



Using Reports

The Reports tab displays information about your devices. You can save and email reports. You can also set specific times for emailed reports to be run and sent automatically.

The reports available are dependent on the groups of devices and individual devices you choose from the selector in the left pane.

Following are the subtabs under Reports:



Note

Some of the subtabs may not be visible to some users.

- **Device Center**—See [Using the Device Center, page 6-2](#)
- **Radio Manager**—See [Displaying Radio Manager Reports, page 6-8](#)
- **Wireless Clients**—See [Displaying Wireless Client Reports, page 6-13](#)
- **Current**—See [Displaying Current Reports, page 6-19](#)
- **Trends**—See [Displaying Trends, page 6-71](#)
- **Scheduled Email Jobs**—See [Scheduling Email Jobs, page 6-90](#)

The WLSE also has a feature that allows the system administrator, with the username admin, to manually enter a URL in the WLSE to export report data, rather than using the UI export function. For information, see [Exporting URL-Based Report Data, page 6-94](#).

Using the Device Center

The device center enables you to quickly access various types of reports for a particular device.

The search results, as well as the folders in the device selector, display icons indicating the alarm status of the devices. For an explanation of the icons, see [Understanding the Icons, page 1-10](#).

For information about the folders for device groups in the device selector, see [System-Defined Groups, page 3-98](#).

**Note**

Your login determines whether you can use this option.

Procedure

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- Step 1** Select **Reports > Device Center**. The Device Center appears above the device selector in the left pane.
- Step 2** Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).
- Step 3** Click on the buttons for different report types:
- For access points and bridges:
 - Summary report—See [Displaying an AP Summary Report, page 6-40](#)
 - Detailed report—See [Displaying a Detailed Report, page 6-43](#)
 - WDS Summary report—See [Viewing the WDS Summary Report, page 6-4](#).
 - Fault Status—See [Viewing the Fault Status Report, page 6-6](#)
 - Device History—See [Viewing Device History, page 6-6](#)
 - Config History—See [Viewing Config History, page 6-7](#)
 - Firmware History—See [Viewing Firmware History, page 6-8](#)
 - AP Web Page—Opens up a browser window to the AP Summary Status.

**Tip**

The HTTP port on IOS access points must be set to 80 for this link to work. For information on setting up the HTTP port, see [Enter HTTP Port Settings—IOS Access Points, page 3-35](#).

- For switches:
 - Summary report—See [Displaying a Switch Summary Report, page 6-65](#)
 - Fault Status—See [Viewing the Fault Status Report, page 6-6](#)
 - Device History—See [Viewing Device History, page 6-6](#)
- For routers:
 - Summary Report—See [Displaying a Router Summary Report, page 6-67](#)
 - Fault Status—See [Viewing the Fault Status Report, page 6-6](#)
 - Device History—See [Viewing Device History, page 6-6](#)
- For servers:
 - Summary Report—See [Displaying a Server Summary Report, page 6-69](#).

Viewing the WDS Summary Report

The following table is displayed for the device's wireless domain services (WDS) summary:

Table 6-1 WDS Summary

Column	Description
Name	The access point name.
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8
MAC Address	The MAC address of the access point.
IP Address	The IP address of the access point. Click to open a browser window to the AP Summary Status. Tip The HTTP port on IOS access points must be set to 80 for this link to work. For information on setting up the HTTP port, see Enter HTTP Port Settings—IOS Access Points, page 3-35 .
Status	The operational status of the device: <ul style="list-style-type: none"> • Admin standalone—Configured as the WDS but with no other devices participating. • Active—The WDS is actively performing as the WDS on the subnet. • Backup—The WDS is acting as a backup to the main WDS. • Candidate—The device is configured as a WDS candidate.

Table 6-1 WDS Summary (continued)

Column	Description
WDS Priority	The access point's assigned WDS priority number.
Subnet Address	The access point's subnet address.
Subnet Mask	The access point's subnet mask.
Active WDS IP Address	The IP address of the active WDS.
Last WDS Election Time	The last time this access point was elected as a WDS.
Number of Infrastructure Nodes Registered with WDS	The number of access points registered with the WDS.
WLSE to WDS Authentication Status	The status of the authentication of the WLSE with the WDS.
WLSE IP Address Configured at WDS	The IP address of the WLSE.

For information on how to sort table data, see [Sorting Table Data](#), page 1-11.

Viewing the Fault Status Report

The following table is displayed for the device's fault status:

Table 6-2 Device Fault Status

Column	Description
Type	The fault type.
Description	A description of the fault. Click to see fault details. See Viewing Fault Details, page 2-10 .
Severity	The fault severity level.
State	The current state of the fault.
Timestamp	The time the fault was reported. Click to see fault details. See Viewing Fault Details, page 2-10 . For more information, see Time Display, page 1-8 .

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

Viewing Device History

The following table is displayed for the device's history:

Table 6-3 Device History

Column	Description
Timestamp	The time the device's state last changed. For more information, see Time Display, page 1-8 .
Device Name	The name of the device.

Table 6-3 Device History (continued)

Column	Description
IP Address	The IP address of the device.
State	The current state of the device.

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

Viewing Config History

The following table is displayed for the device's configuration history:

Table 6-4 Device Configuration History

Column	Description
Start Time	The start time for the device's configuration.
End Time	The end time for the device's configuration.
Job Status	The state of the configuration job.
Template Name	The name of the configuration template used.
Job Name	The name of the configuration job.
Job Type	The type of configuration job.

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

Viewing Firmware History

The following table is displayed for the device's firmware history:

Table 6-5 *Device Firmware History*

Column	Description
Start Time	The start time for the device's firmware upgrade job.
End Time	The end time for the device's firmware upgrade job.
Job Status	The state of the firmware job.
Image Name	The name of the firmware image.
Image Version	The version of the firmware.
Image Device Type	The device type.
Job Protocol	The protocol used for the firmware job.
Job Name	The name of the firmware job.

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

Displaying Radio Manager Reports

This window allows you to view radio management information. You can view, export, and email the reports.

Using this option, you can view the following types of radio management reports:

- Configured Radio Parameters Report (11b)—See [Displaying a Configured Radio Parameters Report \(11b\), page 6-9](#).
- Path Loss Between Managed APs Report (11b)—See [Displaying a Path Loss Between Managed APs Report \(11b\), page 6-10](#).
- Channel Loading Report (11b)—See [Displaying a Channel Loading Report \(11b\), page 6-11](#).

The folders and devices in the device selector display icons indicating the alarm status of the devices. For an explanation of the icons, see [Understanding the Icons, page 1-10](#).

For information about the folders for device groups in the device selector, see [System-Defined Groups, page 3-98](#).

**Note**

Your login determines whether you can use this option.

Displaying a Configured Radio Parameters Report (11b)

Procedure

- Step 1** Select **Reports > Radio Manager**. The window refreshes with a device selector in the left pane.
- Step 2** From the device selector in the left pane, click to expand the folder for the group reports you want to view. The right pane refreshes.
- Step 3** From the Report Name list, select **Configured Radio Parameters Report (11b)**.
- Step 4** Click **View**. The following report displays.

Table 6-6 *Configured Radio Parameters Report (11b)*

Column	Description
AP Name	The name of the access point.
Interface Name	The name of the radio interface.
MAC Address	The MAC address of the access point.
PHY	The physical interface type (11b).
Channel	The radio channel used.
Transmit Power	The power level of the radio transmission in milliwatts.
Data Rate	The data rate in Mbps.
Beacon	The amount of time between beacons in kilomicroseconds.

Table 6-6 Configured Radio Parameters Report (11b) (continued)

Column	Description
Admin Status	The administrative status of the access point.
Operational Status	The operational status of the access point.
As Of	The time the WLSE polled information from the device. For more information, see Time Display , page 1-8.

For information on how to sort table data, see [Sorting Table Data](#), page 1-11.

Step 5 To export the report, click **Export**. See [Exporting a Report](#), page 6-88.

Step 6 To email the report, click **Email Report**. See [Emailing a Report](#), page 6-88.

Displaying a Path Loss Between Managed APs Report (11b)

Procedure

- Step 1** Select **Reports > Radio Manager**. The window refreshes with a device selector in the left pane.
- Step 2** From the device selector in the left pane, click to expand the folder for the group reports you want to view. The right pane refreshes.
- Step 3** From the Report Name list, select **Path Loss Between Managed APs Report (11b)**.
- Step 4** Click **View**. The following report displays.

Table 6-7 Path Loss Between Managed APs Report (11b)

Column	Description
AP Name	The name of the access point.
Interface Name	The name of the radio interface.

Table 6-7 Path Loss Between Managed APs Report (11b) (continued)

Column	Description
PHY	The physical interface type (11b).
Channel	The radio channel used.
Neighbor AP Name	The name of the neighbor access point.
Neighbor Interface Name	The interface name of the neighbor access point.
Path Loss	The amount in decibels of path loss between the two access points.
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

- Step 5** To export the report, click **Export**. See [Exporting a Report, page 6-88](#).
- Step 6** To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying a Channel Loading Report (11b)

Procedure

- Step 1** Select **Reports > Radio Manager**. The window refreshes with a device selector in the left pane.
- Step 2** From the device selector in the left pane, click to expand the folder for the group reports you want to view. The right pane refreshes.
- Step 3** From the Report Name list, select **Channel Loading Report (11b)**.

Step 4 Click **View**. The following report displays.

Table 6-8 Channel Loading Report (11b)

Column	Description
AP Name	The name of the access point.
PHY	The physical interface type (11b).
Channel	The radio channel used.
Average Near (%)	The average (of 15 minutes) channel loading detected by the access point from the nearest clients.
Average Far (%)	The average (of 15 minutes) channel loading detected by the access point from the farthest clients.
Peak Near (%)	The average (of 15 minutes) peak value detected by the access point from the nearest clients.
Peak Far (%)	The average (of 15 minutes) peak value detected by the access point from the farthest clients.
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

Step 5 To export the report, click **Export**. See [Exporting a Report, page 6-88](#).

Step 6 To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying Wireless Client Reports

Wireless client reports provide information about the type of client that is associating with an access point, information about how much bandwidth the client is using, and a history of which access points the client has been associated with.

Wireless client reports are not real-time reports. The data is only as fresh as the last client polling cycle, which means the client polling interval can greatly determine the accuracy of the client reports. Therefore:

- In environments where clients are highly mobile, such as health care and retail deployments, set the client inventory polling interval to the minimum if the network can tolerate the polling traffic.
- In enterprise deployments, most WLAN users have laptops and tend to be fairly stationary for longer periods of time, so the client polling cycles should be more infrequent.

Wireless client polling is a fairly heavy-weight process. If you have many access points to poll for client associations, the interval will need to be set more infrequently, and as a result, the client data will not be as accurate. To set the client polling interval, see [Changing the Polling Intervals for Automatic Inventories, page 3-82](#).

Wireless Clients reports are updated every 51 minutes by default. To change the default setting, select **Devices > Discover > Inventory > Polling**.



Note

Your login determines whether you can use this option.

You can view the following the report types:

- Client Detail Report—See [Displaying a Client Detail Report, page 6-14](#)
- Client Statistics Report—See [Displaying a Client Statistics Report, page 6-16](#)
- Client Historical Association Report—See [Displaying a Client Historical Association Report, page 6-18](#)

Displaying a Client Detail Report

Wireless client polling frequency is set to 51 minutes by default. To increase the accuracy of this report, increase the polling frequency. To change the default setting, select **Devices > Discover > Inventory > Polling**.



