Troubleshooting the Cisco Unified Videoconferencing 3500 Gateway

This section covers problems you might encounter when configuring, operating and managing the Cisco Unified Videoconferencing 3500 Gateway. This chapter provides suggested actions you can use to solve the problems, and includes the following topics.

This chapter discusses the following topics:

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- Monitoring from a Remote Site, page 5-7
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About Problems Encountered Setting the IP Address

This section identifies problems that you can have assigning an IP address to a new gateway, and suggests possible solutions.

Symptoms

- Cannot access the gateway through the serial port.
- Information from the gateway does not appear on the terminal emulator screen.

Recommended Action

- Make sure that the terminal emulator modem is set using the parameters as follows:
    - Baud rate: 9600
    - Data bits: 8
    - Parity: None
    - Stop bits: 1
    - Flow control: None

- Make sure that the terminal cable that is shipped with the unit or a null cable is securely connected to the gateway serial port and to the computer serial port.

- Verify that the gateway can communicate with the terminal by using the procedure below.

Procedure

Step 1   Launch the terminal emulation software installed on the computer you have connected to the gateway serial port.

A prompt appears.

Step 2   Press **Enter**.

If the prompt moves, the terminal emulator is communicating with the gateway.

Step 3   Restart the gateway.

A log of the start up events appears on the computer monitor.

If nothing appears, check the cable connection between the gateway and the computer. You must use the terminal cable that is shipped with the unit or a null cable. If the problem persists, contact Cisco Technical Support for assistance.

Symptom

The terminal emulator does not display the configuration menu.

Possible Cause

After the power to the gateway is turned on, the terminal emulator connection displays a countdown. Pressing any key causes the gateway to begin initialization and you see the "Main application started. Please wait ..." message. When initialization is complete the "Press any Key To start configuration ..." prompt should display.

Recommended Action

To reset the gateway, press the **RST** button on the gateway front panel.

About LED Indications

This section identifies problems that the LEDs can indicate, and suggests possible solutions.

Symptom

The 10/100BaseT link LED does not light up.

The 10/100BaseT link LED is embedded in the 10/100BaseT jack on your left as you face the gateway front panel. When this LED is lit, it indicates that the gateway is connected to the network.

Recommended Action

- Make sure that the LAN cable is connected to the 10/100BaseT-1 jack on the front panel of the gateway.

- Make sure that the devices at both ends of the link are powered-up.

- Make sure that you use a RJ-45 jack with standard wiring to connect the LAN cable to the gateway 10/100BaseT-1 jack.

- Reset the gateway by pressing the **RST** button on the front panel or by clicking **Reset** in the toolbar of the Administrator interface.

- After the gateway restarts, check the link LED.

- Perform a ping test from a PC terminal to the gateway IP address. If the gateway is connected to the network, the ping returns the message "Reply from …". If the gateway does not respond to the ping, the ping returns the message "Request timeout."

If you receive a "Request timeout" message, try replacing the cable and repeat the ping test. Also, make sure that you properly configure the gateway IP address and subnet mask, and the router IP address.

Symptom

Why doesn't the GK Reg LED light up?

Possible Cause

The GK Reg LED indicates that the gateway has an active registration with the gatekeeper.

Recommended Action

- Make sure that you specify the gatekeeper with which you want the gateway to register in the Gateway Administrator interface.

- Make sure that the IP address of the gatekeeper the gateway is to register with is correct.

- Make sure that the gatekeeper is working.

the **Symptom**

Why is the ALARM LED on?

Possible Cause

The ALARM LEDs light up when there is a data transmission error during a call. Errors that trigger the alarm include loss of signal, loss of frame, excessive errors and incorrect configuration.

The gateway has an ALARM LED on the front panel and an alarm for each port on the rear panel. The ALARM LED on the front panel indicates that there is a line error. The ALARM LEDs on the rear panel are associated with an ISDN or serial line and indicate whether the error is from the LAN endpoint (local) or Public Switched Telephone Network (PSTN) endpoint (remote).

Recommended Action

- Make sure you use the correct cable.

- Make sure that the LAN cable is connected.

- Make sure that the gateway port configuration is compatible with how the ISDN line is configured.

- If the gateway is connected to a PBX, make sure that the PBX is properly connected and configured.

- If the gateway is connected directly to a central office switch, make sure that the BRI service is provisioned to support the gateway (for BRI gateways) or that the PSTN line is configured to support the gateway (for PRI gateways).

About Problems with Outbound Calls

This section identifies problems that users can have making calls through the gateway and suggests possible solutions.

Symptom

Why are end users unable to make outbound calls?

Possible Cause

Data is not being transported to the call participants.

Recommended Action

- Make sure that the call initiator is using a valid gateway service prefix to dial the call.

- Make sure that the call initiator is using the correct service for the call. (If the call is a voice call, the service should be configured for voice-only.)

- Make sure that the call initiator is correctly dialing the number.

- Make sure that the dialing endpoint is registered with a gatekeeper.

- For long distance calls, make sure that the BRI or PRI service is configured to support long distance calls.

