls only)	

Associated Remote Destinations

[Add a New Remote Destination](#)

Remote Destination Configuration

Specify the **Destination number**, as this is the number for your Remote destination .

Ensure that the check box, **Enable UNified Mobility features, Enable Single Number Reach, Enable Move to Mobile is checked.**

Single Number Reach Voicemail Policy provides two options Timer control and User Control, of which the former one is default.

Under the section Timer information, you can specify the amount of delay before which the Remote Destination should ring.

In case if the Remote Destination is required to ring immediately, you should set the Wait* as zero.

It is also important to calibrate the time in which the service provider of the remote destination sends the call to the voice-mail of the remote destination. The **S** value should be set lesser than that to ensure that

call does not go to the voicemail of the cell phone. This time value is specified against **S**.

In previous call manager version, these parameters were there with different names:

- Delay before ringing timer
- Answer too soon timer
- Answer too late timer

Remote Destination Configuration

Save

Status
 Status: Ready

Remote Destination Information

Name: RDP-Sankalp
 Destination Number*: 9008815186
 Owner User ID*: sankalp

Enable Unified Mobility features
 Remote Destination Profile*: RDP-Sankalp
 Single Number Reach Voicemail Policy*: Use System Default

Enable Single Number Reach
 Ring this phone and my business phone at the same time when my business line(s) is dialed.

Enable Move to Mobile
 If this is a mobile phone, transfer active calls to this phone when the mobility button on your Cisco IP Phone is pressed.

Enable Extend and Connect
 Allow this phone to be controlled by CTI applications (e.g. Jabber)
 CTI Remote Device*: -- Not Selected --

Timer Information

Wait* 4.0 seconds before ringing this phone when my business line is dialed.*
 Prevent this call from going straight to this phone's voicemail by using a time delay of* 1.5 seconds to detect when calls go straight to voicemail.*
 Stop ringing this phone after* 19.0 seconds to avoid connecting to this phone's voicemail.*

If the SNR voicemail policy is configured for **User Control**, timer information changes as shown in the image:

Single Number Reach Voicemail Policy* User Control

Enable Single Number Reach
 Ring this phone and my business phone at the same time when my business line(s) is dialed.

Enable Move to Mobile
 If this is a mobile phone, transfer active calls to this phone when the mobility button on your Cisco IP Phone is pressed.

Enable Extend and Connect
 Allow this phone to be controlled by CTI applications (e.g. Jabber)
 CTI Remote Device* -- Not Selected --

Timer Information

Wait* 4.0 seconds before ringing this phone when my business line is dialed.*
 Prevent this call from going straight to this phone's voicemail by requiring you to respond to a prompt to be connected.
 Stop ringing this phone after* 19.0 seconds to avoid connecting to this phone's voicemail.*

In case the SNR configuration needs to be restricted based on time and day then these options are modified as required. If no restriction is needed to be applied then **Ring Schedule** should be set to **All the time** and **When receiving a call during the above ring schedule** should be set to **Always ring this destination**.

After you complete the configuration of remote destination, click **Save**.



Check the checkbox, which is next to the line and click **Save**.

Remote Destination Configuration Related

Save Delete Copy Add New

Status
Add successful

Remote Destination Profile

Line	Line Association
Line [1] - 9998 (no partition)	<input checked="" type="checkbox"/>

Remote Destination Information

Name: RDP-Sankalp
Destination Number*: 9008815186
Owner User ID*: sankalp

Enable Unified Mobility features
Remote Destination Profile*: RDP-Sankalp
Single Number Reach Voicemail Policy*: Use System Default

Enable Single Number Reach
Ring this phone and my business phone at the same time when my business line(s) is dialed.

Enable Move to Mobile
If this is a mobile phone, transfer active calls to this phone when the mobility button on your Cisco IP Phone is pressed.

Enable Extend and Connect
Allow this phone to be controlled by CTI applications (e.g. Jabber)
CTI Remote Device*: -- Not Selected --

Timer Information

Wait* 4.0 seconds before ringing this phone when my business line is dialed.*
Prevent this call from going straight to this phone's voicemail by using a time delay of* 1.5 seconds to detect when calls go straight to voicemail.*
Stop ringing this phone after* 19.0 seconds to avoid connecting to this phone's voicemail.*

Verify

Use this section in order to confirm that your configuration works properly.

Verify that the name of the Remote Destination Profile, which is reflected on the **End user** page.

Mobility Information

Enable Mobility
 Enable Mobile Voice Access

Maximum Wait Time for Desk Pickup*: 10000
Remote Destination Limit*: 4
Remote Destination Profiles: RDP-Sankalp

[View Details](#)

On the directory number page, you now must see the name of the Remote Destination Profile in the section Associated devices.

Directory Number Configuration

Save Delete Reset Apply Config Add New

Status
Status: Ready

Directory Number Information

Directory Number*: 9998 Urgent Priority
Route Partition: < None >
Description:
Alerting Name:
ASCII Alerting Name:
External Call Control Profile: < None >
 Allow Control of Device from CTI

Associated Devices:
SEP0026CB3DC691
SEP04CSA44C15BD
RDP-Sankalp

Edit Device
Edit Line Appearance

Perform a test through Dialed number analysis to check whether the call manager directs the call to the remote destination based on configuration or not.

In order to perform a dialed number analysis, navigate to **Cisco Unified Serviceability > Tools > Dialed Number Analyzer > Analysis > Phones > Find > Choose the calling phone**

Specify the Directory number of the desk phone and click **Do Analysis**.

Analyzer Input

Dialed Digit Settings

Directory URI

Dialed Digits

Pattern Analysis SIP Analysis

Domain Route

IP Route

Date and Time Settings

Time Zone

Date - - (YYYY - MMM - DD)

Time - - - (HH : MM : SS : MS)

On the Analysis output, the call is extended to the RDP along with the desk phone, which confirms the eventual effects of SNR configuration.

DNA Analysis Output

Cisco Unified Communications Manager Dialed Number Analyzer Results

▼ **Results Summary**

▼ **Calling Party Information**

- Calling Party** = 1002
- Partition** =
- Device CSS** =
- Line CSS** =
- AAR Group Name** =
- AAR CSS** =
- Dialed Digits** = 9998
- Match Result** = RouteThisPattern

▼ **Matched Pattern Information**

- Pattern** = 9998
- Partition** =
- Time Schedule** =
- Called Party Number** = 9998

There is currently no specific troubleshooting information available for this configuration.