Microsoft Lync 2010 using SIP via Cisco Unified Communications Manager- Session Manager Edition 8.5 to Cisco Unified Communications Manager 8.5 and Cisco Unified Border Element (Enterprise Edition) 1.4 on ASR to Service Provider

## September 28, 2011 - Initial Version

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## Introduction

- This application note describes the necessary steps and configurations for connectivity between Cisco Unified Communications Manager-Session Manager Edition (Cisco UCM-SME) 8.5(1) via Direct SIP to Microsoft Lync 2010 server using Microsoft Mediation Server, and via SIP connection to a Cisco Unified Communications Manager (Cisco UCM) 8.5(1), and SIP connection to simulated Service Provider (SP) using Cisco Unified Border Element (Cisco UBE) 1.4. The network topology diagram (Figure 1) shows the test setup for end-to-end interoperability between the different leaf nodes (Microsoft Lync 2010, Cisco UCM and Cisco UBE/SP) via the Cisco UCM-SME.
- Features tested are basic call, 3-way (ad-hoc) conference, call transfer (attended and unattended), call forward (all, busy and no answer), hold/resume, DTMF inter-working and voice mail. This test setup also includes a connection to a simulated service provider using SIP trunks. Cisco UBE is used as a session border controller (SBC), providing demarcation, security, and inter-working services between the customer's private network and the service provider's SIP network. Voice mail was tested for Cisco UCM users with mailboxes registered to Unity Connection via a Direct SIP trunk from Cisco UCM-SME. Fax could not be tested (see limitations section).
- During testing, a Cisco ASR 1002 router was used as Cisco UBE, however other Cisco voice gateways, such as the 3900 series or AS5400 XM can be used and the decision to choose what Cisco gateway model to use is left to the customer. The customer should choose a Cisco IOS gateway model based on the capabilities and the capacity that will be required based on the planned network deployment. Here is a list of Cisco IOS products capable of running Cisco UBE.

Cisco ASR 1000 Series Aggregation Services Router Cisco 3900 Series Integrated Services Routers Cisco 2900 Series Integrated Services Routers Cisco 3800 Series Integrated Services Routers Cisco 2800 Series Integrated Services Routers Cisco AS5400XM Universal Gateway Cisco AS5350XM Universal Gateway

- If additional guidance on the Cisco UBE is needed, please refer to the Cisco UBE section on the Cisco Interoperability Portal (<u>www.cisco.com/go/interoperability</u>).
- This configuration was tested to simulated service provider. Results may vary based on service provider being used.



**Network Topology** 



Figure 1. Basic Call Setup

Note: As of Cisco UCM-SME Rel. 8.5, for SIP trunk connection requiring Early Offer function, configuration is made under the SIP Profile configuration associated with the SIP trunk. Prior to Release 8.5, network administrators were forced to configure SIP trunks on Cisco UCM-SME to send early offer by using/allocating Media Termination Point. In Cisco UCM-SME Rel. 8.5, the Media Termination Point (MTP) checkbox under the SIP Trunk configuration page no longer needs to be checked to implement early offer function.



### Capabilities

- Voice calls including supplementary services can be successfully established between endpoints controlled by the Microsoft Lync 2010 and endpoints controlled by the Cisco UCM.
- Voice calls including supplementary services can be successfully established between endpoints controlled by the Microsoft Lync 2010 and the PSTN, using Cisco UBE as a session border controller.
- IOS MTPs and transcoders registered to the Cisco UCM-SME can be employed to offer G729 as originating codec option.

### Limitations

These are the known limitations, caveats, or integration issues.

- Microsoft Lync does not support sending or receiving calling and connected name in certain scenarios (like call forward and call-transfer). Cisco UCM sends its calling name and number to Microsoft Lync Mediation Server, but the Lync only displays the calling number and no name is displayed.
- Microsoft Lync 2010 does not provide music on hold (MoH) capability by default except on Microsoft Attendant Console. MoH needs to be enabled using CLI through the Lync Management Shell.
- Microsoft Lync 2010 displays presence information in the Enterprise Voice client only for other Enterprise voice users configured in the Active Directory and Enterprise voice enabled.
- For Microsoft Lync 2010, the Enterprise Voice client cannot be configured for Call Forward Busy. As an option the Enterprise Voice client allows the user to receive a notification of an incoming call during an active call and "redirect" the incoming call to a destination of the user's choice.
- Calling and connected number updates during call-forward and call-transfer scenarios are not fully supported due to SIP UPDATE messages not being interoperable between the systems. For e.g. when a Lync user transfers a PBX call to another PBX user, the local PBX phone will still show connected to the first Lync user.
- Cisco SIP Phones do not send out Comfort Noise payload 13 in the m line of the SDP to indicate support for Comfort Noise as per RFC 3389 and as a result Microsoft doesn't send out SID frames when call is muted on Microsoft side.
- Microsoft Lync 2010 sends its SIP URI @domain in the INVITE, while setting up a conference call, as a result the caller ID will not be displayed properly on the far end.
- When the Enterprise Voice client, initiates a conference call, the conference call does not end when the initiator hangs up, but only after all parties hang up. Additionally for the Enterprise Voice users on the conference call, the session is not dropped and they can rejoin the conference, unless they close the window pop-up for the call, referred to as the toast.
- The Media Bypass capability introduced in Microsoft Lync 2010 requires all media through a SIP trunk integration to originate on a single IP address. For this Microsoft requirement in a Lync to Cisco UCM inter-working, media termination point is required on the SIP trunk for Media Bypass to work.
- Media Bypass is a mandatory requirement if customers want to collocate the Mediation Server role with the Front-End server role. **Important:** According to the Microsoft Lync Planning Tool collocation should only be used if the IP-PBX and/or the voice gateways support Media Bypass and Enterprise voice is not considered mission critical to the organization.





- Media Bypass works as long as an MTP is required on the SIP trunk. The need for an MTP is due to the following:
  - 1. Lync supports Media Bypass with early offer, but does not support re-invite without SDP
  - 2. Lync doesn't support Media Bypass with delayed offer
  - 3. Because of #1, hold/resume, transfer, forward, etc won't work without an MTP.

RFC 3261 sections 13.2.1 and 14.1 make a strong case that Lync's behavior (#1 above) isn't compliant with MUST aspects of the SIP standard. Including the MTP enables standards-compliant interoperability in light of the Lync implementation.

- Microsoft Lync 2010 only supports TCP transport to carry SIP messages. If UDP is required CUBE can be used to
  perform the conversion.
- Microsoft Lync 2010 only supports G711 ulaw or alaw on the outside interface. If G729 is required CUBE or transcoder registered to SME can perform the transcoding function.
- Microsoft Lync 2010 does not support G711 Fax Passthrough.
- Fax T.38 to Service provider is not tested. Service Provider used for this test does not support Fax T.38 switchover.
- On Lync Mediation Server, RTCP is set to disabled, as RTCP is an end point specific configuration and not all Cisco phones support RTCP. Phones like 7970, 7962, and 9971 have this support and this can be enabled under Phone Configuration Product Specific Configuration Layout.

## **Features Supported**

- Basic calls
- Digits Translation
- Intra-site call conferencing
- Call Transfer-Attended and Unattended (See Limitations section for details)
- Hold and resume
- Call forward Unconditional, Busy and No reply (See Limitations section for details.)
- Simultaneous calls
- Inbound/Outbound Basic calls (G711 u-law and a-law) (RFC 3261)
- Call Forward (RFC 3261)
- Conference calls
- DTMF (RFC 2833)
- Options Testing
- Reliable 1XX Provisional Response or PRACK (RFC 3262)
- Early Media (RFC 3261)
- Call hold and resume using Offer/Answer Model (RFC 3264)
- ISDN Mapping

## **Features Not Supported and Not Tested**

- T.38 FAX Relay was not tested. The Service provider used for this test does not support T.38 FAX.
- Blind call transfers
- Comfort noise is not supported
- Decline a call (CUCM phones divert calls to voicemail, instead of declining the call)

### **System Components**

### Hardware Requirements

- Cisco MCS 7835 Unified Communications Manager
- Cisco MCS 7835 Session Manager Edition
- Cisco 3825 voice gateway
- Cisco ASR1K router
- Two Cisco Unified IP phone 7961 configured as SCCP phones
- One Cisco Unified IP phone 7960 configured as SIP phones
- Three DELL notebooks running LYNC clients

### Software Requirements

The following software is required:

- Cisco Unified Communications Manager Release 8.5
- Cisco UCM-Session Manager Edition Release 8.5
- Microsoft Lync Server 2010 Standard Edition, Windows Server 2008 R2 x64 Enterprise Edition OS
- Windows Active Directory/DNS/Cert Server, Windows Server 2008 R2 x64 Enterprise Edition OS
- Backend Database: Windows SQL Server 2008 Enterprise Edition, Windows Server 2008 x64 Enterprise Edition OS
- Microsoft Lync 2010 (build 4.0.7577.4)
- Cisco ASR1K rou ter Release 3.3.1.S

## **IMPORTANT:**

Microsoft Lync Server, Mediation Server and Lync Communicator all need to run through the Microsoft Update website to have the latest updates installed for this integration to work correctly.



## **System Configuration**

This section contains configuration menus and commands and describes configuration sequences and tasks. Configuring the Microsoft LYNC 2010 Server Standard Edition

The look and feel between Lync and the previous versions are different (refer to the captured screenshots) and tools like Lync planning tool, Topology builder, Lync Server Control Panel, Lync Management Shell are added. The main differences were seen during the deployment of the Lync environment itself and how its own components connected to each other. Those differences include, the use of 64-bit servers for each component (refer to Software Requirements section), the need for an interface module (automatically downloaded during installation) on the Front End Servers to enable communication with SQL 2008 (refer to the Microsoft deployment and installation guides for more information, links included below), and finally the configuration of the certificate authority server (refer to the Microsoft deployment and installation guides for more information guides for more information, links included below).

For Cisco documentation guides including release notes, compatibility matrix, deployment, installation guides etc, go to:

http://www.cisco.com/en/US/docs/voice ip comm/cucm/srnd/8x/uc8x.html

http://www.cisco.com/en/US/docs/voice\_ip\_comm/cucm/docguide/8\_5\_1/dg851.html

For Microsoft deployment and installation guides, go to: http://technet.microsoft.com/en-us/library/gg293124.aspx http://technet.microsoft.com/en-us/library/gg398616.aspx

Configuration Steps:

1. Domain Name System Configuration

2. Front End Server/Pool Configuration

3. Mediation Server Configuration

4. User Configuration

5. Microsoft Lync 2010 Configuration

Please refer to the Microsoft Lync Standard Edition Server deployment guide for setup details. Only interoperability related configurations are included in this document.

Domain Name System Configuration

Start > Administrative Tools > DNS



Forw ard Lookup Zone

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🗄 📴 _udp	LYNC2010CLIENT2	Host (A)	172.20.109.170	7/27/2011 4:00
	CUP-DUCATI	Host (A)	172.20.109.251	static
Foresconszones     MedServer34	CM-TELUGU	Host (A)	172.20.109.254	static
	UCCLIENT12	Host (A)	172.20.109.54	7/22/2011 3:00
Reverse Lookup Zones	Lab-PC-3	Host (A)	172.20.109.56	7/25/2011 3:00
109.20.172.in-addr.arpa	(same as parent folder)	Host (A)	172.20.117.120	8/19/2011 8:00
117.20.172.in-addr.arpa	lync2010ad-rtm	Host (A)	172.20.117.120	static
85.20.172.in-addr.arpa	LYNC2010MEDPRTM	Host (A)	172.20.117.130	8/19/2011 3:00
Conditional Forwarders	MedServer3	Host (A)	172.20.117.131	8/16/2011 5:00
🛙 🔟 Global Logs	MedServer4	Host (A)	172.20.117.132	4/11/2011 2:00
DNS Events	LYNC2010FE1-RTM	Host (A)	172.20.117.152	8/16/2011 3:00
	LYNC2010Client1	Host (A)	172.20.117.203	5/29/2011 7:00
	LYNC2010CLIENT3	Host (A)	172.20.201.169	8/21/2011 3:00
	LYNC2010CLIENT4	Host (A)	172.20.201.171	8/16/2011 2:00
	Ivncpc1-PC	Host (A)	172.20.8.141	8/17/2011 3:00
	Ivncpc2-PC	Host (A)	172.20.8.142	8/17/2011 3:00
	Ivncpc3-PC	Host (A)	172.20.8.143	8/18/2011 11:0
	CUBE	Host (A)	172.20.85.101	static
	CUCM-E×UM10	Host (A)	172.20.85.110	static
	CUCM1	Host (A)	172.20.85.110	static
		Host (A)	172.20.85.110	static
	(same as parent folder)	Start of Authority (SOA)	[562], lync2010ad-rtm.lync2010rtm.com., hostmaster.lync	static
	(same as parent folder)	Name Server (NS)	lync2010ad-rtm.lync2010rtm.com.	static
	4			

Host A records added for Lync Front End server, Active Directory/DNS and Mediation Server.



Reverse Lookup Zones Configuration

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LYNC2UIUAD-RIM	(same as parent folder)	Start of Authority (SOA)	[33], lync2010ad-rtm.lync2010rtm.com., hostmaster.lync2	static
🗄 🦰 Forward Lookup Zones	(same as parent folder)	Name Server (NS)	lync2010ad-rtm.lync2010rtm.com.	static
⊞	172.20.117.120	Pointer (PTR)	lync2010ad-rtm.lync2010rtm.com.	8/19/2011 5:00:
	172.20.117.203	Pointer (PTR)	lync2010client1.lync2010rtm.com.	5/29/2011 7:00
	172.20.117.152	Pointer (PTR)	lync2010fe1-rtm.lync2010rtm.com.	static
E C _tcp	172.20.117.130	Pointer (PTR)	lync2010medprtm.lync2010rtm.com.	static
E	172.20.117.131	Pointer (PTR)	medserver3.lync2010rtm.com.	static
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117.20.172.in-addr.arpa				
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Conditional Forwarders				
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PTR Records added for the Lync server and Active Directory.



SRV Records Configuration



SRV Record added for SIP domain service offered by the Lync pool (for Automatic Client Sign-in).

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E Forward Lookup Zones	sip	Service Location (SRV)	[0][0][5068] lync2010fe1-rtm.lync2010rtm.com.	static
		Service Location (SRV)	[0][100][3268] lync2010ad-rtm.lync2010rtm.com.	8/19/2011 8:00:00
I msdcs	ldap	Service Location (SRV)	[0][100][389] lync2010ad-rtm.lync2010rtm.com.	8/19/2011 8:00:00
	kpasswd	Service Location (SRV) Service Location (SRV)	[0][100][464] lync2010ad-rtm.lync2010rtm.com.	8/19/2011 8:00:00
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Lync Server 2010 Site Topology Overview





SME must be added in Topology Builder as a PSTN gateway. PSTN gateway is the generic term to refer to IP-PBX and other gateway devices. The topology must be published to Central Management store. After the PSTN gateway (that is, SME) is added to the topology, it appears in the Lync Server Control Panel. The first thing to do is to add a trunk to the IP-PBX (that is, SME)

Lync Server 2010, Topology Builder			_ <b>□</b> ×
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	PSTN Gateway Gateway FQDN or IP Address: Listening port: SIP Transport Protocol: Alternate media IP address: Mediation Server	172.20.8.41 5060 TCP <i>Nat configured</i> LYNC2010FE1-RTM.lync2010rtm.com (LyncRTM)	Actions 172.20.8.41 Edit Properties Topology View View Edite Help

Listening port of the SME is left to default 5060.



Mediation Server Overview



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Destruction of the second	Enterprise Voice:	Enabled		
🗉 🐻 CUCM-ExUM10.lync2010rtm.com				
172.20.201.254	Associations			
	SQL store:	LYNC2010FE1-RTM.lync2010rtm.com\rtc		
	File store:	\\LYNC2010FE1-RTM.lync2010rtm.com\share		
	Archiving Server:	Not associated		
172.20.8.41	Monitoring Server:	Not associated		
	Edge pool (for media):	Not associated		
Monitoring Servers     Archiving Servers	Note: To view the federation	n route, use the site property page.	1	
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LYNC Front End server configuration with FQDN

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LYNC2010FE1-RTM.lync2010rtm.com	TLS listening port:	5067			Edit Properties
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			172.20.201.254	LyncRTM	<table-cell> Help</table-cell>
Mediation pools			172.20.85.110	LyncRTM	
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EUCM2.lync2010rtm.com					
I72.20.85.101					
<b>172.20.8.41</b>					
I72.20.201.169					
Monitoring Servers					
Archiving Servers					
Edge pools     Trusted application servers					

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Lync Server 2010     LyncRTM     Standard Edition Front End Servers     LVNC2010FE1-RTM.lync2010rtm.com     Director pools     Director pools     A/V Conferencing pools     SQL stores     Mediation pools     Mediation pools	PSTN Gateway Gateway FQDN or IP Address: Listening port: SIP Transport Protocol: Alternate media IP address:	172.20.8.41 5060 TCP Not configured	Actions 172.20.8.41 Edit Properties Topology View View Delete Help
<ul> <li>■ LVNC2010FE1-RTNLlync2010rtm.com</li> <li>■ MedServer3.lync2010rtm.com</li> <li>■ PSTN gateways</li> <li>■ CUCME-XUM10.lync2010rtm.com</li> <li>■ 172.20.01.254</li> <li>■ 172.20.01.254</li> <li>■ CUCME.lync2010rtm.com</li> <li>■ T22.20.8.411</li> <li>■ I72.20.20.1169</li> <li>■ Monitoring Servers</li> <li>■ Edge pools</li> <li>■ Trusted application servers</li> <li>■ Branch sites</li> </ul>	Mediation Server	LYNC2010FE1-RTM.lync2010rtm.com (LyncRTM)	
	]		

PSTN Gateway associated with the Mediation Pool



Active Directory User Configuration

Create users from Front End Server by accessing the Active Directory Users and Computers window

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Active Directory Users and Comput	Name	Туре 👻	Description
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Iync2010rtm.com	👗 Client01 RTM	User	
🕀 🚞 Builtin	👢 Client03 RTM	User	
🕀 🧮 Computers	🚨 Client05 RTM	User	
🛨 🚞 Domain Controllers	🔏 Guest	User	Built-in account for guest
🕀 🚞 ForeignSecurityPrincipals	Lync02 RTM	User	
🕀 🚞 Managed Service Accounts	Lync04 RTM	User	
Users Delegate Control		User	
Find	Rcc2 Pool2	User	
	Rcc3 Pool1	User	
New	Computer	User	
All Tasks	Contact	User	
	Group	User	
View	InetOrgPerson	User	
Refresh	msImaging-PSPs	Security Group	Members of this group ca
Export List	MSMQ Queue Alias	Security Group	
	Printer	Security Group	
Properties	User	Security Group	
Help	Shared Folder	Security Group	
	SServerAdministrator	Security Group	
	CSUserAdministrator	Security Group	
	& CSViewOnlyAdministrator	Security Group	
	CSVoiceAdministrator	Security Group	
	Strater Admins	Security Group	
	& Enterprise Read-only Dom		
	& RTCComponentUniversalS		
	& RTCHSUniversalServices	Security Group	
	RTCProxyUniversalServices	Security Group	
	RTCSBAUniversalServices	Security Group	
	& RTCUniversalConfigReplic	Security Group	
	& RTCUniversalGlobalReadO	Security Group	
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/	RTCUniversalServerRead	Security Group	
	RTCUniversalUserAdmins	Security Group	
	RTCUniversalUserReadOn	Security Group	
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	Read-only Domain Control		
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	Sert Publishers	Security Group	
	& Denied RODC Password R	Security Group	Members in this group can



#### 🔚 Active Directory Users and Computers File Action View Help Ŷ X 2 32 🗙 🗐 🐟 2 📊 🤽 🛅 **T** Active Directory Users and Comput Name Туре Description + 📋 Saved Queries Client01 RTM User 🖃 🏥 lync2010rtm.com 2 Client03 RTM User 🕀 🚞 Builtin 2 Client05 RTM User 🕀 🧮 Computers 퉒 Guest Built-in account for guest ... User 🛨 💼 Domain Controllers Å Lync02 RTM User 🕀 🧮 ForeignSecurityPrincipals 📕 Lync04 RTM SRcc1 Pool2 User + 🚞 Managed Service Accounts User 📋 Users 🧘 Rcc2 Pool2 User 🤱 Rcc3 Pool1 User Å User1 Pool1 User 2 User2 Pool1 User Lync PC1 User Lync PC2 User 🎎 CSAdministrator Security Group ... Members of this group ca... 🞎 CSArchivingAdministrator Security Group ... Members of this group ca... 🎎 CSHelpDesk Members of this group ca... Security Group ... 🎎 CSLocationAdministrator Security Group ... Members of this group ha... & CSResponseGroupAdminis... Members of this group ca... Security Group ... 🞎 CSServerAdministrator Security Group ... Members of this group ca... 🎎 CSUserAdministrator Security Group ... Members of this group ca... Security Group ... Members of this group ca... 🞎 CSViewOnlyAdministrator & CSVoiceAdministrator Security Group ... Members of this group ca...

Security Group ... 🎎 Enterprise Read-only Dom... Security Group ... Members of this group are... & RTCComponentUniversalS... Security Group ... Members can be used as ...

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Designated administrators...

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Security Group ... Members can be used as ...

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🍇 Enterprise Admins

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& RTCHSUniversalServices

📴 Active Directory Users and Computers	Lync PC1 Properties ? 🗙	1
File       Action       View       Help <ul> <li>Active Directory Users and Comput</li> <li>Saved Queries</li> <li>Saved Queries</li> <li>Builtin</li> <li>Computers</li> <li>Domain Controllers</li> <li>ForeignSecurityPrincipals</li> <li>Managed Service Accounts</li> <li>Users</li> </ul> <li>Rcc2 Pi</li> <ul> <li>Users</li> <li>Lync 04</li> <li>Lync 04</li> <li>Client0</li> <li>Lync 04</li> <li>Rcc1 Pi</li> <li>Users</li> <li>Lync 04</li> <li>Rcc2 Pi</li> <li>Client0</li> <li>Score 10</li> <li>Score 21</li> <li>User 21</li> <li>Score 24</li> <li>Sc</li></ul>	Dial-in       Environment       Sessions         Remote control       Remote Desktop Services Profile         Personal Virtual Desktop       COM+       UNIX Attributes         General       Address       Account       Profile       Telephones       Organization       Member Of         R       User logon name:       Image:	
الله RTCUN کی RTCUN کی RTCUN کی RTCUN		9

SME



🧧 Active Directory Users and Computers							
File Action View Help							
A      A							
🔁 Active Directory Users and Comput	Name	Туре 🔻	Description				
⊞ ≦ Saved Queries     ■	👰 LAB-PC-3	Computer					
🖃 🚔 lync2010rtm.com	EVIC2010CLIENT1	Computer					
E Builtin	EVIC2010CLIENT2	Computer					
Computers  Computers  Controllers	EVIC2010CLIENT3	Computer					
	EVIC2010CLIENT4	Computer					
	ELYNC2010FE1-RTM	Computer					
Users	LYNC2010MEDPRTM	Computer					
	ELYNCPC1-PC	Computer					
		Computer					
	EVALUATION CONTRACT	Computer Computer					
		Computer					
		Computer					
	1 OCCERENT 2	Compacer					
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Computers on the Activ Directory running LYNC clients



## Lync Server 2010 Configuration

Lync Server configuration can be done in a couple of ways—through the Microsoft Lync Server Control Panel or through Lync Server Management Shell. For the purposes of configuring a direct SIP connection with CUCM, we will illustrate the configuration by using the Lync Server Control Panel and Topology Builder.

### User Configuration from Control Panel

Start > All Programs > Microsoft Lync Server 2010 > Lync Server Control Panel To add users got to Home > Enable users for Lync Server and then go to Users > Add and then do a find as show n below.



A	Lync Server 2010	Administ	rator   Sig 4.0.
		er Search	4.04
	Home		
33	Users		
M	Topology	Edit Lync Server User - Lync PC1	
Ģ	IM and Presence	Commit 🗙 Cancel	?
e	Voice Routing	Display name:	Â
ζ	Voice Features	Lync PC1	
23	Response Groups	✓ Enabled for Lync Server SIP address:*	
Þ	Conferencing	sip:LyncPC1 @ lync2010rtm.com V	
7	Clients	Registrar pool:	
1	External User	LYNC2010FE1-RTM.lync2010rtm.com	
3	Access	Ielephony:       Enterprise Voice	
	Monitoring and Archiving	Enterprise Voice	
A	Security	tel:+14089333473	
		Dial plan policy:	
Q	Network  Configuration	SME_DialPlan View	
		Voice policy:	
		SME_Policy View	
		Conferencing policy:	
		<automatic> View</automatic>	
		Client version policy:	
		<automatic> View</automatic>	
		PIN policy:	
		<automatic> View</automatic>	
		External access policy:	
		<automatic> View</automatic>	
		Archiving policy:	
		<automatic> View</automatic>	

ì	Home					
3	Users	• Search CLDAP search	:h			
đ	Topology	Search for users by typing a u	ser's name or clickina Ac	ld filter 🗙	Find 📑 📑 🕂 + Add filter	
Ð	IM and Presence					
3	Voice Routing					Search results: 1
6	Voice Features	🕮 Enable users 🔻 🧪 Edi				
2	Response Groups	Display name	Enabled	SIP address	Registrar pool	Telephony
2	Conferencing	Client01 RTM	✓ ✓	sip:Client01@lync2010rtm.com	LYNC2010FE1-RTM.lync2010rtm.com	Enterprise Voice
		Client03 RTM		sip:Client03@lync2010rtm.com	LYNC2010FE1-RTM.lync2010rtm.com	Enterprise Voice
	Clients	Client05 RTM	1	sip:Client05@lync2010rtm.com	LYNC2010FE1-RTM.lync2010rtm.com	Enterprise Voice
5	External User Access	Lync PC1	1	sip:LyncPC1@lync2010rtm.com	LYNC2010FE1-RTM.lync2010rtm.com	Enterprise Voice
	Monitoring	Lync PC2	<b>v</b>	sip:LyncPC2@lync2010rtm.com	LYNC2010FE1-RTM.lync2010rtm.com	Enterprise Voice
	and Archiving	Lync02 RTM	√ √	sip:Lync02@lync2010rtm.com	LYNC2010FE1-RTM.lync2010rtm.com	Enterprise Voice
n,	Security	Lync04 RTM	√	sip:Lync04@lync2010rtm.com	LYNC2010FE1-RTM.lync2010rtm.com	Enterprise Voice
_	Network	Rcc1 Pool2	$\checkmark$	sip:Rcc1P2@lync2010rtm.com	LYNC2010FE1-RTM.lync2010rtm.com	Remote call contr
Q.	Configuration	Rcc2 Pool2	√	sip:Rcc2P2@lync2010rtm.com	LYNC2010FE1-RTM.lync2010rtm.com	Remote call contr
		Rcc3 Pool1	√	sip:Rcc3p1@lync2010rtm.com	LYNC2010FE1-RTM.lync2010rtm.com	Remote call contr
		User1 Pool1	√	sip:User1P1@lync2010rtm.com	LYNC2010FE1-RTM.lync2010rtm.com	Remote call contr
		User2 Pool1	7	sip:User2P1@lync2010rtm.com	LYNC2010FE1-RTM.lync2010rtm.com	Remote call contr

In Lync Server, best practice is to use a dial plan that is based on the E.164 standard. This allows easier routing and troubleshooting as well as a scalable model for growth. It is best practices to represent numbers in an E.164 format (External DIDs as well as internal extensions).

