Administration Console: System Administrator Tasks

The Cisco IPICS system administrator is responsible for installing Cisco IPICS and for setting up Cisco IPICS resources, including servers, routers, multicast addresses, locations, and PTT channels. The system administrator also manages the Cisco IPICS licenses and PMC versions, monitors the status of the system, reviews log files as needed, and creates operational views.

In addition, the system administrator often manages backing up and restoring Cisco IPICS data. For more information, refer to *Cisco IPICS Backup and Restore Guide*.

You perform most Cisco IPICS system administrator activities from the System Administrator window in the Administration Console. To access this window, log in to the Administration Console as described in the "Accessing the Administration Console" section on page 1-10, then choose the **System Administrator** tab.

Note You must be assigned the system administrator role to access the System Administrator window.

The following sections describe many of the activities that you can perform from the System Administrator window:

- Managing Locations, page 2-38
- Managing Activity Logs, page 2-41
- Managing Licenses, page 2-45
- Managing PMC Automatic Updates, page 2-48
- Managing the PMC Installer, page 2-51

For information about managing operational views in the Ops Views window, see Chapter 6, "Operational Views."

For information about managing system information in the System Status window, refer to *Cisco IPICS Troubleshooting Guide*.

For information about managing backups in the Database window, refer to *Cisco IPICS Backup and Restore Guide*.

For information about managing options in the Options window, refer to *Cisco IPICS Troubleshooting Guide*.

Managing the RMS

A Router Media Service (RMS) enables a variety of functionality for Cisco IPICS. For details, see the "RMS" section on page 1-6.

Note Before you perform the RMS management procedures that are described in the following sections, you must configure the RMS. For more information see Appendix A, "RMS Configuration."

As a Cisco IPICS system administrator, you can perform these RMS management tasks:

- Viewing and Editing RMS Details, Activating an RMS, and Deactivating an RMS, page 2-4
- Adding an RMS, page 2-9
- Viewing and Configuring Loopbacks, page 2-11
- Deleting an RMS, page 2-14
- Merging RMS Configuration, page 2-14

- Updating RMS Configuration, page 2-15
- Viewing RMS Configuration, page 2-16

You perform the RMS management tasks in the Administration Console Manage RMS window. For more information about this window, including how to access it, see the "Manage RMS Window" section on page 2-3.

Note Cisco IPICS is not intended to provide complete management capabilities for an RMS. Cisco IPICS manages only the voice-specific parameters that are necessary to set up audio services for Cisco IPICS. For additional information about setting up, configuring, and managing an RMS, refer to the documentation for the RMS.

Manage RMS Window

The Manage RMS window lists the RMSs that are available in your Cisco IPICS network. It also lets you perform the RMS management functions.

To open the Manage RMS window, click the **RMS** link in the Administration Console System Administrator tab.

The Routers area in the Manage RMS window displays the name of each RMS that is installed in your Cisco IPICS network. An icon next to each router name indicates the status of the router, as described in Table 2-1.

Table 2-1 RMS Status Icons

Icon	Meaning
	RMS is operating.
	RMS is deactivated. It might be turned off, unreachable, not configured, or deactivated through Cisco IPICS.

Viewing and Editing RMS Details, Activating an RMS, and Deactivating an RMS

You can view and edit information for any RMS in your Cisco IPICS network. You can also deactivate an RMS, which makes it unavailable for use by Cisco IPICS, or reactivate an RMS. You perform these tasks in the Edit Router Details area.

By default, Cisco IPICS polls the RMS every 10 minutes and updates information in the Edit Router Details area if information has changed. (You can change this default polling period by entering a new value in the RMS Polling Frequency field in the System Administrator Options window. For more information, refer to *Cisco IPICS Troubleshooting Guide*.) To ensure that you see current information, redisplay the Edit Router Details area if it has been displayed for longer than the default polling period.

Note The Edit Router Details displays information for items that have been configured in Cisco IPICS. You can obtain other RMS configuration information from the router as described in the documentation for the router, and by using the Show Configuration feature as described in the "Viewing RMS Configuration" section on page 2-16.

Editing or Viewing RMS Details

You can edit or view a variety of information for an RMS. To do so, perform the following steps.

For information about accessing the Manage RMS window, see the "Manage RMS Window" section on page 2-3.

Procedure

Step 1 In the Manage RMS window Routers area, take either of these actions:

- Click the RMS for which you want to view or change information and then click **Details**
- Double-click the RMS for which you want to view or change information

The Edit Router Details area for the selected RMS displays.

Note If you choose another RMS when the Edit Router Details area is displayed, the information in this area does not change for the new RMS until you click **Details** again or double-click the new RMS.

Step 2 If you want to change any RMS information, except updating the name, configuring loopbacks, or reserving or unreserving DS0s, click **Deactivate**.

This action makes the RMS temporarily unavailable to Cisco IPICS.

Before you make changes, wait until all RMS resources are not in use, or manually disable the channel or deactivate any VTG that involves this RMS.

Step 3 View or update the information that is described in Table 2-2

Table 2-2 Router Details Area Fields

Field	Description
Identification	
Name	Name of the RMS. The name can include alphanumeric characters, spaces, and any of these characters: . , – ‘ # ( ) / :.
Location	Multicast domain that contains the multicast addresses that can be accessed by this RMS. An RMS must be configured with the same location that is configured for the channels that it serves. When the Location is set to All, this RMS can access multicast addresses that have been configured for accessibility in every location (multicast domain). The location name can include alphanumeric characters, spaces, and any of these characters: . , – ‘ # ( ) / :.

Table 2-2 Router Details Area Fields (continued)

Field	Description
Status—*Display only*	• Operational—RMS has at least one loopback configured and that is operating. • Unconfigured—RMS has no loopbacks. • Stopping—RMS has been deactivated but has at least one DS0 in use by Cisco IPICS. The RMS will become deactivated when Cisco IPICS no longer uses any of its voice ports. • Deactivated— RMS has been deactivated and has no DS0s in use. **Note** You can change the user name, password, multicast address, or location of the RMS only when it is in the Deactivated state. • Unreachable—RMS cannot be reached by the Cisco IPICS server.
Connection Properties	
IP Address—*Display only*	Loopback IP address of the RMS.
Host Name—*Display only*	Host name of the RMS.
User Name—*Display only*	User name that Cisco IPICS uses to access the RMS. This name must have administrator privileges on the RMS.
Password	Password that Cisco IPICS uses to access the RMS.
Type—*Display only*	Model number of the RMS.

Table 2-2 Router Details Area Fields (continued)

Field	Description
Controllers—*Display only*	T1 connections on the RMS. The number in parentheses is the number of ports on the corresponding controller.
Loopbacks	Mappings between two controllers that are physically connected. To change a loopback, choose a pair of controllers from the two Loopback drop-down lists and click **Add**. A controller appears in gray if it is in use. Each configured loopback appears in a list near the bottom of this area. To see detailed information about a loopback, click the right arrow next to its name. To see detailed information about all loopbacks, click **Expand All**. To collapse an expanded view of a loopback, click the down arrow next to its name. To collapse detailed information about all loopbacks, click **Collapse All**. For an explanation of the detailed loopback information, see the "Viewing and Configuring Loopbacks" section on page 2-11.

Step 4 If you changed information in the IP Address, User Name, or Password fields, make the corresponding change in the router using the configuration application of the router.

Step 5 Click **Save** to save your changes.

To exit without saving changes, click **Cancel**.

Step 6 If you deactivated the router, click **Activate** to reactivate it.

After you change information for an RMS, it can take up to 10 minutes (by default) for Cisco IPICS to recognize the changes. If you want to cause Cisco IPICS to recognize the changes immediately, see the "Updating RMS Configuration" section on page 2-15.

