



Using the WAE Device Manager GUI

This chapter describes how to use the WAE Device Manager GUI, which is a separate interface from the WAAS Central Manager GUI. The WAE Device Manager is a web-based management interface that allows you to control and monitor an individual WAE device in your network. The WAAS Central Manager device does not have a WAE Device Manager interface. In many cases, the same device settings are found in both the WAE Device Manager and the WAAS Central Manager GUI. For this reason, we recommend that you always configure device settings from the WAAS Central Manager GUI if possible.

When you change device settings in the WAE Device Manager, the changes are propagated to the WAAS Central Manager and override the group settings for that device. If you later decide that you want the group settings to override the settings that you configured from the WAE Device Manager, you can use the group override features in the WAAS Central Manager GUI. For more information, see the [“Overriding Group Configuration Settings” section on page 3-7](#).



Note

Throughout this chapter, the term WAAS device is used to refer collectively to the WAAS Central Managers and WAEs in your network. The term WAE refers to WAE appliances, WAE Network Modules (the NME-WAE family of devices), and SM-SRE modules running WAAS.

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Launching the WAE Device Manager

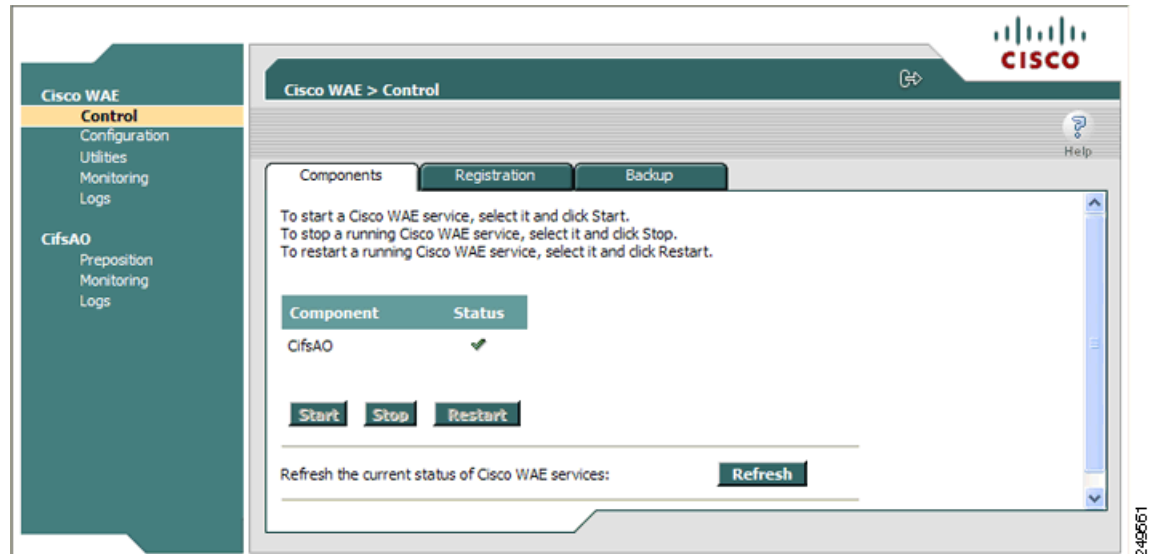
Each WAAS device is managed separately using the WAE Device Manager web-based interface. You can launch the WAE Device Manager remotely from any location on the WAAS network using Internet Explorer (required).

To launch the WAE Device Manager, go to `https://Device_IP_Address:8443/mgr`

The Login window of the WAE Device Manager appears. Enter your username and password in the fields provided and click **Login**. The default username is admin and the default password is default.

The WAE Device Manager interface appears. (See [Figure 11-1](#).)

Figure 11-1 WAE Device Manager Interface



A Quick Tour of the WAE Device Manager

The WAE Device Manager is divided into two sections. The area on the left displays the navigation area. The area on the right displays information about the options that you have selected from the navigation area.

The navigation area allows you to navigate the management screens for different WAE components. The navigation area includes the following options:

- Cisco WAE—Allows you to start and stop the WAE components, register and unregister the WAE, back up and restore configuration files, and use various WAE utilities. For more information, see the [“Managing a Cisco WAE”](#) section on page 11-3.
- CifsAO—Allows you to monitor preposition tasks, view CIFS device statistics, and view the log. For more information, see the [“Managing a CIFS Accelerator Device”](#) section on page 11-13.

The CifsAO option appears only if you have enabled the transparent CIFS accelerator on this WAAS device. For more information, see the [“Enabling and Disabling the Global Optimization Features”](#) section on page 13-3.

The options in the navigation area include suboptions, which when selected, display additional tabs in the display area. Mandatory fields in the display area are indicated with an asterisk. If you click **Save** without entering a value in a mandatory field, an error message is displayed. Click the **Back** link to return to the window where the error occurred.

Information displayed in tables can be sorted by clicking the column headers. Clicking the header a second time sorts the information in reverse order.

As you navigate in the WAE Device Manager, your current location is always displayed across the top of the display area.

To log out of the WAE Device Manager, click the  icon on the upper-right side of the display area.



Note

JavaScripts, cookies, and popup windows must be enabled in the web browser to use the WAE Device Manager.

WAE Management Workflow

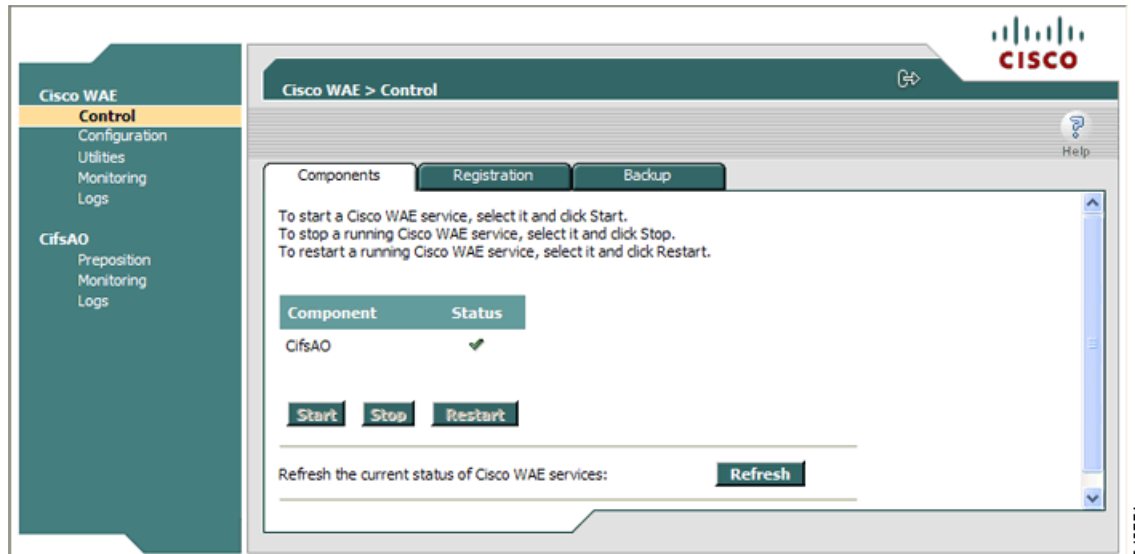
After WAEs have been deployed and registered (as described in the *Cisco Wide Area Application Services Quick Configuration Guide*), use the WAE Device Manager to perform the following actions:

- Start and stop components as described in the “[Starting and Stopping Components](#)” section on [page 11-5](#).
- Register and unregister the WAE as described in the “[Registering and Unregistering a WAE](#)” section on [page 11-6](#).
- Back up and restore configuration files as described in the “[Backing Up the Configuration Files](#)” section on [page 11-7](#).
- Define component-specific notification recipients as described in the “[Defining Notification Settings](#)” section on [page 11-10](#).
- Run WAE maintenance utilities as described in the “[Utilities Option](#)” section on [page 11-11](#).
- View the details, current status, and history of preposition tasks performed on CIFS devices as described in the “[Preposition Option](#)” section on [page 11-14](#).
- View SNMP-generated information and graphs about each WAE component as described in the “[Monitoring the WAE](#)” section on [page 11-16](#).
- View the logs for each WAE component as described in the “[Viewing WAE Logs](#)” section on [page 11-21](#).

