



Troubleshooting the Cisco IPICS Server

The following sections describe how to resolve problems that you may encounter when you use the Cisco IPICS server and its components:

- [Browser Guidelines, page 5-1](#)
- [Cisco IPICS Installation Issues, page 5-2](#)
- [Communications Issues, page 5-8](#)
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Browser Guidelines

When you access the Cisco IPICS Administration Console by using a browser, follow these guidelines:

- Windows in the Administration Console do not refresh automatically. As a best practice, make sure that you update your browser window often and before you perform any server administration functions to ensure that you are working with the most current information. If you attempt to perform an administration update in a window that does not display the most current data, the update will not succeed and Cisco IPICS will display an error. If this situation occurs, update your browser window and retry the operation.

- To ensure that a current window displays the most up-to-date information, refresh it by clicking the button or tab that you used to display it. Cisco IPICS does not support the use of the browser Refresh button to refresh a window in the Administration Console.
- The Cisco IPICS Administration Console uses browser pop-up windows for certain functionality. If you have any browser pop-up blocker software installed on your machine, you may be prevented from performing certain actions. To ensure that you are not blocked from performing administration tasks, disable any pop-up blocker software that is installed on your machine before you use the Administration Console.
- To avoid browser-related memory issues, exit your browser and then restart it after prolonged use of the Cisco IPICS Administration Console.

Cisco IPICS Installation Issues

The issues that are described in this section may occur during or as a result of installing the Cisco Linux operating system or the Cisco IPICS server software. For information about troubleshooting the PMC application installation, see the [“Generating a PMC Installation Log File” section on page 6-3](#).

This section includes the following topics:

- [No Ports Are Listed in the Network Device Control Window, page 5-3](#)
- [Cannot Connect to the Server after Installation, page 5-4](#)
- [Authorization Error after Installation, page 5-5](#)
- [Error Displays When Performing Remote Installation, page 5-7](#)



Caution

Cisco IPICS does not support any modification of the system date and time in the operating system after the Cisco IPICS software has been installed. As a best practice, make sure that you only perform system date changes before you install the Cisco IPICS software. If you change the system date to a past date, you will invalidate your Cisco IPICS license.

To resolve this situation, you must reset the system date to the current date and then upload the license file or restart the server. If you change the system date to a future date and then try to reset it to the current date, you will invalidate your license. To resolve this situation, you must reset the system date to the current date

and then restart the Cisco IPICS system. Make sure that you do not make repetitive changes to the system date. Changes to the system date can cause unexpected behavior, which may require you to reload your software. When you invalidate your license, Cisco IPICS displays a message, after you log in to the Administration Console, to inform you that your system does not have a valid license.

For information about changing the system date and time, refer to the *Cisco IPICS Server Installation Guide*.

No Ports Are Listed in the Network Device Control Window

Problem When you open the Network Device Control window to configure the Ethernet port, no ports are listed.

Solution During the Installation of Cisco Linux, you may have logged in with the system user ID and password that you created. For more information, refer to the *Cisco IPICS Server Installation Guide*.

To continue with the installation, you must log out and then log back in as the root user. To return to the Network Device Control window as the root user, perform the following procedure:

Procedure

- Step 1** Close the current Network Device Control window by clicking **Close**.
- Step 2** Before you can log in as root, you must log out as the system user. To log out, click the **Red Hat** menu and then choose **Log Out**.
The Log Out window displays.
- Step 3** Choose **Log Out** and then click **OK**.
Cisco Linux logs you out and then displays a new login window.
- Step 4** Enter **root** in the Username field and press **Enter**.
- Step 5** Enter **cisco** in the Password field and press **Enter**.
- Step 6** Open a terminal window to enter commands. To do so, open the Red Hat menu on the Cisco Linux desktop by clicking the **Red Hat** icon.
- Step 7** Choose **System Tools > Network Device Control**.

The Network Device Control Menu displays and shows the Ethernet port(s) on the server.

Cannot Connect to the Server after Installation

Problem After you install Cisco IPICS, you enter the static IP address or the host name for the Cisco IPICS server into a browser and you cannot contact the server.

Solution If you cannot connect to the Cisco IPICS server through a browser, one of the following situations may have occurred:

- You entered the incorrect IP address for the Cisco IPICS server
- The Tomcat service is not running

To diagnose the problem, perform the following procedure:

-
- Step 1** Check that you entered the correct IP address for Cisco IPICS into the browser. If you still cannot connect to the Cisco IPICS server, continue to Step [Step 2](#).
- Step 2** Ensure that the Tomcat service is running. For information about checking the status of the Tomcat service, see the [“Checking the Status of the Tomcat Service” section on page 1-2](#).
If the Tomcat service is not running, manually start the Tomcat service. For information about starting the Tomcat service, see the [“Starting the Tomcat Service” section on page 1-5](#).
- Step 3** If the Tomcat service was not running and you had to start it manually, follow these steps:
- a. Check whether the cron was installed by searching for the tomcatcron file on the server. To check the existence of the tomcatcron file, enter the following command:

```
[root] #crontab -l
```
 - b. Take one of the following actions:
 - If the crontab command returned a message such as “no crontab for root,” install the tomcatcron file by entering the following command:

```
[root] #crontab /opt/cisco/ipics/tomcat/cron_root
```

Cisco IPICS starts the Tomcat service automatically after one minute. You can then log into the Administration Console through your browser, as usual.

- If there is no response from the crontab command, then the tomcatcron file already exists. For information about checking and, if necessary, editing the tomcatcron file, see the [“Performing Tomcat Service Procedures”](#) section on page 1-2.

Step 4 To verify that the static IP address, subnet mask and default gateway are properly configured, follow these steps:

a. To open a terminal window, click the **Red Hat** menu and choose **System Tools > Terminal**

b. Enter your root password and press **Enter**.