Note You can change the default time that Cisco IPICS takes to recognize an RMS by entering a new value in the RMS Polling Frequency field in the System Administrator Options window. For more information, refer to *Cisco IPICS Troubleshooting Guide*.

Deactivating or Activating an RMS

When you deactivate an RMS, it goes into the Deactivated state and becomes unavailable for use by Cisco IPICS until you activate it. You should deactivate an RMS when you make certain changes to it, as described in the "Editing or Viewing RMS Details" section on page 2-4.

If you deactivate an RMS that has one or more voice ports in use by Cisco IPICS, the RMS goes into the Stopping state. A router that is in stopping state will not serve additional PMC SIP connections or additional channels that are participants in active VTGs. Existing connections and channels that are served by the RMS are not affected. The RMS will become deactivated when Cisco IPICS no longer uses any of its voice ports.

When you activate an RMS, it becomes available for use by Cisco IPICS.

To deactivate or activate an RMS, perform the following steps.

For information about accessing the Manage RMS window, see the "Manage RMS Window" section on page 2-3.

Procedure

Step 1 In the Manage RMS window Routers area, take either of these actions:

- Click the RMS that you want to deactivate or activate and then click **Details**
- Double-click the RMS that you want to deactivate or activate

The Edit Router Details area for the selected RMS displays.

Step 2 Click **Deactivate** to deactivate an active RMS, or click **Activate** to activate a deactivated RMS.

Adding an RMS

When you add an RMS, you make it available to Cisco IPICS. Before you add an RMS, make sure that these conditions are met:

- The router must exist on the Cisco IPICS network and it must be configured as described in Appendix A, "RMS Configuration"
- At least one location must be defined, as described in the "Managing Locations" section on page 2-38

To add a new RMS in Cisco IPICS, perform the following steps.

For information about accessing the Manage RMS window, see the "Manage RMS Window" section on page 2-3.

Procedure

Step 1 In the Manage RMS window, click **Add**.

The Add New Router Media Service area displays at the bottom of the Manage RMS window.

Step 2 In the Add New Router Media Service area:

a. In the IP Address field, enter a loopback address.

The loopback access must be configured to support SIP calls.

b. In the User Name field, enter the user name required to log in to the RMS that you are adding.

c. In the Password field, enter the password required to log in to the RMS that you are adding.

d. From the Location drop-down list, choose a location that is defined by the IP address that you entered for the router.

e. Click **Save**.

If you do not want to add this RMS, click **Cancel**.

When you click **Save**, Cisco IPICS determines whether it can access the RMS. This process can take up to one minute. If the RMS is accessible, Cisco IPICS displays the Router Details area for the RMS. If the router is not accessible, a message informs you of the possible reason.

The Router Details area displays this information for the router that you are adding:

- Location—Location defined for this RMS
- Status—Displays Unconfigured because you have not yet saved the changes that you made
- IP Address—Loopback IP address that you entered for this router
- Host Name—Host name configured on the router
- User Name—Information that you entered for this router
- Password—Information that you entered for this router
- Type—Model number of the router that you are adding
- Controllers—T1 connections that the router has available for loopback

Step 3 In the Name field, enter a name for the RMS, if you want to change the name that displays in the list or routers in the Manager Routers window.

The name that displays by default is the router host name. You might find it useful to give the RMS a descriptive name. A name that you enter is for IPICS use only, it does not change the router host name.

Step 4 In the adjacent Loopbacks drop-down lists, create a loopback by choosing two controllers that are physically connected on the router, and then click **Add**.

Repeat this step as needed to create additional loopbacks.

Step 5 Configure DS0s for each loopback as described in the "Viewing and Configuring Loopbacks" section on page 2-11.

Step 6 Click **Save** to save the configuration for this RMS.

If you do not want to add this RMS, click **Cancel**.

After you add an RMS, it can take up to 10 minutes (by default) for Cisco IPICS to recognize the addition. If you want to cause Cisco IPICS to recognize the addition immediately, see the "Updating RMS Configuration" section on page 2-15.

Viewing and Configuring Loopbacks

Each loopback that you create in Cisco IPICS appears in a list near the bottom of the Edit Router Details area. You can perform the following tasks related to loopbacks:

- Viewing Detailed Information about a Loopback, page 2-11
- Enabling DS0s in a Loopback, page 2-12
- Disabling DS0s in a Loopback, page 2-13
- Removing a Loopback, page 2-13

Viewing Detailed Information about a Loopback

To see detailed information about a loopback, click the right arrow next to its name. To collapse an expanded view of a loopback, click the down arrow next to its name.

To see detailed information about all loopbacks, click **Expand All**. To collapse detailed information about all loopbacks, click **Collapse All**.

An expanded view of a loopback provides this information for each time slot in the loopback:

- Number—DS0 in the loopback
- State—One of the following:
  - Enabled—DS0 can be used by Cisco IPICS
  - Disabled—DS0 cannot be used by Cisco IPICS
- DS0 Status—One of the following:
  - In Use—DS0 is being used to add a channel to a VTG, add a VTG to a VTG, or add a SIP connection for a channel for a user
  - Unavailable—DS0 is reserved for non-Cisco IPICS use
  - Available—DS0 can be used by Cisco IPICS
  - Error—DS0 is misconfigured
- DS0 Source and DS0 Destination—Connections that the loopback is making. Port Source can be a channel or a VTG. Port Destination can be a channel, a VTG, or a user.

Enabling DS0s in a Loopback

After you create a loopback, you must enable the DS0s that can be used by Cisco IPICS. You can enable DS0s in one loopback at a time, or in several loopbacks at a time.

To enable DS0s in a loopback, perform these steps:

Procedure

Step 1 Expand each loopback in which you want to enable DS0s by clicking the right arrow next to its name or by clicking **Expand All**.

Step 2 Check the check box next to each DS0 that you want to enable.

If you want to enable all DS0s in a loopback, check the check box next to Number at the top of the list of DS0s for that loopback.

If you want to uncheck check boxes, take one of these actions:

- Uncheck specific check boxes, or uncheck the check box next to Number at the top of the list of DS0s to clears all check boxes for that loopback.
- Click **Clear** to clear all check boxes for all loopbacks.

Step 3 Click **Enable DS0s**.

The state for the DS0 displays **Enabled** in green text.

Step 4 Click **Save**.

If you do not want to enable the DS0 or DS0s, click **Cancel**.

Disabling DS0s in a Loopback

If you disable a DS0 in a loopback, it cannot be used by Cisco IPICS. You can disable DS0s in one loopback at a time, or in several loopbacks at a time.

To disable DS0s in a loopback, perform these steps:

Procedure

Step 1 Expand each loopback in which you want to disable DS0s by clicking the right arrow next to its name or by clicking **Expand All**.

Step 2 Check the check box next to each DS0 that you want to disable.

If you want to disable all DS0s in a loopback, check the check box next to Number at the top of the list of DS0s for that loopback.

If you want to uncheck check boxes, take one of these actions:

- Uncheck specific check boxes, or uncheck the check box next to Number at the top of the list of DS0s to clears all check boxes for that loopback.
- Click **Clear** to clear all check boxes for all loopbacks.

Step 3 Click **Disable DS0s**.

The state for the DS0 displays **Disabled** in red text.

Step 4 Click **Save**.

If you do not want to disable the DS0 or DS0s, click **Cancel**.

Removing a Loopback

To remove a loopback, click **Remove** next to its name, and then click **Save**.

If you decide not to remove the loopback, click **Add** next to its name or click **Cancel** instead of clicking **Save**.

Deleting an RMS

Deleting an RMS removes all of its resources from Cisco IPICS and makes the RMS unavailable to Cisco IPICS.