## Voice Routing Configuration

2	Lync Server 2010	1					Administrator   Si
Q2.	Lyne berverzoit				_		4.0.
	Home	Dial Plan Voi	ice Policy Route	PSTN Usage Trun	k Configuration	Test Voice Routing	
33	Users	Create voice	routing test case inf	ormation			
24	Topology						
Ģ	IM and Presence	Edit Dial Pl	lan - SME_DialPlan	1			
ঙ	Voice Routing	🗸 ок	X Cancel				0
6	Voice Features	Scope: Us	ser				
22	Response Groups	Name:*					
Ð	Conferencing	SME_Dial					
~	Clients	Simple na					
		Descriptio					
路	External User Access	Use to Di					
	Monitoring	Dial-in co	nferencing region:				
	and Archiving					?	
	Security	External a	access prefix:				
Q	Network Configuration					?	
	Computation	Associate	d Normalization Ru	les			
		🕈 New	Copy 📋 Pag	ste 🎦 Select 🦯	Show details	Remove 👚 🦊	
			rmalization rule	State	Pattern to ma		
			igit-SME	Committed		+1408933\$1	
		NAM	NP	Committed	^(1\d{10})\$	+\$1	
		Dialed nu	mber to test:			Go	
						00	

Lync Server normalizes all outbound calls as E.164. This allows uniform routing that scales globally across the Lync Server deployment. Phone numbers are normalized to E.164 by normalization rules in this case the rule 4dig-ext. Normalization rules are added in the Dial Plantab.

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Lync Server 2010	)		Adr	ministrator   Si 4.0.
		oute PSTN Usage Trunk Configuration	Test Voice Routing	4.0.
			-	;
Users	Create voice routing test ca	ise information		
Topology				
IM and Presence	-	Policy		
Voice Routing	J OK X Cancel			0
Voice Features	Scope: User			
Response Groups	SME_Policy		7	
Conferencing	Description:			
Clients	SME			
External User				
	Enable call forw	arding	✓ Enable team call	
			Enable PSTN reroute	
Configuration	Associated PSTN Usage	5		
	🗣 New 🔚 Select	🧪 Show details Remove  🛉 🐥		
	PSTN usage record	Associated routes		
	Long Distance	SME Route ^(\+1[0-9]{10})\$ LocalRoute ^(\+1[0-9]{10})\$		
	Translated number to te	est:	Go	
	HomeUsersTopologyIM and PresenceVoice RoutingVoice FeaturesResponse GroupsConferencingClientsExternal User AccessMonitoring and ArchivingSecurityNetwork	Home Users Topology IM and Presence Voice Routing Voice Features Response Groups Clients External User Access Monitoring and Archiving Security Network Configuration Clients Configuration Clients Clients Clients Clients Configuration Clients Configuration Clients Clients Clients Clients Clients Clients Clients Clients Clients Clients Clients Clients Clients Clients Clients Clients Clients Configuration Clients Configuration Clients Configuration Clients Configuration Clients Clients Configuration Clients Configuration Clients Configuration Clients Configuration Clients Configuration Clients Configuration Clients Configuration Clients Configuration Clients Configuration Clients Configuration Clients Configuration Clients Configuration Clients Configuration Clients Clients Configuration Clients Clients Configuration Clients Clie	Home       Dial Plan       Voice Policy       Route       PSTN Usage       Trunk Configuration         Users       Create voice routing test case information       Create voice routing test case information         Topology       IM and Presence       Edit Voice Policy - SME_Policy         Voice Routing       Voice Features       Scope: User         Name:*       Scope: User       Name:*         Response Groups       SME_Policy       Description:         Clients       SME       Calling Features         External User       Calling Features       Calling Features         Access       Image and Archiving       Enable call forwarding         Monitoring       Enable call park       Enable call park         Network       Enable simultaneous ringing of phones         Associated PSTN Usages       Show details Remove Image PSTN Usage         Image record       Associated routes         SME Route ^(+1[0-9](10))S       SME Route ^(+1[0-9](10))S	Home       Dial Plan       Voice Policy       Route       PSTN Usage       Trunk Configuration       Test Voice Routing         Users       Create voice routing test case information             Topology       IM and Presence               Voice Routing       Voice Policy - SME_Policy

PSTN usage is associated on the Voice Policy. Calling features are selected in Voice policy tab. New user policy is created to dial to the SME.

8	Lync Server 201	Adi	ministrator   Sign out
æ.	Lync Server 201	0	4.0.7577.0
	Home	Dial Plan Voice Policy Route PSTN Usage Trunk Configuration Test Voice Routing	
33	Users	Create voice routing test case information	*
M	Topology		
Ģ	IM and Presence	Edit Voice Route - SME Route	
ę	Voice Routing	V OK Cancel	•
C	Voice Features	Name:*	Â
22	Response Groups	SME Route	
Ð	Conferencing	Description: SME Route	
7	Clients	Build a Pattern to Match	
諧	External User Access	Add the starting digits that you want this route to handle, or create the expression manually by clicking Edit.	
	Monitoring and Archiving	Starting digits for numbers that you want to allow:       Type a valid number and then click Add.   Add	
<b>₽</b>	Security Network Configuration	+1[0-9](10) Exceptions Remove	
		Match this pattern:*  ^(\+1[0-9](10))\$ Edit Reset ?	
		Suppress caller ID Alternate caller ID:	
		Associated gateways:	
		PstnGateway:172.20.8.41 Add Remove	

Route to SME is associated with the PSTN gateway (SME in our case) here.

After the trunk is configured, routes can be configured to route CUCM extensions to the trunk to SME. If PSTN connectivity is configured through SME, calls to PSTN from Lync 2010 can be routed to SME through the trunk.

33 14 17	Home Users Topology
33 14 17	Users
N P	
Ģ	Topology
	IM and Presence
Ç	Voice Routing
S	Voice Features
23	Response Groups
Ð	Conferencing
	Clients
1	External User
Ľ	Access
	Monitoring and Archiving
	Security
_	Network
P P	Configuration

Lync 2010 Server Management Shell Commands

### Lync Server/Client Address Book Updating

With the default server/client settings, the Address Book is not updated right away. To ensure that the Address Book is updated with the latest users added to the Active Directory and their configurations, force the update on the server side. Then force the Lync 2010 Client to pull down the latest files to update its local GalContacts.db file.

On Lync Server 2010, enter the following command in the Lync Server Management Shell:

### Update-CsAddressBook

This triggers the Lync Server to synchronize current Active Directory information in the SQL database into the downloadable client and device address book files. Wait 5 minutes for this process to complete.

On Lync Client 2010, execute the following command from the Windows Command Prompt run as an administrator:

### reg add HKLM\Software\Policies\Microsoft\Communicator /v GalDownloadInitialDelay /t REG\_DWORD /d 0 /f

Setting this value to 0 will force Lync to immediately download the address book instead of randomly selecting a time to check the server.

On Lync Client 2010, if the **GalContacts.db** and **GalContacts.db.idx** files already exist, delete them from the user's profile directory (directory location may vary depending on your Client OS). Make sure you exit and restart the Lync Client, after log in you should see a new set of files downloaded, and you should see the latest updated users appear during a search for contacts.

Lync 2010 Server draining mode Stop-CsW indows Service -Graceful rtcmedsrv

## Some Lync2010 useful commands

Get-CsTrunkConfiguration Set-CsTrunkConfiguration Get-CsMediaConfiguration Set-CsMediaConfiguration

PS C:\Users\administrator.OCS2010> Get-CsTnunkConfiguration

Identity: GlobalOutboundTranslationRulesList: {}SipResponseCodeTranslationRulesList: {}Description:ConcentratedTopology: TrueEnableBypass: FalseEnableMobileTrunkSupport: FalseEnableReferSupport: True

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EnableSessionTimer	: False
EnableSignalBoost	: False
MaxEarlyDialogs	:20
RemovePlus FromUri	: False
RTCPActiveCalls	: True
RTCPCallsOnHold	: True
SRTPMode	: Required
EnablePIDFLOSupport	: False

PS C:\Users\administrator.OCS2010> Get-CsMediaConfiguration

Identity : Global EnableQoS : False EncryptionLevel : RequireEncryption EnableSiren : False MaxVideoRateAllowed : VGA600K Identity : Site:lab EnableQoS : False EncryptionLevel : RequireEncryption EnableSiren : False MaxVideoRateAllowed : VGA 600K

Lync2010 - enable music on hold: set-csclientpolicy -EnableClientMusicOnHold \$TRUE

## Microsoft LYNC 2010 Enterprise Voice Client Configuration

Navigation: Choose Tools  $\rightarrow$  Options and enter the sign-in information.

L Microsoft Lync	
Lync <sup>~</sup> 2010	© -
Sign-in address: lyncpc1@lync2010rtm.com	
Sign in as: 🔎 Available 👻	
B3.Office	
Copyright © Microsoft. All rights reserved.	
Lync - Options	
------------------------------	--
General	My account
Personal	Sign-in address: lyncpc1@lync2010rtm.com Advanced
Audio Device Video Device	Automatically start Lync when I log on to Windows
Video Device	Show Lync in foreground when it starts
	Personal information manager
	Microsoft Exchange or Microsoft Outlook
	✓ Update my presence based on my calendar information
	$\checkmark$ Show meeting subject and location to contacts in my Workgroup privacy relationship
	Display my Out of Office information to contacts in my Friends and Family, Workgroup, and Colleagues privacy relationships
	✓ Save instant message conversations in my email Conversation History folder
	✓ Save call logs in my email Conversation History folder
	$\boxed{\checkmark}$ Save my Lync contacts in my personal contacts folder on the Exchange server
	Location
	Share my location information with other programs I use
	Display photo
	Show photos of contacts
	Clear this to turn off photos everywhere in Lync.
	Activity Feed
	Show all my updates in Activity Feed
	To show only your current personal and out-of-office notes, clear this check box.
	OK Cancel Help

Click Advanced button to select the Advanced Connection Settings.

Select the method you want to use to co	onfigure your connection settings.	Advanced
Automatic configuration		
Manual configuration		
Internal server name or IP address:	lync2010/e1-tm lync2010/tm.com	
External server name or IP address:	hmc2010fe1-tm hmc2010tm.com	
Connect using () TCP () TL	C	
connecting () les (6) le		
OK	Cancel Help	rkgroup privacy relationship
	Save my Lync contacts in my personal contacts ation	
LOC		and Lower
22.5	Share my location information with other progra	ms i use
	Share my location information with other progra play photo	ms i use
Disp		ns i use
Disg [2]	play photo	
Disp (2)	play photo Show photos of contacts	
Disp (V) Act	play photo Show photos of contacts Clear this to turn off photos everywhere in Lynd	

If there are DNS entries for this Microsoft Lync, automatic configuration can be used if not select manual configuration.

After signing add contacts



#### Personal Options and Audio Settings

	×
General	My account
Personal	Sign-in address: lyncpc1@lync2010rtm.com Advanced
Status	✓ Automatically start Lync when I log on to Windows
My Picture	
Phones	Show Lync in foreground when it starts
Alerts Ringtones and Sounds	Personal information manager
Audio Device	Microsoft Exchange or Microsoft Outlook
Video Device	Update my presence based on my calendar information
Call Forwarding	Show meeting subject and location to contacts in my Workgroup privacy relationship
File Saving	Display my Out of Office information to contacts in my Friends and Family, Workgroup, and Colleagues privacy relationships
	Save instant message conversations in my email Conversation History folder
	✓ Save call logs in my email Conversation History folder
	✓ Save my Lync contacts in my personal contacts folder on the Exchange server
	Location
	Share my location information with other programs I use
	Display photo
	Show photos of contacts
	Clear this to turn off photos everywhere in Lync.
	Activity Feed
	Show all my updates in Activity Feed
	To show only your current personal and out-of-office notes, dear this check box.
	OK Cancel Help
Lync - Options	
	udio device
Personal Se Audio Device	lect the device you want to use for audio calls:  PC Mic and Speakers
Video Device	
- Haco beriec	Your computer's default setup
	Your computer's default setup
	C Your computer's default setup
	Your computer's default setup
	Your computer's default setup
	Your computer's default setup         ustomize your device         Image: Speakers (High Definition Audio Device)
	Your computer's default setup
	Your computer's default setup         ustomize your device         Image: Speakers (High Definition Audio Device)
	Your computer's default setup         ustomize your device         Image: Speaker (High Definition Audio Device)         Image: Speaker (High Definition Audio Device)         Image: Microphone (High Definition Audio Device)         Image: Ringer (High Definition Audio Device)
	Your computer's default setup         ustomize your device         Image: Speaker (High Definition Audio Device)         Image: Speaker (High Device)
	Your computer's default setup         ustomize your device         Image: Speaker (High Definition Audio Device)         Image: Speaker (High Definition Audio Device)         Image: Microphone (High Definition Audio Device)         Image: Ringer (High Definition Audio Device)
	Your computer's default setup         ustomize your device         Image: Speaker (High Definition Audio Device)         Image: Speaker (High Definition Audio Device)         Image: Microphone (High Definition Audio Device)         Image: Ringer (High Definition Audio Device)
Cu	Your computer's default setup         ustomize your device         Image: Speakers (High Definition Audio Device)         Image: Microphone         Microphone         Microphone         Image: Microphone         Image: Speakers (High Definition Audio Device)
Gu	Your computer's default setup         Image: speaker setup
Cu -Se	Your computer's default setup         ustomize your device         Image: Speakers (High Definition Audio Device)         Image: Microphone         Microphone         Microphone         Image: Microphone         Image: Speakers (High Definition Audio Device)
Cu -Se	Your computer's default setup   speaker   Speakers   Speakers (High Definition Audio Device)   Microphone   Microphone (High Definition Audio Device)   Microphone   Ringer   Speakers (High Definition Audio Device)   Condary ringer   Also ring:
Se	Your computer's default setup   speaker   Speakers   Speakers (High Definition Audio Device)   Microphone   Microphone (High Definition Audio Device)   Microphone   Ringer   Speakers (High Definition Audio Device)   Condary ringer   Also ring:

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_YNC Dialpad	1			
🚺 Microsoft Lyr	ic			
Bus	c PC1	•		© •
2	(A)		." "	
	1	<b>2</b> ABC	3 DEF	
	<b>4</b> GHI	5 JKL	6 MNO	
	7 PQRS	8 TUV	9 wxyz	
	*	0 +	#	
	REDIAL	<u> </u>	CALL	
	0000 0000 0000	PIN 🕊 C	heck	
G • & • C	all forwarding i	is off		



Call Forwarding Configurations



All call forward settings are selected in this tab. You can turn on/off the call forwarding settings and also select for phones to simultaneously ring.

#### Cisco Unified Communications Manager- Session Manager Edition Configurations

UC deployments using Unified CM Session Manager Edition are a variation on the Multi-site Distributed Call Processing deployment model and are typically used where large numbers of UC end systems need to be interconnected via a single UC system - i.e. The Unified CM Session Manager. A deployment using Cisco Unified CM Session Manager Edition is essentially a Unified CM cluster with trunk interfaces only (although IP endpoints are also allowed if required). It allows aggregation of multiple Unified Communications systems, referred to as leaf systems. UC SME is deployed to create and manager centralized dialplan, provide centralized PSTN access, aggregate PBX trunks, interconnect and interoperate across different protocols, lo ad balance inbound and outbound calls.

Note: Cisco Session Manager Edition is set to manage dialplan as a best practice. The Cisco Unified Border Element – Enterprise edition passes all the digits over to the Session Manager Edition and the Session Manager routes the calls to the leaf nodes i.e., Cisco Unified Communications Manager and Microsoft LYNC 2010 Server.

#### Cisco Unified CM Administration For Cisco Unified Communications Solutions Navigation Cisco Unified CM admin Search Documentation System + Call Routing + Media Resources + Advanced Features + Device + Application + User Management + Bulk Administration + Help + Search Documentation Cisco Unified CM Administration System + Call Routing + Media Resources + Advanced Features + Device + Application + User Management + Bulk Administration + Help + Search Documentation Cisco Unified CM Administration System version: 8.5.1.12900-7 System version: 8.5.1.12900-7 Licensing Mannings: System to complice for more details. VMware Installation: 2 vCPU Intel(R) Xeon(R) CPU E5504 @ 2.00GHz, disk 1: 200Gbytes, 5120Mbytes RAM Last Successful Logon: Sep 20, 2011 12:44:11 PM Copyright © 1999 - 2011 Cisco Systems, Inc. Il rights reserved. This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply morp, distributor or use encryption. Inporters, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with user and local country laws, return this product immediately.

#### Cisco Unified Communications Manager- Session Manager Edition - Software release

A summary of U.S. laws governing Cisco cryptographic products may be found at our Export Compliance Product Report web site.

For information about Cisco Unified Communications Manager please visit our Unified Communications System Documentation web site.

For Cisco Technical Support please visit our Technical Support web site.

Cisco Unified Communications Manager-Session Manager Edition-Region Configurations

61660	Unified CM Administ					Nav	vigation C
For Cisco	o Unified Communications Solu	tions				admin	Search
System 👻 Call Routing 🔹	<ul> <li>Media Resources    Advanced Fe</li> </ul>	eatures 👻 Device 👻	Application 👻 User Manage	ment 👻 Bulk Admin	istration 🔻 Help 👻		
Region Configuration	1					F	Related Li
Save 🗙 Delete	🎦 Reset 🖉 Apply Config 🚽	Add New					
– Region Information	ı ————						
Name* G711-CUCM							
– Region Relationshi	ps						
	Region		Audio Bit Rate		Max Video Call Bit Rate (Includes A	udio)	
	Default		ps (G.722, G.711)		384		
	G711-CUCM		ps (G.722, G.711)		384		
	g729	8	kbps (G.729)		384		
NOTE: Regions(s) not		Use System De	fault	Use System De	fault		
- Houny Relationship	Regions		Max Audio Bit	Rate	Max Video Call Bit Rate (I	ncludes Audio	)
Default	<b>.</b>		Keep Current Setting	~	• Keep Current Setting		
G711-CUCM g729					O Use System Default		
g/25					None		
					kbps		
- Save Delete (		New					

Region configurations are used to determine the codecs used by the endpoint within the region and across the region.



Cisco Unified Communications Manager - Session Manager Edition - Device Pools

ahah. C	isco Unified CM Ad	ministration			Navigation C	sco Unified CM Administration 😪
	or Cisco Unified Communica				admin Search	Documentation   About   Log
System 👻 Call	Routing 👻 Media Resources 👻	Advanced Features - Device -	✓ Application   User Management	Bulk Administration 👻 Help 👻		
Find and List	Device Pools					
Add New	Select All E Clear All	Delete Selected				
- Status i 3 records	found					
Device Pool	(1 - 3 of 3)					Rows per Page 50
Find Device Po	ol where Device Pool Name	~	begins with 💌	Find Clear Filter	• -	
Γ	Name 📥		Cisco Unified CM Group	Region	Date/Time	Group Copy
	Default	<u>Default</u>		Default	CMLocal	ß
Γ	G729-DevicePool	Default		<u>q729</u>	CMLocal	ß
	Internal-DP	Default		G711-CUCM	CMLocal	ß
Add New	Select All Clear All	Delete Selected				

Cisco Unified Communications Manager - Session Manager Edition - Device Pool Configurations G711

alialia Cisco Unified	d CM Adm	inistration				Nav
CISCO For Cisco Unified C	Communicatio	ns Solutions				admin
System - Call Routing - Media Re	esources 👻 Ad	vanced Features 👻 Device 👻 Ap	pplication 👻 I	Jser Management 👻	Bulk Administration 👻	Help 👻
Device Pool Configuration						я
🔲 Save 🗙 Delete 📄 Copy	Reset	🥢 Apply Config 📫 Add New				
- Status						
i Status: Ready						
<ul> <li>Device Pool Information</li> <li>Device Pool: Internal-DP (7 me</li> </ul>	embers**)					
— Device Pool Settings — Device Pool Name*						
	_ *	Internal-DP				
Cisco Unified Communications Ma		Default		*		
Calling Search Space for Auto-reg	gistration	< None >		~		
Adjunct CSS		< None >		*		
Reverted Call Focus Priority		Default		*		
Local Route Group		< None >		~		
Intercompany Media Services Enr	olled Group	< None >		~		
<ul> <li>Roaming Sensitive Settings - Date/Time Group*</li> </ul>						
Region*	CMLocal		~			
-	G711-CUCM		~			
Media Resource Group List	Internal-MRGI		~			
Location	Hub_None		~			
Network Locale	< None >		*			
SRST Reference*	Disable		~			
Connection Monitor Duration***						
Single Button Barge*	Default		*			
Join Across Lines*	Default		*			
Physical Location	< None >		*			
Device Mobility Group	< None >		*			
<ul> <li>Device Mobility Related Infor Device Mobility Calling Search Sp</li> </ul>						
AAR Calling Search Space			~			
AAK Calling Search Space	< None >		*			

Region is associated with a device pool which is assigned to the endpoint or a trunk.