The Cisco Linux desktop displays.

c. To try to establish connectivity with the default gateway of another sever on the network, enter the following command:

```
ping <default gateway IP address>
```

where *default gateway IP address* represents the default gateway address for your network.

d. If the ping command is successful, log in to another server on the network and attempt to ping this Cisco IPICS server.

If the ping command is not successful, troubleshoot the network connectivity with your network administrator.

Authorization Error after Installation

Problem After installing Cisco IPICS, you log into the Administration Console and receive an authorization error.

Solution An authorization error can occur in one of the following circumstances:

- You may have entered an incorrect user name or password
- The Informix database may not have started.

To resolve this problem, perform the following procedure:

Procedure

Step 1 Before you check the status of the Informix database, verify that you entered the correct user name and password, and that the Caps Lock setting is not on.

If you confirm that you entered the correct login information for the Cisco IPICS Administration Console and still receive an authorization error, you must check the status of the database. Continue to [Step 2](#).

Step 2 To log into the Cisco Linux operating system on the Cisco IPICS server, enter **root** in the user name field of the Login window and press **Enter**.

Cisco Linux displays a window with a password field.

Step 3 Enter your root password and press **Enter**.

The Cisco Linux desktop displays.

Step 4 To open a terminal window, click the **Red Hat** menu and choose **System Tools > Terminal**

A terminal window displays.

Step 5 Enter the following command at the prompt:

```
[root] #ps -ef | grep oninit
```

If there is no response to the oninit command, then the Informix database is not running. Continue to [Step 6](#).

If the database is running properly, the grep command returns a process similar to the following example. In this case, see the [“Administration Console Does Not Function Properly”](#) section on page 5-23.:

```
informix  5575      1  0 Oct26 ?          00:00:50
/opt/cisco/ipics/database/current/bin/oninit -r
root     5576  5575  0 Oct26 ?          00:00:08
/opt/cisco/ipics/database/current/bin/oninit -r
root     5577  5576  0 Oct26 ?          00:00:02
/opt/cisco/ipics/database/current/bin/oninit -r
root     5578  5576  0 Oct26 ?          00:00:00
/opt/cisco/ipics/database/current/bin/oninit -r
root     5579  5576  0 Oct26 ?          00:00:01
/opt/cisco/ipics/database/current/bin/oninit -r
root     5580  5576  0 Oct26 ?          00:00:00
/opt/cisco/ipics/database/current/bin/oninit -r
root     15750 15700  0 14:12 pts/1    00:00:00 grep oninit
```

- Step 6** Manually start the Informix database by entering the following command at the prompt:

```
[root] #/etc/init.d/ipics_db start
```

Error Displays When Performing Remote Installation

Problem When you start the Cisco IPICS server software installation from an SSH Tectia Client window on a network PC, the installer displays an error similar to the following example:

Example 5-1 Remote Installation Error

```
Invocation of this Java Application has caused an  
InvocationTargetException. This application will now exit. (LAX)
```

Stack Trace:

```
java.awt.HeadlessException:
```

```
No X11 DISPLAY variable was set, but this program performed an  
operation which requires it.
```

```
    at java.awt.GraphicsEnvironment.checkHeadless(Unknown Source)  
    at java.awt.Window.<init>(Unknown Source)  
    at java.awt.Frame.<init>(Unknown Source)  
    at java.awt.Frame.<init>(Unknown Source)  
    at javax.swing.JFrame.<init>(Unknown Source)  
    at com.zerog.ia.installer.LifeCycleManager.f(DashoA8113)  
    at com.zerog.ia.installer.LifeCycleManager.g(DashoA8113)  
    at com.zerog.ia.installer.LifeCycleManager.a(DashoA8113)  
    at com.zerog.ia.installer.Main.main(DashoA8113)  
    at sun.reflect.NativeMethodAccessorImpl.invoke0(Native Method)  
    at sun.reflect.NativeMethodAccessorImpl.invoke(Unknown Source)  
    at sun.reflect.DelegatingMethodAccessorImpl.invoke(Unknown  
Source)  
    at java.lang.reflect.Method.invoke(Unknown Source)  
    at com.zerog.lax.LAX.launch(DashoA8113)  
    at com.zerog.lax.LAX.main(DashoA8113)
```

```
This Application has Unexpectedly Quit: Invocation of this Java  
Application has caused an InvocationTargetException. This application  
will now exit. (LAX)
```

Solution This error occurs when you invoke the installer file without the **-i console** argument. Ensure that you enter the following command:

```
[root] #./<name of installer file>.bin -i console
```

Communications Issues

The issues that are described in this section describe situations in which users have difficulty when communicating with other Cisco IPICS users. These situations may occur in a VTG or when a PMC user or Cisco IP Phone user communicates on a channel.

This section includes the following topics:

- [One Location Cannot Participate in VTG, page 5-8](#)
- [Participants Cannot Communicate in VTG, page 5-9](#)
- [Some PMCs Can Communicate on a Channel, but Other PMCs Cannot Communicate, page 5-9](#)
- [PMC Voice Quality is Poor, page 5-10](#)
- [Channel Automatically Deactivates on PMC, page 5-10](#)
- [Voice Quality Degrades for PMC, page 5-11](#)
- [Feedback Noise on VTG, page 5-11](#)

One Location Cannot Participate in VTG

Problem The multicast address for a PTT channel is set to All and the users associated to the channel are from Locations A, B, and C. Users in Locations B and C can converse with each other on the channel, but users in Location A cannot hear the conversation.

Solution The multicast address for the PTT channel is set to All, but the address may not be configured to reach everyone in the domain. The network administrator must reconfigure the router to include Location A. The problem might be, for example, an IP access list blocking that channel or a firewall setting, or that multicast is not configured properly.