You cannot delete an RMS if any of its DS0s are in use by Cisco IPICS.

To delete an RMS, perform the following steps.

For information about accessing the Manage RMS window, see the "Manage RMS Window" section on page 2-3.

Procedure

Step 1 In the Manage RMS window Routers area, click the RMS that you want to delete.

The RMS becomes highlighted in blue.

Step 2 Click **Delete**.

A dialog box prompts you to confirm the deletion.

Step 3 To confirm the deletion, click **OK**.

If you do not want to delete this RMS, click **Cancel**.

Merging RMS Configuration

The Merge RMS configuration procedure updates Cisco IPICS with this router information:

- Host name
- Router type
- Controllers

Use this procedure if you add or remove controllers on the router or if you change its host name, and you want Cisco IPICS to recognize the change.

To update RMS configuration, perform the following steps.

For information about accessing the Manage RMS window, see the "Manage RMS Window" section on page 2-3.

Procedure

Step 1 In the Manage RMS window Routers area, click the name of the RMS with the configuration that you want to merge.

The RMS name becomes highlighted.

Step 2 Click **Merge Configuration**.

Cisco IP displays changes in the Edit Router Details area.

Step 3 Click **Save** to update the Cisco IPICS RMS configuration with the changes.

If you do not want to save the changes, click **Cancel**.

Updating RMS Configuration

Updating the configuration of an RMS applies the RMS configuration that is specified in Cisco IPICS to the RMS. This procedure can be useful in these situations:

- You have changed information for an RMS as described in the "Viewing and Editing RMS Details, Activating an RMS, and Deactivating an RMS" section on page 2-4 and you do not want to wait for Cisco IPICS to recognize the changes, which can take up to 10 minutes (by default).
- You have added an RMS as described in the "Adding an RMS" section on page 2-9 and you do not want to wait for Cisco IPICS to recognize the addition, which can take up to 10 minutes (by default).
- You have restarted an RMS and are having voice connectivity or voice quality issues. Updating the configuration of the RMS can help eliminate the router configuration as the source of the problem.
- The RMS has restarted but Cisco IPICS has not yet updated the router configuration with the configuration that is specified in Cisco IPICS. (An RMS that shuts down returns to its default configuration when it restarts. Within 10 minutes—by default—after it restarts, Cisco IPICS compares the current RMS configuration with the RMS configuration in the Cisco IPICS database. If there is a discrepancy, Cisco IPICS refreshes the RMS configuration to match the configuration in the database.)

Note Manually updating the configuration for an RMS disconnects all users that are connected to the RMS through a SIP connection and may interrupt any active VTG participant that is hosted on that RMS.

To manually update the configuration for an RMS, perform the following steps.

For information about accessing the Manage RMS window, see the "Manage RMS Window" section on page 2-3.

Procedure

Step 1 In the Manage RMS window Routers area, click the RMS with the configuration that you want to reload.

The RMS name becomes highlighted.

Step 2 Click **Update Configuration**.

Viewing RMS Configuration

You can view the configuration file for any router that is configured for use with the Cisco IPICS network and that is operating. Configuration information can be helpful if you need to troubleshoot a problem with an RMS.

To view the RMS configuration, perform the following steps.

For information about accessing the Manage RMS window, see the "Manage RMS Window" section on page 2-3.

Procedure

Step 1 In the Manage RMS window Routers area, click the RMS for which you want to update the configuration.

The router becomes highlighted.

Step 2 Click **Show Configuration**.

Cisco IPICS displays the configuration in a new window.

Tip You can use the **Show Configuration** button to update information that displays in the Router Details area.

Managing PTT Channels and Channel Groups

A PTT channel, also called a *channel*, is a multicast communications path that allows users to communicate with each other.

A channel group is a logical grouping of PTT channels. Channel groups allow Cisco IPICS dispatchers to work with multiple PTT channels efficiently. For example, instead of dragging individual PTT channels one at a time to set up a VTG, a Cisco IPICS dispatcher can drag a channel group to move all PTT channels in the group. A PTT channel can be in as many channel groups as you require.

As a Cisco IPICS system administrator, you can perform these PTT channel and channel group management tasks:

Channel group management tasks

- Viewing and Editing Channel Group Details, page 2-20
- Creating a Channel Group, page 2-21
- Deleting a Channel Group, page 2-22
- Adding a PTT Channel to a Channel Group, page 2-23
- Removing a PTT Channel from a Channel Group, page 2-24

Channel management tasks

- Viewing and Editing Channel Details, page 2-25
- Adding a PTT Channel, page 2-28
- Deleting a PTT Channel, page 2-29

You perform the PTT channel management tasks in the Administration Console Manage Channels window. For more information about this window, including how to access it, see the "Manage Channels Window" section on page 2-18.

Manage Channels Window

The Manage Channels window lists the channel groups and the channels that are available in your Cisco IPICS network. It also lets you perform the PTT channels and channel groups management functions.

To open the Manage Channels window, click the **Channels** link in the Administration Console System Administrator tab.

The Channels Group area in the Manage Channels window displays the name of each channel group that is configured in Cisco IPICS. To see the channels that are in a channel group, expand the group by clicking the right arrow next to the group name. Click the down arrow next to a group name to collapse an expanded group.

The Channels area displays the name of each channel that is configured in Cisco IPICS.

For information about the icons and colors that appear in the Manage Channels window, see these sections:

- Manage Channels Window Icons, page 2-18
- Manage Channels Window Color Coding, page 2-19

Manage Channels Window Icons

Icons in the Manage Channels window provide information about each channel group and channel name, as described in Table 2-3.

Table 2-3 Channel Group and Channel Icons

Icon	Meaning
	PTT channel.
	Channel group.
	Busy PTT channel. A channel is busy when it is use by an active VTG.
	Secure PTT channel. You can designate a PTT channel as secure when you add the channel.
	Unavailable PTT channel. A channel is unavailable when it is disabled.

Manage Channels Window Color Coding

Information in the Manage Channels window is color coded as described in Table 2-4.

Table 2-4 Color Coding in Manage Channels Window

Color	Meaning
Green channel name in Channel Groups area	You have dragged the channel to the channel group but have not yet clicked **Save**. For more information, see the "Adding a PTT Channel to a Channel Group" section on page 2-23.
Red channel name in Channel Groups area	You have dragged the channel from the channel group but have not yet clicked **Save**. For more information, see the "Removing a PTT Channel from a Channel Group" section on page 2-24.

Table 2-4 Color Coding in Manage Channels Window

Color	Meaning
Blue highlighted channel group or channel name	Channel group or channel is selected in preparation for clicking **Details**, **Add**, or **Delete**.
Orange highlighted channel group or channel name	You have clicked another channel group or channel while the Details area for this channel group or channel is displayed.

Viewing and Editing Channel Group Details

You can view information for and change the name of any channel group in your Cisco IPICS network. You do so in the Edit Channel Groups Details area.

To edit or view channel group details, perform the following steps.

For information about accessing the Manage Channels window, see the "Manage Channels Window" section on page 2-18.

Procedure

Step 1 In the Manage Channels window Channel Groups area, take either of these actions:

- Click the channel group for which you want to view or change information and then click **Details**
- Double-click the channel group for which you want to view or change information

The Edit Channel Group Details area for the selected channel group displays.

Note If you choose another channel group when the Edit Channel Group Details area is displayed, the information in this area does not change for the new channel group until you click **Details** again or double-click the new channel group.

Step 2 View or update the information that is described in Table 2-5.

Note If Operational Views is enabled, additional ops views fields appear in this area. For more information, see Chapter 6, "Operational Views."