- Make sure that the service is registered with the gatekeeper.

Possible Cause

The BRI or PRI line might have been connected to the gateway in the wrong order.

Recommended Action

- Make sure that the PRI or BRI lines are connected before the gateway is turned on. If the gateway is turned on before the lines are connected, the service is not available.

- Make sure that the terminal cable is properly connected to the gateway. When working with an IMUX, make sure that the IMUX is properly configured.

- Reset the gateway to activate the service.

About Problems with Inbound Calls

This section identifies problems users can have receiving calls through the gateway, and suggests possible solutions.

Symptom

Why are end users unable to receive incoming calls?

Possible Cause

The gateway might not be configured correctly.

Recommended Action

- Make sure that at least one routing method is defined for each active PRI or BRI port. See the "Configuring Port Call Policies" section on page 3-55 for information about configuring routing for incoming calls.

- Make sure that parameters for Interactive Voice Response (IVR) or the default extension is set to provide assistance for incoming calls that cannot be directly routed. See the "Configuring Port Call Policies" section on page 3-55 for information about configuring routing for incoming calls.

- Make sure that the endpoint on the LAN that is designated to process incoming calls that require assistance is registered with the gatekeeper and the gateway.

- Make sure that the PRI or BRI numbers are properly configured in the gateway.

Symptom

Why are direct-dial calls not reaching the intended endpoint and why is the IVR not invoked?

Possible Cause

The endpoint of the call recipient might not be registered with a gatekeeper or the telephone line is not working properly.

Recommended Action

- For PRI or BRI ports, make sure that the DID number is associated with an endpoint registered with a gatekeeper and that the number is included in the registration profile of the endpoint. Incoming calls the gateway receives for unused BRI or PRI phone numbers are disconnected.

- Make sure that the BRI or PRI line is in working order.

- Disconnect the BRI or PRI line from the gateway and connect it to a regular PSTN phone. Dial the number. If the phone does not ring, the DID line is out of order.

Possible Cause

There is a mismatch between the number of digits in the dial number that the service provider sends in DID calls and the number of digits in the corresponding E.164 addresses registered with the gatekeeper.

Recommended Action

Make sure that the service provider is sending the same number of digits in calls as specified for the DID service.

For example, if the service specifies four significant digits in the number, the service provider must send four-digit numbers. If the service specifies seven significant digits in the number, the service provider must sends seven-digit numbers.

Symptom

When TCS4 is used, why do TCS4 calls not reach the requested terminal?

Possible Cause

The TCS4 number might not be registered with the gatekeeper or the gateway is improperly configured.

Recommended Action

- Make sure that theTCS4 number is associated with an endpoint in the gatekeeper registration table.
- Make sure that the TCS4 option is enabled for the PRI or BRI port. See the "Configuring Port Call Policies" section on page 3-55 for information about configuring routing for incoming calls.

Symptom

Why is the IVR not responding to incoming calls?

Possible Cause

Endpoints placing calls to the gateway must support DTMF to use the internal IVR. If the dialing endpoint does not support Dual Tone Multi-Frequency (DTMF) tones, the IVR forwards the call to the IVR operator or default extension operator if one is defined (see the "Configuring Port Call Policies" section on page 3-55 for more information).

When the volume of the DTMF tones generated by the dialing endpoint is low, the IVR might not recognize one or more of the tones. If the gateway does not find an endpoint with a phone number corresponding to the tones dialed, the IVR treats this string as an incorrect number and disconnects the call.

Recommended Action

- Make sure that the parameter that allows the gateway to accept DTMF for incoming calls is enabled. See the "Configuring IVR Settings" section on page 3-17 for information about how to set the IVR parameter.
- Make sure that the dialing terminal supports DTMF tones.
- Make sure that the DTMF tones generated are loud enough.
- Make sure that the IVR operator number is associated with the endpoint that is registered with the gatekeeper.

Monitoring from a Remote Site

You can use the Gateway interface to monitor gateway functions from a remote site. The LEDs on the gateway front and rear panels are replicated in the LED Monitoring section of the Gateway Device interface. You can access this page from any computer on the LAN and monitor the module for connectivity or communication problems.

Procedure

Step 1   Launch a Java-based web browser.

Step 2   In the address or URL field, enter the IP address of the gateway that you want to monitor.

The Gateway interface appears.

Step 3   In the User Name field, enter a valid user name.

Step 4   In the Password field, enter the user password.

The Gateway Settings page appears.

Step 5   On the sidebar, click **Device**.

Step 6   Click the **LED Monitoring** tab (if not already selected).

The LED Monitoring tab appears.

Using the Hyperterminal Configuration Commands

This section describes configuration commands that you can access through the gateway serial port. You can use some of these commands to set device parameters that are unavailable in the Gateway interface. This section describes how to use the hyperterminal do the following:

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- Changing a Global User Name and Password, page 5-9
- Setting Echo Cancellation, page 5-9
- Configuring the Web Server Port, page 5-10
- Setting T.120 Data Collaboration Capability, page 5-10
- Restoring the Factory Default Settings, page 5-10
- Configuring the Ethernet Port, page 5-11

Accessing Device Commands through the Serial Port

You can access device commands through the gateway serial port. You can use these commands to configure networking information, set factory defaults, or configure Ethernet port settings.

