

Polycom® Unified Collaboration for IBM Lotus Sametime and IBM Lotus Notes

Deployment Guide



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About this Guide

This guide describes the steps required to integrate the Polycom® Unified Collaboration solution adding real-time, on-demand audio and video conferencing for a IBM® Lotus® Sametime® and IBM Lotus Notes® installation by adding the required Polycom video components. It includes instructions for configuring the IBM components and integrating up and configuring the Polycom and third-party components required for this solution.

Prerequisites

It assumes that the installer has:

- Prior knowledge and experience with the IBM Domino®, Lotus Sametime, and Lotus Notes components
- Access to IBM Domino, Lotus Sametime, and Lotus Notes product documentation
- Read the *Polycom Unified Collaboration for IBM Lotus Sametime and IBM Lotus Notes Release Notes*.

Organization

This guide is organized according to the required configuration workflow, detailing the steps required to create the solution. The following configuration procedures are described in this deployment guide:

Chapter 1- Overview

Provides a description of the Polycom Unified Collaboration for Lotus Sametime and Lotus Notes solution and its components.

Chapter 2- Configuring the IBM Components

Describes the steps and procedures required to modify the configuration of the IBM components to integrate the Polycom Unified Collaboration solution.

Chapter 3 - Configuring the Polycom Components

This chapter describes the steps and procedures required to configure the Polycom Unified Collaboration for IBM Lotus Sametime and IBM Lotus Notes to the IBM environment and manage the communication with the video endpoints as well as the conferencing MCU. In addition, it describes the steps required to adjust the video endpoint configuration to the Polycom Unified Collaboration solution.

Chapter 4 - Configuring the Third Party Components

This chapter describes how to configure the SIP server used in this solution.

Chapter 5 - Verification and Testing

This chapter describes the steps and procedures required to verify that the solution components are configured correctly so point-to-point and multipoint video can be carried out.

Chapter 6 - Communication Protocol and Ports

This chapter describes the communication protocols used in this solution and the ports on which communication occurs.

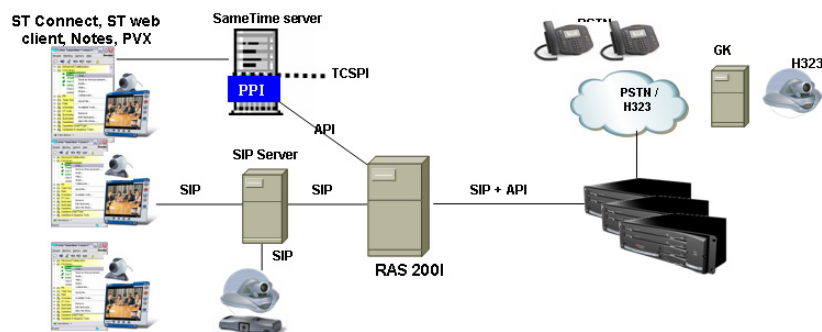
Solution Overview

This guide describes the steps required to integrate the Polycom® Unified Collaboration solution into an existing IBM® Lotus® Sametime® and IBM Lotus Notes® installation by adding the required Polycom components.

Polycom Unified Collaboration Solution Components

The following diagram illustrates the high-level solution architecture showing the solution components, main interfaces, protocols and API(s).

Figure 1-1 Solution Architecture



The following sections describe the Polycom, IBM, and third party components that are part of the integrated solution.

IBM components:

- IBM Domino® Enterprise Server 7.0 or greater
- Lotus SameTime Client + Server 7.5
- Lotus Notes client 7.0.1 or greater

Polycom components:

- Polycom RAS200I conferencing application server

The doorway to Polycom video scenarios, including point-to-point and multipoint conferences. Depending on the scenario being executed, the RAS200I interacts with the other Polycom and IBM components to provide a full-featured video solution.

- Polycom PVX 8.0.3 for IBM solution

Polycom's desktop video application running on the user's PC.

- Polycom VSX 8.x room systems

A family of high quality video room system devices that are used for P2P and multipoint video calls.

- MGC 8.0 video MCU

Audio/video MCUs such as the MGC-25 and MGC+50/100 host the multipoint audio and video conferencing.



The MGCs used in this solution must have the Audio+ cards. Older audio cards are not supported.

- Polycom Plug-in (PPI)

A Java application that runs on the Lotus Sametime server and interfaces to it thru the IBM telephony TCSPI API

- Polycom PathNavigator

Polycom's gatekeeper application.

Third-party components:

- IPTEGO SIP server

SIP server software that acts as SIP-Registrar and Proxy according to SIP RFC 3261.

The IPTEGO Registrar Box includes the following features:

- SIP Registrar (according to RFC 3261)
- Multiple registrations
- Forking
- Configurable call routing to Polycom SIP Application Servers
- IP Configuration (device support DHCP and static configuration)
- Configurable number of concurrent registrations
- Dynamic web based route entry configuration

Configuring the IBM Components

This chapter describes the steps and procedures required to add the Polycom® Unified Collaboration solution into an existing IBM® Lotus® Sametime® and IBM Lotus Notes® installation. It assumes that you have prior knowledge of the IBM system environment and its configuration.

For more information about the installation and configuration of the IBM Lotus components, see their respective installation guides.

Lotus Sametime Server Configuration

The Lotus Sametime server for this Polycom Unified Collaboration solution must have been installed with a Domino Directory and HTTP tunneling enabled.

If the Sametime server has not been configured to allow telephony contact lists, instant messaging, and instant meetings, additional Sametime server configuration may be required, as described in the following procedure:

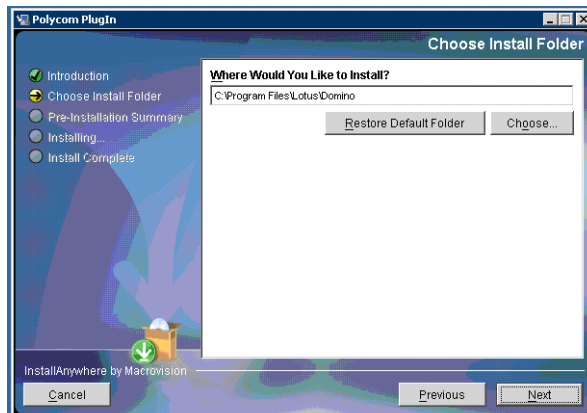
To configure the Sametime server

- 1 From Internet Explorer, browse to the Sametime server (http://<Server_name.Domain_name>/stcenter.nsf)
- 2 Click **Administer the server**.
- 3 Log into the Sametime server with the administrator user name and password.
- 4 Click **Policies**.
- 5 Select **Sametime Default Policy**.
- 6 Verify that in the **Community Services** section **Allow telephony for contact lists, instant messaging, and instant meetings** is set to **Yes**.
- 7 Verify that in the **Instant Meetings** section **Allow users to create Instant Meetings** is set to **Yes**.
- 8 Click **OK**.

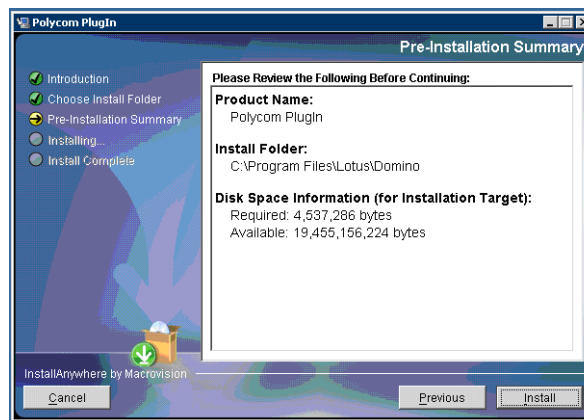
Polycom Plugin (PPI) Installation

To download and install the PPI software

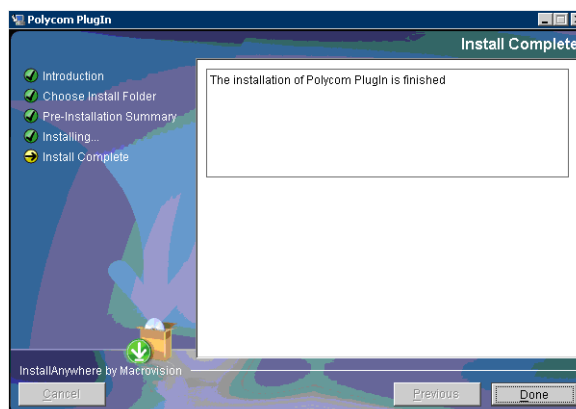
- 1 On the RAS200I **Login** screen, click **Downloads**.
- 2 Select **PPI** from the **Software Downloads** page and click **OK**.
- 3 Select the **Download** for the Domino server OS on which you are running and save the **PPI.exe** file to a temporary directory.
- 4 Copy the file to a temporary directory on the Domino server and double click it to start the installation.
- 5 Close the Lotus Domino service.
- 6 Double click **PPI.exe** to start the installation
- 7 When the **Polycom PlugIn Introduction** page appears, click **Next**.



