



Performing a Site Survey

This appendix explains how the site survey utility can be used when conducting a site survey.

The following topics are covered in this appendix:

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- [Opening the Site Survey Utility, page F-3](#)
- [Selecting the Client Adapter, page F-3](#)
- [Using the Associated AP Status Tab, page F-4](#)
- [Using the AP Scan List Tab, page F-8](#)
- [Using the Proximity Beeper, page F-18](#)
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Overview

**Note**

This appendix applies only to people who are responsible for conducting a site survey to determine the best placement of infrastructure devices within a wireless network.

The site survey utility can assist you in conducting a site survey. The utility operates at the RF level and is used to determine the best placement and coverage (overlap) for your network's infrastructure devices. During a site survey, the current status of the network is read from the client adapter, and the status display is updated four times per second so you can accurately gauge network performance. The feedback that you receive can help you to eliminate areas of low RF signal levels that can result in a loss of connection between the client adapter and its associated access point (or other infrastructure device).

The site survey utility operates in a passive mode. That is, it does not initiate any RF network traffic; it simply listens to the traffic that the client adapter hears and displays the results.

Guidelines

Keep the following guidelines in mind when preparing to perform a site survey:

- Perform the site survey when the RF link is functioning with all other systems and noise sources operational.
- Execute the site survey entirely from the mobile station.

Additional Information

Also consider the following operating and environmental conditions when performing a site survey:

- **Data rates**—Sensitivity and range are inversely proportional to data bit rates. Therefore, the maximum radio range is achieved at the lowest workable data rate, and a decrease in receiver threshold sensitivity occurs as the radio data increases.
- **Antenna type and placement**—Proper antenna configuration is a critical factor in maximizing radio range. As a general rule, range increases in proportion to antenna height.
- **Physical environment**—Clear or open areas provide better radio range than closed or filled areas. Also, the less cluttered the work environment, the greater the range.
- **Obstructions**—A physical obstruction such as metal shelving or a steel pillar can hinder the performance of wireless devices. Avoid placing these devices in a location where a metal barrier is between the sending and receiving antennas.
- **Building materials**—Radio penetration is greatly influenced by the building material used in construction. For example, drywall construction allows greater range than concrete blocks, and metal or steel construction is a barrier to radio signals.

**Note**

Refer to the hardware installation guide for your infrastructure device for additional information on factors affecting placement.

Opening the Site Survey Utility

To open the site survey utility, choose **Start > Programs > Cisco Aironet > Aironet Site Survey Utility**.

**Note**

If you specified a different program folder during installation, you must access the site survey utility from that folder.

**Note**

The site survey utility is installed on your computer only if you checked the Install Site Survey Utility check box during the installation of the client adapter software. If you did not check this check box and want to use the site survey utility, uninstall the client adapter software and reinstall it, making sure to check the site survey check box.

Selecting the Client Adapter

**Note**

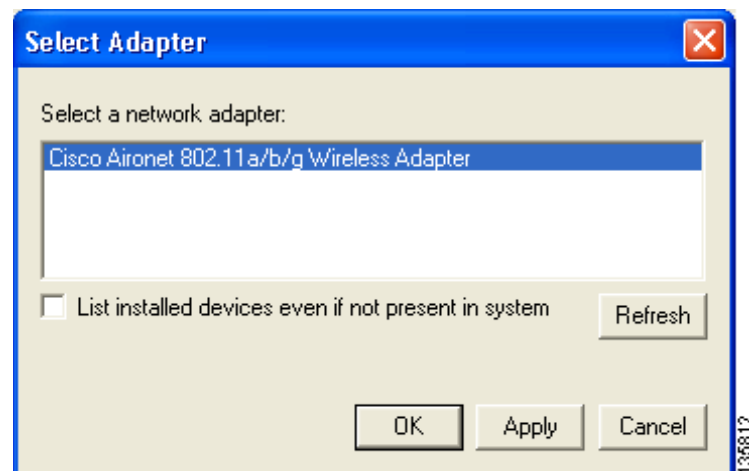
The site survey utility can be used only with CB21AG and PI21AG client adapters.

When the site survey utility starts, it scans for client adapters. If only one adapter is detected, it is selected automatically. However, if the utility detects multiple adapters or no adapters, the Select Adapter window appears (see [Figure F-1](#)).

**Note**

You can manually open this window at any time to select a different client adapter. Simply choose **Select Adapter** from the site survey utility's Action drop-down menu.

Figure F-1 Site Survey Utility - Select Adapter Window



Follow these steps to select the desired client adapter.

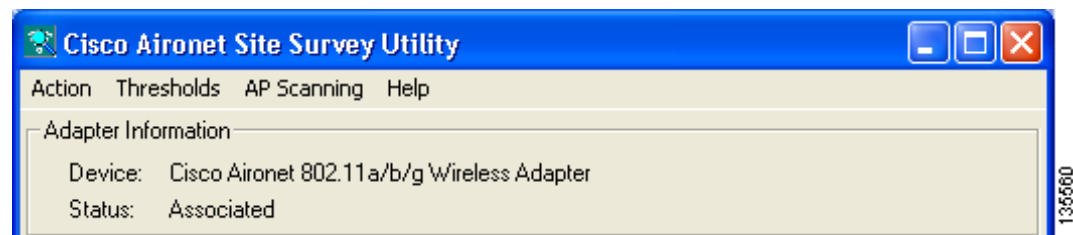
- Step 1** If you want to be able to choose client adapters that are installed but not physically present in your computer, check the **List installed devices even if not present in system** check box.
- Step 2** From the Select a Network Adapter list, select the client adapter that you want to use with the site survey utility.



Note Click **Refresh** to update the list of available client adapters (for instance, after an adapter has been ejected or inserted).

- Step 3** Click **OK** to save your selection and exit the Select Adapter window. The top of the site survey utility's main window (see [Figure F-2](#)) shows the client adapter that is being used with the utility and its current association status (Associated, Not Associated, Device Not Present, or Not a Wireless Adapter).

Figure F-2 Site Survey Utility - Top of Main Window



Using the Associated AP Status Tab

You can perform these functions from the Associated AP Status tab:

- Specify display units, [page F-4](#)
- View the access point's status, [page F-5](#)

Follow the instructions on the pages indicated to perform these functions.

Specifying Display Units

The **Display in percent** check box at the bottom of the Associated AP Status tab enables you to specify how display units are shown.

- Unchecking this check box causes the signal strength and noise level to be shown in decibels with respect to milliwatts (dBm) and the signal-to-noise ratio to be shown in decibels (db). This option, which is the default value, provides a more accurate representation of the data being presented than the percentage option.
- Checking this check box causes the signal strength, signal quality or beacons received, and overall link quality to be shown as a percentage.

Viewing the Access Point's Status

The Associated AP Status tab shows the status of the access point to which your client adapter is associated. [Figure F-3](#) shows the tab with display units shown in dBm, and [Figure F-4](#) shows the tab with display units shown as a percentage.

Figure F-3 Site Survey Utility - Associated AP Status Tab (with Display Units in dBm)

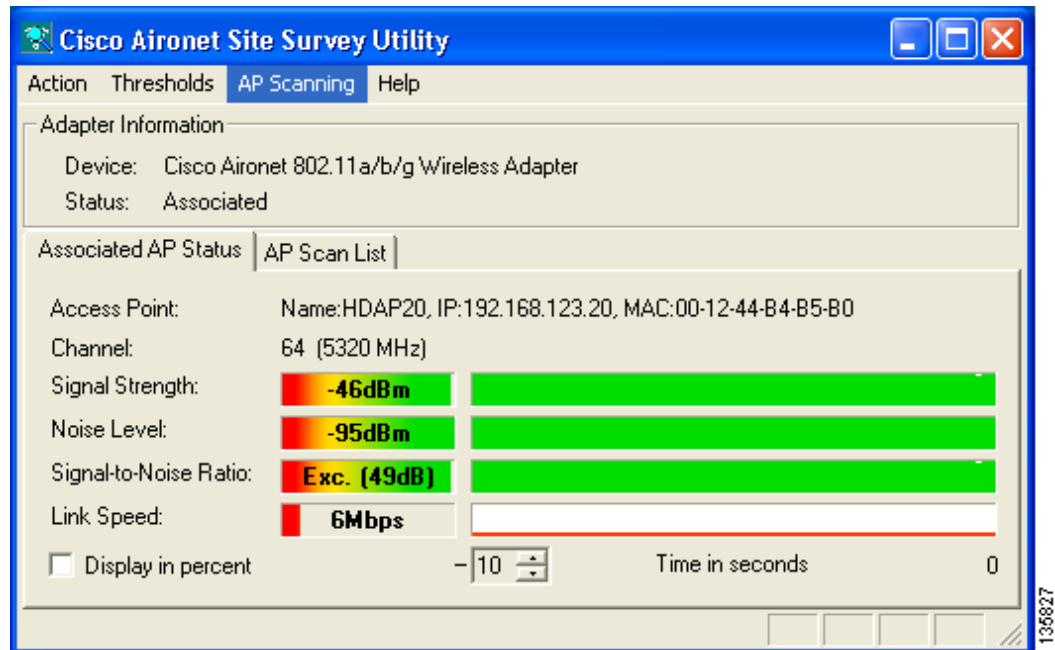


Figure F-4 Site Survey Utility - Associated AP Status Tab (with Display Units as a Percentage)

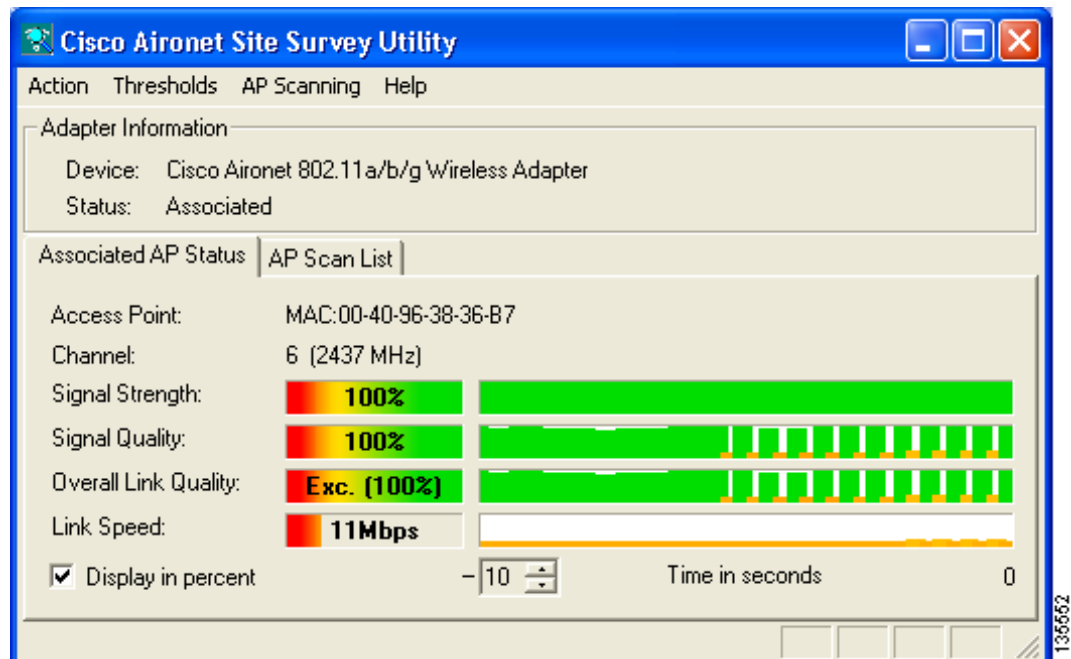


Table F-1 interprets the information that is displayed on the Associated AP Status tab.

