Configuring Meet-Me Conferencing on the UC500

This application note provides instructions for configuring Meet-Me conferencing on the Unified Communications 500 (UC500) platform using the Cisco IOS command-line interface.

A Meet-Me conference is a conference that is initiated by a conference initiator. Once the conference is initiated, anyone is allowed to join the conference by dialing in to the conference number.

The information in this document applies to CCA Version 1.8 and Cisco SBCS software package version 1.3.

Contents

Scope and Assumptions

The information in this application note is intended for use by Cisco SMB Select-certified partners. It is assumed that users are familiar with configuration of voice and security features on the Cisco Smart Business Communications System (SBCS) using CCA and are also familiar with the Cisco IOS command-line interface.

The information in this document applies to CCA Version 1.8 and Cisco SBCS/UC500 software package version 1.3.

There are differences in the number of DSP resources between the 8/16 UC500 and the 24/32/48/64 one. The configuration in this application note is for UC500 platforms supporting from 24 to 64 users. Refer to the "Max Sessions and Max Participant Guidelines for Ad Hoc and Meet-Me Conferencing" section on page 6, for information on the differences in capacity between platforms.

The conference type shown is this application note, is for **Mixed Mode**. In Mixed Mode, users can join the conference using a codec other than G.711 (G.729, for example), which are of higher complexity, thus limiting the number of participants per session. Refer to the "Max Sessions and Max Participant Guidelines for Ad Hoc and Meet-Me Conferencing" section on page 6, for more information.

The configuration created using the Cisco IOS CLI in this application note is compatible with CCA.

Accounts and Logins

The Cisco IOS CLI shares the same username and password as the CCA administrator account.

On the UC500, the default administrator username is *cisco* and the default password is *cisco* for both the IOS CLI and Cisco Unity Express GUI.

Cisco IOS CLI Configuration Steps

Perform the procedure in this section to use CLI to set up Meet-Me conferencing on the UC500.

These steps are based on the procedures in the *Cisco Unified CME System Administrator Guide*, available on Cisco.com. For a more detailed the “Configuring Conferencing,” “SCCP: Configuring Multi-Party Ad Hoc and Meet-Me Conferencing in Cisco Unified CME 4.1 and Later Versions,” in the chapter on adding features.

Step 1. Open a console session to the UC500 and enter configuration mode. To do this:

a. Use an Ethernet cable to connect your PC to one of the LAN ports on the UC500.

b. Open a command window on your PC. You can use the `ping` command to verify that you are connected to the UC500 (IP address 192.168.10.1).

```
C:\ ping 192.168.10.1
```

c. Use the `telnet` command to connect to the UC500 console and enter your username and password to log in. The default username is `cisco` and the default password is `cisco`.

```
C:\ telnet 192.168.10.1

User Access Verification

Username: cisco
Password:
```

d. Enter configuration mode.

```
UC520# enable
UC520# configure terminal
```

Step 2. Enable DSP resources on the voice card.

Note: You can enable both Ad Hoc conference (configurable through CCA) and Meet-Me Conferencing (configurable only through CLI) for combined use on your site. To access the Ad Hoc conferencing settings in CCA, choose **Configure > Telephony > Voice** from the left navigation pane to open the **Voice** window, then click the **Voice Features** tab. See the Max Sessions and Max Participant Guidelines for Ad Hoc and Meet-Me Conferencing on page 6, for guidelines on combined use of Meet-Me and Ad Hoc conferencing.

In configuration mode, enter the following IOS commands to enable DSP resources on the voice card (the UC500 has a built-in voice card).

```
UC520# configure terminal
Enter configuration commands, one per line.  End with CNTL/Z.
UC520(config)# voice-card 0
UC520(config-voicecard)# dsp services dspfarm
```

Step 3. Enable SCCP (Skinny Call Control Protocol).

In configuration mode, enter the following commands to enable SCCP (Skinny Call Control Protocol):

```
UC520(config)# sccp
UC520(config)# sccp local Loopback0
UC520(config)# sccp ccm 10.1.1.1 identifier 1 version 4.0
UC520(config)# sccp ccm group 1
UC520(config-sccp-ccm)# associate ccm 1 priority 1
UC520(config-sccp-ccm)# associate profile 1 register 1234567890
```

Step 4. Configure the DSP farm profile for Meet-Me conferencing.

