

Microsoft Office Communications Server 2007 Enterprise Edition to Cisco Unified Presence 6.0(1) and Cisco Unified Communication Manager 6.0(1)

6/2/2008

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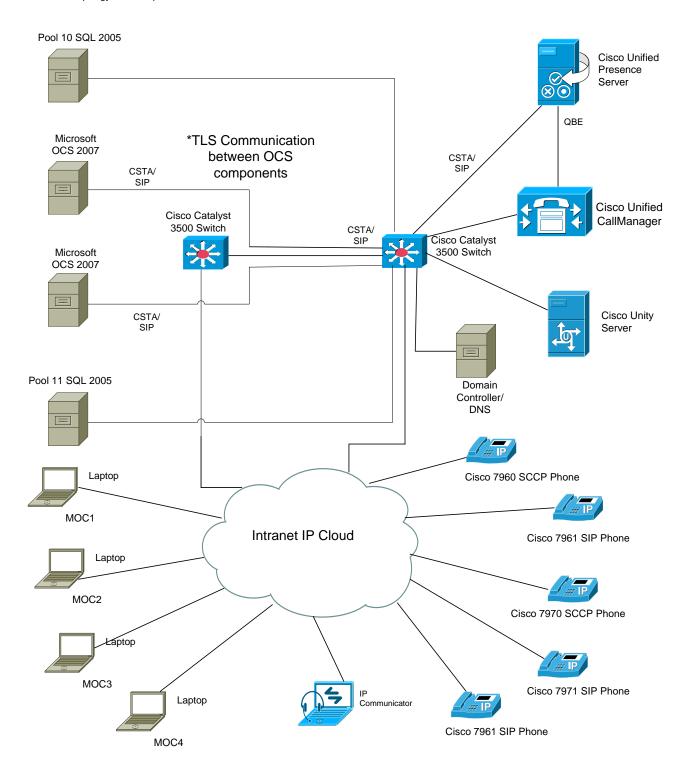
Introduction

- This document describes feature interoperability and documents the steps and configurations necessary for Cisco Unified Communication Manager (CUCM) 6.0(1) and Cisco Unified Presence (CUP) 6.0(1) to interoperate with Microsoft Office Communication Server (OCS) 2007 Enterprise Edition. These features include Microsoft Office Communicator (MOC) features, Desktop (DTP) or IP Phone features, Cisco Unified Communication Manager (CUCM) administration, configuration and provisioning and CUP device identification. It aims to provide a good understanding of what works and what does not work in terms of the feature interaction between various components of the CUCM, CUP and OCS. It also provides guidance to deployment participants of the limitations, expected behaviors as well as known issues. Please note that this document does not address performance and scalability, which are part of broader criteria for a deployment-ready solution.
- As shown in the Network Topology diagram, interoperability testing was performed between the CUP and the OCS using multiple OCS
 pools. Please note the absence of a CSS11501 Load Balancer. This hardware component, unlike Microsoft LCS2005 deployments, is not
 required for OCS2007 Enterprise Edition deployments with only one Front End Server per pool. Multiple Front End Servers /pool will
 still require a load balancer.



Network Topology

Figure 1. Network Topology/Test Setup





Limitations

- Multiple Point of Presence (MPOP): As of the CUP release 6.0(1), the MPOP feature where a MOC user is logged in from more than one location is not supported by CUP. Support for this feature affects other interoperability features between the Cisco CUP and the Microsoft OCS. The affected features include basic placement and teardown of calls and locations-based call forwarding. These features are inherent to MPOP and without support for this feature, the user experiences loss of device and call control when logged in multiple locations.
- Telephone number configuration in Active Directory User profiles: Whenever configuring telephone numbers in AD user profiles, entries must be prefixed by a "+" or they will not appear in the MOC's contacts information, and calls will not be processed.
- Call Forward Setting on DTP or IP Phone: Call forward setting made on the Cisco IP Phone (Desktop) is not recognized and reflected by the MOC GUI. As of the current release of the Microsoft OCS, this feature is not supported. Thus, the MOC overrides any call forward setting manually configured on the DTP.
- DTMF Digits: Using the MOC dial pad to enter digits presented an issue when MOC controls SIP phones and dials into Unity voicemail; DTMF tones are sent to Unity whenever MOC controls SCCP phones. Also, whenever entering digits using the MOC dial pad, there is an issue whenever digits are entered in a relatively fast manner. Some digits may be dropped during communication signaling between CUP and CUCM. As a result, users may experience invalid entry when interacting with devices such as voicemail and IVR systems. These issues will be addressed in future CUCM software releases.
- Shared Lines: There are potential unwanted interactions that may occur in shared line scenarios. The CUP procedure for selecting the device to be controlled by MOC is to login the MOC session. Upon sign-in, both devices associated with shared line will ring and the MOC user must answer the phone the user wishes to control. The unwanted feature interaction in this case include conflict in device and call control and indefinite ringing in cases where the user is away from both devices. This issue is also applicable for devices subscribed to extension mobility where selection of device to control procedures is similar to shared lines.
- Do not Disturb (DND): DND is an unsupported feature with respect to CUP integration. Thus, any MOC client with DND feature enabled, will still have any received call routed to its controlled DTP.
- Application Dial Rules: Whenever adding, modifying, deleting Application Dial Rules on CUCM, CUP SIP Proxy service must be restarted before changes take effect. This is a known issue, and will be addressed in future software releases.
- Conference: OCS2007 does not support Call Conference through 3rd party call control. Conferencing is available in Communicator Call scenarios.
- Transport Layer Security (TLS) connection between CUP and OCS: this feature was not tested in this release.

System Components

Hardware Requirements

- Cisco Hardware
 - a. Linux Servers
 - i. Cisco Unified Presence (MCS 7825H)
 - ii. Cisco Unified Communication Manager (MCS 7845H)
 - b. Cisco Catalyst 3560



- c. 1 Cisco 7960 IP Phones (SCCP)
- d. 2 Cisco 7961 IP Phones (SIP)
- e. 1 Cisco 7970 IP Phone with CUVA (SCCP)
- f. 1 Cisco 7971 IP Phone with CUVA (SIP)
- g. 2 Cisco Unified Video Advantage Cameras
- Micorsoft Hardware
 - a. OCS 2007 Enterprise Edition with SP1 MCS 7825H Windows Server 2003 Enterprise, R2 (32 Bit)
 - b. Windows Active Directory Node also serves as DNS for OCS MCS 7825H Windows Server 2003 Enterprise R2, w/SP 1
 - Windows SQL MCS 7825H SQL Server 2000 Enterprise Edition w/Win. 2003 Server SP1
- Notebook laptops for additional MOC Clients running on Windows XP Professional with SP1

Software Requirements

- Cisco Unified Communication Manager 6.0(1)
- Cisco Unfied Presence 6.0(1)
- Cisco IOS Release or Cisco CatOS Release (for the gateway)
- Microsoft Office Communication Server 2007 Enterprise Edition

Features

Features Supported

- MOC Features
 - Basic Call Placement / Clearing
 - Reverse Number Lookup
 - Basic Call Forwarding
 - New Number
 - Phone Settings
 - Hold / Retrieval of Call
 - Call Transfer
 - Unannounced or Blind
 - Announced or Consultation
- Desktop phone (DTP) Features



- Basic Call Placement / Clearing
- Hold / Retrieval of Call
- Call Forwarding
- Call Conference
- Call Transfers
 - Unannounced or Blind
 - Announced or Consultation
- Cisco Unified Communication Manager (CUCM) Administration, Configuration and Provisioning
 - Adding Dial Rules See Limitations section
 - Deleting Dial Rules See Limitations section
 - Changing Dial Rules See Limitations section
 - Prefix Dial Rules See Limitations section
- Cisco Unified Presence (CUP) Device Identification
 - Shared Lines
 - 2 Phone Devices
 - 1 Phone Device and 1 Cisco IP Communicator
- CUP Features
 - Extension Mobility

Features Not Supported

Call Conference: Invoking of Call Conference from MOC is not an available feature with OCS 2007. Conference calls can still be
initiated from Desktop Phones.

Configuration

For more Cisco deployment and installation guides, go to:

http://www.cisco.com/en/US/products/sw/voicesw/ps556/products_implementation_design_guide_chapter09186a 008070bc02.html

http://www.cisco.com/en/US/partner/products/ps6837/tsd_products_support_integrated_systems_documentation_ list.html

For more Microsoft deployment and installation guides, go to:

http://technet.microsoft.com/en-us/library/bb676082.aspx

 $\underline{http://search.technet.microsoft.com/search/Default.aspx?brand=technet\&query=OCS\&refinement=66\&lang=en-\underline{us}$



Configuration Sequence and Tasks

A. Cisco Unified Communication Manager (CUCM) Configuration

- 1. Cisco Unified Communication Manager Version
- 2. Configure the SIP Trunk
- 3. Configure the Cisco IP Phones
- 4. Configure the End Users
- 5. Configure the Licensing Capabilities Assignments
- 6. Configure the Phone Services
- 7. Configure the Phone URL Services
- 8. Configure the Application User
- 9. Configure the Application Dial Rules
- 10. Configure the Conference Bridge
- 11. Configure the Meet-Me Number
- 12. Configure the Device Profiles for Extension Mobility users

B. Cisco Unified Presence (CUP) Configuration

- 1. CUP Version
- 2. Configure the CUP Method / Event Based Routing
- 3. Configure the Unified Communication Manager Presence Gateway
- 4. Configure the CTI Gateway
- 5. Configure the MOC Assignments
- 6. Configure the AXL Information
- 7. Configure the Privacy ACL Entry (Allowed Destination Host)
- 8. Configure the Proxy ACL Entry (Allowed Incoming Host)
- 9. Configure the IP Phone Messenger Setting
- 10. Configure the IP Phone Messenger User
- 11. Configure the Application User Configuration

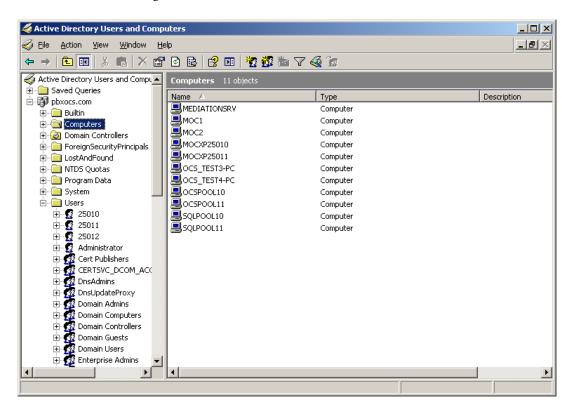
C. OCS Enterprise Edition Configuration

- 1. Domain Name Server
- 2. Pool Properties
- 3. Static Route
- 4. Authorized Host
- Server Properties
- 6. Pool Users
- 7. User Configuration
- 8. Microsoft Office Communicator (MOC) Configuration



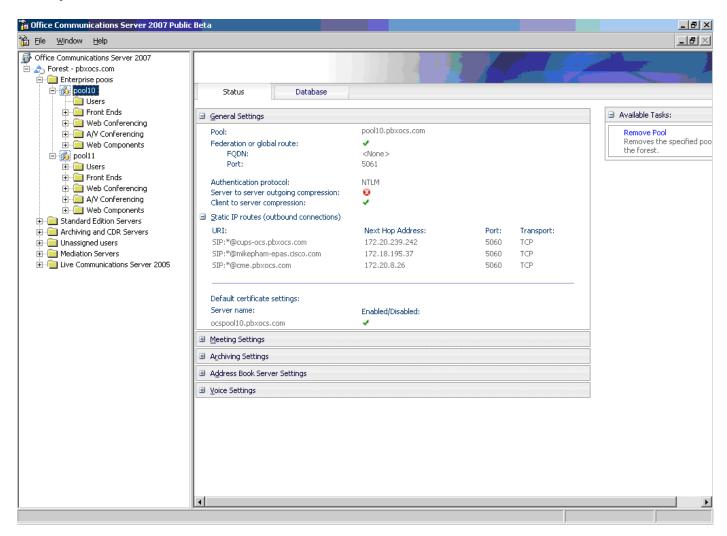
Configuring Microsoft OCS 2007 Enterprise Edition