**Note**

The trend graphs to the right of the smaller bar graphs provide a graphical representation of activity in the past 10 to 60 seconds. The height of an individual trend graph is proportional to the width of its corresponding bar graph. The time is displayed as a negative value to indicate that the data is older at the left edge of the graph than at the right. Use the up and down arrows to select the desired number of seconds from -10 through -60. The default value is -10.

Table F-1 Site Survey Utility - Associated AP Status

Associated AP Status Parameter	Description
Access Point	<p>The access point to which your client adapter is associated. This field may show the access point's name, IP address, and MAC address.</p> <p>Note This information is shown only if the access point was configured with a name or IP address, Aironet Extensions are enabled (on access points running Cisco IOS release 12.2(4)JA or greater), and the access point transmits this information.</p> <p>Note This field shows up to 15 characters for the access point name although the name may be longer.</p> <p>Note If Aironet Extensions are disabled, the IP address of the associated access point is shown as 0.0.0.0.</p> <p>Note This field displays the MAC address of the access point's Ethernet port (for access points that do not run Cisco IOS software) or the MAC address of the access point's radio (for access points that run Cisco IOS software). The MAC address of the Ethernet port on access points that run Cisco IOS software is printed on a label on the back of the device.</p>
Channel	<p>The channel and radio frequency (in MHz) that the access point is currently using for communications.</p> <p>Value: Dependent on radio band and regulatory domain</p>
Signal Strength	<p>The signal strength of the most recently received packets. The higher the value and the wider the bar graph, the stronger the signal.</p> <p>The trend graph to the right of the bar graph provides a visual interpretation of the signal strength over time. Differences in signal strength are indicated by the following colors: green (strongest), yellow (middle of the range), and red (weakest).</p> <p>Range: -95 to -45 dBm or 0 to 100%</p> <p>Note The actual dBm reading could exceed the stated range.</p>

Table F-1 Site Survey Utility - Associated AP Status (continued)

Associated AP Status Parameter	Description
Noise Level	<p>The level of background radio frequency energy. The lower the value and the wider the bar graph, the less background noise present.</p> <p>The trend graph to the right of the bar graph provides a visual interpretation of the level of background noise over time. Differences in background noise level are indicated by the following colors: green (low noise), yellow (middle of the range), and red (high noise).</p> <p>Range: -45 to -95 dBm</p> <p>Note The actual reading could exceed the stated range.</p> <p>Note This parameter appears only if the Display in Percent check box is unchecked.</p>
Signal Quality	<p>The signal quality of the most recently received packets. The higher the value and the wider the bar graph, the clearer the signal.</p> <p>The trend graph to the right of bar graph provides a visual interpretation of the signal quality over time. Differences in signal quality are indicated by the following colors: green (highest quality), yellow (average), and red (lowest quality).</p> <p>Range: 0 to 100%</p> <p>Note This parameter appears only if the Display in Percent check box is checked.</p>
Beacons Received	<p>The percentage of beacon packets received from the access point versus those expected to have been sent. The higher the value and the wider the bar graph, the clearer the signal.</p> <p>The trend graph to the right of bar graph provides a visual interpretation of the signal clarity over time. Differences in signal clarity are indicated by the following colors: green (highest quality), yellow (average), and red (lowest quality).</p> <p>Example: The access point sends out 10 beacons per second, so you would expect the client adapter to receive 50 beacon packets in 5 seconds. If it receives only 40 packets, the percentage of beacons received would be 80%.</p> <p>Range: 0 to 100%</p> <p>Note This parameter appears only if the Display in Percent check box is checked and the client adapter does not provide a signal quality value.</p>

Table F-1 Site Survey Utility - Associated AP Status (continued)

Associated AP Status Parameter	Description
Signal-to-Noise Ratio	<p>The difference between the signal strength and the noise level. The higher the value and the wider the bar graph, the better the client adapter's ability to communicate with the access point.</p> <p>The trend graph to the right of the bar graph provides a visual interpretation of the signal-to-noise ratio over time. Differences in the client adapter's ability to communicate are indicated by the following colors: green (highest quality), yellow (average), and red (lowest quality).</p> <p>Range: Poor, Fair, Good, Excellent; 0 to 50 dB</p> <p>Note This parameter appears only if the Display in Percent check box is unchecked.</p>
Overall Link Quality	<p>A combination of signal strength and signal quality. The higher the value and the wider the bar graph, the better the client adapter's ability to communicate with the access point.</p> <p>The trend graph to the right of the bar graph provides a visual interpretation of the overall link quality over time. Differences in quality are indicated by the following colors: green (highest quality), yellow (average), and red (lowest quality).</p> <p>Value: Poor, Fair, Good, Excellent; 0 to 100%</p> <p>Note This parameter appears only if the Display as Percent check box is checked.</p>
Link Speed	<p>The site survey utility monitors transmitted network traffic, and the link speed reflects the current transmit rate of data packets.</p> <p>The trend graph provides a visual interpretation of the packet transmit rate over time. Differences in link speed are indicated by the following colors: green (fastest), yellow (middle of the range), and red (slowest).</p> <p>Value: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, or 54 Mbps, depending on radio band</p>

Using the AP Scan List Tab

You can perform these functions from the AP Scan List tab:

- View the AP scan list, [page F-9](#)
- Pause the AP scan list, [page F-13](#)
- View AP details, [page F-13](#)
- Generate an AP scan log file, [page F-16](#)
- View an accumulation of access points, [page F-18](#)

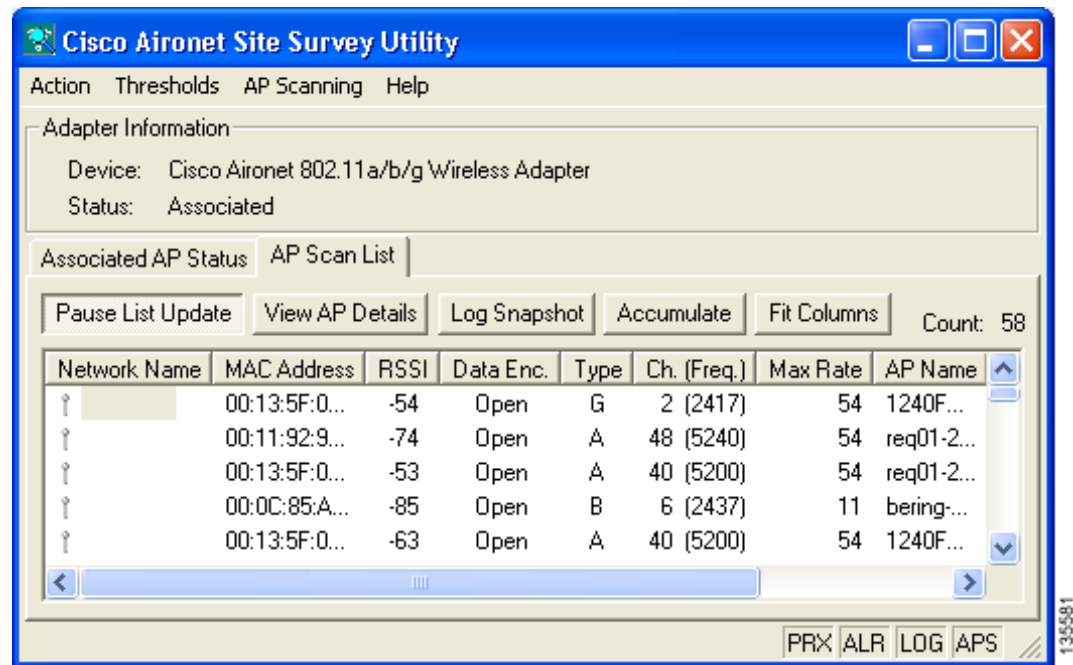
Follow the instructions on the pages indicated to perform these functions.

Viewing the AP Scan List


Your client adapter can detect nearby access points by the beacon signals that the access points continually transmit. The AP scan list displays a continuously updated list of the access points detected by your client adapter as well as the information contained in their beacons.

To view the AP scan list, click the **AP Scan List** tab. The AP scan list appears (see [Figure F-5](#)).

Figure F-5 Site Survey Utility - AP Scan List



To view the entire list of access points and all their information, perform one of the following:

- Click the resize tab in the lower right corner of the main window and drag it until the window reaches the desired size. 
- Use the vertical and horizontal scroll bars.
- Click the middle button in the top right corner of the window.



Note

Clicking **Fit Columns** resizes the columns on the AP scan list so that they are as wide as their widest text. This feature enables you to view the text in each column without it being truncated. However, you can also manually resize the columns by clicking on the edges of the column headers and dragging.

[Table F-2](#) interprets the information that is displayed in the AP scan list.



Note

The AP Detailed Information window provides details for many of the parameters listed in [Table F-2](#). See the “[Viewing AP Details](#)” section on [page F-13](#) for additional information.

**Note**

The AP Scanning drop-down menu contains options that enable you to save and open the AP scan list. These two options are available only when the AP Scan List tab is selected. See the [“Using AP Scanning” section on page F-26](#) for more information.

