

Avaya Solution & Interoperability Test Lab

Configuring Avaya IP Softphone with Video and Polycom VSX 3000 with Avaya Communication Manager – Issue 1.0

Abstract

These Application Notes describe how to configure a Polycom VSX 3000 and an IP Softphone with video with Avaya Communication Manager. This configuration allows video and audio calls to be completed using Avaya Communication Manager.

1. Introduction

Videophones allow the users to hear and see each other during the calls. The video and audio streams can be sent over an IP network from one IP phone to the other IP phone. Videophones can be dedicated units, such the Polycom VSX 3000, or can be software based running on a standard Windows PC.

Avaya Communication Manager can be configured to recognize if a station has video capabilities. When two stations call each other, and both are video enabled, Avaya Communication Manager will automatically attempt to setup a video call between the two stations. If one or both are not video enabled, then the call will remain as a voice call. Avaya Communication Manager supports point to point video calls. To setup a video conference call using Avaya Softphone, an external conference server is required.

The Polycom VSX 3000 Video endpoint allows for 3 additional video endpoints to participate in a video conference call.

If the Avaya Softphone is already in use when another phone calls, the first call has to be put on hold to answer the second call. The Polycom VSX 3000 is a Multipoint Conferencing Unit (MCU) and can handle multiple video phone calls at once and connect the calls together. If the Polycom VSX 3000 is called, the call would become a 3-way conference call with video, if available. Video calls can be transferred.



Figure 1 - Videophones and Computers with IP Softphone Software Registering to Avaya Communication Manager

2. Equipment and Software Validated

Equipment	Software/Firmware		
Avaya S8300 Media Server with G350	Avaya Communication Manager R3.1		
Media Gateway	(R013x.01.2.632.1)		
Avaya 4620SW IP Telephone (Class 2	2.4		
and Class 3)			
Avaya IP Softphone	R5.24.38		
Avaya 4612 Gen-2 IP Telephone	1.8.3		
Avaya Video Integrator	2.0.103		
Logitech QuickCam® Pro 4000	8.4.1.1092		
Polycom VSX 3000	8.0.3		

The following equipment and software/firmware were used for the sample configuration:

 Table 1 – Network Components and Software Versions

3. Configuring Avaya Communication Manager

The following Avaya Communication Manager provisioning is required to support the Polycom VSX 3000 and Avaya IP Softphone. This provisioning is performed via the Avaya Communication Manager System Access Terminal (SAT) interface. To use either videophone, first stations need to be administered in Avaya Communication Manager.

Add a station for the Polycom VSX 3000.

The Polycom VSX 3000 uses three extensions that are linked in the Hunt-to-Station. Administer a station with the extension, **Type** of **H.323**, a **Security Code**, and the **IP Video** field set to y. Repeat 2 more times for each of the additional extensions on the Polycom VSX 3000. Set the **Hunt-to Station** to the next extension for the Polycom videophone (The last one gets the first extension).

add station 31001	Page 1 of 3
STAT	ION
Extension: 31001 Type: H.323 Port: S00004 Name: VSX3000-1	Lock Messages? n BCC: 0 Security Code: 12345 TN: 1 Coverage Path 1: COR: 1 Coverage Path 2: COS: 1 Hunt-to Station: 31002 Tests: y
STATION OPTIONS Loss Group: 19	Message Waiting Indicator: none
Survivable COR: interna Survivable Trunk Dest? y DTMF over IP: in-band	l IP Video? y

TS; Reviewed SPOC 8/16/2006 Solution & Interoperability Test Lab Application Notes ©2006 Avaya Inc. All Rights Reserved. Add a station for Avaya IP Softphone.

For the Avaya IP Softphone, the **IP Softphone** field needs to be **y** as well as the **IP Video Softphone** field (it is displayed after changing IP Softphone) being set to **y**.

```
add station 30001
                                                Page 1 of
                                                             4
                            STATION
                                                           BCC: 0
Extension: 30001
                                   Lock Messages? n
    Type: 4620
Port: S00000
Name: Ext-30001
                                 Security Code: 12345
Coverage Path 1:
    Type: 4620
                                                             TN: 1
                                                             COR: 1
                                 Coverage Path 2:
                                                             COS: 1
                                 Hunt-to Station:
STATION OPTIONS
             Loss Group: 19 Personalized Ringing Pattern: 1
                                   Message Lamp Ext: 30001
           Speakerphone: 2-way
                                         Mute Button Enabled? y
       Display Language: english
                                            Expansion Module? n
Survivable GK Node Name:
        Survivable COR: internal
                                            Media Complex Ext:
  Survivable Trunk Dest? y
                                                  IP SoftPhone? y
                                            IP Video Softphone? y
                                            Customizable Labels? y
```

4. Configuring the Polycom VSX 3000

For the Polycom VSX 3000, connect the necessary cables, and plug the system into the network so it can reach the server. Turn on the unit. The unit has 3 power switches, one is in front of the unit, one is on the back of the screen, and one is under the hardware in the back of the unit.