Domain Name Server Configuration

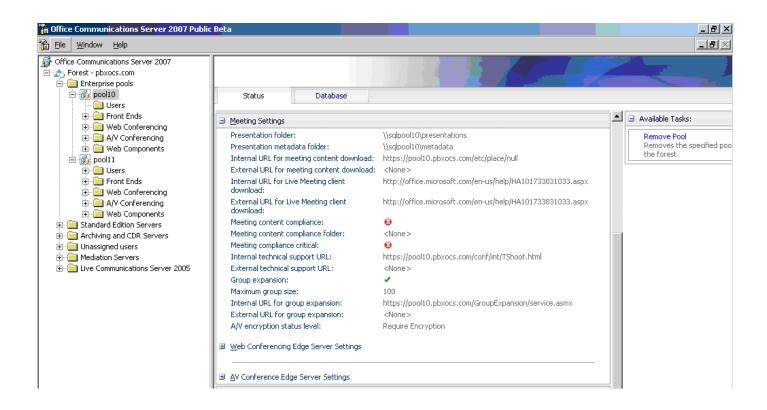




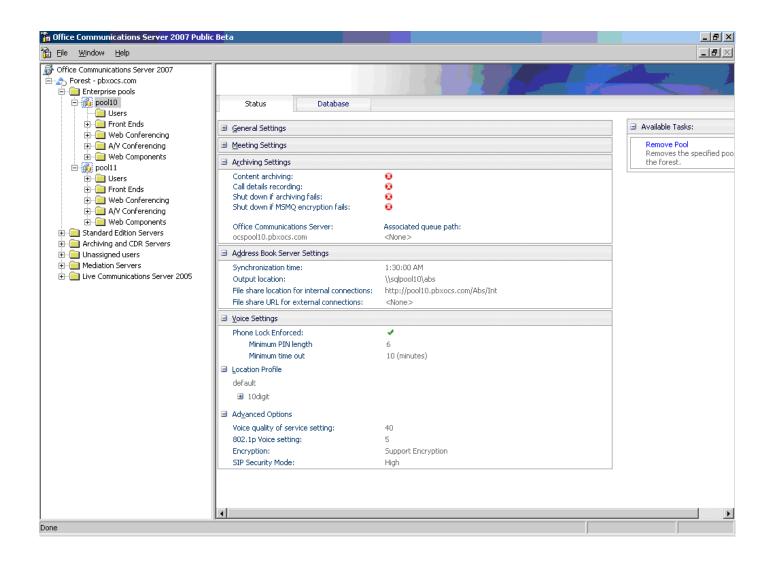
Pool Properties





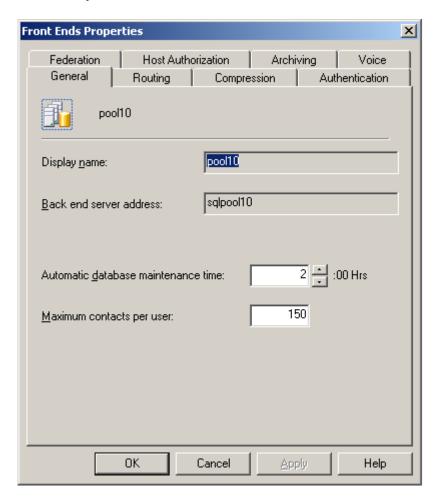




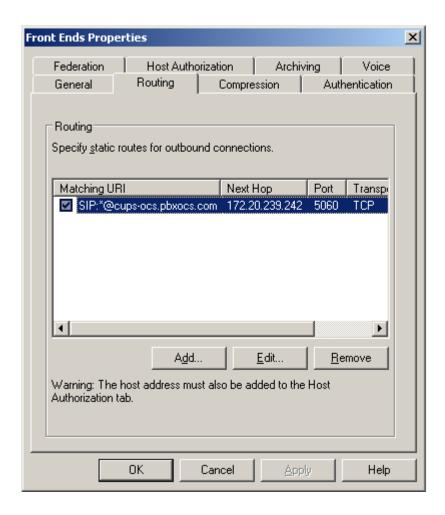




Front End Properties

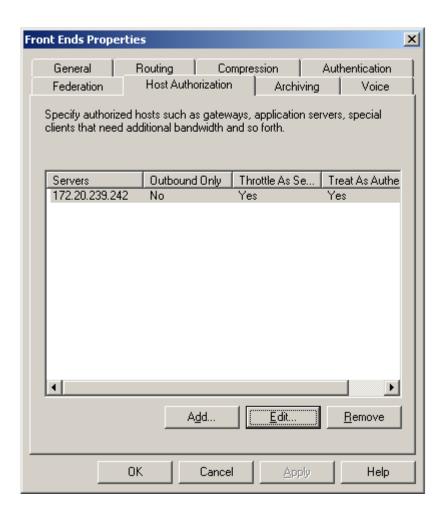






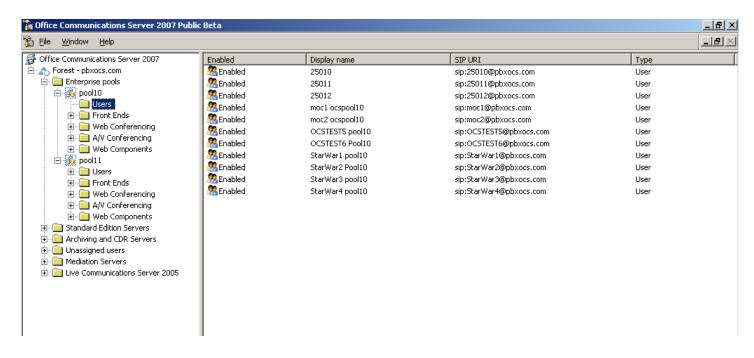
Note...The FQDN above is the host name of the CUP server.





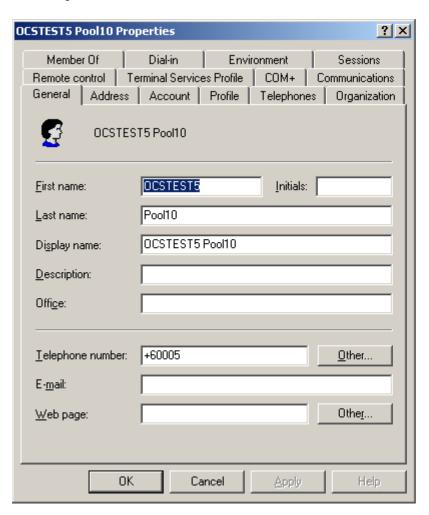


Pool Users

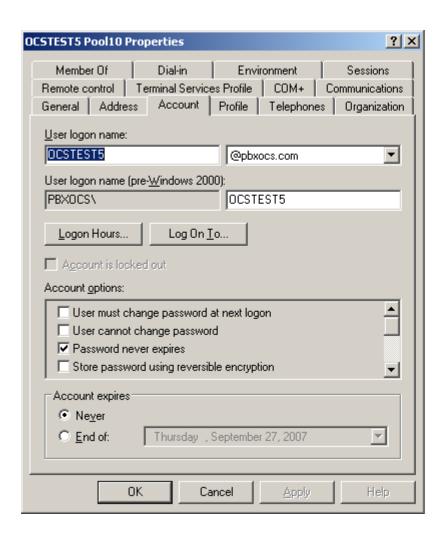




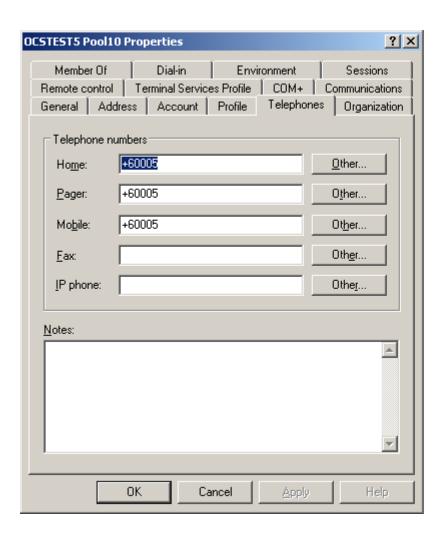
User Configuration



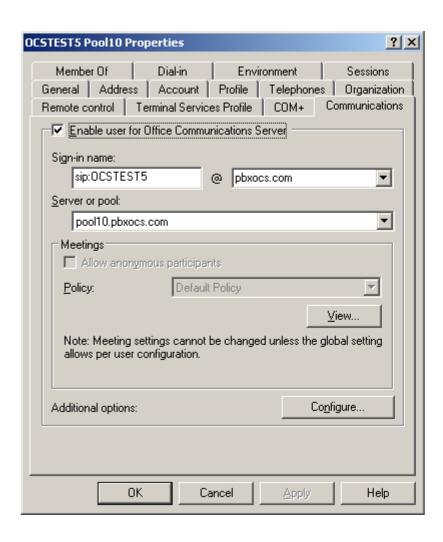




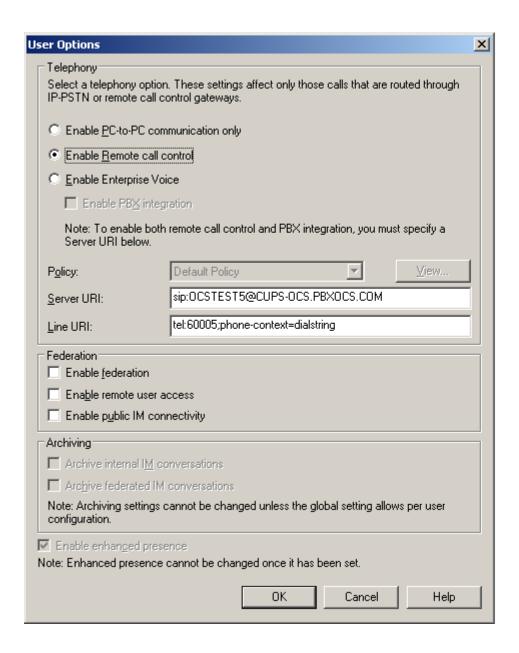








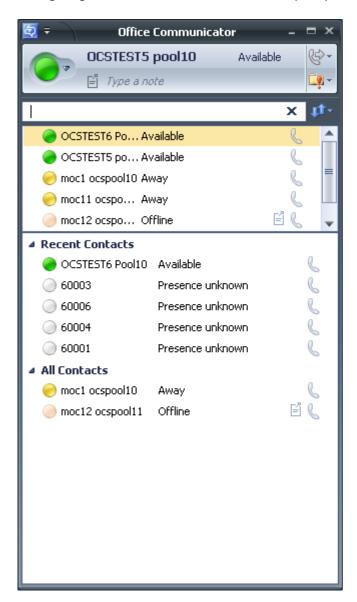




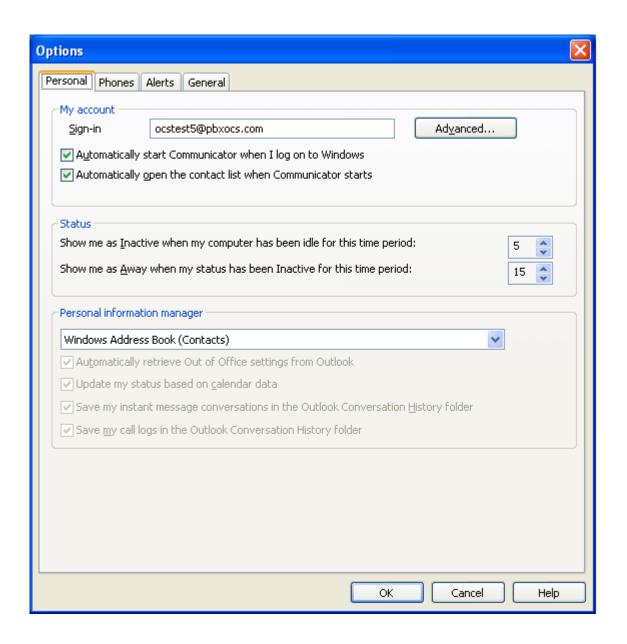
Note...The server URI MUST contain the host name of the CUP server.. This is configured for every RCC user



