



CHAPTER 6

Recovering the PMC Application

This chapter provides information about recovering the PMC application under specific circumstances.

This chapter includes the following sections:

- [Support for Cisco IPICS Recovery, page 6-1](#)
- [Recovering the PMC, page 6-3](#)
- [PMC Recovery Scenarios, page 6-4](#)
- [PMC Application Recovery, page 6-9](#)

Support for Cisco IPICS Recovery

This release of Cisco IPICS allows the connection of a PMC to only one Cisco IPICS server at a time. The PMC GUI displays a server status connectivity indicator. When you click this indicator, the Status menu opens and displays the IP address of your Cisco IPICS server. For more information about the Status menu, see the [“Using the Status Menu” section on page 5-7](#).

Cisco IPICS provides support for connection to an alternate server if your primary server goes offline. When the primary server becomes inaccessible, you may enter the IP address or host name of an alternate server or choose an alternate server from the drop-down list box in the PMC login dialog box.

**Note**

Be aware that when you connect to an alternate server, it is logically the same as your primary server. That is, you receive the same list of channels as if you connected to your primary server.

To choose an alternate server when your primary server is not available, perform the following procedure:

Procedure:

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- Step 1** Enter your alternate **server IP address** or **server host name** (or choose your alternate server IP address from the drop-down list box)
 - Step 2** Enter your **user name** and **password**
 - Step 3** Click **OK**

The last server IP address that you successfully connected to becomes your default server when you next launch the PMC.

**Note**

The PMC displays its connectivity status with the server. If connectivity with the server is lost, a red indicator and an alert icon displays to make you aware of the loss of connectivity. When you click this indicator, the Status menu opens and displays the IP address of your Cisco IPICS server. For more information about this connectivity indicator, see the [“Using the Status Menu” section on page 5-7](#).

When SIP-based remote connections fail, the PMC displays a visual indicator in the form of a yellow triangle next to the channel. For more information, see the [“Identifying Channel Activation Issues” section on page 8-25](#).

If a system failure occurs and the PMC application cannot connect to the Cisco IPICS server, the PMC may continue to operate in offline mode, which is a disconnected state. A failure may be the result of a network failure, a hardware failure, or extreme latency.

**Note**

When the PMC becomes disconnected from the Cisco IPICS server, it continues to operate in its existing state; that is, the PMC can continue with its existing voice channels but it cannot connect to additional, new channels until it reconnects to the server.

After the system recovers and resumes normal operations, the PMC automatically attempts to reconnect to the Cisco IPICS server. The Cisco IPICS server enables recovery of the PMC application by retaining the necessary PMC-related configuration and session information, and by doing so, it provides an efficient recovery mechanism for the PMC.

For more information, see the [“Server-PMC Login Sequence Interaction”](#) section on page 4-6 and the [“System Recovery Caveats”](#) section on page 6-4.

Related Topics:

- [Server-PMC Login Sequence Interaction, page 4-6](#)
- [System Recovery Caveats, page 6-4](#)

Recovering the PMC

This section provides information about recovering the PMC application after a system failure occurs. It also provides information about recovery caveats and includes the following topics:

- [Transparent Recovery Mechanism, page 6-3](#)
- [System Recovery Caveats, page 6-4](#)

Transparent Recovery Mechanism

The Cisco IPICS server provides a transparent recovery mechanism for the PMC end-user by maintaining in its database any PMC-specific session information that the server needs to communicate with the PMC.

The Cisco IPICS PMC login process requires that the PMC end-user log in to the PMC application, which in turn logs in to the Cisco IPICS server. If you attempt to log in to the PMC application and the PMC cannot communicate with the

server, you receive notification that the login to the server has failed. When this failure occurs, the PMC automatically enters offline mode so that you can log in to the PMC locally.

**Tip**

You can only login to the PMC locally if you have already successfully logged in to the Cisco IPICS server once before. For more information, see the [“Logging In to the PMC Application” section on page 4-1](#).

