Using Tools

Cisco Access Manager (CAM) provides a set of tools to help you to manage various features of your Cisco AccessPath system and System Controller. The tool set includes the several managers as described in the following sections:

- "Using the Template Manager" on page 5-1

- "Using the IOS Image Manager" on page 5-12

- "Using the Modem Firmware Image Manager" on page 5-30

- "Using the Configuration File Manager" on page 5-45

- "Using the Task Manager" on page 5-59

- "Using the User Account Manager" on page 5-67

Using the Template Manager

The Template Manager helps you to manage the CAM configuration templates. The Template Manager supports the following tasks:

- Importing a Configuration Template on page 8-6

- Editing a Configuration Template on page 8-8

- Deleting a Custom Configuration Template on page 8-10

The Template Manager lists all the available templates. The information displayed in the main Template Manager dialog box is independent of the device or container you might have selected in the Device Tree View. (See Figure 8-1.)

Figure 8-1   Template Manager—Main Dialog Box

Table 8-1 lists and briefly describes each of the fields that display on the main dialog box of the Template Manager.

Table 8-1   Template Manager Fields

Field Name	Description
number	For informational purposes only.
Name	Name assigned to the template file. CAM defines the names of the default template files. (See Table 8-2.) You define the names for custom configuration template files.

Field Name	Description
Device Type	Type of device for which the template can be used.
Last Modify	The last time the template file was modified. This time should never change for default configuration template files, only for custom configuration template files.
Default	Shows whether the template files is a default configuration template. Custom configuration template files can never be default configuration template files.
(Optional.) Description	Description to help identify the template file.The description can be up to 128 characters in length.

CAM configuration templates are text files that contain Cisco IOS command-line interface (CLI) commands and template variables that allow you to easily define configuration data for a device. CAM creates your configuration files by substituting the template variables with data derived from selections or entries you made at the various dialog boxes during the create and modify procedures for System Controllers and shelves. CAM then downloads these configuration files to the devices that make up your Cisco AccessPath system.

You do not specify a configuration template for a stack. You specify a configuration template during the creation or modification of only System Controllers and shelves. You can also schedule when the download of the configuration is to occur. For details about the create and modify procedures, see the "Configuring System Controllers" section on page 4-42 and the "Shelf Configuration for System Controllers" section on page 5-20.

Note   You cannot edit and save template files from the GUI onto the database if the template file exceeds 28K bytes; the file will be truncated to 28K bytes. However, you can import template files that are larger than 28K bytes from UNIX.

CAM supports two types of templates:

- Default configuration templates—Read-only templates provided with CAM to generate most of the configurations for the supported Cisco AccessPath systems. In most cases, your selections or entries made during the create and modify procedures provide the information needed for CAM to customize these default templates and download the completed configuration files to the shelves on your Cisco AccessPath system. See Table 8-2 for a complete list of CAM default configuration templates. See Appendix B, "Default Configuration Templates," for complete versions of the default configuration templates provided in CAM.

- Custom configuration templates—Customer-created templates designed to add or change functionality built into the templates listed in CAM. You can create these templates by editing the default configuration templates and saving them with different file names. In most cases, the default configuration templates will meet your needs. However, if you have special requirements, consider creating a custom configuration template.

Note   While you can create or modify a custom configuration template, you cannot create or modify the variables that come as part of the CAM default configuration templates. These variables are written in all capital letters and preceded by a pound sign (#). You can add or delete any CLI code, including CLI code that contains CAM variables, but you cannot edit these variables or create new ones.

All of the CLI code entered into a custom configuration template must be written in valid Cisco IOS syntax. Otherwise, when CAM attempts to download the configuration file, the shelf rejects the command.

Default Configuration Templates

Table 8-2 lists the default configuration templates for each type of device.

Table 8-2   CAM Standard Configuration Templates

| System	Template	Device
Cisco AccessPath-TS3	Cisco 3640 (3640-default.txt)	Cisco 3640 Console Management Shelf (CMS)
	Cisco 7206 without Catalyst 5002 (7206-Entry-default.txt)	Cisco 7206 using two Switch Blade cards for switching
	Cisco 7206 with Catalyst 5002 (7206-default.txt)	Cisco 7206 using a Catalyst 5002 for its primary switching path
	Cisco AS5300 (AS5300-default-channelized.txt)	Cisco AS5300s using channelized T1 or E1
	Cisco AS5300 (AS5300-default-pri.txt)	Cisco AS5200s using PRI
	Catalyst 5002 (CAT5002-default.txt)	Catalyst 5002
Cisco-LS3	Cisco LS3 (3640-LS3-default.txt)	Cisco minibundle system
Cisco System Controller	Cisco 3640 (SC3640-default.txt)	Cisco 3640 System Controller (SC)
	Cisco AS5800 (AS5800-default.txt)	Cisco AS5800

Importing a Configuration Template

You can create a custom configuration template using the Import feature in the Template Manager.

To create a custom configuration template by importing:

Step		Description
1	Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform.
2	Click **Template Manager**.	The Template Manager main dialog box appears. (See Figure 8-1.)
3	Click **Import**.	The Template Manager Import dialog box appears. (See Figure 8-2.)
4	Enter the filename.	The name of the file you want to import. This can be any custom configuration file that you have created.
		Note All of the CLI code entered into a custom configuration template must be written in valid Cisco IOS syntax. Otherwise, when CAM attempts to download the configuration file, the System Controller or shelf rejects the command.
5	Enter a location.	The location must be the full path name to the file you want to import. The file must be on the CAM server. It cannot be remote.
6	Select a device type.	Specify the type of device to which the configuration file applies. You can select from any of the following device types:
		• Cisco AS5300
		• Cisco 7206
		• Cisco 3640
		• Catalyst 5002
		• Cisco SC3640
		• Cisco AS5800

Step		Description
7	(Optional.) Enter a description of the configuration file you are importing.	The description can be up to 128 characters.
8	Click **OK**.	CAM imports the specified configuration file and adds it to the templates listed on the Template Manager main dialog box.
		You can now select this template when you create or modify this type of device.

**Figure 8-2   Template Manager—Import Dialog Box**
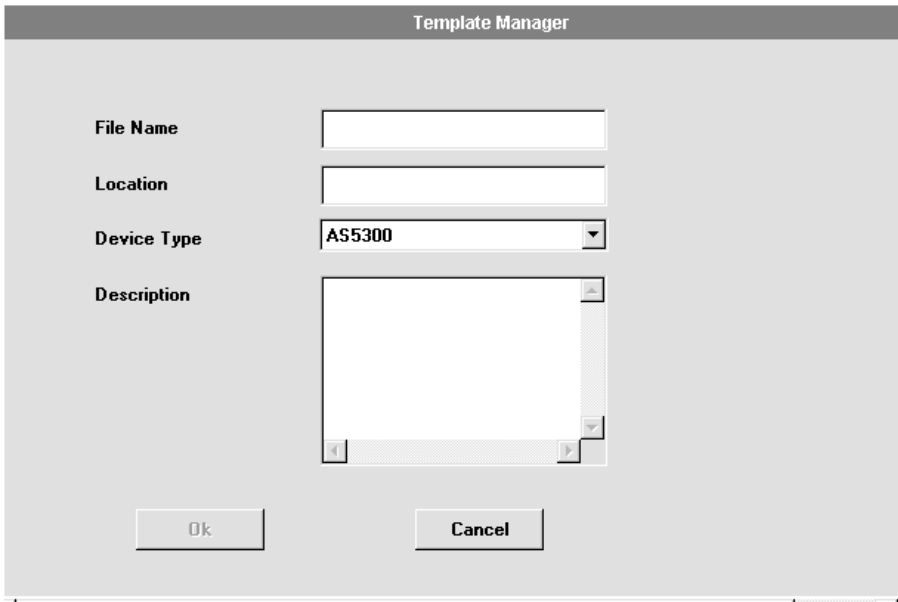
Editing a Configuration Template

You can create a custom configuration template using the Edit feature in the Template Manager.

To edit a custom configuration template:

Step		Description
1	Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform.
2	Click **Template Manager**.	The Template Manager main dialog box appears. (See Figure 8-1.)
3	Select the template you want to edit and click **Edit**.	The Template Manager Edit dialog box appears. (See Figure 8-3.)
4	Modify the template to meet your requirements.	While you can create or modify a custom configuration template, you cannot create or modify the variables that come as part of the CAM default configuration templates. These variables are written in all capital letters and preceded by a pound sign (#). You can add or delete any CLI code, including CLI code that contains CAM variables, but you cannot edit these variables or create new ones.
		All of the CLI code entered into a custom configuration template must be written in valid Cisco IOS syntax. Otherwise, when CAM attempts to download the configuration file, the System Controller or shelf rejects the command.
5	Edit the File Name field to give this template a new name and the description field to give this template a new description.	You can give this template a new name. If you do not give it a new name, CAM updates the existing template. The description can be up to 128 characters.
6	Click **Save**.	You are returned to the Template Manager main dialog box. The list of templates includes the template you just created. You can now select this template when you create or modify this type of device.

Figure 8-3   Template Manager—Edit Dialog Box
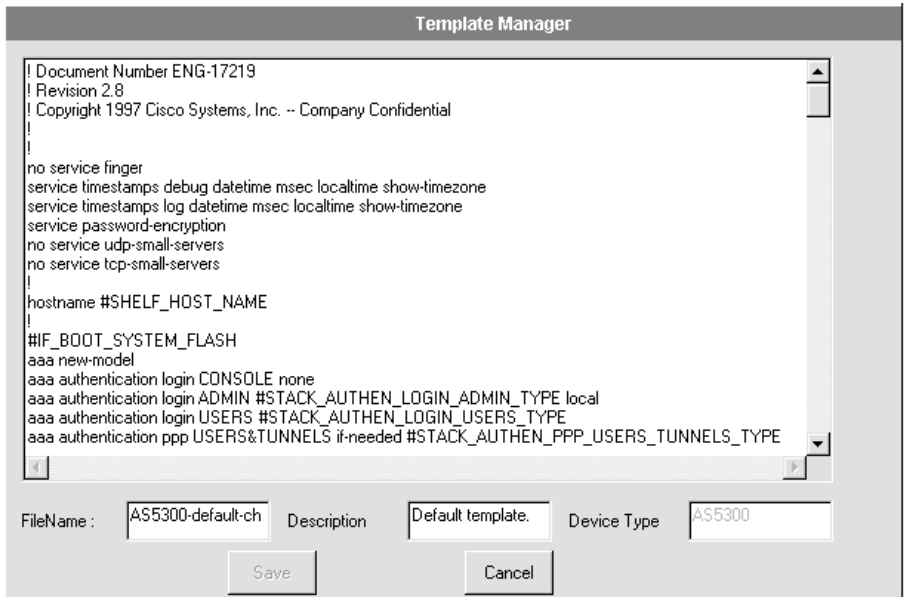
Deleting a Custom Configuration Template

You cannot delete a default configuration template. You can only delete custom configuration templates that you have either imported or renamed and edited. In addition, a custom template cannot be deleted if it is currently used by a shelf.