Managing a Cisco WAE

You use the Cisco WAE menu item in the navigation area to perform basic operations such as viewing the status of WAE components and stop or start components on the WAE. [Figure 11-2](#) shows the Cisco WAE Control window.

Figure 11-2 Cisco WAE Control Window



The Cisco WAE menu item includes the following options:

- **Control**—Enables you to control the WAE and its components as described in the [“Control Option” section on page 11-4](#).
- **Configuration**—Enables you to perform basic configuration tasks as described in the [“Configuration Option” section on page 11-8](#).
- **Utilities**—Enables you to run various maintenance utilities on the WAE as described in the [“Utilities Option” section on page 11-11](#).
- **Monitoring**—Enables you to view tables and graphs about the CPU and disk utilization in the WAE as described in the [“Monitoring the WAE” section on page 11-16](#).
- **Logs**—Enables you to view event logs for various WAE subsystems as described in the [“Viewing WAE Logs” section on page 11-21](#).

Control Option

The Control option displays the following tabs:

- **Components**—Enables you to view the working status of each WAE component. You can start, stop, and restart any component. For more information, see the [“Starting and Stopping Components” section on page 11-5](#).
- **Registration**—Enables you to register or unregister the WAE with the WAAS Central Manager. For more information, see the [“Registering and Unregistering a WAE” section on page 11-6](#).
- **Backup**—Enables you to download and save WAE configuration files and to restore these files back to the WAE, if required. For more information, see the [“Backing Up the Configuration Files” section on page 11-7](#) and the [“Restoring the Configuration Files” section on page 11-8](#).

Starting and Stopping Components

The Components tab enables you to view which components are running and which components are not, and allows you to start, stop, and restart components.

From this tab you can click **Refresh** to update the status of each component and update the WAE Device Manager interface to reflect recent changes made to the device from the WAAS Central Manager GUI. For example, if the device is configured to be a transparent CIFS accelerator device while you are logged into the WAE Device Manager, that change is not reflected until you either click **Refresh** or log in again to the WAE Device Manager.



Note

If a component is not running, most of its configuration can be performed offline. However, any configuration changes made to the component will take effect only after it is restarted.



Note

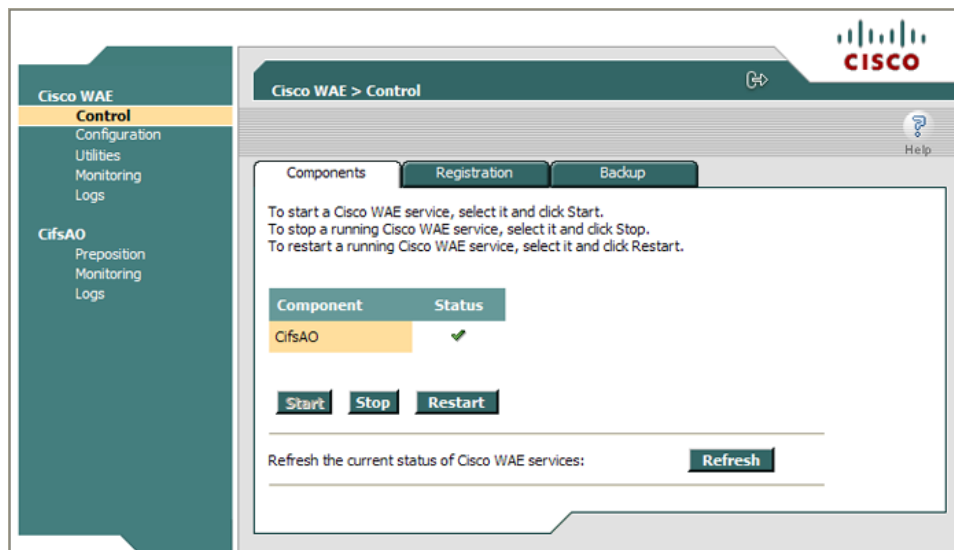
Do not stop or start a component if the device is not registered to a WAAS Central Manager.

To start and stop components, follow these steps:

- Step 1** In the Components tab of the Cisco WAE Control window, choose the component that you want to activate and click **Start**.

After a few seconds, a green checkmark ✓ appears next to the selected component, indicating its status is running, as shown in [Figure 11-3](#).

Figure 11-3 Components Tab—Starting Components



- To stop a component, choose the component from the list and click **Stop**.
After a few seconds, a red ✗ appears next to the selected component, indicating that it is no longer running.
- To restart a WAE component, choose the component from the list and click **Restart**.

- To display the current status of the WAE components, click **Refresh**.

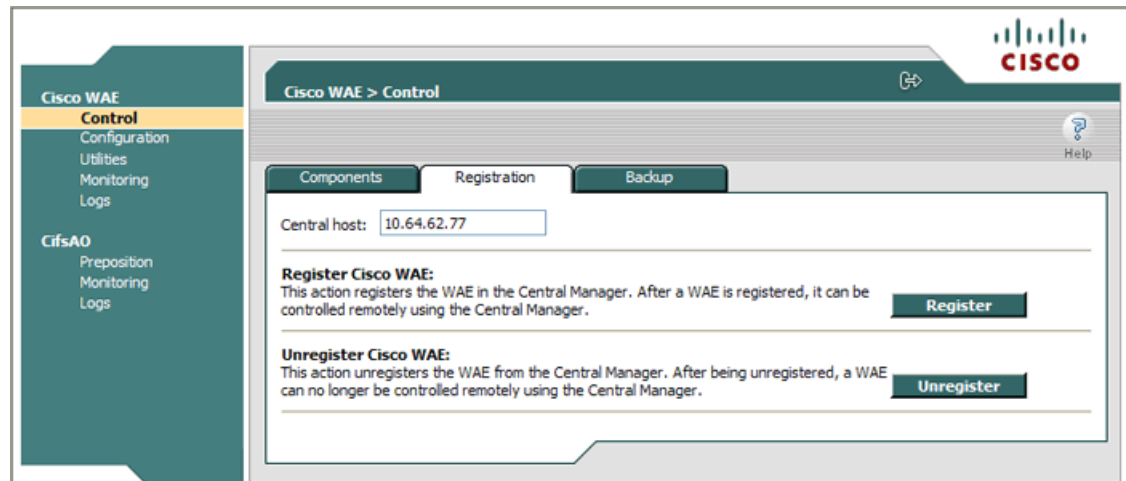
Registering and Unregistering a WAE

The Registration tab enables you to register the WAE with the specified WAAS Central Manager or unregister the WAE. After the WAE is registered, you can view and manage it from the WAAS Central Manager GUI.

