

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 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, and then click **Save Selected/Changes**, as shown in the image:

User Device Association

Select All
 Clear All
 Select All In Search
 Clear All In Search
 Save Selected/Changes
 Remove All Associated

Find User Device Association where Name Find Clear Filter

Show the devices already associated with user

<input type="checkbox"/>		Device Name	Directory
<input type="checkbox"/>		BOTMOTOG	1234
<input checked="" type="checkbox"/>		SEP0026CB3DC691	9998
<input type="checkbox"/>		SEP0026CB3DC691	\+61388710958
<input type="checkbox"/>		SEP006440B57B06	\+61388710959
<input type="checkbox"/>		SEP04C5A44C15BD	\+61388710957
<input type="checkbox"/>		SEP04C5A44C15BD	9998
<input type="checkbox"/>		SEP0C27245472A0	1005
<input type="checkbox"/>		SEP1C1D862F4170	1001
<input type="checkbox"/>		SEP28C7CED7E0FA	1007
<input type="checkbox"/>		SEP503DE57D6C04	1003
<input type="checkbox"/>		SEP5067AEE361AC	\+61388710956
<input type="checkbox"/>		SEP74A02FC0AEB1	8120
<input type="checkbox"/>		SEPACA016FDC201	1012
<input type="checkbox"/>		SEPB000B4BA090B	1011
<input type="checkbox"/>		SEPB8386156E7BA	\+61388710955
<input type="checkbox"/>		SEPBC16F51668F6	1006
<input type="checkbox"/>		SEPBCF1F2E97CF4	5678
<input type="checkbox"/>		SEPDC0282D0B3B9	1000
<input type="checkbox"/>		SEPDC7B94F8EE28	123456789
<input type="checkbox"/>		SEPDC7B94F8EE28	1002

Select All
 Clear All
 Select All In Search
 Clear All In Search
 Save Selected/Changes
 Remove All Associated

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

Available Profiles

As shown in the image, choose the Primary extension for the device.

– Directory Number Associations

Primary Extension

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*

Remote Destination Limit*

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



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).

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*	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](#)

Do Not Disturb

Do Not Disturb

DND Option*

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

Status



Update successful

Directory Number Information

Directory Number*

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: 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 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 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

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 busy.*

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

Enable Extend and Connect

Allow this phone to be controlled by CTI applications (e.g. Jabber)

CTI Remote Device*

-- Not Selected --

Timer Information

Wait* 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

Stop ringing this phone after* 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 needs to be applied, then **Ring Schedule** can be set to **All the time** and **When receiving a call during the above 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 to

Tuesday All Day to

Wednesday All Day to

Thursday All Day to

Friday All Day to

Saturday All Day to

Sunday All Day to

Time Zone*

When receiving a call during the above ring schedule

Always ring this destination

Ring this destination only if caller is in

Do not ring this destination if caller is in

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)	<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 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.
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* 10000

Remote Destination Limit* 4

Remote Destination Profiles RDP-Sankalp

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*	9998
Route Partition	< None >
Description	
Alerting Name	
ASCII Alerting Name	
External Call Control Profile	< None >
<input checked="" type="checkbox"/> Allow Control of Device from CTI	
Associated Devices	SEP0026CB3DC691 SEP04C5A44C15BD RDP-Sankalp

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)

Time - - - (HH)

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

Cisco Unified Communications Manager Dialed Number

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** = Di
- **Logged Into Hunt Groups** = Disabled
- **Alerting Name** =
- **Dual Mode** = Disabled

Troubleshoot

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