Installing Windows 95 Drivers and Utilities for the Cisco Aironet 340/350 Series Client Adapters

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You need a valid Cisco.com account in order to download Cisco Aironet drivers, firmware, and utilities. If you do not have a Cisco.com account, register for free at the Cisco.com Registration page.

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Introduction

This document is a guide to installing Windows 95 drivers and utilities for the Cisco Aironet 340 and 350 Series Client Adapters.

Note: The installation methods described here are similar to those used for Windows 98, Windows NT, and Windows 2000. There are, however, some key differences. Refer to Installing the Driver for Windows 98, Installing the Driver for Windows NT, or Installing Windows 2000 Drivers and Utilities for more information.

Prerequisites

Requirements

You need these items to complete this installation:

- A Cisco Aironet 340 or 350 series client adapter card.
- The Windows 95 drivers and utilities, which can be found on the CD–ROM that accompanied the client adapter card or you can download it from the Wireless Download Center (registered customers only) .

Components Used

The information in this document is based on these software and hardware versions:

- Toshiba Tecra8000 laptop computer running Microsoft Windows 95 Version B

- Cisco Aironet Client Adapter AIR–PCM342 loaded with firmware version 4.23
- Network Driver Interface Specification (NDIS) driver version 6.64
- Aironet Client Utility version 4.15

The information in this document was created from the devices in a specific lab environment. All of the devices used in this document started with a cleared (default) configuration. If your network is live, make sure that you understand the potential impact of any command.

Conventions

Refer to Cisco Technical Tips Conventions for more information on document conventions.

Install the Hardware

This section discusses the installation of the hardware to the PC.

Note: If you do not have a CD–ROM with the proper drivers, you should download the drivers before you replace your computer network interface card with the Cisco Aironet Client Adapter. If you download the driver, expand the self–extracting archive into a temporary folder and note the path of the folder, such as **c:\windows\temp**.

Installing a PC Card

Before you begin, examine the PC card. One end has a dual–row, 68–pin PC card connector. The card is keyed so you can only insert it one way into the PC card slot.

Hold the PC card with the Cisco logo facing up and insert it into the PC card slot. Apply just enough pressure to make sure it is fully seated.

Note: Do not force the PC card into your computer PC card slot. This can damage both the card and the slot. If the PC card does not insert easily, remove the card and reinsert it.

Install a PCI Client Adapter

Complete these steps to install the PCI client adapter.

1. Turn off the PC and all its components.
2. Remove the computer cover.
3. Remove the screw from the top of the CPU back panel above an empty PCI expansion slot. This screw holds the metal bracket on the back panel.

   Note: On most Pentium PCs, PCI expansion slots are white. Refer to your PC documentation for slot identification.
4. Examine the client adapter.

   When the adapter is installed, the antenna connector and the LEDs face out of your computer and are visible when you replace the cover. The bottom edge of the adapter is the connector you insert into an empty expansion slot in your computer.

   Note: Static electricity can damage your client adapter. Before you remove the adapter from the antistatic packaging, discharge static by touching a metal part of a grounded PC.
5. Tilt the adapter to allow the antenna connector and LEDs to slip through the opening in the CPU back panel. Press the client adapter into the empty slot until the connector is firmly seated.

Note: Do not force the adapter into the expansion slot. This can damage both the adapter and the slot. If the adapter does not insert easily, remove the adapter and reinsert it.

6. Reinstall the screw on the CPU back panel and replace the computer cover.
7. Attach the 2–dBi antenna to the adapter antenna connector until it is finger–tight. Do not overtighten. Position the antenna so it is straight up for optimal reception.
8. Boot up the computer.

Install Drivers and Utilities

This section discusses the installation of the drivers.

Install the Drivers

Complete these steps to install the drivers.

1. When the computer is booted up for the first time after the client adapter is inserted, Windows automatically detects the device and briefly displays the New Hardware Found window. The Update Device Driver Wizard window opens to guide you through the driver installation process. If you have the Cisco Aironet Series Wireless LAN Adapters CD–ROM insert it into your computer CD–ROM drive, click **Next**.