Table F-2 Site Survey Utility - AP Scan List







AP Scan List Parameter	Description						
Count	The number of rows, or access points, in the scan list. Note This parameter appears above the AP scan list and to the right.						
Network Name	The network name, or service set identifier (SSID), indicates the name of an available wireless network. The icon to the left of the SSID provides information on link status.						
	<table border="1"> <thead> <tr> <th>Icon</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td></td> <td>An available wireless network.</td> </tr> <tr> <td></td> <td>The wireless network to which your client adapter is currently associated.</td> </tr> </tbody> </table>	Icon	Description		An available wireless network.		The wireless network to which your client adapter is currently associated.
Icon	Description						
	An available wireless network.						
	The wireless network to which your client adapter is currently associated.						
	Note The SSID of a Cisco IOS access point appears in the list of available networks only if a Guest Mode SSID is enabled or the Broadcast SSID in Beacon option is selected. Refer to the software configuration guide for your access point for additional information.						
MAC Address	The access point's MAC address. Note This field displays the MAC address of the access point's Ethernet port (for access points that do not run Cisco IOS software) or the MAC address of the access point's radio (for access points that run Cisco IOS software). The MAC address of the Ethernet port on access points that run Cisco IOS software is printed on a label on the back of the device.						
RSSI	The received signal strength indicator (RSSI) is a measure of signal strength in decibels with respect to milliwatts (dBm).						
Time of Day	The date and time when the signal strength of each access point was at its maximum. They appear in this format: 2005-07-20 16:13:09. Note The time is based on a 24-hour clock. Note This field is visible only in Accumulate mode. See the “Viewing an Accumulation of Access Points” section on page F-18 for information on the Accumulate mode.						

Table F-2 Site Survey Utility - AP Scan List (continued)

AP Scan List Parameter	Description	
Data Encryption	Indicates whether the data exchanged with this access point is encrypted. Value: Secure or Open	
	Value	
	Description	
	Secure	The data exchanged with this access point is encrypted.
	Open	The data exchanged with this access point is unencrypted.
Type	The IEEE 802.11 standard that describes the access point's radio band. Value: A, B, or G	
Channel (Frequency)	The channel and radio frequency (in MHz) that the access point is currently using for communications. Value: Dependent on radio band and regulatory domain	
Max Rate	The maximum rate at which the client adapter can transfer data with an access point. The supported rates of both the client adapter and the access point are examined, and the highest rate that they have in common is the one that is used.	
AP Name	The access point's name. It is shown only if the access point was configured with a name, Aironet Extensions are enabled (on access points running Cisco IOS Release 12.2(4)JA or later), and the access point transmits this information. Note This field shows up to 15 characters although the name of the access point may be longer.	
Load	The access point's channel utilization in terms of traffic and throughput. Value: 0 to 100% Note This parameter is shown only if the access point is using QoS Basis Service Set (QBSS) or call admission control (CAC). If neither is used, this field is left blank. If both are used, the value comes from the QBSS.	
CCX	The version of Cisco Compatible Extensions (CCX) supported by the access point. It is shown only if the access point transmits this information. Value: 1, 2, 3, or 4	

Table F-2 Site Survey Utility - AP Scan List (continued)

AP Scan List Parameter	Description																						
Other Information	<p>A list of miscellaneous values that may appear depending on the access point's current status and the information that it transmits.</p> <p>Values: See table below.</p>																						
	<table border="1"> <thead> <tr> <th>Value</th> <th>Description</th> </tr> </thead> <tbody> <tr> <td>Ad-Hoc</td> <td>Indicates that the device is not an access point but another client adapter operating in ad hoc mode.</td> </tr> <tr> <td>CAC</td> <td>Indicates that the access point is using distributed call admission control (CAC).</td> </tr> <tr> <td>CEC</td> <td>Indicates that the access point is using Cisco extended capabilities (CEC).</td> </tr> <tr> <td>Power</td> <td>Indicates that the access point can limit the transmitting power of the client adapter. The power limit is shown in milliwatts (mW).</td> </tr> <tr> <td>Qos</td> <td>Indicates that the access point is using quality of service (QoS). QoS on wireless LANs (WLAN) provides prioritization of traffic from the access point over the WLAN based on traffic classification.</td> </tr> <tr> <td>RM-Normal RM-APScan RM-CliWlk</td> <td>Indicates that the access point is using radio management. RM-Normal indicates normal status, RM-APScan indicates AP radio scan, and RM-CliWlk indicates client walkabout. Any unrecognized value appears as RM-State?.</td> </tr> <tr> <td>Ssidl</td> <td>Indicates that the access point is using the SSID List feature. The number of hidden SSIDs is shown as a number (for example, Ssidl:2).</td> </tr> <tr> <td>WMM</td> <td>Indicates that the access point is using Wi-Fi Multimedia (WMM), a component of the IEEE 802.11e wireless LAN standard for quality of service (QoS).</td> </tr> <tr> <td>WPA</td> <td>Indicates that the access point is using Wi-Fi Protected Access (WPA), a standards-based security solution from the Wi-Fi Alliance that provides data protection and access control for wireless LAN systems. It is compatible with the IEEE 802.11i standard but was implemented prior to the standard's ratification. WPA uses TKIP and MIC for data protection and 802.1X for authenticated key management.</td> </tr> <tr> <td>WPA2</td> <td>Indicates that the access point is using Wi-Fi Protected Access 2 (WPA2), the next generation of Wi-Fi security. It is the Wi-Fi Alliance's implementation of the ratified IEEE 802.11i standard. WPA2 uses AES-CCMP for data protection and 802.1X for authenticated key management.</td> </tr> </tbody> </table>	Value	Description	Ad-Hoc	Indicates that the device is not an access point but another client adapter operating in ad hoc mode.	CAC	Indicates that the access point is using distributed call admission control (CAC).	CEC	Indicates that the access point is using Cisco extended capabilities (CEC).	Power	Indicates that the access point can limit the transmitting power of the client adapter. The power limit is shown in milliwatts (mW).	Qos	Indicates that the access point is using quality of service (QoS). QoS on wireless LANs (WLAN) provides prioritization of traffic from the access point over the WLAN based on traffic classification.	RM-Normal RM-APScan RM-CliWlk	Indicates that the access point is using radio management. RM-Normal indicates normal status, RM-APScan indicates AP radio scan, and RM-CliWlk indicates client walkabout. Any unrecognized value appears as RM-State?.	Ssidl	Indicates that the access point is using the SSID List feature. The number of hidden SSIDs is shown as a number (for example, Ssidl:2).	WMM	Indicates that the access point is using Wi-Fi Multimedia (WMM), a component of the IEEE 802.11e wireless LAN standard for quality of service (QoS).	WPA	Indicates that the access point is using Wi-Fi Protected Access (WPA), a standards-based security solution from the Wi-Fi Alliance that provides data protection and access control for wireless LAN systems. It is compatible with the IEEE 802.11i standard but was implemented prior to the standard's ratification. WPA uses TKIP and MIC for data protection and 802.1X for authenticated key management.	WPA2	Indicates that the access point is using Wi-Fi Protected Access 2 (WPA2), the next generation of Wi-Fi security. It is the Wi-Fi Alliance's implementation of the ratified IEEE 802.11i standard. WPA2 uses AES-CCMP for data protection and 802.1X for authenticated key management.
Value	Description																						
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CEC	Indicates that the access point is using Cisco extended capabilities (CEC).																						
Power	Indicates that the access point can limit the transmitting power of the client adapter. The power limit is shown in milliwatts (mW).																						
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WPA2	Indicates that the access point is using Wi-Fi Protected Access 2 (WPA2), the next generation of Wi-Fi security. It is the Wi-Fi Alliance's implementation of the ratified IEEE 802.11i standard. WPA2 uses AES-CCMP for data protection and 802.1X for authenticated key management.																						

Pausing the AP Scan List

The AP scan list is updated continually. To pause the current list, click **Pause List Update** above the AP scan list.



Note

AP scanning continues to occur in the background when the Pause List Update button is depressed. For example, the threshold based on the AP scan list count continues to function.



Note

Clicking this button again resumes the list update.

Viewing AP Details

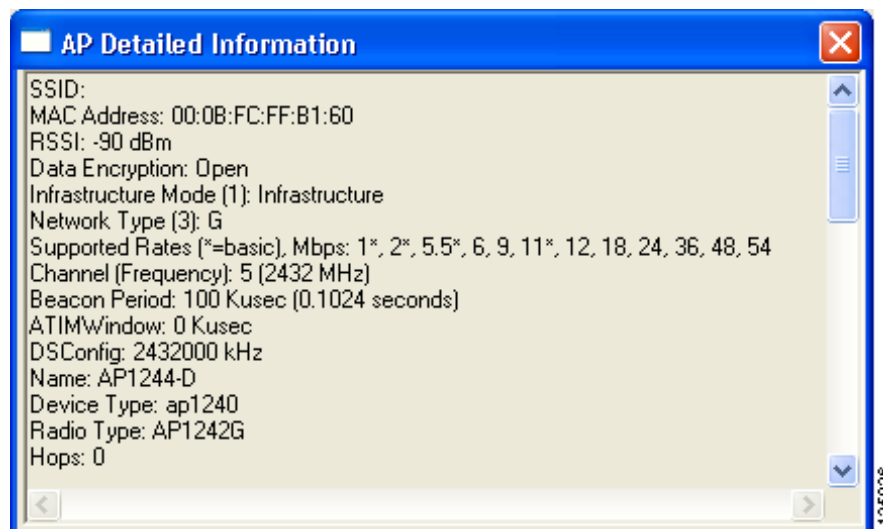
To view details for a particular access point in the AP scan list, select the desired network name in the scan list and click **View AP Details**. The AP Detailed Information window appears (see [Figure F-6](#)).



Note

You can also open the AP Detailed Information window by double-clicking in the first column of the desired row.

Figure F-6 Site Survey Utility - AP Detailed Information Window



[Table F-3](#) interprets the information that is displayed in the AP Detailed Information window.



Note

The AP Detailed Information window contains text summaries of all the information elements present in the access point's beacon or probe response. As a result, the window may contain different information than that described in [Table F-3](#).

**Note**

If you also want the AP Detailed Information window to display debugging information, including a hexadecimal debug-style dump of raw access point scan data, choose **Options** from the site survey utility's Action drop-down menu and check the **Enable Expert Mode for AP Detailed Information** check box. The debug information appears at the bottom of the AP Detailed Information window under the "Expert Mode (Debug Dump)" heading.