⚠️ **Caution**   If you delete a custom configuration template, you cannot recover it.

To delete a custom configuration template:

Step		Description
1	Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform.
2	Click **Template Manager**.	The Template Manager main dialog box appears. (See Figure 8-4.)
3	Select the template you want to delete.	It must be a custom configuration template.
4	Click **Delete**.	You are returned to the Template Manager main dialog box. The custom template has been removed from the listed templates.

Figure 8-4   Template Manager—Main Dialog Box

	Name	Device Type	Last Modify	Default	Description
1	AS5300-default-chann	AS5300	Fri Aug 28 10:01:	Y	Default template.
2	AS5300-default-pri.txt	AS5300	Fri Aug 28 10:01:	Y	Default template.
3	7206-Entry-default.txt	7206	Fri Aug 28 10:01:	Y	Default template.
4	7206-default.txt	7206	Fri Aug 28 10:01:	Y	Default template.
5	3640-LS3-default.txt	3640	Fri Aug 28 10:01:	Y	Default template.
6	3640-default.txt	3640	Fri Aug 28 10:01:	Y	Default template.
7	CAT5002-default.txt	CAT5002	Fri Aug 28 10:01:	Y	Default template.
8	AS5800-default.txt	AS5800	Fri Aug 28 10:01:	Y	Default template.
9	SC3640-default.txt	SC3640	Fri Aug 28 10:01:	Y	Default template.
9	AS5300-modified.txt	AS5300	Fri Sep 04 08:38:	N	modified

Using the IOS Image Manager

The IOS Image Manager provides device-dependent management functions. The IOS Manager supports the following tasks:

- Setting the Default IOS Image on page 8-15

- Importing an IOS Image on page 8-17

- Updating an IOS Image on page 8-19

- Updating All to Default IOS Image on page 8-21

- Updating System Controller on page 8-23

- Viewing the History of an IOS Image on page 8-26

- Deleting an IOS Image on page 8-28

The IOS Image Manager allows you to upgrade or restore a Cisco IOS image on a device. It checks the Cisco IOS images loaded on the shelves within a stack or System Controller. The IOS Image Manager compares the loaded version against the default image version. If the Cisco IOS images do not match, the IOS Image Manager reports the discrepancy.

CAM provides autoverify and autoupdate capability as options. For more information about these options, see the "Setting UI Preference" section on page 3-1.

The Cisco 3640, System Controller-3640, Cisco 7206, and Cisco AS5800 devices have two slots (slot0 and slot1) for Flash memory cards. CAM always uses slot0 as the default Flash memory device when loading Cisco IOS images to these devices. Be sure to have a Flash memory card inserted in slot0. Otherwise, CAM cannot successfully load the Cisco IOS image.

Figure 8-5 shows the main dialog box for the IOS Image Manager.

Figure 8-5   IOS Image Manager—Main Dialog Box
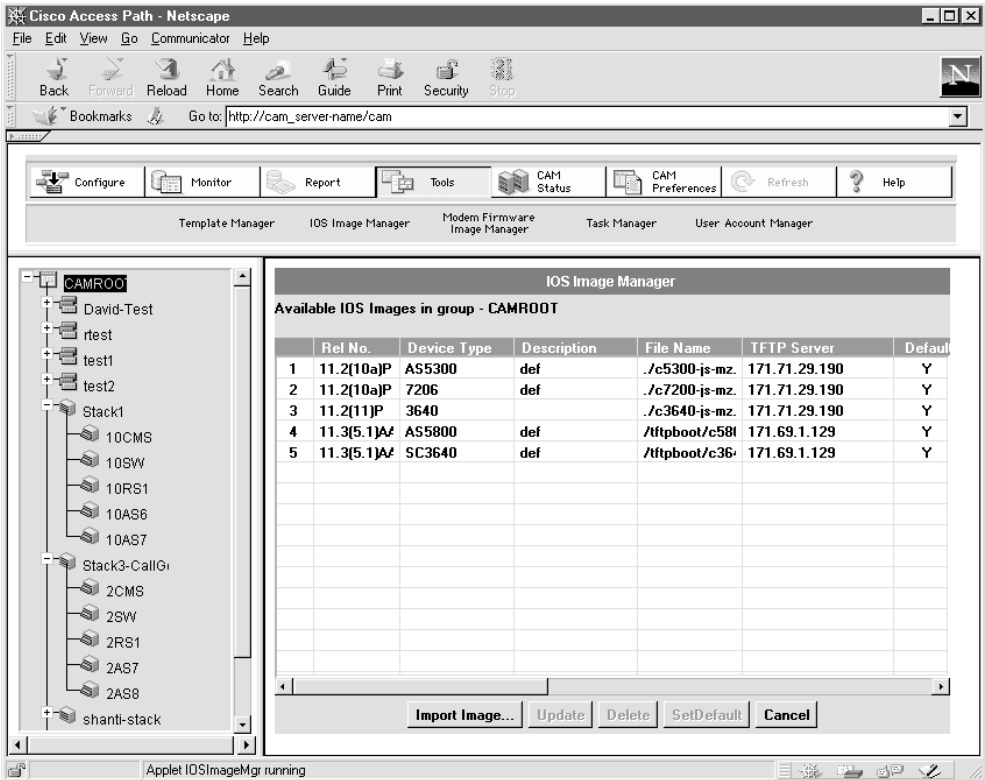
The following table lists and briefly describes each of the fields on the main dialog box of the IOS Image Manager:

Table 8-3   IOS Image Manager Fields

Field Name	Description
number	Number CAM assigns to the image when it imported into CAM. Starting number is 1.
Rel. No	Release number you assign to the Cisco IOS image when you import the Cisco IOS image into CAM.
Device Type	Type of device for which the image will be used.
(Optional.) Description	Description of the image that helps to identify it. It can be up to 255 characters in length.
File Name	Name of the file that is imported. This name must match the name of the image file that resides on the TFTP server.
TFTP Server	Name or IP address of the TFTP server on which the Cisco IOS image file resides.
Default	Specifies whether the Cisco IOS image is the default Cisco IOS image for the specified device type.
InUse	Flag that indicates whether the Cisco IOS image file is currently in use, that is, used by any shelf. You cannot delete a Cisco IOS image that is currently in use.

The IOS Image Manager provides different capabilities for groups, stacks, System Controllers, and shelves. The following table lists the available options:

Table 8-4   IOS Image Manager Option Summary

Container/Device	Option
CAMROOT	• Setting the default Cisco IOS image • Importing a Cisco IOS image • Updating a Cisco IOS image • Deleting a Cisco IOS image
User-defined group	• Importing a Cisco IOS image • Updating a Cisco IOS image • Deleting a Cisco IOS image
Stack	• Updating all shelves to default Cisco IOS image
System Controller	• Updating all shelves to default Cisco IOS image • Updating System Controller • Importing a Cisco IOS image • Updating a Cisco IOS image • Viewing history of a Cisco IOS image
Shelf	• Importing a Cisco IOS Image • Updating a Cisco IOS Image • Viewing history of a Cisco IOS image

Setting the Default IOS Image

You can set the default Cisco IOS image for a device type across the entire CAM system. You can override this default for individual devices. This option is only available if you have selected the CAMROOT group in the Device Tree View. This option is not enabled for any other container or shelf.

For a summary of the options available in the IOS Image Manager for containers and devices, see Table 8-4.

To set the default Cisco IOS image for a device type:

Step		Description
1	Select **CAMROOT** from the Device Tree View.	The default group.
2	Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform for the CAMROOT group.
3	Click **IOS Image Manage**r.	The IOS Image Manager dialog box appears. (See Figure 8-5.)
4	Select a Cisco IOS image from the list and click **SetDefault**.	You have successfully set the default Cisco IOS image for all devices of that type across the entire CAM system.

Importing an IOS Image

You can import a Cisco IOS image file for use by a group, System Controller, and shelf (including Cisco AS5800).

For a summary of the options available in the IOS Image Manager for containers and devices, see Table 8-4.

To import a Cisco IOS image:

Step		Description
1	Select a group, System Controller, or shelf by clicking on its name in the Device Tree View.	The device for which you want to import a Cisco IOS image.
2	Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform for the selected device.
3	Click **IOS Image Manager**.	The IOS Image Manager dialog box appears. (See Figure 8-5.)
4	Click **Import Image**.	The Import IOS Image dialog box appears. (See Figure 8-6.)
5	Enter an image file name.	The name of the Cisco IOS image you want to import into CAM.
6	Enter the image file directory.	The full path of your Cisco IOS image file on the TFTP server.
7	Enter the TFTP server address.	The TFTP server IP address of your Cisco IOS image file.
8	Enter the release number.	The release number helps CAM to verify that Cisco IOS images are consistent across devices.
9	Select the device type for which you are importing the Cisco IOS image.	You can select a AS5300, AS5800, 7206, 3640, or SC3640 if you selected a group in the Device Tree View. AS5300 is the default. If you select a shelf in the Device Tree View, the device type defaults to the type of shelf selected.

Step		Description
10	(Optional.) Enter a description of the Cisco IOS image you are importing.	You can enter up to 255 characters.
11	Click **OK**.	You have successfully imported a Cisco IOS image into CAM. You are returned to the IOS Image Manager main dialog box. The image list now includes the newly imported Cisco IOS image.

