

Configuring Cisco Unified Communications Manager with Comrex STAC-VIP

WWW. TX.CO.UK



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INTRODUCTION

This guide assumes you are starting with a clean install of Cisco UCM (refer to [1], [2] or [3] for installation details) and a STAC-VIP in its factory-default state. STAC-VIP should be running firmware version 1.1p4 or newer and both CUCM and STAC-VIP Mainframe should have static IP addresses assigned. In this guide we set up a basic lab test scenario which allows calls to be made from hardware IP phones or softphones to STAC-VIP via CUCM. CUCM is a very flexible and complex product; you are encouraged to refer to [4], [5] or [6] and / or your Cisco support contact for assistance in developing the configuration which best suits your requirements.

The officially-supported browsers and operating systems for the CUCM 10 web control panel are as follows:

Internet Explorer 8, Internet Explorer 9 (Windows XP, Windows Vista, Windows 7)

Firefox 4.x, Firefox 10.x (Windows XP, Windows Vista, Windows 7, OSX)

Safari 5.x (OSX)

PRELIMINARY STEPS

Enable All Services on CUCM

a) Browse to the IP address of your CUCM installation and click on Cisco Unified Communications Manager; ignore any errors caused by the server's certificate not being trusted by your browser (in Internet Explorer, click 'Continue to this website (not recommended).').

cisco
Installed Applications
Cisco Unified Communications Manager Oisco Unified Communications Self Care Portal Cisco Prime License Manager
Cryptographic Features
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://tools.cisco.com/legal/export/pepd/Search.do
If you require further assistance please contact us by sending email to export@cisco.com.

b) In the Navigation drop-down at the top-right of the screen, select Cisco Unified Serviceability and click Go. Then enter the credentials set up when installing the server in the Username and Password fields and click Login.



c) In the top menu, click Tools, Service Activation. If asked to select a server, choose the CUCM server you wish to configure from the drop-down menu and click Go.

Service /	Activation	
Server*	Server hq-cucm-pubCUCM Voice/Video	✔ Go

d) Check the Check All Services box, click Save and OK in the warning dialog. Wait a few minutes for the 'Loading, please wait.' message to disappear and the page to refresh, at which point all services should show an Activation Status of Activated.

Service Activation
🔚 Save 🤣 Set to Default 🔇 Refresh
Status:
Select Server Server* hq-cucm-pubCUCM Voice/Video V Go I Check All Services

e) In the Navigation drop-down at the top-right of the screen, select Cisco Unified CM Administration and click Go.

CONNECTING STAC-VIP TO CUCM

Add a Phone Security Profile for STAC-VIP

a) In the top menu, click System, Security, Phone Security Profile. In the 'Find Phone Security Profile where' filter, select Name, begins with, enter 'Third-party' (without quotes) in the empty field and click Find.

cisco	Cisco Unified CM Administration	Navigation Cisco Unified CM Administration	✔ Go
	For cisco onnieu communications solutions	administrator Search Documentation About	Logout
System 👻	Call Routing ▼ Media Resources ▼ Advanced Features ▼ Device ▼ Application ▼	v User Management ▼ Bulk Administration ▼ Help ▼	
Find and	List Phone Security Profiles		
Add N	ew 🔛 Select All 🔛 Clear All 💥 Delete Selected		
- Status -			
(i) 3 red	ords found		
Phone 9	Security Profile (1 - 3 of 3)	Rows per Page 50	\sim
Find Phon	e Security Profile where Name V begins with V Third-party	Find Clear Filter	
	Name [*]	Description	Сору
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T	ird-party SIP Device Advanced - Standard SIP Non-Secure Profile	Third-party SIP Device (Advanced) - Standard SIP Non-Secure Profile	ß
T	ird-party SIP Device Basic - Standard SIP Non-Secure Profile	Third-party SIP Device (Basic) - Standard SIP Non-Secure Profile	ß
Add Ne	w Select All Clear All Delete Selected		

- b) Click the Copy icon next to Third-party SIP Device Advanced Standard SIP Non-Secure Profile.
- c) Enter the following information on the Phone Security Profile Configuration screen and click Save. You should see Status: Add successful.