- 8 When prompted to **Choose an Install Folder**, accept the default location or browse to the desired location and then click **Next**.



- 9 Review the **Pre-Installation Summary** information. If it is correct, click **Install** to continue. If it is not, click **Previous** to correct the information.



- 10 When the **Install Complete** page appears, click **Done**.

Note If the installation fails, verify that the Java path is in your Path variable:

- 1 Find the JVM link in Domino. This link is usually found at: C:\Program Files\Lotus\Domino\jvm
- 2 Copy the path.
- 3 Right click on **My Computer** and select **Properties**.
- 4 Click the **Advanced** tab.
- 5 Click the **Environment Variables** link.
- 6 In the **System variables** list, select the **Path** variable and click **Edit**.
- 7 Append the path that you copied in step 2 to the end of the **Path Variable Value** string:
`%SystemRoot%\system32;%SystemRoot%;%SystemRoot%\System32\Wbem;C:\Program Files\Intel\DMIX;C:\Program Files\Lotus\Domino\jvm\bin`
- 8 Click **OK**.
- 9 Re-run the PPI.exe.

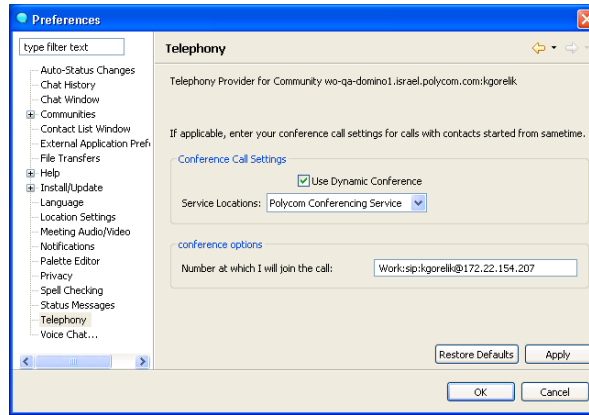
- 11 Change the RAS200I IP address in the PCAS.properties file, located in the C:\Program Files\Lotus\Domino directory.
- 12 Reboot the Domino server so any changes will take effect.

Lotus Sametime Connect Client Configuration

Each Lotus Sametime Connect client must also be configured for Polycom audio and video conferencing. This procedure is also documented in the *Polycom Unified Collaboration for Lotus Sametime and Lotus Notes User Guide*, so that this task can be communicated to end users.

To configure the Lotus Sametime Connect client software

- 1 From **Sametime Connect**, select **File > Preferences** and then select **Telephony**.



In the **Preferences** dialog box, **Use Dynamic Conference** is already enabled and the **Service Locations** says **Polycom Conferencing Service**.

- 2 In the **Conference Options** section, type a call back number into the **Number at which I will join the call** field. The following table provides the format for the different endpoint types:

# Type	# Format
SIP URI	sip:username@<SIP_server_IP_address_or_domain name> (e.g., sip:bjones@192.168.23.10)
H323	Three H323 options: <ul style="list-style-type: none"> • H323:EP IP address • H323:E164 number • H323:H323 EP name
PSTN	123456789
ISDN	ISDN:123456789

- 3 Click **Apply** to save the entry.

Lotus Notes Client Configuration

Each Lotus Notes client software must also be configured for this integrated video conferencing solution. This procedure is also documented in the *Polycom Unified Collaboration for Lotus Sametime and Lotus Notes User Guide*, so that this task can be communicated to end users.

To configure the Lotus Notes client software

- 1** Edit the NOTES.INI file (usually located in the /Lotus/Domino directory).
- 2** Verify that Click2DialEnabled=1.
- 3** If it doesn't, edit the line and save the file.

Setting Up the Polycom Components

This chapter describes the steps and procedures required to set up the Polycom components in a Polycom Unified Collaboration solution. The Polycom components include a RAS200I server, one or more Polycom PVX 8.0.3 for IBM desktop video units, VSX room systems, and Polycom MCUs.

Polycom RAS200I Server Configuration

This section describes the procedure for setting up the RAS200I server after it has been installed. The installation process is described in the *RAS200I Getting Started Guide*.

The RAS200I server is shipped with a basic configuration that must be modified according to the specific deployment network properties before its functionality can be accessed. Once these tasks are accomplished, the unit can be accessed remotely from any web browser within your network.

Configuring the RAS200I Server

You must configure the RAS200I server before it can be deployed and accessed remotely from a web browser within the network. There are two ways to configure a RAS200I server:

- Connect a monitor, keyboard and mouse to the unit and configure it locally
- Configure the unit from a different PC on the network via a web connection

Both connection methods are described here.

To configure a RAS200I server locally:

- 1 Make sure that a monitor, keyboard and mouse are available.
- 2 Connect a monitor, keyboard and mouse to the RAS200I server and turn it on.

- 3 Log into operating system using the user name **Administrator** and the password **polycom**.
- 4 From Internet Explorer, log into the RAS200I server and complete the First Time Setup. For more information, see [“Logging in the First Time”](#) on page 11.
- 5 If you have already connected the RAS200I server to the target IP network restart it. Otherwise, turn the RAS200I server off, connect it to the target IP network, and then power it back up.

Configuring RAS200I from a web connection

To configure a RAS200I via a web connection:

- 1 Connect the RAS200I server directly to an ethernet port on the PC via a crossover cable or connect both the RAS200I server and the PC to the same ethernet switch (or hub) using standard ethernet cables.
- 2 Verify that the RAS200I server and the PC are ON.
- 3 Configure the PC network settings of the PC so that it can connect to the RAS200I server, by entering the following TCP/IP properties
 - » IP Address: 192.168.1.37
 - » Subnet Mask: 255.255.255.0
- 4 From the PC launch an **Internet Explorer** browser and type the default system IP address (192.168.1.254) into the **Address** field.
- 5 From **Internet Explorer**, log into RAS200I server and complete the First Time Setup. For more information, see [“Logging in the First Time”](#) on page 11.
- 6 Turn the RAS200I server off, connect it to the target network and power it back up.

Configuring the PC Network Settings to Connect to the RAS200I Server

Configure the network settings on the PC by changing the TCP/IP properties so that it can communicate with the RAS200I server. These steps are not required if you configure the RAS200I server locally.

To configure network settings:

- 1 Record the original IP address and subnet mask of your computer, so that you can restore these values after you have finished system setup.
- 2 From the **Start** menu, choose **Control Panel > Network Connections > Local Area Connection Properties**.

- 3 Select **Internet Protocol (TCP/IP)** and then click **Properties**.
- 4 In the **Internet Protocol (TCP/IP) Properties** dialog box, enter these settings:
 - **IP address:** 192.168.1.37
 - **Subnet mask:** 255.255.255.0
 - **Default gateway:** Leave blank, or do not change.
 - **Preferred DNS server:** Leave blank, or do not change.
 - **Alternate DNS server:** Leave blank, or do not change.
- 5 Click **OK** twice to close the **Internet Protocol (TCP/IP) Properties** and **Local Area Connection Properties** dialog boxes.

Logging in the First Time

The RAS200I server provides a default administrator's password for the configuration process. After you have completed system setup, you should change the default password.

To access the RAS200I server

- 1 Open **Internet Explorer**, type the IP address of the system in the **Address** line, and press **Enter**.

For example: `http://<YOUR_SERVER'S_IP_ADDRESS>`

- 2 Enter the administrator's password and click **Login**. The default password is **admin**.

The **First Time Setup - Welcome** screen appears.

- 3 Read the license agreement and click **Accept** to accept the terms and continue.

The **First Time Setup - System Information** screen appears.