Cisco Unified Communications Manager - Session Manager Edition - Device Pool Configurations G711

Device Pool Configuration				Related I
🗐 Save 🗶 Delete 🕞 Copy 👇 R	eset 🧷 Apply Config 🕂 Add N	lew		
	lone >	<b>v</b>		
Geolocation Configuration         Seolocation       < None >         Seolocation Filter       < None >	<b>v</b>			
Call Routing Information				
<ul> <li>Incoming Calling Party Settings — If the administrator sets the prefix to E field is empty in which case there is no</li> </ul>		g will use prefix at the next level setti	ng (DevicePool/Service Parameter) Default Prefix Settings	). Otherwise, the value configure
Number Type	Prefix	Strip Digits	berduit Frenk bettings	Calling Search Space
National Number	Default	Strip Digits	< None >	
International Number				
	Default		< None >	<b>v</b>
Unknown Number	Default		< None >	×
Subscriber Number	Default		< None >	~
- Incoming Called Party Settings		g will use prefix at the next level setti	ng (DevicePool/Service Parameter) Default Prefix Settings	). Otherwise, the value configure
Number Type	Prefix	Strip Digits		Calling Search Space
National Number	Default	0	< None >	*
International Number	Default	0	< None >	<b>v</b>
Unknown Number	Default	0	< None >	<b>v</b>
Subscriber Number	Default	0	< None >	~
- Connected Party Settings Connected Party Transformation CSS <	None >	V		

Cisco Unified Communications Manager - Session Manager Edition - Device Pool Configurations-G729

Cisco Unified							Nav
For Cisco Unified	Communicatio	ons Solutions					admin
System	esources 🔻 Ad	vanced Features - Device -	Application -	User Management	■ Bulk Administration     ■	Help 🔻	
Device Pool Configuration							F
Save 🗶 Delete 🗋 Copy	r 🎦 Reset	🧷 Apply Config 🕂 Add Nev	N				
Device Pool Settings							
	- *	G729-DevicePool					
Cisco Unified Communications Ma	-	Default		*			
Calling Search Space for Auto-re	gistration	Internal-CSS		*			
Adjunct CSS		< None >		*			
Reverted Call Focus Priority		Default		*			
Local Route Group		< None >		~			
Intercompany Media Services En	rolled Group	< None >		~			
Barania Caraitina Cattinaa							
Roaming Sensitive Settings     Date/Time Group*	CMLocal		~				
Region*	g729		~				
Media Resource Group List	< None >		~				
Location	Hub_None		~				
Network Locale	< None >		~				
SRST Reference*	Disable		~				
Connection Monitor Duration***							
Single Button Barge*	Default		~				
Join Across Lines*	Default		*				
Physical Location	< None >		*				
Device Mobility Group	< None >		~				
Device Mobility Related Info	****						
Device Mobility Calling Search Sp			1				
AAR Calling Search Space	< None >						
AAR Group	< None >						
Calling Party Transformation CS							
Called Party Transformation CSS							
- Geolocation Configuration -							

Device Pool Configuration	Reset 🥒 Apply Config ᆛ Add !	New /		Related L
Geolocation Filter < None >				
- Call Routing Information				
— Incoming Calling Party Settings —				
If the administrator sets the prefix to I field is empty in which case there is no		g will use prefix at the next level settin	g (DevicePool/Service Parameter	). Otherwise, the value configured
	,	Clear Prefix Settings	Default Prefix Settings	
Numbe <del>r</del> Type	Prefix	Strip Digits		Calling Search Space
National Number	Default		< None >	~
International Number	Default		< None >	~
Unknown Number	Default		< None >	~
Subscriber Number	Default		< None >	~
Incoming Called Party Settings — If the administrator sets the prefix to I field is empty in which case there is no		g will use prefix at the next level settin Clear Prefix Settings	g (DevicePool/Service Parameter Default Prefix Settings	). Otherwise, the value configured
Number Type	Prefix	Strip Digits		Calling Search Space
National Number	Default	0	< None >	~
International Number	Default	0	< None >	~
Unknown Number	Default	0	< None >	~
Subscriber Number	Default	0	< None >	~
Connected Party Settings	: None >	v		
- Save Delete Copy Reset	Apply Config Add New -			
*- indicates required item				

Cisco Unified Communications Manager - Session manager Edition - Media Termination Points Configurations

ahaha		Unified CM Admi				Navigation Cisco Unifi	ed CM
cisco	For Cisco	o Unified Communication	s Solutions			admin Search Documer	ntation
System 👻	Call Routing	<ul> <li>Media Resources - Adva</li> </ul>	inced Features 👻 Device 👻	Application 👻 User Manageme	ent 👻 Bulk Administration 👻 Help 👻		
ind and	List Media 1	Fermination Points					
🔓 Add N	lew Sel	lect All 🔛 Clear All 💥 [	Delete Selected 🏻 🎦 Reset Sele	cted 🧷 Apply Config to Sele	ected		
• Status -	cords found						
Media T	ermination	Point (1 - 3 of 3)					Row:
Find Media	a Termination	Point where Name	✓ begins with ✓	Find Clea	ar Filter 🔂 🚍		
Γ		Name 🗖	Description	Device Pool	Status	IP Address	
	MTP HDV2	G729-Soft		Internal-DP	Registered with 172.20.8.41	172.20.8.58	Q
	MTP HDV2	IOS-MTP-SJC		Internal-DP	Registered with 172.20.8.41	172.20.8.58	Q
	MTP	MTP_2	MTP_SME851	Internal-DP	Registered with 172.20.8.41	172.20.8.41	N
Add Ne	w Select	All Clear All Dele	te Selected Reset Sel	ected Apply Config	to Selected		



diala		ed CM Administration	Nav
cisco	For Cisco Unified	Communications Solutions	admin
System 👻 C	Call Routing 👻 Media F	Resources 💌 Advanced Features 👻 Device 💌 Application 👻 User Management 👻 Bulk Administration 👻 Help 💌	,
Media Term	nination Point Con	figuration	R
Save (	🎦 Reset 🧷 App	nly Config	
Status —	: Ready		
Registration IP Address IPv6 Addres Media Termi Host Server	ss ination Point Type* * ination Point Name* *	Registered with Cisco Unified Communications Manager 172.20.8.41 172.20.8.41 0000:0000:0000:0000:0000:0000:0000 Cisco Media Termination Point Software 172.20.8.41	
	Reset Apply Co		



Cisco Unified Communications Manager - Session manager Edition - Transcoder Configuration

alialia Cisco Unified CM Administration	Navigation Cisco Unified CM Adminis
CISCO For Cisco Unified Communications Solutions	admin Search Documentation Abc
System 🔻 Call Routing 👻 Media Resources 👻 Advanced Features 💌 Device 👻 Application 👻 User Management 👻 Bulk Administration 👻 Help 💌	
Find and List Transcoders	
🕂 Add New 🏢 Select All 🏢 Clear All 💥 Delete Selected   🍄 Reset Selected 🥒 Apply Config to Selected	
- Status 1 records found	
Transcoder (1 - 1 of 1)	Rows per Pa
Find Transcoder where Name 💌 begins with 💌 🛛 Find Clear Filter 🕀 📼	
Name         Description         Device Pool         Status	IP Address
XCODE-SJC XCODE-SJC Default Registered with 172.20.8.41	172.20.8.58
Add New Select All Clear All Delete Selected Reset Selected Apply Config to Selected	
ahaha Cisco Unified CM Administration	Nav
CISCO For Cisco Unified Communications Solutions	admin
System 👻 Call Routing 👻 Media Resources 👻 Advanced Features 💌 Device 💌 Application 👻 User Management 💌 Bulk Administration 👻	✔ Help ▼
Transcoder Configuration	F
-	
🔚 Save 🗙 Delete 🗋 Copy 🎦 Reset 🧷 Apply Config 🕂 Add New	
Transcoder Information         Transcoder:       XCODE-SJC (XCODE-SJC)         Registration       Registered with Cisco Unified Communications Manager 172.20.8.41         IP Address       172.20.8.58         IPv6 Address       0000:0000:0000:0000:0000:0000	
Transcoder Info     Transcoder Type*     Cisco IOS Enhanced Media Termination Point	
Description XCODE-SJC	
Device Name* XCODE-SJC	
Device Pool* View Default View Details	
Common Device Configuration < None > View Details	
Special Load Information Leave blank to use default	
✓ Trusted Relay Point	
- Save Delete Copy Reset Apply Config Add New	
(i) *- indicates required item.	
-	

Cisco Unified Communications Manager - Session Manager Edition - Media Resource Groups configurations

cisco			dministration					Navig
		Unified Communio		Device -	Application -	lleer Management -	Rulk Administration -	admin
System 👻	Call Routing V	Media Resources 🗸	Advanced Features 🔻	Device •	Application •	User Management •	Bulk Administration 🔻	nep 🕈
Media Re	source Grou	p Configuration						Re
Save	X Delete	Copy 🕂 Add	New					
Status -								
UStatu	is: Ready							
	esource Gro							
Media Res	source Group:	SME-MRG (used by	5 devices)					
	esource Gro	up Information —		_				
Name*	SME-MRG							
Descriptio	in							
	for this Gro Media Resource	**						
Available	Media Resourc	CFB_2 (CFB)						
Selected I	Media Resourc	es* [anni o (anni	**					
Selected I	Heala Resourc	IOS-MTP-SIC	(MTP)					
		MOH_2 (MOH MTP_2 (MTP) XCODE-SJC	)					
Use M	ulti-cast for MC	OH Audio (If at least	one multi-cast MOH re	source is a	available)			
- Save	Delete	opy Add New						
(i) *- ir	ndicates requir	ed item.						
<b>i</b> **Ir	ncludes Annun	ciators (ANN), Confe	rence Bridges (CFB), I	Media Tern	nination Points	(MTP), Music On Hold	Servers (MOH) and	Transcoders (XCODE)



#### MRG for LYNC MRGL

cisco			Administration					Navi
							_	admin
System -	Call Routing 🔻	Media Resources	Advanced Features 👻	Device 👻	Application -	User Management 👻	Bulk Administration 👻	Help 👻
Media Res	ource Group	Configuration						Re
Save	X Delete	🗋 Copy 🕂 A	dd New					
Status —	s: Ready							
	esource Grou ource Group: I	I <b>P Status</b> LYNC-MRG (used l	oy 1 devices)					
		p Information -						
Name*	LYNC-MRG							
Description	1							
	for this Grou							
Available №	1edia Resourc	es** ANN_2 CFB_2 G729-Soft IOS-MTP-S: MOH_2						
Selected M	ledia Resource	25* MTP_2 (MTF	• • • •					
Use Mu	lti-cast for MO	H Audio (If at leas	t one multi-cast MOH re	source is a	ivailable)			
- Save (	Delete Co	Add New	]					
ž	dicates require cludes Annunc		ference Bridges (CFB), I	Media Term	nination Points	(MTP), Music On Hold	Servers (MOH) and	Transcoders (XCODE)

Cisco Unified Communications Manager - Session Manager Edition - Media Resource Group Lists configurations

սիսիս			dministration						Nav	igation Cit
cisco	For Cisco U	Inified Communi	ications Solutions						admin	Search D
System 👻	Call Routing 👻	Media Resources 🔹	Advanced Features 👻	Device 👻	Application -	User Management 🔹	Bulk Administration	▼ Help ▼		
Find and	List Media Re	source Group Li	sts							
Hotel Add N	New Select	t All Clear All	Delete Selected							
— Status -										
(1) 2 red	cords found									
Media R	lesource Grou	ıp List <i>(1 - 2 ol</i>	f 2)							
Find Media	a Resource Grou	up List where Nam	e begins with 💌		Find	Clear Filter	4			
	Γ					Name 📥				
			Internal-MRGL						Б	
			LYNC-MRGL						Ъ	
Add Ne	w Select Al	I Clear All	Delete Selected							

LYNC will need a separate MRGL to force MTP based early offer from the SME



MRGL to be associated with SIP trunks except LYNC trunk

cisco				dministration cations Solutions							Navig admin
System 👻	Call Routing	Media Res	ources 👻	Advanced Features 👻	Device 👻	Application 👻	User Managem	nent 👻	Bulk Administration 👻	Help 👻	
Media Re	source Grou	ıp List Con	figuratio	on							Re
Save	X Delete	Сору	🕂 Ado	I New							
— Status - i Statu	us: Ready										
	Resource Group			used by 5 devices)							
	lesource Gro		ormatio	n ———							
Name* I	nternal-MRGL										
Available	<b>Resource Gro</b> Media Resour Media Resour	ce Groups		~~							
							^				
- Save	Delete	Copy Ad	d New								
<b>i</b> *- in	ndicates requi	red item.									



MRGL to be associated with SIP trunk connecting Microsoft LYNC 2010 server

ababi	Cisco Ur	nified CM Ad	dministration						Navi
cisco	For Cisco Ur	nified Communic	ations Solutions						admin
System 👻	Call Routing 👻 🛛	Media Resources 👻	Advanced Features 👻	Device 👻	Application 👻	User Managemer	t - Bulk Administration -	Help 👻	
Media Res	source Group I	List Configuratio	n						Re
Save	X Delete	🗋 Copy 🕂 Add	New						
- Status -	s: Ready								
	esource Group ource Group List	List Status	d by 1 devices)						
		List Information	n						
Name* LY	NC-MRGL								
– Madia Pr		s for this List —							
		Groups SME-MRG							
			~~						
Selected N	1edia Resource (	Groups LYNC-MR	3			*			
- Save	Delete Cop	y Add New							
<b>i</b> *- in	dicates required	item.							

Cisco Unified Communications Manager - Session Manager Edition - Route Patterns

cisco	Cisco Unified CM For Cisco Unified Comm				Navigation Cisco Unified C
System 👻	Call Routing 👻 Media Resource	es • Advanced Features • Device • Applicatio	n 👻 User Management 👻 Bulk Administration		
Find and I	List Route Patterns				
	ew Select All Clear	r All 🙀 Delete Selected			
Status –	cords found				
Route Pa	atterns (1 - 14 of 14)				Ro
Find Route	Patterns where Pattern	💌 begins with 💌	Find Clear Filter 🕂 🚍		
Г	Pattern *	Description	Partition	Route Filter	Associated Device
	<u>347X</u>		LYNC-PT		LYNC-Trunk
	40893334XX		LYNC-PT		CUCM-SIP-Trunk
	4089336XXX		CUCM-PT		CUCM-SIP-Trunk
	411		CUBE-PSTN-PT		PSTN-Access-RL
	<u>44XX</u>		CUCM-PT		CUCM-SIP-Trunk
	<u>61XX</u>		CUCM-PT		CUCM-SIP-Trunk
	<u>7.@</u>	FAX Route_pattern	CUBE-PSTN-PT		PSTN-Access-RL
	<u>9.011!</u>		CUBE-PSTN-PT		PSTN-Access-RL
	<u>9.011!#</u>		CUBE-PSTN-PT		PSTN-Access-RL
	<u>9.911</u>		CUBE-PSTN-PT		PSTN-Access-RL
	<u>9.@</u>		CUBE-PSTN-PT		PSTN-Access-RL
	91.40893334XX		LYNC-PT		LYNC-Trunk
	91.4089336XXX		CUCM-PT		CUCM-SIP-Trunk
	<u>911</u>		CUBE-PSTN-PT		PSTN-Access-RL
Add Nev	w Select All Clear All	Delete Selected			



Route Pattern to the Microsoft LYNC 2010 server

alada cisco											
System -	Call Routing - Me	dia Resources 👻 A	dvanced Features 👻	Device 👻	Application -	User Mana	gement 👻	Bulk Administration 👻	Help 👻	admin	
	oute Pattern Configuration										
Save	🔚 Save 🗶 Delete 📗 Copy 🖧 Add New										
i Status: Ready											
– Pattern	Definition ——										
Route Pat	tern*		40893334XX								
Route Par	tition		LYNC-PT			*					
Descriptio	n										
Numbering	g Plan		Not Selected			~					
Route Filte	er		< None >			~					
MLPP Prec	edence*		Default			*					
Resource	Priority Namespac	e Network Domain	< None >			~					
Route Cla	ss*		Default			*					
Gateway/I	Route List*		CUCM-SIP-Trunk			~	(Edit)				
Route Opt	ion		<ul> <li>Route this patter</li> </ul>	ern							
			O Block this patte		or	*					
Call Class	ification*	OffNet	<u> </u>		v						
	L Device Override		Dial Tone 🗌 Allow C	)verlan Sen		t Priority					
	e Forced Authoriza			Wenap Sen		it Fliolity					
	* .	0									
_	l										
Requir	e Client Matter Co	de									
– Calling I	Party Transform	ations									
	-	nal Phone Number	Mask								
	rty Transform Mas										
Prefix Dig	its (Outgoing Calls	) +1									
	e ID Presentation				~						
-	me Presentation*	Default			~						
-	rty Number Type*		oer		~						
-	rty Numbering Pla		-		~						
		Side Calificity									

Route Pattern Configuration	
🔚 Save 🗙 Delete 🗋 Copy 🕂 Add New	
Require Client Matter Code	
Calling Party Transformations	
Use Calling Party's External Phone Number Mask	
Calling Party Transform Mask	
Prefix Digits (Outgoing Calls) +1	
Calling Line ID Presentation* Default	
Calling Name Presentation* Default	
Calling Party Number Type* Cisco CallManager	
Calling Party Numbering Plan* Cisco CallManager	
Connected Party Transformations	
Connected Line ID Presentation* Default	
Connected Name Presentation* Default	
Called Party Transformations	
Called Party Transform Mask	
Prefix Digits (Outgoing Calls) +1	
Called Party Number Type* Cisco CallManager	
Called Party Numbering Plan* Cisco CallManager	
ISDN Network-Specific Facilities Information Element	
Network Service Protocol Not Selected	
Carrier Identification Code	
Network Service Service Parameter Name	Service Parameter Value
Not Selected 💌 < Not Exist >	
- Save Delete Copy Add New	
(i) *- indicates required item.	



Route Pattern to the Cisco Unified Communications Manager 8.5 (Leaf node)

Route Pattern Configuration							
🔚 Save 🗶 Delete 🗋 Copy 🕂 Add M	ew						
- Status							
i Status: Ready							
Pattern Definition							
Route Pattern*	4089336XXX						
Route Partition	CUCM-PT	*					
Description							
Numbering Plan	Not Selected	$\sim$					
Route Filter	< None >	~					
MLPP Precedence*	Default	*					
Resource Priority Namespace Network Domai	n < None >	*					
Route Class*	Default						
Gateway/Route List*	CUCM-SIP-Trunk		Edit)				
Route Option	<ul> <li>Route this pattern</li> </ul>						
	O Block this pattern No Error	*					
Call Classification* OffNet	~						
Allow Device Override 🗹 Provide Outside	Dial Tone Allow Overlap Sending Urg	ent Priority					
Require Forced Authorization Code							
Authorization Level*							
Require Client Matter Code							
– Calling Party Transformations ————							
Use Calling Party's External Phone Numbe	r Mask						
Calling Party Transform Mask							
Prefix Digits (Outgoing Calls)							
Calling Line ID Presentation* Default	~						
Calling Name Presentation* Default	~						
Calling Party Number Type* Cisco CallMar	ager 💌						
Calling Party Numbering Plan* Cisco CallMar	ager 💌						

Route Pattern Configuration									
Save 🗙 Delete 🗋 Co	<b>u</b>								
Require Forced Authorization	1 Code								
Authorization Level*									
Require Client Matter Code									
Calling Party Transformation	ons								
Use Calling Party's External	Phone Number Mask								
Calling Party Transform Mask									
Prefix Digits (Outgoing Calls)									
Calling Line ID Presentation*	Default 🗸								
Calling Name Presentation*	Default 🗸								
Calling Party Number Type*	Cisco CallManager 🗸 🗸								
Calling Party Numbering Plan*	Cisco CallManager 🗸								
Connected Party Transform									
Connected Line ID Presentation	* Default 🗸								
Connected Name Presentation*	Default								
Called Party Transformatio									
Discard Digits									
-	< None >								
Called Party Transform Mask									
Prefix Digits (Outgoing Calls)									
Called Party Number Type*	Cisco CallManager 🗸 🗸								
Called Party Numbering Plan*	Cisco CallManager 🛛 🗸								
- ISDN Network-Specific Fac									
	Not Selected 👻								
Carrier Identification Code									
Network Service	Service Parameter Name	Service Parameter Value							
Not Selected	< Not Exist >								



Route Pattern to route calls to the LYNC server

615.60		ninistration							Navigation C
For Cisco Unifie	d Communicati	ons Solutions						admir	n   Search
System - Call Routing - Media	a Resources 👻 A	dvanced Features 👻 Device 👻	Application -	User Mana	gement 👻	Bulk Administration 👻	Help 👻		
Route Pattern Configuration	n								Relat
🔚 Save 🗙 Delete 🗋 Ci	opy 🕂 Add Nev	w							
Status: Ready									
- Pattern Definition									
Route Pattern*		40893334XX							
Route Partition		LYNC-PT		~					
Description									
Numbering Plan		Not Selected		~					
Route Filter		< None >		~					
MLPP Precedence*		Default		~					
Resource Priority Namespace I	Network Domain	< None >		~					
Route Class*		Default		*					
Gateway/Route List*		LYNC-Trunk		*	(Edit)				
Route Option		<ul> <li>Route this pattern</li> </ul>							
		O Block this pattern No Erro	or	*					
Call Classification*	ffNet		*						
Allow Device Override 🗹 🛛	Provide Outside D	Dial Tone 🔲 Allow Overlap Ser	nding 🗌 Urge	ent Priority					
Require Forced Authorizatio	on Code								
Authorization Level*									
Require Client Matter Code									
— Calling Party Transformat	ions —								
Use Calling Party's Externa		Mask							
Calling Party Transform Mask									
Prefix Digits (Outgoing Calls)	+1								
Calling Line ID Presentation*	Default		*						
Calling Name Presentation*	Default		~						
Calling Party Number Type*	Cisco CallMana	ger	*						
Calling Party Numbering Plan*	Cisco CallMana	ger	~						



Require Client Matter Code

- Calling Party Transformati	ions —			
Use Calling Party's External	l Phone Number Mask			
Calling Party Transform Mask				
Prefix Digits (Outgoing Calls)	+1			
Calling Line ID Presentation*	Default	~		
Calling Name Presentation*	Default	*		
Calling Party Number Type*	Cisco CallManager	*		
Calling Party Numbering Plan*	Cisco CallManager	~		
- Connected Party Transform Connected Line ID Presentation		*		
Connected Name Presentation				
Connected Name Presentation	Default	*		
- Called Party Transformation				
Discard Digits	< None >	~		
Called Party Transform Mask				
Prefix Digits (Outgoing Calls)	+1	_		
Called Party Number Type*	Cisco CallManager	~		
Called Party Numbering Plan*	Cisco CallManager	*		
- ISDN Network-Specific Fac	cilities Information Element			
Network Service Protocol	Not Selected 💌	]		
Carrier Identification Code		]		
Network Service	Service Parameter Name		Service Parameter Value	
Not Selected	Not Exist >			
· Save Delete Copy	Add New			
(i) *- indicates required item	ı.			



Route Pattern to Service Provider

System - Call Routing - Media Resources - A	Advanced Features 👻 Device 👻 Application 👻 User Management 👻 Bulk Administration 👻 Help 👻						
Route Pattern Configuration	Rela						
Save 🗶 Delete 🗋 Copy 🕂 Add Ne	ew construction of the second s						
Status: Ready							
— Pattern Definition —————							
Route Pattern*	9.@						
Route Partition	CUBE-PSTN-PT						
Description							
Numbering Plan*	NANP						
Route Filter	< None >						
MLPP Precedence*	Default						
Resource Priority Namespace Network Domain	< None >						
Route Class*	Default						
Gateway/Route List*	PSTN-Access-RL V(Edit)						
Route Option	O Route this pattern						
	O Block this pattern No Error						
Call Classification* OffNet	·						
Allow Device Override 🗹 Provide Outside	Dial Tone 🗌 Allow Overlap Sending 🔲 Urgent Priority						
Require Forced Authorization Code							
Authorization Level*							
Require Client Matter Code							
— Calling Party Transformations ————							
Use Calling Party's External Phone Number	Mask						
Calling Party Transform Mask							
Prefix Digits (Outgoing Calls)							
Calling Line ID Presentation*	v						
Calling Name Presentation* Default							
Calling Party Number Type* Cisco CallMan	ager V						
Calling Party Numbering Plan* Cisco CallMan							

Route Pattern Configuration			R					
🔚 Save 💢 Delete 🗋 Copy 🕂 Add New								
Require Client Matter Code								
<ul> <li>Calling Party Transformations —</li> </ul>								
Use Calling Party's External Phone	Number Mede							
Calling Party Transform Mask	Number Mask							
Prefix Digits (Outgoing Calls)								
Calling Line ID Presentation* Defaul	t 🗸							
Calling Name Presentation* Default	t 💌							
Calling Party Number Type* Cisco (	CallManager 🛛 🗸							
Calling Party Numbering Plan* Cisco (	CallManager 🗸 🗸							
<ul> <li>Connected Party Transformations</li> </ul>	e							
Connected Line ID Presentation* Defa								
Connected Name Presentation*	ault							
- Called Party Transformations								
Discard Digits PreDot		Y						
Called Party Transform Mask								
Prefix Digits (Outgoing Calls)								
Called Party Number Type* Cisco C	CallManager 🗸 🗸							
Called Party Numbering Plan* Cisco C	CallManager 🔽							
	Toformation Flammat							
- ISDN Network-Specific Facilities								
Carrier Identification Code								
Network Service	Service Parameter Name	Service Parameter Value						
Not Selected	Not Exist >							
- Save Delete Copy Add Ne	ew							
A *- indicates required item.								