Caution

Increasing the polling frequency could have an effect on performance.

Procedure

- Step 1** Select **Reports > Wireless Clients**. The Wireless Clients selector appears in the left pane.
- Step 2** From the list, select the method you want to use to search for clients.
- Step 3** Enter the MAC address, IP address, or name. You can use an asterisk (*) as a wild card to denote numbers and letters.



Note

The MAC address must be entered in hexadecimal, for example 0070eb37c90.



Note

Searching for clients based on names works only for clients associated to IOS devices.

- Step 4** Click **Search**. A list appears in the left pane.
- Step 5** Click the MAC address, IP address or name. The right pane refreshes and displays the Client Detail Report, which is the default report.

The reports for wireless clients associated to IOS and to non-IOS devices are different:

- IOS Client Detail Report—See [Table 6-9 on page 6-15](#).
- Non-IOS Client Detail Report—See [Table 6-10 on page 6-15](#).

Table 6-9 IOS Client Detail Report

Column	Description
Name	The client name.
IP Address	The client IP address.
Client Type	The type of client.
Connected to	The name or IP address of the AP. Click on this link to view the AP Detail Report and the Fault Summary. For more information, see Displaying a Detailed Report, page 6-43
Role	Indicates the role of the device.
Radio Type	The type of client radio type.
Time last seen	The time the client was last seen by the system.
MAC Address	The MAC address of the client.

Table 6-10 Non-IOS Client Detail Report

Column	Description
Name	The name of the client.
IP Address	The IP address of the client.
Client Type	The type of client.
Connected to	The name or IP address of the AP. Click on this link to view the AP Detail Report and the Fault Summary. For more information, see Displaying a Detailed Report, page 6-43
State	The current state of the client.
Time last seen	The time the client was last seen by the system.

Table 6-10 Non-IOS Client Detail Report (continued)

Column	Description
Software Version	The version of software for this device.
MAC Address	The MAC address of the wireless client.

Step 6 To export the report, click **Export**. See [Exporting a Report, page 6-88](#).

Step 7 To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying a Client Statistics Report

Wireless client polling frequency is set to 51 minutes by default. If 0 (zero) values are displayed in the report or if you want to increase the accuracy of the report, increase the polling frequency. To change the default setting, select **Devices > Discover > Inventory > Polling**.



Caution

Increasing the polling frequency could have an effect on performance.

Procedure

Step 1 Select **Reports > Wireless Clients**. The Wireless Clients selector appears in the left pane.

Step 2 From the list, select the method you want to use to search for clients.

Step 3 Enter the MAC address, IP address, or name. You can use an asterisk (*) as a wildcard to denote numbers and letters.



Note Searching for clients based on names works only for clients associated to IOS devices.

Step 4 Click **Search**. A list appears in the left pane.

Step 5 Select the MAC address, IP address, or name. The right pane refreshes.

- Step 6** From the Report Name list, select **Client Statistics Report**.
- Step 7** Click **View**. The reports for wireless clients associated to IOS and to non-IOS devices are different:
- IOS Client Statistics Report—See [Table 6-11 on page 6-17](#).
 - Non-IOS Client Statistics Report—See [Table 6-12 on page 6-17](#).

Table 6-11 IOS Client Statistics Report

Column	Description
Name	The client name.
IP Address	The client IP address.
MAC Address	The MAC address of the client.
Time last seen	The time the wireless client was last seen by the system.
Packets Transmitted	The number of packets transmitted.
Octets Transmitted	The number of octets transmitted.
Packets Received	The number of packets received.
Octets Received	The number of octets received.
Latest Received Signal Strength (dBm)	A tally of the received signal power.
Latest Signal Quality (%)	The current index of radio signal quality.
Received WEP Errors	The number of received encryption errors.
Packet Errors	The number of packet errors.

Table 6-12 Non-IOS Client Statistics Report

Column	Description
Name	The name of the client.
IP Address	The IP address of the client.
Time last seen	The time the wireless client was last seen by the system.

- Step 8** To export the report, click **Export**. See [Exporting a Report, page 6-88](#).
- Step 9** To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).
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Displaying a Client Historical Association Report

Wireless client polling frequency is set to 51 minutes by default. To increase the accuracy of this report, increase the polling frequency. To change the default setting, select **Devices > Discover > Inventory > Polling**.



Caution

Increasing the polling frequency could have an effect on performance.

Procedure

- Step 1** Select **Reports > Wireless Clients**. The Wireless Clients selector appears in the left pane.
- Step 2** From the list, select the method you want to use to search for clients.
- Step 3** Enter the MAC address, IP address, or name. You can use an asterisk (*) as a wildcard to denote numbers and letters.



Note

Searching for clients based on names works only for clients associated to IOS devices.

- Step 4** Click **Search**. A list appears in the left pane.
- Step 5** Select the MAC address, IP address, or name. The right pane refreshes.
- Step 6** From the Report Name list, select **Client Historical Association Report**.

- Step 7** Click **View**. The Client Historical Association Report displays in the right pane with the following information:

Table 6-13 Client Historical Association Report

Column	Description
AP IP Address	The IP address of the access point.
AP Name	The name of the access point.
Associated Time	The time when the WLSE has polled the access point to retrieve the client association time. Tip To ensure that you are viewing the most up-to-date information, verify when the last inventory cycle occurred. Client inventory status can be seen by selecting Administration > Discover > Tasks History > Inventory .

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

- Step 8** To export the report, click **Export**. See [Exporting a Report, page 6-88](#).
- Step 9** To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying Current Reports

This window allows you to view current information about the monitored devices in your network. You can view, export, and email the reports.

The frequency with which configuration data is collected from the devices is 12 hours by default.

To change the default setting, select **Devices > Discover > Inventory > Polling**.

Using this option, you can view the following types of current reports:

- [Group Reports \(Non-IOS Devices\), page 6-20](#)
- [Group Reports \(IOS Devices\), page 6-20](#)
- [Access Point Reports \(Non-IOS Devices\), page 6-21](#)

- [Access Point Reports \(IOS Devices\)](#), page 6-21
- [Switch Reports](#), page 6-22
- [Router Reports](#), page 6-22
- [Server Reports](#), page 6-22

The folders and devices in the device selector display icons indicating the alarm status of the devices. For an explanation of the icons, see [Understanding the Icons](#), page 1-10.

For information about the folders for device groups in the device selector, see [System-Defined Groups](#), page 3-98.

**Note**

Your login determines whether you can use this option.

Group Reports (Non-IOS Devices)

- Group Client Association—See [Displaying a Group Client Association Report](#), page 6-22
- Group Security Report—See [Displaying a Group Security Report](#), page 6-26
- Group SSID Report—See [Displaying a Group SSID Report](#), page 6-29
- Group VLAN Report—See [Displaying a Group VLAN Report](#), page 6-32
- Per VLAN Client Report—See [Displaying a Per VLAN Client Report](#), page 6-35
- Group Policy Report—See [Displaying a Group Policy Report](#), page 6-38

Group Reports (IOS Devices)

- Group Client Association—See [Displaying a Group Client Association Report](#), page 6-22
- Group Security Report—See [Displaying a Group Security Report](#), page 6-26
- Group SSID Report—See [Displaying a Group SSID Report](#), page 6-29
- Group VLAN Report—See [Displaying a Group VLAN Report](#), page 6-32
- Per VLAN Client Report—See [Displaying a Per VLAN Client Report](#), page 6-35

Access Point Reports (Non-IOS Devices)

- Summary Report—See [Displaying an AP Summary Report, page 6-40](#)
- Detailed Report—See [Displaying a Detailed Report, page 6-43](#)
- AP Associations—See [Displaying an AP Associations Report, page 6-48](#)
- EAP Authentication Report—See [Displaying an EAP Authentication Report, page 6-50](#)
- AP Ethertype Protocol Filters—See [Displaying an AP Ethertype Protocol Filters Report, page 6-51](#)
- AP IP Protocol Filters—See [Displaying an AP IP Protocol Filters Report, page 6-52](#)
- AP IP Port Filters—See [Displaying an AP IP Port Filters Report, page 6-53](#)
- AP Policy Report—See [Displaying an AP Policy Report, page 6-55](#)
- AP QoS Report—[Displaying an AP QoS Report, page 6-56](#)
- AP SSID Report—[Displaying an AP SSID Report, page 6-58](#)
- AP VLAN Report—[Displaying an AP VLAN Report, page 6-60](#)
- Per VLAN Client Report—[Displaying a Per VLAN Client Report, page 6-62](#)
- AP Hot Standby Report—[Displaying an AP Hot Standby Report, page 6-64](#)

Access Point Reports (IOS Devices)

- Summary Report—See [Displaying an AP Summary Report, page 6-40](#)
- Detailed Report—See [Displaying a Detailed Report, page 6-43](#)
- AP Associations—See [Displaying an AP Associations Report, page 6-48](#)
- EAP Authentication Report—See [Displaying an EAP Authentication Report, page 6-50](#)
- AP QoS Report—[Displaying an AP QoS Report, page 6-56](#)
- AP SSID Report—[Displaying an AP SSID Report, page 6-58](#)
- AP VLAN Report—[Displaying an AP VLAN Report, page 6-60](#)
- Per VLAN Client Report—[Displaying a Per VLAN Client Report, page 6-62](#)
- AP Hot Standby Report—[Displaying an AP Hot Standby Report, page 6-64](#)

Switch Reports

- Switch Summary Report—See [Displaying a Switch Summary Report, page 6-65](#)
- AP and Bridge Connected to Switch Report—See [Displaying an AP and Bridge Connected to Switch Report, page 6-66](#)

Router Reports

- Router Summary Report—See [Displaying a Router Summary Report, page 6-67](#)
- AP and Bridge Connected to Router Report—See [Displaying an AP and Bridge Connected to Router Report, page 6-68](#)

Server Reports

- Server Summary Report—See [Displaying a Server Summary Report, page 6-69](#)
- AP Usage Report—See [Displaying an AP Usage Report, page 6-70](#)

Displaying a Group Client Association Report

Procedure

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- Step 1** Select **Reports > Current**. The window refreshes with a device selector in the left pane.
- Step 2** From the device selector in the left pane, click to expand the folder for the group reports you want to view. The right pane refreshes.
- Step 3** From the Report Name list, select **Group Client Association Report**.
- Step 4** Click **View**. The following report displays. The reports for IOS and non-IOS devices are different:
- IOS Group Client Association Report—See [Table 6-14 on page 6-23](#).
 - Non-IOS Group Client Association Report—See [Table 6-15 on page 6-24](#).

Table 6-14 IOS Group Client Association Report

Column	Description
Number of Clients Associated to this Group	The total number of clients associated with the group of access points or bridges.
Count of Active Stations in this Group	The number of access points or bridges currently in the group.
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .
AP Name	The name of the access point. Click to view the following: <ul style="list-style-type: none"> • AP Detailed Report—See Displaying a Detailed Report, page 6-43. • Fault Summary—See Viewing the Fault Status Report, page 6-6. • EAP Authentication Report—See Displaying an EAP Authentication Report, page 6-50.
AP IP Address	The IP address of the access point. Click to open a browser window to the AP Summary Status. Tip The HTTP port on IOS access points must be set to 80 for this link to work. For information on setting up the HTTP port, see Enter HTTP Port Settings—IOS Access Points, page 3-35 .
RF Interface	The radio interface name.
Number of Clients Connected	The number of wireless clients connected to the device.
Number of Bridges Connected	The number of bridges connected to the access point.