Procedure

Step 1   Connect the appropriate ends of the terminal cable to the serial port on the computer and the serial port on the gateway.

> **Note**   The terminal cable is a null cable that is shipped with the gateway module.

Step 2   Launch the terminal emulator on the computer.

Step 3   Set the communication values for the terminal emulator as follows:

- **–** Baud rate: 9600
- **–** Data bits: 8
- **–** Parity: None
- **–** Stop bits: 1
- **–** Flow control: None

Step 4   After the terminal emulator session starts, press the **RST** button on the gateway front panel, or click the **Reset** button on the toolbar of the LED Monitoring tab of the Gateway Device interface.

A log of the auto-boot events appears.

Step 5   When the message "Press any key to start configuration" appears on the screen, press any key within 6 seconds.

The following command line options appear.

- **–** Enter <N> to configure default network port values
- **–** Enter <P> to change the configuration software password
- **–** Enter <A> to display advanced configuration menu
- **–** Enter <Q> to quit configuration menu and start the gateway

Step 6   Select an option to execute.

Changing a Global User Name and Password

Several applications use the same global user name and password to log in to the gateway. These applications include the Upgrade Utility that allows you to change the gateway software, the Upload Utility that allows you to change the IVR messages, and the Telnet utility that allows you to monitor the gateway operations. This user name and password are also used to log in to the Gateway interface. A newly-added administrator automatically has access to these utilities.

Procedure

Step 1   At the prompt for the command line options, press **P** to change the software password and then press **Enter**.

Step 2   At the Enter user name prompt, enter the name that you want to use and then press **Enter**. The user name is case sensitive.

Step 3   At the Enter new password prompt, enter the password that you want to use and then press **Enter**. The password is case sensitive.

A message appears verifying that the password is changed and the command line options appear.

Step 4   Enter **Q** to continue the gateway module boot cycle and then press **Enter**.

Setting Echo Cancellation

You can use these advanced commands to set echo cancellation for the gateway. To set echo cancellation, perform the following steps:

Procedure

Step 1   At the prompt for the command line options, press **A** to display the advanced command menu.

Step 2   Press **1** to enable or disable echo cancellation for voice-only calls and then press **Enter**.

Step 3   At the "0/1-disable/enable echo cancellation (voice calls)" prompt, do one of the following:

–   Press **0** to disable echo cancellation.

–   Press **1** to enable echo cancellation.

Step 4   Press **Enter**.

Configuring the Web Server Port

You can set the port number that the gateway uses for posting its web pages. The default value is 80, which is the standard for web server ports. If another port is used in your environment, you can use this command to change the gateway module web server port setting.

Procedure

Step 1   At the prompt for the command line options, press **A** to display the advanced command menu.

Step 2   Press **2** and then press **Enter** to configure the web server port.

Step 3   At the Enter a new port number for the web server prompt, enter the value that you want to use and then press **Enter**.

Setting T.120 Data Collaboration Capability

From the command line, you can use advanced commands to set the T.120 data collaboration capability for the gateway.

Procedure

Step 1   At the prompt for the command line options, press **A** to display the advanced command menu.

Step 2   Press **4** to enable or disable echo cancellation for voice-only calls and then press **Enter**.

Step 3   At the 0/1-disable/enable echo cancellation (voice calls) prompt, do one of the following:

–   Press **0** to disable T.120.

–   Press **1** to enable T.120.

Step 4   Press **Enter**.

Restoring the Factory Default Settings

You can restore the factory default settings to the gateway from the command line.

Procedure

Step 1   At the prompt for the command line options, press **A** to display the advanced command menu.

Step 2   Press **5** to restore the factory defaults.

Step 3   At the Are you sure you want to restore factory configuration? [y, n] prompt, enter **y** and then press **Enter**.

Configuring the Ethernet Port

You can use the command line commands to configure the speed of the gateway Ethernet port.

Procedure

Step 1   At the prompt for the command line options, press **A** to display the advanced command menu.

Step 2   Press **6** to change the network working mode.

A list of Ethernet configuration options appear.

Step 3   At the Choose working mode prompt, select one of the following:

– Press **1** to configure the gateway for half-duplex operation.

– Press **2** to configure the gateway for full-duplex operation.

– Press **3** to configure the gateway to negotiate the working mode with the router or switch. This is the default setting.

– Press any other key to return to the main menu without making changes.

Step 4   Press **Enter**.

Step 5   At the Choose Speed working mode prompt, select one of the following:

– Press **1** to configure the gateway to support 100 Mbps Ethernet speed.

– Press **2** to configure the gateway to support 10 Mbps Ethernet speed.

– Press **3** to allow the gateway module to negotiate the Ethernet speed with the router or switch. This is the default setting.

– Press any other key to return to the configuration menu without changing the setting.

Step 6   Press **Enter**.