   Note: If you do not have drivers, firmware or utilities, or if you want to download newer versions, go to the Wireless Download Center ⬈ (registered customers only) and follow the instructions to download the appropriate files.
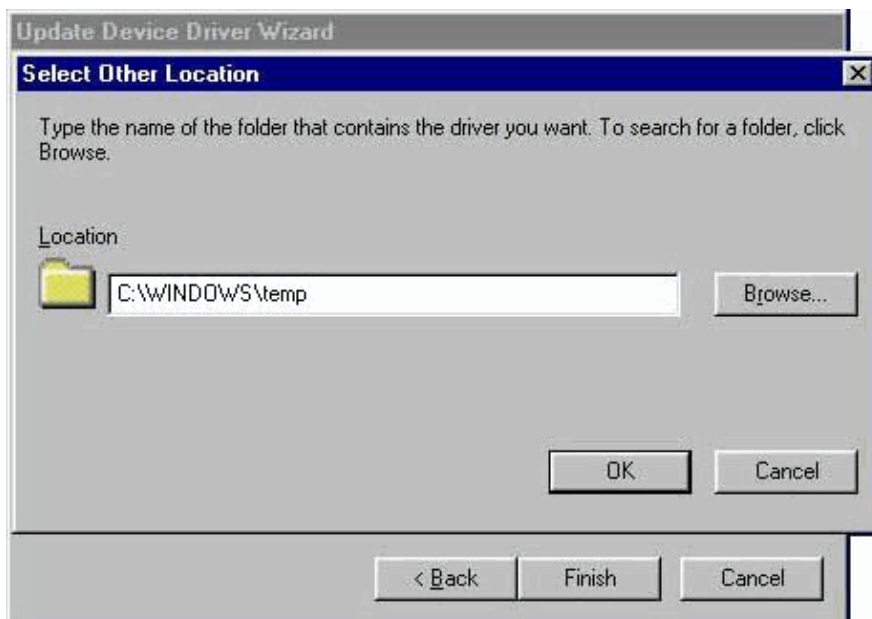

2. The Update Device Driver Wizard searches for the appropriate driver for the client adapter. If the wizard indicates that Windows is unable to locate a driver for the client adapter, click **Other Locations**. Otherwise, skip to step 4.

3. Enter the path to the location where you extracted the Windows 95 driver files in the Select Other Location window.

   The default is A:\, so if you extracted the files to the root directory on a floppy disk, you do not have to enter a path. If you extracted the files to a directory on your hard drive, you must enter the entire path (for example, **C:\WINDOWS\temp**), then click **OK**.

   Note: Windows does not use case−sensitive paths and filenames. For example, **C:\Windows** is the same as **c:\windows**.
4. Click **Finish** when the Update Device Driver Wizard indicates that Windows has found the driver.
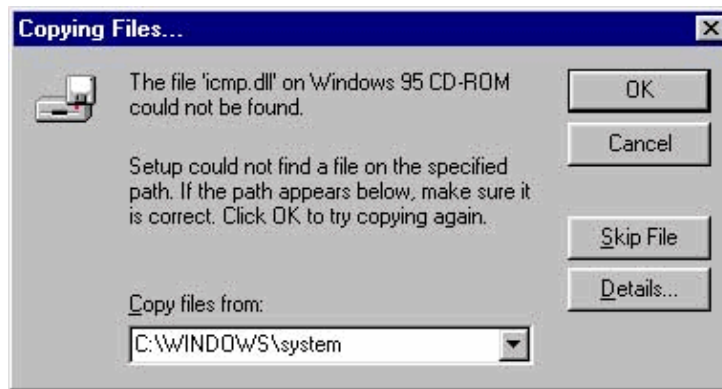
5. Click **OK** when the Insert Disk window prompts you to insert the Aironet Wireless LAN Adapter Installation Disk.