Name: Third-party SIP Device Advanced - Digest Authentication Description: Third-party SIP Device (Advanced) - Digest Authentication Enable Digest Authentication: Checked

CISCO For Cisco	Unified CM Administration o Unified Communications Solutions							
System - Call Routing	✓ Media Resources ✓ Advanced Features ✓ Device ✓ A	pplication 👻						
Phone Security Prof	file Configuration							
Save								
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- Phone Security Pr	ofile Information —							
Product Type:	Third-party SIP Device (Advanced)							
Device Protocol:	SIP							
Name	hird-party SIP Device Advanced - Digest Authentication							
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Transport Type*	TCP+UDP V							
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SIP Phone Port* 506								
Save								

Add an End User for STAC-VIP

a) In the top menu, click User Management, End User, then click Add New.

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System 👻	Call Routing 👻	Media Resources	✓ Advanced Features ▼	Device 🔻	Application -	User Manager	ment 👻	Bulk Administration 👻	Help	-		
Find and I	List Users											
🕂 Add N	lew											
User												
Find User	where First n	ame	✓ begins with ✓			Find Clea	r Filter	ф —				
			No active	query. Plea	ase enter your	search criteria	using th	ne options above.				
Add Net	W											

b) Enter the following information on the End User Configuration screen and click Save. You should see Status: Add successful.

User ID: stacvip

Password: P@ssw0rdOfYourChoice [or any other password of your choice]
Confirm Password: P@ssw0rdOfYourChoice [must match Password]
Last name: STAC-VIP
Digest Credentials: P@ssw0rdOfYourChoice [or any other password of your choice]

Confirm Digest Credentials: P@ssw0rdOfYourChoice [must match Digest Credentials]

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System 👻 Call Routing 👻	Media Resources • Advanced Features • Device • Application • User Management •
End User Configuratior	
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— Status ———	
i Status: Ready	
User Information —	
User Status	Enabled Local User
User ID*	stacvip
Password	•••••
Confirm Password	•••••
Self-Service User ID	
PIN	
Confirm PIN	
Last name*	STAC-VIP
Middle name	
First name	
Title	
Directory URI	
Telephone Number	
Home Number	
Mobile Number	
Pager Number	
Manager User ID	
Department	
User Locale	< None >
Associated PC	
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Confirm Digest Credentia	als
User Profile	Use System Default("Standard (Factory Default) L 🗸 View Details

Add a Phone for STAC-VIP

a) In the top menu, click Device, Phone, then click Add New.

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🕂 Add N	lew														
Phone															
Find Phone	e where Dev	rice Name	✓ begins with	▼ Select	t item or enter	Find C	lear F	filter 🚭							
			No active	query. Plea	ase enter your	search criteria u	using t	he options	above.						
Add Ne	W														

- b) In the Phone Type drop-down, select Third-party SIP Device (Advanced) and click Next.
- c) Enter the following information on the Phone Configuration screen and click Save, then OK in the dialog prompting you to apply the configuration. You should see Status: Add successful.

MAC Address: This field is actually ignored in our setup and can be any unique 12-digit hex number (0-9, A-F) without punctuation; the actual MAC address of your STAC-VIP mainframe can be determined by running the Comrex Device Manager application [7], clicking Scan for Devices and noting the entry in the MAC Address column alongside STAC-VIP Mainframe Description: STAC-VIP Device Pool: Default Phone Button Template: Third-party SIP Device (Advanced) Owner User ID: stacvip [CUCM 9.1 and above only] Device Security Profile: Third-party SIP Device Advanced - Digest Authentication SIP Profile: Standard SIP Profile Digest User: stacvip

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Save								
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Status								
Status: Ready								
Phone Type Product Type: Third-party S	IP Devi	re (Advanced)						
Device Protocol: SIP		(,						
Device Information								
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Common Device Configuration		< None >			÷	View Details		
Phone Button Template*		Third-party SIP D	evice (Advanc	ed)				
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Save