To register the WAE, follow these steps:

- Step 1** In the Cisco WAE Control window, click the **Registration** tab. (See [Figure 11-4](#).)

Figure 11-4 Cisco WAE Control —Registration Tab



- Step 2** In the Central Host field, verify that the address of the WAAS Central Manager is displayed. If no address appears in this field, then the WAE is not registered with a Central Manager.

- Step 3** Click **Register** to register the WAE.

The “Registration will update the WAE properties in the WAAS Central Manager. Are you sure?” message is displayed. Click **OK**. If successful, the “Appliance registered successfully” message is displayed.

- Step 4** Click **Unregister** to unregister the Cisco WAE.

If successful, the “Appliance unregistered successfully” message is displayed.



Note When you unregister a WAE, any policies defined for it in the WAAS Central Manager GUI are removed.

Re-registering a WAE with the Central Manager after successfully replacing disks in RAID-5 systems

This procedure is applicable if the device had only one disk and that was replaced. To re-register a WAE with the Central Manager after successfully replacing disks in RAID-5 systems, follow these steps:

- Step 1** Use the **show cms info** command to view the device information.
- Step 2** Use the **cms deregister force EXEC** command to de-register (remove) the WAAS device from the WAAS network.
- Step 3** Use the **cms database delete** command to delete the existing CMS database for a device that was previously registered with the WAAS Central Manager.
- Step 4** Use the **crypto pki managed-store initialize** command to restart the SSL accelerator and recycle the PKI store on the device.
- Step 5** In the global configuration mode, use the **cms enable** command to initialize the CMS database tables, register the node, and enable the CMS. Next execute the **exit** command and **show cms info** to see that the device has been registered with the WAAS Central Manager.

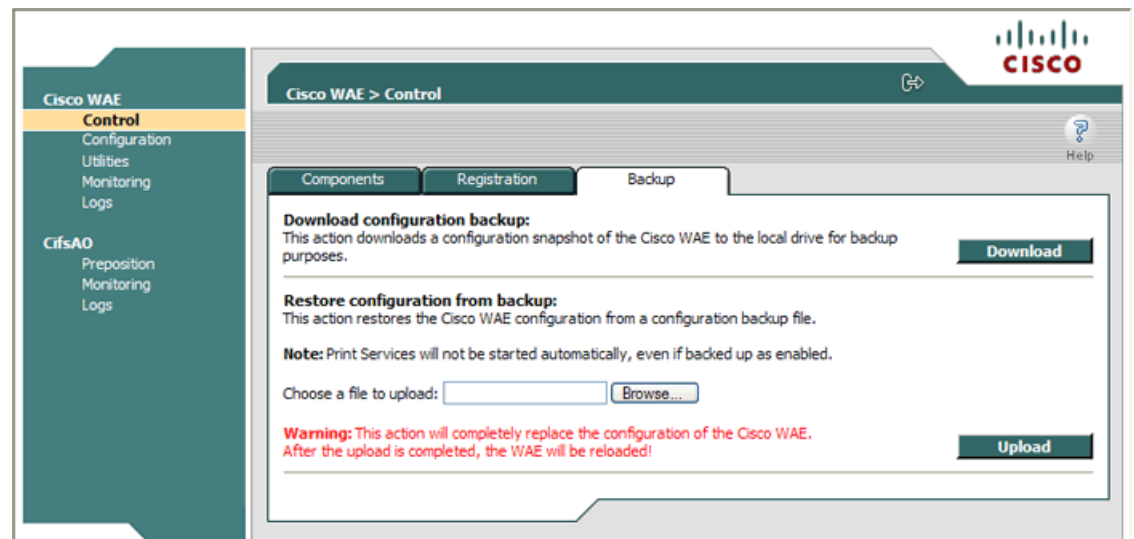
Backing Up the Configuration Files

The Backup tab enables you to back up and restore the configuration files of the WAE.

To back up the WAE configuration, follow these steps:

- Step 1** In the Cisco WAE Control window, click the **Backup** tab. (See [Figure 11-5](#).)

Figure 11-5 Cisco WAE Control —Backup Tab



- Step 2** In the Download configuration backup area, click **Download**.
- Step 3** In the File Download window, click **Save**.
- Step 4** In the Save As window, browse to where you want to save the file. You can also change the filename.
- Step 5** Click **Save**.

The WAE configuration files are downloaded to the selected destination folder and stored in a single, compressed file.

For information about restoring files from a backup, see the [“Restoring the Configuration Files” section on page 11-8](#).

Restoring the Configuration Files

The Backup tab enables you to restore the configuration files of the WAE. Restoring the configuration returns the WAE to its previous state when the backup was performed.

To restore the configuration files, follow these steps:

-
- Step 1** In the Restore configuration from backup area, click **Browse** to navigate to the location of the backup file that you want to restore.
- Step 2** Click **Upload** to restore the selected configuration files.



Note After the upload is completed, the WAE will be reloaded.

Configuration Option

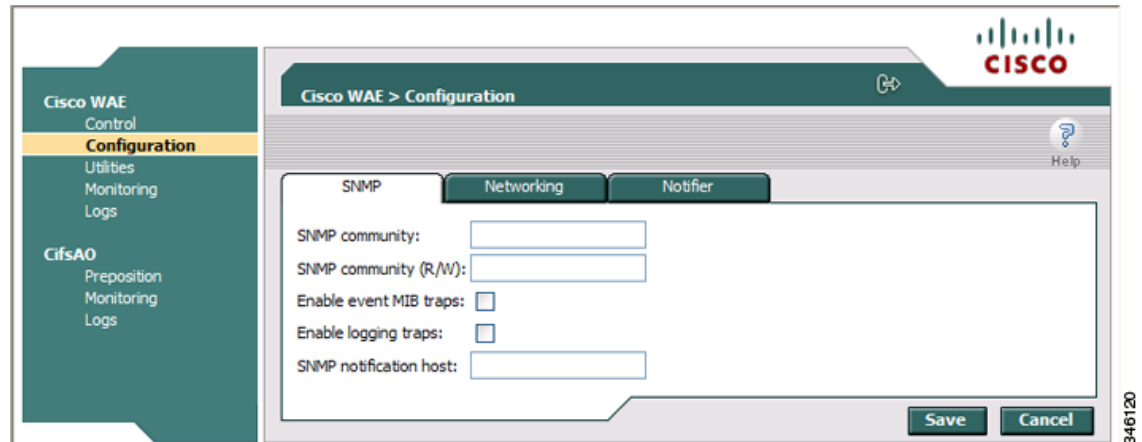
The Configuration option for the Cisco WAE menu item displays the following tabs:

- **SNMP**—Allows you to enable event MIB and logging traps on the WAE. For more information, see the [“Configuring SNMP Settings” section on page 11-8](#).
- **Networking**—Allows you to view WAE settings defined during initial device setup described in the *Cisco Wide Area Application Services Quick Configuration Guide*. For more information, see the [“Viewing Network Settings” section on page 11-9](#).
- **Notifier**—Allows you to define the e-mail address to which notifications are sent when alerts are generated by the WAE. For more information, see the [“Defining Notification Settings” section on page 11-10](#).