International Route Pattern

Cisco Unified								avigatio
System - Call Routing - Media Resi	ources 🔻 Advanc	ced Features - Device -	Application -	User Manageme	ent 👻 Bulk Administration 👻	Help 🔻	admin	Sea
Route Pattern Configuration								Re
🔚 Save 🗶 Delete 🗋 Copy	Add New							
- Status Status: Ready								
– Pattern Definition –								
Route Pattern*	9.01	1!						
Route Partition	CUE	BE-PSTN-PT		~				
Description								
Numbering Plan	N	ot Selected		~				
Route Filter	< N	one >		~				
MLPP Precedence*	Defa	ault		*				
Resource Priority Namespace Netwo	vork Domain < No	one >		*				
Route Class*	Defa	ault		*				
Gateway/Route List*	PST	N-Access-RL		V (Edi	it)			
Route Option	● F	Route this pattern						
	O 6	Block this pattern No Err	or	~				
Call Classification* OffNet	t		~					
Allow Device Override V Provi	ide Outside Dial T	one 🗌 Allow Overlap Se	nding 🗌 Urger	nt Priority				
Require Forced Authorization Co	ode							
Authorization Level*								
Require Client Matter Code								
– Calling Party Transformations	5							
Use Calling Party's External Pho	one Number Mask							
Calling Party Transform Mask								
Prefix Digits (Outgoing Calls)								
Calling Line ID Presentation*	efault		~					
Calling Name Presentation*	efault		*					
Calling Party Number Type* Cis	sco CallManager		~					
Calling Party Numbering Plan* Cis								

System -	Call Routing 👻	Media Res	ources 👻	Advanced Features	• • Device •	Application -	User Management 👻	Bulk Administration 👻	Help 🔻	
Route Pa	ttern Configur	ation								
Save	X Delete	Сору	🕂 Add I	lew						
📖 кеди	re Forced Author	rization U	oae							
Authoriza	ition Level*	0								
🗌 Requi	re Client Matter	Code								
— Calling	Party Transfo	rmations	.——							
Use C	alling Party's Ex	ternal Pho	one Numbe	r Mask						
Calling Pa	arty Transform N	Mask								
Prefix Dig	gits (Outgoing Ca	alls)								
Calling Li	ne ID Presentati	ion* De	fault			~				
Calling N	ame Presentatio	n* De	fault			~				
Calling Pa	arty Number Typ	e* Ci	sco CallMa	ager		~				
Calling Pa	arty Numbering I		sco CallMa			~				
-										-
- Connec	ted Party Tran	nsformat	ions ——							-
Connecte	d Line ID Preser	ntation*	Default			~				
Connecte	ed Name Present	ation*	Default			~				
Collect.	0									
Discard D	Party Transfor Digits		Dot			~				
	rty Transform M									
	gits (Outgoing Ca									
Called Pa	irty Number Typ	e* Cis	co CallMar	ager		~				
Called Pa	irty Numbering F	Plan* Cis	co CallMar	ager		~				
- ISDN N	etwork-Specifi	ic Facilit	ies Inforr	nation Element						
Network	Service Protocol	Not	Selected -			*				
Carrier I	dentification Cod	le								
Network	Service			Service Para	meter Name		Servic	e Parameter Value		
Not S	elected			Not Exist :	>					
										-
- Save	Delete Co	py Ad	d New 🛛 -							_



Cisco UCM-SME Route list for PSTN (CUBE) access

System 👻	Call Routing	<ul> <li>Media Resources</li> </ul>	Advanced Features 👻	Device 👻	Application $\bullet$	User Management 👻	Bulk Administration 👻	Help 🔻
Route List	t Configura	tion						Relat
Save	X Delete	Copy 🎦 Reset	🧷 Apply Config 🛛	Add Ne	w			
– Status –								
(i) Statu	is: Ready							
– Route Li	ist Informa	tion ———						
Registratio				isco Unified	Communicatio	ns Manager 172.20.	8.41	
IP Addres			172.20.8.41					
	e is trusted							
Name*			PSTN-Access-RL					
Descriptio	n							
Cisco Unif	ied Commur	ications Manager Group	Default			~		
🗹 Enable	this Route L	ist (change effective on	Save; no reset requ	uired)				
Run O	n All Active I	Unified CM Nodes						
		nined en nodes						
– Route Li	ist Member	Information ———						
Selected (		PSTN-Access						
					Y Add I	Route Group		
					^			
		~~						
Removed	Groups***	•••						
	0.0000							
	ist Details -							
REAL PSTN-Access								
- Save	Delete	Copy Reset Ap	oly Config Add	New				
(i) *- in	idicates requ	ired item.						
(i) **o	rdered by hi	ghest priority						
ĕ		ved from Route List whe	an you click Save					
•		Tea off Roate List with	in you choic ouve					

SME Route Group for PSTN Trunk Access

System - Call Routing -	Media Resources	<ul> <li>Advanced Featu</li> </ul>	res 👻 Device 👻	Application -	User Management 🔻	Bulk Administration 👻	Help 🔻	
Route Group Configur	ation							Related
Save 🗙 Delete	Add New							
- Status								
(1) Status: Ready								
– Route Group Inform	ation ———							
Route Group Name*	PSTN-Access			7				
Distribution Algorithm*	Circular		1	/				
– Route Group Membe	r Information —							
Find Devices to Add								
Device Name contains				Find				
Available Devices**	CUBE-Trunk							
	CODE-THUNK			-				
Port(s)	None Available			¥				
		)						
	Add to Rou	te Group						
Current Route Grou Selected Devices (orde								
Selected Devices (orde	ered by priority)	CUBE-Trunk (All I	Ports)					
					R	everse Order of S	elected Devices	)
					••			
Removed Devices***		**						
Removed Devices								
– Route Group Membe	rs —							
CUBE-Trunk								
- Save Delete A	Add New							



Cisco UCM-SME SIP Trunks:

/stem 🔻	System   Call Routing  Media Resources  Advanced Features  Device  Application  User Management  Buk Administration  Heip									
Find and List Trunks										
And New III Select All III Clear All 🐺 Delete Selected 👇 Reset Selected										
Add Ne	w Select All	Clear All 💥 Del	ete Selected 🏻 🍟 Reset Selec	ted						
Status —										
~	ords found									
<b>J</b> • • • • •										
Trunks	(1 - 8 of 8)									Rows per Page
						$\square$				nons per rage
nd Trunks	s where Device Name	<b>∨</b> be	gins with 💌	Find		-				
				or enter search te:	xt 💌					
	Name 📥	Description	Calling Search Space	Device Pool	Route Pattern	Partition	Route Group	Priority	Trunk Type	SIP Trunk Security Pr
- 🖑			Internal-CSS	Internal-DP			PSTN-Access	1	SIP Trunk	Non Secure SIP Trunk Pro
- 🛎			PSTN-Access	Internal-DP	91.4089336XXX	CUCM-PT			SIP Trunk	Non Secure SIP Trunk Pro
- 🛎	CUCM-SIP-Trunk		PSTN-Access	Internal-DP	4089336XXX	CUCM-PT			SIP Trunk	Non Secure SIP Trunk Pro
- 🎬	CUCM-SIP-Trunk		PSTN-Access	Internal-DP	<u>44XX</u>	CUCM-PT			SIP Trunk	Non Secure SIP Trunk Pro
- 🚆	CUCM-SIP-Trunk		PSTN-Access	Internal-DP	<u>61XX</u>	CUCM-PT			SIP Trunk	Non Secure SIP Trunk Pro
- 🚆	LYNC-Trunk		PSTN-Access	Internal-DP	<u>91.40893334XX</u>	LYNC-PT			SIP Trunk	Non Secure SIP Trunk Pro
- 🎬			PSTN-Access	Internal-DP	<u>347X</u>	LYNC-PT			SIP Trunk	Non Secure SIP Trunk Pro
- 📲			PSTN-Access	Internal-DP	40893334XX	LYNC-PT			SIP Trunk	Non Secure SIP Trunk Pro
Add New			Selected Reset Sele	cted						
Add New				cicu						



#### SME SIP trunk to Service Provider via ASR CUBE

aludu Cisco Unified CM Administration		Navigation							
CISCO For Cisco Unified Communications Solutions									
System   Call Routing   Media Resources   Advanced Features   Device	Application - User Management - Bulk Administration -	admin Sear							
		incp •							
Trunk Configuration		Related							
🔚 Save 🗙 Delete 🍟 Reset 🕂 Add New									
- Device Information									
Product:	SIP Trunk								
Device Protocol: Trunk Service Type	SIP None(Default)								
Device Name*	CUBE-Trunk								
Description									
Device Pool*	Internal-DP 🗸								
Common Device Configuration	< None >	1							
Call Classification*	Use System Default								
Media Resource Group List	Internal-MRGL								
Location*	Hub_None								
AAR Group	< None >								
Tunneled Protocol*	None								
QSIG Variant*	No Changes								
ASN.1 ROSE OID Encoding*	No Changes								
Packet Capture Mode*	None								
Packet Capture Duration	0								
Media Termination Point Required									
✓ Retry Video Call as Audio									
Path Replacement Support									
Transmit UTF-8 for Calling Party Name									
Transmit UTF-8 Names in QSIG APDU									
Unattended Port									
SRTP Allowed - When this flag is checked, Encrypted TLS needs to be conf	figured in the network to provide end to end security. Fa	ilure to do so will expose keys and other infor							
Consider Traffic on This Trunk Secure*	When using both sRTP and TLS								
Route Class Signaling Enabled*	Default								
Use Trusted Relay Point*	Default								
PSTN Access									
Run On All Active Unified CM Nodes									
System 👻 Call Routing 👻 Med	lia Resources 🔻	Advanced Features 👻	Device 🔻	Application 👻	User Management 👻	Bulk Administration 👻	Help 🔻		
---	-------------------	---------------------	--------------	-------------------	---------------------	-----------------------	-----------------------	---------------------------	----------------------
Trunk Configuration								Relate	d Links: Back To
🔚 Save 🗙 Delete 睯	Reset 🕂 Add I	New							
Asserted-Identity									
Asserted-Type* ppI			*						
SIP Privacy* Default			*						
Inbound Calls									
Significant Digits*	10			~					
Connected Line ID Presenta	tion* Allowed			~					
Connected Name Presentati	on* Allowed			~					
Calling Search Space	Internal-C	css		~					
AAR Calling Search Space	< None >			~					
Prefix DN									
Redirecting Diversion He	ader Delivery - 1	Inhound							
E Realifeeding Diversion ne	dder Delivery -	mboand							
Incoming Calling Party	Settings —								
If the administrator sets the field is empty in whic			II processin	g will use prefix	at the next level s	etting (DevicePool/Se	ervice Parameter). Of	herwise, the value config	jured is used as the
the field is empty in whic	n case there is n	io prenx assigned.		Class Draf	ix Settings	Default Prefix	Cattings		
					ix Settings				
Number Type		Prefix	_	Strip Digits		Callin	ig Search Space		Use Device
Incoming Number	Default		0		< None >		~		
Connected Party Settin					_				
Connected Party Transform	nation CSS < N	one >			*				
Use Device Pool Conne	cted Party Trans	formation CSS							
Outbound Calls									
Called Party Transformation	CSS < None >	•		*					
Use Device Pool Called F	Party Transforma	ation CSS							
Calling Party Transformation	n CSS < None >	•		~					
Use Device Pool Calling	Party Transform	ation CSS							
Calling Party Selection*	Originato	r		~					
Calling Line ID Presentation	*								
	Allowed			~					

Trunk Configuration		Relat
🔚 Save 🗙 Delete	Add New	
Use Device Pool Called Party T Calling Party Transformation CSS Use Device Pool Calling Party T Calling Party Selection* Calling Line ID Presentation*	< None >	
Calling Name Presentation* Caller ID DN Caller Name	Allowed M	
Redirecting Diversion Header D	Delivery - Outbound	
- SIP Information		

Destination					
Destination Address is an SRV					
Destination Address	5	Destination Address II	Destination Address IPv6		
1* 172.20.110.151				5060	
MTP Preferred Originating Codec*	711ulaw		~		
Presence Group*	Standard Pres	sence group	*		
SIP Trunk Security Profile*	Non Secure S	IP Trunk Profile	*		
Rerouting Calling Search Space	< None >		*		
Out-Of-Dialog Refer Calling Search Space	< None >		~		
SUBSCRIBE Calling Search Space	< None >		*		
SIP Profile*	SME-Profile22		~	1	
DTMF Signaling Method*	RFC 2833		*		
- Normalization Script					
Normalization Script < None >		~			
Enable Trace					
Parameter Name		Parameter Value			
1					



Cisco UCM-SME SIP trunk to Cisco UCM

Cisco Unified CM Administration		Navigation
For Cisco onnied communications Solutions		admin Sear
System   Call Routing   Media Resources   Advanced Features   Device	Application  Ver Management  Bulk Administration	Help 👻
Trunk Configuration		Related
🔚 Save 🗙 Delete 👇 Reset 🕂 Add New		
- Status		
(1) Status: Ready		
Device Information		
Product:	SIP Trunk	
Device Protocol:	SIP	
Trunk Service Type	None(Default)	-
Device Name*	CUCM-SIP-Trunk	
Description		]
Device Pool*	Internal-DP	
Common Device Configuration	< None >	
Call Classification*	Use System Default	
Media Resource Group List	Internal-MRGL	
Location*	Hub_None	
AAR Group	< None >	
Tunneled Protocol*	None	
QSIG Variant*	No Changes	
ASN.1 ROSE OID Encoding*	No Changes	
Packet Capture Mode*	None	
Packet Capture Duration	0	1
Media Termination Point Required	0	
Retry Video Call as Audio		
Path Replacement Support		
Transmit UTF-8 for Calling Party Name		
Transmit UTF-8 Names in QSIG APDU		
Unattended Port		
SRTP Allowed - When this flag is checked, Encrypted TLS needs to be con	figured in the network to provide end to end security. F	ailure to do so will expose keys and other info
Consider Traffic on This Trunk Secure*	When using both sRTP and TLS	
Route Class Signaling Enabled*	Default	
Use Trusted Relay Point*	Default	

Trunk Configuration					Related L
🕞 Save 🗙 Delete	Add New				
- Call Routing Information					
Remote-Party-Id					
Asserted-Identity					
Asserted-Type* PAI	*				
SIP Privacy* None	<b>v</b>				
- Inbound Calls					
Significant Digits*	All	*			
Connected Line ID Presentation*	Allowed	*			
Connected Name Presentation*	Allowed	~			
Calling Search Space	PSTN-Access	*			
AAR Calling Search Space	< None >	*			
Prefix DN					
Redirecting Diversion Header	Delivery - Inbound				
Incoming Calling Party Setti					
If the administrator sets the pr the field is empty in which case		essing will use prefix at t	the next level s	etting (DevicePool/Service Parameter)	. Otherwise, the value configure
	. 5	Clear Prefix S	Settings	Default Prefix Settings	
Number Type	Prefix	Strip Digits		Calling Search Space	
Incoming Number	Default	0	< None >		*
Compared Party Callings					
Connected Party Settings — Connected Party Transformation	CSS < None >	~			
Use Device Pool Connected F	arty transformation CSS				
Called Party Transformation CSS	< None a	~			
		•			
Use Device Pool Called Party 1 Calling Party Transformation CSS					
		×			
Use Device Pool Calling Party	Transformation CSS				
I Calling Party Selection"					

Trunk Configuration				Relat
🔚 Save 🗙 Delete 省 Reset 🕂				
Calling Line ID Presentation*	wed			
Calling Name Presentation*				
Caller ID DN				
Caller Name				
Redirecting Diversion Header Delive	ry - Outbound			
- SIP Information				
- Destination				
Destination Address is an SRV				
Destination Addre	ss Destination Address	IPv6	Destination Port	
1* 172.20.8.42			5060	
MTP Preferred Originating Codec*	G729/G729a	~		
Presence Group*	Standard Presence group	~		
SIP Trunk Security Profile*	Non Secure SIP Trunk Profile	~		
Rerouting Calling Search Space	< None >	~		
Out-Of-Dialog Refer Calling Search Spac	e < None >	*		
SUBSCRIBE Calling Search Space	< None >	*		
SIP Profile*	SME SIP Profile	*		
DTMF Signaling Method*	RFC 2833	*		
Normalization Script Normalization Script < None >	~			
Enable Trace				
Parameter Name	Parameter Value			
1			± =	
Geolocation Configuration ———				
Geolocation < None >	~			
Geolocation Filter < None >	~			
Send Geolocation Information				



Cisco UCM-SME SIP trunk to Microsoft LYNC 2010 Server Standard Edition

Trunk Configuration			Related
🔚 Save 🗶 Delete 省 Reset 🕂 Add New			
- Device Information			
Product: Device Protocol: Trunk Service Type Device Name*	SIP Trunk SIP None(Default) LYNC-Trunk		
Description			
Device Pool*	Internal-DP	~	
Common Device Configuration	< None >	*	
Call Classification*	Use System Default	~	
Media Resource Group List	LYNC-MRGL	~	
Location*	Hub_None	~	
AAR Group	< None >	~	
Tunneled Protocol*	None	~	
QSIG Variant*	No Changes	~	
ASN.1 ROSE OID Encoding*	No Changes	~	
Packet Capture Mode*	None	*	
Packet Capture Duration	0		
Media Termination Point Required			
Retry Video Call as Audio			
Path Replacement Support			
Transmit UTF-8 for Calling Party Name			
Transmit UTF-8 Names in QSIG APDU			
Unattended Port			
SRTP Allowed - When this flag is checked, Encrypted TLS needs to b	e configured in the network to provide end to e	nd security. Failure to do	so will expose keys and other inform
Consider Traffic on This Trunk Secure*	When using both sRTP and TLS	~	
Route Class Signaling Enabled*	Default	~	
Use Trusted Relay Point*	Default	~	
PSTN Access			
Run On All Active Unified CM Nodes			

Remote-Part	y-Id										
Asserted-Ide	entity										
Asserted-Type*	PAI		*								
SIP Privacy*	Default		~								
<ul> <li>Inbound Call</li> <li>Significant Digit</li> </ul>					_						
		All			*						
	e ID Presentation*	Allowed			*						
	me Presentation*	Allowed			~						
Calling Search	Space	PSTN-Access			~						
AAR Calling Se	arch Space	< None >			~						
Prefix DN											
Redirecting	Diversion Header	Delivery - Inbound									
_ Incoming C	alling Party Sett	ings —									
If the admin	nistrator sets the pr	efix to Default this indi	ostos call proce	oning will use r	wofiv at	بمراجبتها فيتمح مطغ		Consider Deserved	ter) Ot	and the state of t	
				sang win use p	nenx au	the next level s	etting (DevicePool/	Service Parame		ierwise, the v	alue configured
		e there is no prefix assi								ierwise, the v	alue configured
						Settings	Default Pref			ierwise, the v	alue configured
the field is e					Prefix		Default Pref			ierwise, the v	alue configured
the field is e	empty in which case	e there is no prefix assi		Clear	Prefix		Default Pref	ix Settings		ierwise, the v	alue configured
the field is e Numl Incoming Nu	empty in which case ber Type umber	e there is no prefix assi		Clear Strip Digit	Prefix	Settings (	Default Pref	ix Settings		ierwise, the v	alue configured
the field is e Numl Incoming Nu Connected	empty in which case ber Type umber Party Settings —	a there is no prefix assi Prefix		Clear Strip Digit	Prefix	Settings (	Default Pref	ix Settings		ierwise, the v	alue configured
the field is e Numl Incoming Nu Connected Pa	empty in which case ber Type umber Party Settings — urty Transformation	Prefix CSS < None >	gned.	Clear Strip Digit	Prefix	Settings (	Default Pref	ix Settings		erwise, the v	alue configured
the field is e Numl Incoming Nu Connected Pa	empty in which case ber Type umber Party Settings — urty Transformation	a there is no prefix assi Prefix	gned.	Clear Strip Digit	Prefix	Settings (	Default Pref	ix Settings		erwise, the v	alue configured
the field is e Numl Incoming Nu Connected Pa	empty in which cash ber Type umber Party Settings — rty Transformation e Pool Connected F	Prefix CSS < None >	gned.	Clear Strip Digit	Prefix	Settings (	Default Pref	ix Settings		erwise, the v	alue configured
the field is e Numl Incoming Nu Connected Pa Connected Pa U Use Device Outbound Ca	empty in which cash ber Type umber Party Settings — rty Transformation e Pool Connected F	e there is no prefix assi Prefix 9 CSS < None > Party Transformation C	gned.	Clear Strip Digit	Prefix	Settings (	Default Pref	ix Settings		erwise, the v	alue configured
the field is e Numl Incoming NL Connected Pa ✓ Use Device Outbound Ca Called Party Tr	empty in which case ber Type umber Party Settings — rty Transformation e Pool Connected i ansformation CSS	e there is no prefix assi Prefix 9 CSS < None > Party Transformation C	gned.	Clear Strip Digit	Prefix	Settings (	Default Pref	ix Settings		erwise, the v.	
the field is e Numl Incoming Nu Connected Pa Use Device Outbound Ca Called Party Tr Use Device	empty in which case ber Type umber Party Settings — rty Transformation e Pool Connected i ansformation CSS	e there is no prefix assi Prefix 0 CSS < None > Party Transformation C < None > Transformation CSS	gned.	Clear Strip Digit	Prefix	Settings (	Default Pref	ix Settings		erwise, the v.	
Connected I Connected Part Vuse Device Called Party Tr Use Device Calling Party Tr	empty in which case ber Type umber Party Settings — rty Transformation e Pool Connected i bills — ransformation CSS Pool Called Party ransformation CSS	e there is no prefix assi Prefix 0 CSS < None > Party Transformation C < None > Transformation CSS	gned.	Clear Strip Digit	Prefix	Settings (	Default Pref	ix Settings		erwise, the v.	
Connected I Connected Part Vuse Device Called Party Tr Use Device Calling Party Tr	empty in which case ber Type umber Party Settings — urty Transformation e Pool Connected F ansformation CSS Pool Called Party ransformation CSS Pool Calling Party	e there is no prefix assi Prefix CSS < None > Party Transformation C < None > Transformation CSS ( < None >	gned.	Clear Strip Digit	Prefix	Settings (	Default Pref	ix Settings		erwise, the v	

Trunk Configuration						Related L
🔚 Save 🗶 Delete 嗋 Reset 🕂	Add New					
Caning Party transformation CS5   < No		×				
Use Device Pool Calling Party Transf	formation CSS					
	inator	*				
Calling Line ID Presentation* Allow		*				
Calling Name Presentation*	ved	*				
Caller ID DN						
Caller Name						
Redirecting Diversion Header Delive	ny - Outbound					
Redirecting Diversion header Delive	ry - Outbound					
– SIP Information –		-				
Destination						
Destination Address is an SRV Destination Address		Destination Address 1	06	Destination Port		
1* 172.20.117.152		Destination Address	PV0	5068	<b>=</b>	
MTP Preferred Originating Codec*	711ulaw		~			
Presence Group*	Standard Prese		*			
SIP Trunk Security Profile*	Non Secure SI	P Trunk Profile	*			
Rerouting Calling Search Space	< None >		*			
Out-Of-Dialog Refer Calling Search Space	e < None >		~			
SUBSCRIBE Calling Search Space	< None >		*			
SIP Profile*	SME-Profile22		~			
DTMF Signaling Method*	RFC 2833		*			
Normalization Script						
Normalization Script < None >		~				
Enable Trace						
Parameter Name		Parameter Value				
1				•		



### Configuring the Cisco Unified Communications Manager

Cisco UCM Software release



This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic product import, export, distribute or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agi regulations. If you are unable to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at our Export Compliance Product Report web site.

For information about Cisco Unified Communications Manager please visit our Unified Communications System Documentation web site.

For Cisco Technical Support please visit our Technical Support web site.



Cisco UCM Regions Configurations

սիսի	Cisco L	Jnified CM A	dministration						I	lavigation Cisco Unifie	ed CM Ad	dministrati	on 💌
cisco		Unified Communic	ations Solutions						admir	Search Documen	tation	About	Log
System 👻	Call Routing 👻	Media Resources 👻	Advanced Features 👻	Device 👻	Application $\bullet$	User Management 👻	Bulk Administration 👻	Help 👻					
Find and	List Regions												
HbA 🕂	lew Sele	ct All 🔛 Clear All	Delete Selected										
- Status - i) 3 rec	cords found												
Regions	5 (1 - 3 of 3	;)									Rows p	oer Page	50 🗸
Find Regio	ons where Nam	e begins with 💌		Find C	lear Filter	ф  —							
								Name 📥					
			<u> </u>	efault									
			<u>0</u>	711-Region									
			<u>0</u>	729-Region									
Add Ne	w Select A	II Clear All	Delete Selected										



Cisco UCM Regions Configurations - G711 Region

Cisco Unified CM Administr			Navigatio	n <mark>C</mark>
For Cisco Unified Communications Solut	tions		admin Sea	arch
System ▼ Call Routing ▼ Media Resources ▼ Advanced Fe	atures 👻 Device 👻 Application 👻 User Manage	ment 👻 Bulk Administration 👻	Help 👻	
Region Configuration			Relate	ed Li
🔜 Save 🗶 Delete 睯 Reset 🧷 Apply Config 🔓	Add New			
- Region Information				
Name* G711-Region				
– Region Relationships				
Region Relationships	Max Audio Bit Rate	Max Video	o Call Bit Rate (Includes Audio)	
Default	64 kbps (G.722, G.711)		384	
G711-Region	64 kbps (G.722, G.711)		384	
G729-Region	8 kbps (G.729)		384	
NOTE: Regions(s) not displayed	Use System Default	Use System Default		
- Modify Relationship to other Regions Regions	Max Audio Bit	Rate I	Max Video Call Bit Rate (Includes Audio)	
Default	Keep Current Setting		p Current Setting	
G711-Region G729-Region			System Default	
G725-Kegion		O None		
		0	kbps	
- Save Delete Reset Apply Config Add	New			
(i) *- indicates required item.				



Cisco UCM Region Configurations - G729 Region

System 👻 Call Routing	✓ Media Resources ✓ Advanced Feature	es 👻 Device 👻	Application 👻 User Man	agement 👻 Bulk Admini	stration 👻 Help 💌	
Region Configuration	on				Rela	ed Lin
Save 🗙 Delete	e 🎦 Reset 🥖 Apply Config 🕂 A	dd New				
— Region Informatio	on ————					
Name* G729-Region	1					
— Region Relationsh	ips —					
	Region	Max /	Audio Bit Rate	Ma	x Video Call Bit Rate (Includes Audio)	
	Default	8 ki	bps (G.729)		384	
	G711-Region	8 k	bps (G.729)		384	
	G729-Region	8 ki	bps (G.729)		384	
NOTE: Regions(s) no - Modify Relationsh		Use System De		Use System Default		Us
	Regions		Max Audio	Bit Rate	Max Video Call Bit Rate (Includes Audio)	
Default G711-Region			Keep Current Setting	*	Keep Current Setting	[
G729-Region					🔘 Use System Default	
					O None	
					O kbps	
		_				
— Save Delete						
	Reset Apply Config Add Ne	N				
i *- indicates req		<u></u>				
		<u></u>				
		<u> </u>				
		<u> </u>				



Cisco UCM Device Pool

System 👻 Ca	all Routing 👻 Media Resources 👻 A	dvanced Features 👻 Dev	ice 👻 Application 👻 U	Jser Management 👻 Bulk Administration 👻	Help 👻	
Find and Lis	t Device Pools					
Add New	Select All 🔛 Clear All 🚽	Delete Selected				
– Status –						
i 3 record	ds found					
Device Po	ol (1 - 3 of 3)					Rows per Page
Find Device F	Pool where Device Pool Name		✓ begins with ✓	Find Clear Fi	ter 🕂 😑	
Γ	Name 🕈		Cisco Unified CM Grou	up R	egion	Date/Time Group C
	Default	Default		Default	CMLocal	D
	SJC-DP	Default		G711-Region	CMLocal	D
	SJC-DP-G729	Default		G729-Region	CMLocal	۲۵
Add New	Select All Clear All De	elete Selected				



### Cisco UCM Device Pool for G711

cisco							Navi
For Cisco Unified	Communicatio	ons Solutions					admin
System 👻 Call Routing 👻 Media I	Resources 👻 Ac	Ivanced Features 👻 De	vice - Application -	User Management	Bulk Administration	Help 👻	
Device Pool Configuration							R
	0	<b>*</b> • • • • • •					
🔚 Save 🗶 Delete 🗋 Cop	by 🎦 Reset	Z Apply Config	Add New				
- Status							
i Status: Ready							
<u> </u>							
- Device Pool Information —							
Device Pool: SJC-DP (9 mem	ibers**)						
- Device Pool Settings							
Device Pool Name*		SJC-DP					
Cisco Unified Communications N	lanager Group*	Default		~			
Calling Search Space for Auto-r	egistration	PSTN-Access		~			
Adjunct CSS		< None >		~			
Reverted Call Focus Priority		Default		~			
Local Route Group		< None >		~			
Intercompany Media Services E	nrolled Group	< None >		*			
<ul> <li>Roaming Sensitive Settings</li> <li>Date/Time Group*</li> </ul>							
Region*	CMLocal		~				
Media Resource Group List	G711-Region		~				
Location	SJC-MRGL		~	1			
Network Locale	Hub_None		×				
SRST Reference*	< None >	-	*				
Connection Monitor Duration**	Use Default G	aleway					
Single Button Barge*			~				
Join Across Lines*	Barge		~				
Physical Location	< None >		~				
Device Mobility Group	< None >		~				
, 0.00p	< None >		•				
Device Mobility Related Inf	ormation****						
Device Mobility Calling Search S			~				
AAR Calling Search Space	< None >		~				

System 👻 Call Routing 👻 Media Re	esources - Advanced Features -	Device - Application -	User Management 👻	Bulk Administration 👻 Help 👻	
Device Pool Configuration					Related Links
Save X Delete Copy	r 🎦 Reset 🧷 Apply Config 🚽	Add New			
Single Button Barge*	Barge	~			
Join Across Lines*	On	~			
Physical Location	< None >	~			
Device Mobility Group	< None >	*			
— Device Mobility Related Info	rmation****				
Device Mobility Calling Search Sp	oace < None >		<b>~</b>		
AAR Calling Search Space	< None >	•	<b>~</b>		
AAR Group	< None >	•	<b>~</b>		
Calling Party Transformation CSS	<pre>S &lt; None &gt;</pre>	•	<b>~</b>		
Called Party Transformation CSS	< None >		<b>~</b>		
— Geolocation Configuration —					
Geolocation < None >		~			
Geolocation Filter < None >		~			
— Call Routing Information —					
Incoming Calling Party Sett	tings				
	refix to Default this indicates call pr	rocessing will use prefix	at the next level setti	ng (DevicePool/Service Para	meter). Otherwise, the value configured is u
		Clear Pro	efix Settings	Default Prefix Settings	•
Number Type	Prefix	¢	Strip Digits		Calling Search Space
National Number	Default			< None >	~
International Number	Default			< None >	~
Unknown Number	Default			< None >	~

### - Incoming Called Party Settings

Default

Subscriber Number

If the administrator sets the prefix to Default this indicates call processing will use prefix at the next level setting (DevicePool/Service Parameter). Otherwise, the value configured is u field is empty in which case there is no prefix assigned.