Add a Directory Number (DN) for STAC-VIP

a) In the Association Information panel on the left of the screen, click Line [1] - Add a new DN.

c	Cisco Unified CM
Syste	em 👻 Call Routing 👻 Media Resource
Phor	e Configuration
	Save 🗙 Delete 🗋 Copy 😭
i	itus Add successful
- As	Sociation Modify Button Items
1	Line [1] - Add a new DN
2	Line [2] - Add a new DN
3	Line [3] - Add a new DN
4	Line [4] - Add a new DN
5	The Line [5] - Add a new DN
6	Line [6] - Add a new DN
7	Line [7] - Add a new DN
8	<u>Eine [8] - Add a new DN</u>

 b) Enter the following information on the Directory Number Configuration screen and click Save.
 You should see a new Associated Devices list appear with a single entry representing the STAC-VIP which you have just added.

Directory Number: 100 [or any other convenient unused extension number] Description: STAC-VIP Maximum Number of Calls: 16 Busy Trigger: 16

	ahaha Cisco Unific	ed CM Administration		Navigation
÷	For Cisco Unifie	Communications Solutions		administrator
	System - Call Routing - Media	Resources Advanced Features	Device Application	▼ User Management ▼ Bulk Administration ▼ Help
	Directory Number Configura	ition		Related Links:
	Save			
ł				
	- Status Directory Number Configu	ration has refreshed due to a directo	ry number change. F	Please click Save button to save the configuration.
	— Directory Number Informa	tion		
	Directory Number*	0		Urgent Priority
	Route Partition <	None >	~	
	Description	FAC-VIP		
	Alerting Name			
	ASCII Alerting Name			
	External Call Control Profile	None >		
	✓ Active			
ľ				
ſ	 Directory Number Settings Voice Mail Profile 		V	
	Calling Search Space	< None >	¥	(Choose <none> to use system default)</none>
	BLE Presence Group*	< None >	¥	
	User Hold MOH Audio Source	Standard Presence group	•]
	Network Held MOH Audio Source	< None >	`	
		< None >	~	
	Reject Anonymous Calls			

- Line 1 on Device SE	P0123456789AB					
Display (Caller ID)		ext for a line annearanc	re is intended for displaying text such as a name instead of a			
	directory number for calls. If you specify a number, the person receiving a call may not see the proper identity of the caller.					
ASCII Display (Caller ID)						
External Phone Number Mask						
Monitoring Calling < None >						
bear of opuce						
Multiple Call/Call W Note:The range to sele Maximum Number of C Busy Trigger*	Yaiting Settings on Device SEP(ct the Max Number of calls is: 1-16 calls [*]	123456789AB 16 16] (Less than or equal to Max. Calls)		
- Forwarded Call Info	rmation Display on Device SE	0123456789AB				
Caller Name	ormation Display on Device Sc	-0123430783AD				
Caller Number						
Redirected Number						
✓ Dialed Number						
Save						

c) Finally, click Apply Config and OK in the popup window which appears.

Register STAC-VIP to CUCM

- a) It should now be possible to register your STAC-VIP to CUCM. Browse to the IP address of your STAC-VIP Mainframe, log in, click Configure and log in again. Click Line Configuration, VoIP Providers, Add Provider, SIP Provider.
- b) On the SIP Provider screen, click each of the following settings, enter the appropriate value and click Save Setting each time.

Name: CUCM Account username: 100 [must match Directory Number associated with STAC-VIP Phone on CUCM above] Account password: P@ssw0rdOfYourChoice [must match Digest Credentials associated with STAC-VIP End User on CUCM above] Server/Realm: <IP address of CUCM installation>

 c) Click Show Advanced, click each of the following settings, enter the appropriate value and click Save Setting each time. Note that the SIP Port setting is assigned automatically and should not be changed from its default value.