In configuration mode, enter the following commands to configure the DSP farm profile for Meet-Me conferencing and make it active:

Although the configuration above shows maximum conference participants as 16, up to 32 participants are supported if all participants are using the G.711 codec.

```
UC520(config)# dspfarm profile 1 conference
UC520(config-dspfarm-profile)# codec g711ulaw
UC520(config-dspfarm-profile)# codec g711alaw
UC520(config-dspfarm-profile)# codec g729r8
UC520(config-dspfarm-profile)# codec g729br8
UC520(config-dspfarm-profile)# maximum conference-participants 16
UC520(config-dspfarm-profile)# maximum sessions 1
UC520(config-dspfarm-profile)# associate application sccp
UC520(config-dspfarm-profile)# no shutdown
```

For more information, see the Max Sessions and Max Participant Guidelines for Ad Hoc and Meet-Me Conferencing, on page 6.

Step 5. Associate Cisco Unified CME with a DSP farm profile.

In configuration mode, execute the following IOS commands to associate CME with the DSP farm profile you created in the previous step.

```
UC520(config)# telephony-service
UC520(config-telephony)# conference hardware
UC520(config-telephony)# transfer-system full-consult
UC520(config-telephony)# sdspfarm units 5
UC520(config-telephony)# sdspfarm tag 1 1234567890
```

Step 6. Configure a DN to use for the Meet-Me phone number. This is the phone number that participants will dial to join the Meet-Me conference.

The phone number you configure for the Meet-Me number can be an external number (PSTN DID number) or an internal number. However, the number of digits assigned to a DN for a Meet-Me number *must* match the number of digits for the dial plan configured by CCA.

Note: See the Enabling Users to Dial in to a Meet-Me Conference from an External Access Number on page 6, for information about enabling users to dial in to the conference from the PSTN if the Meet-Me number is internal.

For this out-of-band (OOB) configuration, you must use ephone-dn(s) from the "Unassigned" pool so that CCA does not overwrite the configuration. The range of ephone-dn(s) that can be used varies, based on the number of users:

- 24 users — Use ephone-dn(s) in the 71 - 78 range.
- 32 users — Use ephone-dn(s) in the 95 - 102 range.
- 48 users — Use ephone-dn(s) in the 143 - 150 range.
- 64 users — Use ephone dn(s) in the 191 -198 range.

For UC500 platforms that support 16 or fewer users:

- If the system is in PBX mode, the OOB ephone-dn should be created in the 21-28 range (for 8 users) and the 41-48 range (for 16 users)
- If the system is in Key system mode, the OOB ephone-dn should be created in the 25-54 range (for 8 users) and the 49-86 range (for 16 users).

The sequence of 4 commands shown in the example below must be repeated for the appropriate maximum number of conference participants.

Each dual-line ephone-dn supports two participants; for example, you will need 16 dual-line ephone-dn(s) to support the maximum of 32 conference participants.

As shown in the example below, you must configure at least two (2) of the ephone-dn(s) with the same phone number for this configuration to work.

The `preference` command specifies the priority order for each Meet-Me ephone-dn.

In configuration mode, enter the following IOS commands to configure the Meet-Me number:

```
UC520(config)# ephone-dn 71 dual-line
UC520(config-ephone-dn)# number 1500
UC520(config-ephone-dn)# conference meetme
UC520(config-ephone-dn)# no huntstop

UC520(config)# ephone-dn 72 dual-line
UC520(config-ephone-dn)# number 1500
UC520(config-ephone-dn)# conference meetme
UC520(config-ephone-dn)# no huntstop
UC5250(config-ephone-dn)# preference 1

UC520(config)# ephone-dn 73 dual-line
UC520(config-ephone-dn)# number 1500
UC520(config-ephone-dn)# conference meetme
UC520(config-ephone-dn)# no huntstop
UC5250(config-ephone-dn)# preference 2

UC520(config)# ephone-dn 74 dual-line
UC520(config-ephone-dn)# number 1500
UC520(config-ephone-dn)# conference meetme
UC520(config-ephone-dn)# no huntstop
UC5250(config-ephone-dn)# preference 3
```

```
... additional configuration omitted
```

Step 7. Configure an ephone template for user's phones that includes Meet-Me conferencing softkeys.

- The `MeetMe` softkey is used to intiiate the conference.
- The `ConfList` softkey lists all parties in the coference; it can also be used by the conference administrator to remove a party from the conference.

`Note:` ephone-template 15 is created by default for Cisco 7931 IP phones; it can be modified with softkeys and still maintain interoperability with CCA.