6. If a window appears that indicates that the **pcx500.sys** file could not be found, enter the same path that you entered in step 3 and click **OK**.
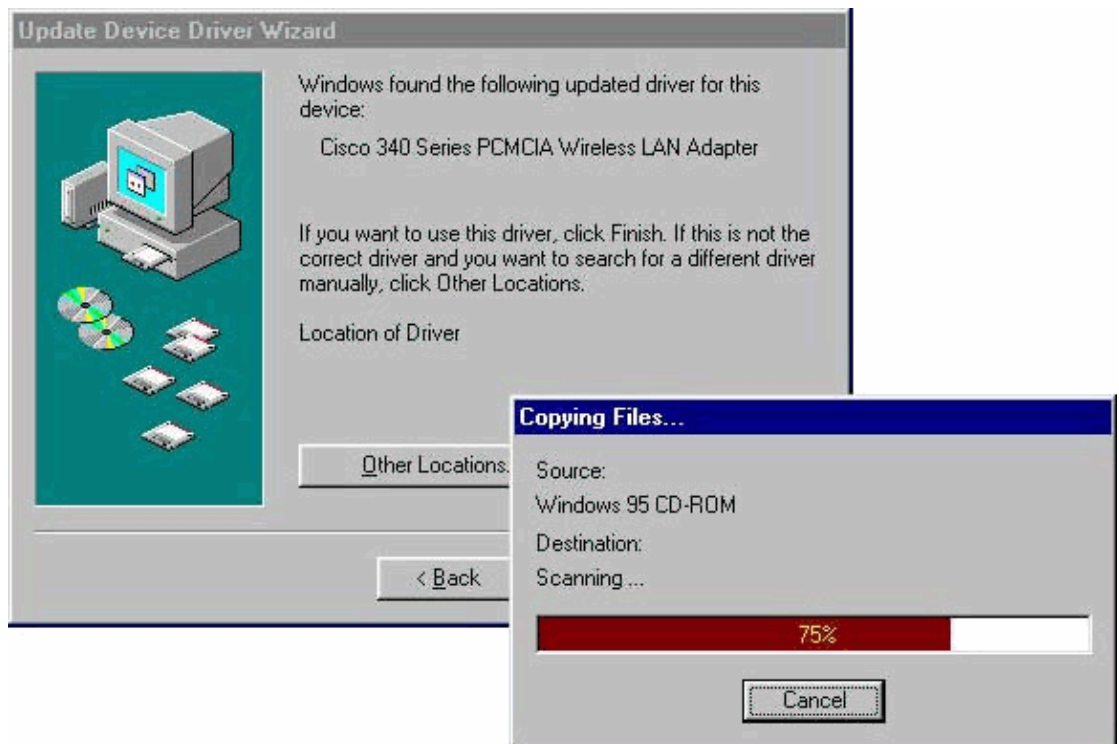

7. If you are prompted to insert the Windows 95 operating system disk, click **OK** and do one of these steps:

♦ If the Windows 95 operating system files are installed on your computer, they are usually located in the **C:\Windows\Options\Cabs** folder. Type **C:\Windows\Options\Cabs** in the **Copy files from** field, then click **OK** to copy the required files.