The Polycom VSX 3000 can be configured for DHCP or an IP address can be chosen manually. Use the remote to navigate the Polycom videophone. Go to **System** \rightarrow **Admin Settings** \rightarrow **LAN Properties**. If the field IP Address is set for DHCP operation, change the field to **Obtain IP address automatically**. If not, then choose **Enter IP address manually** and type in the IP address for the Polycom videophone. The remainder of the configuration can be performed via a webpage or it can be done through the Polycom VSX 3000, using the remote connection. The menus and steps are the same. The images below are taken from the webpage configuration method.

To access the web interface for the Polycom VSX videophone, type the IP address for the Polycom into a web browser. From the Admin Settings \rightarrow Network \rightarrow IP Network, check the Enable IP H.323, set the Use Gatekeeper field as Specify with PIN, and ensure that the Gatekeeper IP Address field has the correct IP address for the call server and the correct port number (1719). The extension and authentication PIN need to match the extension security code of the station in Avaya Communication Manager.



Scroll down the page. The **Type of Service** should be **IP Precedence**. The **Maximum Transmit Bandwidth** and **Maximum Receive Bandwidth** should be set as needed. Keep the remaining fields as default values.

Interop Test - VSX 3000 - Microsoft Internet Explorer		
<u>File E</u> dit <u>V</u> iew Favorites <u>T</u> ools <u>H</u> elp		
🚱 Back 🝷 💿 🗧 🖹 🛃 🏠 🔎 Search 📌 Favorites 🎸) 🖉 - 🍃 🗹 - 🧾 🇱 🦓	
Address 🙆 http://192.45.81.53/a_ipnetwork.htm		💌 🛃 Go 🛛 Links 🎽
Quality of Service		<u>^</u>
Type of Service:	IP Precedence	
Type of Service Value:		
Video:	4	
Audio :	5	
Far End Camera Control:	3	
Enable PVEC:		
Enable RSVP:		
Dynamic Bandwidth:		
Maximum Transmit Bandwidth	384 💌 Kbps	
Maximum Receive Bandwidth:	384 👻 Kbps	
Firewall		
Fixed Ports:		
NAT Configuration:	Off 💌	
Streaming		
Enable Streaming Announceme	ent:	
Speed:	192 💌	
Number of Router Hops (TTL):	1	
Audio Port:	16384	
Video Port:	16386	
IP Multicast Address:	231.5.229.158	
	0	
	3	
	Update	
× Discussions • 🎋 🕅 🗊 🗊 🗐 🔟 🖄	not available on http://192.45.81.53/	0)
E Done		🔮 Internet 🛒

Next, go to Admin Settings \rightarrow LAN Properties. The Domain Name and DNS Servers should be set up for the network. LAN Speed and Duplex Mode should be set to Auto. The default gateway should also be entered along with the subnet mask.

Click Update.

Interop Test - VSX 30	000 - Microsoft Internet Explorer		
<u>F</u> ile <u>E</u> dit <u>V</u> iew F <u>a</u> vorites	s <u>T</u> ools <u>H</u> elp		1
🌀 Back 🝷 🕥 🐇 💌	🗟 🏠 🔎 Search 🤺 Favorites 🥝	🗟 🕶 🎍 🔟 🔹 🧫 🔛 👘 👘 👘	
Address 🚳 http://192.45.8	1.53/a_lansettings.htm		Go Links »
	LAN Properties		
	Any changes made to	this page will cause the system to restart.	
	Enable IP H.323:		
	Enable SIP:		
	Host Name:	Interop-Test	
	IP Address:	Enter IP address manually	
	Use the Following IP Address:	192.45.81.53	
	Domain Name:		
	DNS Servers:		
			5
	Default Gateway:	192.45.81.2	
	Subnet Mask:	255.255.255.0	
	WINS Server:		
	WINS Resolution:		
	LAN Speed:	Auto 💌	
	Duplex Mode:	Auto 💌	
	Any changes made to	this page will cause the system to restart.	
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		3	
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5. Configuration Steps for the Avaya IP Softphone with Video

Install the Avaya Softphone and Video Integrator software. After the software is installed, run the program.

To open the program, click **Start** \rightarrow **Programs** \rightarrow **Avaya IP Softphone** \rightarrow **Avaya IP Softphone**.

The option **Log into Avaya call server** should be chosen and **Control an Avaya telephone** must be checked to use the phone's handset for speech. Click **Next**.

Login Wizard		×
	Choose the login configuration you will use: Log into Avaya <u>c</u>all server ☑ <u>Control an Avaya telephone</u> ☑ Log into Avaya IP <u>telephone</u> ☑ Your Avaya telephone will be used for voice talkpath. This feature requires Avaya Communication Manager 2.0 or later. 	
	< <u>B</u> ack <u>N</u> ext > Cancel <u>H</u> elp	

Enter the Avaya IP Softphone Extension number and the Password. Click Next.