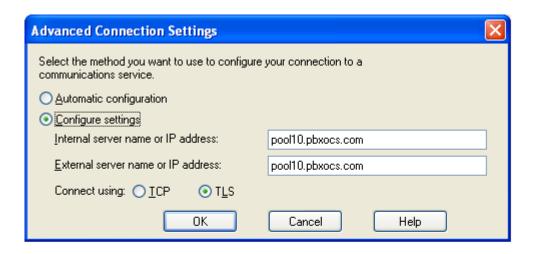
Configuring the Microsoft Office Communicator (MOC)



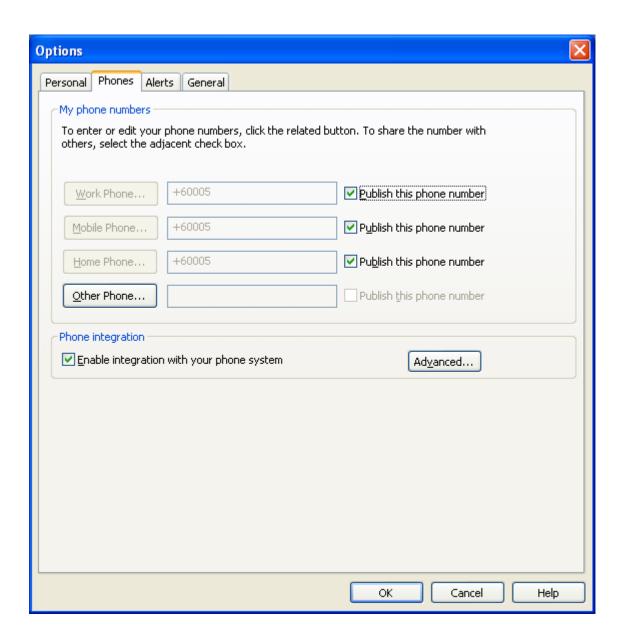








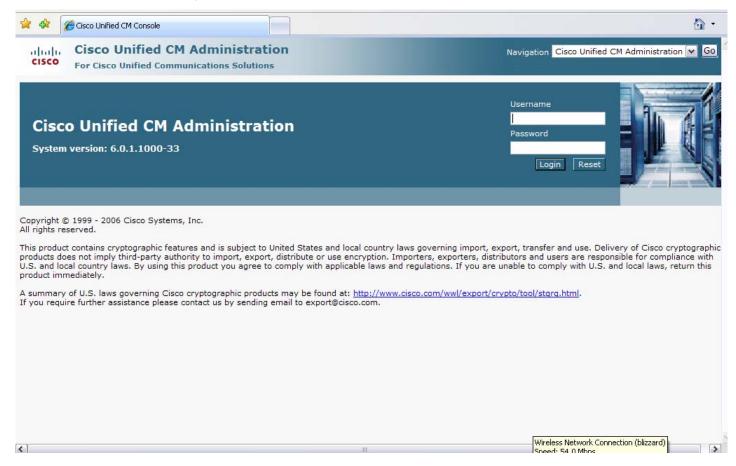






Configuring the Cisco Unified Communication Manager

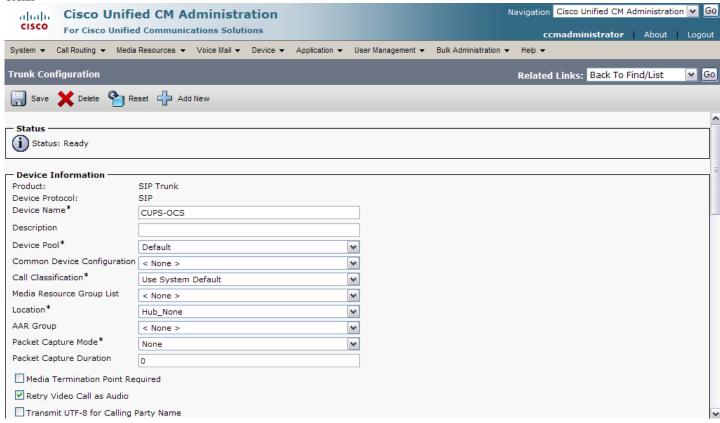
Cisco Unified Communication Manager Version



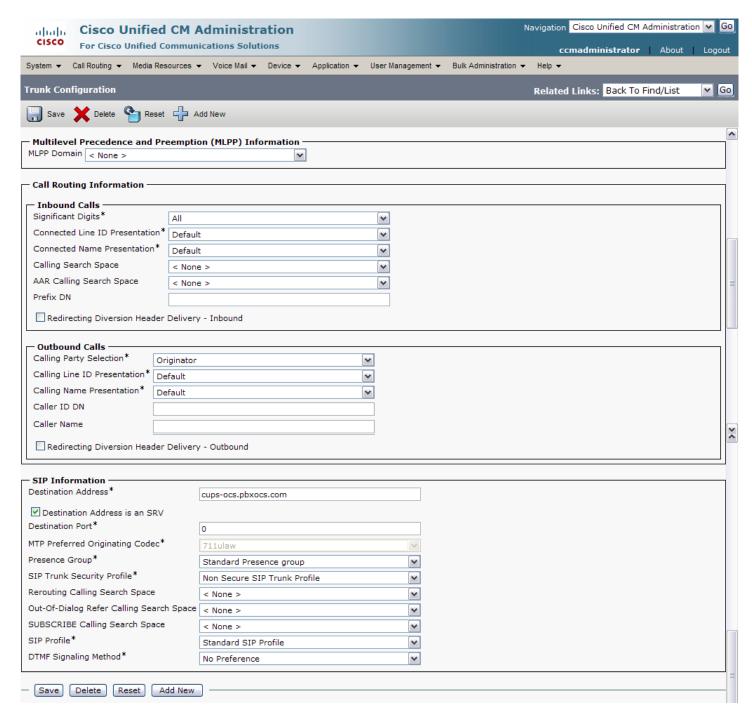


SIP

Trunk





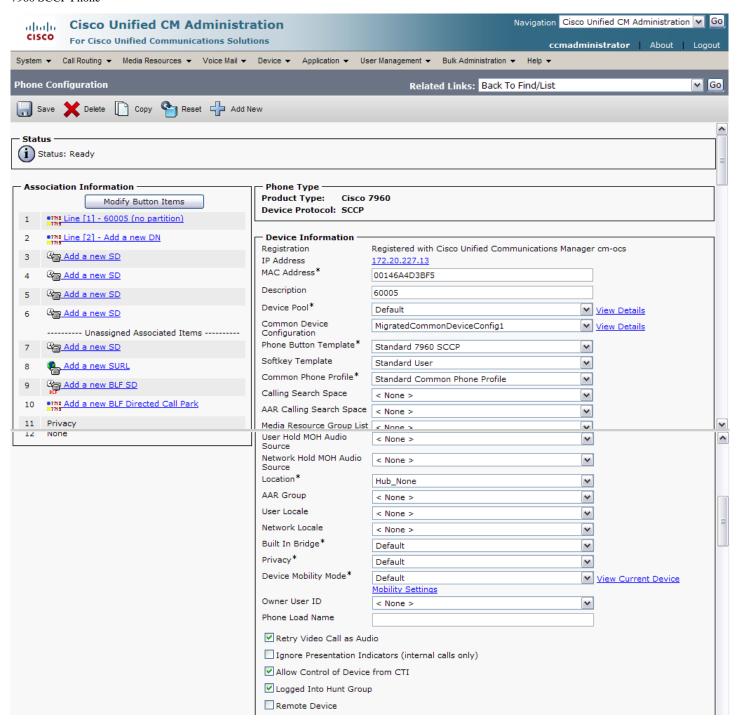


Note..Destination address is FQDN of CUP server..Leave the port set at "0"..Be sure that the entries are correct in the DNS server..



Configuring the Cisco IP Phone

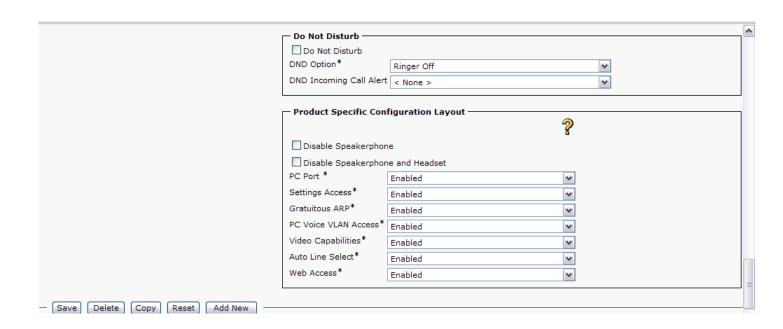
7960 SCCP Phone





	— Protocol Specific Informa	tion —		^
	Packet Capture Mode*	None	~	
	Packet Capture Duration	0		
	Presence Group*	Standard Presence group	~	
	Device Security Profile*	Cisco 7960 - Standard SCCP Non-Secure		
	SUBSCRIBE Calling Search Sp		~	
	Unattended Port			
	Require DTMF Reception			
	RFC2833 Disabled			≣
l				
1		oxy Function (CAPF) Information ———		
	L	No Pending Operation	<u>v</u>	
	L	By Null String	~	
	Authentication String			
	Generate String			
	Key Size (Bits)*	1024	~	
	Operation Completes By	2007 6 28 12 (YYYY:MM:DD:HH)		
	Certificate Operation Status: 1			
	Note: Security Profile Contains	s Addition CAPF Settings.		~
r	— Expansion Module Inform	ation —		^
	— Expansion Module Inform Module 1 < None			^
				^
	Module 1 < None	>		^
	Module 1	>		^
	Module 1	>		^
	Module 1 < None Module 1 Load Name Module 2 < None Module 2 Load Name	>		^
	Module 1	>		^
	Module 1	>		^
	Module 1	>		^
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	Module 1	>		
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	Module 1	>		
	Module 1	> v		•







Directory Number Configura	tion		Relate	d Links: Configure Device (SEP001	46A4D3BF5) 🕶 Go
Save Delete PRE	set 🎝 Add New				
- Status					^
Status: Ready					
─ Directory Number Informat	tion —				
Directory Number* 60005					
Route Partition < None >		~			
Description					
Alerting Name OCS TEST	Г5				
ASCII Alerting Name OCS TEST	Γ5				
Allow Control of Device from	CTI				
Associated Devices SEP00146					
		Edit Devi			
		Edit Lin	ne Appearance		
	**				
Dissociate Devices					
Voice Mail Profile	< None >	v (0	Choose <none> to use s</none>	vetem default)	
Calling Search Space	< None >	▼ (C	choose < None > to use s	ystem derault)	
Presence Group*	Standard Presence g				
User Hold MOH Audio Source	< None >	▼			
Network Hold MOH Audio Source		~			
Auto Answer*	Auto Answer Off	~			
— AAR Settings —					
	Voice Mail	AAR Destination	Mask	AAR Group	
AAR or				< None >	~
Retain this destination in th	e call forwarding				
history					
Call Forward and Call Picku	p Settings ———				
	Voice Mail	Destination		Calling Search Space	
Calling Search Space Activatio	n Policy		U	se System Default	~
Forward All	or		<	None >	~
Secondary Calling Search Spa	ce for Forward All		<	None >	~