Figure 8-6   IOS Image Manager—Import Dialog Box

Updating an IOS Image

Updating a Cisco IOS image allows you to update the Cisco IOS image for all the devices in the group of a particular type, System Controller, or shelf.
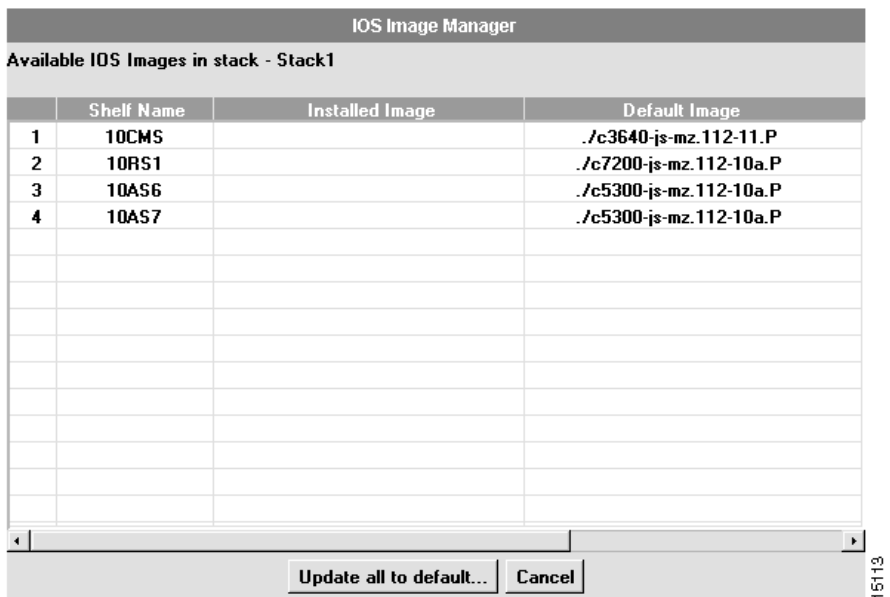
For a summary of the options available in the IOS Image Manager for containers and devices, see Table 8-4.

To update a Cisco IOS image for a System Controller, shelf, or all devices of a specific type:

Step		Description
1	Select a group, System Controller, or shelf by clicking on its name in the Device Tree View.	The group of devices or device for which you want to update a Cisco IOS image.
2	Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform for the selected device.
3	Click **IOS Image Manager**.	The IOS Image Manager dialog box appears. (See Figure 8-5.)
4	Select a Cisco IOS image from the list and click **Update**.	The Update IOS Image dialog box appears. (See Figure 8-7.)
5	Click **Yes** or **No** to erase current Flash memory.	Click **Yes**, to erase the Cisco IOS image currently stored in Flash memory. It cannot be recovered. Click **No**, to have the Cisco IOS image currently stored in Flash memory reside concurrently with the image you have selected.
6	Click **now** or **later** to execute this task.	Click **now** if you want the Cisco IOS image updated immediately and skip to Step 10. Click **later** to schedule the update for a later time. If you click **later**, you must define task information.
7	Enter the time you want the update to take place.	You must ensure that there is a value in the year, month, day, hour, and minutes fields. It must be a time in the future. You must select a date, time, and task name.
8	Enter a Task Name.	You must enter a task name. It can be up to 16 characters. You can manage the task through the Task Manager. After a scheduled task executes, you might need to refresh your system. See "Refreshing Your System" section on page 2-7 for details.

Step		Description
9	Enter information in the Comment field.	You can enter any information about the task that you want. You can specify up to 255 characters.
10	Click **OK**.	You have successfully updated the Cisco IOS image for a System Controller, shelf, or all the devices of the specified type. You are returned to the IOS Image Manager main dialog box.

Figure 8-7   IOS Image Manager—Update Dialog Box

Updating All to Default IOS Image

Updating All to Default IOS image allows you to update all the shelves in the stack or System Controller to the Cisco IOS image that you have defined as the default.

For a summary of the options available in the IOS Image Manager for containers and devices, see Table 8-4.

To update all to a default Cisco IOS image for all the shelves:

Step		Description
1	Select a stack or System Controller from the Device Tree View.	The stack or System Controller for which you want to update information.
2	Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform for the device selected in the Device Tree View.
3	Click **IOS Image Manager**.	The IOS Image Manager dialog box appears. (See Figure 8-8.)
4	Select a Cisco IOS image from the list and click **Update all to default**.	The Update Image dialog box appears. (See Figure 8-9.)
5	Click **Yes** or **No** to erase current Flash memory.	Click **Yes** to erase the Cisco IOS image currently stored in Flash memory. It cannot be recovered. Click **No** to have the modem image currently stored in Flash memory reside concurrently with the image you have selected. For System Controllers, if there is more than one image in Flash memory, the Cisco IOS image must be erased first to successfully load the image. Therefore, this option is disabled if you have selected a System Controller from the Device Tree View.
6	Click **now** or **later** to execute this task.	Click **now** if you want the Cisco IOS image updated immediately and skip to Step 10. Click **later** to schedule the update for a later time. If you click **later**, you must define task information.
7	Enter the time you want the update to take place.	You must ensure that there is a value in the year, month, day, hour, and minutes fields. It must be a time in the future. You must select a date, time, and task name.

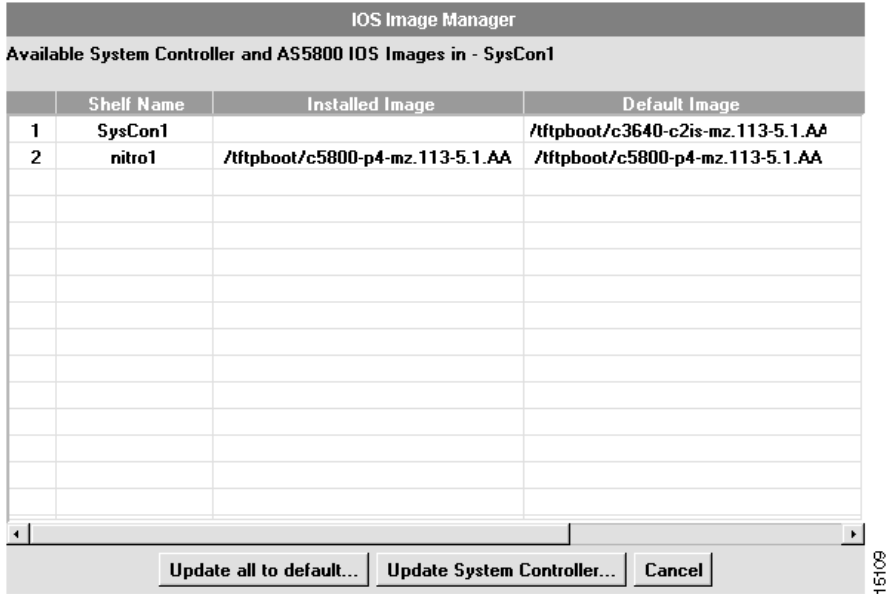| Step		Description
8	Enter a Task Name.	You must enter a task name. It can be up to 16 characters. You can manage the task through the Task Manager. After a scheduled task executes, you might need to refresh your system. See "Refreshing Your System" section on page 2-7 for details.
9	Enter information in the Comment field.	You can enter any information about the task that you want. You can specify up to 255 characters.
10	Click **OK**.	You have successfully updated the Cisco IOS image for all the devices of the specified type. You are returned to the IOS Image Manager main dialog box.

Figure 8-8   IOS Image Manager—Update All Dialog Box

Figure 8-9   IOS Image Manager—Update Dialog Box

Updating System Controller

Updating a Cisco IOS image allows you to update the System Controller to the Cisco IOS image that you select from the list.

For a summary of the options available in the IOS Image Manager for containers and devices, see Table 8-4.

To update the System Controller:

Step		Description
1	Select a System Controller from the Device Tree View.	The System Controller for which you want to update information.
2	Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform for the device selected in the Device Tree View.

Step		Description
3	Click **IOS Image Manager**.	The main System Controller dialog box appears. (See Figure 8-10.)
4	Click **Update System Controller**.	The update System Controller dialog box appears. (See Figure 8-11.)
5	Select a Cisco IOS image from the list.	The Cisco IOS image with which you want to update the System Controller.
6	Click **Update image**.	The Update IOS image dialog box appears. (See Figure 8-11.)
7	Click **Yes** or **No** to erase current Flash memory.	Click **Yes**, to erase the Cisco IOS image currently stored in Flash memory. It cannot be recovered. Click **No**, to have the modem image currently stored in Flash memory reside concurrently with the image you have selected. For System Controllers, if there is more than one image in Flash memory, the Cisco IOS image must be erased first to successfully load the image. Therefore, this option is disabled if you have selected a System Controller from the Device Tree View.
8	Click **now** or **later** to execute this task.	Click **now** if you want the Cisco IOS image updated immediately. Click **later** to schedule the update for a later time. If you click **later**, you must select a date, time and task name. You can manage the task through the Task Manager. After a scheduled task executes, you might need to refresh your system. See "Refreshing Your System" section on page 2-7 for details.
9	Click **OK**.	You have successfully updated the Cisco IOS image for all the devices of the specified type. You are returned to the IOS Image Manager main dialog box.

Figure 8-10   IOS Image Manager—Main System Controller Dialog Box

	Shelf Name	Installed Image	Default Image
	IOS Image Manager		
	Available System Controller and AS5800 IOS Images in - SysCon1		
1	SysCon1		/tftpboot/c3640-c2is-mz.113-5.1.AA
2	nitro1	/tftpboot/c5800-p4-mz.113-5.1.AA	/tftpboot/c5800-p4-mz.113-5.1.AA

Update all to default...   Update System Controller...   Cancel

15109

Figure 8-11   IOS Image Manager—Update System Controller Dialog Box

Viewing the History of an IOS Image

Viewing the history of a Cisco IOS image allows you to view all the records of changes that have been made to the Cisco IOS image for the System Controller or shelf (either System Controller shelf or stack shelf) that you select.

For a summary of the options available in the IOS Image Manager for containers and devices, see Table 8-4.

To view changes:

Step		Description
1	Select a System Controller or shelf from the Device Tree View.	The device for which you want to view history.

Step		Description
2	Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform for the device.
3	Click **IOS Image Manager**.	The IOS Image Manager dialog box appears. (See Figure 8-5.)
4	Click **View History**.	The History Image dialog box appears with records of all the changes to the Cisco IOS image for the selected device. (See Figure 8-12.)
5	Click **Done**.	You are returned to the IOS Image Manager main dialog box.

Figure 8-12   IOS Image Manager—History Dialog Box

Deleting an IOS Image

Deleting a Cisco IOS image removes it from the list of managed Cisco IOS images. It does not delete it from the devices onto which has been loaded.

For a summary of the options available in the IOS Image Manager for containers and devices, see Table 8-4.

To delete a Cisco IOS image from the list of managed images:

Step		Description
1	Select a group by clicking on its name in the Device Tree View.	The group for which you want to delete the Cisco IOS image.
2	Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform for the device selected in the Device Tree View.
3	Click **IOS Image Manager**.	The IOS Image Manager dialog box appears. (See Figure 8-13.)
4	Select a Cisco IOS image from the list and click **Delete**.	You have successfully deleted the Cisco IOS image from the list of managed Cisco IOS images.