Table 6-14 IOS Group Client Association Report (continued)

Column	Description
Number of AP-Repeaters Connected	The number of repeaters connected to the access point.
Status (Fault)	Click to view the Fault Summary. For more information, see Viewing the Fault Status Report, page 6-6 .
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .

Table 6-15 Non-IOS Group Client Association Report

Column	Description
Number of Clients Associated to this Group	The total number of clients currently associated with the group of access points or bridges.
Count of Active Stations in this Group	The number of access points or bridges currently in the group.
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .

Table 6-15 Non-IOS Group Client Association Report (continued)

Column	Description
AP Name	The name of the access point. Click to view the following: <ul style="list-style-type: none"> AP Detailed Report—See Displaying a Detailed Report, page 6-43. Fault Summary—See Viewing the Fault Status Report, page 6-6. EAP Authentication Report—See Displaying an EAP Authentication Report, page 6-50.
AP IP Address	The IP address of the access point. Click to open a browser window to the AP Summary Status.
Number of Clients Connected	The number of wireless clients connected to the device.
Number of Bridges Connected	The number of bridges connected to the access point.
Number of AP-Repeaters Connected	The number of repeaters connected to the access point.
Status (Fault)	Click to view the Fault Summary. For more information, see Viewing the Fault Status Report , page 6-6.
As Of	The time the WLSE polled information from the device. For more information, see Time Display , page 1-8.

For information on how to sort table data, see [Sorting Table Data](#), page 1-11.

Step 5 To export the report, click **Export**. See [Exporting a Report](#), page 6-88.

Step 6 To email the report, click **Email Report**. See [Emailing a Report](#), page 6-88.

Displaying a Group Security Report

Procedure

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- Step 1** Select **Reports > Current**. The window refreshes with a device selector in the left pane.
- Step 2** From the device selector in the left pane, click to expand the folder for the group security reports you want to view.
- Step 3** From the Report Name list, select **Group Security Report**.
- Step 4** Click **View**. The following report displays. The reports for IOS and non-IOS devices are different:
- IOS Group Security Report—See [Table 6-16 on page 6-26](#).
 - Non-IOS Group Security Report—See [Table 6-17 on page 6-28](#).

Table 6-16 IOS Group Security Report

Column	Description
AP Name	<p>The name of the device.</p> <p>Click to view the following:</p> <ul style="list-style-type: none"> • AP Detailed Report—Displaying a Detailed Report, page 6-43. • Fault Summary—Viewing the Fault Status Report, page 6-6. • EAP Authentication Report—Displaying an EAP Authentication Report, page 6-50.

Table 6-16 IOS Group Security Report (continued)

Column	Description
AP IP Address	<p>The IP address of the device.</p> <p>Click to open a browser window to the AP Summary Status.</p> <p>Tip The HTTP port on IOS access points must be set to 80 for this link to work. For information on setting up the HTTP port, see Enter HTTP Port Settings—IOS Access Points, page 3-35.</p>
RF Interface	The radio interface name.
Encryption Type	Indicates that devices using WEP are allowed to communicate with the access point.
Authentication Type - Open System	Indicates whether any device, regardless of its WEP keys, can authenticate and attempt to associate.
Authentication Type - Shared Key	Indicates whether an access point sends a query to any device attempting to associate with the access point.
Authentication Type-Cisco EAP	Indicates whether a device using EAP can authenticate and attempt to associate with the access point.
Status (Fault)	<p>Click to view the Fault Summary.</p> <p>For more information, see Viewing the Fault Status Report, page 6-6.</p>
Link to EAP Authentication Report	<p>Click to view the EAP Authentication report.</p> <p>For more information, see Displaying an EAP Authentication Report, page 6-50.</p>
As Of	<p>The time the fault was reported.</p> <p>For more information, see Time Display, page 1-8.</p>

Table 6-17 Non-IOS Group Security Report

Column	Description
AP Name	<p>The name of the device.</p> <p>Click to view the following:</p> <ul style="list-style-type: none"> • AP Detailed Report—Displaying a Detailed Report, page 6-43. • Fault Summary—Viewing the Fault Status Report, page 6-6. • EAP Authentication Report—Displaying an EAP Authentication Report, page 6-50.
AP IP Address	<p>The IP address of the device.</p> <p>Click to open a browser window to the AP Summary Status.</p>
RF Interface	The radio interface name.
Authentication Type - Open System	Indicates whether any device, regardless of its WEP keys, can authenticate and attempt to associate.
Authentication Type - Shared Key	Indicates whether an access point sends a query to any device attempting to associate with the access point.
Authentication Type-Cisco EAP	Indicates whether a device using EAP can authenticate and attempt to associate with the access point.
Status (Fault)	<p>Click to view the Fault Summary.</p> <p>For more information, see Viewing the Fault Status Report, page 6-6.</p>

Table 6-17 Non-IOS Group Security Report (continued)

Column	Description
Link to EAP Authentication Report	Click to view the EAP Authentication report. For more information, see Displaying an EAP Authentication Report, page 6-50 .
As Of	The time the fault was reported. For more information, see Time Display, page 1-8 .

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

- Step 5** To export the report, click **Export**. See [Exporting a Report, page 6-88](#).
- Step 6** To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying a Group SSID Report

This report displays all the configured SSIDs (both primary and auxiliary) and their corresponding properties in all the devices in the group.

Procedure

- Step 1** Select **Reports > Current**. The window refreshes with a device selector in the left pane. From the device selector in the left pane, click the group folder for which you want to see a report. The right pane refreshes.
- Step 2** From the Report Name list, select **Group SSID Report**.
- Step 3** Click **View**. The following report displays. The reports for IOS and non-IOS devices are different:
- IOS Group SSID Report—See [Table 6-18 on page 6-30](#).
 - Non-IOS Group SSID Report—See [Table 6-19 on page 6-31](#).

Table 6-18 IOS Group SSID Report

Column	Description
SSID	The unique identifier the client device uses to associate with the access point.
AP Name	The name of the access point. Click to view the following: <ul style="list-style-type: none"> • AP Detailed Report—See Displaying a Detailed Report, page 6-43. • Fault Summary—See Viewing the Fault Status Report, page 6-6. • EAP Authentication Report—See Displaying an EAP Authentication Report, page 6-50.
AP IP Address	The IP address of the access point. Click to open a browser window to the AP Summary Status. Tip The HTTP port on IOS access points must be set to 80 for this link to work. For information on setting up the HTTP port, see Enter HTTP Port Settings—IOS Access Points, page 3-35 .
RF Interface	The radio interface name.
VLAN ID	The identification number of the VLAN.
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .

Step 4 Go to [Step 5](#).

Table 6-19 Non-IOS Group SSID Report

Column	Description
SSID	The unique identifier the client device uses to associate with the access point.
VLAN ID	The identification number of the VLAN.
VLAN Name	The name of the VLAN.
AP Name	The name of the access point. Click to view the following: <ul style="list-style-type: none"> • AP Detailed Report—See Displaying a Detailed Report, page 6-43. • Fault Summary—See Viewing the Fault Status Report, page 6-6. • EAP Authentication Report—See Displaying an EAP Authentication Report, page 6-50.
AP IP Address	The IP address of the access point. Click to open a browser window to the AP Summary Status.
RF Interface	The radio interface name.
Number of Clients Connected	The number of wireless clients connected to the device.
Priority	The priority configuration based on the traffic type.
Default Policy Group	The number of the default policy group (which contains access parameters). Click to view the Policy Report—See Displaying a Group Policy Report, page 6-38 .
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

- Step 5** To export the report, click **Export**. See [Exporting a Report, page 6-88](#).
- Step 6** To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).
-

Displaying a Group VLAN Report

This report displays all the configured VLANs and their corresponding properties in the group.

Procedure

- Step 1** Select **Reports > Current**. The window refreshes with a device selector in the left pane. From the device selector in the left pane, click the group folder for which you want to see a report. The right pane refreshes.
- Step 2** From the Report Name list, select **Group VLAN Report**.
- Step 3** Click **View**. The following report displays. The reports for IOS and non-IOS devices are different:
- IOS Group VLAN Report—See [Table 6-20 on page 6-33](#).
 - Non-IOS Group VLAN Report—See [Table 6-21 on page 6-34](#).



Note VLAN information might not be displayed if the WEP keys have not been configured in each VLAN. When the WEP keys are configured in the IOS access points, VLAN information is accessible by SNMP.

Table 6-20 IOS Group VLAN Report

Column	Description
VLAN ID	The identification number of the VLAN.
AP Name	<p>The name of the access point.</p> <p>Click to view the following:</p> <ul style="list-style-type: none"> • AP Detailed Report—See Displaying a Detailed Report, page 6-43. • Fault Summary—See Viewing the Fault Status Report, page 6-6. • EAP Authentication Report—See Displaying an EAP Authentication Report, page 6-50.
AP IP Address	<p>The IP address of the access point.</p> <p>Click to open a browser window to the AP Summary Status.</p> <p>Tip The HTTP port on IOS access points must be set to 80 for this link to work. For information on setting up the HTTP port, see Enter HTTP Port Settings—IOS Access Points, page 3-35.</p>
RF Interface	The radio interface name.
Class of Service	The configured class of service.
SSID	The unique identifier the client device uses to associate with the access point.
As Of	<p>The time the WLSE polled information from the device.</p> <p>For more information, see Time Display, page 1-8.</p>

Step 4 Go to [Step 5](#).

Table 6-21 Non-IOS Group VLAN Report

Column	Description
VLAN ID	The identification number of the VLAN.
VLAN Name	The name of the VLAN.
AP Name	The name of the access point. Click to view the following: <ul style="list-style-type: none"> • AP Detailed Report—See Displaying a Detailed Report, page 6-43. • Fault Summary—See Viewing the Fault Status Report, page 6-6. • EAP Authentication Report—See Displaying an EAP Authentication Report, page 6-50.
AP IP Address	The IP address of the access point. Click to open a browser window to the AP Summary Status.
SSID	The unique identifier the client device uses to associate with the access point.
RF Interface	The radio interface name.
Number of Clients Connected	The number of wireless clients connected to the device.
Priority	The priority configuration based on the traffic type.
Default Policy Group	The number of the default policy group (which contains access parameters). Click to view the Policy Report—See Displaying a Group Policy Report , page 6-38.
As Of	The time the WLSE polled information from the device. For more information, see Time Display , page 1-8.

For information on how to sort table data, see [Sorting Table Data](#), page 1-11.

- Step 5** To export the report, click **Export**. See [Exporting a Report, page 6-88](#).
- Step 6** To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying a Per VLAN Client Report

Wireless client polling frequency is set to 51 minutes by default. To increase the accuracy of this report, increase the polling frequency. To change the default setting, select **Devices > Discover > Inventory > Polling**.



Caution

Increasing the polling frequency could have an effect on performance.

Procedure

- Step 1** Select **Reports > Current**. The window refreshes with a device selector in the left pane. From the device selector in the left pane, click the group folder for which you want to see a report. The right pane refreshes.
- Step 2** From the Report Name list, select **Per VLAN Client Report**.
- Step 3** Click **View**. The following report displays. The reports for IOS and non-IOS devices are different:
- IOS Per VLAN Client Report—See [Table 6-22 on page 6-35](#).
 - Non-IOS Per VLAN Client Report—See [Table 6-23 on page 6-36](#).