For more information about multicast troubleshooting, see the [IP Multicast Troubleshooting Guide](#).

Participants Cannot Communicate in VTG

Problem Participants in a particular VTG cannot communicate with each other.

Solution Check whether the Protocol Independent Multicast (PIM) is set to sparse mode on the router. If you set the router PIM to sparse mode and do not configure a rendezvous point (RP), the router will drop the packets and your VTG participants will not hear any audio. To ensure that this problem does not occur, perform one of the following tasks:

- Set the PIM to sparse-dense mode. If no RP is found, it automatically reverts to dense mode. To configure the router for sparse-dense mode, type the following commands in the router CLI:

```
[router] #configure terminal
```

```
[router (config)] #interface <name of interface>
```

```
[router (config) interface name] #ip pim sparse-dense-mode
```

- Configure an RP manually and continue to use sparse mode.

For more information about multicast troubleshooting, see the [IP Multicast Troubleshooting Guide](#).

Some PMCs Can Communicate on a Channel, but Other PMCs Cannot Communicate

Problem Several PMC users have successfully communicated on a channel. However, subsequent PMC users, after successfully logging in the same location and attempting to activate the same channel, could not listen or talk on the channel.

Solution The router that the channel is using does not have sufficient DSPs. For this channel to accommodate more PMC users, you must add more DSPs. If all the DSP slots are full, please make sure that the appropriate number of RMS time slots have been disabled.

Refer to the [Cisco IPICS Server Administration Guide](#) or the [IP Multicast Troubleshooting Guide](#) for more information.

PMC Voice Quality is Poor

Problem Voice quality for PMC users is very poor and some PMC connections are failing.

Solution When you configure a channel, you have to choose the codec, which is the voice-compression algorithm that encodes the voice signal for transmission and then decodes it when the signal reaches the destination. Cisco IPICS allows you to choose between the G.729 codec and G.711 codec.

This problem is most common when you configure a channel to use the G.729 codec, because this codec requires greater DSP resources. G.729 is used for all SIP (remote) connections.

To resolve this problem, ensure that all the DS0 resources in your system are capable of supporting simultaneous G.729 connections.

If the DS0 resources cannot support simultaneous G.729 connections, limit the number of G.729 channels that you use. When it is possible, use G.711 rather than G.729, because G.711 uses less DSP resources. Also, restrict the number of “remote” users with access to any channels or VTGs. Associate as few channels as needed.

Channel Automatically Deactivates on PMC

Problem Channels that are activated via a SIP-based remote connection may be deactivated by the RMS if there is no traffic activity after a 30 minute interval.

Solution When this situation occurs, the PMC automatically reactivates the connection after 30 seconds. Alternatively, you can reactivate the channel by clicking the **Activate** button on the PMC.

**Note**

If the PMC user activates several channels, the timing to deactivate is separate for each channel.

To minimize this problem, the system administrator should ensure that the RMS configuration includes the following commands:

```
[router](config) #ip rtcp report interval 5001
```

```
[router](config) #gateway
```

```
[router](config) #timer receive-rtcp 5
```

For more information about proper router configuration for Cisco IPICS, refer to the *Cisco IPICS Server Administration Guide*.

**Note**

These commands will affect the timeouts for all Real-time Transport Protocol (RTP), or voice, traffic on the RMS, not just for Cisco IPICS related communications.

Voice Quality Degrades for PMC

Problem Voice quality degrades for PMC users who are connected via multicast or SIP. This problem may correspond to a period of high activity on the router.

Solution The PMC client machines may be sending IP packets that are incorrectly marked for voice priority.

For successful voice transmission, each IP packet must be properly marked in the Differentiated Service Code Point (DSCP) to ensure the highest priority handling when the packets are transmitted between end points. When incorrectly marked packets are dropped or lost, voice quality degrades.

To help resolve this problem, check to make sure that the Microsoft QoS Packet Scheduler is installed on each PMC client machine. For additional details and information about how to install the Microsoft QoS Packet Scheduler, go to <http://www.microsoft.com> and search for QoS Packet Scheduler.

Feedback Noise on VTG

Problem When a particular user talks in a VTG or PTT channel, there is a continuous feedback noise.

Solution This problem occurs when the audio from the conference plays through the microphone of a user who is talking in the conference. For example, this might happen if you are listening to a PTT channel or VTG on a handheld radio and talking in that same VTG or channel by using a PMC. The audio from the (handheld radio) speaker feeds back into the microphone (on the PMC). This can create various types of feedback noise, including metallic echoes or whistling noises.

To avoid feedback, users should turn off radios or speakers in the area in which they communicate on PMCs or Cisco IP Phones.

Equipment Issues

The issues that are in this section describe problems that you may encounter with the Cisco IPICS hardware. For issues that relate to communication difficulties, see the “[Communications Issues](#)” section on page 5-8.

This section includes the following topics:

- [Voice Communications are Interrupted When You Use VTGs and SIP-Connected PMCs](#), page 5-12
- [No Power to Cisco IP Phones](#), page 5-16

Voice Communications are Interrupted When You Use VTGs and SIP-Connected PMCs

Problem Voice communications may be interrupted when you use VTGs and SIP-connected PMCs when certain commands are not included in the T1 controller configuration. Symptoms may include one-way audio transmission, no voice transmission, dropped connections, and poor audio quality. The **debug vpm signaling** command returns unexpected results (regarding M-lead to E-lead mapping) for voice ports that connect VTGs via T1 loopback ports.