Figure 8-13   IOS Image Manager—Main Dialog Box
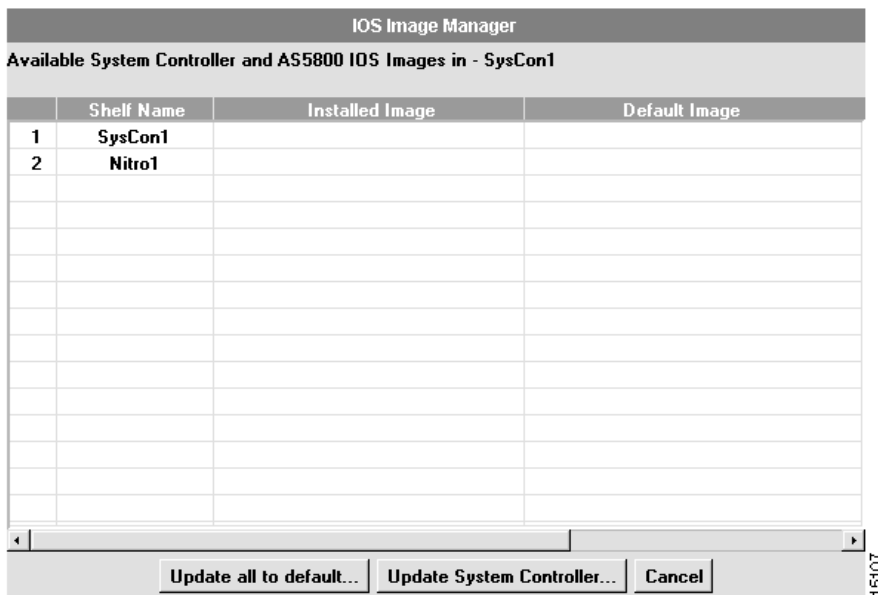
Using the Modem Firmware Image Manager

The Modem Firmware Image Manager provides device-dependent management functions which allow you to upgrade or restore a modem image on a device. The Modem Firmware Image Manager supports the following tasks:

- Setting the Default Modem Image on page 8-33

- Importing a Modem Image on page 8-35

- Updating a Modem Image on page 8-37

- Updating All to Default Modem Image on page 8-39

- Viewing the History of a Modem Image on page 8-42

- Deleting a Modem Image on page 8-44

During the upgrade and restore operations, the Modem Firmware Image Manager checks the modem images loaded on the shelves within a stack and compares the loaded version against the default image version. If the modem images do not match, the Modem Firmware Image Manager reports the discrepancy. CAM provides autoverify and autoupdate options for checking purposes. For more information about these options, see "Setting UI Preference" section on page 3-1.

Figure 8-14 shows the main dialog box for the Modem Firmware Image Manager.

Figure 8-14   Modem Image Manager—Main Dialog Box
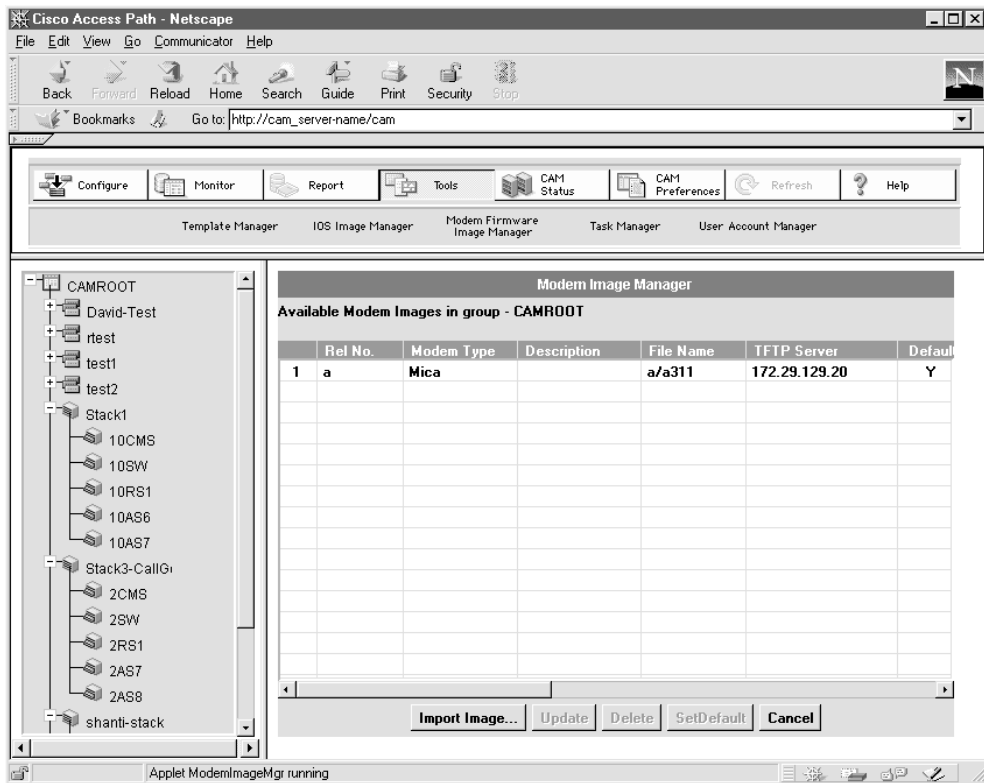
Table 8-5 lists and briefly describes each of the fields that display on the main dialog box
of the Modem Firmware Image Manager.

Table 8-5   Modem Firmware Image Manager Fields

Field Name	Description
number	For informational purposes only.
Rel. No	Release number you assign to the modem firmware image when you import it into CAM.

Field Name	Description
Modem Type	Type of modem for which the image will be used. The supported modem types are MICA and Microcom.
(Optional.) Description	Description of the image that helps to identify it. It can be up to 255 characters in length.
File Name	Name of the file that is imported. This name must match the name of the image file that resides on the TFTP server.
TFTP Server	IP address of the TFTP server on which the modem firmware image file resides.
Default	Specifies whether the modem firmware image is the default modem firmware image for the specified device type.
InUse	Flag that indicates whether the modem firmware image file is currently in use by any shelf. You cannot delete a modem firmware image that is currently in use.

The Modem Firmware Image Manager provides different capabilities for groups, stacks, System Controllers, and shelves. Table 8-6 lists the available options.

Table 8-6   Modem Firmware Image Manager Option Summary

Container/Device	Option
CAMROOT	• Setting the default modem image
	• Importing a modem image
	• Updating a modem image
	• Deleting a modem image
User-defined group	• Importing a modem image
	• Updating a modem image
	• Deleting a modem image
Stack	• Updating all to default modem image
Shelf (Cisco AS5300 only)	• Importing a modem image
	• Updating a modem image
	• Viewing history of the modem image
System Controller, Cisco AS5800, Catalyst 5002, Cisco 7206, and Cisco 3640	• None

Setting the Default Modem Image

You can set the default modem firmware image for a device type across the entire CAM system. You cannot override this default for individual devices. This option is only available if you have selected the CAMROOT group in the Device Tree View. This option is not enabled for any other group.

For a summary of the options available in the Modem Firmware Image Manager for containers and devices, see Table 8-6.

To set the default modem image:

Step		Description
1	Select **CAMROOT** by clicking on its name in the Device Tree View.	The group for which you want to set the Cisco IOS image. You can only set the default modem image for CAMROOT.
2	Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform for CAMROOT.
3	Click **Modem Image Firmware Manager**.	The Modem Image Firmware Manager dialog box appears. (See Figure 8-15.)
4	Select a modem image from the list and click **SetDefault**.	You have successfully set the default modem image for all devices of that type across the entire CAM system.

Figure 8-15   Modem Image Manager—Main Dialog Box
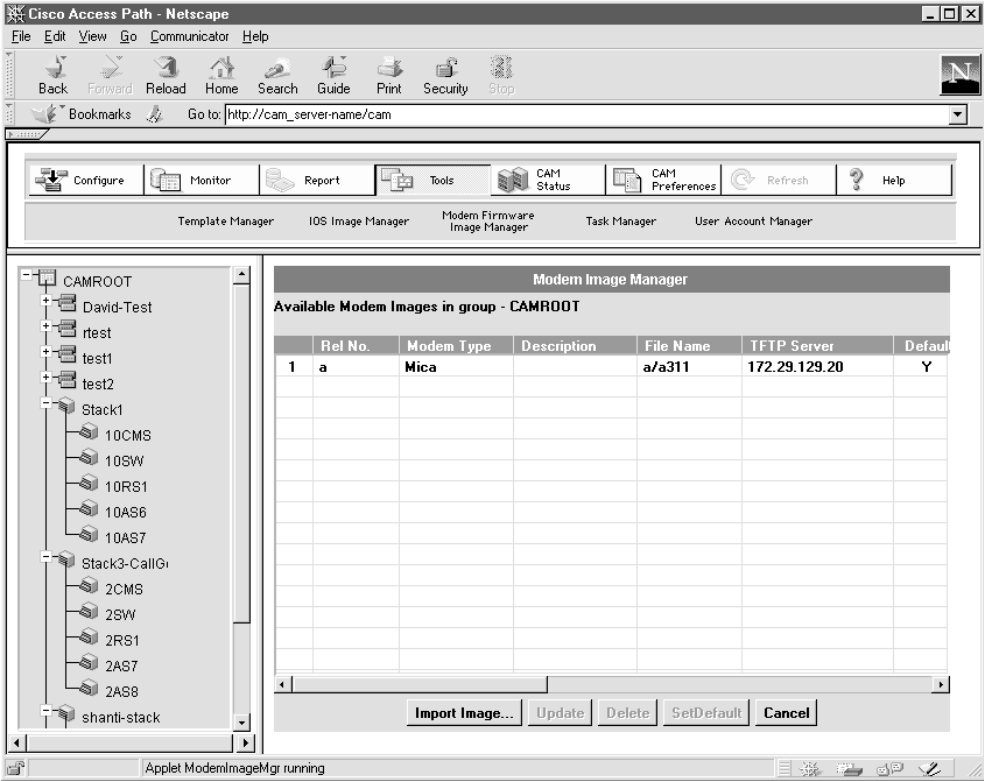
Importing a Modem Image

You can import a modem firmware image file for use by a group or shelf. After you import image files, they appear on a list from which you can select specific images to be downloaded onto the devices.

For a summary of the options available in the Modem Firmware Image Manager for containers and devices, see Table 8-6.