Table 6-22 IOS Per VLAN Client Report

Column	Description
VLAN ID	The identification number of the VLAN.

Table 6-22 IOS Per VLAN Client Report (continued)

Column	Description
AP Name	The name of the access point. Click to view the following: <ul style="list-style-type: none"> • AP Detailed Report—See Displaying a Detailed Report, page 6-43. • Fault Summary—See Viewing the Fault Status Report, page 6-6. • EAP Authentication Report—See Displaying an EAP Authentication Report, page 6-50.
SSID	The unique identifier the client device uses to associate with the access point.
Client MAC Address	The MAC address of the client.
ClientType	The type of client.
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .

Step 4 Go to [Step 5](#).

Table 6-23 Non-IOS Per VLAN Client Report

Column	Description
VLAN ID	The identification number of the VLAN.
VLAN Name	The name of the VLAN.

Table 6-23 Non-IOS Per VLAN Client Report (continued)

Column	Description
AP Name	The name of the access point. Click to view the following: <ul style="list-style-type: none"> • AP Detailed Report—See Displaying a Detailed Report, page 6-43. • Fault Summary—See Viewing the Fault Status Report, page 6-6. • EAP Authentication Report—See Displaying an EAP Authentication Report, page 6-50.
Client MAC Address	The MAC address of the client.
Client Name	The name of the client.
Client IP Address	The IP address of the client.
RF Interface	The radio interface name.
SSID	The unique identifier the client device uses to associate with the access point.
Client Type	The type of client.
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

Step 5 To export the report, click **Export**. See [Exporting a Report, page 6-88](#).

Step 6 To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying a Group Policy Report

This report lists all the policy groups configured on each of the non-*IOS* access points in this group.

Procedure

- Step 1** Select **Reports > Current**. The window refreshes with a device selector in the left pane. From the device selector in the left pane, click the group folder for which you want to see a report. The right pane refreshes.
- Step 2** From the Report Name list, select **Group Policy Report**.
- Step 3** Click **View**. The following report displays the following:

Table 6-24 Group Policy Report

Column	Description
AP Name	The name of the access point. Click to view the following: <ul style="list-style-type: none"> • AP Detailed Report—See Displaying a Detailed Report, page 6-43. • Fault Summary—See Viewing the Fault Status Report, page 6-6. • EAP Authentication Report—See Displaying an EAP Authentication Report, page 6-50.
AP IP Address	The IP address of the access point. Click to open a browser window to the AP Summary Status.
Policy Group Id	The identification number of the policy group.
Policy Group Name	The name of the policy group.
Ethertype Filter Id (In)	The identification number of the (receive) Ethertype filter. Click to view the AP Ethertype Protocol Filters Report—See Displaying an AP Ethertype Protocol Filters Report, page 6-51 .

Table 6-24 Group Policy Report (continued)

Column	Description
Ethertype Filter Id (Out)	The identification number of the (transmit) Ethertype filter. Click to view the AP Ethertype Protocol Filters Report—See Displaying an AP Ethertype Protocol Filters Report, page 6-51 .
IP Protocol Filter Id (In)	The identification number of the (receive) IP protocol filter. Click to view the AP IP Protocol Filters Report—See Displaying an AP IP Protocol Filters Report, page 6-52 .
IP Protocol Filter Id (Out)	The identification number of the (transmit) IP protocol filter Click to view the AP IP Protocol Filters Report—See Displaying an AP IP Protocol Filters Report, page 6-52 .
IP Port Filter Id (In)	The identification number of the (receive) IP port filter. Click to view the AP IP Port Filters Report—See Displaying an AP IP Port Filters Report, page 6-53 .
IP Port Filter Id (Out)	The identification number of the (transmit) IP port filter. Click to view the AP IP Port Filters Report—See Displaying an AP IP Port Filters Report, page 6-53 .
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

Step 4 To export the report, click **Export**. See [Exporting a Report, page 6-88](#).

Step 5 To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying an AP Summary Report

Procedure

Step 1 Select **Reports > Current**. The window refreshes with a device selector in the left pane.

Step 2 Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).

Step 3 From the Report Name list, select **Summary Report**.

Step 4 Click **View**.

- If viewing from the Device Center tab, the AP Summary Report is displayed.
- If viewing from the Current tab, the AP Summary Report and the Fault Summary are displayed.



Note If the selected device has dual interfaces, two summary reports are displayed, one for each interface.

Table 6-25 AP Summary Report

Column	Description
Name	The system name for the device.
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .
MAC Address	The device's MAC address.

Table 6-25 AP Summary Report (continued)

Column	Description
IP Address	<p>The device's IP address.</p> <p>Click to open a browser window to the AP Summary Status.</p> <p>Tip The HTTP port on IOS access points must be set to 80 for this link to work. For information on setting up the HTTP port, see Enter HTTP Port Settings—IOS Access Points, page 3-35..</p>
Parent WDS for the Access Point Note This column displays only on the Device Center summary report.	The access point that provides Wireless Domain Services.
Version	<ul style="list-style-type: none"> For IOS devices, the IOS version on the device. For non-IOS devices, the software version on the device.
Number of Clients Connected	The number of wireless clients connected to the device.
Number of Bridges Connected	The number of wireless bridges connected to the device.
Number of AP-Repeaters Connected	The number of AP repeaters connected to the device.
Model	Model number of the device.
SSID	The unique identifier the client device uses to associate with the access point.
SSID Associated to the Native Vlan	The SSID that is mapped to the native VLAN.
Radio Cell Role	Indicates whether the device is used as a root or repeater.

Table 6-25 AP Summary Report (continued)

Column	Description
Link to the Detailed Report	<p>Click to see details.</p> <p>Note This link is not available from the Device Center.</p> <p>For more information, see Displaying a Detailed Report, page 6-43.</p>
Link to the Association Report	<p>Click to see associations.</p> <p>Note This link is not available from the Device Center.</p> <p>For more information, see Displaying an AP Associations Report, page 6-48.</p>
Link to the Access Point Web Page	<p>Click to open a browser window to the AP Summary Status.</p> <p>Tip The HTTP port on IOS access points must be set to 80 for this link to work. For information on setting up the HTTP port, see Enter HTTP Port Settings—IOS Access Points, page 3-35.</p> <p>Note This link is not available from the Device Center.</p>

For information on the Fault Summary, see [Viewing the Fault Status Report](#), page 6-6.

Step 5 To export the report, click **Export**. See [Exporting a Report](#), page 6-88.

Step 6 To email the report, click **Email Report**. See [Emailing a Report](#), page 6-88.

Displaying a Detailed Report

Procedure

-
- Step 1** Select **Reports > Current**. The window refreshes with a device selector in the left pane.
- Step 2** Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).
- Step 3** From the Report Name list, select **Detailed Report**.
- Step 4** Click **View**.
- The Detailed Reports for IOS and non-IOS devices are different:
 - IOS Detailed Report—See [Table 6-26 on page 6-43](#).
 - Non-IOS Detailed Report—See [Table 6-27 on page 6-46](#).
 - If viewing from the Device Center tab, only the Detailed Report is displayed.
 - If viewing from the Current tab, the Detailed Report, the Fault Summary, and the EAP Authentication Report are displayed.



Note If the selected device has dual interfaces, two summary reports are displayed, one for each interface.

Table 6-26 IOS Detailed Report

Column	Description
Name	The system name for the device.
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .
MAC Address	The device's MAC address.

Table 6-26 IOS Detailed Report (continued)

Column	Description
IP Address	<p>The device's IP address.</p> <p>Click to open a browser window to the AP Summary Status.</p> <p>Tip The HTTP port on IOS access points must be set to 80 for this link to work. For information on setting up the HTTP port, see Enter HTTP Port Settings—IOS Access Points, page 3-35.</p>
Number of Clients Connected	The number of wireless clients connected to the device.
Number of Bridges Connected	The number of bridges connected to the device.
Number of AP-Repeaters Connected	The number of AP repeaters connected to the device.
Software Version	The IOS version on the device.
SSID	The unique identifier the client device uses to associate with the access point.
SSID Associated to the Native Vlan	The SSID that is mapped to the native VLAN.
Radio Cell Role	Indicates the role of the device.
Subnet Mask	The subnet mask.
Hot StandBy	<p>Indicates whether the hot standby unit is in monitoring mode.</p> <p>If true, the current unit is in monitoring mode.</p>
Current operating frequency channel	The radio channel being used.
Ethernet Port Status	The operational status of the Ethernet port.
Radio Port Status	The operational status of the radio port.

Table 6-26 IOS Detailed Report (continued)

Column	Description
Transmit Power (mW)	The access point's transmission power setting in milliwatts.
Switch IP (to which this AP is attached)	<p>The IP address of the switch to which this access point is attached.</p> <p>Note CDP must be enabled for the switch information to be collected for this report.</p>
Switch Name (to which this AP is attached)	<p>The name of the switch to which this access point is attached.</p> <p>Note CDP must be enabled for the switch information to be collected for this report.</p>
Length of WEP key 1 through 4 (in bits)	The WEP key length.
Authentication Type - Open System	Indicates whether any device, regardless of its WEP keys, can authenticate and attempt to associate.
Authentication Type - Shared Key	Indicates whether an access point sends a query to any device attempting to associate with the access point.
Authentication Type-Cisco EAP	Indicates whether a device using EAP can authenticate and attempt to associate with the access point.
Link to the Access Point Web Page	<p>Click to open a browser window to the AP Summary Status.</p> <p>Tip The HTTP port on IOS access points must be set to 80 for this link to work. For information on setting up the HTTP port, see Enter HTTP Port Settings—IOS Access Points, page 3-35.</p>

Step 5 Go to [Step 6](#).

Table 6-27 Non-IOS Detailed Report

Column	Description
Name	The system name for the device.
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .
MAC Address	The device's MAC address.
IP Address	The device's IP address. Click to open a browser window to the AP Summary Status.
Subnet Mask	The subnet mask.
Software Version	The software version on the device.
Number of Clients Connected	The number of wireless clients connected to the device.
Number of Bridges Connected	The number of bridges connected to the device.
Number of AP-Repeaters Connected	The number of AP repeaters connected to the device.
Model	The hardware model of the device.
SNMP Trap Destination	The IP address or host name of the server running the SNMP Management software.
HTTP Port	The device's HTTP setting.
Hot StandBy	Indicates whether the hot standby unit is in monitoring mode. If true, the current unit is in monitoring mode.
Count of Access Point observed by this AP	Number of access points seen by the access points.
Ethernet Port Status	The operational status of the Ethernet port.

Table 6-27 Non-IOS Detailed Report (continued)

Column	Description
Switch IP (to which this AP is attached)	The IP address of the switch to which this access point is attached. Note CDP must be enabled for the switch information to be collected for this report.
Switch Name (to which this AP is attached)	The name of the switch to which this access point is attached. Note CDP must be enabled for the switch information to be collected for this report.
Radio Port	The radio port.
SSID	The unique identifier the client device uses to associate with the access point.
SSID Associated to the Native Vlan	The SSID that is mapped to the native VLAN.
Radio Cell Role	Indicates the role of the device.
Ensure Compatibility With 2Mbps Clients	Indicates whether it is compatible with 2Mbps clients.
Ensure Compatibility With non-Aironet 802.11	Indicates whether it is compatible with 802.11.
Current operating frequency channel	The radio channel being used.
Radio Port Status	The operational status of the radio port.
Transmit Power (mW)	The access point's transmission power setting in milliwatts.
Encryption type	Indicates that devices using WEP are allowed to communicate with the access point.
Length of WEP key 1 through 4 (in bits)	The WEP key length.