When this problem occurs, Cisco IPICS may generate error messages in the ipics.log that appear similar to the following example:

```
2005-11-10 19:25:42,981 [pool-4-thread-1] ERROR IOSRMSCommunicator:433
- 10.32.65.127 getControllers() T1 is missing a required command:
'cablelength short 133ft'
2005-11-10 19:25:42,981 [pool-4-thread-1] ERROR IOSRMSCommunicator:437
- 10.32.65.127 getControllers() T1 controller 1/0/1 UNUSABLE. (Found
24 voice ports)
```

Solution Cisco IPICS requires that the cablelength short command be configured on all T1 controllers. This command allows you to set a cable length of 133 feet or less for a T1 link on the router.

Cisco IPICS also requires that you configure the clock source of a T1 link to ensure synchronization.

To resolve this issue, perform the following procedure:

Procedure

- Step 1** Log in to the router.
- Step 2** From the router prompt, enter the following command in controller configuration mode:

```
[router] #cablelength short 133
```

This command specifies a cable length from 0 to 133 feet.

- Step 3** Configure the clock source on only one of the T1 controllers in the loopback by entering the following command:

```
[router] #clock source internal
```

This command specifies that clock is generated from the T1 controller's internal phase-locked loop (PLL).

- Step 4** On the other T1 controller in the loopback, enter the following command:

```
[router] #no clock source
```

This command specifies that there is no clock source on this T1 controller.



Note Make sure that you specify the correct clock source for each T1 controller. See [Example 5-2](#) for an example of the configuration for the two controllers.

- Step 5** Clear the error counters with the **clear counters** command.
- Step 6** Make sure that you check the T1 controller configuration on a regular basis. To display information about the T1 controllers, use the show controllers T1 command in privileged EXEC mode.

```
[router] #show controllers T1
```

The output from the command displays. [Example 5-3](#) shows the output from the sample configuration from [Example 5-2](#).

Example 5-2 Sample Configuration for Two T1 Controllers

```
controller T1 1/0/0
  framing esf
  clock source internal
  linecode b8zs
  cablelength short 133
  ds0-group 0 timeslots 24 type e&m-lmr
  ds0-group 1 timeslots 1 type e&m-lmr
  ds0-group 2 timeslots 2 type e&m-lmr
  ds0-group 3 timeslots 3 type e&m-lmr
  ds0-group 4 timeslots 4 type e&m-lmr
  ds0-group 5 timeslots 5 type e&m-lmr
  ds0-group 6 timeslots 6 type e&m-lmr
  ds0-group 7 timeslots 7 type e&m-lmr
  ds0-group 8 timeslots 8 type e&m-lmr
  ds0-group 9 timeslots 9 type e&m-lmr
  ds0-group 10 timeslots 10 type e&m-lmr
  ds0-group 11 timeslots 11 type e&m-lmr
  ds0-group 12 timeslots 12 type e&m-lmr
  ds0-group 13 timeslots 13 type e&m-lmr
  ds0-group 14 timeslots 14 type e&m-lmr
  ds0-group 15 timeslots 15 type e&m-lmr
  ds0-group 16 timeslots 16 type e&m-lmr
  ds0-group 17 timeslots 17 type e&m-lmr
  ds0-group 18 timeslots 18 type e&m-lmr
  ds0-group 19 timeslots 19 type e&m-lmr
  ds0-group 20 timeslots 20 type e&m-lmr
  ds0-group 21 timeslots 21 type e&m-lmr
  ds0-group 22 timeslots 22 type e&m-lmr
  ds0-group 23 timeslots 23 type e&m-lmr
```

```
controller T1 1/0/1
  framing esf
  linecode b8zs
  cablelength short 133
  ds0-group 0 timeslots 24 type e&m-lmr
  ds0-group 1 timeslots 1 type e&m-lmr
  ds0-group 2 timeslots 2 type e&m-lmr
  ds0-group 3 timeslots 3 type e&m-lmr
  ds0-group 4 timeslots 4 type e&m-lmr
  ds0-group 5 timeslots 5 type e&m-lmr
  ds0-group 6 timeslots 6 type e&m-lmr
  ds0-group 7 timeslots 7 type e&m-lmr
  ds0-group 8 timeslots 8 type e&m-lmr
  ds0-group 9 timeslots 9 type e&m-lmr
  ds0-group 10 timeslots 10 type e&m-lmr
  ds0-group 11 timeslots 11 type e&m-lmr
```

```
ds0-group 12 timeslots 12 type e&m-lmr
ds0-group 13 timeslots 13 type e&m-lmr
ds0-group 14 timeslots 14 type e&m-lmr
ds0-group 15 timeslots 15 type e&m-lmr
ds0-group 16 timeslots 16 type e&m-lmr
ds0-group 17 timeslots 17 type e&m-lmr
ds0-group 18 timeslots 18 type e&m-lmr
ds0-group 19 timeslots 19 type e&m-lmr
ds0-group 20 timeslots 20 type e&m-lmr
ds0-group 21 timeslots 21 type e&m-lmr
ds0-group 22 timeslots 22 type e&m-lmr
ds0-group 23 timeslots 23 type e&m-lmr
```

The following example shows the output from running the **show controllers** command with the configuration from [Example 5-2](#).