- 4 Enter the system setup information for the RAS200I server. If you are not sure what values to use, contact your IT administrator.

Table 3-1 System Setup Parameters

Field	Description
System Name	Enter the NetBIOS name of the Windows server. The name must contain 6 to 16 characters. Dashes and underscores may be included in the name.
IP Address	Enter the unit's static IP address according to your network setting, replacing the factory default IP address.
Subnet Mask	Enter the network subnet mask for the server.

Table 3-1 System Setup Parameters

Field	Description
Default Gateway	Enter the static IP address of the gateway to be used by the server.
DNS Server	Enter the IP address of the DNS Server to be used by the server.
Current Date	Enter the current date for the system.
Current Time	Enter the current time for the system.
Server Time Zone	Set the time zone according to the server's location.
Auto adjust for daylight savings?	Select this check box if you want the time to be automatically adjusted for daylight savings.

- 5 Click **Next**.
The **First Time Setup - Completed** screen appears.
- 6 Click **Next**.
- 7 When instructed, restart the RAS200I server to apply the new system parameters.

Entering Licensing Information

The RAS 200I server includes a trial license for 50 seats, which allows you to start using the product immediately. The trial license is valid for up to 60 days, starting with the date of first time setup. In addition, you receive one or more license certificates, according to your order. You must activate each license to receive a license number.

Note Licenses are available in 50, 100, 250, 500 and 1000 seats. The RAS 200I server supports a maximum of 1000 seats.

To obtain a software license number

- 1 Go to **System Setup > Licensing**. Record the RAS 200I server serial number, which is listed in the middle of the **Licensing** screen.
- 2 Go to <http://www.polycom.com/support>.
- 3 Log in or create a new user account.
- 4 Click **Product Activation**.
- 5 Enter the Polycom software license number listed on the license certificate and the serial number you recorded in step 1.

- 6 Click **Generate**.
- 7 When the license number appears, record it.

_____ - _____ - _____ - _____
 _____ - _____ - _____ - _____

To enter the license number in RAS 200I server

- 1 Go to **System Setup > Licensing**.
- 2 On the **Licensing** screen, enter the new license number and serial number, and click **Update**.

Figure 3-1 Licensing Screen

	LICENSE KEY	EXPIRATION DATE	SEATS
<input type="checkbox"/>	Default Trial key - 40 days left.	3/6/2007	50

Changing the Administrative Password

Make sure you change the administrative system password after you have completed the first time setup.

To change the password

- 1 Go to **System Setup > Change Password**.
- 2 In the **Change Password** screen, enter the new password, confirm it, and then click **Update**.

Viewing or Changing Application Settings

The RAS200I server uses application settings to create conferences on the MCU and can create a profile automatically when you add an MCU to the RAS200I server.

Profile Management

To view or change the current profile name

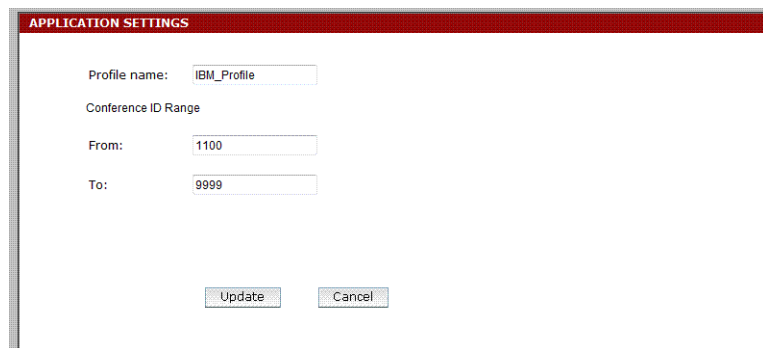
- 1 Go to **System Settings > Application Settings**.

The current profile name appears in the **Profiles** screen.

- 2 In the **Profiles** screen, enter the name of the new profile in the **Profile Name** field, and click **Update**.

- Note**
- You can only change the profile name.
 - For MGC devices, specify the exact same Profile name as created in MGC

Figure 3-2 Application Settings Screen



The screenshot shows a web interface titled "APPLICATION SETTINGS" with a red header bar. Below the header, there are three input fields: "Profile name:" with the value "IBM_Profile", "Conference ID Range" with "From:" set to "1100" and "To:" set to "9999". At the bottom of the form are two buttons: "Update" and "Cancel".

Conference ID Range Assignment

The RAS200I server assigns Conference IDs upon conference creation on the MCUs. To avoid clashes with existing in use Conference IDs, the administrator must assign a range of numbers that is not in use with the following criteria:

- The minimum **Interval size** is 1000
- The **From** field must be greater than 1000
- Both the **From** and **To** fields must be of the same length
- Enter only numeric characters

Changing System Settings

You can modify RAS 200I server system settings.

To change Polycom RAS 200I server settings

- 1 Go to **System Setup > System Settings**.
- 2 On the **System Settings** screen, enter required changes and click **Update**.

Figure 3-3 System Settings Screen

Note If you change the IP address, the system requests that you restart the Polycom RAS 200I server.

In this screen, you specify the following information:

Item	Description
System Name	Defines the NetBIOS name of the Windows server. Must be between 6 and 16 characters long; dashes and underscores are valid characters.
IP Address	Defines the static IP address of the server.
Subnet Mask	Defines the network's subnet mask for the server's IP address.
Default Gateway	Defines the static IP address of the server's gateway.
DNS Server	Defines the static IP address of the DNS server.
Current Date	Specifies the current system date of the Polycom RAS 200I server. If you change the date, the system date of the Polycom RAS 200I server also changes.
Current Time	Specifies the current system time of the Polycom RAS 200I server. If you change the time, the system time of the Polycom RAS 200I server also changes.
System Time Zone	Specifies the time zone in which the system resides.
Auto adjust for daylight savings	Select this check box to adjust the clock automatically for daylight savings time.

Setting Up MCUs

Manual MCU Configuration

The MCUs must be manually configured with the following set of parameters before they can be added to the RAS200I server.

System Configuration:

```
EXTERNAL_DB_IP=<RAS200I IP>
EXTERNAL_DB_PORT=80
EXTERNAL_DB_LOGIN=POLYCOM
EXTERNAL_DB_PASSWORD=POLYCOM
EXTERNAL_DB_DIRECTORY=PCAS\MGCAuthentication.aspx
ENABLE_EXTERNAL_DB_ACCESS=Yes
EXTERNAL_DB_AUTHENTICATE_USER=NO
SKIP_PROMPT=YES
```

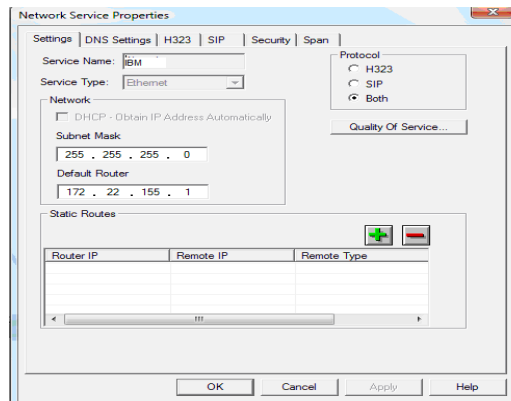
MGC Manual Configuration

IP Service Setup

To set up an IP service

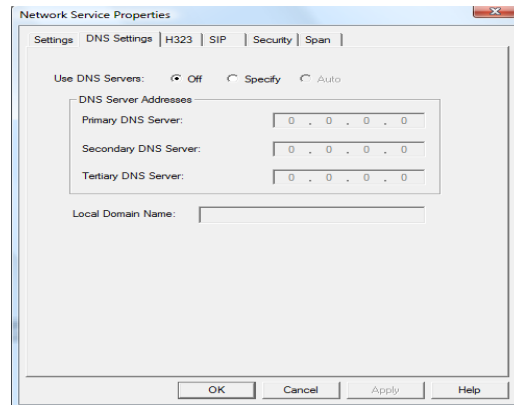
- 1 In the **MGC Manager** browser pane, expand the **MCU Configuration** tree, expand the **Network Services** tree, right-click on **IP** and select **New IP Service**. Refer to your *MGC Administrator's Guide* for more information on using the MGC Manager.
- 2 In the **Settings** tab, set these options, and click **Apply**.
 - **Service Name:** Specify a name for the service
 - **Protocol:** Select **Both**
 - **Subnet Mask:** Enter the subnet mask IP address

- **Default Router:** Enter the Default Router IP address



- 3 Select the **DNS Settings** tab, set this option, and click **Apply**.