< None >

~



### Cisco UCM Device Pool for G729

System 👻 Call Routing 👻 Media Re	esources 👻 Ad	Ivanced Features - Device - Application	✓ User Manag	gement 👻	Bulk Administrati	on 🔻 Hel	p <del>v</del>	
Device Pool Configuration								Re
🕞 Save 🗶 Delete 🗋 Copy	Reset	🖉 Apply Config 🕂 Add New						
- Device Pool Settings		SJC-DP-G729		1				
Cisco Unified Communications Ma	anager Group*	Default	~					
Calling Search Space for Auto-re-	gistration	PSTN-Access	~	1				
Adjunct CSS		< None >	~	ī				
Reverted Call Focus Priority		Default	~	i				
Local Route Group		< None >	~	ī				
Intercompany Media Services En	rolled Group	< None >	*	Ī				
– Roaming Sensitive Settings - Date/Time Group*	CMLocal	~						
Region*	G729-Region	×						
Media Resource Group List	SJC-MRGL	×						
Location	Hub_None	×						
Network Locale	< None >	*						
SRST Reference*	Use Default G	ateway 👻						
Connection Monitor Duration***								
Single Button Barge*	Barge	~						
Join Across Lines*	On	×						
Physical Location	< None >	*						
Device Mobility Group	< None >	×						
– Device Mobility Related Info	rmation****							
Device Mobility Calling Search Sp			*					
AAR Calling Search Space	< None >		~					
AAR Group	< None >		~					
Calling Party Transformation CSS	S < None >		~					
Called Party Transformation CSS	< None >		~					
– Geolocation Configuration –								

System	esources 👻	Advanced Features 👻	Device - Application	✓ User Mana	gement 👻 Bulk	Administration 👻 Help	*	
Device Pool Configuration								Relat
Save Delete Copy	Reset	: 🧷 Apply Config 🚽	Add New					
Single Button Barge*	Barge		~					
Join Across Lines*	On		~					
Physical Location	< None >		*					
Device Mobility Group	< None >		*					
		6 JL						
<ul> <li>Device Mobility Related Infor Device Mobility Calling Search Sp</li> </ul>				~				
AAR Calling Search Space	< None			~				
AAR Group	< None			~				
Calling Party Transformation CSS				~				
Called Party Transformation CSS	- 110110	-		~				
— Geolocation Configuration —								
Geolocation < None >			~					
Geolocation Filter < None >			*					
Coll Double of Tafaamarking								
<ul> <li>Call Routing Information —</li> </ul>								
Incoming Calling Party Sett	-							
If the administrator sets the pr field is empty in which case the			ocessing will use pre	fix at the next	level setting (	DevicePool/Service P	arameter). Otherwise, the	value config
			Clear F	refix Setting	js 🗌	Default Prefix Setti	ngs	
Number Type		Prefix	٢	Strip D	igits		Calling Se	earch Space
National Number	ſ	Default				< None >		*
International Number	(	Default			]	< None >		~
Unknown Number	[	Default			1	< None >		~

### - Incoming Called Party Settings -

Default

Subscriber Number

If the administrator sets the prefix to Default this indicates call processing will use prefix at the next level setting (DevicePool/Service Parameter). Otherwise, the value config field is emoty in which case there is no prefix assigned.

< None >

~



Cisco UCM Media Termination Point Configuration

սիսի, Cisco Unifie	ed CM Administration	Nav
CISCO For Cisco Unified	Communications Solutions	admin
System 👻 Call Routing 👻 Media	Resources 👻 Advanced Features 👻 Device 👻 Application 👻 User Management 👻 Bulk Administration 👻 Help 👻	
Media Termination Point Cor	Ifiguration	
🔜 Save 🎦 Reset 🧷 App	oly Config	
- Status		
i Status: Ready		
- Media Termination Point In	formation	
Registration	Registered with Cisco Unified Communications Manager 172.20.8.42	
IP Address		
IPv6 Address	0000:0000:0000:0000:0000:0000:0000	
	Cisco Media Termination Point Software	
Host Server*	172.20.8.42	
Media Termination Point Name*	MTP 2	
Description	MTP_CUCM851	
Device Pool*	SJC-DP 💌	
Trusted Relay Point		
- Save Reset Apply Co	onfig	
(i) *- indicates required item.		

Cisco UCM Conference Bridge Configurations

ahaha	Cisco Un	ified CM A	dministratio	n					Nav	rigation Cisco Unified CM	Administra
cisco	For Cisco Un	ified Communic	ations Solutions						admin	Search Documentation	About
System 👻	Call Routing 👻 🛛 M	ledia Resources 👻	Advanced Features	- Device - Application	n ❤ Userl	Management 👻 Bulk A	dminist	tration 👻 Help 👻			
Find and L	List Conference	e Bridges									
Add Ne	ew Select A	di 🔛 Clear All	Delete Selected	Page Reset Selected 🛛 🥖	Apply Cor	fig to Selected					
Status –	ords found										
Confere	nce Bridges (	(1 - 2 of 2)								Rows	per Pag
Find Confe	erence Bridges wh	here Name	✓ begins with ✓		Find	Clear Filter	-				
	Cor	nference Bridge N	Name 🕈	Description		Device Pool		Status		IP Addres	5
	CFB_2			CFB_CUCM851		SJC-DP		Registered with 172.20.8.42		172.20.8.42	
	CONF-VGW3			CONF-VGW3		SJC-DP		Registered with 172.20.8.42		172.20.8.58	
Add Nev	w Select All	Clear All	Delete Selected	Reset Selected	App	ly Config to Selected		]			



Software Conference Bridge

a.c.a.	ied CM Administration	1				Nav admin
System - Call Routing - Media	ia Resources 👻 Advanced Features 👻	Device - Application -	User Management 👻	Bulk Administration 👻	Help 👻	aumin
Conference Bridge Configur	ration			Rela	ited Links:	Back To Find/List
🔚 Save 🎦 Reset 🥖 Ap	pply Config					
Status Gady						
- Conference Bridge Inform Conference Bridge : CFB_2 (C Registration Registere IP Address 172.20.8.	CFB_CUCM851) ed with Cisco Unified Communication	ns Manager 172.20.8.42				
<ul> <li>Software Conference Bridg Conference Bridge Type* Host Server</li> <li>▲ Device is not trusted Conference Bridge Name*</li> <li>Description</li> <li>Device Pool*</li> <li>Common Device Configuration</li> <li>Location*</li> <li>Use Trusted Relay Point*</li> </ul>	Cisco Conference Bridge Software 172.20.8.42 CFB_2 CFB_CUCM851 SJC-DP					
- Save Reset Apply C						



Hardware Conference Bridge

System 👻 Call Routing 👻 Media	a Resources 👻	Advanced Features 👻	Device 👻	Application -	User Management 👻	Bulk Administration 👻	Help 👻
Conference Bridge Configur	ration					Rela	ated Links: Back To Find/List
Save 🗶 Delete 🗋 Co	opy 省 Rese	et 🧷 Apply Config	🕂 Add Ne	W			
— Status ————							
(i) Status: Ready							
- Conference Bridge Inform	ation —						
Conference Bridge : CONF-VG		W3)					
		nified Communication	s Manager	172.20.8.42			
IP Address <u>172.20.8.</u>	58						
— IOS Conference Bridge Inf	fo						
		nference Bridge					
A Device is not trusted							
Conference Bridge Name*	CONF-VGW3						
Description	CONF-VGW3						
Device Pool*	SJC-DP-G72	9		~			
Common Device Configuration	<pre>None &gt;</pre>			*			
Location*	Hub None			*			
Use Trusted Relay Point*	On			~			
- Save Delete Copy	Reset A	pply Config Add	New				
(i) *- indicates required item	n.						
J							



### Cisco UCM Media Resource Group

alialia cisco				dministration cations Solutions					Na
System 👻	Call Routing	✓ Med	lia Resources 👻	Advanced Features 👻	Device 👻	Application 👻	User Management 👻	Bulk Administration 👻	Help 🔻
Media Re	source Gro	up Co	nfiguration						
📄 Save			Copy 🕂 Add	1 New					
- Status - i Statu	ıs: Ready								
	esource G source Grou		MRG (used by	9 devices)					
– Media R	esource G	oup Ir	formation —						
Name*	SJC-MRG				]				
Descriptio	n				]				
	<b>for this G</b> Media Reso			**					
Selected I	Media Resou	rces*	ANN_2 (ANN) CFB_2 (CFB) CONF-VGW3 MOH_2 (MOH MTP_2 (MTP)	(CFB) I)					
Use M	ulti-cast for	MOH AL	idio (If at least	one multi-cast MOH re	source is a	vailable)			
- Save	Delete	Сору	Add New						
ž	ndicates requ			erence Bridges (CFB), I	Media Term	nination Points	(MTP), Music On Hold	l Servers (MOH) and	Transcoders (XCODE)



Cisco UCM Media Resource Group List

cisco		Jnified CM A Unified Communic	dministration ations Solutions					
System 👻	Call Routing 👻	Media Resources 👻	Advanced Features 👻	Device 👻	Application -	User Management 🔻	Bulk Administration	Help 👻
Media Re	source Grou	p List Configuratio	on					
Save	X Delete	Copy 🕂 Add	New					
- Status -	us: Ready							
— Media R	lesource Gro	up List Status —						
Media Res	source Group	List: SJC-MRGL (use	d by 9 devices)					
— Media R	lesource Gro	up List Informatio	n ———					
Name* S	SJC-MRGL							
— Media R	esource Gro	ups for this List —						
	Media Resour							
Selected	Media Resourc	e Groups SJC-MRG	**			*		
- Save	Delete C	Copy Add New						
(i) *- ir	ndicates requir	ed item.						



Cisco UCM Route Pattern Configuration

Cisco Unified CM Administration       Navigation       Cisco Unified CM Administration         For Cisco Unified Communications Solutions       admin       Search Documentation       Ab         ent Cal Routing ▼ Media Resources ▼ Advanced Features ▼ Device ▼ Application ▼ User Management ▼ Buk Administration ▼ Help ▼       damin       Search Documentation       Ab         a dat List Route Patterns       0       Advanced Features ▼ Device ▼ Application ▼ User Management ▼ Buk Administration ▼ Help ▼       damin       Search Documentation       Ab         a dat New <ul> <li>Select All</li> <li>Clear All</li> <li>SchoocuBerpi</li> <li>Shi</li> <li>SchoocuBerpi</li> <li>Shi</li> <li>SchoocuBerpi</li> <li>Shi</li> <li>SchoocuBerpi</li> <li>Shi</li> <li>SchocuBerpi</li> <li>Shi</li> <li>S</li></ul>						
n 👻 Call Routing	<ul> <li>Media Resources</li> </ul>	Advanced Features - Device - Applica	tion	n ▼ Help ▼		
and List Route	Patterns					
Add New 🔛 S	elect All 🔲 Clear All	Delete Selected				
us ———						
3 records found						
te Patterns (	1 - 8 of 8)				Roy	ows
loute Patterns w	Pattern	begins with	Find Clear Filter			
	-					
	Pattern 🕈	Description		Route Filter		
7011!			SJC-LD-CUBE-PT			
<u>7011!#</u>	F	ax LD	SJC-LD-CUBE-PT		SME	
<u>9.@</u>			<u>CF-PT</u>		SME	
<u>9.@</u>			SJC-LD-CUBE-PT		SME	
<u>9011!</u>			SJC-LD-CUBE-PT		SME	
<u>9011!#</u>			SJC-LD-CUBE-PT		SME	
	All Clear All	Delete Selected				
J New Selec		Delete Selected				



### PSTN Route Pattern

Cisco Unified CM Add	tions Solutions	
		admii
System ▼ Call Routing ▼ Media Resources ▼ /	Advanced Features ▼ Device ▼ Application ▼ User Management ▼ Bulk Administration ▼ Help ▼	
Route Pattern Configuration		
Save 🗙 Delete 🗋 Copy 🛟 Add Ne	ew	
- Status		
i Status: Ready		
– Pattern Definition –		
Route Pattern*	9.@	
Route Partition	SJC-LD-CUBE-PT	
Description		
Numbering Plan*	NANP	
Route Filter	< None >	
MLPP Precedence*	Default	
Resource Priority Namespace Network Domain	None >	
Route Class*	Default	
Gateway/Route List*	SME v (Edit)	
Route Option	<ul> <li>Route this pattern</li> </ul>	
	O Block this pattern No Error	
Call Classification* OffNet		
Allow Device Override 🗹 Provide Outside	Dial Tone 🗌 Allow Overlap Sending 🔲 Urgent Priority	
Require Forced Authorization Code		
Authorization Level*		
Require Client Matter Code		
— Calling Party Transformations ————————————————————————————————————		
✓ Use Calling Party's External Phone Number	Mask	
Calling Party Transform Mask		
Prefix Digits (Outgoing Calls)		
Calling Line ID Presentation* Default	▼	
Calling Name Presentation* Default	 V	
Calling Party Number Type* Cisco CallMan	ager V	
Calling Party Numbering Plan* Cisco CallMan	ager V	

Route Pattern Configuration	
🔚 Save 🗙 Delete 🗈 Copy 🕂 Add New	
Require Client Matter Code	
- Calling Party Transformations	
Use Calling Party's External Phone Number Mask	
Calling Party Transform Mask	
Prefix Digits (Outgoing Calls)	
Calling Line ID Presentation* Default	
Calling Name Presentation* Default	
Calling Party Number Type* Cisco CallManager	
Calling Party Numbering Plan* Cisco CallManager	
Connected Party Transformations     Connected Line ID Presentation* Default	
Connected Name Presentation* Default	
- Called Party Transformations	
Discard Digits <pre></pre> <pre></pre> <pre></pre> <pre>Visite Content of the second o</pre>	
Called Party Transform Mask	
Prefix Digits (Outgoing Calls)	
Called Party Number Type* Cisco CallManager	
Called Party Numbering Plan* Cisco CallManager	
TCDN Naturals Calacities Tafamatics Flammatics	
ISDN Network-Specific Facilities Information Element     Network Service Protocol     Not Selected	
Carrier Identification Code	
Network Service         Service Parameter Name           Not Selected         Image: Service Parameter Name	Service Parameter Value
Not Selected Vot Exist >	
- Save Delete Copy Add New	
-	



International Route Pattern

616.60	D Unified CM Adr							Na
	g 👻 Media Resources 👻 A		Device - Application -	lleer Mana	aement <del>-</del>	Bulk Administration 👻	Help 👻	admin
			Berice + Application +	oser mana	gement +	Baik Administration +	nop +	
Route Pattern Conf	figuration							
🔚 Save 🗙 Delet	te 📋 Copy 🕂 Add Ne	w						
- ••								
- Status								
i Status: Ready								
- Pattern Definition								
Route Pattern*	•	9011!#						
Route Partition		SJC-LD-CUBE-PT		~				
Description								
Numbering Plan		Not Selected		~				
Route Filter		< None >		~				
MLPP Precedence*		Default						
Resource Priority Na	mespace Network Domain	< None >		*				
Route Class*		Default		~				
Gateway/Route List*	ĸ	SME		~	(Edit)			
Route Option		Route this pattern						
		O Block this patter	rn No Error	*				
Call Classification*	OffNet		*					
Allow Device Ove	erride 🗹 Provide Outside [	Dial Tone 🗌 Allow Ov	verlap Sending 🗌 Urg	ent Priority				
Require Forced A	uthorization Code							
Authorization Level*	0							
Require Client Ma	atter Code							
- Calling Party Tra	nsformations —							
Use Calling Party	's External Phone Number	Mask						
Calling Party Transfo	orm Mask							
Prefix Digits (Outgoin	ng Calls)							
Calling Line ID Prese	entation* Default		~					
Calling Name Preser	ntation* Default		*					
Calling Party Numbe	er Type* Cisco CallMana	iger	*					
Calling Party Numbe	ring Plan* Cisco CallMana	ger	*					

System - Call Routing - Me	dia Resources 👻 🔺	dvanced Features 👻	Device - Application -	User Management 👻	Bulk Administration 👻	Help 👻	
Route Pattern Configurati	on						Related Links
🔚 Save 🗶 Delete 🗋	Copy 🕂 Add Ne	w					
Require Client Matter Co	de						
<ul> <li>Calling Party Transform</li> <li>Use Calling Party's Exten</li> </ul>		Maala					
Calling Party Transform Mas		Mask					
Prefix Digits (Outgoing Calls							
Calling Line ID Presentation	* Default		~				
Calling Name Presentation*	Default		*				
Calling Party Number Type*	Cisco CallMana	ger	*				
Calling Party Numbering Plan	n* Cisco CallMana	ger	~				
<ul> <li>Connected Party Transference</li> <li>Connected Line ID Presentation</li> </ul>							
			*				
Connected Name Presentatio	Default		*				
— Called Party Transforma	tions						
Discard Digits	< None >		~				
Called Party Transform Mask							
Prefix Digits (Outgoing Calls							
Called Party Number Type*							
Called Party Numbering Plan	Cisco CallMana		~				
Called Party Numbering Plan	Cisco CallMana	jer	~				
— ISDN Network-Specific F	acilities Informa	tion Element					
	Not Selected	tion Element	~				
Carrier Identification Code							
Network Service		Service Paramete	er Name	Servic	e Parameter Value		
Not Selected		< Not Exist >					
- Save Delete Copy	Add New -						
	,						
(i) *- indicates required it	em.						
<u> </u>							



Fax Route Pattern

System - Call Routing - Media Res	sources 👻 Ad	dvanced Features 👻	Device 🔻	Application -	User Mana	gement 🔻	Bulk Administration 🔻	Help 🔻	
Route Pattern Configuration									Related L
Save Delete Copy	Add Nev	v							
- Pattern Definition									
Route Pattern*	[	7.@							
Route Partition	[	SJC-LD-CUBE-PT			*				
Description	[	Fax LD							
Numbering Plan*	[	NANP			*				
Route Filter	[	< None >			*				
MLPP Precedence*	Default			*					
Resource Priority Namespace Netv	work Domain	< None >			*				
Route Class*	[	Default			*				
Gateway/Route List*	[	SME			*	(Edit)			
Route Option		Route this pattern	ern						
		<ul> <li>Block this patte</li> </ul>	rn No Error	r	*				
Call Classification* OffNe	et			*					
Allow Device Override 🗹 Prov	vide Outside D	ial Tone 🗌 Allow C	overlap Send	ding 🗌 Urger	nt Priority				
Require Forced Authorization C	Code								
Authorization Level* 0									
Require Client Matter Code									
<ul> <li>Calling Party Transformation</li> </ul>	IS								
Use Calling Party's External Ph		Mask							
Calling Party Transform Mask									
Prefix Digits (Outgoing Calls)									
Calling Line ID Presentation*	efault			~					
Calling Name Presentation*	efault			~					
Calling Party Number Type*	isco CallManag	ger		~					
Calling Party Numbering Plan <sup>*</sup>	isco CallManaç	ger		~					
- Connected Party Transformat	tions —								
Connected Line ID Presentation*				~					

System 👻	Call Routing 👻	Media Res	sources 🔻	Advanced Features	s 👻 Device 👻	Application -	User Management	Bulk Administration	✓ Help ✓	
Route Pa	ttern Configu	ration								
Save	X Delete	Сору	Add	New	_	_	_	_		
_	re Client Matter	_	-							
-	Party Transfo									
	alling Party's E		one Numb	er Mask						
-	arty Transform									
Prefix Dig	its (Outgoing C	Calls)								
Calling Li	ne ID Presentat	tion* De	efault			~				
Calling Na	ame Presentatio	on* De	efault			~				
Calling Pa	arty Number Ty	pe* Ci	sco CallMa	nager		*				
Calling Pa	arty Numbering	*	sco CallMa	-		~				
			aco canna	indger		<u> </u>				
— Connec	ted Party Tra	nsformat	ions —							
	d Line ID Prese		Default			~				
Connecte	d Name Presen		Default			~				
		L	Derdale							
— Called B	arty Transfo	rmations								
Discard D			None >			~				
Called Pa	rty Transform I									
	its (Outgoing C									
-										
	rty Number Typ		co CallMa	nager		*				
Called Pa	rty Numbering	Plan* Cis	co CallMa	nager		*				
	e <b>twork-Specif</b> Service Protoco		Selected -	mation Element						
		1100	Selected -			~				
Carrier Id	lentification Co	de								
Network S	Service			Service Para	meter Name		Sen	vice Parameter Value		
Not Se	elected			Not Exist	>					
- Save	Delete	opy Ad	ld New							
<b>•</b> •										
U *- ir	ndicates require	ed item.								