Auth Username: stacvip Codec Priority: No ISAC or Opus [G.722 > G.711 > G.729] INVITE SDP Compatibility: On

< Back

COMREX

CUCM

Apply Changes Delete

SIP provider allowing STAC VIP to manage one or more VoIP calls simultaneously.

Initializing Changes to this provider must be applied to take effect.

General Settings

Name	CUCM
Network Port Binding	Primary
Color Code	Blue
SIP Provider	Generic SIP Pr

Account Information

Account username	100
Account password	*****
Auth Username	stacvip

Codec Settings

Codec Priority	No ISAC or Op
Codec Fairness	Fair Negotiation

SIP Settings

Outgoing Caller ID Name	
Outgoing Caller ID Number	
Provider Binding Port	5081
Server/Realm	10.10.20.1
Proxy Address	
Outbound Proxy Address	
Registration Proxy Address	
From Username	
From Domain	
Expire time	3600 seconds
Retry time	60 seconds
Register	Yes
Register Transport	UDP
INVITE SDP Compatibility	On
INVITE Contact Compatibility	Off

Extra Settings

Outgoing Enabled	Yes
Transfer Enabled	No
Transfer Domain	
Destination Match	
Hide Advanced	

d) Click Apply Changes then Back, or Back, then Restart (Apply Changes) and OK in the confirmation dialog. You should see the status of the newly-added CUCM provider change to Registered.



e) Click Back, then Line Assignments. Click each line which you wish to be associated with the CUCM Directory Number (100 in the example above), select CUCM from the Provider assignment drop-down and click Save Setting.

< Back		COMREX
Line Assign	Assignments VoIP Providers to STAC VIP lines.	

Line 1	Not Assigned	Line 1
Line 2	CUCM	Provider assignment for line 1.
Line 3	CUCM	Default: Not Assigned
Line 4	CUCM	C Set to Default
Line 5	CUCM	CUCM
Line 6	CUCM	
Line 7	CUCM	
Line 8	CUCM	Cancel
Line 9	CUCM	
Line 10	CUCM	
Line 11	CUCM	
Line 12	CUCM	

f) The association of STAC-VIP to CUCM is now complete. If you already have software or hardware phones registered to CUCM, you should be able to call into STAC-VIP by dialling the Directory Number associated with it (100 in the example above). If not, continue with this guide to add a softphone account for testing.

CONNECTING A SOFTPHONE TO CUCM

Add a Phone Security Profile for the Softphone

- a) Return to the CUCM administration page by entering the IP address of the CUCM installation, clicking Cisco Unified Communications Manager, ensuring Cisco Unified CM Administration is selected in the Navigation drop-down at the top-right of the screen (if not, select it and click Go) and logging if necessary.
- b) In the top menu, click System, Security, Phone Security Profile. In the 'Find Phone Security Profile where' filter, select Name, begins with, enter 'Third-party' (without quotes) in the empty field and click Find.