Example 5-3 Sample Output from the show controllers Command

```
router_1#show controllers T1
T1 1/0/0 is up.
  Applique type is Channelized T1
  Cablelength is short 133
  No alarms detected.
  alarm-trigger is not set
  Version info Firmware: 20041023, FPGA: 16, spm_count = 0
  Framing is ESF, Line Code is B8ZS, Clock Source is Internal.
  Current port master clock:recovered from T1 1/0/1
  Data in current interval (250 seconds elapsed):
    0 Line Code Violations, 0 Path Code Violations
    0 Slip Secs, 0 Fr Loss Secs, 0 Line Err Secs, 0 Degraded Mins
    0 Errored Secs, 0 Bursty Err Secs, 0 Severely Err Secs, 0 Unavail
  Secs
  Total Data (last 24 hours)
    0 Line Code Violations, 0 Path Code Violations,
    19555 Slip Secs, 0 Fr Loss Secs, 0 Line Err Secs, 0 Degraded
  Mins,
    19555 Errored Secs, 0 Bursty Err Secs, 0 Severely Err Secs, 0
  Unavail Secs
T1 1/0/1 is up.
  Applique type is Channelized T1
  Cablelength is long gain36 0db <-- This is what it shows if the
  cablelength command is missing.
  No alarms detected.
  alarm-trigger is not set
  Version info Firmware: 20041023, FPGA: 16, spm_count = 0
  Framing is ESF, Line Code is B8ZS, Clock Source is Line.
  Current port master clock:recovered from T1 1/0/1
```

```

Data in current interval (262 seconds elapsed):
  0 Line Code Violations, 0 Path Code Violations
  0 Slip Secs, 0 Fr Loss Secs, 0 Line Err Secs, 0 Degraded Mins
  0 Errored Secs, 0 Bursty Err Secs, 0 Severely Err Secs, 0 Unavail
Secs
Total Data (last 24 hours)
  0 Line Code Violations, 0 Path Code Violations,
  19554 Slip Secs, 0 Fr Loss Secs, 0 Line Err Secs, 0 Degraded
Mins,
  19554 Errored Secs, 0 Bursty Err Secs, 0 Severely Err Secs, 0
Unavail Secs

```

For more information about the proper configuration for routers that you use with Cisco IPICS, refer to the [Cisco IPICS Server Administration Guide](#).

No Power to Cisco IP Phones

Problem Cisco IP Phones are not receiving power.

Solution When there is no power going to the Cisco IP Phones, one of the following circumstances may be true:

- There is no Power over Ethernet (PoE) module in the router.
- The IOS software version is incorrect.



Note For information about the proper IOS software versions for the Cisco IP Phones that Cisco IPICS supports, refer to the [Cisco IPICS Hardware Compatibility Matrix](#).

To determine the cause of the power issue, run the following command on the router:

```
[router] #show power
```

- If the command returns an “unsupported command” message, for example, the IOS software version is incorrect. Installing the correct IOS version would probably correct the problem.
- If the command returns information about the power, the cause of the problem is probably the lack of a POE power module.

To work around this issue, either use wall sockets for power or install POE in the router.

Router Configuration Issues

The issues in this section describe problems you may encounter with the router or RMS configuration.

This section includes the following topics:

- [Long Wait After Restarting Cisco IPICS Following RMS Configuration, page 5-17](#)
- [VTG Activation Slow or RMS in Unreachable State, page 5-18](#)
- [RMS Fails or Remains in Unreachable State, page 5-18](#)
- [New RMS Does Not Display Loopbacks, page 5-19](#)
- [Router Remains in Unreachable State, page 5-19](#)
- [Router Indicator Lights for the Loopback Are Not Green, page 5-21](#)
- [Voice Loops in Conferences and Router Configuration Shows Incorrect Information, page 5-22](#)

Long Wait After Restarting Cisco IPICS Following RMS Configuration

Problem Restarting Cisco IPICS takes almost two minutes.

Solution After you define one or more RMS components for which you have allocated a large number of DS0 voice ports, Cisco IPICS may restart slowly.

When you restart Cisco IPICS, the server verifies that all of the RMS components are still operational and match the last configured condition for the RMS. This verification is necessary, because the RMS components may have also restarted.

At this time, Cisco IPICS also reconfigures all of the DS0s to match the last known state in the configuration data. If an RMS has, for example, 96 DS0s, then Cisco IPICS must send anywhere from 800 to 1400 commands to the router. On higher performing routers, this may take 10 to 20 seconds. On lower performing routers, this process may take one to two minutes (60 to 120 seconds).

To solve this problem, use a higher performing router, such as the Cisco 3845 rather than a model such as the Cisco 3725. Also, do not heavily load any RMS with controllers and DS0s.

Cisco recommends that you limit an RMS to approximately 6 controllers with a total of approximately 100 DS0s.

VTG Activation Slow or RMS in Unreachable State

Problem Activation of VTGs is slow, remote user logins are slow or frequently exhibit errors, or the RMS is frequently or persistently in an Unreachable state.

Solution If you change the prompt on the router, either before or after you add the RMS component to Cisco IPICS, operations such as VTGs activation and deactivation may fail.

Cisco IPICS only supports the default prompts.

To avoid problems, keep the default prompt by using the **no prompt** router configuration command.

RMS Fails or Remains in Unreachable State

Problem The RMS fails or remains in an unreachable state and you can observe the following information:

- All virtual teletype interface (VTY) lines are in use.
- The ipics.log file includes the following error message:

```
ERROR IOSRMSCommunicator:..java.net.ConnectException:Connection
refused.
```

Solution This problem may occur when multiple Cisco IPICS users are logged in to the router and have used all of the available VTY lines. In this situation, the Cisco IPICS server cannot communicate with the router.

To verify that all of the VTY lines are in use, use the Telnet or use a Secure Shell (SSH) command to access the router. Then, enter the **show users** command to display information about the lines that are active on the router.

To clear a VTY line, enter the **clear line** command. (This command terminates the service on the specified line and closes any open files.)

To help resolve this problem, you can configure a time interval that the VTY lines wait for expected user input. To configure this interval, set the exec-timeout interval to 22 minutes. Be sure to save any configuration changes that you make.

You can also limit the number of users who can log in to any router that you use with Cisco IPICS.

New RMS Does Not Display Loopbacks

Problem The RMS that you added to Cisco IPICS does not display loopbacks in the Edit Router Details area of the Administration Console.

Solution You may have attempted to add an RMS with a partial or unsupported controller configuration.