Forward Busy Internal or Forward No Answer Internal or Forward No Answer External or Forward No Answer External or Forward No Answer External or Forward No Coverage Internal or Forward No Coverage External or Forward No Coverage External or Forward No Coverage External or Forward On CTI Failure or Forward Unregistered Internal or Forward Unregistered Internal or Forward Unregistered External Forw	> > > > > > > > > > > > > > > > > > >	
Forward No Answer Internal or	>	
Forward No Answer External or	>	
Forward No Coverage Internal or	V V V V	
Forward No Coverage External or	V V V	III
Forward on CTI Failure	~	
Forward Unregistered Internal or	~	
Forward Unregistered External Or		
No Answer Ring Duration (seconds) Call Pickup Group MLPP Alternate Party Settings Target (Destination) MLPP Calling Search Space MLPP No Answer Ring Duration (seconds) Line Settings for All Devices Hold Reversion Ring Duration (seconds) Setting the Hold Reversion Ring Duration to zero will disable to seconds) Line 1 on Device SEP00146A4D3BF5 Display (Internal Caller ID) Display (Internal Caller ID) Display text for a line appearance is intended for displaying text such as a normal caller ID) Display text for a line appearance is intended for displaying text such as a normal caller ID)	~	
Call Pickup Group MLPP Alternate Party Settings		
MLPP Alternate Party Settings Target (Destination) MLPP Calling Search Space		
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Target (Destination) MLPP Calling Search Space MLPP No Answer Ring Duration (seconds) Line Settings for All Devices Hold Reversion Ring Duration (seconds) Hold Reversion Notification Interval (seconds) Setting the Hold Reversion Notification Interval to zero will disable to seconds) Line 1 on Device SEP00146A4D3BF5 Display (Internal Caller ID) Display text for a line appearance is intended for displaying text such as a number, the person receiving a call may not see the proper identity		
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(seconds) Continue Continue	e feature	
Line 1 on Device SEP00146A4D3BF5 Display (Internal Caller ID) Display text for a line appearance is intended for displaying text such as a n instead of a directory number for internal calls. If you specify a number, the person receiving a call may not see the proper identity	ble the	
Display (Internal Caller ID) OCS TEST5 Display text for a line appearance is intended for displaying text such as a n instead of a directory number for internal calls. If you specify a number, the person receiving a call may not see the proper identity		
ID) instead of a directory number for internal calls. If you specify a number, the person receiving a call may not see the proper identity		-
instead or a directory number for internal calls. If you specify a number, the person receiving a call may not see the proper identity		
	of the	
ASCII Display (Internal OCS TEST5		
Caller ID) Line Text Label		
ASCII Line Text Label OCS TEST5		
External Phone Number		
Mask		≡
Visual Message Waiting Indicator Policy* Use System Policy ✓		
Ring Setting (Phone Use System Default Idle)*		
Ring Setting (Phone Active) Use System Default Applies to this line when any line on the phone has a call in progress.		
Call Pickup Group Audio Alert Setting(Phone Idle) Use System Default		

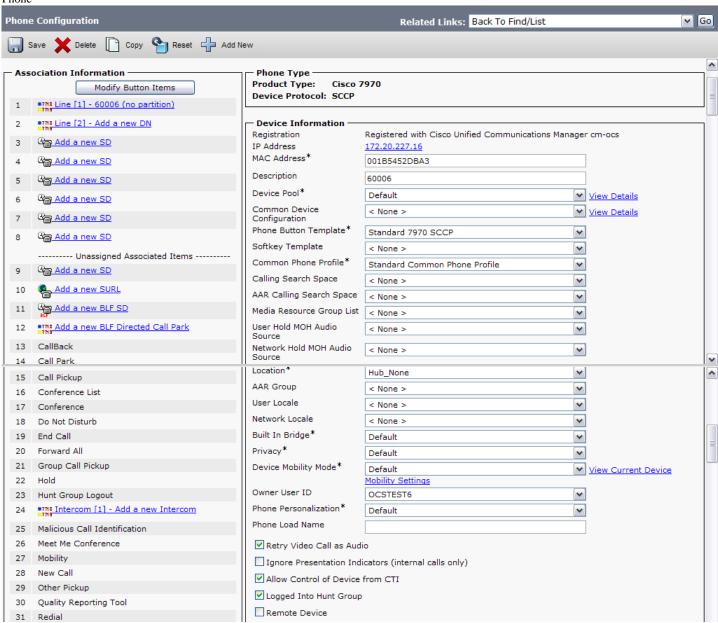


Call Pickup Group Audio Alert Setting (Phone Active) Monitoring Calling	Use System Default				
Search Space	1 Notice >				
					Propagate Selected
-Multiple Call/Call V	aiting Settings on Device SEPO	0146A4D3BF5			
	ect the Max Number of calls is: 1-20	0			
Maximum Number of	Calls*	4			
Busy Trigger*		2		(Less than or	equal to Max. Calls)
— Form and od Call Inf	ormation Display on Device SEI	0014684D2DEE			
✓ Caller Name	ormacion display on device sci	00140#402012			
☑ Caller Number					
▼ Redirected Numbe	r				
▼ Dialed Number					
_					
—Users Associated v					
	Full Name		User ID		Permission
OCSPOOL10,0	OCSTEST5		OCSTEST5		i

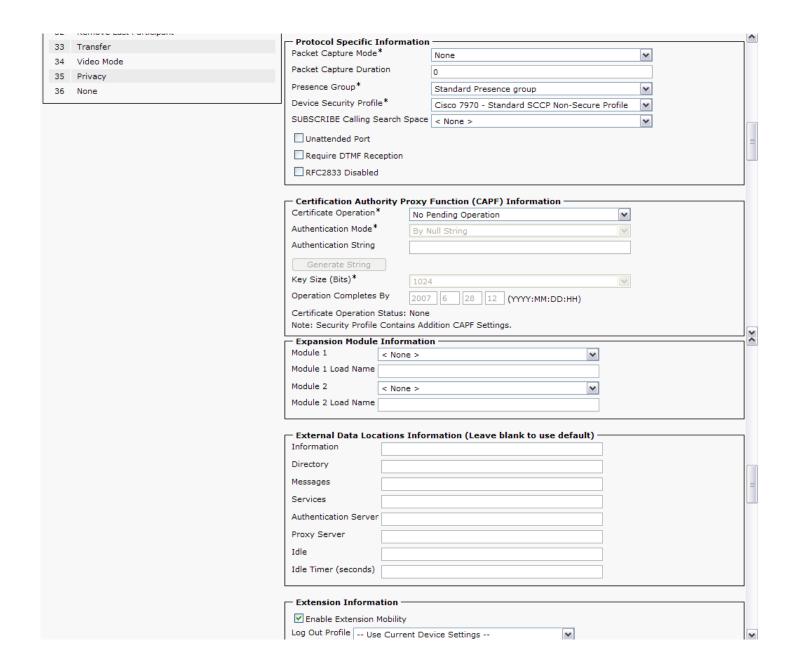


7970 SCCP

Phone







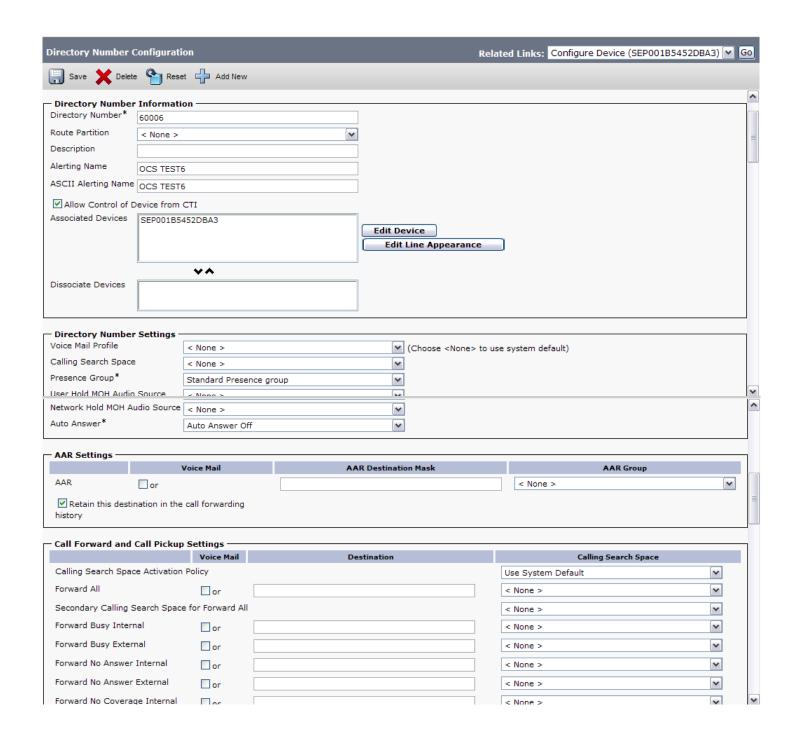


MLPP Information		^^
MLPP Domain < None >	~	
MLPP Indication* Default	~	
MLPP Preemption* Default	<u> </u>	
Do Not Disturb		
Do Not Disturb		
DND Option* Ringer Off		
DND Incoming Call Alert < None >	~	
Secure Shell Information		
Secure Shell User		
Secure Shell Password		
Product Specific Configuration Layout -		
		?
Disable Speakerphone		
Disable Speakerphone and Headset		
Forwarding Delay*	Disabled	•
PC Port *	Enabled	- V
Settings Access*	Enabled	•
Gratuitous ARP*	Disabled	•
PC Voice VLAN Access*	Enabled	•
Video Capabilities*	Enabled	•
Auto Line Select*	Disabled	•
Web Access*	Enabled	*
Days Display Not Active	Sunday Monday	
	Tuesday	•
Display On Time	07:30	
Display On Duration	10:30	
Display Idle Timeout	01:00	
Span to PC Port*	Disabled	•
Logging Display*	PC Controlled	
Load Server		
Recording Tone*	Disabled	·
Recording Tone Local Volume*	100	
Recording Tone Remote Volume*	50	
Recording Tone Duration		
		~



Display On When Incoming Call*	Disabled	^
RTCP*	Disabled	~
"more" Soft Key Timer	5	
Auto Call Select*	Enabled	~
Log Server		
Advertise G.722 Codec*	Use System Default	~
Wideband Headset UI Control*	Enabled	~
Wideband Handset UI Control*	Enabled	~
Wideband Headset*	Enabled	~
Wideband Handset*	Use Phone Default	~
Peer Firmware Sharing*	Disabled	~
Cisco Discovery Protocol (CDP): Switch Port*	Enabled	~
Cisco Discovery Protocol (CDP): PC Port*	Enabled	~







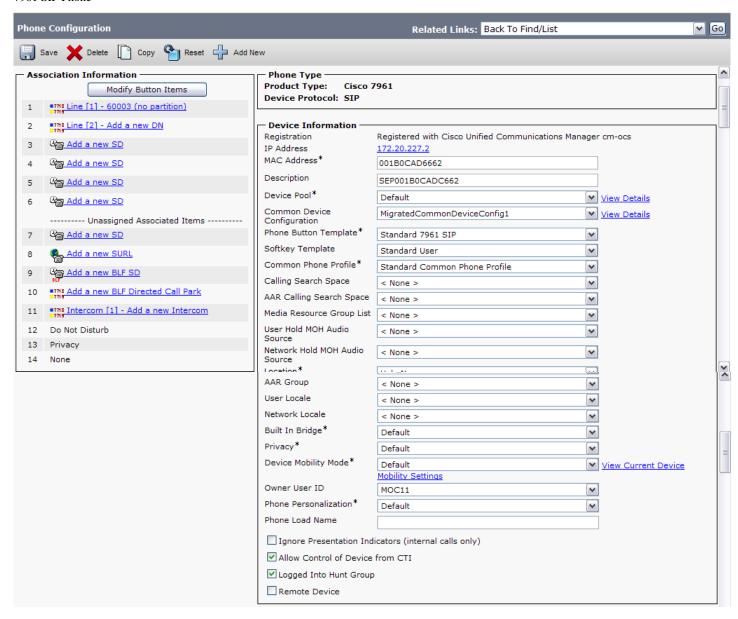
Forward Unregistered Inte	rnal or						< None >	•	^
Forward Unregistered Exte	rnal or						< None >	~	
No Answer Ring Duration (s	econds)								
Call Pickup Group	< No	ne >			~				
– MLPP Alternate Party Se	ettings ——								
Target (Destination)	_								
MLPP Calling Search Space		< None	>		~				
MLPP No Answer Ring Durat	ion (seconds)								
– Line Settings for All Dev	vices —								
Hold Reversion Ring Duration						Setting th	e Hold Reversion Ring Duration	n to zero will disable the feat	ure
Hold Reversion Notification (seconds)	Interval					Setting th	e Hold Reversion Notification I	nterval to zero will disable the	е
(seconds)		feature	=						
Line 1 on Device SEP00	1B5452DBA3								
Display (Internal Caller	OCS TEST6				Display text	for a line ap	ppearance is intended for displa	aying text such as a name	
ID)	instead of a c caller.	directory	number for in	ternal calls. If yo	ou specify a nur	nber, the pe	rson receiving a call may not s	ee the proper identity of the	
ASCII Display (Internal	OCS TEST6								~
Line Text Label	OCS TEST6								^
ASCII Line Text Label	OCS TEST6								
External Phone Number Mask									
Visual Message Waiting Indicator Policy*	Use System	Policy			~				
Audible Message Waiting Indicator Policy*	Off				~				
Ring Setting (Phone Idle)*	Use System	Default			~				
Ring Setting (Phone Active)	Use System	Default			Applies to t	nis line when	any line on the phone has a ca	all in progress.	
Call Pickup Group Audio Alert Setting(Phone Idle)	Use System	Default			~				
Call Pickup Group Audio Alert Setting(Phone Active)	Use System	Default			~				=
Recording Option*	Call Recordi	ng Disab	oled		~				
Recording Profile	< None >				~				
Monitoring Calling Search Space	< None >				~				