Table 6-27 Non-IOS Detailed Report (continued)

Column	Description
Authentication Type - Open System	Indicates whether any device, regardless of its WEP keys, can authenticate and attempt to associate.
Authentication Type - Shared Key	Indicates whether an access point sends a query to any device attempting to associate with the access point.
Authentication Type-Cisco EAP	Indicates whether a device using EAP can authenticate and attempt to associate with the access point.
Link to the Access Point Web Page	Click to open a browser window to the AP Summary Status.

- Step 6** For Fault Summary information, see [Viewing the Fault Status Report, page 6-6](#).
- Step 7** For EAP Authentication Report, see [Displaying an EAP Authentication Report, page 6-50](#).
- Step 8** To export the report, click **Export**. See [Exporting a Report, page 6-88](#).
- Step 9** To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying an AP Associations Report

Procedure

- Step 1** Select **Reports > Current**. The window refreshes with a device selector in the left pane.
- Step 2** Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).
- Step 3** From the Report Name list, select **AP Associations Report**.

- Step 4** Click **View**. The report is displayed. The reports for IOS and non-IOS devices are different:
- IOS AP Associations Report—See [Table 6-28 on page 6-49](#).
 - Non-IOS AP Associations Report—See [Table 6-29 on page 6-49](#).

Table 6-28 IOS AP Associations Report

Column	Description
Name	The wireless client's name.
IP Address	The wireless client's IP address.
MAC Address	The wireless client's MAC address.
Device Type	The wireless client device type.
Role	The role of the client device in the network.
Radio Type	The type of client radio type.
As Of	The time the client was last seen by the system. For more information, see Time Display, page 1-8 .

Table 6-29 Non-IOS AP Associations Report

Column	Description
Name	The name of the client associated with the access point.
IP Address	The IP address of the wireless client.
MAC Address	The wireless client's MAC address.
Device Type	The wireless client device type.
State	The operational state of the device.
As Of	The time the device was last seen by the system. For more information, see Time Display, page 1-8 .

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

- Step 5** To export the report, click **Export**. See [Exporting a Report, page 6-88](#).

Step 6 To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying an EAP Authentication Report

This device report lists all the authentication servers that are configured for the access point.

Procedure

- Step 1** Select **Reports > Current**. The window refreshes with a device selector in the left pane.
- Step 2** Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).
- Step 3** From the Report Name list, select **EAP Authentication Report**.
- Step 4** Click **View**. The report is displayed. The reports for IOS and non-IOS devices are different:
- IOS EAP Authentication Report—See [Table 6-30 on page 6-50](#).
 - Non-IOS EAP Authentication Report—See [Table 6-31 on page 6-51](#).

Table 6-30 IOS EAP Authentication Report

Column	Description
Server IP Address	The IP address of the authentication server.
Server Protocol	The protocol used by the server.
Server Priority	The priority of the server when multiple servers are configured for the same service.
Authentication Port	The port setting used by the access point and the server for authentication.

Step 5 Go to [Step 6](#).

Table 6-31 Non-IOS EAP Authentication Report

Column	Description
Server Name	The name of the authentication server or the IP address. The IP address is displayed if the server name is not configured or if Reverse DNS is not enabled under Administration > Discover > Discover .
Server Protocol	The protocol used by the server.
Server Priority	The priority of the server when multiple servers are configured for the same service.
Server Port	The port setting used by the access point and the server for authentication.

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

Step 6 To export the report, click **Export**. See [Exporting a Report, page 6-88](#).

Step 7 To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying an AP Ethertype Protocol Filters Report

This non-IOS device report lists the Ethertype protocol filters configured on the access point.

Procedure

-
- Step 1** Select **Reports > Current**. The window refreshes with a device selector in the left pane.
- Step 2** Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).
- Step 3** From the Report Name list, select **AP Ethertype Protocol Filters**.
- Step 4** Click **View**. The report is displayed with the following headings:

Table 6-32 AP Ethertype Protocol Filters Report

Column	Description
Filter Set Id	The identification number of the filter set.
Filter Set Name	The name of the filter set.
Default Disposition	The type of disposition configured: Forward (to forward protocol traffic, or Block (to block protocol traffic).
Filter Special Case Ethertype	The special case configuration.
Filter Special Case Disposition	The special case disposition.
Filter Special Case Priority	The priority configuration based on the traffic type.
As Of	The time the WLSE polled information from the device. For more information, see Time Display , page 1-8.

For information on how to sort table data, see [Sorting Table Data](#), page 1-11.

Step 5 To export the report, click **Export**. See [Exporting a Report](#), page 6-88.

Step 6 To email the report, click **Email Report**. See [Emailing a Report](#), page 6-88.

Displaying an AP IP Protocol Filters Report

This non-IOS device report lists the IP protocol filters configured on the access point.

Procedure

Step 1 Select **Reports > Current**. The window refreshes with a device selector in the left pane.

- Step 2** Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).
- Step 3** From the Report Name list, select **AP IP Protocol Filters**.
- Step 4** Click **View**. The report is displayed with the following headings:

Table 6-33 AP IP Protocol Filters Report

Column	Description
Filter Set Id	The identification number of the filter set.
Filter Set Name	The name of the filter set.
Default Disposition	The type of disposition configured: Forward (to forward protocol traffic, or Block (to block protocol traffic).
Filter Special Case IP Protocol	The special case configuration.
Filter Special Case Disposition	The special case disposition.
Filter Special Case Priority	The priority configuration based on the traffic type.
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

- Step 5** To export the report, click **Export**. See [Exporting a Report, page 6-88](#).
- Step 6** To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying an AP IP Port Filters Report

This non-IOS device report lists the various IP port filters configured on the access point.

Procedure

- Step 1** Select **Reports > Current**. The window refreshes with a device selector in the left pane.
- Step 2** Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).
- Step 3** From the Report Name list, select **AP IP Port Filters**.
- Step 4** Click **View**. The report is displayed with the following headings:

Table 6-34 AP IP Port Filters Report

Column	Description
Filter Set Id	The identification number of the filter set.
Filter Set Name	The name of the filter set.
Default Disposition	The type of disposition configured: Forward (to forward protocol traffic, or Block (to block protocol traffic).
Filter Special Case IP Port	The special case configuration.
Filter Special Case Disposition	The special case disposition.
Filter Special Case Priority	The priority configuration based on the traffic type.
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

- Step 5** To export the report, click **Export**. See [Exporting a Report, page 6-88](#).
- Step 6** To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying an AP Policy Report

This non-IOS device report lists all the policy groups configured on the access point.

Procedure

-
- Step 1** Select **Reports > Current**. The window refreshes with a device selector in the left pane.
 - Step 2** Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).
 - Step 3** From the Report Name list, select **AP Policy Report**.
 - Step 4** Click **View**. The report is displayed with the following headings:

Table 6-35 AP Policy Report

Column	Description
Policy Group Id	The identification number for the policy group.
Policy Group Name	The name of the policy group.
Ethertype Filter Id (In)	The identification number of the (receive) Ethertype filter. Click to see the AP Ethertype Protocol Filters Report—See Displaying an AP Ethertype Protocol Filters Report, page 6-51 .
Ethertype Filter Id (Out)	The identification number of the (transmit) Ethertype filter. Click to see the AP Ethertype Protocol Filters Report—See Displaying an AP Ethertype Protocol Filters Report, page 6-51 .
IP Protocol Filter Id (In)	The identification number of the (receive) IP protocol filter. Click to see the AP Ethertype Protocol Filters Report—See Displaying an AP IP Protocol Filters Report, page 6-52 .

Table 6-35 AP Policy Report (continued)

Column	Description
IP Protocol Filter (Out)	The identification number of the (transmit) IP protocol filter. Click to see the AP IP Protocol Filters Report—See Displaying an AP IP Protocol Filters Report, page 6-52 .
IP Port Filter Id (In)	The identification number of the (receive) IP port filter. Click to see the AP IP Port Filters Report—See Displaying an AP IP Port Filters Report, page 6-53 .
IP Port Filter Id (Out)	The identification number of the (transmit) IP port filter. Click to see the AP IP Port Filters Report—See Displaying an AP IP Port Filters Report, page 6-53 .
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

Step 5 To export the report, click **Export**. See [Exporting a Report, page 6-88](#).

Step 6 To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying an AP QoS Report

This device report displays the configured QoS parameters.

Procedure

Step 1 Select **Reports > Current**. The window refreshes with a device selector in the left pane.

Step 2 Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).

- Step 3** From the Report Name list, select **AP QoS Report**.
- Step 4** Click **View**. The report is displayed. The reports for IOS and non-IOS devices are different:
- IOS AP QoS Report—See [Table 6-36 on page 6-57](#).
 - Non-IOS AP QoS Report—See [Table 6-37 on page 6-57](#).

Table 6-36 IOS AP QoS Report

Column	Description
RF Interface	The radio interface name.
Traffic Class	The category of traffic.
Min Contention Window	The minimum contention window value.
Max Contention Window	The maximum contention window value.
Fixed Time Slot	The configured time slot.
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .

- Step 5** Go to [Step 6](#).

Table 6-37 Non-IOS AP QoS Report

Column	Description
RF Interface	The radio interface name.
Traffic Category	The category of traffic.
CWmin	The minimum contention window value.
CWmax	The maximum contention window value.
Generate QBSS Element	Indicates if basic 802.11 quality of service is enabled or disabled.
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .

For information on how to sort table data, see [Sorting Table Data](#), page 1-11.

Step 6 To export the report, click **Export**. See [Exporting a Report](#), page 6-88.

Step 7 To email the report, click **Email Report**. See [Emailing a Report](#), page 6-88.

Displaying an AP SSID Report

This device report displays all the configured SSIDs (both primary and auxiliary) and their corresponding properties.

Procedure

- Step 1** Select **Reports > Current**. The window refreshes with a device selector in the left pane.
- Step 2** Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search](#), page 1-9.
- Step 3** From the Report Name list, select **AP SSID Report**. Click **View**. The report is displayed. The reports for IOS and non-IOS devices are different:
- IOS AP SSID Report—See [Table 6-38](#) on page 6-58.
 - Non-IOS AP SSID Report—See [Table 6-37](#) on page 6-57.

Table 6-38 *IOS AP SSID Report*

Column	Description
SSID	The unique identifier the client device uses to associate with the access point.
RF Interface	The radio interface name.
VLAN ID	The VLAN identification number.
As Of	The time the WLSE polled information from the device. For more information, see Time Display , page 1-8.

Step 4 Go to [Step 5](#).

Table 6-39 Non-IOS AP SSID Report

Column	Description
SSID	The unique identifier the client device uses to associate with the access point.
VLAN ID	The VLAN identification number.
VLAN Name	The VLAN name.
RF Interface	The radio interface name.
Number of Clients Connected	The number of wireless clients connected to the device.
Priority	The priority configuration based on the traffic type.
Default Policy Group	The number of the default policy group (which contains access parameters). Click to view the AP Policy Report—See Displaying an AP Policy Report, page 6-55 .
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

Step 5 To export the report, click **Export**. See [Exporting a Report, page 6-88](#).

Step 6 To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying an AP VLAN Report

This device report displays all the configured VLANs and their corresponding properties.