Table 2-5 Edit Channel Group Details Area Fields

Field	Description
Static Attributes	
Channel Group Name	Name of the channel group. The name can include alphanumeric characters, spaces, and any of these characters: . , – ‘ # ( ) / :_ .
Runtime Attributes	
Associated VTGs—*Display only*	VTG or VTGs in which channel group is a member. Includes one of these designations: • Active—Channel group is a participant in an active VTG • Idle—Channel group is a member of a VTG template

Step 3 Click **Save** to save your changes.

To exit without saving changes, click **Cancel**.

Creating a Channel Group

A channel group provides a a way to organize channels. You may find it useful to create and name channel groups according to location (for example, South Area PTT Channels) or function (for example, Executive PTT Channels).

To create a channel group, perform the following steps.

For information about accessing the Manage Channels window, see the "Manage Channels Window" section on page 2-18.

Procedure

Step 1 In the Manage Channel Groups window Channel Groups area, click **Add**.

The Edit Channel Group Details area for a new channel group displays.

Step 2 In the Channel Group Name field, enter a name for the new channel group.

The name can include alphanumeric characters, spaces, and any of these characters: . , – ‘ # ( ) / :_ .

Step 3 Optional. If Operational Views is enabled, enter appropriate information in the Ops View Attributes fields.

For more information, see Chapter 6, “Operational Views.”

Step 4 Click **Save** to save the new channel group

If you do not want to create this channel group, click **Cancel**.

Deleting a Channel Group

When you delete a channel group, it is no longer available to Cisco IPICS. Deleting a channel group does not affect the channels that are contained in the channel group.

You cannot delete a channel group that is a participant in an active VTG or that is a member of a VTG template. You must remove the channel group from the VTG before you can delete it.

To delete a channel group, perform the following steps.

For information about accessing the Manage Channels window, see the “Manage RMS Window” section on page 2-3.

Procedure

Step 1 In the Manage Channels window Channel Groups area, click the channel group that you want to delete.

The channel group becomes highlighted in blue.

Step 2 Click **Delete** in the Channel Groups area.

A dialog box prompts you to confirm the deletion.

Step 3 To confirm the deletion, click **OK**.

If you do not want to delete this channel group, click **Cancel**.

Adding a PTT Channel to a Channel Group

Adding a PTT channel to a channel group makes the channel part of that group. You can add the same PTT channel to multiple channel groups.

You cannot add a channel to a channel group that is a participant in an active VTG or that is a member of a VTG template. You must first remove the channel group from the active VTG or from the VTG template.

For information about creating channels, see the "Adding a PTT Channel" section on page 2-28.

To add a PTT channel to a channel group, perform the following steps.

For information about accessing the Manage RMS window, see the "Manage Channels Window" section on page 2-18.

Procedure

Step 1 In the Manage Channels window Channel Groups area, display the channel group to which you want to add the PTT channel.

Step 2 Drag the PTT channel name that you want to add from the Channels area to the desired channel group.

When you release the mouse button, the PTT channel is added to the group. If the channel group is expanded, you will see the newly added PTT channel displayed in green.

Repeat this step as needed to add other channels to channel groups.

Step 3 Click **Save** to complete the additions that you have made.

If you want to undo the changes that you made since you last clicked **Save**, click **Revert**.

Removing a PTT Channel from a Channel Group

When you remove a PTT channel from a channel group, the channel is no longer a part of that group. Removing a PTT channel from a channel group does not remove the channel itself from Cisco IPICS, nor does it remove the channel from any other channel group to which it belongs.

You cannot remove a PTT channel from a channel group that is a participant in an active VTG or that is a member of a VTG template. You must first remove the channel group from the active VTG or from the VTG template.

To remove a PTT channel from a channel group, perform the following steps.

For information about accessing the Manage RMS window, see the "Manage Channels Window" section on page 2-18.

Procedure

Step 1 In the Manage Channels window Channel Groups area, display the channel group from which you want remove a PTT channel.

Step 2 If the PTT channels in the channel group are not visible, click the right arrow next to the group name to expand it.

Step 3 Locate the channel that you want to remove and drag it out of the Channel Groups area.

When you release the mouse button, the channel name changes to red.

Repeat this step as needed to remove other channels from the channel group.

Step 4 Click **Save** to complete removing the channels.

If you want to undo the changes that you made since you last clicked **Save**, click **Revert**.

Viewing and Editing Channel Details

You can view and edit information for any channel. You do so in the Edit Channel Details area.

To edit or view channel details, perform the following steps.

For information about accessing the Manage Channels window, see the "Manage Channels Window" section on page 2-18.

Procedure

Step 1 In the Manage Channels window Channel area, take either of these actions:

- Click the channel for which you want to view or change information and then click **Details**
- Double-click the channel for which you want to view or change information

The Edit Channel Details area for the selected channel displays.

Note

- If Operational Views is enabled, additional ops views fields appear in this area. For more information, see Chapter 6, "Operational Views."
- If you choose another channel when the Edit Channel Details area is displayed, the information in this area does not change for the new channel until you click **Details** again or double-click the new channel group.

Step 2 View or update the information that is described in Table 2-6

Table 2-6 Edit Channel Details Area Fields

Field	Description
Static Attributes	
Channel Name	Name of the channel. The name can include alphanumeric characters, spaces, and any of these characters: . , – ‘ # ( ) / :_ .
Preferred Codec	Codec (G.711 or G.729) used by this channel. Use G.711 if this channel should be available to Cisco IP Phone users or will be part of a VTG. Use G.711 or G.729 if this channel will be available to PMC users. G.729 uses less bandwidth but consumes more PMC resources and router resources than G.711.
Secure Flag	Indicates whether this channel is a secure channel. This field is for reference only and should be set to reflect the configuration of the channel in your network. Changing this setting does not affect the security configuration of the channel.
Status—*Display only*	Displays one the following states: • Active—Channel is an active participant in an active VTG • Idle—Channel is available for use in a VTG • Pending—A VTG in which this channel is a participant has been activated and the channel is being initialized • Disabled—Channel is disabled

Table 2-6 Edit Channel Details Area Fields (continued)

Field	Description
Connection Attributes	
Location	Users from the specified locations can access this channel without using additional network resources. Users from other locations can only access this channel through a SIP connection. If the network is configured so that the channel can be accessed by users in every location, set this value to **All**.
Type	Type of connection that Cisco IPICS and devices use to connect to this channel when connecting from the corresponding location.
Address	Multicast address, in the corresponding location, that is used to connect to this channel. The first octet in this address must be 224, 232, 233, 238, 239. Each subsequent octet must be in the range of 0 through 255. Two channels in the same location cannot have the same multicast address.
Port	Multicast address port number, in the corresponding location, that is used to connect to this channel. This value must be an even number in the range of 21000 through 65534.
Runtime Attributes	
Associated VTGs—*Display only*	VTGs that are associated with this channel.
Associated Users—*Display only*	Users that are associated with this channel.

Step 3 Click **Save** to ave any changes that you have made.

To exit without saving changes, click **Cancel**.

Adding a PTT Channel

Adding a PTT channel makes it available for use by Cisco IPICS.

Before you add a PTT channel, configure locations as described in the "Managing Locations" section on page 2-38.

To add a new channel, perform the following steps.

For information about accessing the Manage Channels window, see the "Manage Channels Window" section on page 2-18.

Procedure

Step 1 In the Manage Channels window Channel area, click **Add**.

The Edit Channel Details area for a new channel displays.

Step 2 In the Edit Channel Details area for a new channel:

a. In the Channel Name field, enter a name for the channel.