If the files are not located in that folder, use Windows Find function to locate the files by selecting **Start > Find > Files or Folders**. When you locate the files, type the full path in the **Copy files from** field, then click **OK** to copy the required files.
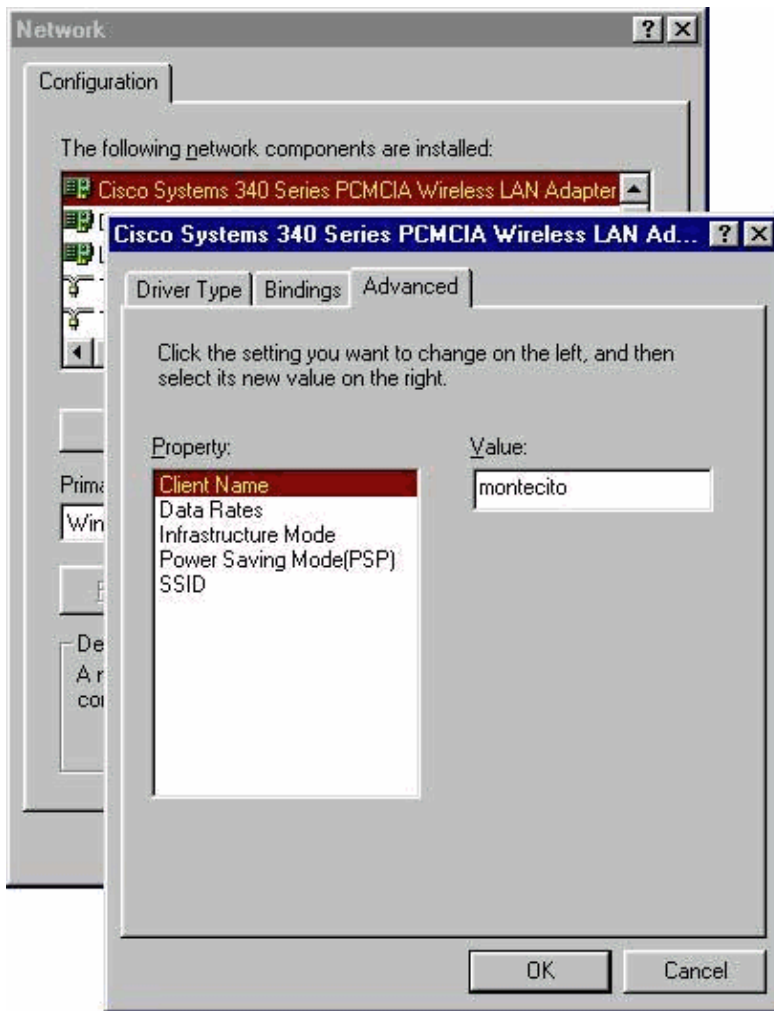
♦ If Windows 95 prompts for the Windows 95 operating system CD−ROM, insert the CD−ROM into your CD−ROM drive. If your CD−ROM drive is drive D, the path in the dialog box should be **D:\Win95**. Click **OK** to copy the required files.
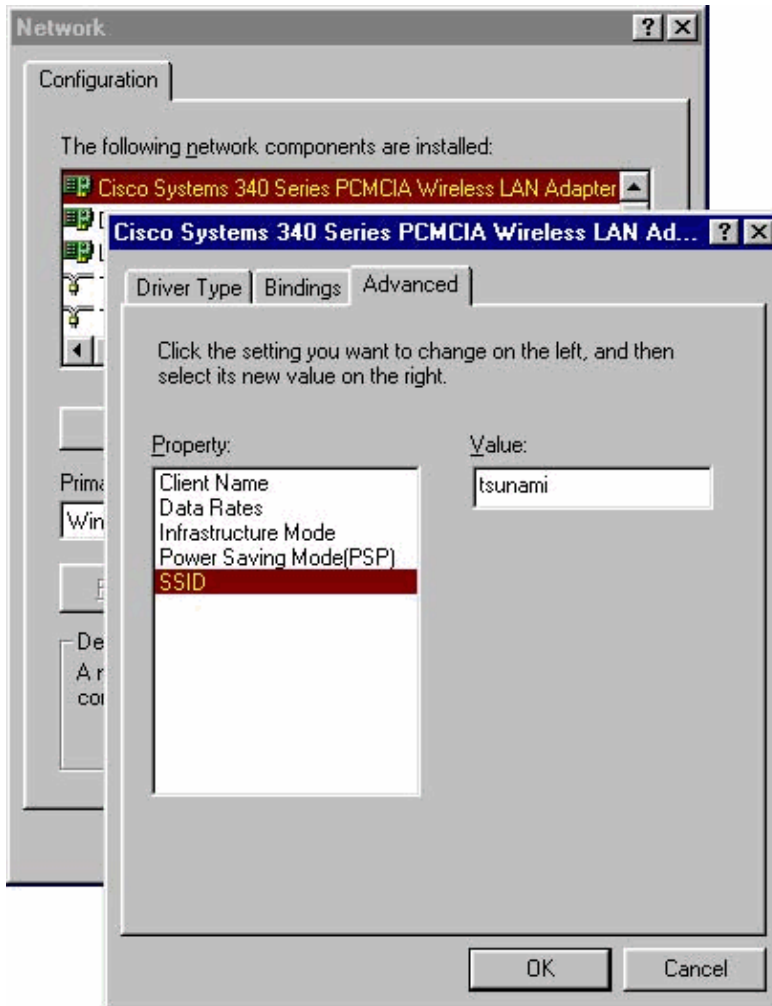