Procedure

-
- Step 1** Select **Reports > Current**. The window refreshes with a device selector in the left pane.
- Step 2** Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).
- Step 3** From the Report Name list, select **AP VLAN Report**.
- Step 4** Click **View**. The report is displayed. The reports for IOS and non-IOS devices are different:
- IOS AP VLAN Report—See [Table 6-40 on page 6-60](#).
 - Non-IOS AP VLAN Report—See [Table 6-41 on page 6-61](#).



Note VLAN information might not be displayed if the WEP keys have not been configured in each VLAN. When the WEP keys are configured in the IOS access points, VLAN information is accessible by SNMP.

Table 6-40 IOS AP VLAN Report

Column	Description
VLAN ID	The identification number of the VLAN.
Class of Service	Lists the class of service.
RF Interface	The radio interface name.
SSID	The unique identifier the client device uses to associate with the access point.
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .

Table 6-41 Non-IOS AP VLAN Report

Column	Description
VLAN ID	The identification number of the VLAN.
VLAN Name	The name of the VLAN.
SSID	The unique identifier the client device uses to associate with the access point.
RF Interface	The radio interface name.
Number of Clients Connected	The number of wireless clients connected to the device.
Priority	The priority configuration based on the traffic type.
Default Policy Group	The number of the default policy group (which contains access parameters).
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

Step 5 To export the report, click **Export**. See [Exporting a Report, page 6-88](#).

Step 6 To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying a Per VLAN Client Report

Wireless client polling frequency is set to 51 minutes by default. To increase the accuracy of this report, increase the polling frequency. To change the default setting, select **Devices > Discover > Inventory > Polling**.



Caution

Increasing the polling frequency could have an effect on performance.

Procedure

- Step 1** Select **Reports > Current**. The window refreshes with a device selector in the left pane.
- Step 2** Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).
- Step 3** From the Report Name list, select **Per VLAN Client Report**.
- Step 4** Click **View**. The report is displayed. The reports for IOS and non-IOS devices are different:
 - IOS Per VLAN Report—See [Table 6-42 on page 6-62](#).
 - Non-IOS Per VLAN Report—See [Table 6-43 on page 6-63](#).

Table 6-42 IOS Per VLAN Report

Column	Description
VLAN ID	The identification number of the VLAN.
RF Interface	The radio interface name.
SSID	The unique identifier the client device uses to associate with the access point.
Client MAC Address	The MAC address of the client.
Client Name	The name of the client.
Client IP Address	The IP address of the client.

Table 6-42 IOS Per VLAN Report (continued)

Column	Description
Client Type	The type of client associated to the access point.
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .

Step 5 Go to [Step 6](#).

Table 6-43 Non-IOS Per VLAN Client Report

Column	Description
VLAN ID	The identification number of the VLAN.
VLAN Name	The name of the VLAN.
Client MAC Address	The MAC address of the client.
Client Name	The name of the client.
Client IP Address	The IP address of the client.
SSID	The unique identifier the client device uses to associate with the access point.
Client Type	The type of client associated to the access point.
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

Step 6 To export the report, click **Export**. See [Exporting a Report, page 6-88](#).

Step 7 To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying an AP Hot Standby Report

Procedure

- Step 1** Select **Reports > Current**. The window refreshes with a device selector in the left pane.
- Step 2** Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).
- Step 3** From the Report Name list, select **AP HotStandby Report**.
- Step 4** Click **View**. The report is displayed with the following headings:

Table 6-44 AP Hot Standby Report

Column	Description
Hot StandBy	Indicates whether the access is enabled for hot standby.
Monitored AP Mac Address	The MAC address of the access point this access point is monitoring. Note This field displays the value 000000000000 when the MAC Address has not been configured on the access point.
Monitored AP IP Address (IOS only)	The IP address of the access point this access point is monitoring. Note This field is empty if the monitored device is not in the list of devices discovered by the WLSE.
Monitored AP Name	The name of the access point this access point is monitoring. Note This field is empty if the monitored device is not in the list of devices discovered by the WLSE.
Polling Frequency	The frequency with which this access point is polling the monitored access point in seconds.
Polling Timeout	The amount of time in seconds that this access point waits for a response from the monitored access point before it assumes the monitored access point has malfunctioned.

Table 6-44 AP Hot Standby Report (continued)

Column	Description
Hot Standby Status	The current status of the hot standby access point: Normal, Initializing, Takeover, Stopped, Associating, RootMacFailed, InterfaceMerge, AssociationFail, EtherTestFail, RadioTestFail, or Error.
Hot Standby State	The current state of the hot standby access point: Running, Initializing, Stopped, or NotRunning.

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

Step 5 To export the report, click **Export**. See [Exporting a Report, page 6-88](#).

Step 6 To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying a Switch Summary Report

Procedure

Step 1 Select **Reports > Current**. The window refreshes with a device selector in the left pane.

Step 2 Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).

Step 3 From the Report Name list, select **Switch Summary Report**.

Step 4 Click **View**. The group report is displayed with the following headings:

Table 6-45 Switch Summary Report

Column	Description
System Name	The switch name.
IP Address	The switch IP address or hostname.
System Description	A description of the system.

Table 6-45 Switch Summary Report (continued)

Column	Description
Location	A description of the switch location.
Product Type	The switch type.
System Version	The software version on the switch.
Link to the AP and Bridge Connected	Click for details. For more information, see Displaying an AP and Bridge Connected to Switch Report , page 6-66.

- Step 5** For information on the Fault Summary table, see [Viewing the Fault Status Report](#), page 6-6
- Step 6** To export the report, click **Export**. See [Exporting a Report](#), page 6-88.
- Step 7** To email the report, click **Email Report**. See [Emailing a Report](#), page 6-88.

Displaying an AP and Bridge Connected to Switch Report

Procedure

- Step 1** Select **Reports > Current**. The window refreshes with a device selector in the left pane.
- Step 2** Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search](#), page 1-9.
- Step 3** From the Report Name list, select **AP and Bridge Connected to Switch Report**.

Step 4 Click **View**. The report is displayed with the following headings:

Table 6-46 AP and Bridge Connected to Switch Report

Column	Description
Device Port	The device port.
AP Name	The name of the access point or bridge connected to the switch.
AP IP Address	The IP address of the access point or bridge connected to the switch.
Status (Fault)	The fault status. Click for details. For more information, see Viewing the Fault Status Report, page 6-6 .

Step 5 To export the report, click **Export**. See [Exporting a Report, page 6-88](#).

Step 6 To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying a Router Summary Report

Procedure

- Step 1** Select **Reports > Current**. The window refreshes with a device selector in the left pane.
- Step 2** Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).
- Step 3** From the Report Name list, select **Router Summary Report**.

Step 4 Click **View**. The group report is displayed with the following headings:

Table 6-47 Router Summary Report

Column	Description
System Name	The router name.
IP Address	The router IP address.
System Description	A description of the router.
Location	The location of the router.
Product Type	The router hardware type.
System Version	The router version.

Step 5 For information on the Fault Summary table, see [Viewing the Fault Status Report, page 6-6](#)

Step 6 To export the report, click **Export**. See [Exporting a Report, page 6-88](#).

Step 7 To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying an AP and Bridge Connected to Router Report

Procedure

-
- Step 1** Select **Reports > Current**. The window refreshes with a device selector in the left pane.
- Step 2** Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).
- Step 3** From the Report Name list, select **AP and Bridge Connected to Router Report**.

Step 4 Click **View**. The report is displayed with the following headings:

Table 6-48 AP and Bridge Connected to Router Report

Column	Description
Device Port	The device port.
AP Name	The name of the access point or bridge connected to the router.
AP IP Address	The IP address of the access point or bridge connected to the router.
Status (Fault)	The fault status. Click for details. For more information, see Viewing the Fault Status Report, page 6-6 .

Step 5 To export the report, click **Export**. See [Exporting a Report, page 6-88](#).

Step 6 To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying a Server Summary Report

Procedure

- Step 1** Select **Reports > Current**. The window refreshes with a device selector in the left pane.
- Step 2** Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).
- Step 3** From the Report Name list, select **Summary Report** for the server.

Step 4 Click **View**. The report is displayed with the following headings:

Table 6-49 Summary Report

Column	Description
Server Name	The name of the server.
Port	The port number used for authentication.
User Name	The user name used for authentication.

Step 5 To export the report, click **Export**. See [Exporting a Report, page 6-88](#).

Step 6 To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying an AP Usage Report

Procedure

Step 1 Select **Reports > Current**. The window refreshes with a device selector in the left pane.

Step 2 Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).

Step 3 From the Report Name list, select **AP Usage Report**.

Step 4 Click **View**. The report is displayed with the following headings:

Table 6-50 AP Usage Report

Column	Description
AP Name	The name of the access point.
AP IP Address	The IP address of the access point.
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .

Step 5 To export the report, click **Export**. See [Exporting a Report, page 6-88](#).

Step 6 To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying Trends

The trending reports allow you to view performance and error rates over periods of time, which you can use to analyze peak network utilization periods (see [Using Trend Reports For Capacity Planning, page 6-72](#)). You can view trends about the monitored access points, bridges, and servers in your network, as well as view, export, and email the reports.



Note

Trending reports are not shown for routers or switches.

The frequency with which performance data is aggregated can be selected at the time you run the report. To change the default setting for the length of time the data is saved, **Devices > Discover > Inventory > Polling**.

There may be instances in which the data points on a graph do not appear at the interval you set. This occurs because the graph's contents are summarized when the space needed to show all the data is not available in the specified graph size. For example for a given date range, if there are 100 data points and only 25 can be plotted, the x-axis will be plotted for every 4th point.

Using this option, you can view the following types of trend reports:

- Group Reports
 - Group Performance Report: RF Utilization—[Displaying a Group Performance Report: RF Utilization, page 6-73](#)
 - Group Performance Report: Ethernet Utilization—See [Displaying a Group Performance Report: Ethernet Utilization, page 6-74](#)
 - Top N Number of Associations—See [Displaying a Top N Number of Associations Report, page 6-75](#)
 - Top N Percentage Errors—See [Displaying a Top N Percentage Errors Report, page 6-77](#)

- Access Point and Bridge Reports
 - AP and Bridge RF Transmission Statistics—See [Displaying an AP and Bridge RF Transmission Statistics Report](#), page 6-78
 - AP and Bridge Ethernet Transmission Statistics—See [Displaying an AP and Bridge Ethernet Transmission Statistics Report](#), page 6-79
 - AP and Bridge Performance: Graph—See [Displaying an AP and Bridge Performance Graph](#), page 6-80
 - AP and Bridge Performance: Tabular—See [Displaying an AP and Bridge Performance: Tabular](#), page 6-81
 - Top N Busiest Clients—See [Displaying Top N Busiest Clients](#), page 6-82
 - Top N Client Error Rate—See [Displaying Top N Client MIC Error Rate](#), page 6-84
- Server Report
 - Server Response Time Graph—See [Displaying a Server Response Time Graph](#), page 6-86

The folders and devices in the device selector display icons indicating the alarm status of the devices. For an explanation of the icons, see [Understanding the Icons](#), page 1-10.

For information about the folders for device groups in the device selector, see [System-Defined Groups](#), page 3-98.


Note

Your login determines whether you can use this option.