Choose a unique and recognizable name that accurately describes the PTT channel. It is often helpful to name the PTT channel according to the department or organization that will use it, or for a particular geographic region (for example *Fire Department* or *North Area*).

b. From the Preferred Codec drop-down list, choose a codec for the channel:

- Choose G.711 if the channel will be available to Cisco IP Phone users or will be part of a VTG.
- Choose G.711 or G.729 if this channel will be available to PMC users.

  G.729 uses less bandwidth but consumes more PMC resources and router resources than G.711.

c. From the Secure Flag drop-down list, choose whether this channel is a secure channel (**Yes**) or is not a secure channel (**No**).

This field is for reference only and should be set to reflect the configuration of the channel in your network. The setting that you make does not affect the security configuration of the channel.

d. Optional. If Operational Views is enabled, enter appropriate information in the Ops View Attributes fields.

For more information, see Chapter 6, "Operational Views."

e. From each Location drop-down list, choose the multicast domain that contains a multicast address that you want to connect to this channel.

   If there is only one multicast domain, choose the location **All**.

f. From each Type drop-down list, choose the type of connection that Cisco IPICS and devices use to connect to this channel when connecting from the corresponding location.

g. In each Address field, enter the multicast address, in the corresponding location that is used to connect to this channel.

   The first octet in this address must be 224, 232, 233, 238, 239. Each subsequent octet must be in the range of 0 through 255.

   Cisco recommends that addresses be in the range of 239.192.0.0 through 239.251.255.255 to conform to IANA specifications. Cisco IPICS does not check an address that you enter for conflicts with reserved or special addresses. If you add an address that is outside of the recommended range, make sure that there are no conflicts.

h. In each Port field, enter the port number for the corresponding multicast address.

   This value must be an even number in the range of 21000 through 65534.

Step 3 Click **Save** to save the information for this channel.

If you do not want to add this channel, click **Cancel**.

Deleting a PTT Channel

If a PTT channel is no longer needed, you can delete it from Cisco IPICS.

You cannot delete a PTT channel that has an active VTG associated with it. You must remove the channel from the VTG before deleting it.

Tip To see the VTGs associated with a PTT channel, click the channel in the Channels list and then click **Details**. Cisco IPICS displays the VTG names in the Associated VTGs field of the Edit Channel Details area.

To delete a channel, perform the following steps.

For information about accessing the Manage RMS window, see the "Manage RMS Window" section on page 2-3.

Procedure

Step 1 In the Manage Channels window Channels area, click the channel that you want to delete.

The channel becomes highlighted.

Step 2 Click **Delete**.

A dialog box prompts you to confirm the deletion.

Step 3 To confirm the deletion, click **OK**.

If you do not want to delete this channel, click **Cancel**.

Managing the Multicast Pool

Cisco IPICS stores multicast addresses in the multicast pool. When you activate a VTG, Cisco IPICS automatically assigns an available multicast address from the multicast pool to that VTG. (A multicast address is available when it is not assigned to an active VTG or to a channel). When a VTG deactivates, its multicast address is released for use by another VTG.

Note You cannot activate more VTGs than there are multicast addresses in the multicast pool.

As a Cisco IPICS system administrator, you can perform these multicast pool management tasks:

- Viewing and Editing Multicast Address Information, page 2-32
- Adding Individual Multicast Addresses, page 2-34
- Adding a Sequence of Multicast Addresses, page 2-36
- Deleting a Multicast Address, page 2-38

You perform the multicast pool management tasks in the Administration Console Manage Multicast Pool window. For more information about this window, including how to access it, see the "Manage Multicast Pool Window" section on page 2-31.

Manage Multicast Pool Window

The Manage Multicast Pool window displays information about the multicast addresses that are in the multicast pool. It also lets you perform the multicast pool management functions.

To open the Manage Multicast Pool window, click the **Multicast** link in the Administration Console System Administrator tab.

Each multicast address in the multicast pool window appears on its own row with related information displayed in various columns. By default, rows of information appear in ascending order by multicast address. You can toggle the display so that rows appear in ascending or descending order by any column heading. To do so, click the name in a column heading. An up arrow in a column indicates that activities are in ascending order by that column, and a down arrow indicates that activities are in descending order by that column.

You can resize any column by dragging the border to the right of its name.

For each multicast address in the multicast pool, the Manage Multicast Pool window displays the information that is described in Table 2-7.

Table 2-7 Manage Multicast Pool Window Fields

Field	Description
Address	Multicast address and port.
Location	Location that is assigned to this multicast address. The location name can include alphanumeric characters, spaces, and any of these characters: . , – ‘ # ( ) / :_ .
Status	Either of these designations: • Active—Address is assigned to an active VTG • Idle—Address is not assigned to an active VTG

Table 2-7 Manage Multicast Pool Window Fields (continued)

Field	Description
Connection Type	Either of these designations: • Used by Channel—Multicast address is assigned to a PTT channel. • Used by VTG—Address is reserved for use or is in use by a VTG. Cisco IPICS assigns an available multicast address to a VTG automatically. When the VTG ends, the address becomes available for another VTG. **Note** If you remove a PTT channel connection (the multicast address you assign to a PTT channel) from a PTT channel, Cisco IPICS disassociates that address from the PTT channel and removes the address from the multicast pool.
Used By	Name of the active channel or VTG that is using the multicast address, if applicable.

Viewing and Editing Multicast Address Information

You can view information for any multicast address, and you can change a multicast address and port number. You do so in the Edit Multicast Address Details area.

To edit or view multicast address information, perform the following steps.

For information about accessing the Manage Multicast Pool window, see the "Manage Multicast Pool Window" section on page 2-31.

Procedure

Step 1 In the Manage Multicast Pool window, take either of these actions:

- Click the multicast address for which you want to view or change information and then click **Details**, which appears under the list of multicast addresses
- Double-click the multicast address for which you want to view or change information

The Edit Multicast Address Details area for selected channel displays.

Note If you choose another multicast address when the Edit Multicast Address Details area is displayed, the information in this area does not change for the new multicast address until you click **Details** again or double-click the new address.

Step 2 View or update the information that is described in Table 2-8.

Table 2-8 Multicast Address Details Area Fields

Field	Description
Address	Multicast address. When adding an address, enter a valid multicast address, which must begin with 224, 232, 233, 238, or 239. Also, make sure to enter all 4 parts, or octets, of the address. Each octet must be in the range of 0 through 255. Cisco recommends that addresses be in the range of 239.192.0.0 through 239.251.255.255 to conform to IANA specifications. Cisco IPICS does not check an address that you enter for conflicts with reserved or special addresses. If you add an address that is outside of the recommended range, make sure that there are no conflicts.
Port	Multicast address port number This value must be an even number in the range of 21000 through 65534.

Table 2-8 Multicast Address Details Area Fields (continued)

Field	Description
Connection Type—*Display only*	Either of these designations: • Used by Channel—Address is assigned to a PTT channel. • Used by VTG—Address is reserved for use or is in use by a VTG. Cisco IPICS assigns an available multicast address to a VTG automatically. When the VTG ends, the address becomes available for another VTG.
Last Released—*Display only*	Date at time at which the address was last released from an active VTG.
Status—*Display only*	Either of these designations: • Active—Address is assigned to an active VTG • Idle—Address is not assigned to an active VTG
Location—*Display only*	Location that is assigned to this multicast address. An address for a PTT channel has a specific location, either location All or another location name. Regardless of the location in this field, a VTG can contain only channels that are in the same multicast domain as the RMS that is used to mix the channels.
Used By—*Display only*	Name of the active channel or VTG that is using the multicast address, if applicable.

Step 3 Click **Save** to save your changes.

To exit without saving changes, click **Cancel**.

Adding Individual Multicast Addresses

When you add a multicast address to the multicast pool, it becomes available for use by active VTGs.

If you later assign the address to a channel, it will no longer be available for use by active VTGs.