Configuring SNMP Settings

The SNMP tab allows you to configure the SNMP settings on the Cisco WAE. To configure the SNMP settings, click the **SNMP** tab in the Configuration window. The SNMP tab appears. (See [Figure 11-6](#).)

Figure 11-6 WAE Configuration—SNMP Tab



This tab allows you to configure the following settings:

- **SNMP community**—Sets the SNMP community string for read access, which is used as a password for authentication when accessing the SNMP agent of the WAE.
- **SNMP community (R/W)**—Sets the SNMP community string for read/write access, which is used as a password for authentication when accessing the SNMP agent of the WAE.
- **Enable event MIB traps**—Allows the WAE to send event MIB traps to the SNMP host specified in the SNMP notification host field.
- **Enable logging traps**—Enables logging traps on the device.
- **SNMP notification host**—Enter the IP address or hostname of your SNMP host so that the WAE can send MIB and logging traps to the host.

Click **Save** after making any changes to this page, or click **Cancel** to disregard your changes so that they do not take effect.

Viewing Network Settings

The Networking tab enables you to view the connection parameters between the WAE and the LAN.

The Networking tab contains the following information:

- **Machine name**—The hostname of the WAE.
- **DHCP**—Whether a DHCP server is available on the network.
- **IP Address**
- **Net mask**
- **Default Gateway**
- **DNS Server 1**
- **DNS Server 2**
- **Domain Name**
- **MAC Address**
- **Time Zone**

Defining Notification Settings

The Notifier tab allows you to define the e-mail address to which notifications are sent when alerts are generated by the WAE.

To define notification settings, follow these steps:

- Step 1** In the Configuration window, click the **Notifier** tab. (See [Figure 11-7](#).)

Figure 11-7 Notifier Tab

The screenshot shows the Cisco WAE Configuration window with the Notifier tab selected. The left sidebar contains navigation options: Cisco WAE, Control, Configuration (highlighted), Utilities, Monitoring, Logs, CifsAO, Preposition, Monitoring, and Logs. The main content area is titled 'Cisco WAE > Configuration' and has tabs for SNMP, Networking, and Notifier. The Notifier tab is active, showing two sections: 'E-mail Notification' and 'SNMP Notification'. The 'E-mail Notification' section includes fields for Email address, Mail server host name, Time period (1.0 min), Notify Level (INFO), Mail server port (25), Login to server (checkbox), Server user name, Server password, From (WAFS), and Subject (Cisco WAE Device Manag). The 'SNMP Notification' section includes an SNMP Notify Level dropdown set to FATAL. Save and Cancel buttons are at the bottom right.

- Step 2** In the Email address field, enter the address to which notifications about this WAE are sent.
- Step 3** In the Mail server host name field, enter the name of the mail server host.
- Step 4** In the Time period field, enter the time interval for notifications to accumulate until they are sent through e-mail and choose the relevant time unit from the drop-down list (min or sec).
- Step 5** From the Notify Level drop-down list, choose the minimum event severity level for generating notifications.
- Step 6** In the Mail server port field, enter the port number for connecting with the mail server.
- Step 7** Check the **Login to server** check box if the WAE must log in to the mail server to send notifications. If this option is selected, additional fields are enabled.
- Step 8** In the Server username field, enter the username for accessing the mail server.
- Step 9** In the Server password field, enter the password for accessing the mail server.
- Step 10** In the From field, enter the text that should appear in the From field of each e-mail notification.
- Step 11** In the Subject field, enter the text that should appear as the subject of each notification.
- Step 12** From the SNMP Notify Level drop-down list, choose the minimum event severity level for generating SNMP notifications.

Step 13 Click **Save**.

Utilities Option

The Utilities option displays the following tabs:

- **Support**—Allows you to dump WAE data to an external location for support purposes. For more information, see the [“Running Support Utilities” section on page 11-11](#).
- **WAFS Cache Cleanup**—Allows you to remove all files from the CIFS (WAFS) cache. For more information, see the [“Running the Cache Cleanup Utility” section on page 11-12](#). This option appears only if you have enabled the transparent CIFS accelerator on this WAAS device.
- **File Server Rename**—Allows you to rename a file server in the CIFS (WAFS) cache. For more information, see the [“Running the File Server Rename Utility” section on page 11-13](#). This option appears only if you have enabled the transparent CIFS accelerator on this WAAS device.

Running Support Utilities

The Support tab displays product information about the WAE, including the WAAS software version and build number running on the device.

The Support tab also allows you to download a system report that provides a snapshot of the current state of the WAE and its operation, including the configuration log files of various components. You can send this report to Cisco Technical Support (TAC) if you need assistance.



Note

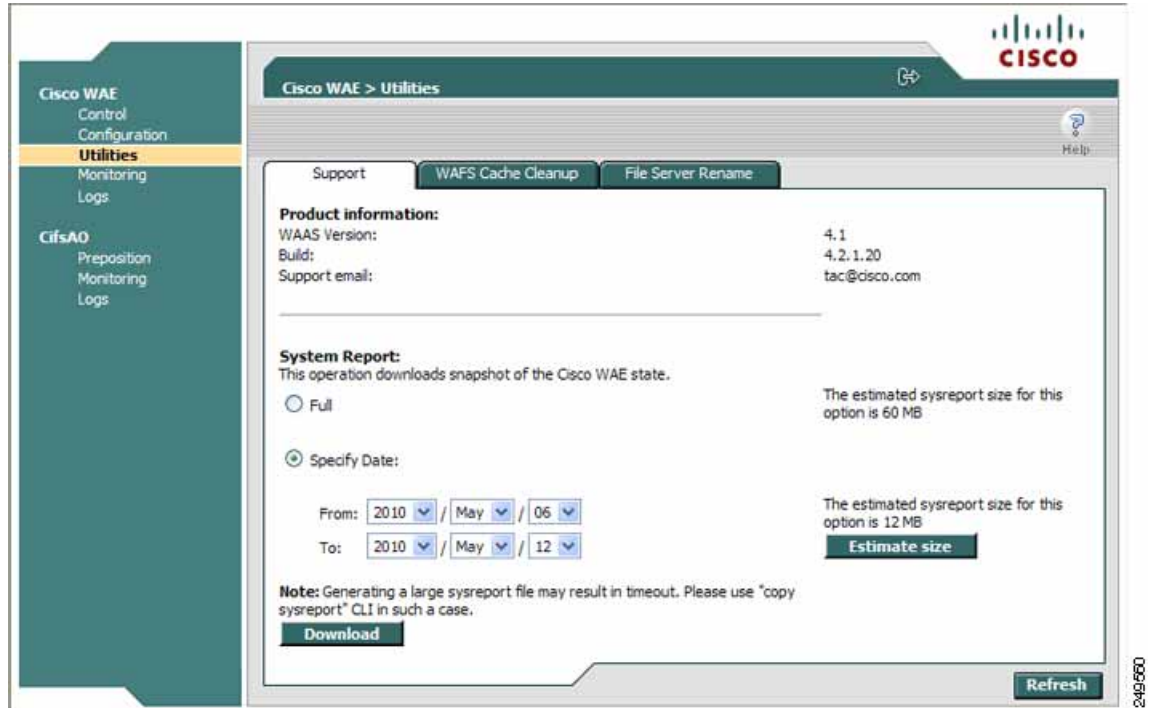
Downloading a full system report can impact the performance of the WAE. For this reason, we recommend downloading the system report during nonpeak hours or limiting the date range of the report.