Refer to the *Cisco IPICS Server Administration Guide* for proper configuration information.

Router Remains in Unreachable State

Problem After updating the login information to an RMS, you cannot access it from the Cisco IPICS server. In the Administration Console Manage RMS window, the RMS displays as Unreachable.

Solution You may have activated the RMS with incorrect settings, such as a user name, password, or IP address. This causes the RMS to enter an unreachable state, without any way to fix the incorrect settings or to disable the RMS.

This situation occurs when a formerly operational RMS (with configured loopbacks) already exists in Cisco IPICS and you update the settings to incorrect values.

To resolve the problem, perform the following procedure:

Procedure

Step 1 In the Manage RMS window of the Administration Console, select the router and click **Details**.

The Edit Router Details area displays.

Step 2 Deactivate the router by clicking **Deactivate**.

The router displays with an Out of Service state.

- Step 3** Enter the correct username and password for the router in the Edit Router Details area.
- Step 4** Click **Save**.
- Step 5** Reactivate the router by clicking **Reactivate**.
- If the username and password you entered are correct, the router reactivates and displays with an Operational state.
-

Router Indicator Lights for the Loopback Are Not Green

Problem After you create a physical loopback on the router, the green Carrier Detect (CD) indicator lights are not on.

Solution Each set of ports on the router has the following indicator lights. Check the loopbacks on your router to see which of the following indicator lights is on:

- Alarm Indication (AL)—This red light indicates one of the following problems:
 - The cable is not connected
 - You have not mapped the pins correctly for a T1. The following is the proper pin configuration on the RJ45 connector:
 - Pins 1 and 2 must be mapped to pins 4 and 5
 - Pins 4 and 5 must be mapped to pins 1 and 2
- Loss of Frame (LP)—This yellow light indicates one of the following problems:
 - The cable has a loose connection
 - The cable is defective
- Both the Alarm Indication (AL) and Carrier Detect (CD) lights are on
 - The interface is shutdown—Enable the interface by executing the **no shutdown** command on both ends of the T1 loopback interface
 - The framing is incorrect—Cisco recommends that you use the Extended Super Frame (ESF) framing method on both ends of the loopback
 - The line code is incorrect—Cisco recommends B8ZS encoding standard on both ends of the loopback
- Carrier Detect (CD)—This green light indicates that there are no problems with the loopback.

Voice Loops in Conferences and Router Configuration Shows Incorrect Information

Problem Users experience voice loops (continuous echoes) in conferences. The Show Configuration feature in the Manage RMS window displays settings for voice ports or dial peers that are not currently in use.

Solution When you add an RMS to a Cisco PICS system, particularly an RMS that was previously associated with another Cisco IPICS system, you may observe differences between the “Show Configuration” and the configuration in the RMS Details area. For example, some of the voice ports may show descriptions that contain an “INUSE” status in the Show Configuration window, even though they are not listed in the loopbacks.

Cisco IPICS automatically updates an RMS every 10 minutes with the configuration that you can view in the RMS Details area. After you make a change to a new RMS, such as adding loopbacks, the RMS configuration is not updated until the monitor process has a chance to run.

To ensure that the Cisco IPICS configuration and the configuration on the RMS are in sync, you can click **Update Configuration** after you add an RMS (or after you add loopbacks to a previously configured RMS). This rewrites all of the voice resources with the current status. Alternately, you can simply wait for up to 10 minutes and Cisco IPICS will automatically update the RMS.



Note

When you click **Update Configuration**, any currently active voice resources on the RMS will be reconfigured and this action may cause a momentary loss of connection.

General Operation Issues

The issues listed in this section describe situations that users may encounter in using the Cisco IPICS Administration Console.

This section includes the following topics:

- [Administration Console Does Not Function Properly, page 5-23](#)
- [Database Full Message Displays and Users Cannot Save Data, page 5-26](#)

- [VTG Activates by Itself](#), page 5-26
- [Policy Is Active But VTG Is Not](#), page 5-27
- [User Added to VTG, but No VTG Appears on User PMC](#), page 5-27
- [Cisco IP Phone Cannot Access Channel](#), page 5-28
- [VTGs and Policies Not Functioning Properly](#), page 5-28
- [Browser Displays 404 Error for Cisco IPICS](#), page 5-29
- [Intermittent Commands Fail](#), page 5-30
- [Backup Log Displays Incorrectly in Notepad](#), page 5-31
- [Some Language Characters Display Incorrectly](#), page 5-31
- [PMC Users Receive Error Message After Database Restore](#), page 5-32

Administration Console Does Not Function Properly

Problem Users cannot log in to the Administration Console from the Login window. Users who are currently logged in to the system encounter errors when they try to perform tasks. Existing conferences (VTGs and channel connections) function normally.

Solution You may encounter this problem under the following conditions:

- The database has stopped
- The database has entered into quiescent mode; this mode occurs when a restore operation or database maintenance is being performed
- The informix user password has changed

If the database has stopped or gone into quiescent mode, you can perform procedures to start the database again. However, if the informix password was manually changed, the Cisco IPICS server will not be able to access the database until you reset the password by reinstalling the Cisco IPICS server software.



Caution

When you manually change the informix password, Cisco IPICS can no longer process commands to the database. Make sure that you do not change the informix password unless you are prompted to do so by the Cisco IPICS installation or upgrade procedure.

To troubleshoot this issue, perform the following procedure:

Procedure

Step 1 Check to make sure that the database is running by following these steps:

- a. Log in to the server as root by entering root in the Login window user name field; then press **Enter**.

Cisco Linux displays a window with a password field.

- b. Enter your root password and press **Enter**.

The Cisco Linux desktop displays.

- c. Open a terminal window by clicking the **Red Hat** menu and choose **System Tools > Terminal**.