Before you add a multicast address, configure locations as described in the "Managing Locations" section on page 2-38.

For information about adding a sequence of multicast addresses simultaneously, see the "Adding a Sequence of Multicast Addresses" section on page 2-36.

To add one or more multicast addresses to the multicast pool individually, perform the following steps.

For information about accessing the Manage Multicast Pool window, see the "Manage Multicast Pool Window" section on page 2-31.

Procedure

Step 1 In the Manage Multicast Pool window, click **Add**, which appears under the list of multicast addresses.

The Add One area displays under the Multicast Pool.

Step 2 In the Address field, enter the multicast address that you want to add.

Make sure to enter a valid multicast address, which must begin with 224, 232, 233, 238, or 239. Also, make sure to enter all 4 parts, or octets, of the address.

Cisco recommends that addresses be in the range of 239.192.0.0 through 239.251.255.255 to conform to IANA specifications. Cisco IPICS does not check an address that you enter for conflicts with reserved or special addresses. If you add an address that is outside of the recommended range, make sure that there are no conflicts

Step 3 In the Port field, enter the port number for this address.

This value must be an even number in the range of 21000 through 65534.

Step 4 Click **Save**.

If you choose not to add this address, click **Cancel**.

Step 5 If you want to add another individual address, repeat Step 2 through Step 4.

Adding a Sequence of Multicast Addresses

Cisco IPICS can generate a list of multicast addresses and add them to the multicast pool. This feature can be useful when you need to add several multicast addresses.

For information about adding multicast addresses individually, see the "Adding Individual Multicast Addresses" section on page 2-34.

When you choose to have Cisco IPICS generate a sequence of multicast addresses, you specify the first address and the number of addresses that you want. Cisco IPICS returns the number of addresses you specify, starting with the first address that you specified and incrementing the fourth part, or octet, of each additional address by one. You can generate a sequence of up to 255 multicast addresses at a time.

For example, if you request five addresses and specify the first address to be 239.195.5.1, Cisco IPICS generates this sequence of addresses:

```
239.195.5.1
239.195.5.2
239.195.5.3
239.195.5.4
239.195.5.5
```

When you generate multicast addresses in this way, Cisco IPICS assigns the port number that you designate to each address.

After Cisco IPICS generates the list of addresses, you can change the number or port for any address, and you can delete any addresses that you do not want in the multicast pool. For more information, see the "Viewing and Editing Multicast Address Information" section on page 2-32 and see the "Deleting a Multicast Address" section on page 2-38.

To generate and add a sequence of multicast addresses to the multicast pool individually, perform the following steps.

For information about accessing the Manage Multicast Pool window, see the "Manage Multicast Pool Window" section on page 2-31.

Procedure

Step 1 In the Manage Multicast Pool window, click **Many**, which appears under the list of multicast addresses.

The Add Many area displays under the Multicast Pool.

Step 2 In the Initial Address field the four parts, or octets, of the first IP address in the sequence that you want.

Make sure to enter a valid multicast address, which must begin with 224, 232, 233, 238, or 239. Also, make sure to enter all 4 parts, or octets, of the address. Each octet must be in the range of 0 through 255. Each octet must be in the range of 0 through 255.

Cisco recommends that addresses be in the range of 239.192.0.0 through 239.251.255.255 to conform to IANA specifications. Cisco IPICS does not check an address that you enter for conflicts with reserved or special addresses. If you add an address that is outside of the recommended range, make sure that there are no conflicts

Step 3 In the Number of Addresses field, enter the number of IP addresses that you want Cisco IPICS to generate.

You can enter a number between 1 and 255.

Step 4 In the Port field, enter the port number to be used for each generated multicast addresses.

This value must be an even number in the range of 21000 through 65534.

Step 5 Click **Save**.

If you choose not to generate these addresses, click **Cancel**.

If you click **Save**, Cisco IPICS generates the IP addresses and displays them in the Multicast Pool pane.

If the generated list contains addresses that you do not want, you can edit or delete them. See the "Viewing and Editing Multicast Address Information" section on page 2-32 and see the "Deleting a Multicast Address" section on page 2-38.

Deleting a Multicast Address

You can delete a multicast address when it is no longer needed.

You cannot delete a multicast address that is assigned to an active VTG. You must deactivate the VTG before you can delete the address.

You also cannot delete a multicast address that is assigned to a channel. To delete the address in this case, delete the channel, which automatically removes the multicast address from the multicast pool.

To delete a multicast addresses from the multicast pool, perform the following steps.

For information about accessing the Manage Multicast Pool window, see the "Manage Multicast Pool Window" section on page 2-31.

Procedure

Step 1 In the Manage Multicast Pool window, click the multicast address that you want to delete.

The multicast address becomes highlighted in blue.

Step 2 Click **Delete**, which appears under the list of multicast addresses.

A dialog box prompts you to confirm the deletion.

Step 3 To confirm the deletion, click **OK**.

If you choose not to delete this address, click **Cancel**.

Managing Locations

A location is a multicast domain that contains multicast addresses that can be accessed by a designated RMS. Users who are associated with the same location can communicate with each other without additional network configuration.

As a Cisco IPICS system administrator, you can perform these locations management tasks:

- Changing a Location Name, page 2-39
- Adding a Location, page 2-40
- Deleting a Location, page 2-41

You perform the locations management tasks in the Administration Console Manage Location window. For more information about this window, including how to access it, see the "Manage Location Window" section on page 2-39.

Manage Location Window

The Manage Location window displays the locations that are configured in your Cisco IPICS network. It also lets you perform the locations management functions.

To open the Manage Location window, click the **Locations** link in the Administration Console System Administrator tab.

By default, location names appear in ascending alphanumeric order. You can toggle the display between ascending and descending order. To do so, click the Location Name column heading. An up arrow indicates that location names are in ascending order, and a down arrow indicates that location names are in descending order.

Changing a Location Name

Edit Location Details area lets you change any location name.

To change the name of a location, perform the following steps.

For information about accessing the Manage Location window, see the "Manage Multicast Pool Window" section on page 2-31.

Procedure

Step 1 In the Manage Location window, take either of these actions:

- Click the location name that you want to change and then click **Details**
- Double-click the location name that you want to change

The Edit Location Details area for the selected location displays.

Step 2 Enter the new location name.

The location can include alphanumeric characters, spaces, and any of these characters: . , – ‘ # ( ) / :_ .

Step 3 Click **Save** to save your changes.

To exit without saving changes, click **Cancel**.

Adding a Location

You can add location to Cisco IPICS as needed.

To add a location, perform the following steps.

For information about accessing the Manage Location window, see the “Manage Location Window” section on page 2-39.

Procedure

Step 1 In the Manage Location window, click **Add**, which appears under the list of location names.

The Add Location area displays.

Step 2 In the Location Name field, enter a name for the location.

The location can include alphanumeric characters, spaces, and any of these characters: . , – ‘ # ( ) / :_ .

Step 3 To add the location, Click **Save**.

If you choose not to add this location, click **Cancel**.

Deleting a Location

You can delete a location when it is no longer needed.

You cannot delete a location if it is associated with a channel or if it is set as the default location for a user. In these cases, you must disassociate the location from the channel or set another default location for the user before you can delete the location.

To delete a location from Cisco IPICS, perform the following steps.

For information about accessing the Manage Location window, see the "Manage Location Window" section on page 2-39.

Procedure

Step 1 In the Manage location window, click the location name that you want to delete.

The location name becomes highlighted in blue.

Step 2 Click **Delete**, which appears under the list of location names.

A dialog box prompts you to confirm the deletion.

Step 3 To confirm the deletion, click **OK**.

If you choose not to delete this location, click **Cancel**.