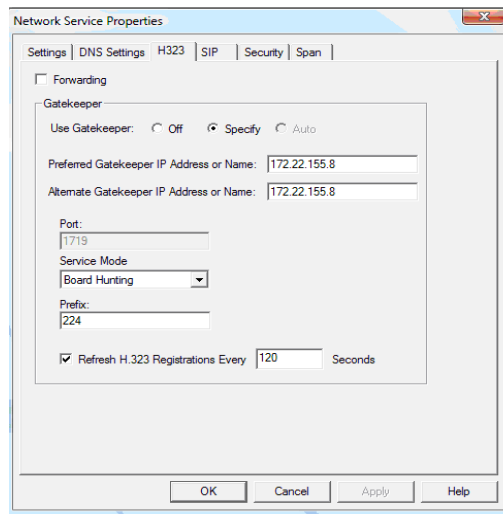
- **Use DNS Servers:** Select **Off**



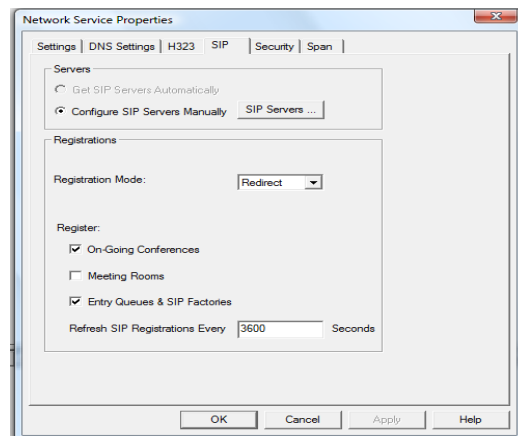
- 4 Select the **H323** tab, set these options, and click **Apply**.

- **Gatekeeper:** Select **Specify**
- **Preferred Gatekeeper IP Address or Name:** Enter the gatekeeper IP address
- **Alternate Gatekeeper IP Address or Name:** Enter the gatekeeper IP address
- **Service Mode:** Select **Board Hunting**

- **MCU Prefix in Gatekeeper:** Assign a prefix for gatekeeper routing

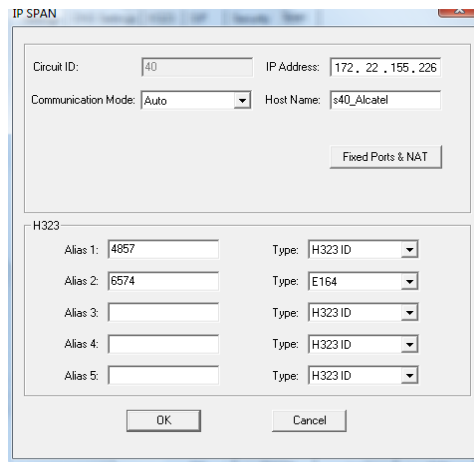


- 5 Select the **SIP** tab, set these options, and click **Apply**.
 - Select **Configure SIP servers manually**
 - Select **On Going Conferences**
 - Select **Entry Queues & SIP Factories**



- 6 On the **SIP** tab, click **SIP Servers...**
- 7 In the **SIP Settings** dialog box, set these options, and click **OK**.
 - **SIP Transport:** Select TCP
 - **Preferred Sip Server:** Select **Specify**
 - **IP address or Name:** Specify the SIP server IP address
 - **Domain Name or IP:** Specify the SIP server IP address

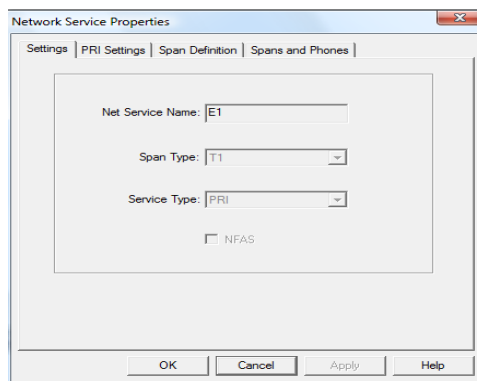
- » **Alias 2: Select E164**, and specify a numeric ID



PSTN Service Setup

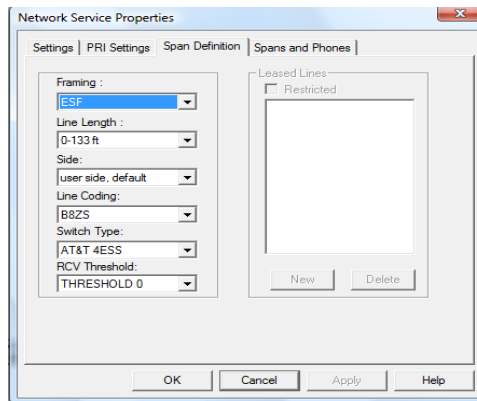
To set up a PSTN service


- 1 In the **MGC Manager** browser pane, expand the **MCU Configuration** tree, expand the **Network Services** tree, right-click on **ISDN** and select **New Network Service**. Refer to your *MGC Administrator's Guide* for more information on using the MGC Manager.
- 2 Select the **Settings** tab, set these options, and click **Apply**.
 - **Net Service Name:** Specify a name for the service
 - **Span Type:** Choose **E1** or **T1**

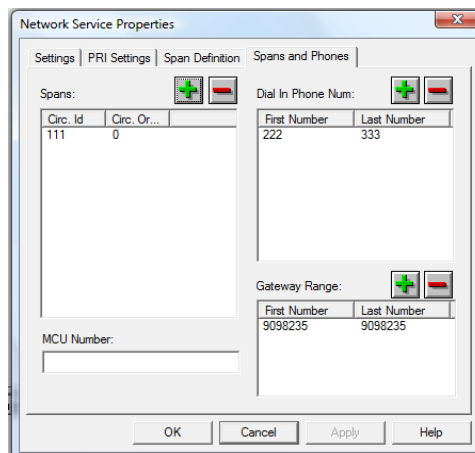


- 3 Select the **Span Definition** tab, set this option, and click **Apply**.

- **Switch Type:** Select the appropriate switch type.

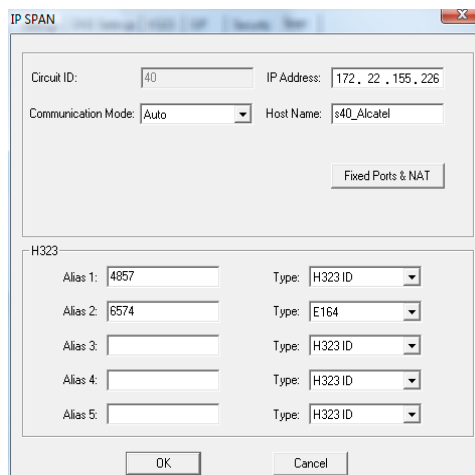


- 4 Select the **Span & Phones** tab and in the **Span** area, click **Add Span** .

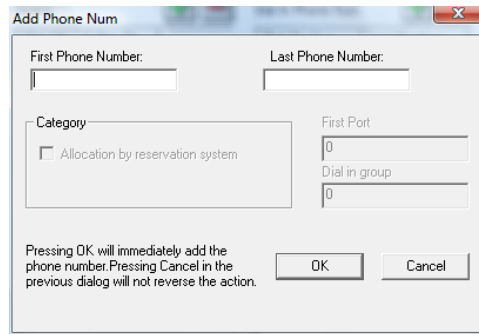


- 5 In the **IP Span** dialog box, set these options, and click **OK**.