A terminal window displays.

- d. From root, enter the following command:

```
[root] #onstat -l
```

If the database is online and running, the command returns the following response; continue to [Step 3](#).

```
IBM Informix Dynamic Server Version 10.00.UC1      -- On-Line -- Up
00:16:14 -- 124036 Kbytes
```

If the database is in quiescent mode, the command returns the following response; continue to [Step e](#).

```
IBM Informix Dynamic Server Version 10.00.UC1      -- Quiescent --
Up 00:00:42 -- 124036 Kbytes
```

If the database is not running, the command returns the following response; start the database:

```
shared memory not initialized for INFORMIXSERVER 'IPICSDbServer'
```

For information about starting the database, see the [“Starting the Informix Database” section on page 1-10](#).

- e. If the database is in quiescent mode and a restore operation is in progress, wait for the operation to complete.

If you are not currently restoring the database, the database may have stopped in maintenance mode. To move the database into online mode, enter the following command:

```
[root] #onmode -m
```

- f. Check to see if the database is running by entering the following command at the prompt:

```
[root] #onstat -l
```

Take one of the following actions:

- If the response to the command indicates that the database is online, continue to use Cisco IPICS as normal.
- If the command returns any other response, you may need to terminate the database processes before you can start the database again. For more information, see the [“Stopping the Informix Database” section on page 1-9](#).

- Step 2** If the database has stopped, you can start it by entering the following command at the prompt:

```
[root] #/etc/init.d/ipics_db start
```

If the database successfully starts, Cisco Linux displays the message, [OK].

If the database does not successfully start, check the diagnostics.log file, which is located in the following directory:

```
/opt/cisco/ipics/database/logs
```

If you cannot resolve the problem by using the information that appears in the diagnostics.log file, contact your Cisco support personnel.

- Step 3** If the database is running properly and you cannot use the Administration Console, check the informix user password to make sure that it was not manually changed.



Caution

When you manually change the informix password, Cisco IPICS can no longer process commands to the database. Make sure that you do not change the informix password unless you are prompted to do so by the Cisco IPICS installation or upgrade procedure.

The only method for resetting the informix user password for Cisco IPICS is to reinstall the Cisco IPICS server software. During the procedure, you create a new password for the informix user. For information about performing a Cisco IPICS server installation, refer to the *Cisco IPICS Server Installation Guide*.



Note If you must reinstall the Cisco IPICS server software to resolve the issue, notify users that communications will be disrupted until the installation process has completed.

Database Full Message Displays and Users Cannot Save Data

Problem When I click **Save** (in any window in the Administration Console), Cisco IPICS displays a message that the database is full.

Solution The logical logs may be full, due to an extremely high amount of activity on the system. You can verify the amount of database consumption for the logical logs in the System Status window in the Administration Console. If the Database % Full indicator displays that the database is full, you can purge the logs by clicking **Purge**.

For more information about the Purge feature, see the [“Purging Activity Logs from the Database” section on page 3-4](#).

VTG Activates by Itself

Problem As a dispatcher, I see in the VTG Workspace that a VTG activated, but I did not click **Activate**.

Solution One of the following may have occurred:

- The VTG was triggered by a policy. Check the Manage Policies window to see which policy(s) contained that VTG.
- Another dispatcher is logged into your Cisco IPICS system and activated that VTG.

**Note**

As a best practice, make sure that you refresh your browser window often and before you perform any server administrative functions to ensure that you are working with the most current information. If you attempt to perform an administrative refresh in a window that does not display the most current data, the refresh will not succeed and Cisco IPICS will display an error. If this situation occurs, refresh your browser window and retry the operation.

Policy Is Active But VTG Is Not

Problem The Manage Policies window shows me that a policy is active, but the one of VTGs in the policy was not activated.

Solution The system may have insufficient resources, such as no available multicast addresses, to activate the entire policy. In such cases, Cisco IPICS attempts to activate as much of the policy as it can (for example, activating two of the three VTGs in a policy, if the system does not have more than two available multicast addresses).

User Added to VTG, but No VTG Appears on User PMC

Problem The dispatcher adds a user to a VTG, but the user does not see the VTG appear on the PMC. The user may also not see channels that the operator associates to the user profile.

Solution This problem occurs when a user is in the database under two different user IDs. The user may log in with one name, while the operator or dispatcher use another ID for the user.

Check the Users list in the Manage Users window for duplicate user entries and delete any unused IDs.

Cisco IP Phone Cannot Access Channel

Problem A Cisco IP Phone cannot access a channel that was associated to it.

Solution The location information may be incorrectly configured. Check your user profile in the Cisco IPICS Administration Console (see the *Cisco IPICS Server Administration Guide* for more information) or contact your operator.

The Cisco IPICS server does not allow Cisco IP Phone users who are remote from the PTT channel. When the user is remote to the channel, the channel does not appear or is not selectable for the user on the Cisco IP Phone.

VTGs and Policies Not Functioning Properly

Problem Problems are occurring in the Administration Console. For example, the dispatcher cannot activate policies and VTGs.

Solution To troubleshoot these problems, you should change a setting in the `log4j.properties` file to set the file to collect debugging information. When you do this, the `ipics.log` file, which you can view and download in the Administration Console System Status window, begins collecting debug information. You can use this to collect helpful information about this issue.