abab	Cisco Unified CM Administration	Navigation Cisco Unified CM Administration	✔ Go
cisco	For Cisco Unified Communications Solutions	administrator Search Documentation About	Logout
System 👻	Call Routing Media Resources Advanced Features Device Application	on ▼ User Management ▼ Bulk Administration ▼ Help ▼	
Find and	I List Phone Security Profiles		
🕂 Add	New 🔠 Select All 🔛 Clear All 💥 Delete Selected		
Status	ecords found		
Phone	Security Profile (1 - 4 of 4)	Rows per Page	50 🗸
Find Phor	ne Security Profile where Name V begins with V Third-party	Find Clear Filter	
Find Phor	ne Security Profile where Name V begins with V Third-party Name ^	Find Clear Filter 💬 📼 Description	Сору
Find Phor	ne Security Profile where Name V begins with V Third-party Name ^ Third-party AS-SIP Endpoint - Standard SIP Non-Secure Profile	Find Clear Filter 😳 📼 Description Third-party AS-SIP Endpoint - Standard SIP Non-Secure Profile	Сору
	ne Security Profile where Name begins with Third-party Name Third-party AS-SIP Endpoint - Standard SIP Non-Secure Profile Third-party SIP Device Advanced - Digest Authentication	Find Clear Filter Description Third-party AS-SIP Endpoint - Standard SIP Non-Secure Profile Third-party SIP Device (Advanced) - Digest Authentication	Сору
	ne Security Profile where Name begins with Third-party Name Third-party AS-SIP Endpoint - Standard SIP Non-Secure Profile Third-party SIP Device Advanced - Digest Authentication Third-party SIP Device Advanced - Standard SIP Non-Secure Profile	Find Clear Filter 🔁 📼 Description Third-party AS-SIP Endpoint - Standard SIP Non-Secure Profile Third-party SIP Device (Advanced) - Digest Authentication Third-party SIP Device (Advanced) - Standard SIP Non-Secure Profile	Copy C
	ne Security Profile where Name begins with V Third-party Name A Third-party AS-SIP Endpoint - Standard SIP Non-Secure Profile Third-party SIP Device Advanced - Digest Authentication Third-party SIP Device Advanced - Standard SIP Non-Secure Profile Third-party SIP Device Basic - Standard SIP Non-Secure Profile	Find Clear Filter Description Third-party AS-SIP Endpoint - Standard SIP Non-Secure Profile Third-party SIP Device (Advanced) - Digest Authentication Third-party SIP Device (Advanced) - Standard SIP Non-Secure Profile Third-party SIP Device (Basic) - Standard SIP Non-Secure Profile	Copy C C C C C C C C C C C C D C C D C C D C C D C C D C C D C C D C C D C C D C

- c) Click the Copy icon next to Third-party SIP Device Basic Standard SIP Non-Secure Profile.
- d) Enter the following information on the Phone Security Profile Configuration screen and click Save. You should see Status: Add successful.

Name: Third-party SIP Device Basic - Digest Authentication Description: Third-party SIP Device (Basic) - Digest Authentication Enable Digest Authentication: Checked

CISCO For Cisco	Unified CM Administration o Unified Communications Solutions	
System - Call Routing	✓ Media Resources ✓ Advanced Features ✓ Device ✓	Application +
Phone Security Pro	ile Configuration	
Save		
Status Status: Ready		
Dhawa Caawiita Du		
Product Type: Device Protocol:	Third-party SIP Device (Basic) SIP	
Name*	Third-party SIP Device Basic - Digest Authentication	
Description	Third-party SIP Device (Basic) - Digest Authentication	
Nonce Validity Time*	600	
Transport Type*	TCP+UDP V	
✓ Enable Digest Aut	nentication	
— Parameters used i	n Phone	
SIP Phone Port* 506		
- Eave		
Dave		

Add an End User for the Softphone

a) In the top menu, click User Management, End User, then click Add New.

cisco	Cisco l For Cisco	Jnified CM A Unified Communi	dministration cations Solutions				Navigatior	Cisco Unified CM Administ	ration	Go Logout
System 👻	Call Routing 👻	Media Resources 🔻	Advanced Features 👻	Device 👻	Application -	User Management 👻	Bulk Administration - Hel	p 🕶		
Find and	List Users									
Add N	lew									
User										
Find User	where First n	ame	✓ begins with ✓			Find Clear Filter				
			No active	query. Plea	se enter your	search criteria using	the options above.			
Add Ne	W									

b) Enter the following information on the End User Configuration screen and click Save. You should see Status: Add successful.

User ID: softphone1

Password: S3cr3tW0rd [or any other password of your choice]
Confirm Password: S3cr3tW0rd [must match Password]
Last name: Softphone 1
Digest Credentials: S3cr3tW0rd [or any other password of your choice]

Confirm Digest Credentials: S3cr3tW0rd [must match Digest Credentials]