Table F-3 Site Survey Utility - AP Detailed Information


Detailed Information Parameter	Description
SSID	The network name, or service set identifier (SSID), indicates the name of the access point's wireless network.
MAC Address	The access point's MAC address. Note This field displays the MAC address of the access point's Ethernet port (for access points that do not run Cisco IOS software) or the MAC address of the access point's radio (for access points that run Cisco IOS software). The MAC address of the Ethernet port on access points that run Cisco IOS software is printed on a label on the back of the device.
RSSI	The received signal strength indicator (RSSI) is a measure of signal strength in decibels with respect to milliwatts (dBm).
Data Encryption	Indicates whether the data exchanged with this access point is encrypted. Value: Secure or Open
Infrastructure Mode	Indicates whether the device is an access point operating in infrastructure mode or another client adapter operating in ad hoc mode.  Note Ad hoc mode is not supported in these bands: 5250–5350 MHz and 5470–5725 MHz. Value: Infrastructure or Ad-Hoc
Network Type	The IEEE 802.11 standard that describes the access point's radio band. Value: A, B, or G
Supported Rates	The rates at which the access point is capable of transmitting and receiving data packets. Value: 1, 2, 5.5, 6, 9, 11, 12, 18, 24, 36, 48, or 54 Mbps
Channel (Frequency)	The channel and radio frequency that the access point is currently using for communications. Value: Dependent on radio band and regulatory domain
Beacon Period	The amount of time between access point beacons in Kilomicroseconds (Kμsec). Note One Kμsec equals 1,024 microseconds.

Table F-3 Site Survey Utility - AP Detailed Information (continued)

Detailed Information Parameter	Description
ATIMWindow	<p>Announcement traffic information message (ATIM) window. The brief time period immediately following the transmission of each beacon in an ad hoc network. This value is expressed in Kilomicroseconds (Kμsec).</p> <p>Note One Kμsec equals 1,024 microseconds.</p> <p>Note This parameter's value is 0 when the device is operating in infrastructure mode.</p>
DSConfig	<p>The frequency of the selected channel.</p> <p>Range: 2,412,000 to 2,484,000 kHz (802.11b/g); 5,000,000 to 6,000,000 kHz (802.11a)</p>
Name	<p>The access point's name. It is shown only if the access point was configured with a name, Aironet Extensions are enabled (on access points running Cisco IOS Release 12.2(4)JA or later), and the access point transmits this information.</p> <p>Note This field shows up to 15 characters although the name of the access point may be longer.</p>
Device Type	The access point's model number.
Radio Type	The type of radio used in the access point.
Hops	The number of hops that the packets must take to get to the root. For example, if there is a repeater between your client adapter and the access point to which it is associated, the number of hops is 1.
Load	<p>The access point's channel utilization in terms of traffic and throughput.</p> <p>Note This parameter is shown only if the access point is using QoS Basis Service Set (QBSS) or call admission control (CAC). If neither is used, this field is left blank. If both are used, the value comes from the QBSS.</p>
CWmin	<p>The minimum value used by the access point to calculate a contention window (CW).</p> <p>Note Contention occurs when two or more radios in the same area try to transmit at the same time. When this occurs, the radios wait for a certain amount of time before trying again. Because contention can occur more than once, the radios use a series of progressively longer wait periods, or "windows," each time they encounter contention for a given packet.</p>
CWmax	<p>The maximum value used by the access point to calculate a contention window (CW).</p> <p>Note Contention occurs when two or more radios in the same area try to transmit at the same time. When this occurs, the radios wait for a certain amount of time before trying again. Because contention can occur more than once, the radios use a series of progressively longer wait periods, or "windows," each time they encounter contention for a given packet.</p>
Associations	The number of associations currently being maintained by the access point.

Table F-3 Site Survey Utility - AP Detailed Information (continued)

Detailed Information Parameter	Description
CCX Version	The version of Cisco Compatible Extensions (CCX) supported by the access point.
Power Limit	The power limit that the access point has set for the client adapter. It is shown in milliwatts (mW).
RM-Normal RM-APScan RM-CliWlk	Indicates that the access point is using radio management. RM-Normal indicates normal status, RM-APScan indicates AP radio scan, and RM-CliWlk indicates client walkabout. Any unrecognized value appears as RM-State?.

Generating an AP Scan Log File

To enter the current contents of the AP scan list into a log file, click **Log Snapshot**. The “Logged current AP Scan List” message appears below the scan list, and the log file is saved. The default filename is SST_APScanLog.txt, and the default location is the directory where the site survey utility is installed.



Note

If desired, you can change the filename and its location using the AP Scan List Logging Configuration window. See the [“Configuring AP Scan Logging” section on page F-26](#) for more information.

If the AP scan list is paused when you click Log Snapshot, the currently displayed data (not the latest available data) is added to the log. Each time you click **Log Snapshot**, the new scan list is written at the end of the existing log file.

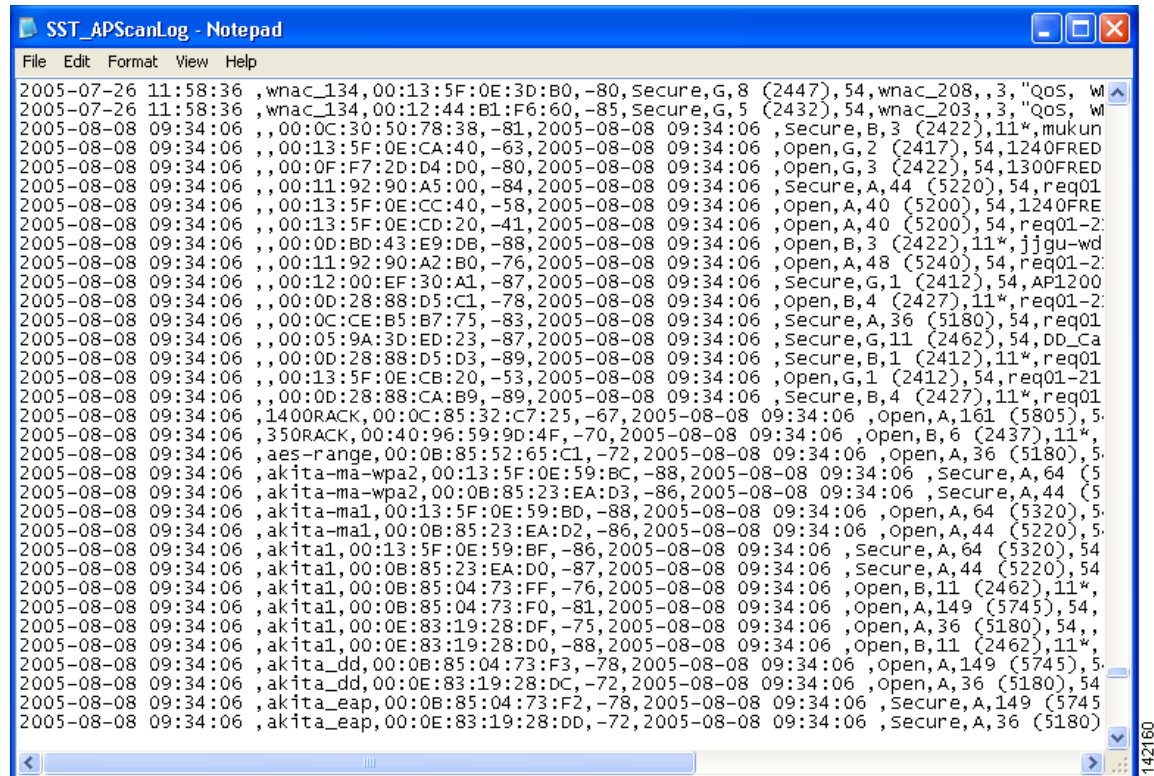
To view the log file, choose **View AP Scan Log** from the AP Scanning drop-down menu. The log file opens in the configured viewer (see [Figure F-7](#)).



Note

The log file can be viewed in Notepad or any other viewer. However, because it is written in a comma-separated values (CSV) format, it can also be opened by a spreadsheet or database program (such as Microsoft Excel). If the file is renamed with a .csv extension, Microsoft Excel would automatically place the values in separate columns.