8. Remove any disks and click **Yes** if you are prompted to restart the computer.
9. When the computer restarts, double−click **My Computer**, **Control Panel**, **Network**. Select the Cisco Systems Wireless LAN Adapter and click **Properties**, then select the Advanced tab in the Properties window.
10. Select **Client Name** from the Property column on the left of the window. Type the unique client name of your computer in the Value field.

The client name *montecito* is shown here for demonstration purposes only. You may need to contact your network administrator to determine the correct client name.
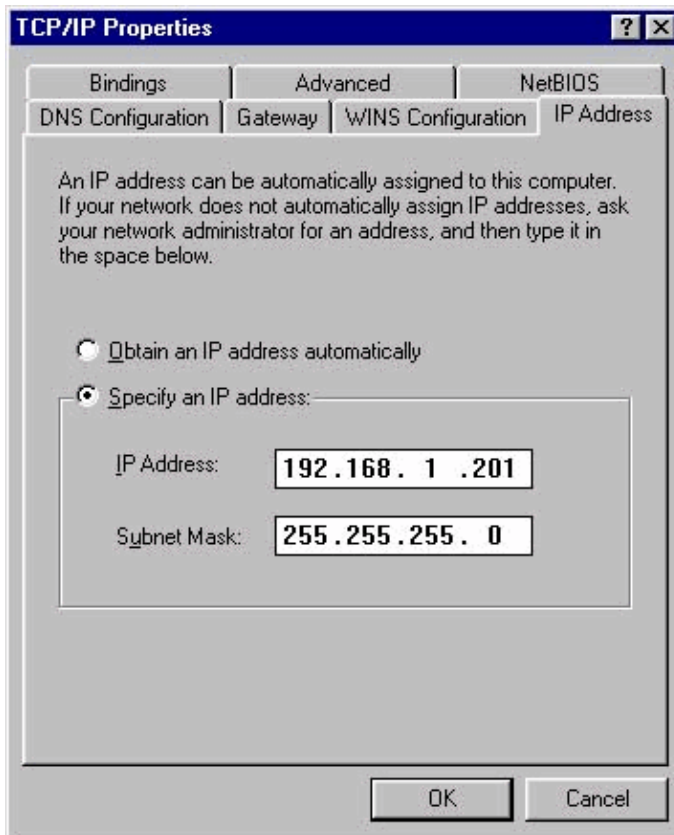
11. Select **SSID** from the Property column. Type RF network (case−sensitive) SSID in the Value field.

The default SSID *tsunami* is shown here for demonstration purposes only. You may need to contact your network administrator to determine the correct SSID to use. Click **OK** to close the Properties window.

Network [?] [X]

Configuration

The following network components are installed:

- Cisco Systems 340 Series PCMCIA Wireless LAN Adapter

Cisco Systems 340 Series PCMCIA Wireless LAN Ad... [?] [X]

Driver Type | Bindings | Advanced

Click the setting you want to change on the left, and then select its new value on the right.

Property:
- Client Name
- Data Rates
- Infrastructure Mode
- Power Saving Mode(PSP)
- SSID

Value:
tsunami

OK   Cancel

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12. If your computer does not automatically obtain an IP address from a DHCP server (check this with your network administrator), select **TCP/IP > Cisco Systems Wireless LAN Adapter** from the Network window. Click **Properties** and select the **IP Address** tab. Select the **Specify an IP address** option and type the IP address and subnet mask. Select the **Gateway** tab and type the default gateway address for your computer. (This information can be obtained from your system administrator.) Click **OK** to close the TCP/IP Properties window.