Managing Activity Logs

The Cisco IPICS logs store a variety of information about activities relating to VTGs. You can review this information at any time.

Cisco IPICS tracks and logs the date and time that following activities occur:

- User is assigned to, or release from, a PTT channel
- PMC user is enabled or disabled
- PMC user starts or stops listening to a channel
- PMC user is muted
- PMC user is unmuted

- PMC user pushes the **PTT** button
- PMC user releases the **PTT** button
- Channel is added to a VTG
- Channel is removed from a VTG
- VTG is added to another VTG
- VTG is removed from another VTG
- User is added to a VTG
- User is removed from a VTG
- VTG is activated
- VTG is deactivated

You can choose how to view activity logs:

- By channel—Users and VTGs that used that PTT channel
- By user—PTT channels and VTGs in which that user was involved
- By VTG—Users and PTT channels that were participants in that VTG

As a Cisco IPICS system administrator, you can perform these activity log management tasks:

- Downloading Activity Logs, page 2-43
- Viewing an Activity Log, page 2-43

You display activity logs from the Administration Console Activity Logs Pool window. For more information about this window, including how to access it, see the "Activity Logs Window" section on page 2-42.

Activity Logs Window

The Activity Logs window displays each channel, user, or VTG that is configured in Cisco IPICS, depending on the information that you choose to view. It also lets you perform the activity logs management functions

To open the Activity Logs window, click the **Activity Logs** link in the Administration Console System Administrator tab.

Downloading Activity Logs

To perform detailed analysis of activities, you can download activity logs. When you download activity logs, Cisco IPICS takes these actions:

- Creates a .csv file that contains all activity logs in the period that you designate
- Downloads the .csv file to the location that you specify on the computer from which you are accessing the Administration Console

You can open the downloaded file with Microsoft Excel.

To download activity logs, perform the following steps.

For information about accessing the Activity Logs window, see the "Activity Logs Window" section on page 2-42.

Procedure

Step 1 In the Activity Logs window:

a. In the From drop-down lists, specify the beginning date and time of the period for which information should be included in the activity logs that you are downloading.

b. In the To drop-down lists, specify the ending date and time of the period for which information should be included in the activity logs that you are downloading.

Step 2 Follow the on-screen prompts to download the file.

Viewing an Activity Log

You can view activity logs for any channel, user, or VTG. To view an activity log, perform the following steps.

For information about accessing the Activity Logs window, see the "Activity Logs Window" section on page 2-42.

Note Because a log maintains historical data, if you delete or rename a channel, user, or VTG, that name will appear in an activity list but will not be listed in the channel, user, or VTG management windows.

Procedure

Step 1 If the Activity Logs window does not display a list that contains the item (channel, user, or VTG) for which you want to view an activity log, take these actions:

a. Click the **By Channel**, **By User**, or **By VTG** radio button to indicate the list of items that you want.

b. Click **Find**.

The Activity Logs window displays a list of channels, users, or VTGs, depending on the radio button that you choose.

Step 2 Take either of these actions:

- Click the channel, user, or VTG for which you want to view an activity log and then click **Details**, which appears under the list of items
- Double-click the channel, user, or VTG for which you want to view an activity log

An activity log displays. The information in the log depends on whether you are viewing a log for channel, a user, or a VTG as follows:

- An activity log for a channel displays a list of user activities and a list of VTG activities that involve the specified channel
- An activity log for a user displays a list of channel activities and a list of VTG activities that involve the specified user
- An activity log for a VTG displays a list of channel activities a list of user activities that involve the specified VTG

Each activity in a log appears on its own row with information in these columns:

- Time—Date and time that an activity started
- Channel, User, or VTG—Name of the channel, user, or VTG
- Action—Brief description of the activity

You can resize any column by dragging the border to the right of its name.

By default, the activities in a log appear in ascending order by time. You can toggle the display so that activities appear in ascending or descending order by any column heading. To do so, click the name in a column heading. An up arrow in a column indicates that activities are in ascending order by that column, and a down arrow indicates that activities are in descending order by that column.

Note If you click another channel, user, or VTG when an activity log is displayed, Cisco IPICS highlights in orange the item for which the log information is displayed. The log information does not change for the new selection until you click **Details** again or double-click the new selection.

Managing Licenses

License files determine number of Cisco IPICS ports, the number of concurrent PMC users, and the number of concurrent Cisco IP Phone users that your Cisco IPICS system supports, and whether Operational Views is enabled.

If your requirements exceed the limits of your current license, you can obtain additional licenses. For detailed information about licenses and how to obtain them, refer to *Cisco IPICS PMC Installation and User Guide*.

As a Cisco IPICS system administrator, you can upload new license files to the Cisco IPICS server so that the new licenses take effect. For instructions, see the "Uploading a License File" section on page 2-47.

You perform the license management tasks in the Administration Console License Management window. For more information about this window, including how to access it, see the "License Management Window" section on page 2-45.

License Management Window

The License Management window provides information about the licenses that are configured for your Cisco IPICS installation. It also lets you upload new licenses to the Cisco IPICS server.

To open the License Management window, click the **License** link in the Administration Console System Administrator tab.

The Configured License area in the License Management window provides the information that is described in Table 2-9.

Note The License Management window displays of available licenses and current usage information does not reflect real-time data. The data that displays in this window shows the usage at the time that the license window was last accessed. To make sure that you are viewing the most current license information, update your browser window.

Table 2-9 License Management Window Configured License Area

Field	Description
Cisco IPICS Ports	Total Ports—Number of voice interoperability ports that are licensed for your system. Each port corresponds to a unique multicast address in a particular location. Current Usage—Number of voice ports in use.
Concurrent PMC Users	Total Ports—Number of users that can access this Cisco IPICS server through PMCs at one time. Current Usage—Number of users currently accessing this server through PMCs. **Note** If a user accesses this server through multiple PMCs at the same time, each PMC counts as 1 user.
Concurrent IP Phone Users	Total Ports—Number of users that can access this Cisco IPICS server through Cisco IP Phones at one time. Current Usage—Number of users currently accessing this server through Cisco IP Phones. **Note** If a user accesses this server through multiple Cisco IP Phones at the same time, each phone counts as 1 user.

Table 2-9 License Management Window Configured License Area (continued)

Field	Description
Cisco IPICS Ops View	Displays Licensed when Operational Views is enabled. Displays Not Licensed when Operational Views is not enabled.

Uploading a License File

When you obtain a new Cisco IPICS license file, you must upload it to the Cisco IPICS server before it will take effect. This procedure copies a licence file from the server on which you stored it when you obtained it to the Cisco IPICS server.

To upload a license, perform the following steps.

For information about accessing the License Management window, see the "License Management Window" section on page 2-45.

Procedure

Step 1 In the License Management window License File field, enter the path name and file name of the license file to upload to the Cisco IPICS server.

To locate this file in a Choose File window, click **Browse**.

Step 2 Click **Upload** to upload the file to the Cisco IPICS database.

If you choose not to upload this file, click **Cancel**.

Step 3 Click **Apply** to cause the new license to take effect.

Cisco IPICS updates the information in the Configured License area to reflect the new license.

Managing PMC Automatic Updates

Cisco provides updates of the PMC application to add features and resolve issues. Users can upgrade their PMCs at their convenience by downloading the current version of the PMC Installer, as described in the "Downloading the PMC" section on page 5-6.

In addition, each PMC client polls the Cisco IPICS server regularly. As part of this process, the PMC client determines whether there is a PMC version to which the it can or must update. You use the automatic update feature to designate the PMC version that is available for this update, and to designate whether an update is required or recommended.