Figure F-7 Site Survey Utility - AP Scan Log File



```

SST_APScanLog - Notepad
File Edit Format View Help
2005-07-26 11:58:36 ,wnac_134,00:13:5F:0E:3D:B0,-80,Secure,G,8 (2447),54,wnac_208,,3,"QoS, W
2005-07-26 11:58:36 ,wnac_134,00:12:44:B1:F6:60,-85,Secure,G,5 (2432),54,wnac_203,,3,"QoS, W
2005-08-08 09:34:06 ,,00:0C:30:50:78:38,-81,2005-08-08 09:34:06 ,Secure,B,3 (2422),11*,mukun
2005-08-08 09:34:06 ,,00:13:5F:0E:CA:40,-63,2005-08-08 09:34:06 ,open,G,2 (2417),54,1240FRED
2005-08-08 09:34:06 ,,00:0F:F7:2D:D4:D0,-80,2005-08-08 09:34:06 ,open,G,3 (2422),54,1300FRED
2005-08-08 09:34:06 ,,00:11:92:90:A5:00,-84,2005-08-08 09:34:06 ,Secure,A,44 (5220),54,req01
2005-08-08 09:34:06 ,,00:13:5F:0E:CC:40,-58,2005-08-08 09:34:06 ,open,A,40 (5200),54,1240FRE
2005-08-08 09:34:06 ,,00:13:5F:0E:CD:20,-41,2005-08-08 09:34:06 ,open,A,40 (5200),54,req01-2
2005-08-08 09:34:06 ,,00:0D:BD:43:E9:DB,-88,2005-08-08 09:34:06 ,open,B,3 (2422),11*,jjgu-wd
2005-08-08 09:34:06 ,,00:11:92:90:A2:B0,-76,2005-08-08 09:34:06 ,open,A,48 (5240),54,req01-2
2005-08-08 09:34:06 ,,00:12:00:EF:30:A1,-87,2005-08-08 09:34:06 ,Secure,G,1 (2412),54,AP1200
2005-08-08 09:34:06 ,,00:0D:28:88:D5:C1,-78,2005-08-08 09:34:06 ,open,B,4 (2427),11*,req01-2
2005-08-08 09:34:06 ,,00:0C:CE:B5:B7:75,-83,2005-08-08 09:34:06 ,Secure,A,36 (5180),54,req01
2005-08-08 09:34:06 ,,00:05:9A:3D:ED:23,-87,2005-08-08 09:34:06 ,Secure,G,11 (2462),54,DD_Ca
2005-08-08 09:34:06 ,,00:0D:28:88:D5:D3,-89,2005-08-08 09:34:06 ,Secure,B,1 (2412),11*,req01
2005-08-08 09:34:06 ,,00:13:5F:0E:CB:20,-53,2005-08-08 09:34:06 ,open,G,1 (2412),54,req01-21
2005-08-08 09:34:06 ,,00:0D:28:88:CA:B9,-89,2005-08-08 09:34:06 ,Secure,B,4 (2427),11*,req01
2005-08-08 09:34:06 ,1400RACK,00:0C:85:32:C7:25,-67,2005-08-08 09:34:06 ,open,A,161 (5805),5
2005-08-08 09:34:06 ,350RACK,00:40:96:59:9D:4F,-70,2005-08-08 09:34:06 ,open,B,6 (2437),11*,
2005-08-08 09:34:06 ,aes-range,00:0B:85:52:65:C1,-72,2005-08-08 09:34:06 ,open,A,36 (5180),5
2005-08-08 09:34:06 ,akita-ma-wpa2,00:13:5F:0E:59:BC,-88,2005-08-08 09:34:06 ,Secure,A,64 (5
2005-08-08 09:34:06 ,akita-ma-wpa2,00:0B:85:23:EA:D3,-86,2005-08-08 09:34:06 ,Secure,A,44 (5
2005-08-08 09:34:06 ,akita-ma1,00:13:5F:0E:59:BD,-88,2005-08-08 09:34:06 ,open,A,64 (5320),5
2005-08-08 09:34:06 ,akita-ma1,00:0B:85:23:EA:D2,-86,2005-08-08 09:34:06 ,open,A,44 (5220),5
2005-08-08 09:34:06 ,akita1,00:13:5F:0E:59:BF,-86,2005-08-08 09:34:06 ,Secure,A,64 (5320),54
2005-08-08 09:34:06 ,akita1,00:0B:85:23:EA:D0,-87,2005-08-08 09:34:06 ,Secure,A,44 (5220),54
2005-08-08 09:34:06 ,akita1,00:0B:85:04:73:FF,-76,2005-08-08 09:34:06 ,open,B,11 (2462),11*,
2005-08-08 09:34:06 ,akita1,00:0B:85:04:73:F0,-81,2005-08-08 09:34:06 ,open,A,149 (5745),54
2005-08-08 09:34:06 ,akita1,00:0E:83:19:28:DF,-75,2005-08-08 09:34:06 ,open,A,36 (5180),54,,
2005-08-08 09:34:06 ,akita1,00:0E:83:19:28:D0,-88,2005-08-08 09:34:06 ,open,B,11 (2462),11*,
2005-08-08 09:34:06 ,akita_dd,00:0B:85:04:73:F3,-78,2005-08-08 09:34:06 ,open,A,149 (5745),5
2005-08-08 09:34:06 ,akita_dd,00:0E:83:19:28:DC,-72,2005-08-08 09:34:06 ,open,A,36 (5180),54
2005-08-08 09:34:06 ,akita_eap,00:0B:85:04:73:F2,-78,2005-08-08 09:34:06 ,Secure,A,149 (5745
2005-08-08 09:34:06 ,akita_eap,00:0E:83:19:28:DD,-72,2005-08-08 09:34:06 ,Secure,A,36 (5180)

```

The log entries are time-stamped and appear in ASCII text. Each line typically represents a different access point.



Note

If the Accumulate button is depressed when you click Log Snapshot, two timestamps appear on each line. The timestamp in column one of the log file is the time when the log entry is made. The second timestamp, which appears only when the Accumulate button is depressed, is the Time of Day. This value indicates the date and time when the signal strength of each access point was at its maximum. Both timestamps appear in this format: 2005-07-20 16:13:09. The time is based on a 24-hour clock. For example, the first two lines in Figure F-7 show only one timestamp while the remaining lines show both timestamps.



Note

As an alternative to using the Log Snapshot button, you can configure the site survey utility to automatically copy the contents of the AP scan list to a log file using the AP Scanning drop-down menu options. See the “Using AP Scanning” section on page F-26 for more information.

Viewing an Accumulation of Access Points

Clicking the **Accumulate** button changes the behavior of the AP scan list. Instead of displaying only the current AP scan list, the list includes all of the access points (based on MAC address) that have appeared in the scan list since the Accumulate button was last clicked.

After a scan line is added to the list, it is never removed nor updated with new scan information unless the signal strength (RSSI) of the latest scan is greater than or equal to any detected previously from that access point. The Time of Day field, which appears only in Accumulate mode, indicates the date and time when the signal strength of each access point was at its maximum.

The Accumulate mode provides a convenient way to list all access points within a facility, not just those that may be visible at one time from a particular location. By using the information in the Time of Day field with a site map and a wristwatch, you may be able to determine the approximate location of each access point in the list.



Note

Clicking the Accumulate button again deactivates the Accumulate mode and returns the current AP scan list.



Note

You can use the Save AP Scan List and Open AP Scan List options in the AP Scanning drop-down menu to save and reload accumulated scan lists back into the application at a later time.

Using the Proximity Beeper

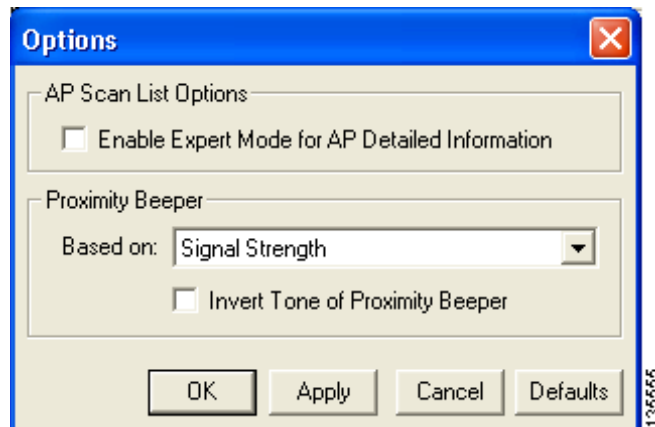
You can use the site survey utility's proximity beeper to identify areas where wireless coverage is good or weak based on the client adapter's proximity to access points within a particular area. The beeper can be set to sound as the client adapter approaches or moves farther away from an access point.

Configuring the Proximity Beeper

Follow these steps to configure the proximity beeper.

-
- Step 1** Choose **Options** from the site survey utility's Action drop-down menu. The Options window appears (see [Figure F-8](#)).

Figure F-8 Site Survey Utility - Options Window



Step 2 Choose one of these options on which the proximity beeper will be based:

Proximity Beeper Option	Description
Signal Strength	The beeper sounds as an access point's signal becomes stronger. Note This is the default value.
Noise Level/Signal Quality	The beeper sounds as the level of background radio frequency energy decreases or the signal quality of the most recently received packets improves.
Signal-to-Noise Ratio/ Overall Link Quality	The beeper sounds as the client adapter's ability to communicate with an access point improves.
Link Speed	The beeper sounds as the transmit rate of data packets between the client adapter and an access point becomes faster.

Step 3 Perform one of the following to set the tone of the proximity beeper:

- Uncheck the **Invert Tone of Proximity Beeper** check box if you want the beeper's rate and pitch to increase in response to the option selected in [Step 2](#). The beeps become more alarming as the client adapter moves closer to an access point, enabling you to identify areas of good coverage. This is the default setting.
- Check the **Invert Tone of Proximity Beeper** check box if you want the beeper's rate and pitch to decrease in response to the option selected in [Step 2](#). The beeps become more alarming as the client adapter approaches areas of weaker coverage.

Step 4 Click **OK** to save your changes.

Step 5 Follow the instructions in the [“Enabling the Proximity Beeper”](#) section below to enable the proximity beeper.

Enabling the Proximity Beeper

To enable the proximity beeper, choose **Enable Proximity Beeper** from the Action drop-down menu or press **F6**. When the beeper is enabled, a check mark appears next to the Enable Proximity Beeper menu option, and PRX appears in the site survey utility's status bar.

**Note**

To disable the proximity beeper, choose the **Enable Proximity Beeper** menu option again so that the check mark disappears or re-press **F6**.

Using Thresholds

You can perform these threshold-related functions:

- Configure threshold values, [page F-20](#)
- Enable threshold triggers, [page F-23](#)
- Enter a comment in the threshold log file, [page F-24](#)
- View the threshold log file, [page F-24](#)
- Delete the threshold log file, [page F-25](#)

Follow the instructions on the pages indicated to perform these functions.

Configuring Threshold Values

Follow these steps to configure threshold values that trigger audible alerts, entries in the threshold log file, or both.

-
- Step 1** Choose **Configure Thresholds** from the site survey utility's Thresholds drop-down menu. The Threshold Logging Configuration window appears (see [Figure F-9](#)).

Figure F-9 Site Survey Utility - Threshold Logging Configuration Window

- Step 2** Check the check box for each condition below for which you want to trigger audible alerts, text entries in the threshold log file, or both. You can check as many as you like.

Condition	Description
A change in the client adapter's association status	Triggers audible alerts, log file entries, or both when the client adapter's association status changes. Default: Unchecked
Connectivity with this URL or IP Address	Triggers audible alerts, log file entries, or both when the client adapter is able to successfully access the specified URL or IP address after associating to an access point. When the client adapter associates to an access point, the connectivity test transmits ping requests to the specified URL or IP address at a rate of 4 per second for up to 10 seconds or until a ping reply is received. If a reply is received within that time, the test ends successfully. Otherwise, the test fails, and no triggers are generated. No further ping requests are sent until the client adapter loses association and reassociates. If you check this check box, be sure to also enter the URL or IP address that invokes the triggers. Default: Unchecked

Condition	Description
Signal Strength	<p>Triggers audible alerts, log file entries, or both when the Signal Strength value reaches or crosses over the specified threshold value. If you check this check box, be sure to also choose a threshold value.</p> <p>Threshold Value Range: -95 to -45 dBm or 0 to 100%</p> <p>Default: Unchecked; -75 dBm or 40%</p> <p>Note The actual dBm reading could exceed the stated threshold value range.</p> <p>Note The Display in percent check box on the Associated AP Status tab determines which threshold value units are used.</p>
Noise Level/Signal Quality	<p>Triggers audible alerts, log file entries, or both when the Noise Level or Signal Quality value reaches or crosses over the specified threshold value. If you check this check box, be sure to also choose a threshold value.</p> <p>Threshold Value Range: -45 to -95 dBm or 0 to 100%</p> <p>Default: Unchecked; -65 dBm or 40%</p> <p>Note The actual dBm reading could exceed the stated threshold value range.</p> <p>Note The Display in percent check box on the Associated AP Status tab determines which condition and threshold value units are used.</p>
Signal-to-Noise Ratio/Link Quality	<p>Triggers audible alerts, log file entries, or both when the Signal-to-Noise Ratio or Link Quality value reaches or crosses over the specified threshold value. If you check this check box, be sure to also choose a threshold value.</p> <p>Threshold Value Range: 0 to 50 dBm or 0 to 100%</p> <p>Default: Unchecked; 20 dBm or 40%</p> <p>Note The actual dBm reading could exceed the stated threshold value range.</p> <p>Note The Display in percent check box on the Associated AP Status tab determines which condition and threshold value units are used.</p>
Link Speed	<p>Triggers audible alerts, log file entries, or both when the Link Speed value reaches or crosses over the specified threshold value. If you check this check box, be sure to also choose a threshold value.</p> <p>Threshold Value Range: 0 to the maximum rate of the current connection</p> <p>Default: Unchecked; 11 Mbps</p>



Note When a value reaches a threshold and stays there, continuous triggers are not generated. After a value reaches a threshold, it must become not equal to the threshold value before another trigger is generated.