### Cisco UCM SIP trunks configurations

	-								a	lmin Se
system		ill Routing 👻 🛛	edia Resources 🔻	Advanced Features - Devi	ice - Application	<ul> <li>User Management</li> </ul>	Bulk Administration	Help 👻		
ind a	nd Lis	t Trunks								
<u>}</u> ∧	dd New	Select A	II 🔛 Clear All	Delete Selected 🤷 Re	eset Selected					
Stat	us —									
i۱	record	ls found								
_										
Trui	nks (	1 - 8 of 8)								
ind T	runks v	vhere Device	Name	✓ begins with ✓		Find Clear Filte	r 🕂 🗖			
				Sele	ect item or enter s	earch text 💌				
		Name 🕈	Description	Calling Search Space	Device Pool	Route Pattern	Partition	Route Group	Priority	Trunk Ty
	<u>ال</u>	Name * Fax-GW	Description	Calling Search Space <u>PSTN-Access</u>	Device Pool SJC-DP	Route Pattern <u>347X</u>	Partition SJC-Phones-PT	Route Group	Priority	
	# •		Description					Route Group	Priority	SIP Trunk
_	SIP	Fax-GW	Description	PSTN-Access	SJC-DP	<u>347X</u>	SJC-Phones-PT	Route Group	Priority	Trunk Ty SIP Trunk SIP Trunk SIP Trunk
		Fax-GW SME	Description	PSTN-Access Inbound-CSS	SJC-DP SJC-DP	<u>347X</u> 7011!	SJC-Phones-PT SJC-LD-CUBE-PT	Route Group	Priority	SIP Trunk SIP Trunk
		Fax-GW SME SME	Description	PSTN-Access Inbound-CSS Inbound-CSS	SJC-DP SJC-DP SJC-DP	<u>347X</u> 70111 9.@	SJC-Phones-PT SJC-LD-CUBE-PT CF-PT	Route Group	Priority	SIP Trunk SIP Trunk SIP Trunk
	912 912 912 912 912	Fax-GW SME SME SME	Description	PSTN-Access Inbound-CSS Inbound-CSS Inbound-CSS	SJC-DP SJC-DP SJC-DP SJC-DP SJC-DP	347X 70111 9.@ 7.@	SJC-Phones-PT SJC-LD-CUBE-PT CF-PT SJC-LD-CUBE-PT	Route Group	Priority	SIP Trunk SIP Trunk SIP Trunk SIP Trunk SIP Trunk
		Fax-GW SME SME SME SME	Description	PSTN-Access Inbound-CSS Inbound-CSS Inbound-CSS Inbound-CSS	<u>SJC-DP</u> <u>SJC-DP</u> <u>SJC-DP</u> <u>SJC-DP</u> <u>SJC-DP</u>	347X 7011! 9.@ 7.@ 9011!	SJC-Phones-PT SJC-LD-CUBE-PT CF-PT SJC-LD-CUBE-PT SJC-LD-CUBE-PT	Route Group	Priority	SIP Trunk SIP Trunk SIP Trunk SIP Trunk
	912 912 912 912 912	Fax-GW SME SME SME SME SME SME	Description	PSTN-Access Inbound-CSS Inbound-CSS Inbound-CSS Inbound-CSS Inbound-CSS	SIC-DP           SIC-DP           SIC-DP           SIC-DP           SIC-DP           SIC-DP           SIC-DP           SIC-DP	347X 70111 9.@ 7.@ 90111 90111#	SJC-Phones-PT SJC-LD-CUBE-PT CF-PT SJC-LD-CUBE-PT SJC-LD-CUBE-PT SJC-LD-CUBE-PT	Route Group	Priority	SIP Trunk SIP Trunk SIP Trunk SIP Trunk SIP Trunk

SIP Trunk Configuration for the Session Manager Edition

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System   Call Routing   Media Resources   Advanced Features   Device	Application  User Management	Bulk Administration 💌	admin Search Docu
· · ·	spproation · · · · · · · · · · · · · · · · · · ·		
Trunk Configuration			Related Links:
🔚 Save 🗙 Delete 🎦 Reset 🕂 Add New			
Device Information         Product:         Device Protocol:         Trunk Service Type         Device Name*         Description         Device Pool*         Common Device Configuration         Call Classification*         Media Resource Group List         Location*	SIP Trunk SIP None(Default) SME SIC-DP < None > Use System Default SIC-MRGL Hub None	× × ×	
AAR Group	< None >	~	
Tunneled Protocol*	None	~	
QSIG Variant*	No Changes	~	
ASN.1 ROSE OID Encoding*	No Changes	~	
Packet Capture Mode*	None	*	
Packet Capture Duration	0		
Media Termination Point Required  Retry Video Call as Audio Path Replacement Support Transmit UTF-8 for Calling Party Name Transmit UTF-8 Names in QSIG APDU Unattended Port SRTP Allowed - When this flag is checked, Encrypted TLS needs to be con Consider Traffic on This Trunk Secure* Route Class Signaling Enabled*	figured in the network to provide en When using both sRTP and TLS Default	d to end security. Fa	ilure to do so will expose keys and other information.
Use Trusted Relay Point*	Default	~	
♥PSTN Access     □ Run On All Active Unified CM Nodes	Cordan	•	

System - C	Call Routing 🔻	Media Resources 👻	Advanced Features 👻	Device 👻	Application +	User Management 👻	Bulk Administration 👻	Help 👻	
Trunk Conf	figuration								Related I
Save	🗙 Delete 🤇	🖢 Reset 🛟 Ad	id New						
— Call Routi	ing Informat	ion ———							
Remote-	-Party-Id								
Asserted									
Asserted-Ty	ype* ppI			*					
SIP Privacy	/* Default			*					
- Inbound									
Significant	t Digits*	4			*				
Connected	d Line ID Pres	entation* Allowed	I		*				
Connected	d Name Preser	ntation* Allowed	l		~				
Calling Sea	arch Space	Inbound	d-CSS		~				
AAR Callin	ng Search Spa	ce < None	>		~				
Prefix DN									
Redired	ctina Diversio	n Header Delivery	- Inbound						
		, , , , , , , , , , , , , , , , , , , ,							
Incomi	ing Calling Pa	arty Settings —							
			efault this indicates ca no prefix assigned.	II processin	ng will use prefi	at the next level se	etting (DevicePool/Se	rvice Parameter). O	therwise, the value configur
the field	u is empty in i	which case there is	no prenx assigned.	ſ	Close Deo	fix Settings	Default Prefix	Fattings	
						ix settings			
	Number Type		Prefix	_	Strip Digits		Callin	g Search Space	
Incomir	ng Number	Default		0		< None >		*	
	cted Party Se								
		ettings formation CSS <	None >			<b>v</b>			
Connecte	ed Party Trans					•			
Connecte	ed Party Trans	formation CSS <				¥			
Connecte	ed Party Trans Device Pool Co	formation CSS <				<b>v</b>			
Connecte	ed Party Trans Device Pool Co nd Calls	formation CSS <	nsformation CSS		V	<b>v</b>			
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Connecte Use D Outboun Called Part	ed Party Trans Device Pool Co ad Calls —— Ity Transforma evice Pool Cal	formation CSS <	nsformation CSS		×	V			

System - Call Routing - Media Resources	✓ Advanced Features ▼ Devic	e 👻 Application 👻 l	Jser Management	■ Bulk Administration     ■	Help 👻
Trunk Configuration					Related I
🔚 Save 🗶 Delete 省 Reset 🕂	Add New				
Outbound Calls					
Called Party Transformation CSS < No	ne >	~			
Use Device Pool Called Party Transfo					
Calling Party Transformation CSS < No	ne >	*			
Use Device Pool Calling Party Transf	ormation CSS				
	Redirect Number	~			
Calling Line ID Presentation* Defa	ult	~			
Calling Name Presentation* Defa	ult	~			
Caller ID DN					
Caller Name					
Redirecting Diversion Header Deliver	ry - Outbound				
- SIP Information					
Destination					
Destination Address is an SRV					
Destination Addres	s De	stination Address IPv	/6	Destination Port	
1* 172.20.8.41				5060	
MTP Preferred Originating Codec*	711ulaw		~		
Presence Group*	Standard Presence group		~		
SIP Trunk Security Profile*	Non Secure SIP Trunk Profile		~		
Rerouting Calling Search Space	< None >		~		
Out-Of-Dialog Refer Calling Search Space	< None >		*		
SUBSCRIBE Calling Search Space	< None >		~		
SIP Profile*	SME-Profile1		*		
DTMF Signaling Method*	No Preference		*		
Normalization Script					
Normalization Script < None >		~			
Enable Trace					

### SIP Trunk Configuration for the Fax Gateway

uludu Cisco Unified CM Administration		Navigation
CISCO Unified CM Administration		
For Cisco Unified Communications Solutions		admin Sea
System - Call Routing - Media Resources - Advanced Features - Device -	Application  Very User Management  Bulk Administration	Help 👻
Trunk Configuration		Relate
🔚 Save 🗙 Delete 省 Reset 🕂 Add New		
- Device Information		
Product:	SIP Trunk	
Device Protocol: Trunk Service Type	SIP None(Default)	
Device Name*	Fax-GW	
Description		
Device Pool*		
Common Device Configuration	SJC-DP V	
Call Classification*	< None >	
	Use System Default	
Media Resource Group List Location*	SJC-MRGL	
	Hub_None	
AAR Group	< None >	
Tunneled Protocol*	None	
QSIG Variant*	No Changes	
ASN.1 ROSE OID Encoding*	No Changes	
Packet Capture Mode*	None	
Packet Capture Duration	0	
Media Termination Point Required		
Retry Video Call as Audio		
Path Replacement Support		
Transmit UTF-8 for Calling Party Name		
Transmit UTF-8 Names in QSIG APDU		
Unattended Port		
SRTP Allowed - When this flag is checked, Encrypted TLS needs to be cor	Figured in the network to provide and to and coourity. Et	vilure to do so will expose keys and other info
Consider Traffic on This Trunk Secure*	When using both sRTP and TLS	indre to do so win expose keys and other nito
Route Class Signaling Enabled*	Default	
Use Trusted Relay Point*	Default	
PSTN Access		1
Run On All Active Unified CM Nodes		



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For (	Cisco Unified Co	ommunications Solutions						admin Searc	h Documen
System - Call Rou	ting 🔻 Media Res	ources - Advanced Features -	Device 🔻	Application -	User Management 👻	Bulk Administration 👻	Help 👻		
Trunk Configura	tion							Related	Links: Ba
🔒 Save 🗶 D	elete 🎦 Reset	Add New							
Remote-Party-	-Id								
Asserted-Iden									
Asserted-Type*	Default		*						
SIP Privacy*	Default		*						
Inbound Calls									
Significant Digits	*	All		*					
Connected Line 1		Default		*					
Connected Name	e Presentation*	Default		~					
Calling Search S	pace	PSTN-Access		~					
AAR Calling Sea	rch Space	< None >		~					
Prefix DN									
Redirecting D	version Header	Delivery - Inbound							
– Incoming Ca	lling Party Sett	inas —							
-		efix to Default this indicates cal	l processino	will use prefix	at the next level se	tting (DevicePool/Se	rvice Parameter). Othe	erwise, the value configu	red is used
the field is em	npty in which case	e there is no prefix assigned.							
				Clear Pre	fix Settings	Default Prefix	Settings		
Numbe	er Type	Prefix		Strip Digits		Callin	g Search Space		Use
Incoming Nun	nber	Default	0		< None >		*		<b>~</b>
Connected P	arty Cottings -								
Connected Part	y Transformation	CSS < None >			*				
	y Transformation	CSS < None > Party Transformation CSS			~				
Use Device	y Transformation				~				
Use Device	y Transformation Pool Connected F	Party Transformation CSS			<b>•</b>				
Use Device	Pool Connected F	Party Transformation CSS		v	<b>v</b>				
Use Device	ry Transformation Pool Connected F Is	Party Transformation CSS           < None >           Transformation CSS			•				
Use Device	y Transformation Pool Connected R Is	Party Transformation CSS          < None >         Transformation CSS         < None >		v v	v 				
Use Device	y Transformation Pool Connected R Is	Party Transformation CSS           < None >           Transformation CSS			×				


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System 👻	Call Routing 👻 Media Resources 🔹	Advanced Features	s 👻 Device 👻	Application 👻	User Manage	ement 👻	Bulk Administration 👻	Help 👻	
Trunk Cor	nfiguration								Related
Save	🗙 Delete 👇 Reset 🕂 A	dd New							
– SIP Info	ormation —								
Destina	ation —								
Desti	nation Address is an SRV								
1* 17	Destination Address		Destin	ation Address I	Pv6		Destination Port		
1 17	72.20.109.201					506	50	• •	
	rred Originating Codec*	711ulaw			*				
Presence		Standard Presence	group		*				
SIP Trunk	Security Profile*	Non Secure SIP Tr	unk Profile		*				
Rerouting	Calling Search Space	< None >			~				
Out-Of-Di	alog Refer Calling Search Space	< None >			~				
	BE Calling Search Space	< None >			~				
SIP Profile		Standard SIP Profi	e		*				
DTMF Sigr	naling Method*	No Preference			*				
- Norma	lization Script								
Normaliz	ation Script < None >		*	]					
Enab	le Trace								
	Parameter Name		Par	ameter Value					
1									
<ul> <li>Geolocation</li> </ul>	tion Configuration								
	on Filter < None >		¥						
	Geolocation Information		¥						
ound v									
- Save	Delete Reset Add New	]							
(i) *- in	dicates required item.								
(i) **-	Device reset is not required for a	hanges to Packet C	apture Mode a	nd Packet Capt	ure Duration	ı.			



SCCP Phone configurations on the Cisco UCM

aha	6	Cisco I	Unified CM /	Administra	ation					Na	vigation Cisco Unified
cisc	•	For Cisco	Unified Commun	ications Soluti	ons					admin	Search Documenta
System ·	<del>,</del> 0	Call Routing 👻	Media Resources	<ul> <li>Advanced Fea</li> </ul>	tures 🕶 Device 👻 App	lication 👻 User I	lanagement 👻 Bi	lk Administration	r Help ▼		
Find an	d Li	st Phones								Related Li	nks: Actively Logge
Ad	d Nev	v 🔣 Sek	ect All 🔛 Clear All	Delete Sel	ected 🍳 Reset Selecter	d 🧪 Apply Cor	ifiq to Selected				
- Statu	-										
( <b>1</b> ) 3 1	recor	ds found									
-											
Phone	е (	(1 - 3 of 3)									
Find Ph	one v	where Dev	ice Name	🖌 beg	ins with 💌	Fin					
					Select iten	n or enter search	text 🗸				
			Device Name(Line	e) ^	Description	Device	Pool Devi	e Protocol	Status		IP Address
	7961	G-GE	P00235E18EDDC	Matt	Damon 6162	SJC-DP	SCCP		Registered with 172.20.8.4	2	172.20.8.19
	7961	SE	P0026CB3BBA09	Mark	Whalberg 6164	SJC-DP	SCCP		Unknown		Unknown
	7961	SE	P0026CB3BBA44	Leon	ardo DiCaprio 6163	SJC-DP	SCCP		Registered with 172.20.8.4	2	172.20.8.223
Add New Select All Clear All Delete Selected Reset Selected Apply Config to Selected											

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ter	m	eatures - Device - Application - User I	Management 👻 Bulk Administration 👻 Help 👻		
on	e Configuration		Rela	ted Links:	Back To Find/List
J	Save 🗙 Delete 📋 Copy 省 Reset 🧷 App	oly Config 🚽 Add New			
	tus —				
J)	Status: Ready				
155	sociation Information	Product Type: Cisco 7961G-GE			
	Modify Button Items	Device Protocol: SCCP			
L	Line [1] - 6162 in SJC-Phones-PT	L			
2	<u>Stine [2] - Add a new DN المتعلمة المعامة محمد المعامة محمد م</u>	Device Information			
}	Add a new SD	Registration IP Address	Registered with Cisco Unified Communicati 172.20.8.19	ons Manage	r 172.20.8.42
L	Add a new SD	Active Load ID	Unknown		
	-	Device is Active			
	Sa Add a new SD	Device is trusted			
	Carl Add a new SD	MAC Address*	00235E18EDDC		1
	Unassigned Associated Items	Description	Matt Damon 6162		]
	Car Add a new SD	Device Pool*	SJC-DP		View Details
3	Add a new SURL	Common Device Configuration	< None >		1
	-	Phone Button Template*	Standard 7961G-GE SCCP	~	
	Add a new BLF SD	Softkey Template		*	
0	Add a new BLF Directed Call Park	Common Phone Profile*	< None >	~	1
1	CallBack		Standard Common Phone Profile	*	
2	Call Park	Calling Search Space	PSTN-Access	*	
3	Call Pickup	AAR Calling Search Space	< None >	*	
4	Conference List	Media Resource Group List	SJC-MRGL	~	
5	Conference	User Hold MOH Audio Source	< None >	~	
6	Do Not Disturb	Network Hold MOH Audio Source	< None >	~	
7	End Call	Location*	Hub_None	~	
8	Forward All	AAR Group	< None >	*	
9	Group Call Pickup	User Locale	< None >	~	
20	Hold	Network Locale	< None >	~	
21		Built In Bridge*	Default	~	
22	Intercom [1] - Add a new Intercom	Privacy*	Default	~	
3	Malicious Call Identification	Davies Mability Made*		•	1

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System  Call Routing  Media Resources  Advanced Feat	tures    Device    Application    User Ma	nagement - Bulk Administration - Help -						
Phone Configuration		Related	Links: Back To Find/List					
🔚 Save 🗙 Delete 📄 Copy 省 Reset 🧷 Apply	Config 🕂 Add New							
23 Malicious Call Identification	Device Mobility Mode*							
24 Meet Me Conference	Owner User ID	Default	View Current Device Mobili					
25 Mobility	Phone Personalization*	< None >	~					
26 New Call		Default	×					
27 Other Pickup	Services Provisioning*	Default	~					
28 Quality Reporting Tool	Phone Load Name							
29 Redial	Single Button Barge	Default	~					
30 Remove Last Participant	Join Across Lines	Default	*					
31 Transfer	Use Trusted Relay Point*	Default	*					
32 Video Mode	BLF Audible Alert Setting (Phone Idle)*	Default	~					
33 Privacy	BLF Audible Alert Setting (Phone Busy)*	Default	~					
34 None	Always Use Prime Line*	Default	~					
	Always Use Prime Line for Voice Messag		~					
	Calling Party Transformation CSS	< None >	~					
	Geolocation	< None >	*					
	✓ Use Device Pool Calling Party Transf	ormation CSS						
	✓ Retry Video Call as Audio							
	Ignore Presentation Indicators (inter	nal calls only)						
	Allow Control of Device from CTI							
	✓ Logged Into Hunt Group							
	Remote Device							
	Protected Device****							
	Hot line Device****							
	L							
	Protocol Specific Information							
	Packet Capture Mode* None	•						
	Packet Capture Duration 0							
	Presence Group* Stan	dard Presence group 💌						
	Device Security Profile* Cisc	o 7961G-GE - Standard SCCP Non-Secure Prol 💌						
	SUBSCRIBE Calling Search Space < No	ne > 🗸						

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													admin
System 👻	Call Routing 🔻	Media Resou	irces 🔻	Advanced Feat	ures 🔻 [	Device 🔻	Application	▼ Us	er Management 🔻	Bulk Administration 👻	Help 🔻	_	
Phone Co	nfiguration										Re	lated	Links: Back To Find
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	•••		<u> </u>		FOLKEL	Capture m	Jue	1	None			<b>Y</b>	
					Packet (	Capture Di	uration	[	0				
					Presenc	e Group*		[	Standard Preser	nce group		~	
					Device	Security Pr	rofile*	[	Cisco 7961G-GE	- Standard SCCP N	on-Secure Pr	rot 🗸	
					SUBSCR	RIBE Callin	ig Search S	pace	< None >			~	
					Unat	ttended Po	rt						
					Requ	uire DTMF	Reception						
					RFC	2833 Disab	oled						
						ication Au ate Operati			Function (CAPF ending Operation	-	*		
					Authent	ication Mod	de*		ull String		·		
					Authent	ication Stri	ing	Dy In	an outling				
						ierate Strir							
						e (Bits)*		1024			~		
					Operatio	on Comple	tes By	2011	10 2 12	(YYYY:MM:DD:HH)			
					Certifica	ate Operati	ion Status:	None					
					Note: Se	ecurity Pro	file Contair	ns Add	ition CAPF Settin	igs.			
					— Expan	ision Mod	ule Inforn	natior	· — — —				
					Module	1	< None	e >			*		
					Module	1 Load Nar	me						
					Module	2	< None	e >			*		
					Module	2 Load Nar	me						
					Exteri Informa		ocations	Infor	nation (Leave	blank to use defa	ult) ———		
					Director	ry							
					Message	es							
					Service	s							
					Authent	ication Ser	rver						

gradie       Disable Speakerphone       Disable Speakerphone and Headset       Forwarding Delay*       PC Port *       Settings Access*       Gratuitous ARP*	Phone Configuration	Related Links: Back To Find/Lis	st
HLPP Information         MLPP Indication*         MLPP Indication*         Default         MLPP Premption*         Default         Do Not Disturb         DND Option*         Use Common Phone Profile Setting         DND Incoming Call Alert         Secure Shell Information         Secure Shell Information         Secure Shell Information         Secure Shell Password         Disable Speakerphone         Disable Speakerphone and Headset         Forwarding Delay*         PC Port *         Settings Access*         Gratuitous ARP*	🔜 Save 🗶 Delete 📄 Copy 👇 Reset 🥢 Appl	Config G Add New	
MLPP Domain < None >   MLPP Indication* Default   MLPP Preemption* Default   Do Not Disturb Default   Do Not Disturb Use Common Phone Profile Setting   DND Option* Use Common Phone Profile Setting   DND Incoming Call Alert < None >   Secure Shell Information    Secure Shell Ner    Secure Shell Ner    Secure Shell Password      Product Specific Configuration Layout   Product Speckerphone   Disable Speakerphone and Headset   Forwarding Delay*   Disabled   Settings Access*   Gratuitous ARP*			
MLPP Domain < None >   MLPP Indication* Default   MLPP Preemption* Default   Do Not Disturb Default   Do Not Disturb Use Common Phone Profile Setting   DND Option* Use Common Phone Profile Setting   DND Incoming Call Alert < None >   Secure Shell Information    Secure Shell Ner    Secure Shell Ner    Secure Shell Password      Product Specific Configuration Layout   Product Speckerphone   Disable Speakerphone and Headset   Forwarding Delay*   Disabled   Settings Access*   Gratuitous ARP*			
MLPP Indication*   Default   WLPP Preemption*   Default   Do Not Disturb   DND Option*   Use Common Phone Profile Setting   DND Incoming Call Alert < None >     Secure Shell Information   Secure Shell User   Secure Shell Password     Product Specific Configuration Layout   Product Specific Configuration Layout   Product Specific Configuration Layout   Product Speakerphone   Disable Speakerphone   Disable Speakerphone   Settings Access*   Gratuitous ARP*			
MLPP Preemption*     Do Not Disturb   Do Not Disturb   DND Option*   Use Common Phone Profile Setting   DND Incoming Call Alert   Secure Shell Information   Secure Shell User   Secure Shell User   Secure Shell Password     Product Specific Configuration Layout   Secure Shell Ver   Secure Shell Password		< NOIG >	
Do Not Disturb   □ Do Not Disturb   DND Option*   Use Common Phone Profile Setting   DND Incoming Call Alert   < None >     Secure Shell Information   Secure Shell User   Secure Shell Password     Product Specific Configuration Layout     P		berdar	
□ Do Not Disturb   DND Option*   Use Common Phone Profile Setting   DND Incoming Call Alert   Secure Shell Information   Secure Shell User   Secure Shell Password     Product Specific Configuration Layout   Product Specific Configuration Layout   I Disable Speakerphone   □ Disabled   ♥ C Port *   Settings Access*   □ Disabled		MLPP Preemption* Default	
□ Do Not Disturb   DND Option*   Use Common Phone Profile Setting   DND Incoming Call Alert   Secure Shell Information   Secure Shell User   Secure Shell Password     Product Specific Configuration Layout   Product Specific Configuration Layout   I Disable Speakerphone   □ Disabled   ♥ C Port *   Settings Access*   □ Disabled		└─ Do Not Disturb ────	
DND Option* Use Common Phone Profile Setting DND Incoming Call Alert None >  Secure Shell Information Secure Shell User Secure Shell Password  Product Specific Configuration Layout Pro			
DND Incoming Call Alert   Secure Shell Information   Secure Shell User   Secure Shell Password     Product Specific Configuration Layout   Product Specific Configuration Layout   I Disable Speakerphone   Disable Speakerphone and Headset   Forwarding Delay*   PC Port *   Settings Access*   Gratuitous ARP*     Disabled			
Secure Shell Information Secure Shell User Secure Shell User Product Specific Configuration Layout Product Specific Configuration Product Specific Configurat			
Secure Shell User Secure Shell Password Product Specific Configuration Layout Product Specific Configuration Layout Disable Speakerphone Disable Speakerphone Disable Speakerphone and Headset Forwarding Delay* PC Port * Settings Access* Enabled Gratuitous ARP* Disabled V			
Secure Shell Password		- Secure Shell Information	
Product Specific Configuration Layout       Param         Disable Speakerphone		Secure Shell User	
Param       Disable Speakerphone       Disable Speakerphone and Headset       Forwarding Delay*       PC Port *       Settings Access*       Gratuitous ARP*		Secure Shell Password	
Param       Disable Speakerphone       Disable Speakerphone and Headset       Forwarding Delay*       PC Port *       Settings Access*       Gratuitous ARP*			
□ Disable Speakerphone         □ Disable Speakerphone and Headset         Forwarding Delay*       Disabled         PC Port *       Enabled         Settings Access*       Enabled         Gratuitous ARP*       Disabled			
Disable Speakerphone and Headset         Forwarding Delay*       Disabled         PC Port *       Enabled         Settings Access*       Enabled         Gratuitous ARP*       Disabled		2 Param	Ove
Forwarding Delay*     Disabled       PC Port *     Enabled       Settings Access*     Enabled       Gratuitous ARP*     Disabled		Disable Speakerphone	
PC Port * Enabled   Settings Access* Enabled   Gratuitous ARP* Disabled		Disable Speakerphone and Headset	
Settings Access*     Enabled       Gratuitous ARP*     Disabled		Forwarding Delay* Disabled	*
Gratuitous ARP*		PC Port * Enabled	*
Gratuitous ARP* Disabled		Settings Access* Enabled	× П
		Gratuitous ARP* Disabled	
PC Voice VLAN Access* Enabled		PC Voice VLAN Access* Enabled	
Video Capabilities* Disabled V			
Auto Line Select* Disabled		Auto Line Select* Disabled	*
Web Access* Disabled		Web Access* Disabled	
Span to PC Port* Disabled V		Span to PC Port* Disabled	~
Logging Display* PC Controlled		Logging Display* PC Controlled	~
Load Server		Load Server	
Recording Tone*		Recording Tone*	~

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.tem ▼ Call Routing ▼ Media Resources ▼ A	dvanced Features   Device   Application   User Management   Bulk Administration	Help 🔻		
one Configuration		Related Links: Back To Fi	nd/List	
Save 🗶 Delete 🗋 Copy 資 Reset	Analy Config			
		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*	Enabled	*	
	Wideband Handset UI Control*	Enabled	~	
	Wideband Headset*	Enabled	~	
	Wideband Handset*	Use Phone Default	~	
	Peer Firmware Sharing*	Enabled	~	
	Cisco Discovery Protocol (CDP): Switch Port*	Enabled	~	
	Cisco Discovery Protocol (CDP): PC Port*	Enabled	~	
	Link Layer Discovery Protocol - Media Endpoint Discover (LLDP-MED): Switch Port*	Enabled	~	
	Link Layer Discovery Protocol (LLDP): PC Port*	Enabled	~	
	LLDP Asset ID			
	LLDP Power Priority*	Unknown	~	
	Display Refresh Rate*	Normal	~	
	IPv6 Load Server			
	IPv6 Log Server			
	802.1× Authentication*	User Controlled	~	
	Detect Unified CM Connection Failure*	Normal	~	
	Minimum Ring Volume*	0-Silent	~	
	Headset Sidetone Level*	Use Phone Default	~	
	HTTPS Server*	http and https Enabled	~	
	Enbloc Dialing*	Enabled	~	
	Switch Port Remote Configuration*	Disabled	~	
	PC Port Remote Configuration*	Disabled	~	