Related Topics

[Using Trend Reports For Capacity Planning](#), page 6-72

Using Trend Reports For Capacity Planning

Trend reports can help you analyze when peak network utilization occurs and make intelligent decisions about whether or not the network is supporting these peak utilizations adequately. If you see that there are a high number of errors

during peak periods, or the peak periods correlate with many complaints about performance, you can take steps to improve the WLAN experience, perhaps by deploying more access points.

You can use trend reports to see which access points are most utilized, which are most underutilized, and which have the most errors. These data are useful for making intelligent decisions about the WLAN. Why is the WLAN most utilized in some areas and underutilized in others? Is it simply the location or is there another reason?

For example, in some retail and manufacturing deployments, WLAN administrators have used the WLSE trending reports to determine where the WLAN was underutilized. Using these data, they determined that the employees in these areas were inadequately trained on mobile applications. After this problem was identified and more training supplied to the employees, the WLAN administrators used the WLSE trend reports to validate that the WLAN usage patterns were consistent with expectations. This helped to maximize the return on investment of both the WLAN infrastructure and the wireless applications.

Displaying a Group Performance Report: RF Utilization

Procedure

- Step 1** Select **Reports > Trends**. The window refreshes with a device selector in the left pane.
- Step 2** From the device selector in the left pane, click the group folder for which you want a report. The right pane refreshes.
- Step 3** From the Report Name list, select **Group Performance Report: RF Utilization**.
- Step 4** From the Start Date and End Date lists, select the start date and end date for the period of time for which you want trending information.
- Step 5** From the Frequency list, select the frequency with which you want the performance data aggregated. For example, if you choose hourly, the information displayed will be one hour's aggregation of data.

Step 6 Click **View**. The table is displayed:

Table 6-51 Group Performance Report: RF Utilization

Column	Description
AP Name	The name of the access point.
AP IP Address	The IP address of the access point.
RF Interface	The radio interface name.
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .
RF Utilization (%)	The percentage of radio frequency utilization.
Number of Associations	Shows the number of associations with clients.
SSID	The unique identifier the client device uses to associate with the access point.
Channel Number	The channel being used.

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

Step 7 To export the report, click **Export**. See [Exporting a Report, page 6-88](#).

Step 8 To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying a Group Performance Report: Ethernet Utilization

Procedure

-
- Step 1** Select **Reports > Trends**. The window refreshes with a device selector in the left pane.
- Step 2** From the device selector in the left pane, click the group folder for which you want to see a report. The right pane refreshes.
- Step 3** From the Report Name list, select **Group Performance Report: Ethernet Utilization**.

- Step 4** From the Start Date and End Date lists, select the start date and end date for the period of time for which you want trending information.
- Step 5** From the Frequency list, select the frequency with which you want the performance data aggregated. For example, if you choose hourly, the information displayed will be one hour's aggregation of data.
- Step 6** Click **View**. The table is displayed:

Table 6-52 Group Performance Report: Ethernet Utilization

Column	Description
AP Name	The name of the access point.
AP IP Address	The IP address of the access point.
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .
Ethernet Utilization (%)	The percentage of Ethernet utilization.
Number of Associations	Shows the number of associations with clients.
SSID	The unique identifier the client device uses to associate with the access point.
Channel Number	The channel being used.

- Step 7** To export the report, click **Export**. See [Exporting a Report, page 6-88](#).
- Step 8** To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying a Top N Number of Associations Report

This report lists the top number of access points which have the highest average number of associations over the selected period of time. The minimum and maximum number of associations are also displayed.

Procedure

-
- Step 1** Select **Reports > Trends**. The window refreshes with a device selector in the left pane.
- Step 2** From the device selector in the left pane, click the group folder for which you want to see a report. The right pane refreshes.
- Step 3** From the Report Name list, select **Top N Number of Associations**.
- Step 4** From the Start Date and End Date lists, select the start date and end date for the period of time for which you want trending information.
- Step 5** From the Frequency list, select the frequency with which you want the performance data aggregated. For example, if you choose hourly, the information displayed will be one hour's aggregation of data.
- Step 6** In the N Value text box, enter the top number of associations you want to view.
- Step 7** Click **View**. The table is displayed:

Table 6-53 *Top N Number of Associations*

Column	Description
AP Name	The name of the access point.
AP IP Address	The IP address of the access point.
Number of Clients Connected (Avg)	The average number of clients connected to the access point.
Number of Clients Connected (Min)	The minimum number of clients connected to the access point.
Number of Clients Connected (Max)	The maximum number of clients connected to the access point.

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

- Step 8** To export the report, click **Export**. See [Exporting a Report, page 6-88](#).
- Step 9** To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).
-

Displaying a Top N Percentage Errors Report

This report lists the top number of access points which have the highest average percentage of errors. The minimum and maximum percentage of errors during the selected period of time are also displayed.

Procedure

-
- Step 1** Select **Reports > Trends**. The window refreshes with a device selector in the left pane.
 - Step 2** From the device selector in the left pane, click the group folder for which you want to see a report. The right pane refreshes.
 - Step 3** From the Report Name list, select **Top N Percentage Errors**.
 - Step 4** From the Start Date and End Date lists, select the start date and end date for the period of time for which you want trending information.
 - Step 5** From the Frequency list, select the frequency with which you want the performance data aggregated. For example, if you choose hourly, the information displayed will be one hour's aggregation of data.
 - Step 6** In the N Value text box, enter the top number of errors you want to view.
 - Step 7** Click **View**. The table is displayed:

Table 6-54 Top N Percentage Errors

Column	Description
AP Name	The name of the access point.
AP IP Address	The IP address of the access point.
RF Interface	The radio interface name.
Packet Errors (Avg) (%)	The average percentage of error packets.
Packet Errors (Min) (%)	The minimum percentage of error packets.
Packet Errors (Max) (%)	The maximum percentage of error packets.

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

- Step 8** To export the report, click **Export**. See [Exporting a Report, page 6-88](#).
- Step 9** To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).
-

Displaying an AP and Bridge RF Transmission Statistics Report

This report displays the transmit and receive rates overlaid in a graph.

Procedure

- Step 1** Select **Reports > Trends**. The window refreshes with a device selector in the left pane.
- Step 2** Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).
- Step 3** From the Report Name list, select **AP and Bridge RF Transmission Statistics**.
- Step 4** From the Start Date and End Date lists, select the start date and end date for the period of time for which you want trending information.
- Step 5** From the Frequency list, select the frequency with which you want the performance data aggregated. For example, if you choose hourly, the information displayed will be one hour's aggregation of data.
- Step 6** Click **View**. A graph is displayed:

Table 6-55 AP and Bridge RF Transmission Statistics

Column	Description
Transmit Rate	The x-axis displays the time intervals. The y-axis displays the number of packets transmitted per second.

Table 6-55 AP and Bridge RF Transmission Statistics (continued)

Column	Description
Receive Rate	The x-axis displays the time intervals. The y-axis displays the number of packets received per second.
Packet Errors	The x-axis displays the time intervals. The y-axis displays the number of error packets per number of packets.

Step 7 To export the report, click **Export**. See [Exporting a Report, page 6-88](#).

Step 8 To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying an AP and Bridge Ethernet Transmission Statistics Report

This report displays the transmit and receive rates overlaid in a graph.

Procedure

-
- Step 1** Select **Reports > Trends**. The window refreshes with a device selector in the left pane.
 - Step 2** Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).
 - Step 3** From the Report Name list, select **AP and Bridge Ethernet Transmission Statistics**.
 - Step 4** From the Start Date and End Date lists, select the start date and end date for the period of time for which you want trending information.
 - Step 5** From the Frequency list, select the frequency with which you want the performance data aggregated. For example, if you choose hourly, the information displayed will be one hour's aggregation of data.

Step 6 Click **View**. A graph is displayed:

Table 6-56 AP and Bridge Ethernet Transmission Statistics

Column	Description
Transmit Rate	The x-axis displays the time intervals. The y-axis displays the number of packets transmitted per second.
Receive Rate	The x-axis displays the time intervals. The y-axis displays the number of packets received per second.
Packet Errors	The x-axis displays the time intervals. The y-axis displays the number of error packets per number of packets.

Step 7 To export the report, click **Export**. See [Exporting a Report, page 6-88](#).

Step 8 To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying an AP and Bridge Performance Graph

This report displays the Ethernet utilization and RF utilization overlaid in a graph.

Procedure

Step 1 Select **Reports > Trends**. The window refreshes with a device selector in the left pane.

Step 2 Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).

Step 3 From the Report Name list, select **AP and Bridge Performance Graph**.

Step 4 From the Start Date list, select the start date for the graph, and from the For a period of list, select the number of days.

Step 5 From the Frequency list, select the frequency with which you want the performance data aggregated. For example, if you choose hourly, the information displayed will be one hour's aggregation of data.

Step 6 Click **View**. A graph is displayed:

Table 6-57 AP and Bridge Performance Graph

Column	Description
Ethernet Utilization	The x-axis displays the time intervals. The y-axis displays the percent of Ethernet utilization.
RF Utilization	The x-axis displays the time intervals. The y-axis displays the percent of radio frequency utilization.
Number of Associations	The x-axis displays the time intervals. The y-axis displays the number of client associations

Step 7 To export the report, click **Export**. See [Exporting a Report, page 6-88](#).

Step 8 To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying an AP and Bridge Performance: Tabular

Procedure

Step 1 Select **Reports > Trends**. The window refreshes with a device selector in the left pane.

Step 2 Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).

Step 3 From the Report Name list, select **AP and Bridge Performance: Tabular**.

- Step 4** From the Start Date list, select the start date for the graph, and from the For a period of list, select the number of days.
- Step 5** From the Frequency list, select the frequency with which you want the performance data aggregated. For example, if you choose hourly, the information displayed will be one hour's aggregation of data.
- Step 6** Click **View**. The report is displayed:

Table 6-58 AP and Bridge Performance: Tabular

Column	Description
IP Address	The IP address of the access point or bridge.
As Of	The time the WLSE polled information from the device. For more information, see Time Display, page 1-8 .
Number of Associations	The number of client associations.
Ethernet Utilization (%)	The amount of Ethernet utilization.
RF Interface	The radio interface name.
RF Utilization (%)	The amount of radio frequency utilization.

- Step 7** To export the report, click **Export**. See [Exporting a Report, page 6-88](#).
- Step 8** To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying Top N Busiest Clients

This report lists the top number of busiest clients in terms of average bit rate as perceived by the access point for the selected period of time. The minimum and maximum bit rates for the clients are also displayed.

Wireless client polling frequency is set to 51 minutes by default. If 0 (zero) values are displayed in the report or if you want to increase the accuracy of the report, increase the polling frequency. To change the default setting, select **Devices > Discover > Inventory > Polling**.

**Caution**

Increasing the polling frequency could have an effect on performance.

Procedure

- Step 1** Select **Reports > Trends**. The window refreshes with a device selector in the left pane.
- Step 2** Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).
- Step 3** From the Report Name list, select **Top N Busiest Clients**.
- Step 4** From the Start Date and End Date lists, select the start date and end date for the period of time for which you want trending information.
- Step 5** From the Frequency list, select the frequency with which you want the performance data aggregated. For example, if you choose hourly, the information displayed will be one hour's aggregation of data.
- Step 6** In the N Value text box, enter the top number of clients you want to view.
- Step 7** Click **View**. The table is displayed:

Table 6-59 Top N Busiest Clients

Column	Description
Client MAC Address	The MAC address of the client.
Bit Rate (Avg) (in kbps)	The average bit rate for the client.
Bit Rate (Min) (in kbps)	The minimum bit rate for the client.
Bit Rate (Max) (in kbps)	The maximum bit rate for the client.