Step 3 If you want to specify the length of time that the above conditions must exist before triggering audible alerts, log file entries, or both, check the **Hysteresis** check box and choose a value in seconds.

Range: 1 to 10 seconds

Default: Checked; 3 seconds



Note The Hysteresis setting does not apply to the connectivity test. Connectivity is achieved if just one ping response is returned.

Step 4 The Filename field specifies the name and location of the threshold log file. If you want to change the name of the log file, enter a new name in the Filename field. If you want to change the location of the log file, click **Browse**, navigate to the desired location, and click **OK**.

Default Name: SST_ThreshLog.txt

Default Location: The directory where the site survey utility is installed

Step 5 The Viewer field specifies the name and location of the program that is used to view the threshold log file. (To view the log file, choose **View Threshold Log** from the Thresholds drop-down menu.) If you want a different program to be used, click **Browse**, navigate to the location of the desired program, and click **OK**.

Default Program: Notepad.exe

Step 6 Click **OK** to save your changes.

Step 7 Follow the instructions in the [“Enabling Threshold Triggers”](#) section below to enable the threshold triggers.

Enabling Threshold Triggers

In the previous section, you specified the conditions under which threshold triggers are generated, provided those triggers are enabled.

To enable audible alerts when a threshold condition occurs, choose **Enable Threshold Alerts** from the Thresholds drop-down menu or press **F7**. When threshold alerts are enabled, a check mark appears next to the Enable Threshold Alerts menu option, and ALR appears in the site survey utility’s status bar.

To enable the logging of text messages to the threshold log file when a threshold condition occurs, choose **Enable Threshold Logging** from the Thresholds drop-down menu or press **F8**. When threshold logging is enabled, a check mark appears next to the Enable Threshold Logging menu option, and LOG appears in the site survey utility’s status bar.



Note You can enable one or both triggers.



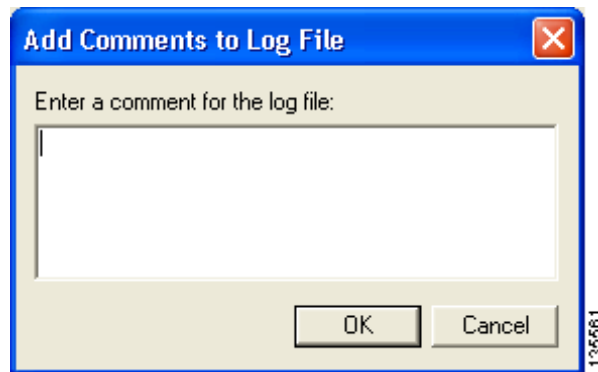
Note To disable the threshold triggers, choose the **Enable Threshold Alerts** and **Enable Threshold Logging** menu options again so that the check mark disappears or re-press **F7** and **F8**.

Entering a Comment in the Threshold Log File

Follow these steps if you want to enter a comment in the threshold log file.

- Step 1** Choose **Add User Comment** from the Thresholds drop-down menu. The Add Comments to Log File window appears (see [Figure F-10](#)).

Figure F-10 Site Survey Utility - Add Comments to Log File Window



- Step 2** Type one or more lines of text or paste text copied from another application.
- Step 3** Click **OK** to have your comments entered into the threshold log file.



Note User comments are entered in the threshold log file even if threshold logging is not currently enabled.

Viewing the Threshold Log File

Follow these steps to view the threshold log file from within the site survey utility.



Note You can also open the threshold log file from Windows Explorer.

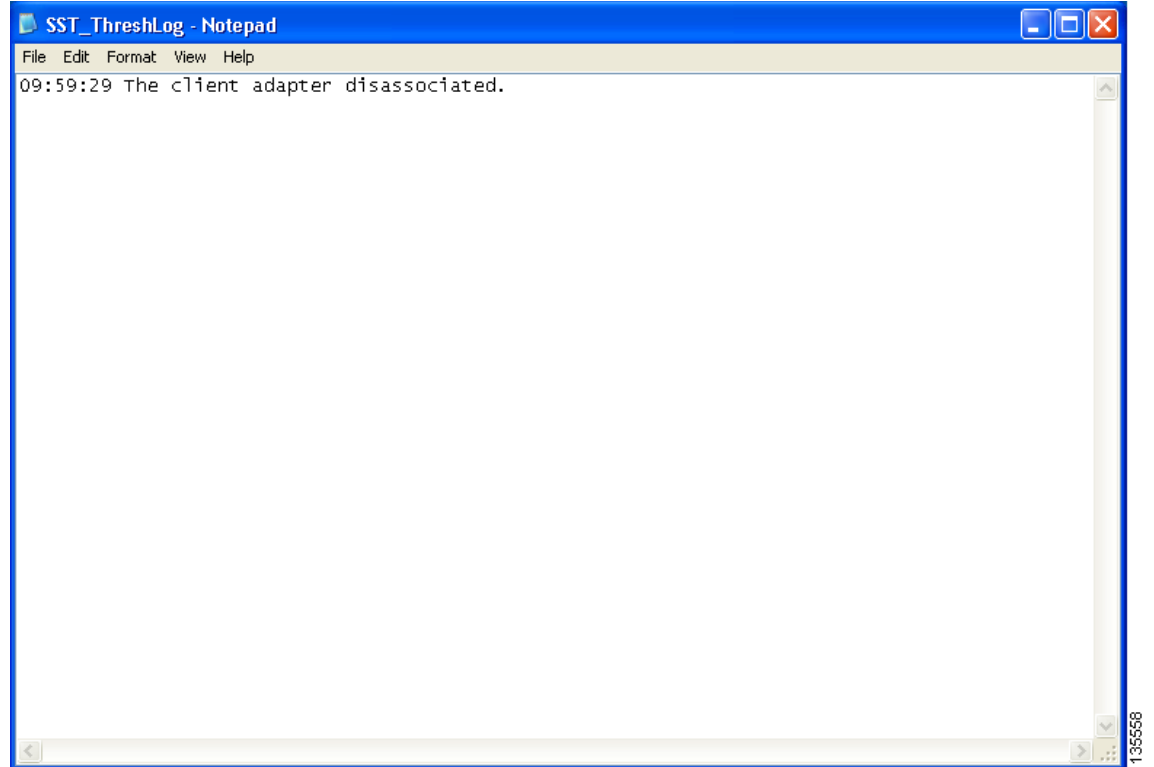
- Step 1** Choose **View Threshold Log** from the Thresholds drop-down menu. The log file opens in the configured viewer (see [Figure F-11](#)).



Note The View Threshold Log menu option is disabled if the log file does not exist.



Note [Figure F-11](#) shows the threshold log file in Notepad, but other viewers can be used.

Figure F-11 Site Survey Utility - Threshold Log File Window

- Step 2** Click the **X** in the upper right-hand corner of the window to close the window.
-

Deleting the Threshold Log File

Follow these steps to delete the threshold log file.

- Step 1** Choose **Delete Threshold Log** from the Thresholds drop-down menu.



Note The Delete Threshold Log menu option is disabled if the log file does not exist.

- Step 2** Click **Yes** when asked to confirm your decision.
-

Using AP Scanning

You can perform these functions related to AP scanning:

- Configure AP scan logging, [page F-26](#)
- Enable AP scan logging, [page F-28](#)
- View the AP scan log, [page F-28](#)
- Delete the AP scan log, [page F-30](#)
- Save the AP scan list, [page F-30](#)
- Open the AP scan list, [page F-31](#)

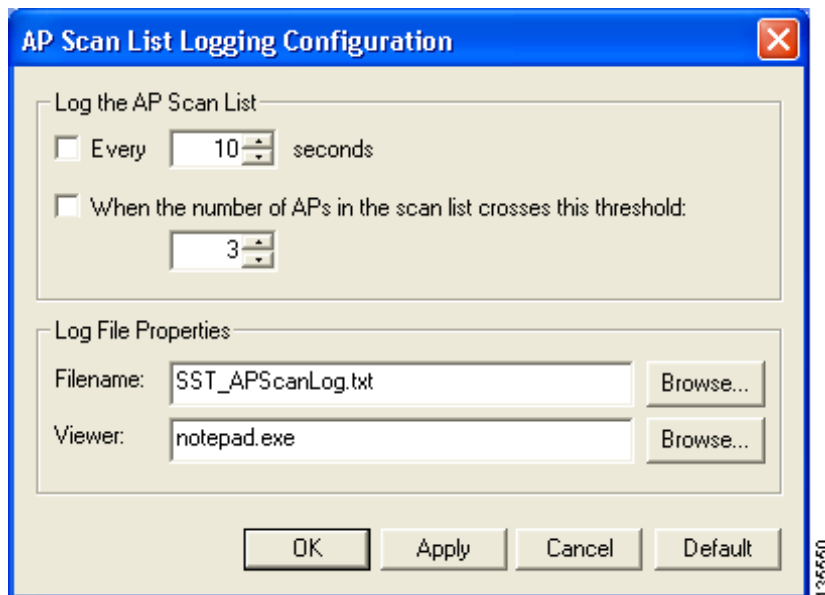
Follow the instructions on the pages indicated to perform these functions.

Configuring AP Scan Logging

Follow these steps to configure the site survey utility to automatically copy the contents of the AP scan list to a log file.

- Step 1** Choose **Configure AP Scan Logging** from the AP Scanning drop-down menu. The AP Scan List Logging Configuration window appears (see [Figure F-12](#)).

Figure F-12 Site Survey Utility - AP Scan List Logging Configuration Window



- Step 2** Check the check box and select a numerical value for each condition below that you want to cause the contents of the AP scan list to be automatically copied to a log file. You can check one or both.