- **Circuit ID:** Specify a numeric ID

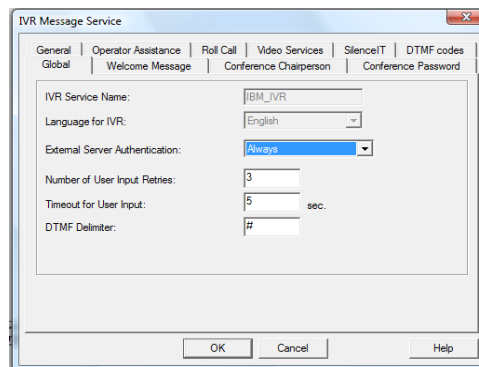


- 6 In the **First & Last Phone Number** dialog box, set this option, and click **OK**.
 - **First Phone Number:** Enter the first phone number in the range of phone numbers to dial in to the MGC
 - **Last Phone Number:** Enter the last phone number in the range of phone numbers

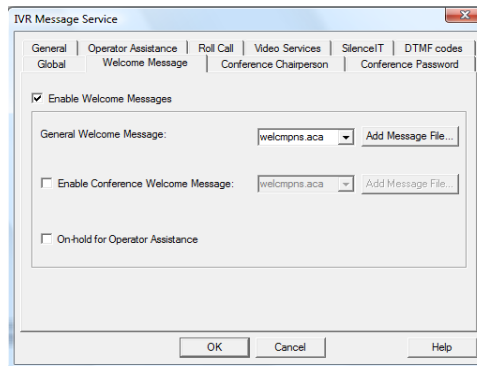


IVR Message Service

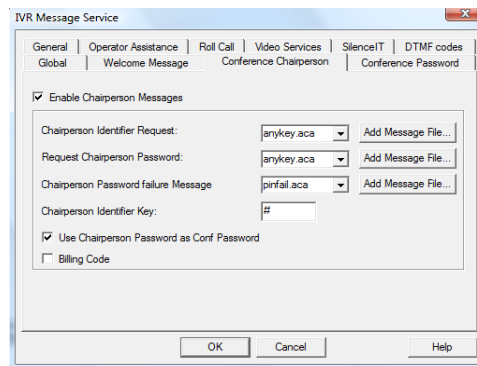
- 1 In the **MGC Manager** browser pane, expand the **MCU Configuration** tree, expand the **IVR Msg Service** tree. Refer to your *MGC Administrator's Guide* for more information on using the MGC Manager.
- 2 Select the **Global** tab, set these options, and click **OK**.
 - **IVR Service name:** Enter IBM_IVR
 - **External Server Authentication:** Select **Always**



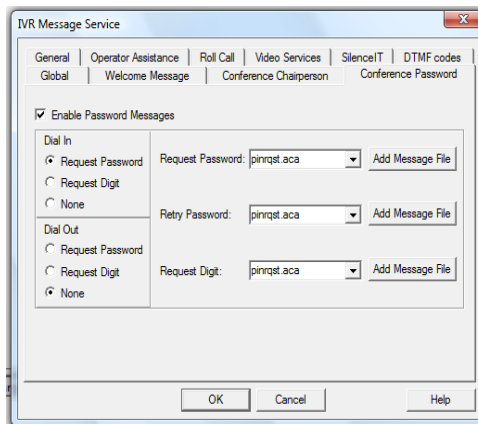
- 3 Select the **Welcome Message** tab, set these options, and click **OK**.
 - Select **Enable Welcome Message**
 - **General Welcome Message:** Select a message file



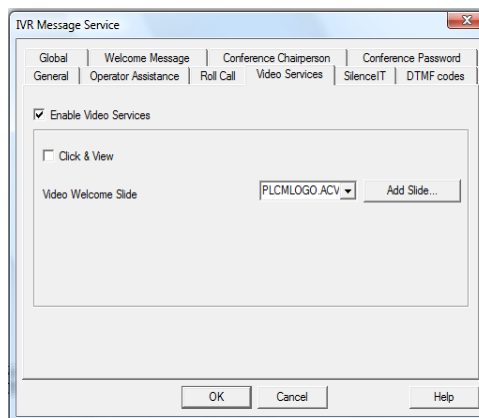
- 4 Select the **Conference Chairperson** tab, set these options, and click **OK**.
 - Select **Enable Chairperson Message**
 - Select **Use Chairperson Password as Conf Password**
 - **Chairperson Identifier Request:** Select a message file
 - **Request Chairperson Password:** Select a message file
 - **Chairperson Password Failure Message:** Select a message file



- 5 Select the **Conference Password** tab, set these options, and click **OK**.
 - Select **Enable Password Message**
 - **Dial In:** Select **Request Password**
 - **Dial Out:** Select **None**
 - **Request Password:** Select a message file
 - **Retry Password:** Select a message file
 - **Request Digit:** Select a message file

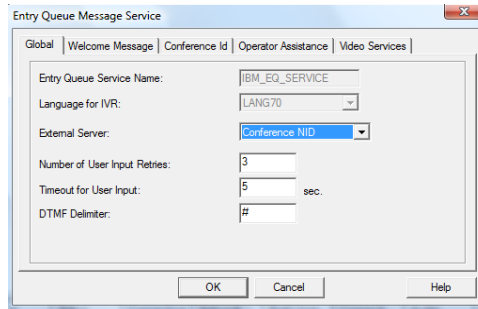


- 6 Select the **Video Services** tab, set this option, and click **OK**.
 - Select **Enable Video Services**

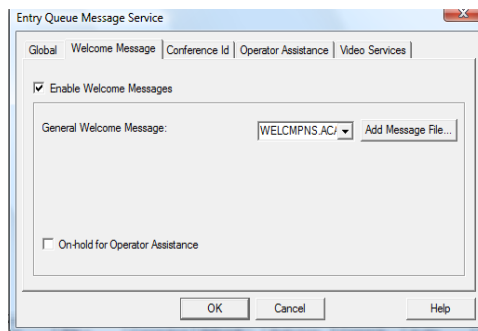


Entry Queue Message Service Setup

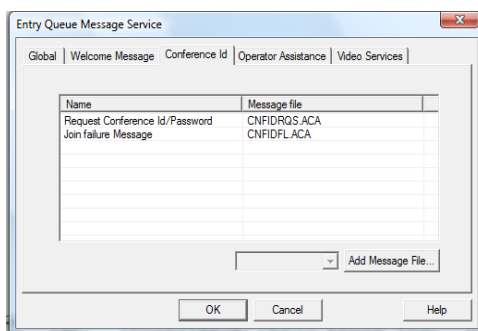
- 1 In the **MGC Manager** browser pane, expand the **MCU Configuration** tree, expand the **Entry Queue Message Service** tree. Refer to your *MGC Administrator's Guide* for more information on using the MGC Manager.
- 2 Select the **Global** tab, set these options, and click **OK**.
 - **Entry Queue Service Name:** Enter **IBM_EQ_SERVICE**
 - **Language for IVR:** Select a language
 - **External Server:** Select **Conference NID**



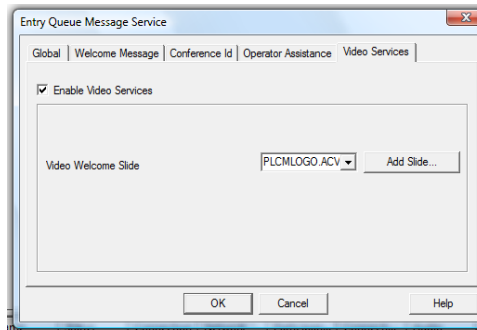
- 3 Select the **Welcome Message** tab, set these options, and click **OK**.
 - Select **Welcome Message**
 - **General Welcome Message**: Select a message file



- 4 Select the **Conference ID** tab, set these options, and click **OK**.
 - **Conference ID**: Select a message file
 - **Join Failure Message**: Select a message file

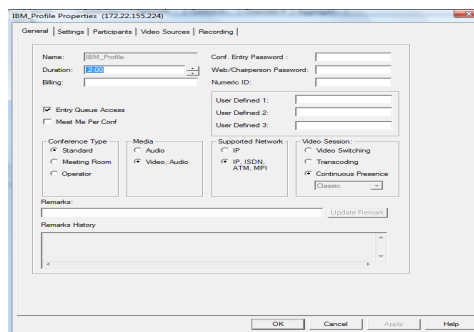


- 5 Select the **Video Service** tab, set these options, and click **OK**.
 - Select **Enable Video Services**
 - **Video Welcome Slide**: Select a slide

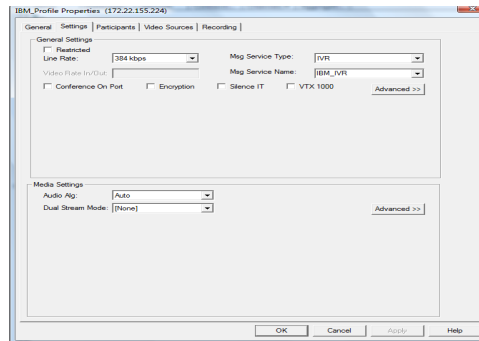


Profile Setup:

