Troubleshooting

This chapter provides general information for diagnosing and correcting common problems encountered when installing or operating a Cisco Aironet Wireless LAN Adapter.

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Accessing the Latest Troubleshooting Tips

This chapter provides basic troubleshooting tips for your client adapter. For more up-to-date and complex troubleshooting information, refer to the TAC web site at http://www.cisco.com/tac. Select **Wireless LAN** under "Top Issues."

Interpreting the Indicator LEDs

The client adapter shows messages and error conditions through its two LEDs:

- **Link Integrity/Power LED (green)** – This LED lights when the client adapter is receiving power and blinks slowly when the adapter is linked with the network.
- **Link Activity LED (amber)** – This LED blinks quickly when the client adapter is receiving or transmitting data and blinks in a repeating pattern to indicate an error condition.

Table 9-1 interprets the LED operating messages.

Table 9-1   LED Operating Messages

	Green LED	Amber LED	Condition
Normal Operation	Blinking quickly	Blinking quickly	Power is on, self-test is OK, and client adapter is scanning for a network.
	Blinking slowly	Blinking quickly	Client adapter is associated to an access point.
	Continuously on or blinking slowly	Blinking	Client adapter is transmitting or receiving data while associated to an access point.
	Off	Blinking quickly	Client adapter is in power save mode.
	On continuously	Blinking quickly	Client adapter is in ad hoc mode.
Error Conditions	Off	Off	Client adapter is not receiving power or an error has occurred.
	Off	1 blink at 2-second rate	RAM failure. Refer to the "Obtaining Technical Assistance" section in the Preface for technical support information.
	Off	2 fast blinks, 2-second pause	Flash boot block checksum failure. Refer to the "Obtaining Technical Assistance" section in the Preface for technical support information.
	Off	3 fast blinks, 2-second pause	Firmware checksum failure. Reload the firmware.
	Off	4 fast blinks, 2-second pause	MAC address error (error reading MAC chip). Reload the firmware.
	Off	5 fast blinks, 2-second pause	PHY access error. Refer to the "Obtaining Technical Assistance" section in the Preface for technical support information.
	Off	6 fast blinks, 2-second pause	Incompatible firmware. Load the correct firmware version.

Problems after Installing the Driver

> **Note**   If you experience problems during driver installation, you may want to restart the installation process. Go to the "Removing the Driver and Client Utility" section on page 8-4 to start with a clean installation.

Follow the instructions in this section if you experience difficulty with your client adapter after installing the driver (for instance, your computer repeatedly freezes at the network login screen, the green LED does not blink to indicate that the adapter is active, etc.).

Radio Not Found

If your computer's operating system is Mac OS X and a power-up client utility message indicates the radio cannot be found, verify that the *CiscoPCCardRadio.kext* driver or the *CiscoPCIRadio.kext* driver (depending on your client adapter) is installed in the */System/Library/Extensions* folder.

- If the driver is not found, re-install the package and restart your computer.
- If the driver is found, try removing and re-inserting the client adapter in your computer. Restart your computer.

Client Adapter Recognition Problems

If your computer's operating system is Mac OS 9.x, verify that the driver (pcm3x0) and enablers (pcm3x0Enabler) are installed. They should be in the Extensions folder of the System folder.

- If you cannot find the driver, reinstall it and restart the computer.
- If the driver is properly installed, eject the client adapter and reinsert it.

Problems Associating to the Access Point

Follow the instructions below if your client adapter fails to associate to the access point:

- If possible, move your Macintosh a few feet closer to the access point and try again.
- Make sure the client adapter is securely inserted in your's PC card slot or PCI slot.
- If you are using a PCI client adapter, make sure the antenna is securely attached.
- Make sure the access point is turned on and operating.
- Check that all parameters are set properly for both the client adapter and the access point. These include the network name or SSID, network type and channel, WEP activation, and LEAP activation.
- If the client adapter still fails to establish contact, refer to the "Obtaining Technical Assistance" section in the Preface for technical support information.

Problems Authenticating

Follow the instructions below if your client adapter fails to authenticate:

- If possible, move your Macintosh a few feet closer to the access point and try again.
- Make sure the client adapter is securely inserted in your's PC card slot or PCI slot.
- If you are using a PCI client adapter, make sure the antenna is securely attached.
- Make sure the access point is turned on and operating.
- Check that all parameters are set properly for both the client adapter and the access point. These include the network name or SSID, network type and channel, WEP activation, LEAP activation, WEP password, and LEAP username and password.
- If your client adapter is a 40-bit card and LEAP is enabled, the adapter can associate to but not authenticate to access points using 128-bit encryption. To authenticate to an access point using 128-bit encryption, you have two possible options:
    - Purchase a 128-bit client adapter. This is the most secure option.
    - Disable WEP for the client adapter and configure the adapter and the access point to associate to mixed cells. This option presents a security risk because your data is not encrypted as it is sent over the RF network.
- If the client adapter still fails to authenticate, refer to the "Obtaining Technical Assistance" section in the Preface for technical support information.

Problems Connecting to the Network

Follow the instructions below if your client adapter is unable to connect to the network:

- Verify that the client adapter is enabled for your Macintosh Network Preferences panel.
- Verify that the Macintosh Network TCP/IP settings are set properly for the client adapter.
- If the client adapter still fails to authenticate, refer to the "Obtaining Technical Assistance" section in the Preface for technical support information. Proxy server, network protocols, and further authentication information might be needed to connect to the network.

Running the Troubleshooting Tool on Mac OS X

On Mac OS X, the client utility provides a troubleshooting tool to assist you in identifying and resolving configuration and association problems with your client adapter.