	ng Settings on Device SEP00 le Max Number of calls is: 1-200					
Maximum Number of Calls	*	4				
Busy Trigger*		2		(Less than or e	equal to Max. Calls)	
— Forwarded Call Inform	ation Display on Device SEP(001B5452DBA3				
✓ Caller Name						
Caller Number						
Redirected Number						
☑ Dialed Number						
— Users Associated with	line —					
Oscis Associated With	Full Name		User I	•	Permission	
OCSPOOL10,OCST	EST6		OCSTEST6		i	



7961 SIP Phone



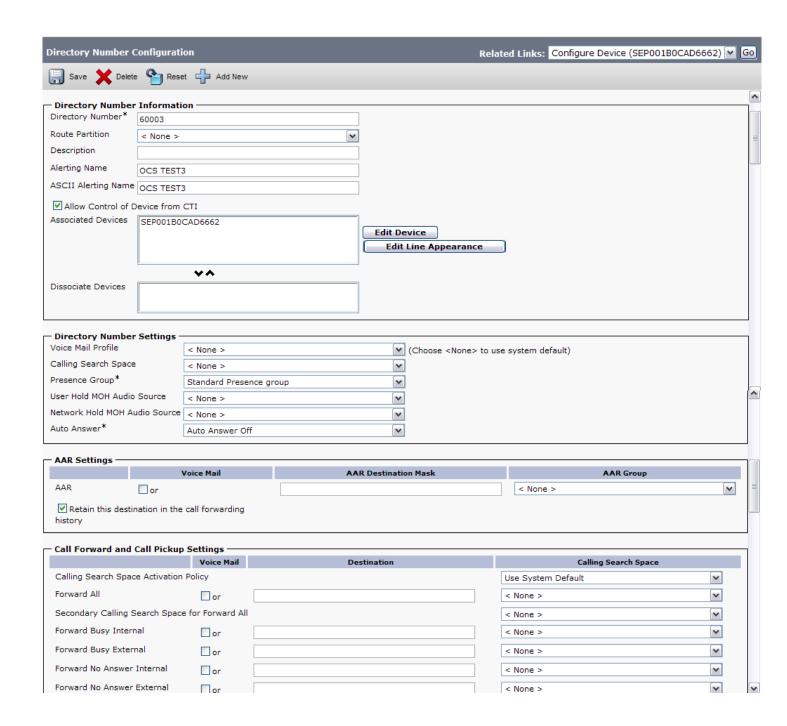


Protocol Specific Information Packet Capture Mode* None Packet Capture Duration O Presence Group* Standard Presence group MTP Preferred Originating Codec* Vilulaw Device Security Profile* Rerouting Calling Search Space SUBSCRIBE Calling Search Space SIP Profile* Digest User MOC11 Media Termination Point Required Unattended Port Require DTMF Reception Certification Authority Proxy Function (CAPF) Information Certificate Operation* Authentication Mode * Authentication String External Data Locations Information (Leave blank to use default) Information Directory Messages Services Authentication Server Proxy Server Idle Idle Timer (seconds)		er.		
Packet Capture Duration Presence Group* Standard Presence group Standard St				
Presence Group* Standard Presence group MTP Preferred Originating Codec* 711ulaw Device Security Profile* Rerouting Calling Search Space SUBSCRIBE Calling Search Space SUBSCRIBE Calling Search Space SUBSCRIBE Calling Search Space NONE > SIP Profile* Digest User MOC11 Media Termination Point Required Unattended Port Require DTMF Reception Certification Authority Proxy Function (CAPF) Information Certificate Operation* Authentication Mode* Authentication String External Data Locations Information (Leave blank to use default) Information Directory Messages Services Authentication Server Proxy Server Idle				
SIP Dial Rules MTP Preferred Originating Codec* Titulaw Vitality Device Security Profile Cisco 7961 - Standard SIP Non-Secure Profile Vitality Vitalit				
MTP Preferred Originating Codec* Titulaw				
Device Security Profile * Cisco 7961 - Standard SIP Non-Secure Profile March Rerouting Calling Search Space Kone > March SUBSCRIBE Calling Search Space Kone > March SIP Profile * Standard SIP Profile March Digest User MOC11 March Media Termination Point Required Unattended Port Require DTMF Reception Certification Authority Proxy Function (CAPF) Information Certificate Operation * No Pending Operation Authentication Mode * Authentication String March Information Directory Messages Services Authentication Server Proxy Server Idle				
Rerouting Calling Search Space		odec* 711ulaw	<u> </u>	
SUBSCRIBE Calling Search Space SIP Profile *			file 💌	
SIP Profile* Digest User MOC11 Media Termination Point Required Unattended Port Require DTMF Reception Certification Authority Proxy Function (CAPF) Information Certificate Operation* Authentication Mode* Authentication String External Data Locations Information (Leave blank to use default) Information Directory Messages Services Authentication Server Proxy Server Idle	Rerouting Calling Search Sp.	ace < None >	v	
Digest User MoC11 Wedia Termination Point Required Unattended Port Require DTMF Reception	_	Space < None >	~	L
Media Termination Point Required Unattended Port Require DTMF Reception Certification Authority Proxy Function (CAPF) Information Certificate Operation* Authentication Mode* Authentication String External Data Locations Information (Leave blank to use default) Information Directory Messages Services Authentication Server Proxy Server Idle	SIP Profile*	Standard SIP Profile	~	
Unattended Port Require DTMF Reception Certification Authority Proxy Function (CAPF) Information Certificate Operation* Authentication Mode* By Null String Authentication String External Data Locations Information (Leave blank to use default) Information Directory Messages Services Authentication Server Proxy Server Idle	Digest User	MOC11	~	
Require DTMF Reception Certification Authority Proxy Function (CAPF) Information Certificate Operation* Authentication Mode* Authentication String External Data Locations Information (Leave blank to use default) Information Directory Messages Services Authentication Server Proxy Server Idle	Media Termination Point	Required		
Certification Authority Proxy Function (CAPF) Information Certificate Operation* Authentication Mode* Authentication String External Data Locations Information (Leave blank to use default) Information Directory Messages Services Authentication Server Proxy Server Idle	Unattended Port			
Certification Authority Proxy Function (CAPF) Information Certificate Operation* Authentication Mode* Authentication String External Data Locations Information (Leave blank to use default) Information Directory Messages Services Authentication Server Proxy Server Idle	Require DTMF Reception			
Certificate Operation* Authentication Mode* Authentication String Sy Null String W				
Authentication Mode* Authentication String External Data Locations Information (Leave blank to use default) Information Directory Messages Services Authentication Server Proxy Server Idle				
Authentication String - External Data Locations Information (Leave blank to use default) Information Directory Messages Services Authentication Server Proxy Server Idle				
External Data Locations Information (Leave blank to use default) Information Directory Messages Services Authentication Server Proxy Server Idle		By Null String	~	
Information Directory Messages Services Authentication Server Proxy Server Idle	Authentication String			
Information Directory Messages Services Authentication Server Proxy Server Idle	─ External Data Locations	Information (Leave blank to use default) —		
Messages Services Authentication Server Proxy Server Idle				
Services Authentication Server Proxy Server Idle	Directory			
Authentication Server Proxy Server Idle	Messages			
Proxy Server Idle				
Proxy Server Idle				
Idle	Services			
	Services Authentication Server			
Idle Timer (seconds)	Services Authentication Server Proxy Server			
	Services Authentication Server Proxy Server Idle			
	Services Authentication Server Proxy Server Idle Idle Timer (seconds)			
Extension Information	Services Authentication Server Proxy Server Idle Idle Timer (seconds)			
☑ Enable Extension Mobility	Authentication Server Proxy Server Idle Idle Timer (seconds) Extension Information —			
▼ Enable Extension Mobility Log Out Profile Use Current Device Settings	Authentication Server Proxy Server Idle Idle Timer (seconds) Extension Information — Enable Extension Mobility Log Out Profile — Use Curre			
☐ Enable Extension Mobility Log Out Profile Use Current Device Settings Log in Time < None >	Authentication Server Proxy Server Idle Idle Timer (seconds) Extension Information — Enable Extension Mobility Log Out Profile — Use Curre Log in Time			
☑ Enable Extension Mobility Log Out Profile Use Current Device Settings Log in Time < None >	Authentication Server Proxy Server Idle Idle Timer (seconds) - Extension Information - Enable Extension Mobility Log Out Profile Use Curre Log in Time < None >			
✓ Enable Extension Mobility Log Out Profile Use Current Device Settings ✓ Log in Time < None > Log out Time < None >	Authentication Server Proxy Server Idle Idle Timer (seconds) - Extension Information - V Enable Extension Mobility Log Out Profile Log in Time			
✓ Enable Extension Mobility .og Out Profile Use Current Device Settingsog in Time < None >	Services Authentication Server Proxy Server dle dle Timer (seconds) Extension Information — Enable Extension Mobility og Out Profile — Use Curre og in Time	ent Device Settings		



- Do Not Disturb			^
Do Not Disturb			
	ger Off		
DND Incoming Call Alert < N			
3	Tone -		
- Secure Shell Information	1		
Secure Shell User			
Secure Shell Password			
- Product Specific Configur	ration Layout —		
		?	
Disable Speakerphone			
Disable Speakerphone and	d Headset		
PC Port *	Enabled	~	=
Settings Access*	Enabled	~	
Gratuitous ARP*	Enabled	~	
PC Voice VLAN Access*	Enabled	~	
Video Capabilities*	Disabled	~	
Auto Line Select*	Enabled	~	
Web Access*	Enabled	~	2
Span to PC Port*	Disabled	~	
Logging Display*	PC Controlled	~	
Load Server			
Recording Tone*	Disabled	~	
Recording Tone Local Volume	100		
Recording Tone Remote Volu	me* 50		
Recording Tone Duration			
RTCP*	Disabled	~	
"more" Soft Key Timer	5		
Auto Call Select*	Enabled	~	
Log Server			
Advertise G.722 Codec*	Use System Default	~	
Wideband Headset UI Control	-	~	
Wideband Handset UI Control		~	
Wideband Headset*	Enabled	~	
Wideband Handset*	Use Phone Default	~	L
Peer Firmware Sharing*	Disabled	~	