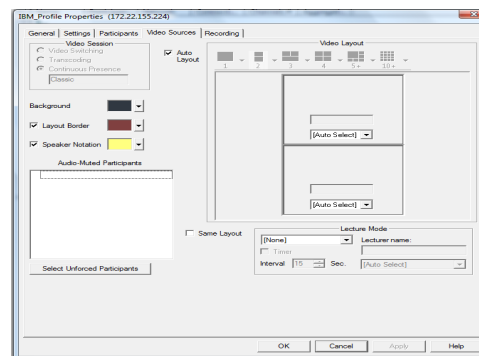
- 1 In the **MGC Manager** browser pane, expand the **MCU Configuration** tree, expand the **Profiles** tree. Refer to your *MGC Administrator's Guide* for more information on using the MGC Manager.
- 2 Select the **General** tab, set these options, and click **OK**.
 - **Name:** IBM_Profile
 - **Duration:** 2 hours (recommended)
 - Select **Entry Queue Access**
 - **Video Session:** Select **Continuous Presence, Classic**



- 3 Select the **Settings** tab, set these options, and click **OK**.
 - **Line Rate:** Select **384kbps**
 - **Msg Service Type:** Select **IVR**
 - **Msg Service Name:** Select **IBM_IVR**



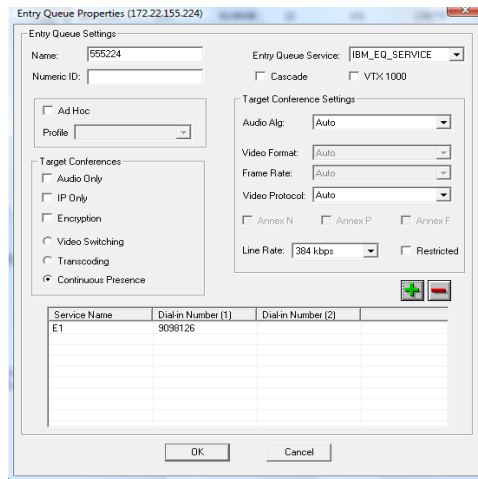
- 4 Select the **Video Source** tab, set this options, and click **OK**.
- Select **Auto Layout**



Entry Queue Setup

- >> In the **Entry Queue Properties dialog box**, set these options, and click **OK**.
- **Name:** Specify a numeric ID (recommended)
 - **Target Conferences:** Select **Continuous Presence**
 - **Entry Queue Service:** IBM_EQ_Service
 - **Line Rate:** 384 kbps
 - **Service Name:** The ISDN service name specified in the PSTN Service Setup

- **Dial In Number:** The PSTN/ISDN number to reach the entry queue



Add MCUs to the RAS200I Server

To add MCUs

- 1 Go to **Directory Setup > Devices**.

The **List of Devices** screen appears. In this screen, you can add, change, delete, and update the status of the MCU.

Note The RAS200I server only lists MCU devices that have registered with it. You manually register the MCUs by adding them to the **List of Devices** screen.

- 2 Click **Add** and the **Add Device** screen appears.

Figure 3-4 Add Device Screen

- 3 In the **Device Name** field, enter a name for the MCU.
- 4 In the **IP Address** field, enter the IP address of the MCU controller.

- Entry Queue Parameters
- 5 In the **Admin User ID** field, enter the administrative user's login ID for the MCU.
 - 6 In the **Password** field, enter the password of the administrative user for the MCU.
 - 7 In the **Priority** drop-down list, select **High**, **Medium**, or **Low**. The priority specifies the order of MCUs to use when you have multiple MCUs. Five is the highest priority; zero is the lowest priority.
 - 8 In the **Name** field enter the entry queue Numeric ID, or if the device is an MGC, specify the **Entry Queue** name created in MGC
 - 9 In the **SIP Address** field enter the SIP server IP address or host name.
 - 10 In the **H323 Address** field enter the GK Prefix as set in the MCU.
 - 11 In the **Phone Number** field enter the EQ PSTN/ISDN phone number.
 - 12 Click **Update**.
 - 13 Repeat steps 1 through 12 to add multiple MCUs.

Verifying the MCU Configuration

Once the MCU is added to the RAS200I, verify the following MCU configuration is set:

Entry Queue Definitions:

Name: Numeric_ID

Profile: <Profile Name set in the application settings>

EQ Service: RAS200_EQ_IVR

Conference Profile Definitions:

Name: <Profile Name set in the application settings>

IVR Message Service: RAS200_IVR

Entry Queue Service Definitions:

Name: RAS200_EQ_IVR

External Server Authentication: Numeric ID

IVR Service Definitions:

Name: RAS200_IVR

External Server Authentication: Always

System Configuration File: Greet & Guide Section:

Quick_LOGIN_VIA_EQ=No

VSX Configuration

To use a VSX room system in this IBM-Polycom Instant Video solution, the system must have software version 8.5.3 or later. It can be setup to work either in SIP or H323 mode

Specifying SIP Settings

To register the VSX system with the SIP Server and define the required SIP settings:

- 1** From the system remote, select **System > Admin Settings > Network > Call Preference** and check the **Enable SIP** option. (From the web interface, select **Admin Settings > Network > Call Preference** and check the **Enable SIP** option.)
- 2** Go to **Admin Settings > Network > IP Network > SIP Settings** and configure the following settings:

Settings	Description
Enable SIP	<input checked="" type="checkbox"/>
Transport Protocol	Both
User Name	Specifies the system's SIP URI including SIP server address as defined by the system administrator, for example <code>austin1@<SIP_Server_IP_address></code> . This name is required for authentication with the SIP server.
Password	Leave Empty
Registrar Server	SIP Server IP address
Proxy Server	SIP Server IP address
PCAS	Off
PCAS Server Address	Leave Empty

- 3** Click **Update**.

Specifying H323 Settings

To register the VSX system with the Gatekeeper and define the required H323 settings:

- 1 From the system remote, select **System > Admin Settings > Network > Call Preference** and check the **Enable IP H.323** option. (From the web interface, select **Admin Settings > Network > Call Preference** and check the **Enable IP H.323** option.)
- 2 Go to **System > Admin Settings > Network > IP Network > H323 Settings** and configure the following settings:

Settings	Description
Use Gatekeeper	Specifies the system's SIP URI including SIP server address as defined by the system administrator, for example <code>austin1@<SIP_Server_IP_address></code> . This name is required for authentication with the SIP server.
Gatekeeper IP Address	Leave Empty
Enable IP H.323:	<input checked="" type="checkbox"/>
Display H.323 Extension:	<input checked="" type="checkbox"/>
H.323 Name:	Specify the VSX H323 Name
H.323 Extension (E.164):	Specify the VSX H323 Extention
Use Gatekeeper:	Specify
Gatekeeper IP Address:	Specify the Gatekeeper IP address
Alternate Gatekeepers:	Leave Empty
Use PathNavigator for Multipoint Calls:	Dynamic

- 3 Click **Update**.

PVX Configuration


Polycom PVX software application for video conferencing works in conjunction with your PC and a USB camera. PVX version 8.0.3 is required for this Polycom-IBM integrated solution. The PVX software application licenses are acquired separately. Install the PVX application as described in the PVX product documentation.

Auto-start and Auto-answer

It is recommended that you set PVX to:


- Start automatically every time you power on your PC. The main Polycom PVX window will automatically open when you receive a call, or you can manually open it by right-clicking the PVX icon in the Windows taskbar notification area.
- Answer incoming video calls automatically whenever the system is not in a call. When a call comes in, you hear a short ringing sound, and then the call connects.