To download the system report, follow these steps:

Step 1 In the Utilities window, click the **Support** tab.

The Support window appears. (See [Figure 11-8](#).)

Figure 11-8 Utilities—Support Tab



- Step 2 In the System Report area, choose one of the following radio buttons:
 - **Full** to download a full system report.
 - **Specify Date:** to download a report for the time range that you specify (default is the past 7 days).
- Step 3 Click **Estimate size** to view the size of the report.
 The actual size of the report may vary from the estimate. If the estimated size is large, you may want to specify a smaller time frame and download multiple smaller reports to minimize the stress on the WAE.
- Step 4 Click **Download**.
 A message informs you that downloading the report can affect the performance of all services on the device.
- Step 5 Click **OK** to start the collection process.
- Step 6 In the File Download window, click **Save**.
- Step 7 In the Save As window, browse to where you want to save the file. (You can also change the filename.) Click **Save**. The file is saved in tar gzip format.

Running the Cache Cleanup Utility

The WAFS Cache Cleanup tab enables you to remove all files from the CIFS device cache. This tab appears only if you have enabled the transparent CIFS accelerator on this WAAS device.

To run the cache cleanup utility, follow these steps:

-
- Step 1** In the Utilities window, click the **WAFS Cache Cleanup** tab. The WAFS Cache Cleanup window appears.
- Step 2** Click **Run** to erase the contents of the cache.
-

Running the File Server Rename Utility

The File Server Rename tab enables you to change the resource location for all resources of a given file server name on the WAAS device. This function changes the file server name for the files in the CIFS cache. This tab appears only if you have enabled the transparent CIFS accelerator on this WAAS device.

To run the file server rename utility, follow these steps:

-
- Step 1** If the CifsAO component is running, stop it as described in the [“Starting and Stopping Components” section on page 11-5](#).
- Step 2** In the Utilities window, click the **File Server Rename** tab.
- Step 3** In the Current File Server name field, enter the current name.
- Step 4** In the New File Server name field, enter the new name and click **Run** for the new name to take effect.



Note Do not specify the name of another existing cached file server in the New File Server name field. If you do specify an existing name as the new name, the cached contents of this file server are overwritten with the cached contents of the file server you are renaming.

Managing a CIFS Accelerator Device

The CifsAO option in the navigation area allows you to monitor preposition tasks, view CIFS device statistics, and view the log. The CifsAO option appears only if you have enabled the transparent CIFS accelerator on this WAAS device.

The CifsAO option includes the following menu items:

- **Preposition**—Allows you to monitor the progress of preposition policies created in the WAAS Central Manager GUI. In addition, you can optionally terminate preposition tasks. For more information, see the [“Preposition Option” section on page 11-14](#).
- **Monitoring**—Allows you to view CIFS (WAFS) device statistics in tables and graphs as described in the [“Monitoring the Cisco WAE Component” section on page 11-18](#).
- **Logs**—Allows you to view the event log related to the CIFS accelerator. For more information, see the [“Viewing Cisco WAE Logs” section on page 11-22](#).

Preposition Option

The Preposition option allows you to view the details and current status of preposition policies created in the WAAS Central Manager GUI. These policies define which files are proactively placed in the WAAS device cache according to a prearranged schedule. Prepositioning enables system administrators to strategically place large, frequently accessed files at the network edge during off-peak hours, increasing efficiency and providing end users with quick first-time access of those files.

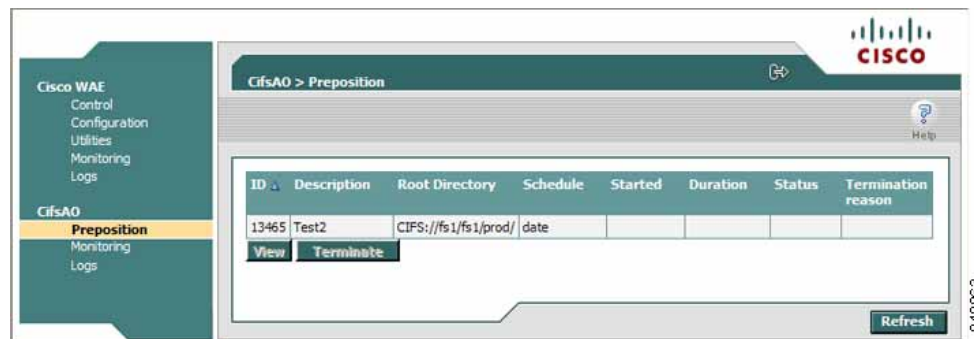
You can view information such as the root directory containing the files being prepositioned, the schedule for each policy, and the status of the most recent task for each policy. You can also view a detailed task history for each policy, and manually terminate any tasks in progress.

To view preposition policies for this device, follow these steps:

Step 1 In the navigation area, click **Preposition**.

The CifsAO > Preposition window appears. (See [Figure 11-9](#).)

Figure 11-9 CifsAO Preposition Window



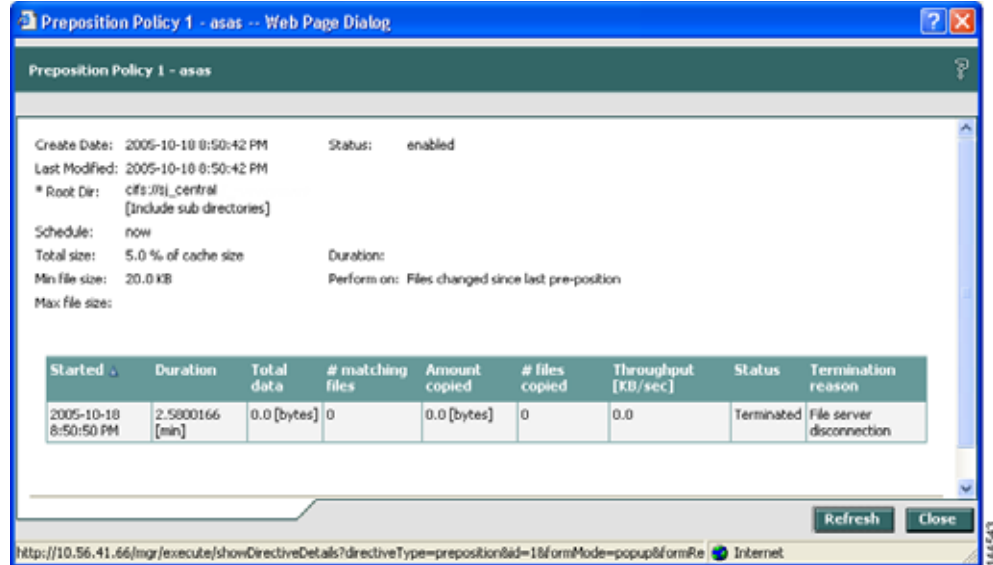
The Preposition window contains a table that displays all the preposition policies assigned to this CIFS Edge device. For each policy, the following information is displayed:

- ID—ID number of the selected policy.
- Description—Descriptive name assigned to the policy.
- Root Directory—Source directory for the content being prepositioned.
- Schedule—Defined schedule for the policy.
- Started—When this policy was last invoked by the system.
- Duration—Elapsed time of the latest task.
- Status—Current status of the policy, updated every time the refresh button is clicked. If the task defined by the policy is currently being run, its status is In Progress. A preposition task in progress can be terminated.
- Termination reason—Reason the policy was terminated.