DN Configuration for SCCP Phone

System 👻 Call Routing	✓ Media Re	esources 👻 Ac	vanced Feature	s 👻 Device	<ul> <li>Application</li> </ul>	✓ User Management ✓	Bulk Administration 👻	Help 👻	
Directory Number C	Configurati	ion							Related Links: Configure
Save 🗙 Delete	e 省 Rese	et 🧷 Apply C	onfig 🕂 Ad	ld New					
– Directory Number	Informati	on ———							
Directory Number*	6162								
Route Partition	SJC-Phone	es-PT			~				
Description	Matt Damo	in							
Alerting Name	Matt Damo	n							
ASCII Alerting Name	Matt Damo	n							
Allow Control of D									
Associated Devices	SEP002358								
					Edit De		_		
					Edit	Line Appearance			
	1	<b>~</b> ^							
Dissociate Devices									
- Directory Number	Settings -								
Voice Mail Profile		< None >			*	(Choose <none> to us</none>	e system default)		
Calling Search Space		PSTN-Access			*				
Presence Group*		Standard Pres	ence group		*				
User Hold MOH Audio	Source	< None >			*				
Network Hold MOH Au	idio Source	< None >			*				
Auto Answer*		Auto Answer 0	Off		*				
– AAR Settings –			e Mail	_					
AAR		Voice	e Mail			AAR Destinati	on Mask		<pre>AAR </pre>
_	or			L					< None >
Retain this destir	nation in the	call forwarding	history						
- Call Formuland	Call Dicker	Cottings							
– Call Forward and	сап мскир	_	Voice Mail			Destination			Calling Searc
Calling Search Spac	e Activation	Policy						Us	se Svstem Default



 $\fbox{\sc l} Retain$  this destination in the call forwarding history

Call Forward and Call Pickup Se	ttings			
	Voice Mail	Destination	Ca	lling Search Space
Calling Search Space Activation Poli	су		Use System Default	*
Forward All	or		< None >	♥
Secondary Calling Search Space for	Forward All		< None >	~
Forward Busy Internal	🗹 or		CF-CSS	~
Forward Busy External	✓ or		CF-CSS	~
Forward No Answer Internal	✓ or		CF-CSS	~
Forward No Answer External	✓ or		CF-CSS	~
Forward No Coverage Internal	✓ or		CF-CSS	~
Forward No Coverage External	✓ or		CF-CSS	~
Forward on CTI Failure	or		CF-CSS	~
Forward Unregistered Internal	✓ or		CF-CSS	~
Forward Unregistered External	✓ or		CF-CSS	~
Io Answer Ring Duration (seconds)				
Call Pickup Group	< None >	~		
Park Monitoring				
	Voice Mail	Destination	Calling Sea	rch Space
Park Monitoring Forward No Retrieve Destination External	e 🗌 or		< None > parker's line.	💙 A blank value means to
Park Monitoring Forward No Retrievo Destination Internal	e 🗌 or		<pre></pre>	🖌 A blank value means to
ark Monitoring Reversion Timer 0		A blank value will use value se	t in Park Monitoring Reversion Timer service para	meter

Directory Number Configuration			Related Links: Configure Device
🔚 Save 🗙 Delete	🖉 Apply Config 🕂 Add New		
<ul> <li>MLPP Alternate Party Settings</li> <li>Target (Destination)</li> </ul>			
MLPP Calling Search Space	< None >	*	
MLPP No Answer Ring Duration (sec	onds)		
– Line Settings for All Devices –			
Hold Reversion Ring Duration (seco	nds) 0		Setting the Hold Reversion Ring Duration to zero will disable the feature
Hold Reversion Notification Interval	(seconds) 0		Setting the Hold Reversion Notification Interval to zero will disable the feature
Party Entrance Tone*	Default		
– Line 1 on Device SEP00235E18	EDDC		
Display (Internal Caller ID)	Matt Damon	Displ	ay text for a line appearance is intended for displaying text such as a name instead of a dir
	calls. If you specify a number, the p	erson receiving a call ma	y not see the proper identity of the caller.
ASCII Display (Internal Caller ID)	Matt Damon		
Line Text Label	Matt Damon 6162		
ASCII Line Text Label	Matt Damon 6162		
External Phone Number Mask	408933XXXX		
Visual Message Waiting Indicator Policy*	Use System Policy	*	
Audible Message Waiting Indicator Policy*	Default	~	
Ring Setting (Phone Idle)*	Ring	~	
Ring Setting (Phone Active)	Use System Default	Y Appli	es 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)	Use System Default	~	
Recording Option*	Call Recording Disabled	~	
Recording Profile	< None >	~	
Monitoring Calling Search Space	< None >	~	
✓ Log Missed Calls			

System 👻 Call Routing 👻 Media Reso	urces 👻 Advanced Featu	rres - Device - Application -	User Management 👻 E	∂ulk Administration 👻 Help 💌	
Directory Number Configuration					Related Links: Configure
🔚 Save 🗙 Delete 睯 Reset	🖉 Apply Config	Add New			
Audible Message Waiting Indicator Policy*	Indicator Policy*				
Ring Setting (Phone Idle)*	ne Idle)* Ring				
Ring Setting (Phone Active)	Use System Default	*	Applies to this line wh	en any line on the phone has a c	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 Recording Disable	ed 💌			
Recording Profile	< None >	*			
Monitoring Calling Search Space	< None >	*			
✓ Log Missed Calls					
<ul> <li>Multiple Call/Call Waiting Setti Note:The range to select the Max Nu Maximum Number of Calls*</li> <li>Busy Trigger*</li> </ul>	] (Less than or equal to Max. Call	s)			
Forwarded Call Information Dis     Caller Name	splay on Device SEP0	0235E18EDDC			
Caller Number					
Redirected Number					
☑ Dialed Number					
— Users Associated with Line —					
Associate	End Users				
- Save Delete Reset Ap	pply Config Add Ne	ew			
(i) *- indicates required item.					
(i) **- Changes to Line or Directo	ory Number settings req	uire restart.			



SIP Phone configurations on the Cisco UCM

		tration		Navigation Cisco
	CO For Cisco Unified CM Adminis			
				admin Search Docu
	<ul> <li>Call Routing          <ul> <li>Media Resources</li> <li>Advanced</li> </ul> </li> </ul>	Features	Management 👻 Bulk Administration 👻 Help 👻	
	• Configuration		Rela	ated Links: Back To Find/List
2	Save 🗙 Delete 🗋 Copy 🎦 Reset 🧷 A	pply Config L Add New		
ət	us			
	Status: Ready			
<i>.</i>				
~~	ociation Information	Phone Type		
	Modify Button Items	Product Type: Cisco 9971		
	• <u> <u> <u> </u> <u> </u></u></u>	Device Protocol: SIP		
_	- 1113			
	The [2] - Add a new DN	Registration	Registered with Cisco Unified Communicat	ions Manager 172.20.8.42
	Carl Add a new SD	IP Address	172.20.8.182	
	জ্জ <u>Add a new SD</u>	Active Load ID	sip9971.9-1-2	
	ିଙ୍କ Add a new SD	Inactive Load ID	sip9971.9-0-0-77	
		Download Status	Successful	
	বি <u>ল্ল Add a new SD</u>	Device is Active		
	Unassigned Associated Items	Device is trusted		
	Car Add a new SD		E8BA7006ACA1	
	All Calls	Description	SEPE8BA7006ACA1	
	Add a new BLF Directed Call Park	Device Pool*	SJC-DP-G729	View Details
	- (13	Common Device Configuration	< None >	View Details
	Call Park	Phone Button Template*	Standard 9971 SIP	¥
	Call Pickup CallBack	Common Phone Profile*	Standard Common Phone Profile	~
		Calling Search Space	PSTN-Access	~
	Group Call Pickup	AAR Calling Search Space	< None >	~
	Hunt Group Logout	Media Resource Group List	SJC-MRGL	~
		User Hold MOH Audio Source	1-SampleAudioSource	×
	Malicious Call Identification	Network Hold MOH Audio Source		
	Meet Me Conference	Location*	1-SampleAudioSource	×
	Mobility		Hub_None	×
	Other Pickup	AAR Group	< None >	*
	Quality Reporting Tool	User Locale	English, United States	~
	Redial	Network Locale	United States	~
	Add a new SURL	Built In Bridge*	Default	~
	Add a new BLF SD	Privacy*	Default	*

Cisco Unified CM Admin For Cisco Unified Communications			admin Search Documentati
em ▼ Call Routing ▼ Media Resources ▼ Advan		fanagement ▼ Bulk Administration ▼ Help ▼	
ne Configuration		R	telated Links: Back To Find/List
Save 🗙 Delete 🗋 Copy 🎦 Reset 🧷	Apply Config Add New		
01 <b>7</b>		Locidan	
Answer Oldest Do Not Disturb	Device Mobility Mode* Owner User ID	Default	View Current Device Mobility Settin
Services	Phone Personalization*	Default	 ~
Record	Services Provisioning*	Default	~
Privacy	Phone Load Name		
None	Use Trusted Relay Point*	Default	~
	BLF Audible Alert Setting (Phone Idle) BLF Audible Alert Setting (Phone Busy		<b>~</b>
	Always Use Prime Line*	Default	<b>_</b>
	Always Use Prime Line for Voice Messa		~
	Calling Party Transformation CSS	< None >	~
	Geolocation	< None >	
	Feature Control Policy	< None >	~
	Use Device Pool Calling Party Tran		
	<ul> <li>Ignore Presentation Indicators (into</li> <li>Allow Control of Device from CTI</li> </ul>	crist cana only)	
	Logged Into Hunt Group		
	Remote Device		
	Protected Device****		
	Protocol Specific Information —		
	Packet Capture Mode* No	ne	×
	Packet Capture Duration 0		
		andard Presence group	~
		None >	
		1ulaw sco 9971 - Standard SIP Non-Secure Profile	~
	Rerouting Calling Search Space	None >	~
	SUBSCRIBE Calling Search Space <	None >	~
	SIP Profile*		
For Cisco Unified Communicatio	inistration	andard STP Profile User Management 👻 Bulk Administration 👻 H	admin   Search D
For Cisco Unified Communicatio m  Call Routing  Media Resources  Ad the Configuration	vanced Features   Device   Application		admin Search Do
For Cisco Unified Communicatio	vanced Features       Device      Application      Apply Config      Add New	User Management 👻 Bulk Administration 👻 H	
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For Cisco Unified Communicatio m  Call Routing  Media Resources  Ad the Configuration	Apply Config Add New Certificate Operation * Authentication Mode* By	User Management 👻 Bulk Administration 👻 H	admin Search Do leb • Related Links: Back To Find/List
For Cisco Unified Communicatio m  Call Routing  Media Resources  Ad the Configuration	Apply Config Add New Certificate Operation* Authentication Mode* Authentication String	User Management V Bulk Administration V H Pending Operation	admin Search Do leb • Related Links: Back To Find/List
For Cisco Unified Communicatio em • Call Routing • Media Resources • Ad ne Configuration	inistration ins Solutions vanced Features  Device Application  Application Certificate Operation Authentication Mode Authentication String Generate String	User Management  Bulk Administration  H Pending Operation Null String	admin   Search Do leb • Related Links: Back To Find/List
isco For Cisco Unified Communicatio em • Call Routing • Media Resources • Ad ne Configuration	Authentication Mode* Authentication String Key Size (Bits)*	User Management  Bulk Administration H Pending Operation Null String 24	admin   Search Do leb • Related Links: Back To Find/List
For Cisco Unified Communicatio em • Call Routing • Media Resources • Ad ne Configuration	Apply Config Add New  Apply Config Add New  Certificate Operation* Authentication Mode* By Authentication String Key Size (Bits)* Operation Completes By 207	User Management  Bulk Administration H Pending Operation Null String 24 11 10 12 12 (YYYY:MM:DD:HH)	admin Search Do leip • Related Links: Back To Find/List
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SCO For Cisco Unified Communicatio m  Call Routing  Media Resources  Ad Configuration	Apply Config Add New  Apply Config Add New  Certificate Operation* Authentication Mode* By Authentication String Key Size (Bits)* Operation Status: Non Note: Security Profile Contains A	User Management  Bulk Administration H Pending Operation Null String 24 11 10 12 12 (YYYY:MM:DD:HH) re ddition CAPF Settings.	admin Search D leb • Related Links: Back To Find/List
SCO For Cisco Unified Communicatio m   Call Routing  Media Resources  Advice Configuration	Apply Config Add New Certificate Operation* Authentication Mode* Device String Key Size (Bis)* Operation Completes By Certificate Operation Status: Non Certificate Operation Status: Non	User Management  Bulk Administration H Pending Operation Null String 24 11 10 12 12 (YYYY:MM:DD:HH) re ddition CAPF Settings.	admin Search D relp Related Links: Back To Find/List
SCO For Cisco Unified Communicatio m  Call Routing  Media Resources  Ad the Configuration	Apply Config Add New Certificate Operation* Note: Security Profile Contains A	User Management  Bulk Administration H Pending Operation Null String 24 11 10 12 12 (YYYY:MM:DD:HH) ie ddition CAPF Settings. on	admin Search D relp Related Links: Back To Find/List
SCO For Cisco Unified Communicatio m   Call Routing  Media Resources  Advice Configuration	Apply Config → Add New  Apply Config → Add New  Certificate Operation* No Authentication Mode* By Authentication String Generate String Key Size (Bits)* 10 Operation Completes By Certificate Operation Status: Non Note: Security Profile Contains A  Expansion Module Informati Module 1 < None >	User Management  Bulk Administration H Pending Operation Null String 24 11 10 12 12 (YYYY:MM:DD:HH) ie ddition CAPF Settings. on	admin Search D reb • Related Links: Back To Find/List
SCO For Cisco Unified Communicatio m  Call Routing  Media Resources  Ad Configuration	Apply Config → Add New  Apply Config → Add New  Certificate Operation* No Authentication Mode* By Authentication String Generate String Key Size (Bits)* 10 Operation Completes By 200 Certificate Operation Status: No Note: Security Profile Contains A  Expansion Module Informati Module 1 < None >	User Management  Bulk Administration H Pending Operation Null String 24 11 10 12 12 (YYYY:MM:DD:HH) re ddition CAPF Settings. on	admin Search D reb • Related Links: Back To Find/List
For Cisco Unified Communicatio m • Call Routing • Media Resources • Ad ne Configuration	Apply Config  Add New  Certificate Operation *  Authentication Mode *  Authentication String  Generate String  Key Size (Bits) *  Operation Completes By Certificate Operation Status: Non Note: Security Profile Contains A  Fexpansion Module Informati Module 1  < None >  Module 2 < None >	User Management  Bulk Administration H Pending Operation Null String 24 11 10 12 12 (YYYY:MM:DD:HH) re ddition CAPF Settings. on	admin Search D leip Related Links: Back To Find/List
SCO For Cisco Unified Communicatio m  Call Routing  Media Resources  Ad Configuration	inistration ins Solutions  vanced Features       Device     Application     Certificate Operation     Authentication Mode     Authentication String     Generate String     Key Size (Bits)*     Operation Completes By     Certificate Operation Status: Non     Note: Security Profile Contains A      Expansion Module Informati     Module 1	User Management  Bulk Administration H Pending Operation Null String 24 13 10 12 12 (YYYY:MM:DD:HH) e ddition CAPF Settings. on	admin Search D leip Related Links: Back To Find/List
SCO For Cisco Unified Communicatio m  Call Routing  Media Resources  Ad the Configuration	Apply Config → Add New  Apply Config → Add New  Certificate Operation* No Authentication Mode* By Authentication String Generate String Key Size (Bits)* 100 Operation Completes By 100 Operation Completes By 100 Operation Completes By 100 Operation Status: Non Note: Security Profile Contains A  Expansion Module Informati Module 1 < None > Module 1 Load Name Module 2 < None > Module 2 < None > Module 3 Load Name	User Management  Bulk Administration H Pending Operation Null String 24 13 10 12 12 (YYYY:MM:DD:HH) e ddition CAPF Settings. on	admin Search Dr reip  Related Links: Back To Find/List
SCO For Cisco Unified Communicatio m  Call Routing  Media Resources  Ad the Configuration	Apply Config → Add New  Apply Config → Add New  Certificate Operation* No Authentication Mode*  Certificate Operation String Generate String Key Size (Bite)* Operation Completes By Certificate Operation Status: Non Note: Security Profile Contains A  Expansion Module I formati Module 1 cad Name Module 2 c None > Module 2 cod Name Module 3 c None > Module 3 cod Name  External Data Locations Information	User Management  Bulk Administration H Pending Operation Null String 24 11 10 12 12 (YYYY:MM:DD:HH) te ddition CAPF Settings. on	admin Search D
SCO For Cisco Unified Communicatio m  Call Routing  Media Resources  Adv Configuration	Apply Config → Add New  Apply Config → Add New  Certificate Operation* No Authentication Mode* By Certificate Operation String Generate String Key Size (Bits)* 100 Operation Completes By Certificate Operation Status: Non Note: Security Profile Contains A  Expansion Module Informati Module 1 < None > Module 1 < None > Module 2 < None > Module 2 < None > Module 2 < None > Module 3 < None > Module 3 Load Name	User Management  Bulk Administration H Pending Operation Null String 24 11 10 12 12 (YYYY:MM:DD:HH) te ddition CAPF Settings. on	admin Search D
SCO For Cisco Unified Communicatio m   Call Routing  Media Resources  Advice Configuration	Apply Config  Add New  Apply Config  Add New  Certificate Operation *  Authentication Mode *  Authentication String  Generate String  Key Size (Bits) *  Operation Completes By Certificate Operation Status: Non Note: Security Profile Contains A  Expansion Module Informati Module 1  < None >  Module 2  < None >  Module 2  < None >  Module 2  < None >  Module 3  < None >  Module 3  < None >  External Data Locations Info Information Directory Messages	User Management  Bulk Administration H Pending Operation Null String 24 11 10 12 12 (YYYY:MM:DD:HH) te ddition CAPF Settings. on	admin Search D
SCO For Cisco Unified Communicatio m  Call Routing  Media Resources  Ad Configuration	Apply Config  Add New  Apply Config  Add New  Certificate Operation * No Authentication Mode* By Authentication String Generate String Key Size (Bits)* Operation Completes By 200 Certificate Operation Status: Non Note: Security Profile Contains A  Expansion Module Informati Module 1	User Management  Bulk Administration H Pending Operation Null String 24 11 10 12 12 (YYYY:MM:DD:HH) te ddition CAPF Settings. on	admin Search D
SCO For Cisco Unified Communicatio m   Call Routing  Media Resources  Advice Configuration	Apply Config  Add New  Apply Config  Add New  Certificate Operation* Authentication Mode* By Authentication String Generate String Key Size (Bits)* Operation Completes By Cortificate Operation Status: Non Note: Security Profile Contains A  Expansion Module Informati Module 1	User Management  Bulk Administration H Pending Operation Null String 24 11 10 12 12 (YYYY:MM:DD:HH) te ddition CAPF Settings. on	admin Search D leip  Related Links: Back To Find/List
SCO For Cisco Unified Communicatio m  Call Routing  Media Resources  Ad Configuration	Apply Config → Add New  Apply Config → Add New  Certificate Operation* No Authentication Mode* By Authentication String Generate String Key Size (Bits)* 100 Operation Completes By 200 Certificate Operation Status: Non Note: Security Profile Contains A  Expansion Module Informati Module 1 Cad Name Module 2 < None > Module 2 < None > Module 3 Load Name  External Data Locations Information Directory Messages Services Authentication Server Proxy Server	User Management  Bulk Administration H Pending Operation Null String 24 11 10 12 12 (YYYY:MM:DD:HH) te ddition CAPF Settings. on	admin Search D
SCO For Cisco Unified Communicatio m  Call Routing  Media Resources  Adv Configuration	Apply Config → Add New  Apply Config → Add New  Certificate Operation* No Authentication Mode*  Certificate Operation String Generate String Key Size (Bits)* Operation Completes By Certificate Operation Status: Non Note: Security Profile Contains A  Expansion Module I formati Module 1 Load Name Module 2 < None > Module 2 Load Name Module 3 < None > Module 3 Load Name  External Data Locations Information Directory Messages Services Authentication Server Proxy Server Idle	User Management  Bulk Administration H Pending Operation Null String 24 11 10 12 12 (YYYY:MM:DD:HH) te ddition CAPF Settings. on	admin Search D
SCO For Cisco Unified Communicatio m  Call Routing  Media Resources  Adv Configuration	Apply Config  Add New  Apply Config  Add New  Certificate Operation* Authentication Mode* Authentication String Generate String Key Size (Bits)* Operation Completes By Certificate Operation Status: Non Note: Security Profile Contains A  Expansion Module Informati Module 1  < None > Module 2  < None > Module 3  < None >    External Data Locations Information Directory Messages Services Authentication Server Proxy Server Idle Idle Timer (seconds)	User Management  Bulk Administration H Pending Operation Null String 24 11 10 12 12 (YYYY:MM:DD:HH) te ddition CAPF Settings. on	admin Search D
For Cisco Unified Communicatio m  Call Routing  Media Resources  Ad the Configuration	Apply Config  Add New  Apply Config  Add New  Certificate Operation *  Authentication Mode*  Authentication String  Generate String  Key Size (Bits)*  Operation Completes By Certificate Operation Status: Non Note: Security Profile Contains A  Fexpansion Module Informati Module 1  Certificate Operation Status: Non Note: Security Profile Contains A  Fexpansion Module Informati Module 2  Nodule 2  Cond Name Module 3  Cexternal Data Locations Information Directory Messages Services Authentication Server Proxy Server Idle Idle Timer (seconds) Secure Authentication URL	User Management  Bulk Administration H Pending Operation Null String 24 11 10 12 12 (YYYY:MM:DD:HH) te ddition CAPF Settings. on	admin Search Dr reip  Related Links: Back To Find/List
SCO For Cisco Unified Communicatio m  Call Routing  Media Resources  Ad Configuration	Apply Config  Add New  Apply Config  Add New  Certificate Operation* Authentication Mode* Authentication String Generate String Key Size (Bits)* Operation Completes By Certificate Operation Status: Non Note: Security Profile Contains A  Expansion Module Informati Module 1  < None > Module 2  < None > Module 3  < None >    External Data Locations Information Directory Messages Services Authentication Server Proxy Server Idle Idle Timer (seconds)	User Management  Bulk Administration H Pending Operation Null String 24 11 10 12 12 (YYYY:MM:DD:HH) te ddition CAPF Settings. on	admin Search D Related Links: Back To Find/List





DN Configuration for the SIP Phone

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System 👻	Call Routing	✓ Media R	esources 👻 Advanced Features 👻	Device 👻	Application	✓ User Management ✓	Bulk Administration 👻	Help 👻	
Directory	Number (	Configurati	on						Related Links: Configure De
Save		Res	et 🧷 Apply Config 🖵 Add Nev	v					
- Status -	ıs: Ready								
- Director	ry Number	Informati	on ————						
Directory	Number*	6165							
Route Par	tition	SJC-Phone	es-PT	~					
Descriptio	n	Joe Doe							
Alerting N	ame	Joe Doe							
ASCII Ale	rting Name	Joe Doe							
Allow Q	Control of D	evice from	СТІ						
Associated	d Devices	SEPE8BA7	006ACA1		Edit De Edit	vice ine Appearance			
Dissociate	e Devices		**						
- Director	ry Number	Settings -							
Voice Mail	Profile		Default		*	(Choose <none> to us</none>	e system default)		
Calling Search Space PST		PSTN-Access		*					
Presence Group* Standard Presence group		*							
User Hold MOH Audio Source 1-SampleAudioSource		*							
Network Hold MOH Audio Source 1-SampleAudioSource			*						
Auto Answ	ver*		Auto Answer Off		*				
- AAR Set	tings —								
	-9-		Voice Mail			AAR Destinatio	on Mask		AAR Gro
AAR		or							< None >
🗹 Retai	n this destir	nation in the	call forwarding history						



Cisco Unified Cisco Unified Com	M Administration	n		Nav admin	vigation Cisco Unified CM Administration	
System - Call Routing - Media Resource	ces 👻 Advanced Features 🦷	<ul> <li>Device</li></ul>	t 👻 Bulk Administration 👻 Help	•		
Directory Number Configuration				Related Links: <mark>C</mark>	onfigure Device (SEPE8BA7006ACA1)	
Save X Delete PReset	🖉 Apply Config 🕂 Add N	lew				
	Voice Mail	Destination		Call	ling Search Space	
Calling Search Space Activation Polic	γ.			Use System Default	~	
Forward All	or			CF-CSS	~	
Secondary Calling Search Space for	Forward All			CF-CSS	~	
Forward Busy Internal	or			CF-CSS	×	
Forward Busy External	or			CF-CSS	~	
Forward No Answer Internal	or			CF-CSS	~	
Forward No Answer External	or			CF-CSS	~	
Forward No Coverage Internal	or			CF-CSS	~	
Forward No Coverage External	or			CF-CSS	~	
Forward on CTI Failure	or			CF-CSS	~	
Forward Unregistered Internal	or			CF-CSS	~	
Forward Unregistered External	or			CF-CSS	~	
No Answer Ring Duration (seconds) 2	5					
Call Pickup Group	None >	~				
– Park Monitoring –						
	Voice Mail	Destination		Calling Searc	ch Space	
Park Monitoring Forward No Retrieve Destination External	🗌 or		< None > parker's line.		<ul> <li>A blank value means to call the</li> </ul>	
Park Monitoring Forward No Retrieve Destination Internal	or		<pre></pre> <pre></pre> <pre></pre> <pre></pre> <pre>/ Content of the second se</pre>		A blank value means to call the	
Park Monitoring Reversion Timer A blank value will use value set in Park Monitoring Reversion Timer service parameter						
– MLPP Alternate Party Settings — Target (Destination)						
MLPP Calling Search Space	< None >					
MLPP No Answer Ring Duration (secon	ds)					

Line 1 on Device SEPE8BA7006ACA	1	
Display (Internal Caller ID)	Joe Doe	Display text for a line appearance is intended for displaying text such as a name instead of a directory number for inter
	specify a number, the person receiving a ca	II may not see the proper identity of the caller.
ASCII Display (Internal Caller ID)	Joe Doe	
Line Text Label	Joe Doe	
ASCII Line Text Label	Joe Doe	
External Phone Number Mask	4089336165	
Visual Message Waiting Indicator Policy*	Use System Policy	M
Audible Message Waiting Indicator Policy*	Default	V
Ring Setting (Phone Idle)*	Use System Default	V
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)	Use System Default	M
Recording Option*	Call Recording Disabled	✓
Recording Profile	< None >	▼
Monitoring Calling Search Space	< None >	▼
✓ Log Missed Calls		
– Multiple Call/Call Waiting Settings of	on Device SEPE8BA7006ACA1	
Note:The range to select the Max Nu		
Maximum Number of Calls*	4	
Busy Trigger*	2	(Less than or equal to Max. Calls)
- Forwarded Call Information Display	on Device SEPE8BA7006ACA1	
Caller Name		
Caller Number		
Redirected Number		

Redirected Number
 Dialed Number

#### **Cisco IOS Gateway Configurations**

Cisco Unified Border Element Configuration on the ASR

CUBE-ASR1K\_Vz\_151#show ver Cisco IOS Software, IOS-XE Software (PPC\_LINUX\_IOSD-ADVENTERPRISEK9-M), Version 15.1(2)S1, RELEASE SOFTWARE (fc2) Technical Support: http://www.cisco.com/techsupport Copyright (c) 1986-2011 by Cisco Systems, Inc. Compiled Wed 01-Jun-11 04:09 by mcpre

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#### ROM: IOS-XE ROMMON

CUBE-ASR1K\_Vz\_151 uptime is 5 weeks, 2 days, 19 hours, 48 minutes Uptime for this control processor is 5 weeks, 2 days, 19 hours, 50 minutes System returned to ROM by reload System image file is "bootflash:asr1000rp1-adventerprisek9.03.03.01.S.151-2.S1.bin" Last reload reason: Reload Command This product contains cryptographic features and is subject to United States and local country laws governing import, export, transfer and use. Delivery of Cisco cryptographic products does not imply third-party authority to import, export, distribute or use encryption. Importers, exporters, distributors and users are responsible for compliance with U.S. and local country laws. By using this product you agree to comply with applicable laws and regulations. If you are unable to comply with U.S. and local laws, return this product immediately.