CISCO For Cisco Un	ified CM Administration ified Communications Solutions	
System - Call Routing - M	ledia Resources 👻 Advanced Features 👻 Device 👻 Appl	ication 👻 User Management 👻
End User Configuration		
Save		
- Status		
(i) Status: Ready		
User Information ——		
User Status User ID*	Enabled Local User	
Password		
Confirm Password		_ _
Self-Service User ID		
PIN		
Confirm PIN		
Last name*	Softphone 1	
Middle name		
First name		
Title		
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Telephone Number		
Home Number		
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Mail ID		
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User Locale	< None >	
Associated PC		7
Digest Credentials		Ĩ
Confirm Digest Credentials	••••••••	Ĩ
User Profile	Use System Default("Standard (Factory Default) L 🗸	View Details

Add a Phone for the Softphone

a) In the top menu, click Device, Phone, then click Add New.

cisco	Cisco L For Cisco	Unified CM A	dministration ations Solutions				a	Navigation dministrator	Cisco Unified CM Admir	istration	Go Go
System 👻	Call Routing 👻	Media Resources 👻	Advanced Features 👻	Device 🔻	Application -	User Management 👻	Bulk Admini	stration 👻 Help	-		
Find and I	List Phones							Related Li	nks: Actively Logged	In Device Rep	ort 🗸 Go
🕂 Add N	lew										
Phone											
Find Phone	e where Devi	ce Name	✓ begins with	✓ Select	item or enter	Find Clear search text V	Filter 🕂				
			No active	query. Plea	ase enter your	search criteria using	the options	above.			
Add Ne	w										

- b) In the Phone Type drop-down, select Third-party SIP Device (Basic) and click Next.
- c) Enter the following information on the Phone Configuration screen and click Save, then OK in the dialog prompting you to apply the configuration. You should see Status: Add successful.

MAC Address: This field is actually ignored in our setup and can be any unique 12-digit hex number (0-9, A-F) without punctuation; the actual MAC address of the computer on which you will run the softphone can be determined by pressing Windows+R, typing cmd <enter>, then typing ipconfig /all <enter> and noting the Physical Address for the network connection currently in use Description: Softphone 1 Device Pool: Default Phone Button Template: Third-party SIP Device (Basic) Owner User ID: softphone1 [CUCM 9.1 and above only] Device Security Profile: Third-party SIP Device Basic - Digest Authentication SIP Profile: Standard SIP Profile Digest User: softphone1

	nified Communic	ations Solutions					administer	ton
stem 👻 Call Routing 👻 N	Media Resources 👻	Advanced Features 👻	Device 🔻	Application -	User Ma	anagement 👻	Bulk Administration 👻	Hel
one Configuration								
one Configuration					-			
Save								
74 - 4								
Status: Ready								
9,								
Phone Type ———								
Product Type: Third	-party SIP Devi	ce (Basic)						
Jevice Protocol. 31P								
Device Information —								
Device is not trusted AC Address*						-		
		FEDCBA987654						
Device Real*		Softphone 1						
Common Device Configur	ration	Default			~	View Details		
hone Button Template*	ddoll	< None >	e (Bacic)			View Details		
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Calling Search Space		< None >	.se i rome		~	view Details		
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ocation*		Hub_None			~			
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Add a Directory Number (DN) for the Softphone

a) In the Association Information panel on the left of the screen, click Line [1] - Add a new DN.

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System 👻 🕻	Call Routing 👻 Media Resource:				
Phone Conf	figuration				
Save	🗙 Delete 📔 Copy 🎦				
Status Add successful					
Association					
1 •775 <u>Li</u>	ne [1] - Add a new DN				

b) Enter the following information on the Directory Number Configuration screen and click Save.
 You should see a new Associated Devices list appear with a single entry representing the softphone which you have just added.