In configuration mode, execute the following IOS commands to configure an ephone template for Meet-Me conferencing.

```
UC520(config)# ephone-template 1
UC520(config-ephone-template)# softkeys hold Newcall Resume Select Join
UC520(config-ephone-template)# softkeys idle Cfwdall ConfList Dnd Gpickup
HLog Join Login Newcall Pickup Redial RmLstC
UC520(config-ephone-template)# softkeys seized Redial Pickup Gpickup HLog
Meetme Endcall
UC520(config-ephone-template)# softkeys connected Acct ConfList Confrn
Endcall Flash HLog Hold Join Park RmLstC Select Trnsfer
```

Step 8. Apply the ephone template to each user's phone, then save and write the changes.

For example, in configuration mode, execute commands similar to the following to apply ephone-template 1 to ephone 6.

```
UC520(config)# ephone 6
UC520(config-ephone)# ephone-template 1
UC520(config-ephone)# conference admin
UC520(config)# end
UC520# write memory
Building configuration...
Compressed configuration from 25453 bytes to 11485 bytes[OK]
UC520#
```

The optional `conference admin` command shown in the example above configures the ephone (in this case, ephone-6) as the conference administrator. The administrator can dial in to any conference directly through the conference number, use the `ConfList` softkey to list conference parties, and remove any party from any conference.

Continue applying ephone templates as needed.

`TIP:` Use the `sh ephone registered` command to list information for ephones that includes the Mac address and extension associated with each ephone.

For example, the following output shows that ephone-6 has Mac address 001D.E5EA.9C19 and is assigned extension number 204:

```
UC520# sh ephone registered

ephone-6 Mac:001D.E5EA.9C19 TCP socket:[7] activeLine:0 REGISTERED in SCCP ver 8/8
SPCP ver 1/1
mediaActive:0 offhook:0 ringing:0 reset:0 reset_sent:0 paging 0 debug:0 caps:12
IP:10.1.1.14 63821 524G  keepalive 19 max_line 4
button 1: dn 13 number 204 CH1   IDLE         CH2   IDLE
```

Step 9. Restart the affected IP phones to apply the softkey template.

Enabling Users to Dial in to a Meet-Me Conference from an External Access Number

The Meet-Me conference number configured in this example is an internal number. If you want your users to be able to dial in to an internal Meet-Me conference number from an external access

number, you must create a DID translation rule to translate the external access number to the internal Meet-Me conference number. For PRI lines, you can map the DID to the internal conference number or use the AA or Operator to transfer the call to the Meet-Me number.

DID translation rules are configured via CCA from the `Dial Plan` tab in the `Voice` window (**`Configure > Telephone > Voice`**). Creation of DID translation rules is outside the scope of this application note. For more information, see the Cisco Configuration Assistant online help and documentation, available at www.cisco.com/go/configassist.

Initiating a Meet-Me Conference

The Meet-Me conference initiator must have conference admin rights on their phone. To create the conference:

- The conference initiator presses the MeetMe soft key on their phone, waits for the confirmation tone, then dials the Meet-Me conference number.
- Additional callers (internal and/or external) can join the Meet-Me conference by dialing the Meet-Me number (1500 in the example configuration, or, the conference DID, if one has been mapped via DID translation rule).
- The additional callers are parties in the Meet-Me conference on extension 1500, along with the conference initiator.

Caveats and Limitations

The following limitations apply to this configuration.

- Conference call chaining is not supported.

Max Sessions and Max Participant Guidelines for Ad Hoc and Meet-Me Conferencing

This section covers supported configuration for maximum number of sessions and participants for Meet-Me and Ad Hoc conferencing on the Cisco SBCS platform. In the following table:

- The breakdowns apply only to UC500 with IOS 12.4(20)T and above.
- Regular mode means that you are using one of the two conferencing methods exclusively, either Ad Hoc or Meet-Me
- Mixed mode means that participants can use a combination of G.711 and other codecs (G.729, for example).

UC500 SKU	Regular Mode		Mixed Mode	
16U and 8U	Sessions	Participants	Sessions	Participants
	2	32	2	8
	4	16		
	8	8		
24U, 32U, 48U	4	32	4	8
	8	16		

	16	8		

You can allocate any number of sessions between Ad Hoc and Meet-Me conferences, as long as the total number of sessions is equal to the maximum number of sessions supported for the SKU and mode type (regular or mixed).

For More Information

For more information on CME conferencing features, see the section on configuring conferencing in the *Cisco Unified Communications Manager Express System Administrator Guide*, available on Cisco.com at the following URL:

http://www.cisco.com/en/US/docs/voice_ip_comm/cucme/admin/configuration/guide/cmeadm.html

For more information on Cisco SBCS solutions, visit the SBCS Support Wiki at the following URL:

supportwiki.cisco.com/sbcs