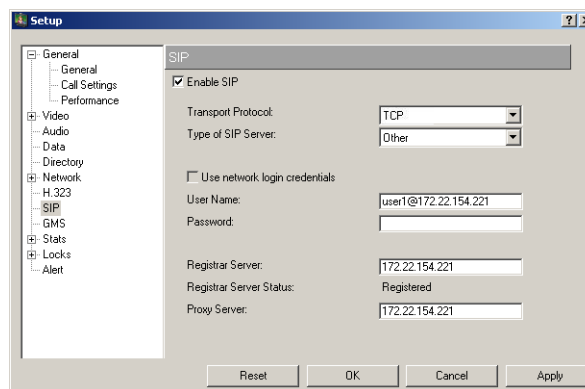
To configure these settings

- 1 From the PVX interface, click **Setup** .
- 2 From the **General** screen, enable the **Auto-start Application in Background** check box.
- 3 If you want to prevent other applications from covering the Main Polycom PVX window when you use it, select the **Always on Top** option.
- 4 Click the **Call Settings** tab.
- 5 Select the **Auto-Answer** check box.
- 6 Click **Apply**.

Specifying SIP Settings

To register the PVX system with the SIP Server and configure SIP settings:

- 1 From the PVX interface, click **Setup** .
- 2 Click the **SIP** tab.



- 3 Select **Enable SIP**.


4 Configure the following settings:

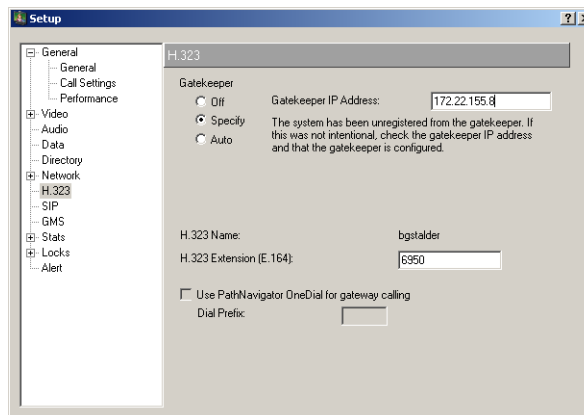
Settings	Description
Enable SIP	<input checked="" type="checkbox"/>
Transport Protocol	TCP
Type of SIP Server	Other
User Name	Specifies the system's SIP URI including SIP server address as defined by the system administrator, for example <code>austin1@<SIP_Server_IP_address></code> . This name is required for authentication with the SIP server.
Password	Leave Empty
Registrar Server	SIP Server IP address
Proxy Server	SIP Server IP address

5 Click **Apply**.

Specifying H323 Settings

To register the PVX system with the Gatekeeper and define the required H323 settings:

- From the PVX interface, click **Setup** .
- Click the **H.323** tab.



- Select **Specify** in the **Gatekeeper** section, which activates the gatekeeper.
- Specify the **Gatekeeper IP Address**.
- Click **Apply**.

Setting Up the Third-Party Components

Setting Up the SIP Server

To assign the SIP server an IP address from a different PC

- 1 Make sure both the SIP server and the PC are turned on.
- 2 Change the PC IP address to 192.168.0.50.
- 3 Connect both the SIP server and the PC to the same ethernet switch or hub using standard ethernet cables.
- 4 From the PC, launch an **Internet Explorer** browser and type the default system IP address (192.168.0.51) into the address field.
- 5 Enter the password: **iptego**
- 6 To change the default IP address go to **Network** and change the network parameters appropriate.

Parameter Name	Value
DHCP activated	Not checked
IP Address	SIP server IP address
Network Mask	
Default Route	
DNS Server	
Local Domain	localhost

7 Click Submit.

It is now possible to enter the SIP server from the network by typing the assigned SIP server IP address

To change the password

- 1** From any PC connected to the network, launch an **Internet Explorer** browser and type the SIP server IP address into the address field.
- 2** Enter the default password: **iptego**
- 3** Go to **Password** & apply a new one

Parameter	Value
Old Password	iptego
New Password	Any other password
Re-Type New Password	Same string as entered in the line above

4 Click the **Submit** button for the setup to take affect

Configuring the SIP Server

To configure the SIP server static route and dial plan

- 1 From any PC connected to the network, launch an **Internet Explorer** browser and type the SIP server IP address into the address field.
- 2 Enter the password
- 3 Go to **Dial Plan** and apply the following rule:

R-URI RegExp	Target Host	Target Port
<code>^sip:RAS200I_\w+@RAS200I-00213.172.22.154.221</code> Where: RAS200I-00213 – is the RAS200I server name 172.22.154.221 – is the SIP server IP address	RAS200I IP address	5060

- 4 Click **Submit**.

Service Configuration IPTEGO

SIP Registrar Box - Dialplan Administration

R-URI RegExp	Target Host	Target Port
*sip:RAS200I_\w+@RAS200I-00213.172.22.154.221	172.22.154.213	5060
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>
<input type="text"/>	<input type="text"/>	<input type="text"/>

SIP Service: Registrar, Dial Plan
 Administration: Networking, Password, Firmware, Log out

Testing and Validation

Testing the IBM Components

To verify the Sametime server configuration:

- Check a Lotus Sametime client to verify that the **Call** icon/option is enabled.
- Optionally, check the **Instant Meeting** dialog box to verify that the **Join the Call** icon is enabled.

To verify the Sametime Connect client configuration:

- Check the **Telephony Preferences. Service Locations** should say **Polycom Conference Service**.
- Right click **Call me back at** and verify that the field displays the dial out string for the endpoint.

To verify the Notes client configuration:

- Verify that the **Call** option is enabled.

Testing the Polycom Components

The process for testing the installation of the Polycom components in the solution is:

- 1 Verify that the PVX and/or VSX endpoints are the correct versions and are installed correctly. For installation and configuration instructions, see the endpoint documentation.
- 2 Verify the SIP server setup. Perform the [“Basic SIP Setup Testing”](#) on page 40.
- 3 Verify the H.323 setup. Perform the [“H.323 Setup Testing”](#) on page 41.

- 4 Verify the PSTN setup. Perform the [“PSTN Setup Testing”](#) on page 42.
- 5 Verify the RAS200I server configuration. Perform the [“RAS200I Setup Testing”](#) on page 43.
- 6 Verify the SIP server configuration. Perform the [“SIP Server Setup Testing”](#) on page 45.
- 7 Verify the connection between the RAS200I server and MCU devices. Perform the [“MCU Setup Testing”](#) on page 44.

Basic SIP Setup Testing

Start a video session with two SIP endpoints

#	Scenario	Expected result
1	Check SIP configuration on PVX/VSX	PVX/VSX is registered with the SIP server
2	From endpoint 1 dial the SIP address of endpoint 2	A SIP video call is established

Dial out from MCU to SIP endpoints

#	Scenario	Expected results
1	Check SIP configuration on endpoints 1,2 & 3	Endpoints 1, 2 & 3 are registered with the SIP server
2	Create a conference on MCU	Conference 1 is created
3	Dial out to SIP endpoint 1	Endpoint 1 is connected to conference 1
4	Dial out to SIP endpoint 2	Endpoint 2 is connected to conference 1 Endpoints 1 & 2 are connected to the same conference
5	Dial out to SIP endpoint 3	Endpoint 3 is connected to conference 1 All three endpoints are connected to the same conference

Dial in to the MCU using SIP endpoints

#	Scenario	Expected results
1	Check SIP configuration on endpoint 1, 2 & 3	Endpoints 1, 2 & 3 are registered with the SIP server
2	Create a conference on MCU	Conference 1 is created
3	Dial In from SIP endpoint 1	Endpoint 1 is connected to conference 1
4	Dial In from SIP endpoint 2	Endpoint 2 is connected to conference 1
		Endpoints 1 & 2 are connected to the same conference
5	Dial In from SIP endpoint 3	Endpoint 3 is connected to conference 1
		All three endpoints are connected to the same conference

H.323 Setup Testing

Start a video session with two H323 endpoints

#	Scenario	Expected results
1	Check gatekeeper configuration on PVX/VSX	PVX/VSX is registered on the gatekeeper
2	From endpoint 1 dial the H323 address of endpoint 2	H323 video call is established

Dial out from MCU to H323 endpoints

#	Scenario	Expected results
1	Check gatekeeper configuration on endpoints 1, 2 & 3	Endpoints 1, 2 & 3 are registered on the gatekeeper
2	Create a conference on MCU	Conference 1 is created
3	Dial out to H323 endpoint 1	Endpoint 1 is connected to conference 1

#	Scenario	Expected results
4	Dial out to H323 endpoint 2	Endpoint 2 is connected to conference 1
		Endpoints 1 & 2 are connected to the same conference
5	Dial out to H323 endpoint 3	Endpoint 3 is connected to conference 1
		All three endpoints are connected to the same conference