To import a modem firmware image:

Step		Description
1	Select a group or shelf by clicking on its name in the Device Tree View.	The group or shelf for which you want to import the modem image.
2	Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform for the selected group or shelf.
3	Click **Modem Image Firmware Manager**.	The Modem Image Firmware Manager dialog box appears. (See Figure 8-14.)
4	Click **Import Image**.	The Modem Image Import dialog box appears. (See Figure 8-16.)
5	Enter an image file name.	The name of the modem image you want to import into CAM.
6	Enter the image file directory.	The full path of your modem image on the TFTP server.
7	Enter the TFTP server address.	CAM provides its own TFTP server address in this field. However, if your TFTP server is remote, enter the TFTP server address in this field.
8	Enter the release number.	The release number helps CAM to verify that modem images are consistent across devices.
9	Select the modem type for which you are importing the modem image.	You can select MICA or Microcom. MICA is the default.
10	(Optional.) Enter a description of the modem image you are importing.	You can enter up to 255 characters.
11	Click **OK**.	You have successfully imported a modem image into CAM. You are returned to the Modem Image Manager main dialog box. The image list now includes the newly imported modem image.

Figure 8-16   Modem Image Manager—Import Dialog Box
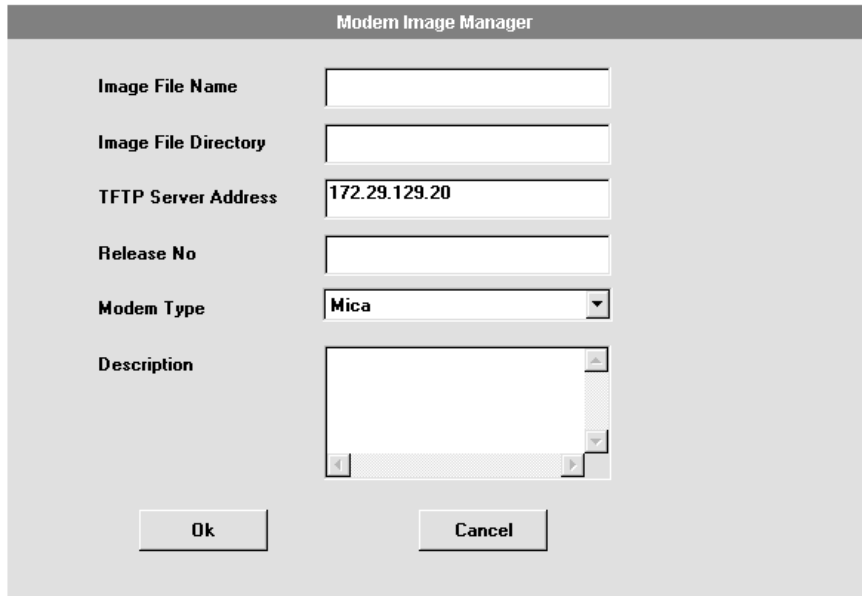
Updating a Modem Image

Updating a modem firmware image allows you to update the modem firmware image for all the modems in the group of a particular type. This option downloads the selected image onto the selected group or shelf.
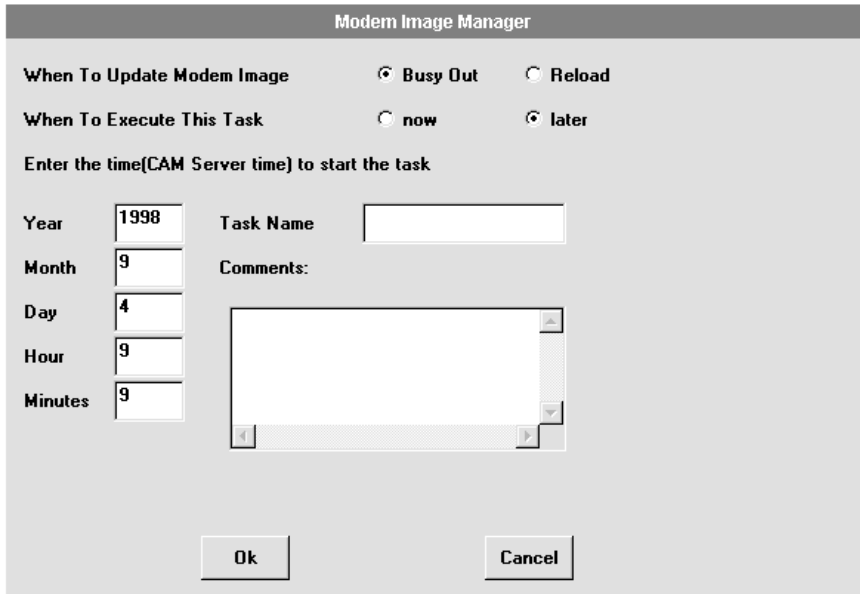
For a summary of the options available in the Modem Firmware Image Manager for containers and devices, see Table 8-6.

To update a modem firmware image for all devices of a specific type:

Step		Description
1	Select a group or shelf by clicking on its name in the Device Tree View.	The group for which you want to update the modem image.

Step		Description
2	Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform for the selected group or shelf.
3	Click **Modem Image Firmware Manager**.	The Modem Image Firmware Manager dialog box appears. (See Figure 8-14.)
4	Select an modem image from the list and click **Update**.	The Modem Image Update dialog box appears. (See Figure 8-17.)
5	Click **Busy Out** or **Reload** to determine when the modem image is updated.	Click **Busy Out** to update the modem image on Busy Out. Click **Reload** to update the modem image when the device reloads.
6	Click **now** or **later** to execute this task.	Click **now** if you want the Cisco modem image updated immediately and skip to Step 10. Click **later** to schedule the update for a later time. If you click **later**, you must define task information.
7	Enter the time you want the update to take place.	You must ensure that there is a value in the year, month, day, hour, and minutes fields. It must be a time in the future. you must select a date, time, and task name.
8	Enter a Task Name.	You must enter a task name. It can be up to 16 characters. You can manage the task through the Task Manager. After a scheduled task executes, you might need to refresh your system. See "Refreshing Your System" section on page 2-7 for details.
9	Enter information in the Comment field.	You can enter any information about the task that you want. You can specify up to 255 characters.
10	Click **OK**.	You have successfully updated the modem image for all the devices of the specified type. You are returned to the Modem Image Manager main dialog box.

Figure 8-17   Modem Image Manager—Update Dialog Box

Updating All to Default Modem Image

Updating a modem firmware image allows you to update all the Cisco AS5300 shelves in the stack to the modem image that you have defined as the default.

For a summary of the options available in the Modem Firmware Image Manager for containers and devices, see Table 8-6.

To update all to the default modem firmware image for all the shelves:

Step		Description
1	Select a stack from the Device Tree View.	The stack for which you want to update information.
2	Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform for the device selected in the Device Tree View.

Step		Description
3	Click **Modem Image Firmware Manager**.	The Modem Image Firmware Manager Update All dialog box appears. (See Figure 8-18.)
4	Select a modem image from the list and click **Update all to default**.	The Modem Image Update dialog box appears. (See Figure 8-19.)
5	Click **Busy Out** or **Reload** to determine when the modem image is updated.	Click **Busy Out** to update the modem image on Busy Out. Click **Reload** to update the modem image when the device reloads.
6	Click **now** or **later** to execute this task.	Click **now** if you want the Cisco IOS image updated immediately and skip to Step 10. Click **later** to schedule the update for a later time. If you click **later**, you must define task information.
7	Enter the time you want the update to take place.	You must ensure that there is a value in the year, month, day, hour, and minutes fields. It must be a time in the future. You must select a date, time, and task name.
8	Enter a Task Name.	You must enter a task name. it can be up to 16 characters.You can manage the task through the Task Manager. After a scheduled task executes, you might need to refresh your system. See "Refreshing Your System" section on page 2-7 for details.
9	Enter information in the Comment field.	You can enter any information about the task that you want. You can specify up to 255 characters.
10	Click **OK**.	You have successfully updated the modem image for all the devices of the specified type. You are returned to the Modem Image Manager main dialog box.

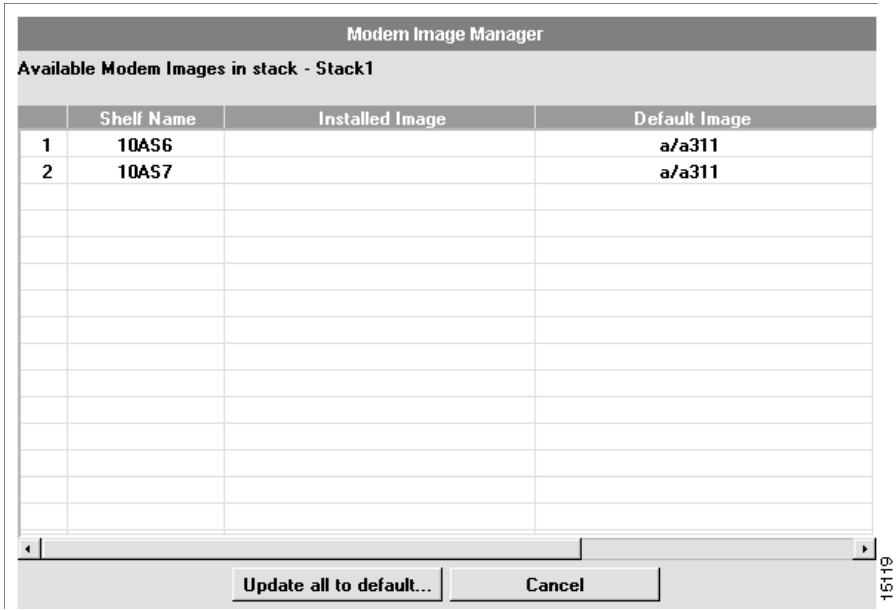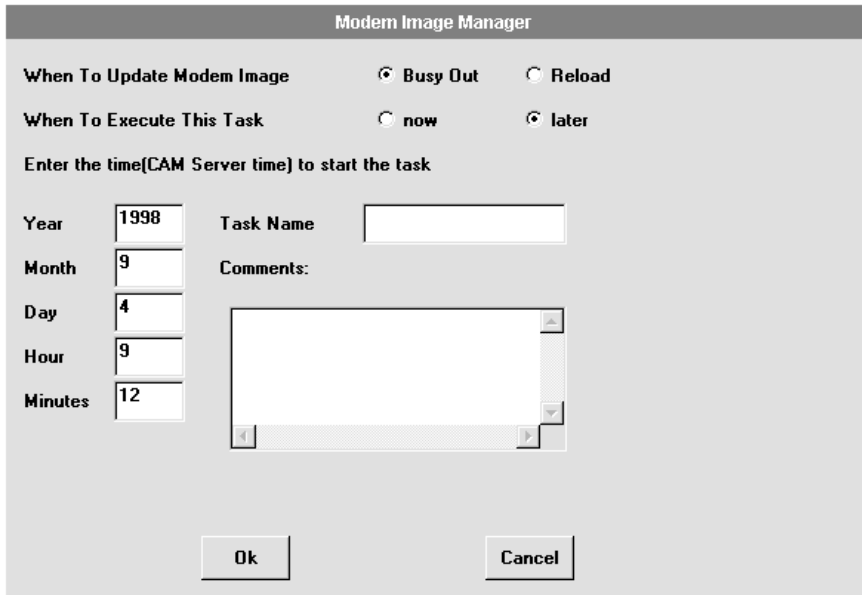**Figure 8-18   Modem Image Manager—Update All Dialog Box**

Figure 8-19   Modem Image Manager—Update Dialog Box

Viewing the History of a Modem Image

Viewing history of the modem firmware image allows you to view records of all the changes that have been made to the modem firmware image for the shelves that you select.