TCP/IP Properties

Bindings | Advanced | NetBIOS
DNS Configuration | Gateway | WINS Configuration | IP Address

An IP address can be automatically assigned to this computer. If your network does not automatically assign IP addresses, ask your network administrator for an address, and then type it in the space below.

○ Obtain an IP address automatically

⊙ Specify an IP address:

IP Address: 192.168. 1 .201

Subnet Mask: 255.255.255. 0

OK   Cancel

13. Click **OK** in the Network window.
14. Click **Yes** when prompted to restart your computer.

Install the Utilities

After you have installed the appropriate driver for Windows 95, you can install the Aironet Client Utility (ACU), Link Status Meter (LSM), and Client Encryption Manager (CEM) utilities.

Note: The LSM and CEM utilities have been merged into ACU versions 5.01 and later. If you use ACU version 5.01 or later, do not install these utilities separately.

- ACU allows you to configure the client adapter, enable server−based authentication, and enable the Wired Encryption Privacy (WEP) feature.
- LSM provides troubleshooting and status information.
- CEM enables you to set one or more WEP keys for your client adapter.

Note: If your computer does not have a CD−ROM drive or if you do not have the Cisco Aironet Series Wireless LAN Adapters CD, download the utilities from the Wireless Download Center (registered customers only) .
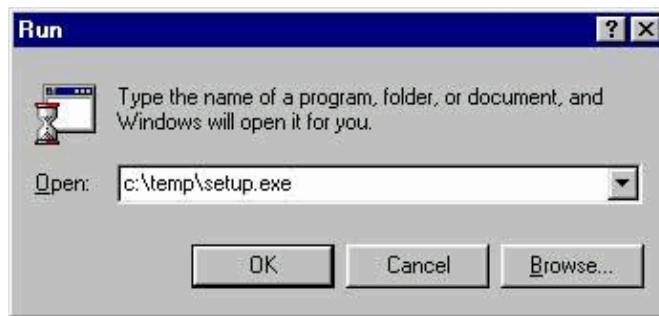
Complete these steps to install the client utilities for Windows 95.

1. Close any programs that are running.
2. Insert the Cisco Aironet Series Wireless LAN Adapters CD−ROM into your CD−ROM drive, or download the latest utilities package from the Wireless Download Center (registered customers only) and extract the files into a temporary folder.
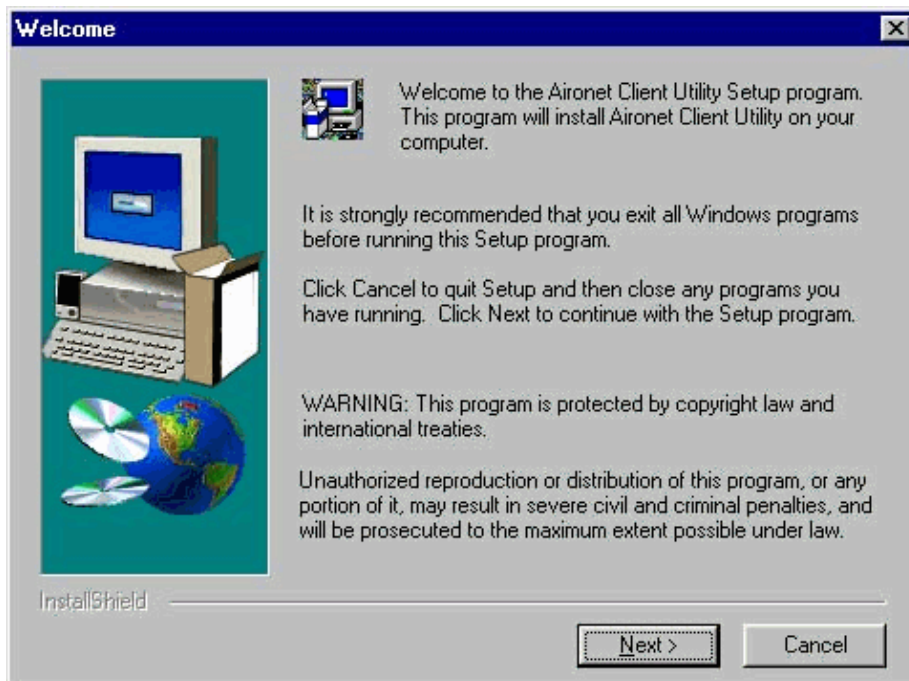3. Perform one of these steps to begin the utilities setup program:

   ♦ If you are installing the utilities from CD−ROM, select **Start > Run** and type the following path (where D is the letter of your CD−ROM drive): **D:\Utilities\ACU\setup.exe**. Older

versions of the CD−ROM may use the path **D:\utils\setup.exe**.