Condition	Description
Every <i>XXX</i> seconds	Causes the contents of the AP scan list to be copied to a log file after a specified amount of time elapses. For example, if you set the value to 60, the AP scan list is logged to a file every 60 seconds. Default: Unchecked; 10 seconds
When the number of APs in the scan list crosses this threshold	Causes the contents of the AP scan list to be copied to a log file whenever the number of access points in the scan list reaches or crosses over the specified threshold value. For example, if you set the value to 5, the AP scan list is logged to a file each time the number of access points in the scan list rises to or above 5 or falls to or below 5. However, if the number of access points in the scan list stays at 5, continuous triggers are not generated. Default: Unchecked; 3 Note If threshold alerts are enabled (on the Thresholds drop-down menu), an audible alert sounds whenever the number of access points in the scan list reaches or crosses over the specified threshold value. Likewise, if threshold logging is enabled, a text entry is made to the threshold log file whenever this condition is met.

- Step 3** The Filename field specifies the name and location of the AP scan log file. If you want to change the name of the log file, enter a new name in the Filename field. If you want to change the location of the log file, click **Browse**, navigate to the desired location, and click **OK**.

Default Name: SST_APScanLog.txt

Default Location: The directory in which the site survey utility is installed



Note The filename and location that you choose here also applies to the log file that is created when you click the Log Snapshot button on the AP Scan List tab.

- Step 4** The Viewer field specifies the name and location of the program that is used to view the AP scan log file. (To view the log file, choose **View AP Scan Log** from the AP Scanning drop-down menu.) If you want a different program to be used, click **Browse**, navigate to the location of the desired program, and click **OK**.

Default Program: Notepad.exe



Note The log file can be viewed in Notepad or any other viewer. However, because it is written in a comma-separated values (CSV) format, it can also be opened by a spreadsheet or database program (such as Microsoft Excel). If the file is renamed with a .csv extension, Microsoft Excel would automatically place the values in separate columns.

- Step 5** Click **OK** to save your changes.

- Step 6** Follow the instructions in the [“Enabling AP Scan Logging”](#) section below to enable AP scan logging.

Enabling AP Scan Logging

To enable the site survey utility to automatically copy the contents of the AP scan list to a log file under the conditions specified above, choose **Enable AP Scan Logging** from the AP Scanning drop-down menu or press **F9**. When AP scan logging is enabled, a check mark appears next to the Enable AP Scan Logging menu option, and APS appears in the site survey utility's status bar.


Note

When AP scan logging is enabled, log entries are made even when the AP Scan List tab is not visible and when it is visible with updates paused.


Note

To disable AP scan logging, choose the **Enable AP Scan Logging** menu option again so that the check mark disappears or re-press **F9**.

Viewing the AP Scan Log

Follow these steps to view the AP scan log file from within the site survey utility.


Note

You can also open the AP scan log file from Windows Explorer.

Step 1

Choose **View AP Scan Log** from the AP Scanning drop-down menu. The log file opens in the configured viewer (see [Figure F-13](#)).

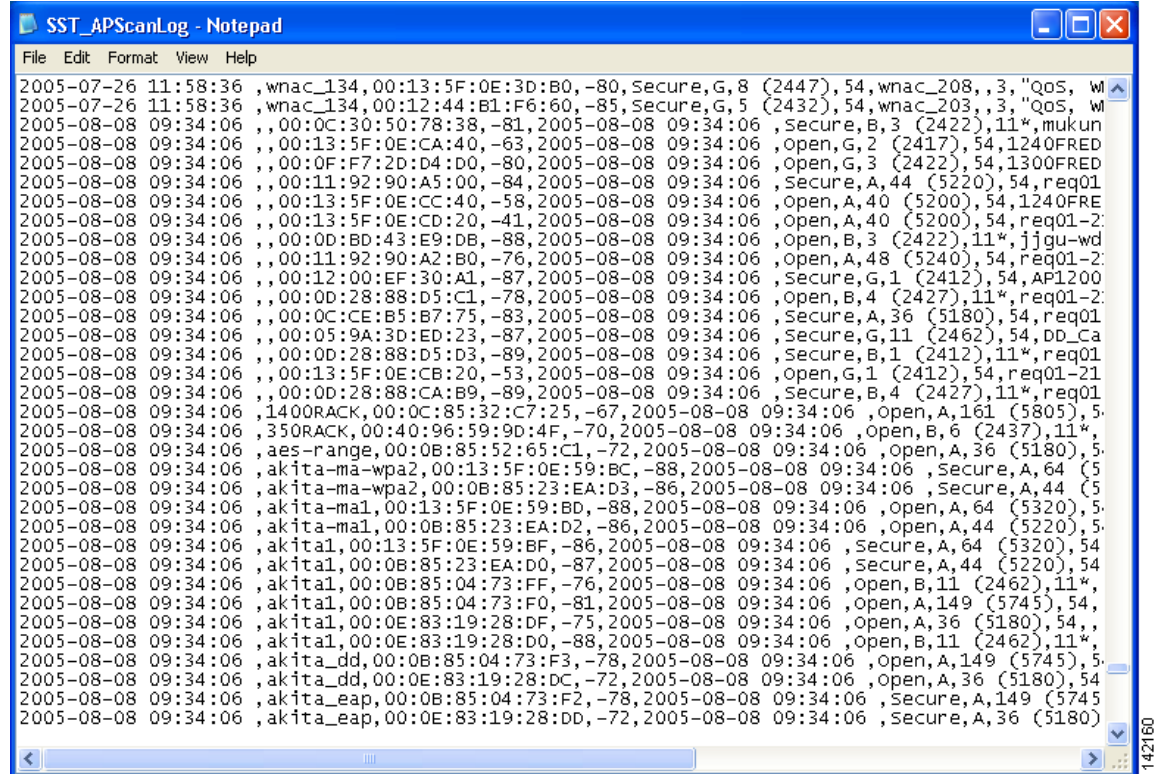

Note

The View AP Scan Log menu option is disabled if the log file does not exist.


Note

[Figure F-13](#) shows the AP scan log file in Notepad, but other viewers can be used.

Figure F-13 Site Survey Utility - AP Scan Log File



```

SST_APScanLog - Notepad
File Edit Format View Help
2005-07-26 11:58:36 ,wnac_134,00:13:5F:0E:3D:B0,-80,Secure,G,8 (2447),54,wnac_208,,3,"QoS, W
2005-07-26 11:58:36 ,wnac_134,00:12:44:B1:F6:60,-85,Secure,G,5 (2432),54,wnac_203,,3,"QoS, W
2005-08-08 09:34:06 ,,00:0C:30:50:78:38,-81,2005-08-08 09:34:06 ,Secure,B,3 (2422),11*,mukun
2005-08-08 09:34:06 ,,00:13:5F:0E:CA:40,-63,2005-08-08 09:34:06 ,open,G,2 (2417),54,1240FRED
2005-08-08 09:34:06 ,,00:0F:F7:2D:D4:D0,-80,2005-08-08 09:34:06 ,open,G,3 (2422),54,1300FRED
2005-08-08 09:34:06 ,,00:11:92:90:A5:00,-84,2005-08-08 09:34:06 ,Secure,A,44 (5220),54,req01
2005-08-08 09:34:06 ,,00:13:5F:0E:CC:40,-58,2005-08-08 09:34:06 ,open,A,40 (5200),54,1240FRE
2005-08-08 09:34:06 ,,00:13:5F:0E:CD:20,-41,2005-08-08 09:34:06 ,open,A,40 (5200),54,req01-2
2005-08-08 09:34:06 ,,00:0D:BD:43:E9:DB,-88,2005-08-08 09:34:06 ,open,B,3 (2422),11*,jjgu-wd
2005-08-08 09:34:06 ,,00:11:92:90:A2:B0,-76,2005-08-08 09:34:06 ,open,A,48 (5240),54,req01-2
2005-08-08 09:34:06 ,,00:12:00:EF:30:A1,-87,2005-08-08 09:34:06 ,Secure,G,1 (2412),54,AP1200
2005-08-08 09:34:06 ,,00:0D:28:88:D5:C1,-78,2005-08-08 09:34:06 ,open,B,4 (2427),11*,req01-2
2005-08-08 09:34:06 ,,00:0C:CE:B5:B7:75,-83,2005-08-08 09:34:06 ,Secure,A,36 (5180),54,req01
2005-08-08 09:34:06 ,,00:05:9A:3D:ED:23,-87,2005-08-08 09:34:06 ,Secure,G,11 (2462),54,DD_Ca
2005-08-08 09:34:06 ,,00:0D:28:88:D5:D3,-89,2005-08-08 09:34:06 ,Secure,B,1 (2412),11*,req01
2005-08-08 09:34:06 ,,00:13:5F:0E:CB:20,-53,2005-08-08 09:34:06 ,open,G,1 (2412),54,req01-21
2005-08-08 09:34:06 ,,00:0D:28:88:CA:B9,-89,2005-08-08 09:34:06 ,Secure,B,4 (2427),11*,req01
2005-08-08 09:34:06 ,1400RACK,00:0C:85:32:C7:25,-67,2005-08-08 09:34:06 ,open,A,161 (5805),5
2005-08-08 09:34:06 ,350RACK,00:40:96:59:9D:4F,-70,2005-08-08 09:34:06 ,open,B,6 (2437),11*,
2005-08-08 09:34:06 ,aes-range,00:0B:85:52:65:C1,-72,2005-08-08 09:34:06 ,open,A,36 (5180),5
2005-08-08 09:34:06 ,akita-ma-wpa2,00:13:5F:0E:59:BC,-88,2005-08-08 09:34:06 ,Secure,A,64 (5
2005-08-08 09:34:06 ,akita-ma-wpa2,00:0B:85:23:EA:D3,-86,2005-08-08 09:34:06 ,Secure,A,44 (5
2005-08-08 09:34:06 ,akita-ma1,00:13:5F:0E:59:BD,-88,2005-08-08 09:34:06 ,open,A,64 (5320),5
2005-08-08 09:34:06 ,akita-ma1,00:0B:85:23:EA:D2,-86,2005-08-08 09:34:06 ,open,A,44 (5220),5
2005-08-08 09:34:06 ,akita1,00:13:5F:0E:59:BF,-86,2005-08-08 09:34:06 ,Secure,A,64 (5320),54
2005-08-08 09:34:06 ,akita1,00:0B:85:23:EA:D0,-87,2005-08-08 09:34:06 ,Secure,A,44 (5220),54
2005-08-08 09:34:06 ,akita1,00:0B:85:04:73:FF,-76,2005-08-08 09:34:06 ,open,B,11 (2462),11*,
2005-08-08 09:34:06 ,akita1,00:0B:85:04:73:F0,-81,2005-08-08 09:34:06 ,open,A,149 (5745),54
2005-08-08 09:34:06 ,akita1,00:0E:83:19:28:DF,-75,2005-08-08 09:34:06 ,open,A,36 (5180),54,,
2005-08-08 09:34:06 ,akita1,00:0E:83:19:28:D0,-88,2005-08-08 09:34:06 ,open,B,11 (2462),11*,
2005-08-08 09:34:06 ,akita_dd,00:0B:85:04:73:F3,-78,2005-08-08 09:34:06 ,open,A,149 (5745),5
2005-08-08 09:34:06 ,akita_dd,00:0E:83:19:28:DC,-72,2005-08-08 09:34:06 ,open,A,36 (5180),54
2005-08-08 09:34:06 ,akita_eap,00:0B:85:04:73:F2,-78,2005-08-08 09:34:06 ,Secure,A,149 (5745
2005-08-08 09:34:06 ,akita_eap,00:0E:83:19:28:DD,-72,2005-08-08 09:34:06 ,Secure,A,36 (5180)

```

The log entries are time-stamped and appear in ASCII text. Each line typically represents a different access point.