For a summary of the options available in the Modem Firmware Image Manager for containers and devices, see Table 8-6.

To view changes made to the modem firmware image:

Step		Description
1	Select a shelf from the Device Tree View.	The device for which you want to view history.
2	Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform for the device selected in the Device Tree View.

Step		Description
3	Click **Modem Image Firmware Manager**.	The Modem Image Firmware Manager dialog box appears. (See Figure 8-14.)
4	Click **View History**.	The Modem Image History dialog box appears with records of all the changes to the modem image for the selected device. (See Figure 8-20.)
5	Click **Done**.	You are returned to the Modem Image Manager main dialog box.

Figure 8-20   Modem Image Manager—History Dialog Box

Deleting a Modem Image

Deleting a modem firmware image removes it from the list of managed modem images. It does not delete it from the devices on which it has been loaded.

For a summary of the options available in the Modem Firmware Image Manager for containers and devices, see Table 8-6.

To delete a modem firmware image from the list of managed images:

Step		Description
1	Select a group by clicking on its name in the Device Tree View.	The group for which you want to delete modem firmware images.
2	Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform for the device selected in the Device Tree View.
3	Click **Modem Image Firmware Manager**.	The Modem Image Firmware Manager dialog box appears. (See Figure 8-14.)
4	Select an modem image from the list and click **Delete**.	You have successfully deleted the modem image from the list of managed modem images.

Using the Configuration File Manager

The Configuration File Manager helps you to manage configuration files for System Controllers and shelves.


Note You cannot edit and save (or save as) configuration files from the GUI onto the database if the configuration file exceeds 28K bytes; the file will be truncated to 28K bytes. However, you can import configuration files that are larger than 28K bytes from UNIX, as well as backup and download large files to a device.

The Configuration File Manager supports the following tasks:

- Importing a Configuration File on page 8-48
- Editing a Configuration File on page 8-50
- Updating a Configuration File on page 8-52
- Viewing History of a Configuration File on page 8-55
- Deleting a Configuration File on page 8-57

Figure 8-21 shows the main dialog box for the Configuration File Manager. You can refresh the information on the Configuration File Manager main dialog box by clicking the **Refresh** button.

Figure 8-21   **Configuration File Manager—Main Dialog Box**
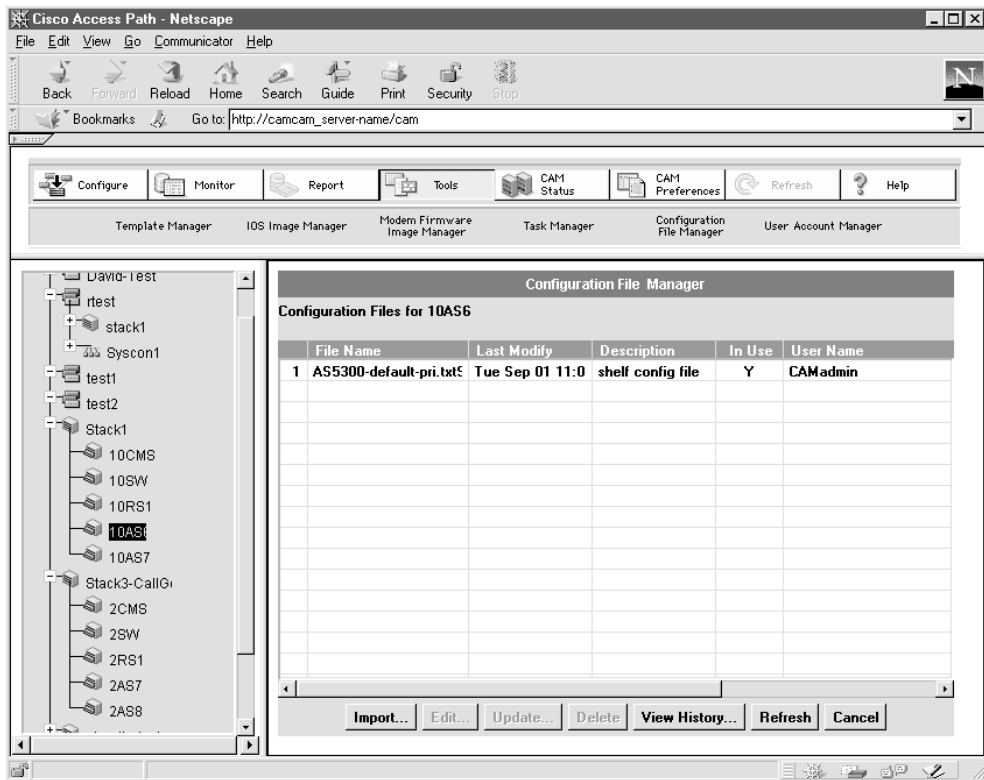
Table 8-7 lists and briefly describes each of the fields that display on the main dialog box of the Configuration File Manager.

Table 8-7   Configuration File Manager Fields

Field Name	Description
number	For informational purposes only.
File Name	Name of the configuration file.
Last Modify	The last time the configuration file was modified.
(Optional.) Description	Description of the file to help you identify it. It can be up to 128 characters in length.
In Use	Name of the configuration file currently loaded on the device.
User Name	Name of the user who has created or modified the configuration file.

The Configuration File Manager provides different capabilities for groups, stacks, System Controllers, and shelves.

Table 8-8 lists the available options.

Table 8-8   Configuration File Manager Option Summary

Container/Device	Option
CAMROOT	• none
User-defined group	• none
Stack	• none

Table 8-8   Configuration File Manager Option Summary (Continued)

Container/Device	Option
System Controller	• Importing a configuration file
	• Editing a configuration file
	• Updating a configuration file
	• Deleting a configuration file
	• Viewing history of a configuration file
Shelf (Cisco AS5300, Cisco AS5800, Catalyst 5002, Cisco 7206, Cisco 3640)	• Importing a configuration file
	• Editing a configuration file
	• Updating a configuration file
	• Deleting a configuration file
	• Viewing history of a configuration file

Importing a Configuration File

You can add configuration files to the list of files that can be selected using the Import feature in the Configuration File Manager.
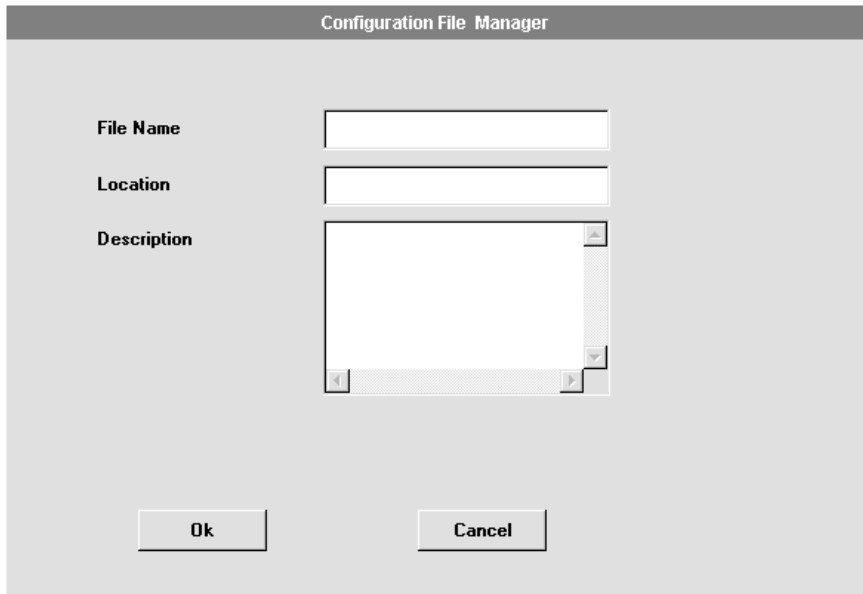
For a summary of the options available in the Configuration File Manager for containers and devices, see Table 8-8.

To add a configuration file by importing:

Step		Description
1	Select a System Controller or shelf from the Device Tree View.	The device for which you want to import a configuration file.
2	Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform for the selected device.
3	Click **Configuration File Manager**.	The Configuration File Manager dialog box appears. (See Figure 8-21.)
4	Click **Import**.	The Configuration File Manager Import dialog box appears. (See Figure 8-22.)

Step		Description
5	Enter the file name.	The name of the file you want to import. This can be any custom configuration file that you have created.
		All of the CLI code entered into a custom configuration template must be written in valid Cisco IOS syntax. Otherwise, when CAM attempts to download the configuration file, the System Controller or shelf rejects the command.
6	Enter a location.	The location must be the full path name of the file you want to import. The file must be on the CAM server.
7	(Optional.) Enter a description of the configuration file you are importing.	The description should provide information to help you identify the configuration file. The description can be up to 128 characters.
8	Click **OK**.	CAM imports the specified configuration file and adds it to the files listed on the Configuration File Manager main dialog box.
		You can now select this configuration file when you create or modify this type of device.