♦ If you downloaded the utilities, select **Start > Run** and type the path of the temporary folder into which you extracted the files. This example shows a path of **c:\temp\setup.exe**.
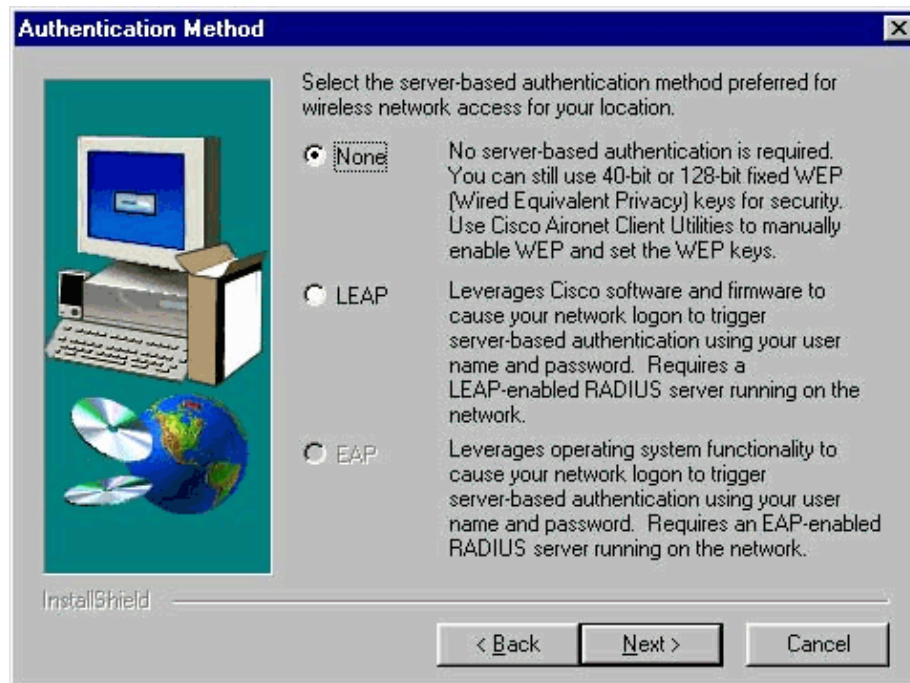