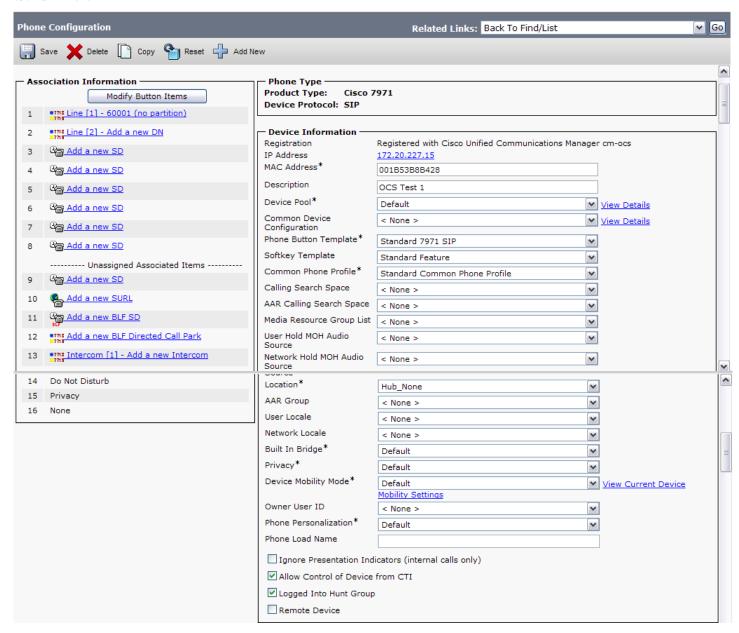




Forward No Coverage Inte	rnal or				< None >	~	
Forward No Coverage Exte	rnal or				< None >	~	
Forward on CTI Failure	or				< None >	~	
Forward Unregistered Inter	rnal or				< None >	~	
Forward Unregistered Exter					< None >	~	
No Answer Ring Duration (se							
Call Pickup Group	< None >		~				
							_
- MLPP Alternate Party Se Target (Destination)	ettings —						
MLPP Calling Search Space	< None	>	~				
MLPP No Answer Ring Durati	ion (seconds)						
							_
 Line Settings for All Dev Hold Reversion Ring Duratio 				Cattian the	Hald Barranian Bina Brossian to account	:::: dia-bla sha 6s	
Hold Reversion Notification I					Hold Reversion Ring Duration to zero w		
(seconds)	feature			Setting the	Hold Reversion Notification Interval to 2	ero will disable the	
Line 1 on Device SEP001	1B0CAD6662						<u>ا</u>
Display (Internal Caller ID)	OCS TEST3				earance is intended for displaying text s		
.5,	instead of a directory caller.	number for internal ca	ills. It you specity a num	ber, the perso	on receiving a call may not see the prop	er identity of the	
ASCII Display (Internal Caller ID)	OCS TEST3						
Line Text Label	OCS TEST3						
ASCII Line Text Label	OCS TEST3						
External Phone Number							
Mask Visual Message Waiting							
Indicator Policy*	Use System Policy		~				
Audible Message Waiting Indicator Policy*	Default		~				
Ring Setting (Phone Idle)*	Use System Default		~				
Ring Setting (Phone Active)	Use System Default		Applies to th	is line when a	ny line on the phone has a call in progre	ass.	L
Call Pickup Group Audio Alert Setting(Phone Idle)	Use System Default		~				
Call Pickup Group Audio Alert Setting(Phone Active)	Use System Default		~				
Recording Option*	Call Recording Disal	oled	~				Î
Recording Profile	< None >		~				
Monitoring Calling Search Space	< None >		<u> </u>				
							╛
 Multiple Call/Call Waitin Note: The range to select the 							
Maximum Number of Calls*		4					
Busy Trigger*		2			(Less than or equal to Max. Calls)		
– Forwarded Call Informa	tion Display on Devi	ce SEP001B0CAD666	52				_
✓ Caller Name	, .,						
✓ Caller Number							
Redirected Number							



7971 SIP Phone

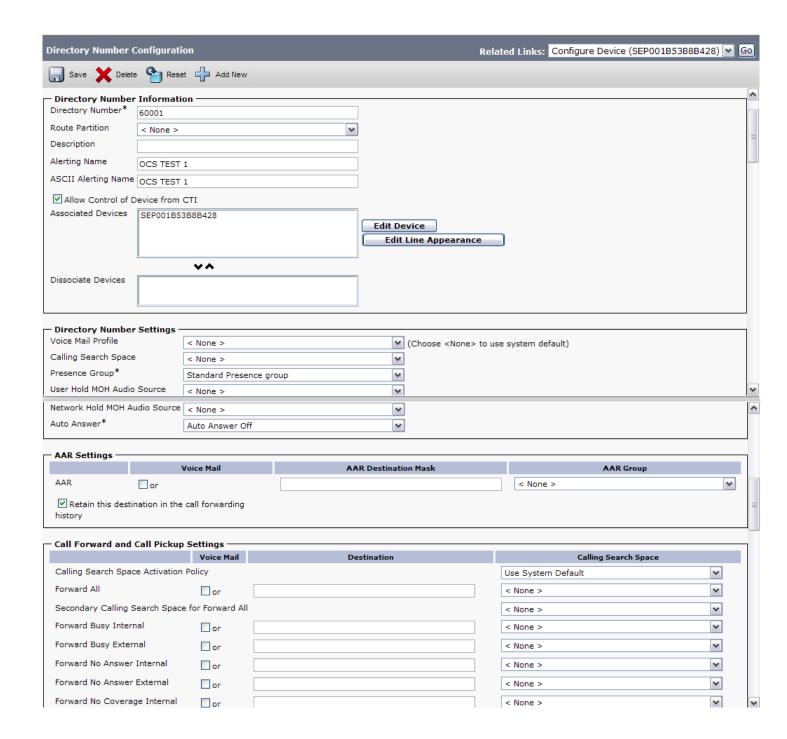




D	_	^
Protocol Specific Informatio Packet Capture Mode*		
Packet Capture Duration	None	~
	0	
Presence Group*	Standard Presence group	<u> </u>
SIP Dial Rules	< None >	~
MTP Preferred Originating Codec	711ulaw	~
Device Security Profile*	Cisco 7971 - Standard SIP Non-Secure Profile	▼
Rerouting Calling Search Space	< None >	~
SUBSCRIBE Calling Search Spac	e < None >	~
SIP Profile*	Standard SIP Profile	v
Digest User	MOC1	~
Media Termination Point Requ	ired	
Unattended Port		
Require DTMF Reception		
Certification Authority Proxy	Function (CAPF) Information	
Certificate Operation*	Pending Operation	
Authentication Mode*	Null String	
Authentication String		~
— External Data Locations Info	ormation (Leave blank to use default)	^
External Data Locations Info	rmation (Leave blank to use default)	-
	rmation (Leave blank to use default)	-
Information Directory	ermation (Leave blank to use default)	-
Information Directory Messages	ermation (Leave blank to use default)	-
Information Directory Messages Services	ormation (Leave blank to use default)	-
Information Directory Messages Services Authentication Server	ormation (Leave blank to use default)	-
Information Directory Messages Services	ormation (Leave blank to use default)	-
Information Directory Messages Services Authentication Server	ormation (Leave blank to use default)	-
Information Directory Messages Services Authentication Server Proxy Server	ermation (Leave blank to use default)	-
Information Directory Messages Services Authentication Server Proxy Server Idle	ormation (Leave blank to use default)	-
Information Directory Messages Services Authentication Server Proxy Server Idle	ormation (Leave blank to use default)	-
Information Directory Messages Services Authentication Server Proxy Server Idle Idle Timer (seconds)	ormation (Leave blank to use default)	-
Information Directory Messages Services Authentication Server Proxy Server Idle Idle Timer (seconds) Extension Information		-
Information Directory Messages Services Authentication Server Proxy Server Idle Idle Timer (seconds) Extension Information V Enable Extension Mobility Log Out Profile Use Current D Log in Time < None >		-
Information Directory Messages Services Authentication Server Proxy Server Idle Idle Timer (seconds) Extension Information V Enable Extension Mobility Log Out Profile Use Current D		-
Information Directory Messages Services Authentication Server Proxy Server Idle Idle Timer (seconds) Extension Information Extension Mobility Log Out Profile Log in Time		-
Information Directory Messages Services Authentication Server Proxy Server Idle Idle Timer (seconds) Extension Information Extension Mobility Log Out Profile Log in Time < None > Log out Time < None > MLPP Information	evice Settings	-
Information Directory Messages Services Authentication Server Proxy Server Idle Idle Timer (seconds) Extension Information Extension Mobility Log Out Profile Log in Time		-





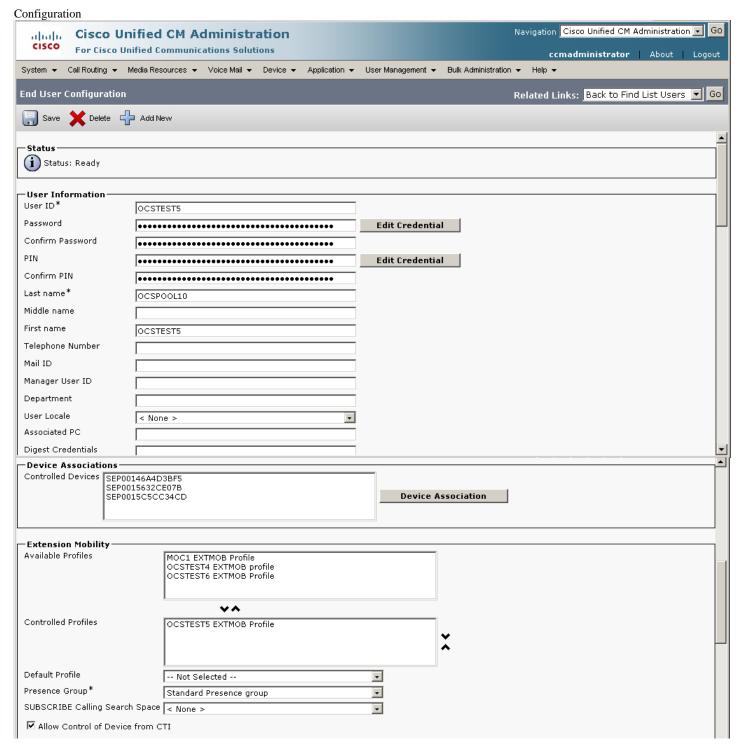




Forward No Coverage Exter	mal or			< None >	~
Forward on CTI Failure	or			< None >	~
Forward Unregistered Inter	nal or			< None >	~
Forward Unregistered Exter	nal or			< None >	~
No Answer Ring Duration (se	conds)				
Call Pickup Group	< None >		~		
MLPP Alternate Party Set Target (Destination)	ttings —			7	
MLPP Calling Search Space	a Nana		~		
MLPP No Answer Ring Duration	< None on (seconds)	>			
	` '				
Line Settings for All Dev	ices —				
Hold Reversion Ring Duration	n (seconds)			Setting the Hold Reversion Ring Duration to ze	ero will disable the feature
Hold Reversion Notification I (seconds)				Setting the Hold Reversion Notification Interva	al to zero will disable the
Line 1 on Device SEP001	featur B53B8B428	a			
Display (Internal Caller	OCS Test 1		Display tex	tt for a line appearance is intended for displaying	text such as a name
ID)	instead of a director	y number for internal cal		mber, the person receiving a call may not see the	
ASCII Display (Internal Caller ID)	ocs Test 1				
Line Text Label	OCS TEST 1				
ASCII Line Text Label	OCS TEST 1				
External Phone Number					
Mask					
Visual Message Waiting Indicator Policy*	Use System Policy		~		
Audible Message Waiting Indicator Policy*	Off		~		
Ring Setting (Phone Idle)*	Use System Default		Y		
Ring Setting (Phone Active)	Use System Default		➤ Applies to t	this line when any line on the phone has a call in p	progress.
Call Pickup Group Audio Alert Setting(Phone Idle)	Use System Default		v		
Call Pickup Group Audio Alert Setting(Phone Active)	Use System Default		~		
Recording Option*	Call Recording Disa	bled	~		
Recording Profile	< None >		~		
Monitoring Calling Search Space	< None >		<u> </u>		
Search Space					
Multiple Call/Call Waiting Note:The range to select the	Max Number of calls				
	Max Number of calls	4			



End User





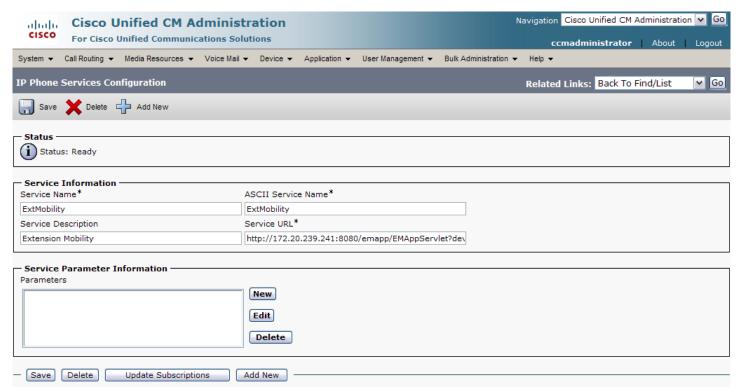
SUBSCRIBE Calling Search Space <	None >	^
Allow Control of Device from CTI		
		J
Directory Number Associations		1
Primary Extension 60005	v	
— Mobility Information ————		1
✓ Enable Mobility		
Enable Mobile Voice Access		
Maximum Wait Time for Desk Pickup*	10000	
Remote Destination Limit*	4	
Remote Destination Profiles		
Access Lists	View Details	
Access Lists		
	<u>View Details</u>	
CAPF Information		1
Associated CAPF Profiles		
	<u>View Details</u>	
		1
Permissions Information		ı
Groups	Add to User Group	
	Remove from User Group	
	View Details View Details	
Roles		
	View Details	
l.		