Directory Number: 101 [or any other convenient unused extension number] **Description:** Softphone 1

alaala Cisco Unif	fied CM Administration				Navi	igatio
For Cisco Unifi	ied Communications Solutions				administ	rato
System - Call Routing - Mee	dia Resources 👻 Advanced Features 👻	Device 👻 Applica	tion 👻 User Mana	agement 👻	Bulk Administration	- He
Directory Number Configu	ration				Related Li	nks:
Save						
- Status						
Directory Number Confi	guration has refreshed due to a direct	ory number change	e. Please click Sa	ve button	to save the configu	ration
— Directory Number Inform	nation					
Directory Number*	101		Urgent Priorit	y		
Route Partition	< None >	~				
Description	Softphone 1					
Alerting Name						
ASCII Alerting Name						
External Call Control Profile	< None >	~				
✓ Active						
— Directory Number Settin	05					
Voice Mail Profile	< None >		✓ (Choose <no< td=""><td>ne> to use</td><td>e system default)</td><td></td></no<>	ne> to use	e system default)	
Calling Search Space	< None >		✓			
BLF Presence Group*	Standard Presence group		~			
User Hold MOH Audio Source	< None >		~			
Network Hold MOH Audio Sou	Irce < None >		~			
Reject Anonymous Calls						

c) Finally, click Apply Config and OK in the popup window which appears.

Register the Softphone to CUCM

a) It should now be possible to register a softphone to CUCM. For this example we will use the free PhonerLite application. Download the application from <u>http://www.phoner.de/PhonerLite.zip</u>, extract the contents of the zip file and run PhonerLite.exe (no installation is required). A wizard will appear prompting you to enter the details of your SIP server. Ensure manual configuration is selected in the list on the left and enter the following information, clicking the green 'next' arrow to confirm each page and the green tick to finish. In the status bar at the bottom of the PhonerLite window you should see a green light and a message that it has registered to the CUCM server.

Proxy/Registrar: <IP address of CUCM installation>

User name: 101 [must match Directory Number associated with softphone Phone on CUCM above]

Authentication name: softphone1

Password: S3cr3tW0rd [must match Digest Credentials associated with softphone End User on CUCM above]

'with the profile name': CUCM

Setup	Wizard							
Provider Provider								
Image: SiPgate Imaget	Proxy/Registrar 10.10.20.1							
Setup	Wizard							
PhonerLite								
User name 101 101@10.10.20.1 Password •••••••	Authentication name softphone1							
Setup	Wizard							
Confirm								
Created account: 101@10.10.20.1 with the profile name CUCM	Solution							

b) Click the Configuration tab, then the Codecs tab, scroll down in the list of codecs to find G.722
 WB, select it and use the up arrow to move it to the top of the list. Then uncheck all codecs in the list except G.722 WB, G.711 A-Law and G.711 u-Law. Click Save.

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G.722 WB, 64 □ Opus, 18 ✓ G.711 A-Law, 64	kbps A kbps 0 1 kbps	tho cancellations	n 500 n	ns					
G.711 u-Law, 64 G.726-32, 32 GSM 13	kbps no	silence detect	ion 🗸 🗹 MO	н					
☐ iLBC, 15 ☐ Speex, 15	kbps kbps	SR IP SAV	/P ∐ZRTP ⊻G.7	26 AAL2					
Speex WB, 30	kbps v								
L CUCM V 🥥 sip:101@10.10.20.1 registered									

c) In the Destination number field, enter 100 (or whichever Directory Number you associated with STAC-VIP on CUCM above) and press Enter. STAC-VIP should indicate an incoming call on the first of the lines associated with CUCM. Answer the call by putting it on air to confirm that everything is working as expected.



d) To test the conferencing of multiple calls on STAC-VIP via CUCM, repeat the following steps using a different PC as the softphone client:

Add an End User for the Softphone (using a different User ID and Last name) Add a Phone for the Softphone (using a different MAC Address, Description, Owner User ID [CUCM 9.1 and above only] and Digest User)

Add a Directory Number (DN) for the Softphone (using a different Directory Number and Description)

Register the Softphone to CUCM (using the different User name and Authentication name)