Step 2 Choose a policy in the table and click **View** to view a detailed task history (iterations of a selected policy).

The Preposition Task Details window appears. (See [Figure 11-10](#).)

Figure 11-10 Preposition Task Details Window



The top half of the Preposition Policy window displays the following details about the selected policy:

- Create Date—When the policy was created.
- Last Modified—When the policy was last modified.
- Total size—Limit placed on the total size of the files being prepositioned, if any.
- Min file size—Minimum size of files in the root directory (and subdirectories if they are part of the preposition policy) that are affected by the policy.
- Max file size—Maximum size of files in the root directory (and subdirectories if they are part of the preposition policy) that are affected by the policy.
- Perform on—Which files to preposition from the selected location—those files that have changed since the last preposition, those files changed during a defined interval, or all files.

The lower half of the Preposition Policy window contains a table that displays the most recent tasks performed by the selected policy (up to the last 10 iterations), including the following information:

- Total data—Total amount of data to be transferred by the policy.
- # matching files—Number of files matching the defined filter of the policy.
- Amount copied—Total amount of data copied by the policy during its most recent run. (This amount may be less than the amount in the Total data field if the policy is currently in progress, or if the policy did not complete its run, for example, due to time constraints placed on its operation.)
- # files copied—Number of files copied by the policy during its most recent run.
- Throughput—Throughput achieved by the policy in kilobits per second (Kbps).
- Termination reason—Reason that the policy was terminated, if relevant. Policies can be terminated due to time or space constraints placed on the policy or to a decision by the administrator to manually terminate its operation.

Step 3 Click **Close** to return to the Policies window.



Note To update the information displayed in the Policies window, click **Refresh**.

Terminating a Preposition Task

You can terminate a preposition task that is in progress at any time. This action does not delete the preposition policy that generated the task; the system will still perform the task described by the policy when the next scheduled time arrives.



Note Do not terminate a preposition task if the device is not registered to a WAAS Central Manager.

To terminate a preposition task, follow these steps:

-
- Step 1** In the Policies window, select a preposition policy with a status of In Progress and click **Terminate**. A confirmation message is displayed.
- Step 2** Click **Yes** to terminate the task. If you click View to display the Preposition Policy window, the table that displays the task history contains a message indicating that the latest task was terminated by the administrator.
-

Monitoring the WAE

The Monitoring option available for the Cisco WAE and transparent CIFS accelerator components enables you to view detailed tables that describe the current state of the WAE. It also provides graphs that display historical data about the selected components. These graphs enable you to track WAE statistics for a day, week, month, or an entire year.



Note WAE statistics and graphs are generated by the freeware MRTG utility. For details, go to <http://people.ee.ethz.ch/~oetiker/webtools/mrtg/>.

The monitoring options differ for each WAE component as described in [Table 11-1](#).

Table 11-1 *Monitoring Options by Component*

Component	Monitored Statistics
Cisco WAE	CPU and disk drive utilization
Transparent CIFS accelerator	CIFS traffic and cache

This section contains the following topics:

- [Monitoring Graphs, page 11-17](#)
- [Monitoring the Cisco WAE Component, page 11-18](#)
- [Monitoring a Transparent CIFS Accelerator, page 11-19](#)

Monitoring Graphs

The WAAS software generates four historical graphs for each monitored statistic. Each graph presents a different range of time for the selected data as follows:

- Daily—Displays data for the past 24 hours. Each data point represents a 5-minute average.
- Weekly—Displays data for the past seven days. Each data point represents a 30-minute average.
- Monthly—Displays data for the past five weeks. Each data point represents a 2-hour average.
- Yearly—Displays data for the past 12 months. Each data point represents a one-day average.

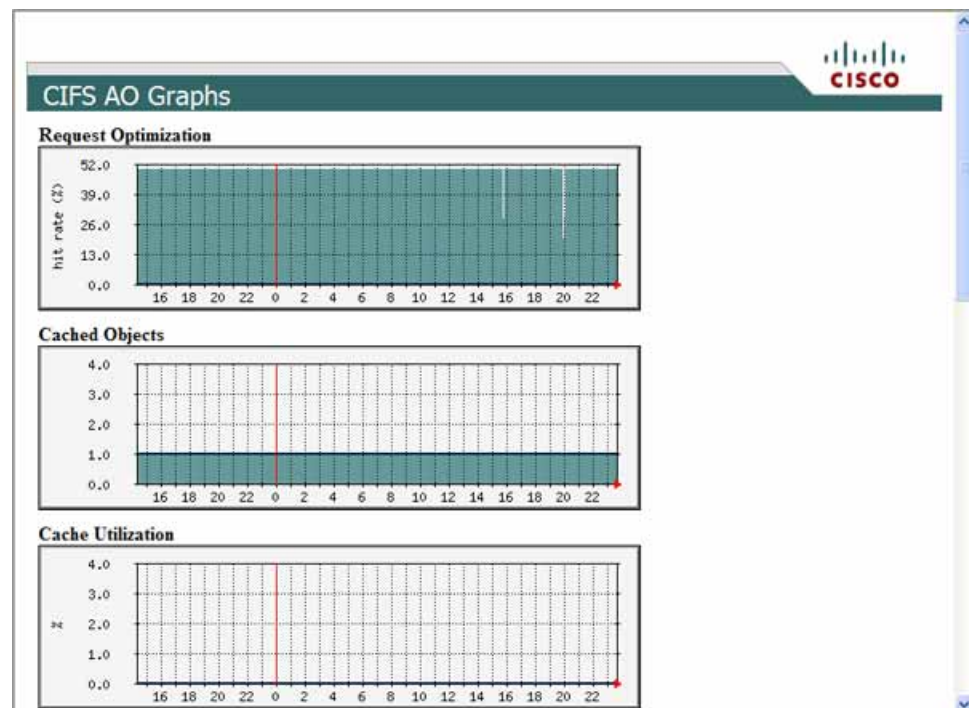
The maximum value over the given time period and the current value for the statistic being monitored is also displayed below each of these graphs.

Viewing Options

You can view an index window of the daily graphs for all the monitored statistics available for a component, or you can view the four historical graphs for a particular statistic (for example, cache utilization) at once.

Figure 11-11 shows a sample screen when a user chooses to view the index graphs.