When a PMC performs an automatic update, it installs the pmc.dll file only. This process does not update PMC skins or the PMC help file. To update skins and the help file, you must download the current version of the PMC Installer from the Administration Console Download PMC window in the User tab, and install the PMC as described in *Cisco IPICS PMC Installation and User Guide*.

As a Cisco IPICS system administrator, you can perform these PMC version management tasks:

- Specifying PMC Versions for Automatic Updates, page 2-49
- Uploading pmc.dll Files, page 2-50

You perform the PMC automatic update tasks in the Administration Console PMC Auto Update window. For more information about this window, including how to access it, see thee "PMC Auto Update Window" section on page 2-48.

PMC Auto Update Window

The PMC Auto Update window lets you specify information about PMC versions to use for automatic updates. It also lets you upload to the Cisco IPICS server the new PMC versions that are used for these updates.

To open the PMC Auto Update window, click the **PMC Auto Update** link in the Administration Console System Administrator tab.

The Last Uploaded Version field in this window displays the version number of the PMC that was last uploaded to the Cisco IPICS server.

The other fields in this window contain information used for the automatic update, as described in the "Specifying PMC Versions for Automatic Updates" section on page 2-49.

A field displays Uninitialized if Cisco IPICS has no value for that field.

Specifying PMC Versions for Automatic Updates

The PMC Versions area in the PMC Auto Update window lets you designate the PMC versions that are used for an automatic update. When you specify PMC version for the automatic update, be aware of this information:

- If you want to force PMCs to update as soon as possible, enter PMC version numbers in the Maximum Available Version field and in the Minimum Supported Version field. When you enter values in these fields, the next time that a PMC client polls the server, it compares the PMC version that it is running with the minimum supported PMC version. If the PMC client is not running the minimum supported version, it automatically downloads the PMC version that is specified in the Maximum Available Version field, automatically updates to that version, and then automatically restarts.

Caution Forcing a PMC automatic update shuts down and then restarts a PMC without warning a user, regardless of what the PMC is in use for. For this reason, it is recommended that you force an update only when it is absolutely necessary.

- If you want to prompt PMC users to update their PMCs when it is convenient for them, enter a PMC version number in the Recommended Download Version field. In this case, the next time that a PMC polls the server, it receives instructions to prompt PMC users to update. When a user decides to update, the PMC automatically downloads the PMC version that is specified in the Recommended Download Version field, automatically updates to that version, and then automatically restarts.
- You must upload a PMC version to the Cisco IPICS server before it becomes available in any of the fields in the PMC Version area in the PMC Auto Update window

To specify PMC versions for automatic updates, perform the following steps.

For information about accessing the PMC window, see the "PMC Auto Update Window" section on page 2-48.

Procedure

Step 1 In the PMC Auto Update window:

- If you want to force an automatic update, take these actions:
  a. From the Maximum Available Version drop-down list, choose the PMC version to which PMCs should be updated.
  b. From the Minimum Supported Version drop-down list, choose the minimum version of the PMC that is acceptable to run.

  PMC clients that are running a PMC version that is earlier than the version in the Minimum Supported Version field will automatically update to the version in the Maximum Available Version field.
- If you want to prompt users to perform an automatic update, from Recommended Download Version drop-down list, choose the PMC version to which PMCs should be updated.

Step 2 Click **Save** to save changes that you have made.

If you do not want to save your changes, click **Cancel**.

Uploading pmc.dll Files

A pmc.dll file contains the version of the PMC that is installed during the automatic update process. Before selections appear in the Maximum Available Version, Minimum Supported Version, or Recommended Download Version drop-down lists in the PMC Versions area in the PMC Auto Update window, you must upload the corresponding pmc.dll file or files to the Cisco IPICS server.

When you upload a pmc.dll file, the file is copied from the PC on which you stored it to the Cisco IPICS server.

To upload a pmc.dll file to the Cisco IPICS server, perform the following steps from the PC on which you have stored the file.

For information about accessing the PMC window, see the "PMC Auto Update Window" section on page 2-48.

Procedure

Step 1 In the PMC Auto Update window PMC File field, enter the full path name and file name (pmc.dll) of the pmc.dll file that your obtained from Cisco.

To locate this file in a Choose File window, click **Browse**.

Step 2 In the Version of Upload field, enter the PMC version number of pmc.dll file.

Enter the version number in this format, where each # is a number: #.#(#.#.#). Only the first two numbers are required.

The PMC version number that you enter will appear in the Maximum Available Version, Minimum Supported Version, and Recommended Download Version drop-down lists.

Step 3 Click **Upload**.

Cisco IPICS uploads the file from your PC to the Cisco IPICS server. A status bar displays the progress of the upload as it proceeds. When the upload completes, Cisco IPICS updates information in the Last Uploaded Version field.

Managing the PMC Installer

The PMC Installer, pmcsetup.exe, installs the PMC on PMC client machines. This file downloads to a PMC client when a PMC user clicks the **PMC Download** link in the Administration Console User tab, as described in the "Downloading the PMC" section on page 5-6.

Managing the PMC installer involves these processes:

1. Upload the pmcinst.exe file to the Cisco IPICS server.

   The pmcinst.exe file contains the PMC binary files, including the .exe, pmc.dll, help, and skins files.

2. Generate the PMC Installer.

   This process creates the pmc.ini file, which contains the IP address that PMCs use to communicate with the Cisco IPICS server, and bundles the pmc.ini file and the pmcinst.exe file into a single file, called pmcsetup.exe.

As a Cisco IPICS system administrator, you can upload the pmcinst.exe file and generate the pmcsetup.exe file as described in the "Generating a PMC Installer" section on page 2-52.

You perform these tasks in the Administration Console Manager PMC Installer window. For more information about this window, including how to access it, see thee "Manage PMC Installer Window" section on page 2-52.

Manage PMC Installer Window

The Manage PMC Installer window displays information about the PMC Installer and lets you generate a PMC installer.

To open the Manage PMC Auto Update window, click the **PMC Installer** link in the Administration Console System Administrator tab.

The Installer Status field displays the date and time that a pmcsetup.exe files was last generated, and displays the IP address defined by the bundled pmc.ini file.

The pmcinst.exe field displays the version number of the pmcinst.exe file that was last uploaded to the Cisco IPICS server.

The other fields in this window contain information used when you generate a pmcsetup.exe file, as described in the "Generating a PMC Installer" section on page 2-52.

Generating a PMC Installer

Generating a PMC Installer creates a new pmcsetup.exe file, and makes it available for download from the **PMC Download** link in the Administration Console User tab.

To generate a PMC Installer, perform the following steps from the PC on which you stored the pmcinst.exe file.

For information about accessing the Manage PMC Installer window, see the "Manage PMC Installer Window" section on page 2-52.

Procedure

Step 1 From the System Administrator tab, click the **PMC Installer** link.

The Manage PMC Installer window displays.

Step 2 In the Upload pmcinst.exe field, enter the full path name and file name (pmcinst.exe) of the pmcinst.exe that your obtained from Cisco.

To locate this file in a Choose File window, click **Browse**.

Step 3 In the Version field, enter the PMC version number of the pmcinst.exe file.

Enter the version number in this format, where each # is a number: #.#(#.#.#). Only the first two numbers are required.

Step 4 Click **Upload**.

Cisco IPICS uploads the pmcinst.exe file from your PC to the Cisco IPICS server.

Step 5 From the Server IP Address drop-down list, choose the IP address that PMCs use to communicate with the Cisco IPICS server.

Step 6 Click **Generate PMC Installer**.

Cisco IPICS creates the pmc.ini file, which contains the IP address that you specified, bundles it with pmcinst.exe that you downloaded, and creates the mcsetup.exe file.

Now you can instruct PMC users download a new PMC application, as described in the "Downloading the PMC" section on page 5-6.