4. Click **Next** when the Welcome window appears.

5. In the Authentication Method window, select the server−based authentication method preferred for wireless network access in your location and click **Next**.
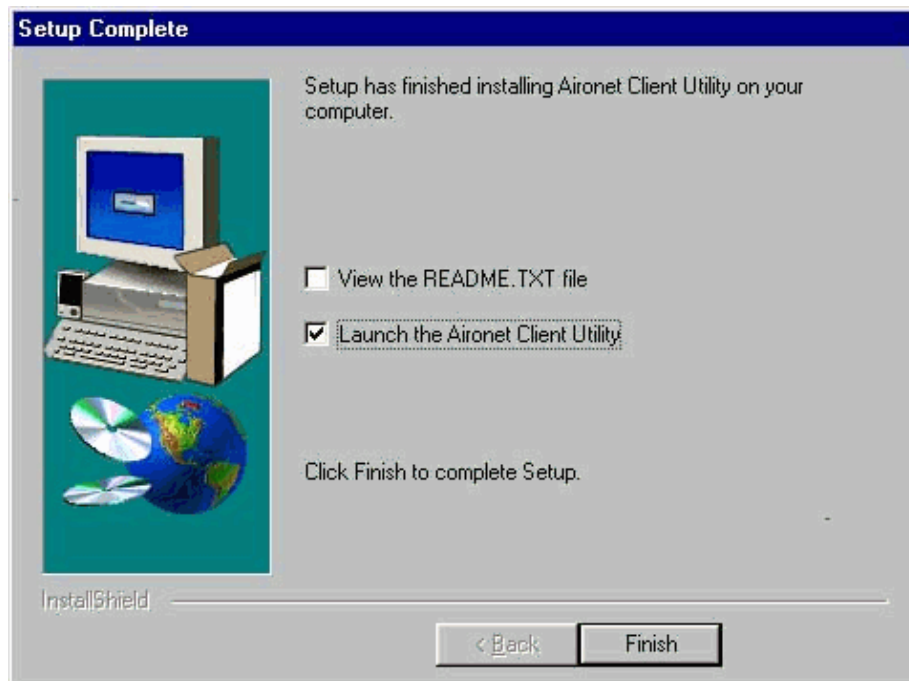
♦ If you select **None** (the default value), server−based authentication is not enabled for your client adapter. After the client utilities are installed, you can elect not to implement any security features, or you can activate some level of security by using WEP keys. Refer to the Cisco Aironet Wireless LAN Adapters Software Configuration Guide for instructions on setting WEP keys using CEM and enabling WEP through ACU, or refer to Wired Equivalent Privacy (WEP) on Aironet Access Points and Bridges Configuration Example.

♦ If you select **LEAP**, LEAP is enabled on your client adapter, provided an EAP−enabled RADIUS server runs on your network. After LEAP is enabled and your computer is rebooted, your client adapter authenticates to the RADIUS server using your network logon and receives a session−based WEP key.

♦ **EAP** is not available in all versions or for all operating systems. If EAP is available and you select it, EAP is enabled on your client adapter, provided an EAP−enabled RADIUS server is running on your network. If your computer is not using an operating system with built−in EAP support, this option is not available. After EAP is enabled and your computer is rebooted, your client adapter authenticates to the RADIUS server using your network logon and receives a session−based WEP key.

6. Select the client utilities that you want to install and deselect any that you do not want to install in the Select Components window. Click **Next**.

7. Click **Next** to allow icons for the client utilities to be placed in the Cisco Aironet folder in the Select Program Folder window.
8. Perform one of these steps in the Setup Complete window:

   ♦ If you selected no server–based authentication in step 5 select **Launch the Aironet Client Utility** and click **Finish**. ACU opens so you can configure your client adapter.

♦ If you selected LEAP or EAP server–based authentication in step 5, select **Yes, I want to restart my computer now**, remove the CD–ROM from the computer's CD–ROM drive, and click **Finish**. When the computer reboots, enter your username and password at the network logon screen. Following the sequence of events described in the EAP and LEAP sections above, the client adapter authenticates to the server and receives a session–based WEP key, provided your client adapter is configured to associate to an EAP–enabled Access Point.

Installation of the utilities is complete. Refer to the Cisco Aironet Wireless LAN Adapters Software Configuration Guide for instructions on how to use each utility.

Verify the Installation

Open ACU by double–clicking the ACU icon on your desktop to verify that you have properly installed the appropriate driver and client utilities. If the installation was successful, the bottom left corner of the Aironet Client Utility screen indicates that your client adapter is associated to its Access Point.

Check the system tray on your desktop to verify that your client adapter is authenticated and has received a session–based WEP key (if you enabled LEAP or EAP on your client adapter). The WepStat icon, which looks like two connected computers, should appear in the system tray and indicate that LEAP or EAP is authenticated and WEP is enabled. In addition, LEAP or EAP and Enable WEP should be selected in the Network Security screen in ACU. For further information, refer to Wired Equivalent Privacy (WEP) on Aironet Access Points and Bridges Configuration Example.

Related Information

- **Cisco Aironet Wireless LAN Client Adapters**
- **Cisco Aironet 340 Series Wireless LAN Adapters**
- **Wireless Support Resources**
- **Wireless Download (registered customers only)**
- **Technical Support & Documentation – Cisco Systems**