To begin collecting debug information, perform the following procedure:

Procedure

-
- Step 1** Log in to the Cisco IPICS server with root privileges.
 - Step 2** Open a terminal window by clicking the **Red Hat** menu and choosing **System Tools > Terminal**.
 - Step 3** To stop the Tomcat service by entering the following command:

```
[root] /etc/init.d/ipics_tomcat stop
```
 - Step 4** Open the file for editing by entering the following command:

```
[root] #vi /root/tomcat/current/webapps/ipics_server/  
WEB-INF/classes/log4j.properties file
```
 - Step 5** Locate the following setting in the file:

```
log4j.logger.com.cisco.ipics.server
```

- Step 6** Change the setting from info to debug.
- Step 7** Save and close the file with the **:wq** command.
- Step 8** Restart the Tomcat service by entering the following command:
- ```
[root] /etc/init.d/ipics_tomcat start
```
- Step 9** Exit the terminal window by clicking **X**.

**Caution**

---

Setting the log4j.properties file to debug can generate a large number of messages during periods of high traffic. Be sure to change the setting back to info after you finish debugging.

---

## Browser Displays 404 Error for Cisco IPICS

**Problem** When trying to access the Cisco IPICS in the browser, I received the following error:

```
HTTP Status 404:
type Status report
message /ipics_server/
description: The requested resource (/ipics_server/) is not available.
```

In the Administration Console System Status window, the entries in the ipics.log file include the following message:

```
09:10:32,818 ERROR [/ipics_server]:3673 - Exception sending context initialized event to
listener instance of class com.cisco.ipics.server.core.ServerImpl
java.lang.ClassFormatError: Incompatible magic value 16693950 in class file
```

**Solution** A portion of the Cisco IPICS system has been corrupted.

To correct the problem, perform the following procedure:

- 
- Step 1** Log into the server as the root user.
- Step 2** Delete the ipics\_server folder with the following command:

```
[root] #rm -rf /opt/cisco/ipics/tomcat/current/
webapps/ipics_server
```

**Step 3** Restart tomcat with the following command:

```
[root] #/etc/init.d/ipics_tomcat restart
```

Cisco Linux responds with a message, indicating whether the Tomcat server has started.

When you restart the Tomcat server, the ipics\_server.war file recognizes that the ipics\_server folder is missing and expands to create another.

**Step 4** Open a browser and enter the address for Cisco IPICS.

---

## Some Windows Display No Data and an Undefined Error

**Problem** Some Internet Explorer browser users may receive a javascript “undefined” error and not see any data display in Administration Console windows that display data in a table format. This problem occurs when the IE browser javascript engine cannot handle advanced dynamic features because of installation of third party software or other setup issues.

**Solution** You can resolve this problem by reinstalling the javascript engine. To download the installation script to your PC, go to <http://www.microsoft.com> and search for Windows Script 5.6 for Windows Server 2003.

## Intermittent Commands Fail

**Problem** An intermittent “command failed” error displays when a dispatcher activates or deactivates a VTG or when a user logs in or logs out of the PMC application.

**Solution** Commands that Cisco IPICS sends to the RMS fail for no apparent reason. This may occur during VTG activation or deactivation or when a PMC user logs in or logs out.

When the problem occurs, you can find an error in the ipics.log and/or the ipics.rms.log file.

This problem is intermittent, however, and you can work around it by simply trying the command or action again.

## Backup Log Displays Incorrectly in Notepad

**Problem** When I download the backup log in the Manage Database window and choose Open, Notepad displays the file as one continuous text block.

**Solution** The backup log you download from the Manage Database window is the bar\_act.log, which includes UNIX newline characters. These characters cannot be read in Notepad or any editor that only reads plain text.

To resolve this problem, perform the following procedure:

### Procedure

- 
- Step 1** When you download the log file from the Manage Database window, click **Save** to save the file to your PC.
  - Step 2** Choose a location on your PC to save the file and click **Save**.
  - Step 3** Open a Desktop Explorer window and navigate to location where you saved the bar\_act.log file.
  - Step 4** Right-click the file and choose **Open with > Choose Program**.
  - Step 5** Choose WordPad or another text view that is capable of reading UNIX newline characters.
- 

## Some Language Characters Display Incorrectly

**Problem** Some information, such as user names and PTT channel names, displays with incorrect characters in some languages.

**Solution** The Internet Explorer browser on some PCs may be unable to display characters from several languages on the same page. When the browser displays English, Hebrew, and Arabic, characters from some of the languages may display incorrectly. The problem occurs when Internet Explorer selects a font that supports only some languages.

To resolve this problem, in Internet Explorer, choose a font that supports all unicode character sets. Such fonts include Arial Unicode MS (which is included with Microsoft Office).

To choose a new font for Internet Explorer, perform the following procedure:

### Procedure

---

- Step 1** From the Internet Explorer menu, choose **Tools > Internet Options**.  
The Internet Options window displays.
- Step 2** Click **Fonts**.  
The Fonts dialog box displays.
- Step 3** From the Web page font pane, select Arial Unicode MS.
- Step 4** To accept the font choice, click **OK**. Then, click **OK** to save your changes and close the Internet Options window.  
Internet Explorer now displays the languages correctly.
- 

## PMC Users Receive Error Message After Database Restore

**Problem** After a database restore procedure has been completed, PMC users receive an “unknown response” error message when they try to launch the PMC. These users cannot connect to the server but they can operate in offline mode.

**Solution** This problem may occur if the Tomcat service is not restarted after the restore procedure is completed or if the PMC user attempts to log in to the system before the Tomcat service has completed the restart process.

To resolve this problem, perform the following procedure:

### Procedure

---

- Step 1** Verify if the Tomcat service is running. For more information, see the [“Checking the Status of the Tomcat Service”](#) section on page 1-2.
- Step 2** If the Tomcat service is not running, start it. For more information, see the [“Starting the Tomcat Service”](#) section on page 1-5.

If the Tomcat service is running, wait for at least 5 minutes so that the database has time to synchronize its information with the RMS.

- Step 3** If you continue to experience problems, check the ipics.log file, which is located in the `/opt/cisco/ipics/tomcat/versions/5.5.9/logs` directory.
-