Figure 8-22   Configuration File Manager—Import Dialog Box
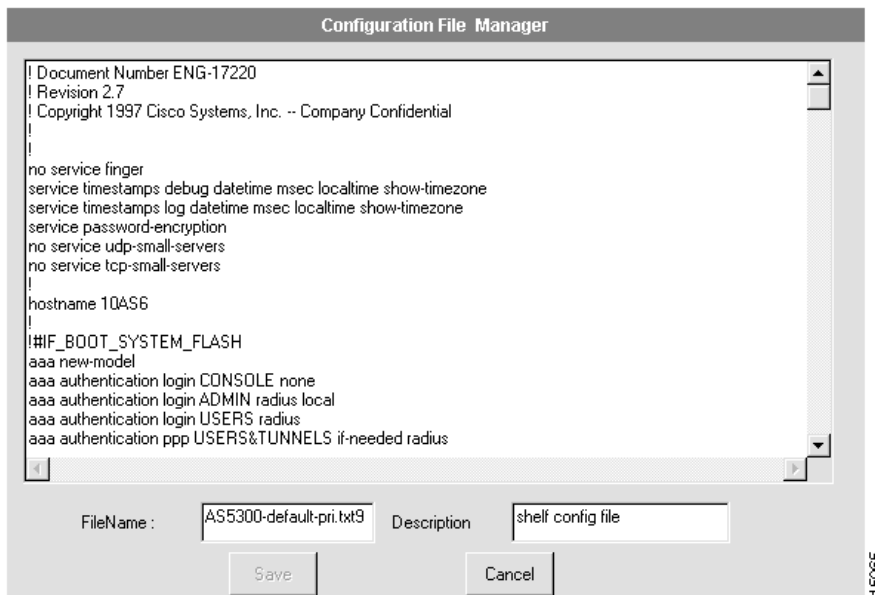

Editing a Configuration File

You can create a custom configuration file using the Edit feature in the Configuration File Manager.

For a summary of the options available in the Configuration File Manager for containers and devices, see Table 8-8.

To create a custom configuration file by editing:

Step		Description
1	Select a System Controller or shelf from the Device Tree View.	The device for which you want to edit a configuration file.
2	Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform for the selected device.
3	Click **Configuration File Manager**.	The Configuration File Manager dialog box appears. (See Figure 8-21.)
4	Select the configuration file you want to edit, and click **Edit**.	The Configuration File Manager Edit dialog box appears with the configuration file content. (See Figure 8-23.)
5	Modify the file to meet your requirements.	All of the CLI code entered into a custom configuration file must be written in valid Cisco IOS syntax. Otherwise, when CAM attempts to download the configuration file, the System Controller or shelf rejects the command.
6	(Optional.) Change the file name and description of the file.	If the InUse field for the file is **Y**, you must give the configuration file a new name, even if the file you are using is your own custom file. If the InUse field for the file is **N**, you can either use the same name or give it a new name. Changing the description in either case is optional.
		The name and description can be up to 20 characters each. If another user is saving the same file using the same name, CAM processes only one of the commands, the other user receives an error message indicating a duplicate name.
7	Click **Save**.	You are returned to the Configuration File Manager main dialog box. The list of files includes the file you just created.
		You can now select this template when you create or modify this type of device.

Figure 8-23   Configuration File Manager—Edit Dialog Box

Updating a Configuration File

Updating a configuration file allows you to update any shelf or System Controller to use the configuration file that you select from the list. If the configuration file is in use, you cannot update it.

For a summary of the options available in the Configuration File Manager for containers and devices, see Table 8-8.

To update the configuration file:

Step		Description
1	Select a System Controller or shelf from the Device Tree View.	The System Controller or shelf for which you want to update information.
2	Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform for the device selected in the Device Tree View.
3	Click **Configuration File Manager**.	The Configuration File Manager dialog box appears. (See Figure 8-21.)
4	Select a configuration file from the list and click **Update**.	The Configuration File Manager Update dialog box appears with the configuration file content. (See Figure 8-24.)
5	Select whether to save the configuration file currently loaded on the device, before the update.	If you want to save the configuration file currently loaded on the device, click **Yes**, and enter a file name in the File Name field. If you do not want to save the current configuration, click **No**. The default is **No**.
6	Select whether to execute the task now or later.	If you select **now**, proceed to Step 10. If you select **later**, you must define task information. The task information specifies when the download is to take place. The default is **later**.
7	Enter the time you want the update task to take place.	You must ensure that there is a value in the year, month, day, hour, and minutes fields. It must be a time in the future.
8	Enter a task name.	You must enter a task name. It can be up to 16 characters in length.
9	(Optional.) Enter information in the Comment field.	You can enter any information about the task that you want. You can specify up to 128 characters.

Step		Description
10	Click **OK**.	The selected configuration file is downloaded to the selected device. You are returned to the Configuration File Manager main dialog box. You might need to refresh as described in Step 11.
11	Click **Refresh** to refresh the displayed information.	If you selected **now** in Step 6 and the update is successful, the displayed information is updated automatically. CAM displays a message indicating that the update operation was successful. The InUse field value becomes Y, indicating that the selected file is currently running on the device.
		If you selected **later** in Step 6, the information is not automatically updated. You must click **Refresh** to update the displayed information. In addition, to determine that the update operation was successful, check the status of the scheduled task in the Task Manager. No message displays to indicate the update operation was successful. See "Refreshing Your System" section on page 2-7 for details.

Figure 8-24   Configuration File Manager—Update Dialog Box

Viewing History of a Configuration File

Viewing the history of a configuration file allows you to view all the records of changes that have been made to the configuration file on a per-device basis starting from the first download.

For a summary of the options available in the Configuration File Manager for containers and devices, see Table 8-8.

To view changes:

Step	Description
1 Select a System Controller or shelf from the Device Tree View.	The device for which you want to view history.
2 Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform for the device selected in the Device Tree View.
3 Click **Configuration File Manager**.	The Configuration File Manager dialog box appears. (See Figure 8-21.)
4 Click **View History**.	The Configuration File Manager History dialog box appears with records of all the changes to the configuration file for the selected device. (See Figure 8-25.)
5 Click **Done**.	You are returned to the Configuration File Manager main dialog box.

Figure 8-25   Configuration File Manager—History Dialog Box

Deleting a Configuration File

You can delete a configuration file that you have either imported or renamed and edited. If the configuration file is in use, you cannot delete it.

For a summary of the options available in the Configuration File Manager for containers and devices, see Table 8-8.

> **Caution**   If you delete a configuration file, you cannot recover it.

To delete a configuration file:

Step		Description
1	Select a System Controller or shelf from the Device Tree View.	The device for which you want to delete a configuration file.
2	Click **Tools.**	The Task Selection bar displays all of the tasks CAM can perform for the selected device.
3	Click **Configuration File Manager**.	The Configuration File Manager dialog box appears. (See Figure 8-26.)
4	Select the file you want to delete and click **Delete**.	The configuration file has been removed from the listed files.

Figure 8-26   Configuration File Manager—Main Dialog Box
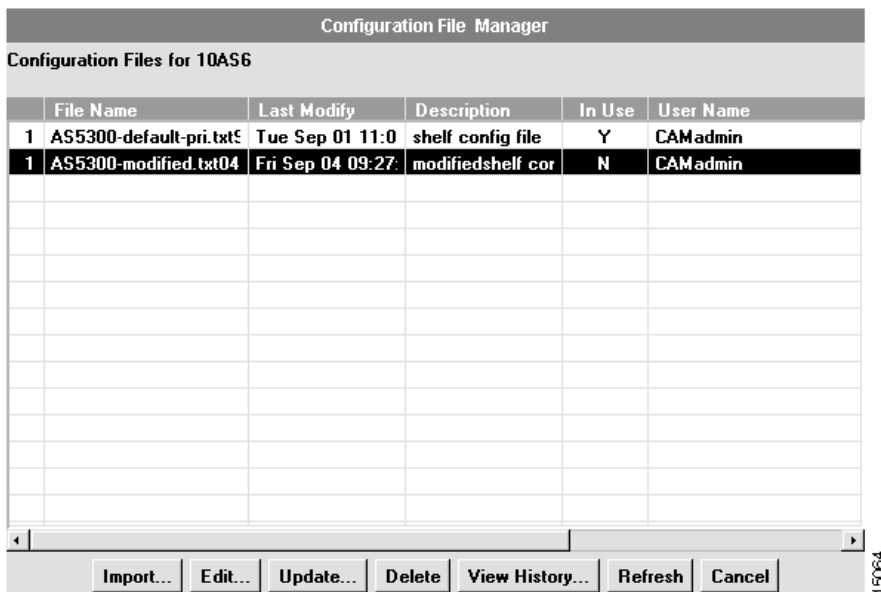
Using the Task Manager

The Task Manager helps you to manage the scheduled tasks in CAM. The Task Manager supports the following tasks:

- Viewing Task Output on page 8-63
- Deleting a Task on page 8-65

You do not add tasks for scheduling at the Task Manager dialog box. You add a task by means of other operations in CAM. Table 8-9 lists the CAM operations that allow you to schedule a task and have it managed by the Task Manager.

Table 8-9   User-Scheduled Tasks

Operation	Container/device	Operation Code in CAM
Configure>Delete	Stack	Delete Stack
	System Controller	Delete System Controller
	Shelf (Cisco AS5300, Cisco AS5800, Cisco 7206, Catalyst 5002, Cisco 3640)	Delete Shelf
Configure>Modify	Stack	Modify Stack/Shelf
	System Controller	Modify System Controller
	Shelf (Cisco AS5300, Cisco AS5800, Cisco 7206, Catalyst 5002, Cisco 3640)	Modify Stack/Shelf

Table 8-9   User-Scheduled Tasks (Continued)

Operation	Container/device	Operation Code in CAM
Configure>Add	System Controller	Add System Controller
	Shelf (Cisco AS5300, Cisco AS5800, Cisco 7206, Catalyst 5002, Cisco 3640)	Add Shelf
Tools>IOS Image>Update	Group	Load IOS Image
	System Controller	Load IOS Image
	Shelf (Cisco AS5300 and Cisco AS5800)	Load IOS Image
Tools>IOS Image>UpdateAllDefault	Stack	Load Default IOS Image
	System Controller	Load Default IOS Image
Tools>ModemImage>Update	Group	Load Modem Image
	Shelf (Cisco AS5300, Cisco AS5800, Cisco 7206, Catalyst 5002, Cisco 3640	Load Modem Image
Tools>ModemImage>UpdateAllDefault	Stack	Load Default Modem Image
Tools>Configuration File>Update	System Controller	Load Config File
	Shelf (Cisco AS5300, Cisco AS5800, Cisco 7206, Catalyst 5002, Cisco 3640)	Load Config File

In addition to user-scheduled tasks, CAM supports 11 internal tasks, 3 ReportInternal tasks, and 8 OtherInternal tasks. CAM displays and executes tasks in chronological order, by their scheduled start time at the Task Manager dialog box. However, if user-scheduled tasks are scheduled to execute at the same time, CAM executes them one after the other in random sequence. If ReportInternal tasks, OtherInternal tasks, and user-scheduled tasks are scheduled to execute at the same time, CAM executes them simultaneously.

Note The task status information at the Task Manager dialog box does not update automatically. You must click the **Refresh** button to update the status.

If a system crash occurs, the status of all tasks is reset to scheduled after recovery. CAM then executes them in chronological order.

