

Configure Single Number Reach for CallManager

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Introduction

This document describes the inputs and modifications commonly used when configuring Cisco Unified Mobility Application known as Mobile Connect.

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 can 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 (CUCM) 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, ensure 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

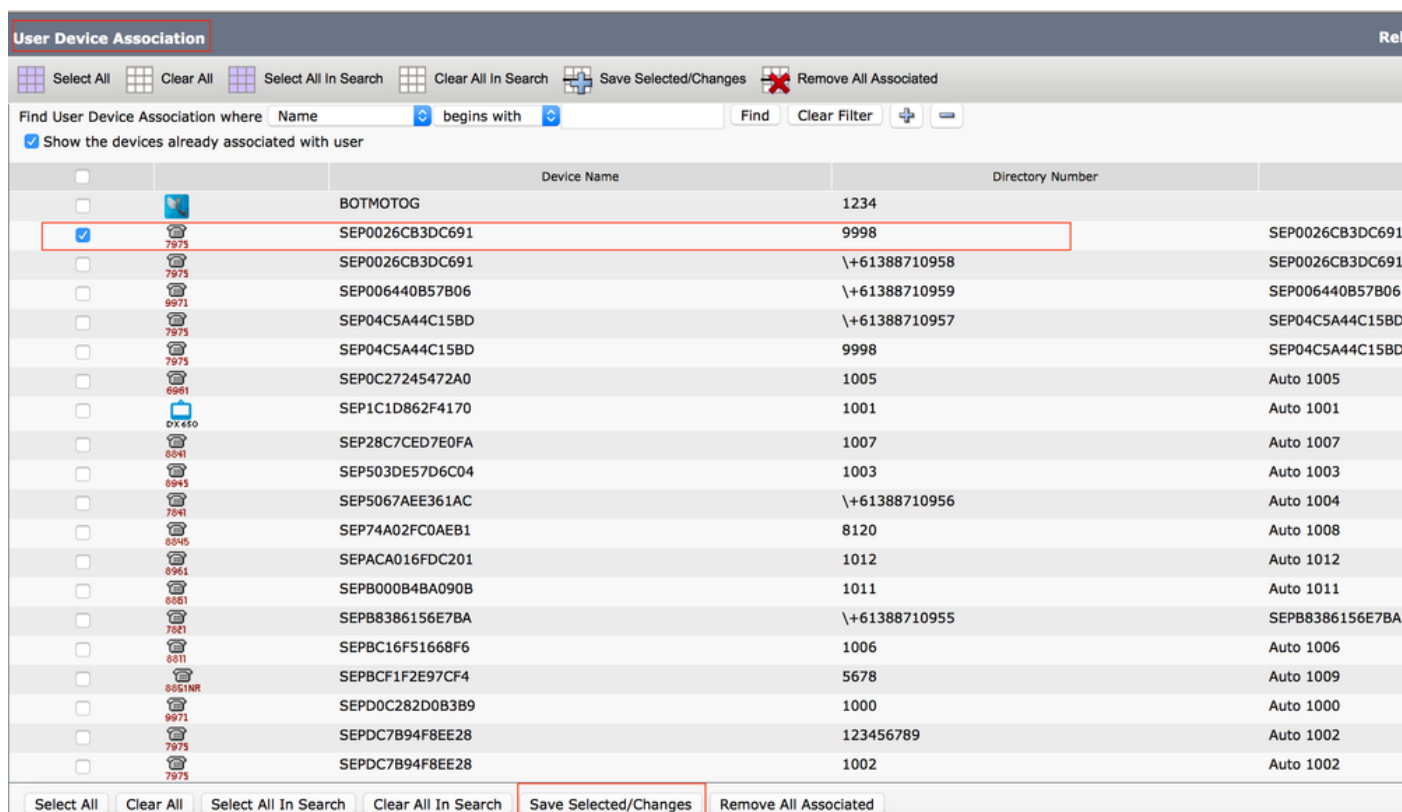
When you work with CUCM, the performed tasks are related to these activities:

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

User Configuration



You are directed to a User Device Association page, where you can select the device which needs to be associated as the deskphone of the user, 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.