Licensing Capabilities Assignments

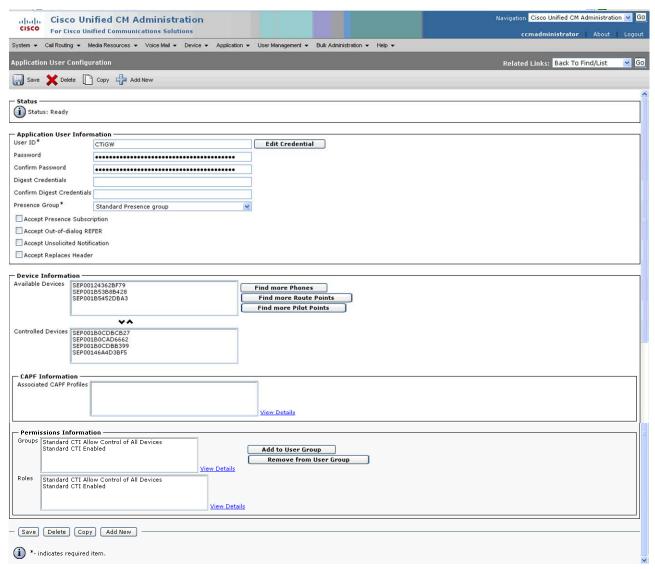


Phone Services

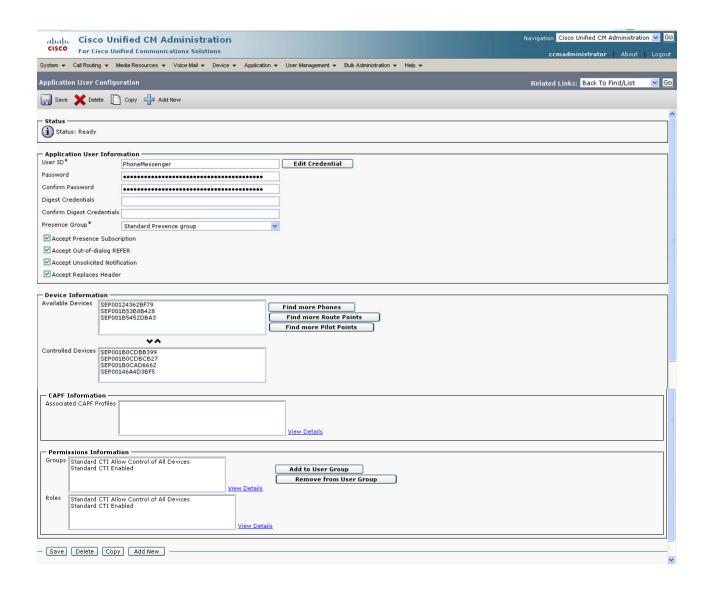




Application User Configuration

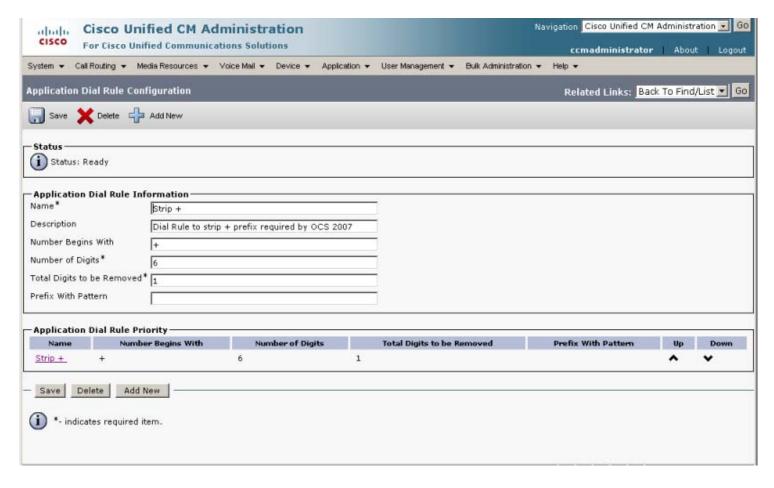






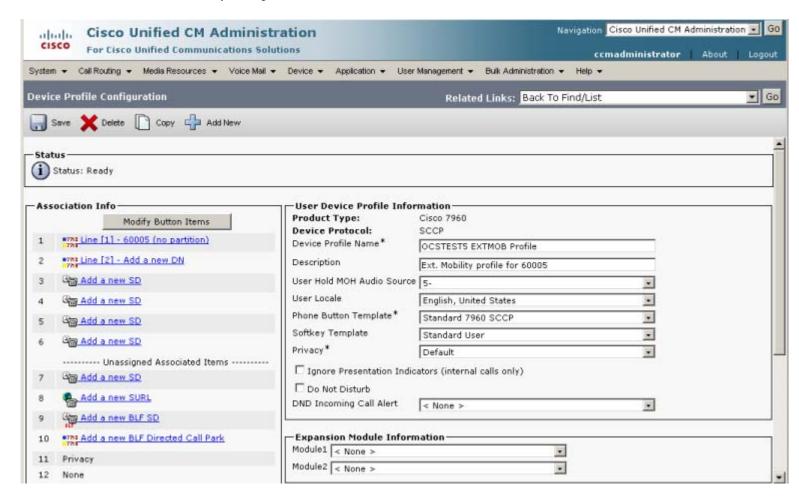


Application Dial Rule Configuration





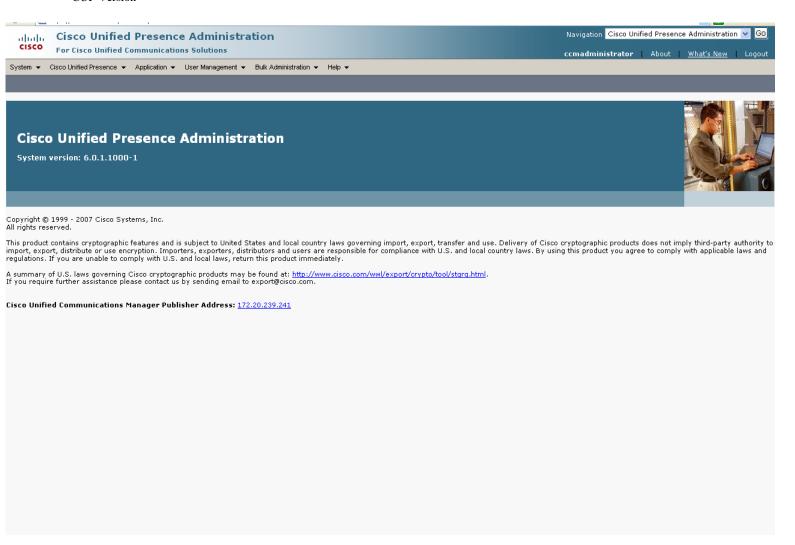
Device Profile (Extension Mobility) Configuration





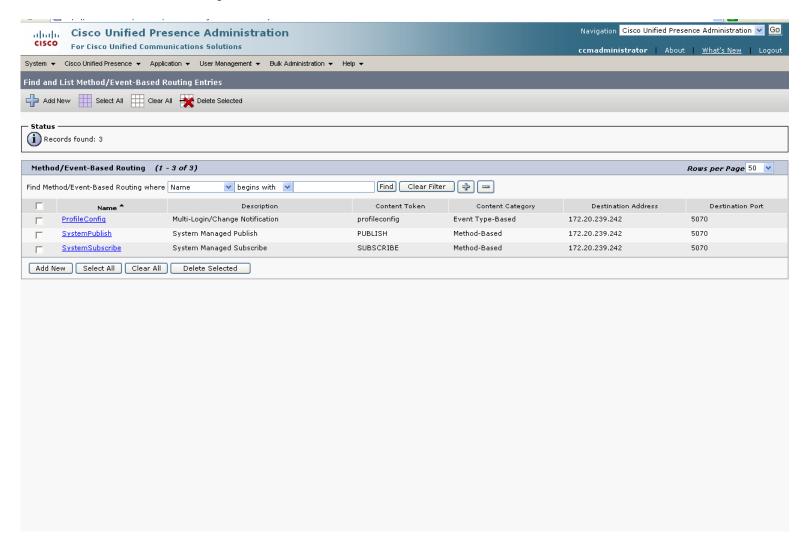
Configuring the Cisco Unified Presence server