NOTES

- Each Third-party SIP Device configured in CUCM requires a different Digest User, so a different End User must be set up for each, as we have done above.
- The crucial difference between CUCM's Basic and Advanced Third-party SIP Device is that the former allows a maximum of two concurrent calls, while the latter allows up to 16. It is for this reason that the Advanced version has to be used for STAC-VIP. Note that the Basic Device consumes three Device Licence Units and the Advanced Device consumes six Device Licence Units.
- If you wish to register to the server a SIP device which does not provide support for separate username and authentication user, the User ID of the End User (which is selected as the Digest User in the Phone Configuration screen) can be made the same as the Directory Number assigned to the device.
- If you wish to associate a caller ID name with the STAC-VIP or a softphone to be displayed to the callee, you should configure this on CUCM. In the top menu, click Device, Phone. In the 'Find Phone where' filter, select Description, begins with, enter the description set on the STAC-VIP / relevant softphone in the empty field and click Find. Click the link in the Device Name(Line) column, then in the Association Information panel on the left of the screen, click Line [1] Enter the name in the Display (Caller ID) [CUCM 10.5] or Display (Internal Caller ID) [CUCM 9.1 and below] field on the Directory Number Configuration screen in the 'Line 1 on Device SEP...' section. Click Save, then Apply Config and OK in the popup window which appears.

- Line 1 on Device SEP012345678	9AB	
Display (Caller ID)		Display text
ASCII Display (Caller ID)]
External Phone Number Mask]
Monitoring Calling Search Space	< None >	

• [CUCM 9.1 and below only]

If you wish to associate a caller ID number with the STAC-VIP to be displayed to the callee, you should configure this on the STAC-VIP. Browse to the IP address of your STAC-VIP Mainframe, log in, click Configure and log in again. Click Line Configuration, VoIP Providers, CUCM, Show Advanced, Outgoing Caller ID Number, enter the number and click Save Setting. Note that the Outgoing Caller ID Name setting does not apply for registrations to CUCM (it is overridden by the Display (Internal Caller ID) setting in CUCM; see above). Click Back, then Restart (Apply Changes) and OK in the confirmation dialog.

SIP Settings



• To associate different Directory Numbers with different lines on the STAC-VIP, repeat the following sections:

Add an End User for STAC-VIP (using a different User ID and Last name) Add a Phone for STAC-VIP (using a different MAC Address, Description, Owner User ID [CUCM 9.1 and above only] and Digest User) Add a Directory Number (DN) for STAC-VIP (using a different Directory Number and Description) Register STAC-VIP to CUCM (using a different Name, the different Account username and Auth Username and different lines for the new Provider in Line Assignments)

We have configured CUCM to authenticate the SIP devices above (STAC-VIP and softphones) using a username and password. CUCM's default behaviour, however, is not to check the password, since Cisco proprietary IP phones send their MAC address when registering and this is validated by the server. If security is of no concern, when configuring STAC-VIP on CUCM, you can omit the creation of a secure SIP profile (the entirety of the Add a Phone Security Profile for STAC-VIP section), omit Digest Credentials and Confirm Digest Credentials in the Add an End User for STAC-VIP section and use Device Security Profile: Third-party SIP Device Advanced - Standard SIP Non-Secure Profile in the Add a Phone for STAC-VIP section. Any value can then be used for the STAC-VIP Account password setting in the Register STAC-VIP to CUCM section (but note that STAC-VIP will fail to register unless some value is entered).

Similarly, when configuring the softphone on CUCM, you can omit the creation of a secure SIP profile (the entirety of the Add a Phone Security Profile for the Softphone section), omit Digest Credentials and Confirm Digest Credentials in the Add an End User for the Softphone section and use Device Security Profile: Third-party SIP Device Basic - Standard SIP Non-Secure Profile in the Add a Phone for the Softphone section. Any value can then be used for the PhonerLite Password setting in the Register the Softphone to CUCM section (but note that PhonerLite will fail to register unless some value is entered).

 Occasionally, after clicking Apply Config and OK on the Directory Number Configuration screen for either STAC-VIP or a softphone, the device whose configuration has been changed will not be able to make a call via CUCM - the call will proceed to the SIP 'ringing' stage and then be cleared around half a second later by the server, which reports the problem as 'Temporary failure'. The solution is simply to wait a couple of minutes and retry.

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