End User Configuration

Save Delete Add New

Device Information

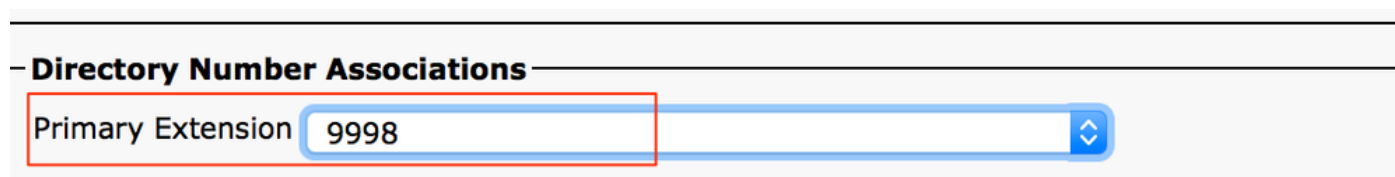
Controlled Devices SEP0026CB3DC691

Available Profiles

Device Association

Line Appearance Association for Presence

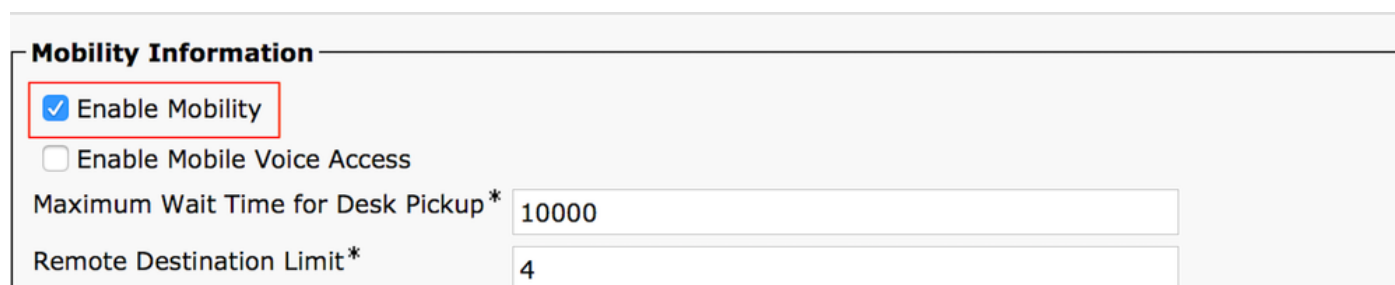
Choose the **Primary extension** for the device, as shown in this image:



Directory Number Associations

Primary Extension 9998

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:



Mobility Information

☒ Enable Mobility

☐ Enable Mobile Voice Access

Maximum Wait Time for Desk Pickup* 10000

Remote Destination Limit* 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**.

Remote Destination Profile Configuration



Save

Status



Status: Ready

Remote Destination Profile Information

Name*	RDP-Sankalp
Description	
User ID*	sankalp
Device Pool*	Default
Calling Search Space	< None >
AAR Calling Search Space	< None >
User Hold Audio Source	< None >
Network Hold MOH Audio Source	< None >
Privacy*	Default
Rerouting Calling Search Space	< None >
Calling Party Transformation CSS	< None >
☒ Use Device Pool Calling Party Transformation CSS	
User Locale	< None >
Network Locale	< None >
☐ Ignore Presentation Indicators (internal calls only)	

Do Not Disturb

☐ Do Not Disturb
DND Option* Call Reject

Save

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

Click **Add a new DN** to navigate to a directory number configuration where you need to specify the directory number of the desk phone with which you need to associate the RDP. 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*	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
☒ Use Device Pool Calling Party Transformation CSS	
User Locale	< None >
Network Locale	< None >
☐ Ignore Presentation Indicators (internal calls only)	

Associated Remote Destinations

[Add a New Remote Destination](#)

Do Not Disturb

☐ Do Not Disturb

DND Option* Call Reject

It is also important to know 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*	9998	☐ 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 Line [1] - 9998 (no partition)

2 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

☒ Use Device Pool Calling Party Transformation CSS

User Locale < None >

Network Locale < None >

☐ 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:

1. Timer Control (default)
2. User Control

Under the **Timer Information** section, specify the amount of delay before the Remote Destination can ring.

In case the Remote Destination is required to ring immediately, you can 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 **Stop ringing this phone after** value can be set to lesser than that to ensure that the call does not go to the voicemail of the cell phone. This time value is specified against **Stop ringing this phone after**.

In the previous call manager version, these parameters had different names:

- Delay before ringing timer

- Answer too soon timer
- Answer too late timer

Remote Destination Configuration

Save

Status

Status: Ready

Remote Destination Information

NameRDP-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, the 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, these options are modified as required. If no restriction needs to be applied, the **Ring Schedule** can be set to **All the time** and **When receiving a call during the ring schedule** can be set to **Always ring this destination**.

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

When Single Number Reach is Enabled

Ring Schedule

☒ All the time

☐ As specified below

☐ Monday	☐ All Day	No Office Hours	to	No Office Hours
☐ Tuesday	☐ All Day	No Office Hours	to	No Office Hours
☐ Wednesday	☐ All Day	No Office Hours	to	No Office Hours
☐ Thursday	☐ All Day	No Office Hours	to	No Office Hours
☐ Friday	☐ All Day	No Office Hours	to	No Office Hours
☐ Saturday	☐ All Day	No Office Hours	to	No Office Hours
☐ Sunday	☐ All Day	No Office Hours	to	No Office Hours

Time Zone* (GMT) Etc/GMT

When receiving a call during the above ring schedule

☒ Always ring this destination

☐ Ring this destination only if caller is in -- Not Selected -- [View Details](#)

☐ Do not ring this destination if caller is in -- Not Selected -- [View Details](#)

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

Remote Destination Configuration

Save Delete Copy Add New

Status

Add successful

Remote Destination Profile

Line	Line Association
Line [1] - 9998 (no partition)	☒

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 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*

 Remote Destination Limit*

 Remote Destination Profiles

[View Details](#)

On the directory number page, you 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*

 Route Partition

 Description

 Alerting Name

 ASCII Alerting Name

 External Call Control Profile

☒ Allow Control of Device from CTI

☐ Urgent Priority

Associated Devices

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 9998

☐ Pattern Analysis
 ☐ SIP Analysis

☒ Domain Route
 ☐ IP Route

Date and Time Settings

Time Zone (GMT) Etc/GMT

Date 2016 - Apr - 15 (YYYY - MMM - DD)

Time 10 - 23 - 12 - 0 (HH : MM : SS : MS)

Do Analysis

Clear

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

Expand All

Collapse All

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

- ▼ **Device :Type= Cisco 7975**
 - **Device Status** = UnKnown
 - **Device Name** = SEP0026CB3DC691

- ▼ **Device :Type= Remote Destination Profile**
 - **Device Status** = UnKnown
 - **Device Name** = RDP-Sankalp
 - **Ignore Presentation Indicators** = Disabled
 - **Logged Into Hunt Groups** = Disabled
 - **Alerting Name** =
 - **Dual Mode** = Disabled

Troubleshoot

There is currently no specific information available to troubleshoot this configuration.