CUP Version



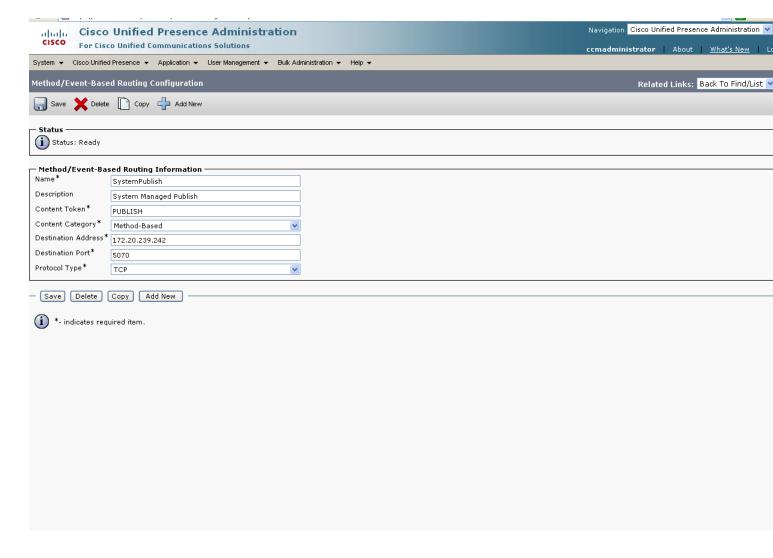


CUP Method / Event – Based Routing Entries



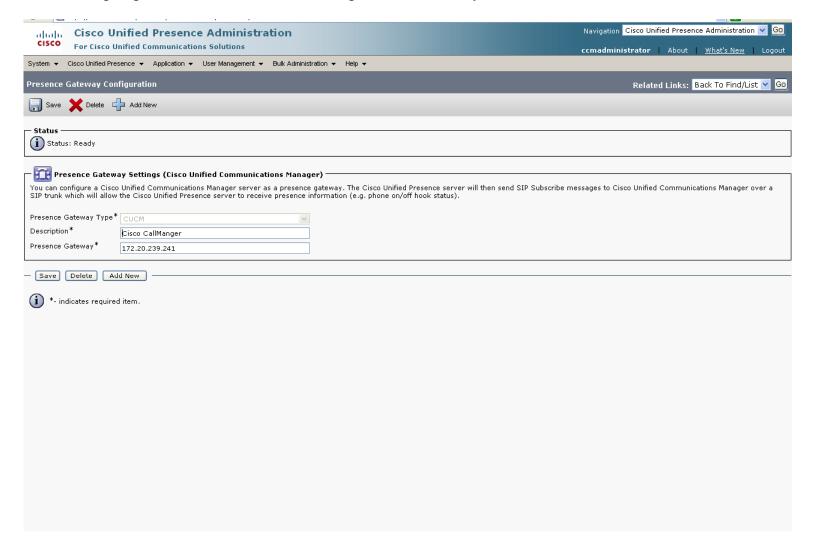


CUP Method / Event – Based Routing Configuration



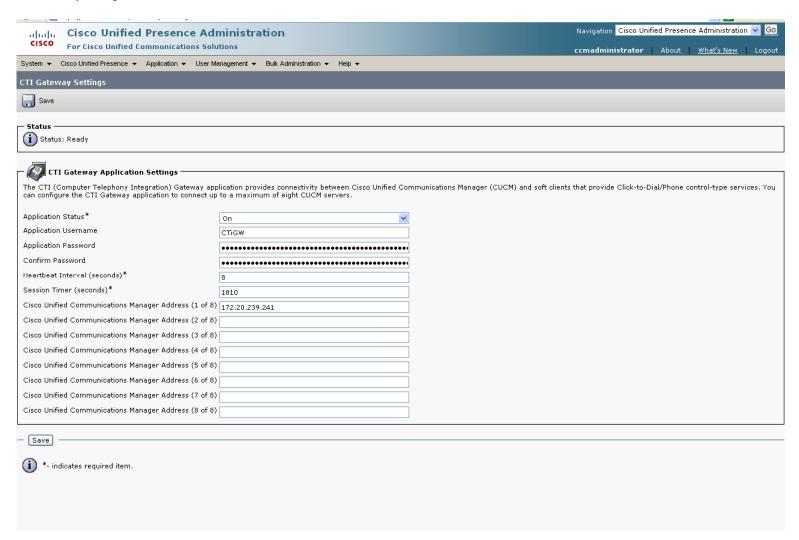


Configuring Cisco Unified Communication Manager Presence Gateway



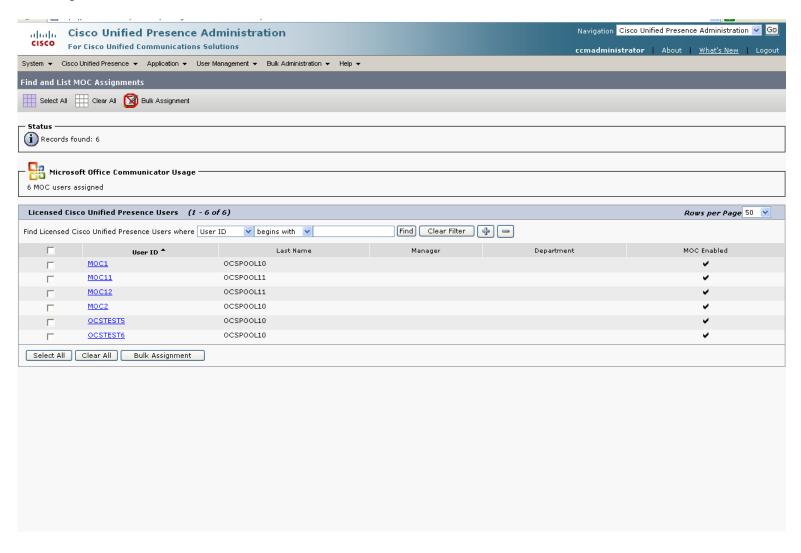


CTI Gateway Configuration



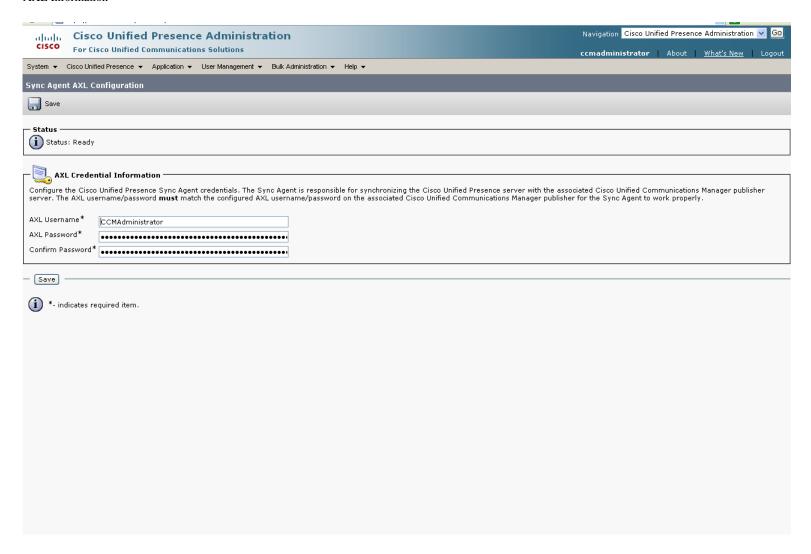


MOC Assignments



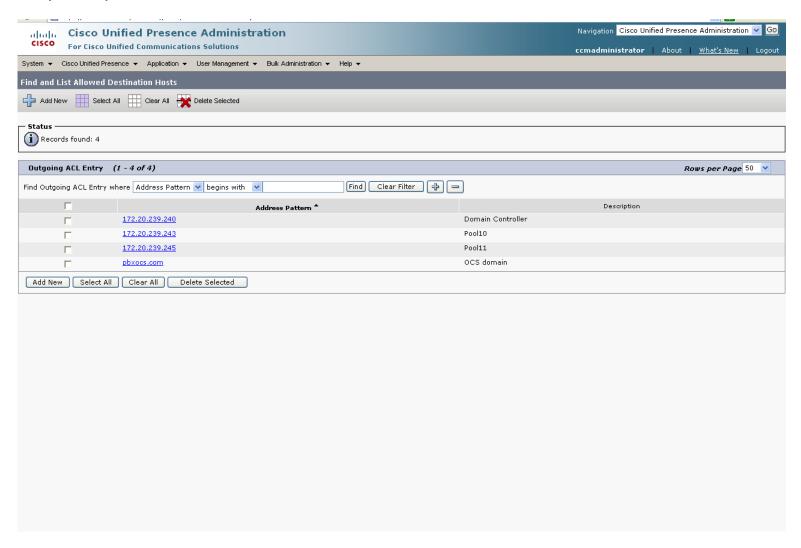


AXL Information



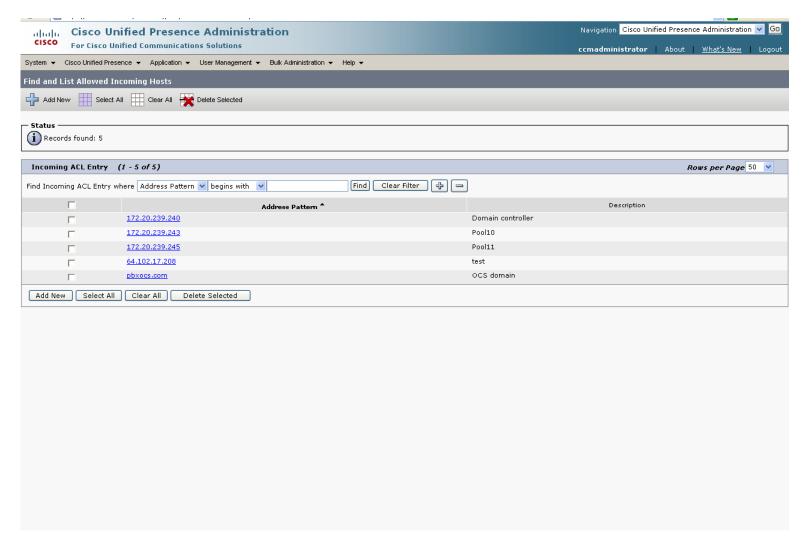


Privacy ACL Entry (Allowed Destination Host)



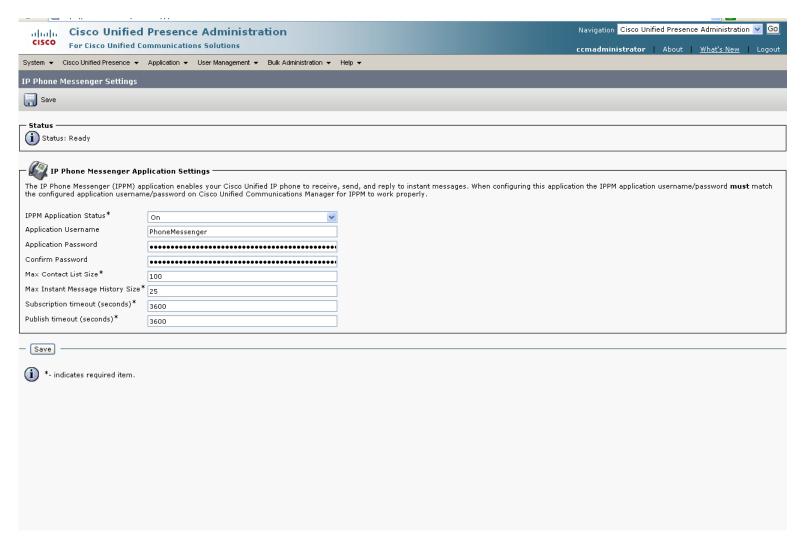


Proxy ACL Entry (Allowed Incoming Host)



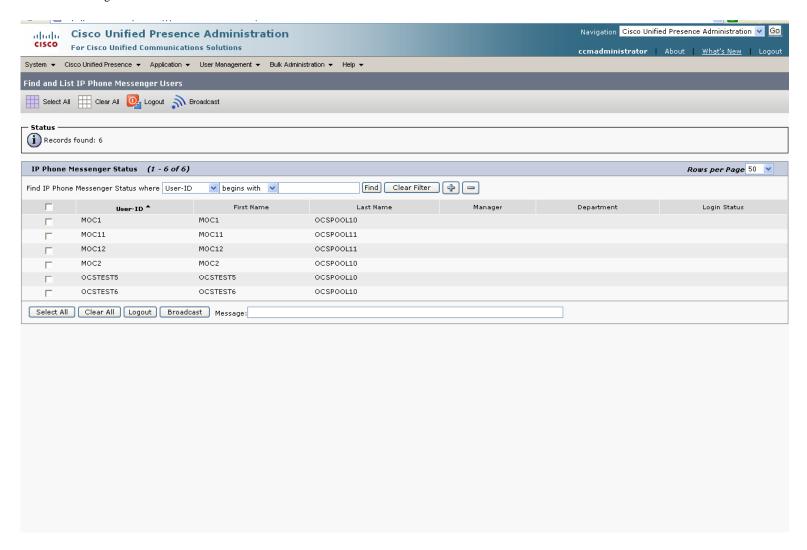


IP Phone Messenger Setting





IP Phone Messenger User





Acronyms

CCT A	
CSTA	Computer-Supported Telecommunications Applications
CUCM	Cisco Unified Communication Manager
CTI	Computer Telephony Interface
CUP	Cisco Unified Presence
DND	Do-Not-Disturb
DTMF	Dual Tone MultiFrequency
DTP	DeskTop Phone
GUI	Graphical User Interface
IETF	Internet Engineering Task Force
IM	Instant Messaging
IPPM	Internet Protocol Phone Messenger
MS OCS	Microsoft Office Communication Server
MCS	Multimedia Communication Server
MSN	Microsoft Network
MPOP	Multiple Point Of Presence
SCCP	Skinny Protocol
SIMPLE	SIP Instant Messaging and Presence Levering Extensions
SIP	Session Initiation Protocol
SNMP	Simple Network Management Protocol
TCP	Transmission Control Protocol
TLS	Transport Layer Security
XML	Extensible Markup Language
MOC	Microsoft Office Communicator
QoS	Quality of Service
GW	Gateway
S/W	Software
QBE	Quick Buffer Encoding, Protocol
DB	Database



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