To run the troubleshooting tool perform the following steps:

Step 1   Click the up and down arrows to the right of the basic or advanced properties field.

Step 2   Select **Troubleshooting** on the pull-down menu and the troubleshooting screen appears (see Figure 9-1).

Figure 9-1   Client Utility Troubleshooting Screen
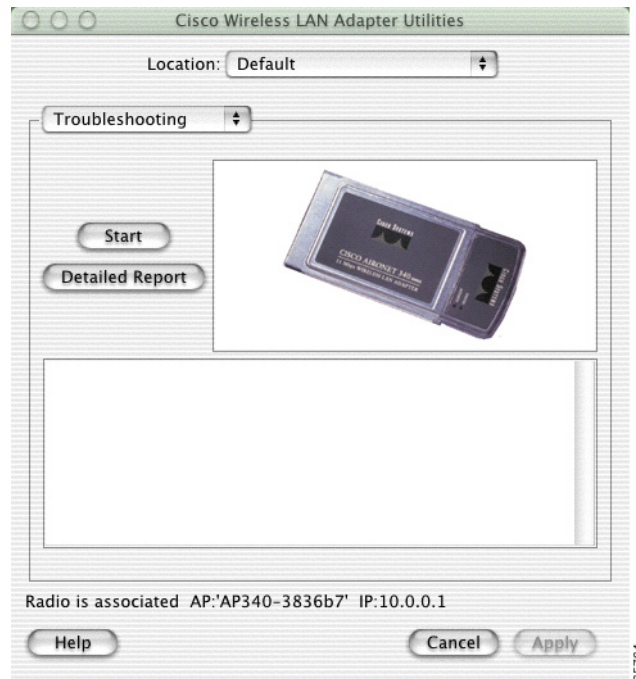
Step 3   Click **Start** to activate the troubleshooting tool. The troubleshooting tool performs a series of tests to check the operation of the client adapter and presents the results on the troubleshooting screen (see Figure 9-2).

Figure 9-2   *Client Utility Troubleshooting Test Results Screen*
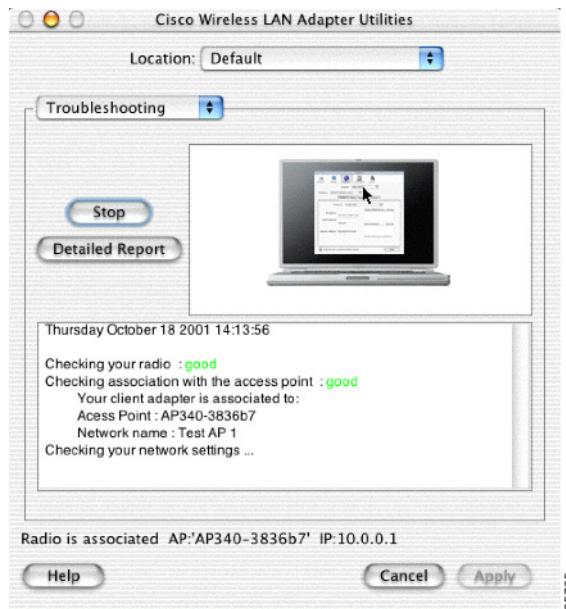
The troubleshooting test results screen indicates the progress of various tests and their results. The troubleshooting tool displays *good t*o indicate a test completed successfully, such as *Checking radio: good* or *Checking association with the access point: good*. If a test fails, the troubleshooting tool indicates *error* next to the test. You can scroll through the tests results by clicking the scroll bar on the right side of the screen.
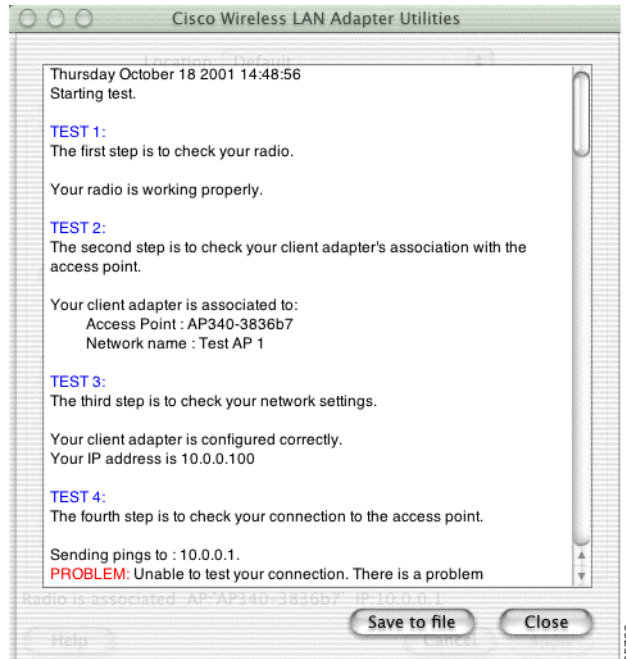
Note   You can stop the troubleshooting test at any time by clicking **Stop**.

Step 4   If you want to view a detailed report of the troubleshooting test results, click **Detailed Report** and the detailed report screen appears (see Figure 9-3).

Figure 9-3   Client Utility Troubleshooting Detailed Report Screen

When a troubleshooting test fails, the troubleshooting tool lists possible repair options. You should carefully follow the repair suggestions and run the troubleshooting test again.

Note   The detailed report contains valuable information that can be used by the technical support organization to analyze your problems. You can save the detailed report to a file on your hard disk by clicking **Save to File**.

Step 5   Click **Close** when you have finished reviewing the test results.

Step 6   When you have finished running the troubleshooting tests, click the up and down arrows to the right of the troubleshooting field and select basic or advanced properties.