Figure 11-11 Sample Index Graph Window

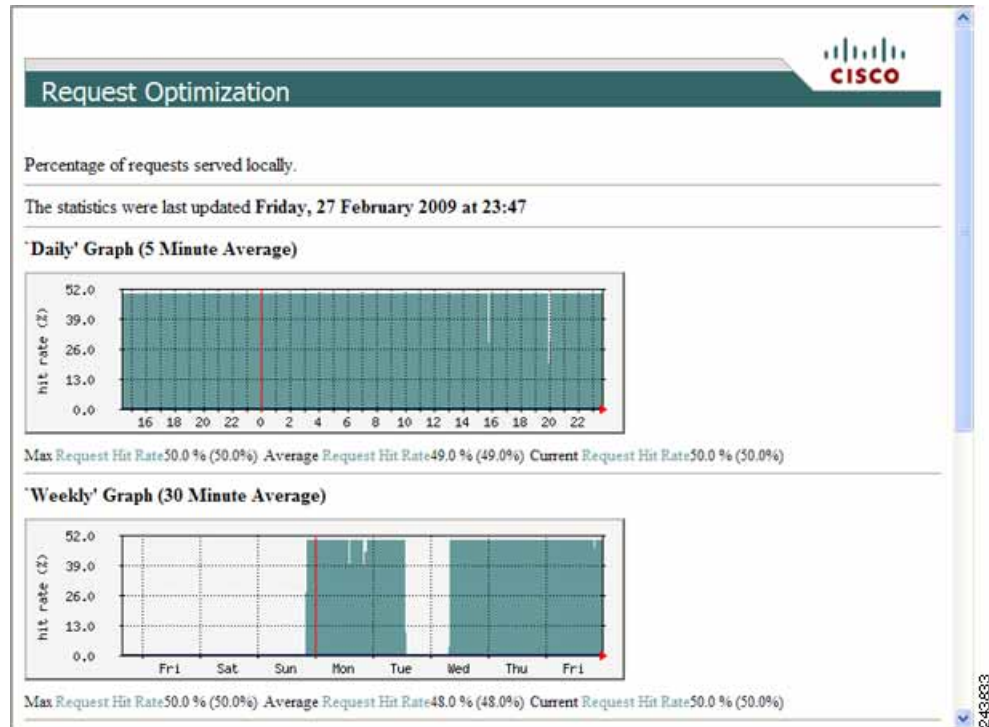


Tip

Each graph in an index window acts as a link. Clicking on the graph displays all four historical graphs for the selected statistic. For example, clicking the Request Optimization graph in the index graphs window displays the daily, weekly, monthly and yearly Request Optimization historical graphs. Clicking the Back button in the browser returns you to the index graphs.

Figure 11-12 shows a sample screen when a user chooses to view the historical graphs for a particular statistic.

Figure 11-12 Sample Historical Graph Window



Note

Graphs can be printed using the Print command in your browser.

Monitoring the Cisco WAE Component

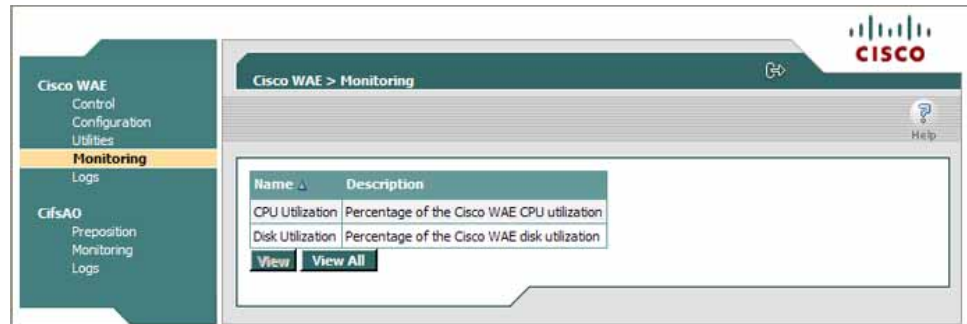
The Monitoring option for the Cisco WAE component displays a table with the statistics monitored on a WAE. From this table, you can display historical graphs that indicate the central processing unit (CPU) utilization and disk drive utilization on the WAE.

CPU utilization is a measure of the amount of bandwidth used by the CPU versus the total bandwidth available. The amount is expressed as a percentage. Disk drive utilization is a measure of the amount of disk space that is being used on all disk drives versus the total disk space available. This amount is also expressed as a percentage.

To monitor the WAE component, follow these steps:

- Step 1 In the navigation area, click **Monitoring** under the **Cisco WAE** menu item.
The Cisco WAE Monitoring window appears. (See Figure 11-13.)

Figure 11-13 Cisco WAE Monitoring Window



Step 2 Do one of the following:

- Choose the statistic that you want to view (by clicking in its row), and then click **View** to display a popup window that contains the historical graphs for that statistic.
- Click **View All** to display the index window with the daily graphs for both statistics on the WAE component.

Monitoring a Transparent CIFS Accelerator

The Monitoring option displays the following tabs:

- CIFS—Displays data about the status of the CIFS protocol and the selected device.
- Cache—Displays data about the device cache.
- Graphs—Displays a list of graphs that are available for the device.



Note The SNMP parameters displayed in the CIFS and Cache tabs are contained in a special MIB file.

To monitor a transparent CIFS accelerator follow these steps:

Step 1 In the navigation area, click **Monitoring** under the **CifsAO** menu.

The Monitoring window appears and the CIFS tab is displayed.

The CIFS tab displays the following CIFS-related information:

- Total Time Saved—Total time saved by CIFS acceleration.
- Total KBytes read—Total number of kilobytes read by clients (both through the cache and remotely) from this device using the CIFS protocol.
- Total KBytes written—Total number of kilobytes written by clients to this device using the CIFS protocol.
- Remote requests count—Total number of client CIFS requests that were forwarded remotely over the WAN. The name of this statistic is a link that you can use to display its historical graphs (without first going to the Graphs tab). Local requests are also shown on these graphs.

- **Local requests count**—Total number of client CIFS requests handled locally by this device. The name of this statistic is a link that you can use to display its historical graphs (without first going to the Graphs tab). Remote requests are also shown on these graphs.
- **Total remote time**—Total amount of time, in milliseconds, spent by this device to process all client CIFS requests that were sent remotely over the WAN.
- **Total local time**—Total amount of time, in milliseconds, spent by this device to process all client CIFS requests that were handled locally.
- **Connected sessions count**—Total number of CIFS sessions connected on this device. The name of this statistic is a link that you can use to display its daily, weekly, monthly, and yearly graphs (without first going to the Graphs tab).
- **Open files count**—Total number of open CIFS files on this device. The name of this statistic is a link that you can use to display its daily, weekly, monthly, and yearly graphs (without first going to the Graphs tab).
- **CIFS Command Statistics**—Table of statistics on CIFS commands. For each command type, the table lists the total number of requests, the number of remote requests, the number of asynchronous requests, the average time in milliseconds spent by this device to process each request that was handled locally, and the average time in milliseconds spent by this device to process each request that was sent remotely over the WAN.

To reset the CIFS statistics, click the **Reset CIFS Statistics** button below the table.

Step 2 Click the **Cache** tab.