By allowing local login to the PMC application, Cisco IPICS ensures uninterrupted communications by providing the ability for the PMC to continue to operate in its existing state even when the server becomes unreachable.

After you log in to the PMC, the PMC automatically attempts to reconnect to the Cisco IPICS server.

System Recovery Caveats

When a system failure occurs, the PMC maintains functionality by allowing you to continue participation in existing VTGs, even if the PMC cannot connect to the Cisco IPICS server. However, you cannot connect to new, additional VTGs until the system recovers.

When the server recovers from a communications failure and resumes normal operations, the server automatically refreshes the channels that are running on the PMC.

Related Topics:

- [Logging In to the PMC Application, page 4-1](#)
- [Dynamic Configuration, page 4-15](#)

PMC Recovery Scenarios

The following information describes how the PMC recovers in certain scenarios:

- [Cisco IPICS Server is Unavailable, page 6-5](#)
- [Cisco IPICS Server and PMC are Up/Communications are Down, page 6-8](#)

- [Cisco IPICS Server and PMC are Up/Network is Down](#), page 6-8

Cisco IPICS Server is Unavailable

If Cisco IPICS server fails, either at startup or during the middle of an operation, the PMC displays a message to inform you that connectivity has been lost. The PMC continues to operate in its existing state, and polls the server during this time, but the system does not allow changes to channels or configurations to be made while the server is down.



Note

Cisco IPICS does not prevent you from logging in to the PMC application if the connection to the server goes offline.

This section includes information about the following scenarios:

- [Cisco IPICS Server is Down/RMS and PMC are Up](#), page 6-5
- [Cisco IPICS Server and RMS are Down/PMC is Up](#), page 6-6
- [Cisco IPICS Server Resumes Operation](#), page 6-7

Cisco IPICS Server is Down/RMS and PMC are Up

If Cisco IPICS server fails, either at startup or during the middle of an operation, the PMC displays a message, along with a server status connectivity indicator on the PMC, to inform you that connectivity has been lost. The PMC continues to operate in its existing state but no changes to channels or configuration parameters can be made while the server is down. (The PMC continues to poll the server during this time.)

In the following scenarios, the server becomes inaccessible but the PMC maintains communications with the RMS (except where noted):

- The server is offline when the PMC starts up

Because the PMC stores the user and configuration data on the local machine, Cisco IPICS uses this information to enable PMC communications when the server is unavailable.

- In this situation, the PMC clients who are in the same location can continue to use the multicast connection information that was previously configured.
- SIP users may continue to use the SIP connection information unless the PMC successfully logged out of Cisco IPICS. (Upon successful logout, Cisco IPICS reclaims the resources and invalidates the SIP connections.)

When the PMC starts up, the server allocates the necessary RMS resources for all assigned channels, whether or not the channels are activated or visible on the PMC. This functionality enables the PMC to communicate by using data that has been configured.



Note The exception exists when RMS modifications, which are unknown to the PMC, occur. In this situation, RMS availability becomes unpredictable.

- The server goes offline after successful user login

When this situation occurs, the PMC displays a message to notify the user that communications with the server have been interrupted. By using the stored configuration, the PMC sets up its SIP and multicast connections. All channels again become operable unless the RMS is modified by server or RMS activity.

- The server is online but the PMC has lost connectivity to the server

The PMC displays a message to notify the user that communications with the server have been interrupted. The PMC uses the last known configuration to set up its SIP and multicast connections, but in this situation, some of the SIP connections may not be accurate if the server had modified the RMS during the time when the PMC lost connectivity.

Cisco IPICS Server and RMS are Down/PMC is Up

When both the server and RMS become unavailable, the following scenarios may occur:

- The PMC cannot connect to either the server or the RMS at PMC startup

In this situation, the PMC user can log in to the PMC by using the stored information. When the PMC tries to set up a SIP connection, it detects the loss of connectivity to the RMS.