Dial in to the MCU using H323 endpoints

#	Scenario	Expected results
1	Check gatekeeper configuration on endpoints 1, 2 & 3	Endpoints 1, 2 & 3 are registered on the gatekeeper
2	Create a conference on MCU	Conference 1 is created
3	Dial In from H323 endpoint 1	Endpoint 1 is connected to conference 1
4	Dial In from H323 endpoint 2	Endpoint 2 is connected to conference 1
		Endpoints 1 & 2 are connected to the same conference
5	Dial In from H323 endpoint 3	Endpoint 3 is connected to conference 1
		All three endpoints are connected to the same conference

PSTN Setup Testing

Start a video session with two PSTN3 endpoints

#	Scenario	Expected results
1	From endpoint 1 dial the phone number of endpoint 2	Audio call is established

Dial out from MCU to PSTN endpoints

#	Scenario	Expected results
1	Create a conference on MCU	Conference 1 is created
2	Dial out to PSTN endpoint 1	Endpoint 1 is connected to conference 1
3	Dial out to PSTN endpoint 2	Endpoint 2 is connected to conference 1
		Endpoints 1 & 2 are connected to the same conference
4	Dial out to PSTN endpoint 3	Endpoint 3 is connected to conference 1
		All three endpoints are connected to the same conference

Dial in to the MCU using PSTN3 endpoints

#	Scenario	Expected results
1	Create a conference on the MCU	Conference 1 is created
2	Dial In from PSTN endpoint 1	Endpoint 1 is connected to conference 1
3	Dial In from PSTN endpoint 2	Endpoint 2 is connected to conference 1
		Endpoints 1 & 2 are connected to the same conference
4	Dial In from PSTN endpoint 3	Endpoint 3 is connected to conference 1
		All three endpoints are connected to the same conference

RAS200I Setup Testing

To verify the Polycom RAS200I configuration:

- 1 Open **Internet Explorer** and enter the IP address of the RAS200I server as you entered it during first time setup.
- 2 Verify on the **Login** screen that the server's status is **Ready**.

PPI Setup Testing

To verify the PPI was configured to work with RAS server:

>> Check the PPI log file in the Domino Server to verify that you have a good connection. The log file should show the following:

```
[26 Apr 2007 16:28:05][PolycomConferenceService][init][Telephony Command Dispatcher 0]
INFO started after super.init
=====
[26 Apr 2007 16:28:05][PolycomConferenceService][initPCASService][Telephony Command Dispat
INFO started: sPcasIP = 172.22.154.216
=====
[26 Apr 2007 16:28:08][PolycomConferenceService][initPCASService][Telephony Command Dispat
INFO finished: sPcasIP = 172.22.154.216
=====
[26 Apr 2007 16:28:08][PolycomConferenceService][init][Telephony Command Dispatcher 0]
INFO finished
=====
[26 Apr 2007 16:28:08][PolycomConferenceService][start][Telephony Command Dispatcher 0]
INFO started (after super.start)
=====
[26 Apr 2007 16:28:08][PolycomConferenceService][start][Telephony Command Dispatcher 0]
INFO finished
=====
[26 Apr 2007 16:28:08][CheckRequestStatusThread][run][Thread-2]
INFO CheckRequestStatusThread.run: started
=====
[26 Apr 2007 16:28:08][CheckNotificationThread][run][Thread-3]
INFO Started function CheckNotification
=====
```

If the log file does not show the expected results, verify that the RAS 200I IP address in the `pcas.properties` file is correct.

MCU Setup Testing

To verify the Polycom RAS200I can dial out via the MCU

- 1 Define the list of MCU devices in the RAS200I server. For instructions, see the *RAS200I Administrator's Guide*.
- 2 Verify the status of each MCU on the RAS200I server. The correct status should be **Available**.
- 3 Using the MCU manager (MGC Manager), verify that the IBM profile exists on each MCU. For instructions, see the MCU documentation.
- 4 Start a three-way SIP/H323 video call among three Sametime users.
- 5 Using the MCU manager, verify the conference has been created and the three endpoints have successfully connected to the conference.
- 6 Verify that all three users are connected to the same conference and that each user can see the other two users.

To verify the Polycom RAS200I can dial in via the MCU

- 1 Define the list of MCU devices in the RAS200I server. For instructions, see the *RAS200I Administrator's Guide*.
- 2 Verify the status of each MCU on the RAS200I server. The correct status should be **Available**.
- 3 Using the MCU manager (MGC Manager), verify that the **IBM EQ**, **IBM EQ Service** and **IBM IVR** exist on each MCU. For instructions, see the MCU documentation.
- 4 Schedule a non-restricted meeting to start now through Sametime Web Collaboration interface.
- 5 Using the MCU manager, verify the conference has been created.
- 6 Dial in to the EQ number from all three endpoints and follow the IVR instructions: Enter the conference ID and press # # (pound, pound).
- 7 Verify that all three users are connected to the same conference and that each user can see the other two users.

Testing the Third-party Components

SIP Server Setup Testing

To verify the SIP server static route configuration

- 1 Open **Internet Explorer** and enter the IP address of the SIP server.
- 2 Check the **Dial Plan** entry.
- 3 Initiate a two-way SIP call from the Sametime client.
- 4 Verify that all three users are connected to the same conference and that each user can see the other two users.

Communication Protocols and Ports Summary

Table 6-1 lists the Communication Protocols and the default ports used for data transmission between the various components in the Polycom Unified Collaboration solution.

Table 6-1 *Communication Protocol and Ports used in Polycom Unified Collaboration solution*

Components	Protocol and Default Port
MCU -> RAS200I	SIP port 5060
RAS200I -> MCU	HTTP port 80
PPI -> RAS200I	HTTP port 80
PVX, VSX, MCU <-> Gatekeeper	GK default port 1719
PVX, VSX, RAS200I <-> SIP server	SIP default port 5060
SameTime Server <-> PPI	API

Table 6-2, Table 6-3, and Table 6-4 list the rules regarding protocols and ports when the Polycom Unified Collaboration solution uses a firewall like the Polycom V2IU appliance.

Table 6-2 *Protocol and Ports for use with Firewalls*

	EP SIP	EP H.323	PC + ST Connect
EP SIP	TCP 5060 TCP / UDP 1024-65535	X	X
EP H.323	X	TCP 1720 TCP 1731 TCP / UDP 1024-65535	X
PC + ST Connect	X	X	X

Table 6-2 Protocol and Ports for use with Firewalls

	EP SIP	EP H.323	PC + ST Connect
PC + Web Meeting	X	X	X
Lotus + ST Server	X	X	TCP 443 TCP 80 TCP 1533 TCP 1080 TCP 8081-8084
SIP Server	TCP 5060	X	X
H.323 GK	X	TCP 1718 TCP 1719	X
RAS200I	TCP 5060 UDP 5060	X	X

Table 6-3 Protocol and Ports for use with Firewalls (cont'd)

	PC + Web Meeting	Lotus + ST Server	SIP Server	H.323 GK
EP SIP	X	X	TCP 5060	X
EP H.323	X	X	X	TCP 1718 TCP 1719
PC + ST Connect	X	TCP 443 TCP 80 TCP 1533 TCP 1080 TCP 8081-8084	X	X
PC + Web Meeting		TCP 443 TCP 80 TCP 1533 TCP 1080 TCP 8081-8084	X	X
Lotus + ST Server	TCP 443 TCP 80 TCP 1533 TCP 1080 TCP 8081-8084		X	X

Table 6-3 Protocol and Ports for use with Firewalls (cont'd)

	PC + Web Meeting	Lotus + ST Server	SIP Server	H.323 GK
SIP Server	X	X	TCP 5060 UDP 5060	X
H.323 GK	X	X	X	TCP 1718 TCP 1719
RAS200I	X	All ports with source TCP 80	TCP 5060 UDP 5060	X

Table 6-4 Protocol and Ports for use with Firewalls (con't)

	RAS200I
EP SIP	TCP 5060
EP H.323	X
PC + ST Connect	TCP 80
PC + Web Meeting	TCP 80
Lotus + ST Server	TCP 80
SIP Server	TCP 5060 UDP 5060
H.323 GK	X
RAS200I	X