Login Wizard	×
	Enter your extension and password to log into the server. Extension: \$0001 Password: ***** Performed and password for next login session
	< <u>B</u> ack <u>N</u> ext > Cancel <u>H</u> elp

Solution & Interoperability Test Lab Application Notes ©2006 Avaya Inc. All Rights Reserved. Type in the call server address in **Primary Server Address** and any **Alternate Server Addresses** (if applicable), and then choose **Next**.

Login Wizard	
	Enter the IP address or domain name of the Avaya call server. If multiple servers are configured for reliability, enter the addresses of the alternate servers. Primary Server Address: 192.45.80.5 Alternate Server Addresses: Add
	< <u>B</u> ack <u>N</u> ext > Cancel <u>H</u> elp

To add a location, click on **Properties** then the **Dialing Rules** tab. Click on **New** and the **General** tab (not pictured). Enter the new area code and name the location. Click **Save** then choose the location. Click **Next**.

Login Wizard		×
	Select the dialing location you want to use for the server. The dialing location contains dialing properties such as the country and area code. Click the Properties button to create, edit or delete a dialing location. Dialing Location: My Location	
	< <u>B</u> ack <u>N</u> ext > Cancel <u>H</u> elp	

TS; Reviewed SPOC 8/16/2006 Solution & Interoperability Test Lab Application Notes ©2006 Avaya Inc. All Rights Reserved. 10 of 15 ACM-VP.doc Check **Enable Emergency Call Handling feature** and use **Your extension number** of the phone. Choose **Next**.

Login Wizard		×
	 Enable Emergency Call Handling feature Your extension number 30001 Ielephone number: 	
	< <u>B</u> ack <u>N</u> ext > Cancel <u>H</u> elp	

Under **Video Options**, choose **Picture In Picture** to include the video feed on the screen. Also, set **Video Prompt** to **Automatic** to have the phone automatically enable video if the calling phone has video capabilities. Click **OK**.

Video Options	
Video Prompt C Automatic Manual C Prompt Dialog C Toolbar button	Performance
Video Window Display Picture In Picture Near End Window Position Top Left Bottom Left Bottom R	C Individual Windows t
Video Window Size	Video Window Always on Top
Camera AUTO	•
Maximum Rate for Outgoing Ca	all: Maximum 🗨 Kbps
Maximum Rate for Incoming Ca	all: Maximum 💌 Kbps
Flicker Reduction Enabled	60 v Hz
Restore Defaults OK	Cancel <u>H</u> elp

To open the program, click Start \rightarrow Programs \rightarrow Avaya IP Softphone \rightarrow Avaya IP Softphone. When starting the program, the prompt below is displayed. Click Log in unless a change is needed.

gin				X
Extension:	Password:	_		
Configuration:				
Control of Avaya Telephor	ne (via the server)	-		
Call <u>S</u> erver Address:				
192.45.80.5				
Band <u>w</u> idth Setting:				
		-		
Dialing Location:				
My Location		•	Pr <u>o</u> perties	
Remember password fo	r next login sessior	ı		
Automatically log in if po	ossible when applic	ation resta	arts	
Your Avaya telephone will be used for voice talkpath. This feature requires Avaya Communication Manager 2.0 or later.				
Log in Settin	gs Ca	ncel	<u>H</u> elp	

6. Verification Steps

The following are steps that can be used to verify that the configuration described in these Application Notes is correct.

- Verify the Avaya IP Softphone connects video and audio to other Avaya IP Softphones during a call.
- Verify the Avaya IP Softphone connects video and audio to Polycom VSX 3000 videophone during a call.
- Verify the Avaya IP Softphone connects audio to non-video phones.
- Verify the Avaya IP Softphone accepts transfer calls.
- Verify the Polycom VSX 3000 creates 3-way visual conference with two Avaya IP Softphones when calls are made.
- Verify the Polycom VSX 3000 accepts transfer calls.
- Verify the Polycom VSX 3000 connects audio to non-video phones.

Notes:

To use the transfer option with the Polycom VSX 3000, the star button and then the dot button need to be pressed. A few seconds after pressing the dot button, there should be a dial tone. Dial the number the call is being transferred to, make sure the line picks up, and then hang up to complete the transfer. The call will become a video call if both phones have video capabilities.

To create an audio conference, follow the transfer option steps above. Instead of hanging up the phone, hit the dot button one more time to reconnect the first phone.

7. Conclusion

The Avaya IP Softphone is capable of making videophone calls. It can be used to control a regular IP telephone, or in a standalone mode. Both the Avaya IP Softphone and Polycom VSX 3000 were able to communicate with each other and non-video telephones.

8. References

Product documentation for Avaya products may be found at: <u>http://support.avaya.com</u>

 [1] Administrator Guide for Avaya Communication Manager, Doc # 03-300509, Issue 1, June 2005

Product documentation for PolyCom products may be found at: http://www.polycom.com/home

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