- If the PMC had not previously logged out, all SIP connections and VTGs that are stored in the last known configuration may appear to be available on the PMC (but they are really unavailable).
- Upon successful logout, Cisco IPICS marks all SIP resources as unavailable and displays the channels as disabled on the PMC.
- When the PMC user tries to activate a SIP resource that it not in service, a busy tone is heard.
- Multicast connections that are stored in the configuration remain operable for the same location.

**Note**

Be aware that the location information is also stored in the last known configuration. Therefore, if the PMC user logs in to a different location while both the server and the RMS are offline, the multicast connection may no longer be operable.

- The PMC loses connectivity to both the server and the RMS while the PMC is operational
 - When the PMC detects that it has lost connectivity with the RMS, Cisco IPICS marks all SIP connections on the RMS as disabled.
 - Multicast connections remain operable if the PMC user location does not change, as described above.

Cisco IPICS Server Resumes Operation

When the Cisco IPICS server resumes normal operations, the following activities occur:

1. When the server recovers from a failure, it returns to its last known state and resumes normal operations. The server initializes the PMC sessions and commands by using the information that it has stored in the database.
2. After connectivity is reestablished between the server and the PMC, new sessions may be created on the server. The server checks for concurrent license usage, and if the number of concurrent users exceeds the maximum, the system displays a warning message. For more information about license requirements, see the [“License Information” section on page 4-6](#).

3. The PMC login state is recovered from the server database when the server restarts. If the PMC session had been in an inactive state during the communications interruption, the system may prompt you to log in to the PMC again.

**Note**

Cisco IPICS does not prevent you from logging in to the PMC application if the connection to the server goes offline.

Cisco IPICS Server and PMC are Up/Communications are Down

In this scenario, the Cisco IPICS server is operational but the communications between the server and the PMC are down. The PMC retains the ability to login locally and it continues to operate in its existing state and poll the server.

When communications resume, the server manages the licensing and sessions as shown below:

1. After communications resume, the Cisco IPICS server checks the licenses for the PMC that had been locally logged in.
2. The PMC sessions that were inactive with the server become active and communications with those sessions proceed as normal.
3. If the PMC session became inactive, the Cisco IPICS server may prompt you to log in to the PMC application again.

Cisco IPICS Server and PMC are Up/Network is Down

When the network fails and communications go offline, you can still log in to the PMC application by using the local login process. When normal operations resume, the same process, as described in the [“Cisco IPICS Server and PMC are Up/Communications are Down”](#) section on page 6-8, occurs.

For more information about logging in to the PMC application, see the [“Logging In to the PMC Application”](#) section on page 4-1.

Related Topics:

- [Logging In to the PMC Application, page 4-1](#)
- [License Information, page 4-6](#)

PMC Application Recovery

The Cisco IPICS server provides the basic PMC configuration, skin, and XML definitions.

If Cisco IPICS cannot locate your chosen PMC skin, or if your skin has been misconfigured, a message displays to prompt you to check the configuration and the Skin directory to make sure that it has not been deleted.

If, at startup, Cisco IPICS detects that your PMC skin has been corrupted, the system prompts you with a skin selection dialog box so that you can choose a PMC skin to use.

If you encounter a configuration, skin, or XML loss, you can quickly recover from these failures by uninstalling and reinstalling the PMC application on your client machine or by choosing another compatible version to run at login.

For information about uninstalling the PMC application, see the [“Uninstalling the PMC Application” section on page 2-27](#).

For information about installing the PMC application, see the [“Installing the PMC Application” section on page 2-2](#).

For information about choosing a compatible version to run at login, see the [“Launching the PMC Application” section on page 2-13](#), and the [“Managing PMC Version Numbers” section on page 2-18](#).

Related Topics

- [Installing the PMC Application, page 2-2](#)
- [Launching the PMC Application, page 2-13](#)
- [Managing PMC Version Numbers, page 2-18](#)
- [Reverting to a Previous Version of the PMC Application, page 2-26](#)
- [Uninstalling the PMC Application, page 2-27](#)
- [Logging In to the PMC Application, page 4-1](#)

Where to Find More Information

- [*Cisco IPICS Server Administration Guide, Release 2.1\(1\)*](#)