You can use the Tasks Manager for:

- Viewing Task Output
- Deleting a Task

Figure 8-27 shows the main dialog box for the Task Manager.
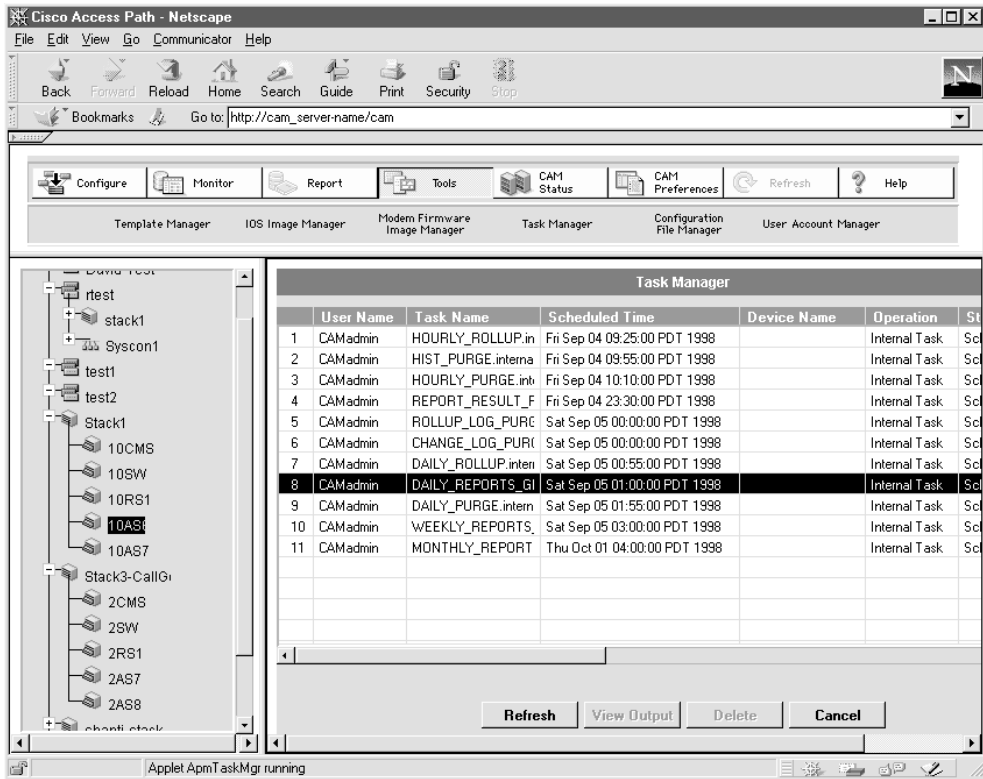
Figure 8-27   Task Manager—Main Dialog Box

Table 8-10 lists and briefly describes each of the fields that display on the main dialog box of the Task Manager.

Table 8-10   Task Manager Fields

Field Name	Description
number	Number CAM assigns to the task file. Starting number is 1.
User Name	Name of the user who has scheduled the task. A user with Administrator privileges can see all scheduled tasks, including internal tasks. All other users can see only those tasks they have scheduled.
Task Name	Name assigned to the task automatically or by the user who has scheduled the task.
Scheduled Time	The time at which the task has been scheduled to execute.
Device Name	Name of the device on which the scheduled task is to occur.
Operation	The internal operation code of the scheduled task. (See Table 8-9.)
Status	Task status that indicates whether the task has succeeded or is scheduled.
Comments	Optional description or comment.

Viewing Task Output

You can view task output of a configuration task only if it has failed.

To view task output:

Step	Description
1 Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform for the selected device.
2 Click **Task Manager**.	The Task Manager dialog box appears. (See Figure 8-27.) This dialog box is not device specific.

Step		Description
3	Select the failed task for which you want to view output and click **View Output**.	The Task Manager View Output dialog appears. (See Figure 8-28.)
		If a scheduled shelf deletion fails because its stack is gone, the View Output dialog box does not reflect this failure.

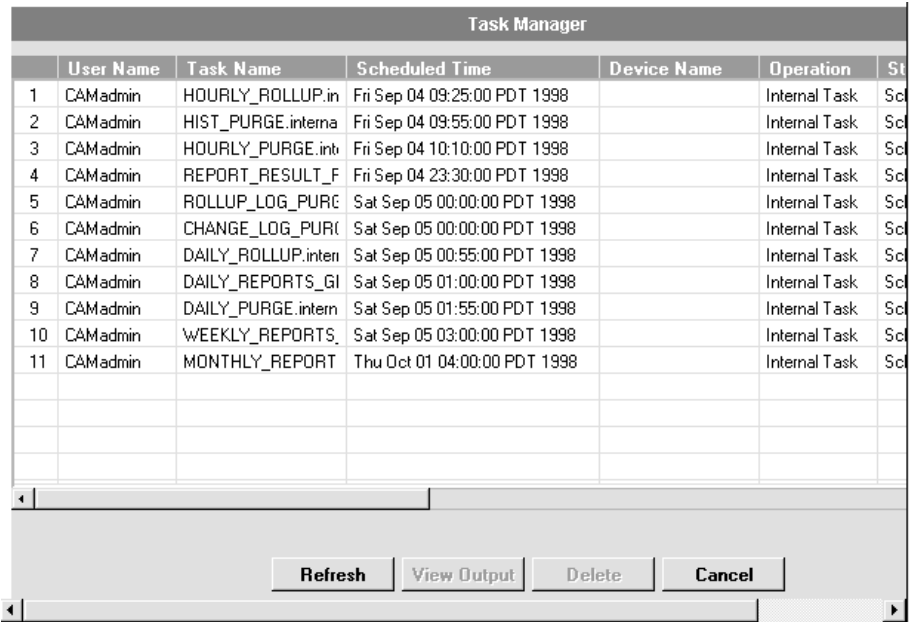**Figure 8-28   Task Manager—View Task Output Dialog Box**

Deleting a Task

You cannot delete an internal task or tasks in the InProgress state. You can only delete tasks that you have scheduled. In addition, tasks that you have scheduled continue to display at the Task Manager dialog box until you manually delete them. However, internal tasks that have succeeded are deleted from the Task Manager dialog box automatically; they are replaced by the next task in the scheduled state.

To delete a task:

Step		Description
1	Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform for the selected device.
2	Click **Task Manager**.	The Task Manager dialog box appears. (See Figure 8-29.) This dialog box is not device specific.
3	Select the user-defined task you want to delete and click **Delete**.	You are returned to the Task Manager main dialog box. The task has been removed from the listed tasks.

Figure 8-29   Task Manager—Main Dialog Box

	User Name	Task Name	Scheduled Time	Device Name	Operation	St
1	CAMadmin	HOURLY_ROLLUP.in	Fri Sep 04 09:25:00 PDT 1998		Internal Task	Sc
2	CAMadmin	HIST_PURGE.interna	Fri Sep 04 09:55:00 PDT 1998		Internal Task	Sc
3	CAMadmin	HOURLY_PURGE.int	Fri Sep 04 10:10:00 PDT 1998		Internal Task	Sc
4	CAMadmin	REPORT_RESULT_F	Fri Sep 04 23:30:00 PDT 1998		Internal Task	Sc
5	CAMadmin	ROLLUP_LOG_PURG	Sat Sep 05 00:00:00 PDT 1998		Internal Task	Sc
6	CAMadmin	CHANGE_LOG_PUR(	Sat Sep 05 00:00:00 PDT 1998		Internal Task	Sc
7	CAMadmin	DAILY_ROLLUP.inter	Sat Sep 05 00:55:00 PDT 1998		Internal Task	Sc
8	CAMadmin	DAILY_REPORTS_GI	Sat Sep 05 01:00:00 PDT 1998		Internal Task	Sc
9	CAMadmin	DAILY_PURGE.intern	Sat Sep 05 01:55:00 PDT 1998		Internal Task	Sc
10	CAMadmin	WEEKLY_REPORTS_	Sat Sep 05 03:00:00 PDT 1998		Internal Task	Sc
11	CAMadmin	MONTHLY_REPORT	Thu Oct 01 04:00:00 PDT 1998		Internal Task	Sc

Refresh   View Output   Delete   Cancel

15196

Using the User Account Manager

The User Account Manager helps you to manage CAM users. The User Account Manager supports the following tasks:

- Adding a user

- Modifying a user

- Deleting a user

The privileges defined at the User Account Manager dialog box determine the possible operations a user can do at the various CAM dialog boxes. The User Account Manager dialog box lists all users in addition to their respective passwords and privileges currently defined in CAM.

If you have administrator privileges, you can use all dialog boxes without restriction. You must have administrator privileges to use the User Account Manager. If you have administrator privileges, you can add, modify, and delete users at the User Account Manager dialog box. Additionally, you can set the user name, password, and read-write or read-only privileges for each CAM user.

If you have read-only or read-write privilege, you are restricted. The read-only privilege prevents you from creating or making changes at any of the dialog boxes in CAM. read-only users have access only to monitor and report dialog boxes. The read-write privilege limits a user to adding or editing his/her own settings. Read-write users have access to all dialog boxes except the User Account Manager dialog box.

If you do not have administrator privileges, the User Account Manager is not visible to you.

Table 8-11   User Account Manager Fields

Field Name	Description
User Name	Name of the user who you want to add, modify, or delete.
Password	Password assigned to the user name.
Privilege	Privilege assigned to the username.

Adding, Modifying, or Deleting a User

You can add, modify, or delete a CAM user at the User Account Manager dialog box. You can modify a user's name, password, or privilege, and you can delete a CAM user, but you cannot delete the administrator. You must have administrator privileges to use the User Account Manager.

To add, modify, or delete a user:

Step		Description
1	Click **Tools**.	The Task Selection bar displays all of the tasks CAM can perform for the selected device.
2	Click **User Account Manager**.	The User Account Manager dialog box appears. (See Figure 8-30.)
3	Enter a username, or select the user account you want to modify or delete.	The username can be up to 64 characters. When you enter a username, the **Add** button becomes enabled. When you highlight an existing username in the list, the **Modify** and **Delete** buttons become enabled.
4	Enter a password.	The password can be up to 64 characters.
5	Select a privilege.	The possible privileges are read-only and read-write. The default privilege is read-only. A user with read-only privileges cannot make any changes at the CAM dialog boxes. A user with read-write privileges can make changes, but not to other users.
		If the logged-in user has read-only or read-write privileges, the information displayed at the dialog boxes relates to only the logged-in user.
6	Click **Add**, **Modify**, or **Delete**.	The user is added, modified, or deleted.

Figure 8-30   User Account Manager—Main Dialog Box