The Cache tab displays the following information:

- **Maximum cache disk size**—Maximum amount of disk space (in gigabytes) allocated to the CIFS device cache.
- **Current cache disk usage**—Current amount of disk space (in kilobytes) used by the CIFS device cache. The name of this statistic is a link that you can use to display its historical graphs (without first going to the Graphs tab).
- **Maximum cache resources**—Maximum number of resources (files and directories) allowed in the CIFS device cache.
- **Current cache resources**—Current number of resources contained in the CIFS device cache. The name of this statistic is a link that you can use to display its historical graphs (without first going to the Graphs tab).
- **Evicted resources count**—Number of resources that have been evicted from the cache since the device was started.
- **Last eviction time**—Time when a cache eviction last occurred.
- **Cache size high watermark**—Percentage of disk usage that causes the CIFS device to begin evicting resources.
- **Cache size low watermark**—Percentage of disk usage that causes the CIFS device to stop evicting resources.
- **Cache resources high watermark**—Percentage of total cache resources that causes the CIFS device to begin evicting resources.
- **Cache resources low watermark**—Percentage of total cache resources that causes the CIFS device to stop evicting resources.
- **Last evicted resource age**—Amount of time that the last-evicted resource spent in the CIFS device cache.
- **Last evicted resource access time**—Last time that the last-evicted resource was accessed.

Viewing WAE Logs

You can view event information logged by the Cisco WAE and the CifsAO components. The event information available varies based on the component that you are viewing.

This section contains the following topics:

- [WAE Logs, page 11-21](#)
- [Viewing Cisco WAE Logs, page 11-22](#)

WAE Logs

You can configure what you want displayed for each log file and save the log to a file locally as described in the following sections:

- [Setting Display Criteria, page 11-21](#)
- [Viewing Log Entries, page 11-22](#)
- [Saving Log File Information, page 11-22](#)

Setting Display Criteria

All WAE logs allow you to set the criteria for the data that you want to display as shown in [Figure 11-14](#).

Figure 11-14 WAE Log Data Criteria

The screenshot shows a configuration form for WAE Log Data Criteria. It includes two rows of date and time pickers for 'From' and 'To'. The 'From' row is set to 2005, May, 29, 22:24. The 'To' row is set to 2005, May, 31, 22:24. There is a 'Log Level' dropdown set to 'All' and a 'Lines' dropdown set to '100'. A 'Filter' text box is empty. An 'Update' button is on the right. A vertical ID '137327' is on the far right.

To set the criteria for viewing log information, follow these steps:

-
- Step 1** Choose the beginning date (year, month, and day) and time (hour and minutes using a 24-hour clock format) from the **From** drop-down list.
 - Step 2** Choose the ending date (year, month, and day) and time (hour and minutes using a 24-hour clock format) from the **To** drop-down list.
 - Step 3** (Optional) Choose the minimum severity level of events to display from the **Log Level** drop-down list. By choosing the minimum severity level, all events with a severity level greater than that specified are displayed. The default is **All**.
 - Step 4** (Optional) Choose the number of events (one per line) to appear on a single page of the log from the **Lines** drop-down list. The default is 100 events.
 - Step 5** (Optional) Enter a filter string by which the log can be further filtered.
 - Step 6** Click **Update**.
-

Viewing Log Entries

Each log entry contains the date and time that the event occurred, the severity level of the event, and a description containing the log message. The log message format varies based on the type of event.

The severity level of an event indicates the seriousness of the event. Six choices are defined and provide the follow information:

- All—Displays events of all severity levels.
- Debug—Indicates events have occurred that match those specified for debugging purposes.
- Info—Indicates an event occurred regarding the proper operation of the component. No user action is required with this type of event.
- Warning—Indicates a minor problem occurred on a component. The component should be able to overcome the incident without user intervention.
- Error—Indicates a problem occurred that affected the proper operation of the component. User intervention is likely required.
- Fatal—Indicates a severe problem occurred on a component that may have caused it to stop operating. User intervention is required.

Saving Log File Information

You can save a log as a text file and download it to your local drive.

To save a log as a text file, follow these steps:

-
- Step 1** Set up your log with the date range and time frame that you want to save, using the **From** and **To** drop-down lists. (See the [“Setting Display Criteria” section on page 11-21.](#))
 - Step 2** Set up the severity level of the events you want to view.
For more information, see the [“Setting Display Criteria” section on page 11-21.](#)
 - Step 3** Click **Update**.
 - Step 4** Click **Download**.
The File Download window appears.
 - Step 5** Click **Save** in the File Download window.
 - Step 6** Specify the directory where you want to save the log file.
 - Step 7** Click **OK**.
-

Viewing Cisco WAE Logs

Each WAE component generates its own log files.

The Cisco WAE component generates these logs:

- Manager log—Displays events related to the WAE Device Manager and WAAS Central Manager GUI components, such as configuration changes and WAE registrations and notifications that other WAE components were started or stopped.

- WAFS Watchdog log—Displays events related to the watchdog utility, which monitors the other application files inside the WAE and restarts them, if necessary.

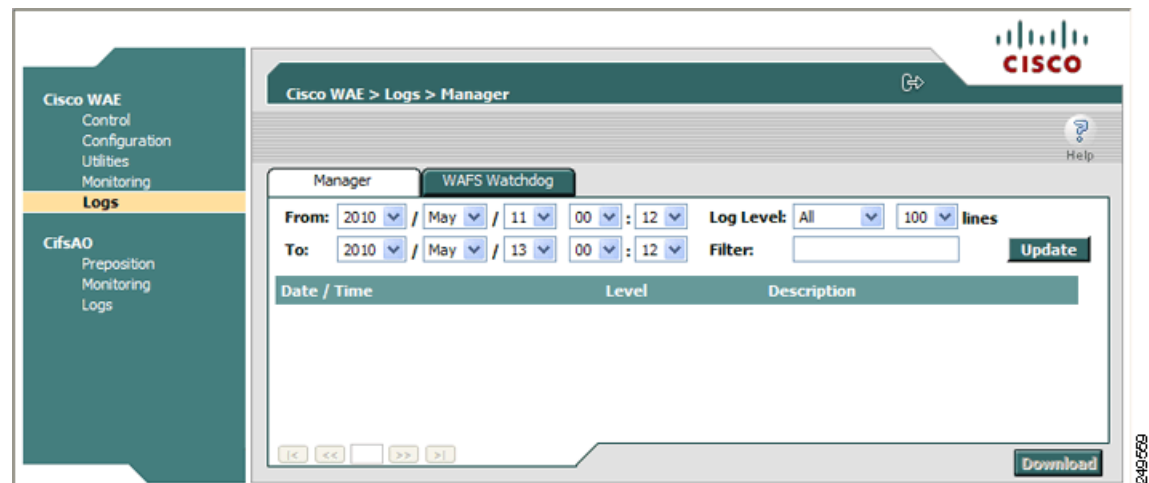
The CIFS accelerator generates one log that displays all events related to CIFS accelerator operation.

To view Cisco WAE and CIFS accelerator logs, follow these steps:

Step 1 In the navigation area, click the **Logs** option under the Cisco WAE or CifsAO component.

[Figure 11-15](#) shows the Logs window for the Cisco WAE component.

Figure 11-15 Cisco WAE Component Logs Window



- Step 2** If you selected the Cisco WAE, click the **Manager** or **WAFS Watchdog** tab to choose the log that you want to view.
- Step 3** Set up your display criteria using the **From**, **To**, **Level**, and **Lines** drop-down lists. (See the [“Setting Display Criteria”](#) section on page 11-21.)
- Step 4** (Optional) Set a filter on the log so that only events containing specific words or phrases are displayed by entering the relevant free text in the **Filter** text box.
- Step 5** Click **Update**. The Logs window is refreshed according to your selected criteria.



Note Navigation arrows () appear at the bottom of each log window when the number of events is greater than the number of lines selected per window.