Note The log file can be viewed in Notepad or any other viewer. However, because it is written in a comma-separated values (CSV) format, it can also be opened by a spreadsheet or database program (such as Microsoft Excel). If the file is renamed with a .csv extension, Microsoft Excel would automatically place the values in separate columns.



Note If the Accumulate button was depressed when you saved the AP scan log, two timestamps appear on each line. The timestamp in column one of the log file is the time when the log entry is made. The second timestamp, which appears only when the Accumulate button is depressed, is the Time of Day. This value indicates the date and time when the signal strength of each access point was at its maximum. Both timestamps appear in this format: 2005-07-20 16:13:09. The time is based on a 24-hour clock. For example, the first two lines in Figure F-13 show only one timestamp while the remaining lines show both timestamps.

Step 2 Click the **X** in the upper right-hand corner of the window to close the window.

Deleting the AP Scan Log

Follow these steps to delete the AP scan log file.

- Step 1** Choose **Delete AP Scan Log** from the AP Scanning drop-down menu.



Note The Delete AP Scan Log menu option is disabled if the log file does not exist.

- Step 2** Click **Yes** when asked to confirm your decision.

Saving the AP Scan List

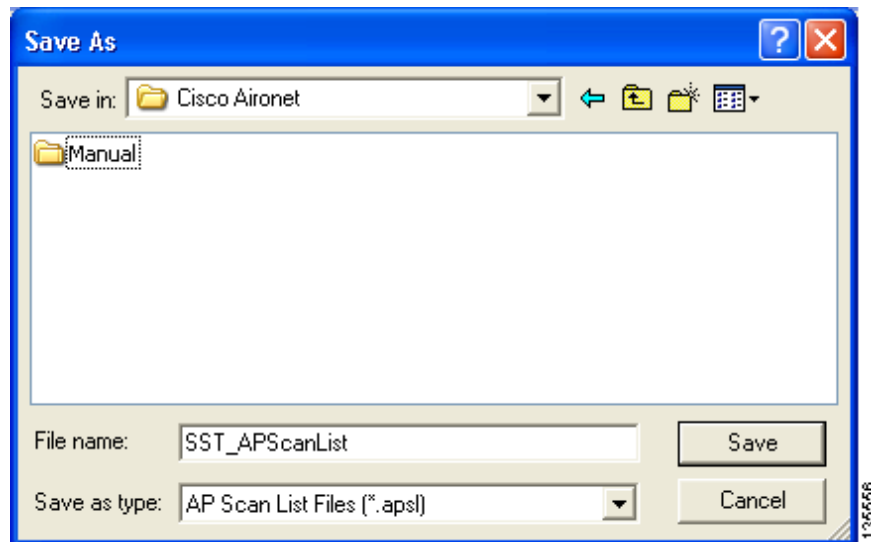
Follow these steps to save the current contents of the AP scan list to a file.

- Step 1** Choose **Save AP Scan List** from the AP Scanning drop-down menu. The Save As window appears (see [Figure F-14](#)).



Note The Save AP Scan List option is available only if the AP Scan List tab is selected.

Figure F-14 Site Survey Utility - Save As Window



- Step 2** From the Save in drop-down box, choose the location where you want to save the AP scan list file.



Note The initial default location is the directory where the site survey utility is installed. However, after you save the AP scan list file the first time, the default directory becomes the one that was last used to open or save the AP scan list file.

- Step 3** The default filename (SST_APScanList.apsl) appears in the File name box at the bottom of the window. If desired, type in a new filename.
- Step 4** Click **Save**.

Opening the AP Scan List

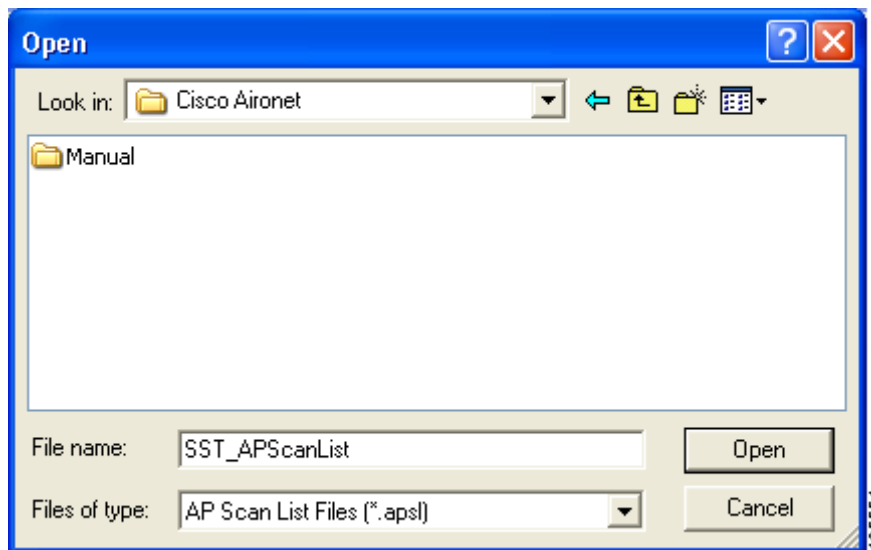
Follow these steps to open a saved AP scan list file.

- Step 1** Choose **Open AP Scan List** from the AP Scanning drop-down menu. The Open window appears (see [Figure F-15](#)).



Note The Open AP Scan List option is available only if the AP Scan List tab is selected.

Figure F-15 Site Survey Utility - Open Window



- Step 2** From the Look in drop-down box, find the AP scan list file.



Note The default directory is the one that was last used to open or save the AP scan list file.

- Step 3** Click the AP scan list file (SST_APScanList.apsl) so that it appears in the File name box at the bottom of the window.

- Step 4** Click **Open**. The contents of the AP scan list file appear in the AP scan list window.

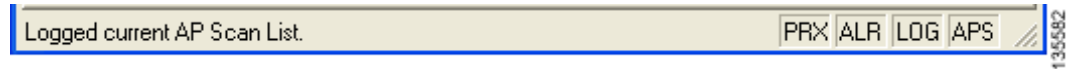


Note Updating of the AP scan list is paused automatically.

Viewing the Status Bar

The site survey utility's status bar runs along the bottom of the window (see [Figure F-16](#)).

Figure F-16 Site Survey Utility - Status Bar



It consists of three sections:

- A message area
- Four indicators
- A resize handle

Status Messages

The left side of the status bar displays status messages from the site survey utility. [Table F-4](#) lists and explains the messages that may appear.



Note

The messages disappear after a short period of time.

Table F-4 Site Survey Utility - Status Messages

Status Message	Description
“Added remarks to log file”	The comments you entered in the Add Comments to Log File window have been added to the threshold log file.
“The client adapter associated (<access point string as shown on main screen>)”	Your client adapter is associated to the specified access point.
“The client adapter disassociated”	Your client adapter has lost its connection to the access point.
“Connectivity test succeeded (<user’s URL or IP address setting>)”	Your client adapter successfully accessed the specified URL or IP address after associating to an access point.
“Logged current AP Scan List”	The current contents of the AP scan list were logged to a file.
Threshold crossing notifications of the form: <status-parameter> (<value><units>) rose above or to the threshold value of (<value>)	<ul style="list-style-type: none"> • <status-parameter>—Can be any value that appears on the Associated AP Status tab • <value>—A number in the range appropriate for the parameter • <units>—The scientific units of the parameter <p>Note “Rose above or to” is replaced by “fell below or to” depending on the direction of crossing.</p>

Indicators

The right side of the status bar can show up to four indicators:

- PRX—The proximity beeper is enabled.
- ALR—Threshold alerts are enabled.
- LOG—Threshold logging is enabled.
- APS—Automatic AP scan list logging is enabled.

**Note**

The indicators do not appear when their corresponding features are disabled.

Resize Tab

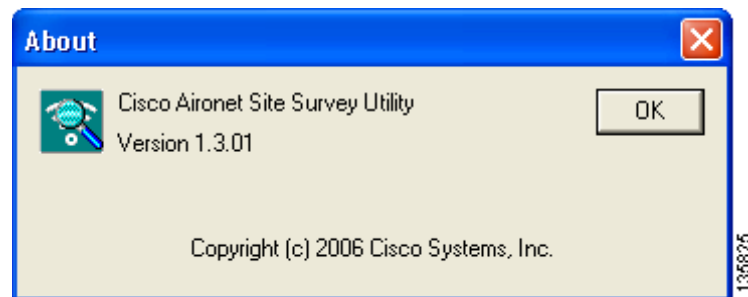
The resize tab in the right corner of the status bar can be used to change the size of the site survey utility's main window. Simply click the resize tab and drag it until the window reaches the desired size.



Finding the Version of the Site Survey Utility

To find the current version of the site survey utility, choose **About** from the Help drop-down menu. The About window appears (see [Figure F-17](#)).

Figure F-17 Site Survey Utility - About Window



Accessing Online Help

To access the site survey utility's online help, choose **Contents** from the Help drop-down menu.

Exiting the Site Survey Utility

To exit the site survey utility, perform one of the following:

- Click the **X** in the top right corner of the main window.
- Choose **Exit** from the Action drop-down menu.

Uninstalling the Site Survey Utility

Uninstalling the client adapter software also uninstalls the site survey utility. Refer to the [“Uninstalling the Client Adapter Software”](#) section on page 9-6 for instructions.