A summary of U.S. laws governing Cisco cryptographic products may be found at: http://www.cisco.com/wwl/export/crypto/tool/stqrg.html

If you require further assistance please contact us by sending email to export @cisco.com.

```
cisco ASR1002 (2RU) processor with 1703423K/6147K bytes of memory.
4 Gigabit Ethernet interfaces
32768K bytes of non-volatile configuration memory.
4194304K bytes of physical memory.
7798783K bytes of eUSB flash at bootflash:.
Configuration register is 0x2102
CUBE\text{-}ASR1K\_Vz\_151\#show\,run
Building configuration ...
Current configuration : 8863 bytes
1
! Last configuration change at 12:34:31 UTC Fri Sep 9 2011
!
version 15.1
service timestamps debug datetime msec
service timestamps log datetime msec
no plat form punt-keepalive disable-kernel-core
1
hostname CUBE-ASR1K_Vz_151
1
boot-start-marker
boot system bootflash:asr1000rp1-adventerprisek9.03.03.01.S.151-2.S1.bin
boot-end-marker
!
vrf definition Mgmt-intf
address-family ipv4
exit-address-family
address-family ipv6
exit-address-family
logging buffered 20000000
logging console errors
enable password cisco
1
no aaa new-model
!
ipc zone default
association 1
 no shutdown
1
ip source-route
1
!
!
ip domain name ciscolab.globalipcom.com
ip name-server 172.30.218.36
1
!
!
```

```
!
multilink bundle-name authenticated
1
voice service voip
allow-connections sip to sip
no supplementary-service sip refer
redirect ip2ip
sip
header-passing error-passthru
 asserted-id pai
localhost dns:gwl.ciscolab.globalipcom.com
 early-offer forced
 midcall-signaling passthru
 privacy-policy passthru
 g729 annexb-all
no call service stop
1
voice class sip-profiles 1
response ANY sip-header Allow-Header modify "invite, options, bye, cancel, ack, prack, update, refer, subscribe, notify, info,
register" "invite, bye, cancel, ack, prack, subscribe, notify, info, register"
response 183 sip-header Allow-Header modify "ACK, BYE, CACEL, INFO, INVITE, OPTIONS, PRACK, REFER, NOTIFY"
"ACK, BYE, CANCEL, INFO, INVITE, PRACK, REFER, NOTIFY"
response ANY sip-header Allow-Header modify "INVITE, OPTIONS, BYE, CACEL, ACK, PRACK, UPDATE, REFER,
SUBSCRIBE, NOTIFY, INFO, REGISTER" "INVITE, BYE, CACEL, ACK, PRACK, SUBSCRIBE, NOTIFY, INFO,
REGISTER"
voice class sip-profiles 2
request REINVITE sdp-header Audio-Attribute modify "inactive" "sendrecv"
request REINVITE sdp-header Audio-Attribute modify "sendonly" "sendrecv"
request ACK sdp-header Audio-Attribute modify "sendonly" "sendrecv"
response 200 sdp-header Audio-Attribute modify "sendonly" "sendrecv"
1
1
1
voice translation-rule 1
rule 1 /71//1\1/
!
voice translation-rule 2
rule 1 /^84089550468/ /14089550468/
!
voice translation-rule 7
rule 1 /71/ /1 \1/
1
!
voice translation-profile Outgoing-Fax-G711
translate called 1
!
voice translation-profile RICUBcallingnum
translate calling 2
translate called 2
```

```
!
!
redundancy
mode none
1
1
!
no ip ftp passive
ip ftp username cisco
ip ftp password cisco
1
interface GigabitEthernet0/0/0
ip address 172.20.110.151 255.255.255.0
negotiation auto
!
interface GigabitEthernet0/0/1
no ip address
standby delay minimum 30 reload 60
standby version 2
standby 1 priority 50
standby 1 track 1 decrement 10
shut down
negotiation auto
bfd interval 500 min_rx 500 multiplier 3
!
interface GigabitEthernet0/0/2
no ip address
shut down
negotiation auto
1
interface GigabitEthernet0/0/3
no ip address
shut down
negotiation auto
1
interface GigabitEthernet0
vrf forwarding Mgmt-intf
no ip address
shutdown
negotiation auto
!
ip default-gateway 172.20.110.1
ip forward-protocol nd
no ip http server
no ip http secure-server
ip route 172.20.0.0 255.255.0.0 172.20.110.1
ip route 172.30.218.0 255.255.255.0 172.20.110.150
logging esm config
1
tftp-server flash:
```

#### 111111 CISCO.

```
control-plane
1
1
dial-peer voice 9000 voip<sup>1</sup>
description to SP facing
destination-pattern .....
session protocol sipv2
session target sip-server
session transport udp
voice-class sip asserted-id pai
dtmf-relay rtp-nte
fax protocol pass-through g711ulaw
1
dial-peer voice 9001 voip<sup>2</sup>
description Incoming to SME - SME facing
destination-pattern 408933....
session protocol sipv2
session target ipv4:172.20.8.41
session transport tcp
dtmf-relay rtp-nte
codec g711ulaw
fax protocol pass-through g711ulaw
no vad
1
dial-peer voice 577 voip
description Outbound to Fax Machines
destination-pattern 408577....
session protocol sipv2
session target sip-server
session transport udp
incoming called-number 408577....
codec g711ulaw
fax protocol pass-through g711ulaw
1
dial-peer voice 3470 voip<sup>3</sup>
description To Fax Machines towards SME
shut down
destination-pattern 40893334..
session protocol sipv2
session target ipv4:172.20.8.41
session transport udp
incoming called-number 40893334..
codec g711ulaw
fax protocol pass-through g711ulaw
!
```

<sup>1</sup> Outbound dialpeer towards service provider

<sup>2</sup> Outbound dialpeer towards SME. CUBE sends all the 10 digits to SME for centralized dialplan resolution

<sup>3</sup> Outbound dialpeer towards fax machine gateway behind the SME (refer topology diagram for details)

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dial-peer voice 408 voip<sup>4</sup> description To SP 7-digit dialing - SP facing destination-pattern ...... session protocol sipv2 session target sip-server session transport udp voice-class sip asserted-id pai dtmf-relay rtp-nte codec g711ulaw fax protocol pass-through g711ulaw dial-peer voice 9003 voip<sup>5</sup> description Fax calls using G.711u - SP facing translation-profile outgoing Outgoing-Fax-G711 destination-pattern 71..... session protocol sipv2 session target sip-server voice-class sip early-offer forced dtmf-relay rtp-nte codec g711ulaw fax protocol pass-through g711ulaw 1 dial-peer voice 9900 voip<sup>6</sup> description to SP - SME facing session protocol sipv2 session transport udp incoming called-number ..... voice-class sip asserted-id pai dtmf-relay rtp-nte codec g711ulaw fax protocol pass-through g711ulaw no vad 1 dial-peer voice 9901 voip7 description Incoming to SME - SP facing session protocol sipv2 session transport tcp incoming called-number 408933.... dtmf-relay rtp-nte codec g711ulaw fax protocol pass-through g711ulaw no vad ! dial-peer voice 4408 voip description To SP 7-digit dialing - SME facing session protocol sipv2 session transport udp incoming called-number ......

- <sup>4</sup> Dialpeer for 7 digit dialing towards the SP
- <sup>5</sup> Dialpeer for Fax calls using G.711u SP facing
- <sup>6</sup> Incoming dialpeer SME facing
- <sup>7</sup> Incoming dialpeer SP facing

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dtmf-relay rtp-nte fax protocol pass-through g711ulaw dial-peer voice 9004 voip8 description To SP - International calls - SP facing destination-pattern 011T session protocol sipv2 session target sip-server session transport udp voice-class sip early-offer forced dtmf-relay rtp-nte codec g711ulaw fax protocol pass-through g711ulaw 1 dial-peer voice 9904 voip9 description To SP International calls - SME facing session protocol sipv2 session target sip-server session transport udp incoming called-number 011T dtmf-relay rtp-nte codec g711ulaw fax protocol pass-through g711ulaw ! dial-peer voice 1800 voip10 destination-pattern 1800...... session protocol sipv2 session target sip-server session transport udp voice-class sip asserted-id pai dtmf-relay rtp-nte codec g711ulaw fax protocol pass-through g711ulaw no vad 1 dial-peer voice 7 voip11 session protocol sipv2 session target sip-server session transport udp incoming called-number 71..... voice-class sip asserted-id pai dtmf-relay rtp-nte fax protocol t38 version 0 ls-redundancy 0 hs-redundancy 0 fallback none no vad 1 1 sip-ua

set pstn-cause 1 sip-status 503

<sup>8</sup> International dialing dialpeer towards the SP

<sup>9</sup> Incoming dialpeer for international calls from the SME

<sup>10</sup> Toll free dialing dialpeer

<sup>11</sup> Incoming fax dialpeer SME facing

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```
set pstn-cause 102 sip-status 503
retry invite 2
retry bye 2
retry cancel 2
timers trying 1000
sip-server ipv4:172.30.218.49:5147
g729-annexb override
!
line con 0
password cisco
login
stopbits 1
line aux 0
stopbits 1
line vty 0 4
password cisco
login
!
end
```



IOS MTP and Hardw are CFB Configuration

MSFT-GW2#show ver Cisco IOS Software, C2900 Software (C2900-UNIVERSALK9-M), Version 15.1(3)T1, RELEASE SOFTWARE (fc2) Technical Support: http://www.cisco.com/techsupport Copyright (c) 1986-2011 by Cisco Systems, Inc. Compiled Sun 27-Mar-11 07:36 by prod\_rel\_team

ROM: System Bootstrap, Version 15.0(1r)M9, RELEASE SOFT WARE (fc1)

MSFT-GW2 uptime is 3 weeks, 6 days, 1 hour, 49 minutes System returned to ROM by reload at 18:30:00 UTC Tue Aug 30 2011 System image file is "flash0:c2900-universalk9-mz.SPA.151-3.T1.bin" Last reload type: Normal Reload Last reload reason: Reload Command

Cisco CISCO2921/K9 (revision 1.0) with 999392K/49152K bytes of memory. Processor board ID FTX1448AH5X 3 Gigabit Ethernet interfaces 2 Channelized E1/PRI ports 2 Channelized (E1 or T1)/PRI ports DRAM configuration is 64 bits wide with parity enabled. 255K bytes of non-volatile configuration memory. 4099032K bytes of ATA System CompactFlash 0 (Read/Write)

License Info:

License UDI:

 Device#
 PID
 SN

 \*0
 CISCO2921/K9
 FTX1448AH5X

Technology Package License Information for Module:'c2900'

Technology Technology-package Technology-package Current Type Next reboot

ipbase ipbasek9 Permanent ipbasek9 security None None None uc uck9 Permanent uck9 data None None None

Configuration register is 0x2102

MSFT-GW2#show run

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Building configuration ...

```
Current configuration : 8733 bytes
1
! Last configuration change at 20:55:39 UTC Thu Sep 1 2011
!
version 15.1
service timestamps debug datetime msec
service timestamps log datetime msec
no service password-encryption
service sequence-numbers
!
hostname MSFT-GW2
!
boot-start-marker
boot system flash0:c2900-universalk9-mz.SPA.151-3.T1.bin
boot-end-marker
1
!
card type e1 0 0
! card type command needed for slot/vwic-slot 1/1
logging buffered 999999
enable secret 5 $1$400b$0Kzn2HUoop0OL64b91spK.
enable password cisco
١
no aaa new-model
network-clock-participate slot 1
network-clock-participate wic 0
1
no ipv6 cef
ip source-route
ip cef
!
ip dhcp pool 3
 dns-server 172.20.2.181
  default-router 172.20.8.1
 lease 2
!
!
no ip domain lookup
multilink bundle-name authenticated
1
isdn switch-type primary-4ess
1
crypto pki token default removal timeout 0
!
crypto pki trustpoint TP-self-signed-3443052460
enrollment selfsigned
subject-name cn=IOS-Self-Signed-Certificate-3443052460
revocation-check none
!
```

```
crypto pki certificate chain TP-self-signed-3443052460
certificate self-signed 01
3082022B 30820194 A0030201 02020101 300D0609 2A864886 F70D0101 04050030
 31312F30 2D060355 04031326 494F532D 53656C66 2D536967 6E65642D 43657274
 69666963 6174652D 33343433 30353234 3630301E 170D3131 30383330 31383332
 32345A17 0D323030 31303130 30303030 305A3031 312F302D 06035504 03132649
4F532D53 656C662D 5369676E 65642D43 65727469 66696361 74652D33 34343330
 35323436 3030819F 300D0609 2A864886 F70D0101 01050003 818D0030 81890281
 8100B84F A83B31D6 4CCB9507 199B0675 21042C87 3AC072A1 A9B87146 B33A81B9
 71449C3A 8640E523 F2E51F5C 53DA8844 25CD60F4 173A27B2 9FE5D4D0 FC6B2086
 CB52FBE7 5B75DBBA 6B0A522C 3FD88D1A 5ABE950D A0E334B8 5DC5C7E4 874CD72B
 51A60F19 F935309C DE7146C1 F5EAAFC2 A0B0DC7D 7FF195DD 6105967F 8EB1ABE8
 79510203 010001 A3 53305130 0F060355 1D130101 FF040530 030101 FF 301F0603
 551D2304 18301680 14519620 E52CD148 41A6D69B 8EFEEA88 00ED3CA7 E7301D06
 03551D0E 04160414 519620E5 2CD14841 A6D69B8E FEEA8800 ED3CA7E7 300D0609
 2A864886 F70D0101 04050003 81810076 D12A4112 963CACAA 59657B51 EA051F2F
 4555E4162FDF32DF98D031A017C88DBB8ADBD8D90770062B2295D3157E38C18F
 B4C0CCF6 2555CA47 20D09D2B CED701F9 445AD9B3 322783C8 736F1CEE F2AC2F59
 823B4C75 5985F137 2A1B77AB 8B6007CE 4FC2C29C 228A3BB2 F0B841B8 5CFA5201
EAEDB235 E35340FD B79542E7 8D754F
        Quit
1
voice-card 0
dspfarm
dsp services dspfarm<sup>12</sup>
voice service pots
map q850-cause 47 release-source all tone 1
supplementary-service qsig call-forward
supplementary-service qsig mwi release-call
fax rate disable
voice service voip
ip address trusted list
ipv4 172.20.8.38
ipv4 172.20.8.30
 ipv4 172.20.8.59
 ipv4 172.20.8.85
ipv4 172.20.8.98
ip address trusted call-block cause dest-unroutable
sip
1
voice class h323 2
h225 timeout connect 60
h225 timeout call-proceeding 5
h225 timeout ntf 5000
h225 display-ie ccm-compatible
call start fast
 call preserve limit-media-detection
 h245 caps suppress nte
```

<sup>12</sup> Enabling DSP sharing and DSp farm services

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```
telephony-service ccm-compatible
icense udi pid CISCO2921/K9 sn FTX1448AH5X
hw-module pvdm 0/0
1
!
redundancy
1
!
controller E1 0/0/0
shut down
1
controller E1 0/0/1
interface GigabitEthernet0/0
description $ETH-LAN$$ETH-SW-LAUNCH$$INTF-INFO-GE 0/0$
bandwidth 1000000
ip address 172.20.8.58 255.255.255.0
duplex auto
speed auto
1
interface GigabitEthernet0/1
no ip address
shut down
duplex auto
speed auto
١
interface GigabitEthernet0/2
no ip address
shut down
duplex auto
speed auto
ip default-gateway 172.20.8.1
ip forward-protocol nd
ip http server
ip http access-class 23
ip http authentication local
ip http secure-server
ip http timeout-policy idle 60 life 86400 requests 10000
ip route 0.0.0.0 255.255.255.0 172.20.8.1
ip route 0.0.0.0 255.255.255.255 GigabitEthernet0/0
ip route 172.20.8.1 255.255.255.255 GigabitEthernet0/0
1
access-list 23 permit 10.10.10.0 0.0.0.7
1
!
!
control-plane
!
ccm-manager fallback-mgcp
ccm-manager mgcp
```

#### CISCO.

```
no ccm-manager fax protocol cisco
ccm-manager music-on-hold
mgcp
mgcp call-agent 172.20.8.38 2427 service-type mgcp version 0.1
mgcp rtp unreachable timeout 1000 action notify
mgcp modem passthrough voip mode nse
mgcp package-capability rtp-package
mgcp package-capability sst-package
mgcp package-capability pre-package
no mgcp package-capability res-package
no mgcp timer receive-rtcp
mgcp sdp simple
mgcp fax t38 inhibit
1
mgcp profile default
!
sccp local GigabitEthernet0/0
sccp ccm 172.20.8.42 identifier 11 version 7.0 <sup>13</sup>
sccp ccm 172.20.8.41 identifier 1 priority 1 version 7.0 <sup>14</sup>
sccp
!
sccp ccm group 11
associate ccm 11 priority 1
associate profile 11 register CONF-VGW3
!
sccp ccm group 1
associate ccm 1 priority 1
associate profile 1 register XCODE-SJC
associate profile 2 register IOS-MTP-SJC
associate profile 3 register IOS-MTP-SJ-G711
associate profile 7 register G729-Soft
!
dspfarm profile 1 transcode <sup>15</sup>
codec g729r8
codec g711ulaw
codec g711alaw
maximum sessions 6
associate application SCCP
dspfarm profile 4 transcode
description CME XCODER
codec g711ulaw
codec g711alaw
codec g729ar8
codec g729abr8
maximum sessions 2
associate application SCCP
shut down
```

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 <sup>&</sup>lt;sup>13</sup> For resources registering to the CUCM
 <sup>14</sup> For resources registering to the SME

<sup>&</sup>lt;sup>15</sup> Transcoder resources

#### 111111 CISCO.

! dspfarm profile 11 conference <sup>16</sup> codec g711ulaw codec g711alaw codec g729ar8 codec g729abr8 codec g729r8 codec g729br8 codec g722-64 maximum conference-participants 16 maximum sessions 1 associate application SCCP ! dspfarm profile 2 mtp  $^{17}$ codec g711ulaw maximum sessions software 200 associate application SCCP ! dspfarm profile 3 mtp description SJC G711 MTP codec g711ulaw maximum sessions software 200 shutdown ! dspfarm profile 7 mtp codec g711ulaw maximum sessions software 10 associate application SCCP 1 dspfarm profile 8 mtp codec g711ulaw shut down 1 dial-peer voice 778 voip mailbox-selection orig-called-num session protocol sipv2 ! ! 1 gatekeeper shut down ! 1 telephony-service srst mode auto-provision none srst ephone description SRST .. Welcome .. : May 19 2011 19:02:06 srst dn line-mode octo max-ephones 20 max-dn 20 no-reg both ip source-address 172.20.8.58 port 2000

<sup>16</sup> Conference bridge <sup>17</sup> Software MTP

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```
max-conferences 8 gain -6
transfer-system full-consult
!
!
ephone-dn-template 1
call-waiting ring
caller-id block
huntstop channel 2
!
!
ephone-template 1
max-calls-per-button 2
speed-dial 1 2003 label "SIP-CME-2003"
speed-dial 2 2004 label "SIP-CME-2004"
!
!
line con 0
password cisco
login
line aux 0
```

Fax Gateway Configuration

show ver Cisco IOS Software, 2800 Software (C2800NM-IPVOICEK9-M), Version 15.0(1)M4, RELEASE SOFTWARE (fc1) Technical Support: http://www.cisco.com/techsupport Copyright (c) 1986-2010 by Cisco Systems, Inc. Compiled Thu 28-Oct-10 17:09 by prod\_rel\_team

ROM: System Bootstrap, Version 12.4(1r) [hqluong 1r], RELEASE SOFTWARE (fc1)

Cisco 2811 (revision 53.50) with 249856K/12288K bytes of memory. Processor board ID FTX1040A1LY 2 FastEthemet interfaces 2 Voice FXS interfaces DRAM configuration is 64 bits wide with parity enabled. 239K bytes of non-volatile configuration memory. 125440K bytes of ATA CompactFlash (Read/Write)

License Info:

License UDI:

 Device#
 PID
 SN

 \*0
 CISCO2811
 FTX1040A1LY

Configuration register is 0x2102

IOSGW#show run Building configuration...

Current configuration : 5053 bytes
!
! Last configuration change at 00:50:39 UTC Thu Sep 8 2011
!
version 15.0
service timestamps debug uptime
service timestamps log datetime msec
no service password-encryption
service linenumber
!
hostname IOSGW
!
boot-start-marker
boot-end-marker

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```
!
logging buffered 900000
enable password cisco
!
no aaa new-model
1
dot11 syslog
ip source-route
ip cef
1
!
no ip domain lookup
no ipv6 cef
multilink bundle-name authenticated
!
!
voice service voip
h323
sip
!
voice class codec 1
codec preference 1 g729r8
codec preference 2 g711ulaw
!
!
1
voice translation-rule 1
rule 1 /^9/ /8/
1
voice translation-rule 2
rule 2 /^.*\(....\)/ /732216\1/
!
!
voice translation-profile NPA
translate calling 2
!
!
voice-card 0
dspfarm
dsp services dspfarm
!
license udi pid CISCO2811 sn FTX1040A1LY
archive
log config
 hidekeys
username cisco privilege 15 secret 5 $1$11WY$fwla1ooHsE/ORF20GsQFz.
1
interface FastEthernet0/0
ip address 172.20.109.201 255.255.255.0
duplex auto
speed auto
!
```

```
interface FastEthernet0/1
no ip address
shut do wn
duplex auto
speed auto
1
ip forward-protocol nd
no ip http server
no ip http secure-server
ip route 0.0.0.0 0.0.0.0 172.16.100.1
ip route 0.0.0.0 0.0.0.0 172.20.109.1
1
!
!
!
control-plane
!
!
voice-port 0/0/0
time outs ringing infinity
station-id name FAX-GW1
station-id number 4089333473
!
voice-port 0/0/1
timeouts ringing infinity
station-id name 4089336163
station-id number 4089333474
!
!
no mgcp package-capability res-package
no mgcp package-capability fxr-package
no mgcp timer receive-rtcp
!
dial-peer voice 2715 pots
destination-pattern 4089336164
port 0/0/0
forward-digits 0
!
dial-peer voice 2717 pots
destination-pattern 4089336163
port 0/0/1
forward-digits 0
!
dial-peer voice 711 voip<sup>18</sup>
description outgoing call to International
destination-pattern 7011T
translate-outgoing calling 2
session protocol sipv2
session target ipv4:172.20.8.42
incoming called-number 27..
```

<sup>18</sup> International fax calling

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```
dtmf-relay rtp-nte
playout-delay nominal 80
playout-delay mode fixed
codec g711ulaw
no vad
!
dial-peer voice 7 voip<sup>19</sup>
destination-pattern 71......
session protocol sipv2
session target ipv4:172.20.8.42
incoming called-number 347.
dtmf-relay rtp-nte
fax-relay sg3-to-g3
fax rate 14400
fax protocol t38 ls-redundancy 0 hs-redundancy 0 fallback none
no vad
!
dial-peer voice 3473 pots
destination-pattern 3473
port 0/0/0
!
dial-peer voice 3474 pots
destination-pattern 3474
port 0/0/1
1
!
sip-ua
protocol mode ipv4
1
1
line con 0
exec-timeout 610 0
password cisco
login
line aux 0
line vty 0 4
exec-timeout 00
password cisco
login
!
scheduler allocate 20000 1000
end
```

```
IOSGW#
```

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<sup>&</sup>lt;sup>19</sup> Longdistance and local fax calling



#### Acronyms

Acronym	Definition
Lync	Lync 2010 Server
DTMF	Dual Tone Multi Frequency
SIP	Session Initiation Protocol
SDP	Session Description Protocol
B2BUA	Business to business User Agent
OITT	Open Interoperability Test Tool
UC-OIP	Microsoft Unified Communications Open Interoperability Program
UC	Unified Communications; also referenced in this document as to a user who is enabled for voice on Lync Server 2010 (i.e. "UC enabled")
LyncIT	Lync server 2010 Interoperability Test Tool
ТСР	Transmission Control Protocol
TLS	Transport Layer Security
GW	Gateway
S/W	Software
DB	Database



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Printed in the USA