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

- Step 8** To export the report, click **Export**. See [Exporting a Report, page 6-88](#).
- Step 9** To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).

Displaying Top N Client MIC Error Rate

Wireless client polling frequency is set to 51 minutes by default. To increase the accuracy of this report, increase the polling frequency. To change the default setting, select **Devices > Discover > Inventory > Polling**.



Caution

Increasing the polling frequency could have an effect on performance.

This report lists the top number of clients in terms of Message Integrity Check (MIC) rate as perceived by the access point for the selected period of time.

This report is for IOS access points only.

Procedure

-
- Step 1** Select **Reports > Trends**. The window refreshes with a device selector in the left pane.
 - Step 2** Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).
 - Step 3** From the Report Name list, select **Top N Client MIC Error Rate**.
 - Step 4** From the Start Date and End Date lists, select the start date and end date for the period of time for which you want trending information.
 - Step 5** From the Frequency list, select the frequency with which you want the performance data aggregated. For example, if you choose hourly, the information displayed will be one hour's aggregation of data.
 - Step 6** In the N Value text box, enter the top number of clients you want to view.
 - Step 7** Click **View**. The report is displayed.



Note

Values such as MIC Error Rate might display empty because, when queried, access points sometimes return null values for the cDot11Client counters.

Table 6-60 IOS Top N Client MIC Error Rate

Column	Description
Client MAC Address	The MAC address of the client.
MIC Error Rate (Avg) (per second)	The average value of the rate of Message Integrity Check (MIC) errors recorded for the client.
MIC Error Rate (Min) (per second)	The minimum value of the rate of Message Integrity Check (MIC) errors recorded for the client.
MIC Error Rate (Max) (per second)	The maximum value of the rate of Message Integrity Check (MIC) errors recorded for the client.

For information on how to sort table data, see [Sorting Table Data](#), page 1-11.

Step 8 To export the report, click **Export**. See [Exporting a Report](#), page 6-88.

Step 9 To email the report, click **Email Report**. See [Emailing a Report](#), page 6-88.

Displaying Top N Client Bit Error Rate

Wireless client polling frequency is set to 51 minutes by default. To increase the accuracy of this report, increase the polling frequency. To change the default setting, select **Devices > Discover > Inventory > Polling**.



Caution

Increasing the polling frequency could have an effect on performance.

This report lists the top number of clients in terms of bit error rate as perceived by the access point for the selected period of time.

This report is for non-IOS access points only.

Procedure

-
- Step 1** Select **Reports > Trends**. The window refreshes with a device selector in the left pane.
- Step 2** Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).
- Step 3** From the Report Name list, select **Top N Client Error Rate**.
- Step 4** From the Start Date and End Date lists, select the start date and end date for the period of time for which you want trending information.
- Step 5** From the Frequency list, select the frequency with which you want the performance data aggregated. For example, if you choose hourly, the information displayed will be one hour's aggregation of data.
- Step 6** In the N Value text box, enter the top number of clients you want to view.
- Step 7** Click **View**. The report is displayed.

Table 6-61 Non-IOS Top N Client Bit Error Rate

Column	Description
Client MAC Address	The MAC address of the client.
Bit Error Rate (Avg) (in kbps)	The average bit error rate for the client.
Bit Error Rate (Min) (in kbps)	The minimum bit error rate for the client.
Bit Error Rate (Max) (in kbps)	The maximum bit error rate for the client.

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

- Step 8** To export the report, click **Export**. See [Exporting a Report, page 6-88](#).
- Step 9** To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).
-

Displaying a Server Response Time Graph

This graph plots the response time of the server over the period of time specified.

Procedure

-
- Step 1** Select **Reports > Trends**. The window refreshes with a device selector in the left pane.
- Step 2** Search for a device or select the device for which you want a report from the device selector in the left pane. For information on how to search or use the device selector, see [Using the Device Selector and Search, page 1-9](#).
- Step 3** From the Report Name list, select **Server Response Time Graph**.
- Step 4** From the Start Date list, select the start date for the graph, and from the For a period of list, select the number of days.
- Step 5** From the Frequency list, select the frequency with which you want the performance data aggregated. For example, if you choose hourly, the information displayed will be one hour's aggregation of data.
- Step 6** Click **View**. The following report displays:

Table 6-62 Server Response Time Graph

Column	Description
Server Response Time	The x-axis displays the time intervals. The y-axis displays the response time in milliseconds.

- Step 7** To export the report, click **Export**. See [Exporting a Report, page 6-88](#).
- Step 8** To email the report, click **Email Report**. See [Emailing a Report, page 6-88](#).
-

Exporting a Report

-
- Step 1** Click **Export**. An Export window appears.
 - Step 2** From the Output Format list, select the format in which you want the file exported: CSV, PDF, or XML.
 - Step 3** Click **Submit**. A window opens in the requested format and displays the output.
-

Emailing a Report

All reports can be exported via email. These reports can be mailed on-demand, as one-time scheduled jobs, or at recurring intervals. Although IT policies vary depending on the deployment environment, consider scheduling weekly email exports of trending reports and exporting inventory reports as needed. For example, some of the security configuration inventory reports might be exported on a monthly basis as part of an ongoing security audit.

Before You Begin

Configure the mailroute so that the WLSE knows where to send the e-mails. Enter the mail server hostname or IP address by selecting **Administration > Appliance > Configure Mailroute**.

Procedure

-
- Step 1** Click **Email Report**. A the right pane refreshes with an Email properties dialog box.
 - Step 2** Enter the following:



Tip If email notification is not working, you may need to configure the mailroute by selecting **Administration > Appliance > Configure Mailroute**.

Field	Description
To	Enter the email address of the person to whom you want to send the report. An entry in this field is required.
Cc	Enter email addresses of persons that you want to copy on the email.
Subject	Enter a subject for the email.
Attachment Type	From the list, select the format in which you would like the report sent: CSV, PDF, or XML. CSV and XML formats are designed to be used by automated tools.
Message	Enter any message you would like to send.

Step 3 To cancel the email, click **Cancel**.

Step 4 To send the email immediately, click **Send Now**.

Step 5 To schedule the email for later:

- a. Click **Schedule**. The schedule job dialog box appears.
- b. Enter the following:

Field	Description
Job Name	Enter a name for the job. For more information, see Naming Guidelines, page A-1 .
Specify the Days Worth or Report Data	Enter the number of days for which you want data emailed. Note This entry is applicable to Trends reports only.
Start Date	From the list, select the date you would like to send the email.
Start Time	From the list, select the time you would like to send the email.

Field	Description
Repeat	
Enable	Check if you want to set up a scheduled job that periodically sends email.
Every	From the list, select the period of time you would like the email sent.

- Step 6** Do one of the following:
- Click **Cancel** to cancel the schedule.
 - Click **Finish** to complete scheduling. You receive a confirmation message that your email has been scheduled.
- Step 7** To view, delete, or edit the scheduled email jobs, see [Scheduling Email Jobs, page 6-90](#)

Scheduling Email Jobs

This window allows you to view information about email jobs you have scheduled. It also allows you to delete them and edit them.

The length of time job data is retained is 30 days by default. To change the default setting, select **Devices > Discover > Inventory > Polling**.



Note

Your login determines whether you can use this option.

Procedure

Step 1 Select **Reports > Scheduled Email Jobs**. The Email Jobs window appears.

Field	Description
Job Name	The name of the job. For more information, see Naming Guidelines, page A-1 .
Recurring	Indicates whether it is a recurring job.
Next Schedule	Indicates when the job runs again.

For information on how to sort table data, see [Sorting Table Data, page 1-11](#).

Step 2 To delete a job, select it, then click **Delete Email Job**.

Step 3 To view an email job, select it, then click **View Email Job**. See [Viewing Email Job Details, page 6-91](#).

Step 4 To edit a job, select it, then click **Edit Email Job**. See [Editing an Email Job, page 6-92](#).

Viewing Email Job Details

The following tables are displayed in a window when you select a job in **Reports > Scheduled Email Jobs**, then click **View Email Job**.

Report Properties

Column	Description
User Name	The name of the user who scheduled the job.
Report Type	The report type.
Report Name	The report name.

Email Properties

Column	Description
To	The username of the person to whom the report is being emailed.
Cc	The username of the person to whom the report is being copied.
Subject	The email subject.
Email Format	The format in which the report is being emailed.
Body	The text entered into the body of the email.

Schedule Properties

Column	Description
Email Job Name	The name of the email job.
Start Date	The date the report is emailed.
Frequency	The frequency with which the report is to be emailed.

Editing an Email Job

Procedure

- Step 1** Click **Edit Email Report**. The selected email job is displayed.
- Step 2** Change any of the following email properties:

Field	Description
To	Edit the email address of the person to whom you want to send the report. An entry in this field is required.
Cc	Edit email addresses of persons that you want to copy on the email.

Field	Description
Subject	Edit the subject for the email.
Attachment Type	From the list, select the format in which you would like the report sent: CSV, PDF, or XML.
Message	Edit any message you would like to send.



Tip If email notification is not working, you may need to configure the mailroute by selecting **Administration > Appliance > Configure Mailroute**.

Step 3 Change any part of the following email schedule:

Field	Description
Start Date	Edit the date the report is emailed.
Start Time	Edit the time the report is emailed.
Repeat	Change the setting for scheduling a recurring job by deselecting or selecting the checkbox.
Every	Change the period of time you want the email sent.

Step 4 Click **Save** to save your edits, or **Cancel** to discard them.

Exporting URL-Based Report Data



Note

This procedure can only be performed by the system administrator with the username admin.

Procedure

Step 1 After you have logged in to the WLSE, enter the following URL in your browser:

http://{WLSE name:port |
ipaddress:port}/servlet/com.cisco.nm.wlse.util.WLSEReportsExportServlet?
{parameters}

The parameters are as follows and are case sensitive:

reporttype={Wireless Client | group | device}

id={group name | client macaddress | device name | device ip address}

family= {Router | Switch | AccessPoint | IOSAccessPoint | Wireless Client | EAP | RADIUS | PEAP | EAP-MD5 | group}

reportName = {name} Enter the name of the report.

filetype= {csv | xml | pdf}

reportcategory= {current | trends}

tzOffset= {time} The time zone offset in minutes for GMT/UTC. Add a + (plus) or - (minus) as appropriate. For example, -300 minutes means 5 hours.

For trend reports, you must add the following parameters:

startdate={YYYY-MM-DD-hh-mm-ss}

enddate={YYYY-MM-DD-hh-mm-ss}



Note The start date and end date are interpreted relative to the time zone offset provided.

topNVal This is required only to display Top N Reports.

DataFrequency={ **Hourly** | **Weekly** | **Daily** | **Monthly** }

An example of a URL to generate CSV output for Group Performance Report: RF Utilization, for a group of 350 access points, with start date and time of July 21 00:00:00 GMT+05:30 2003, and an end date and time of July 21 23:59:59 GMT+05:30 2003 is as follows:

```
http://172.10.29.117:1741/servlet/com.cisco.nm.wlse.util.WLSEReportsExportServlet?id=350%20AP&reporttype=group&family=group&reportName=Group%20Performance%20Report%20%3A%20RF%20Utilization&tzOffset=330&filetype=csv&reportcategory=trends&startdate=2003-7-21-00-00-00&enddate=2003-7-21-23-59-59
```

