



### Lab 2.5.2.1 Install Aironet Client Utility (ACU)

Estimated Time: 30 Minutes

Number of Team Members: six teams with two students per team

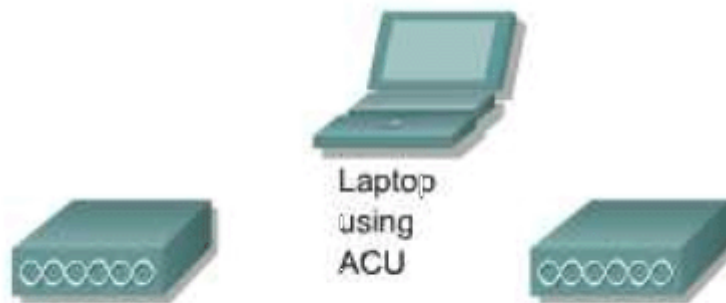
#### Objective

The student will learn the procedures for installing the Aironet Client Utility (ACU). Also, the student will configure, select, and manage profiles.

#### Scenario

Install and configure the ACU to allow a user to configure, manage, and monitor wireless connections.

#### Topology



#### Preparation

This lab will require the following materials:

- Desktop or Laptop PC
- Appropriate wireless client adapter card
- One Cisco Aironet PCI352, CB20A, or PCM 352 Client Adapter Network Interface Card.
- Aironet Client Utility installer
- 2 configured APs (instructor must setup)
  - Office Profile    AP1 – SSID of AP1
  - Home Profile    AP2 – SSID of AP2

#### Resources

[http://www.cisco.com/en/US/products/hw/wireless/ps4555/products\\_installation\\_and\\_configuration\\_guide\\_book09186a0080184b6e.html](http://www.cisco.com/en/US/products/hw/wireless/ps4555/products_installation_and_configuration_guide_book09186a0080184b6e.html)

## Step 1 Configure XP to use the ACU

To configure the client adapter through ACU instead of through Windows XP, follow the steps below:

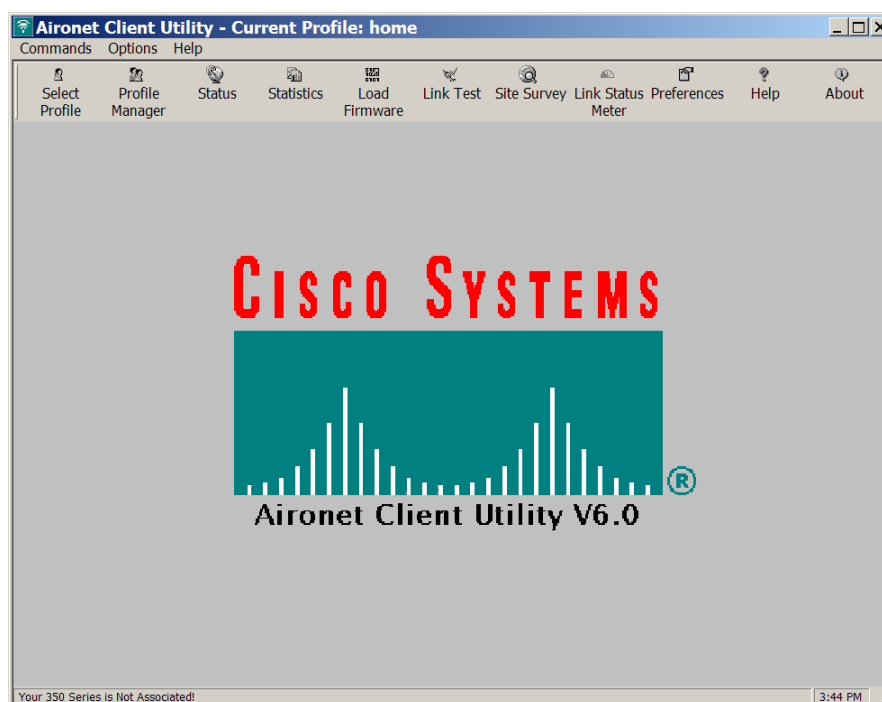
- Double-click My Computer, Control Panel, and Network Connections. Click **Start>Control Panel** then double-click **Network Connections**.  
For Windows XP, click **Start>My Computer>Control Panel>System**. See your instructor for instructions for other operating systems.
- Right-click Wireless Network Connection and click Properties.
- Select the Wireless Networks tab.
- Deselect the Use Windows to configure my wireless network settings check box.
- Follow the instructions in the "Installing ACU" section to install ACU.

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**Note** If you are planning to configure the client adapter through Windows XP but you want to use ACU's diagnostic tools, then install ACU but do not create any profiles.

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## Step 2 Install the Aironet Client Utilities (ACU)



After the appropriate driver is installed for the computer's operating system and for the client adapter type, follow the steps below to install the Aironet Client Utility (ACU).

If EAP-TLS, EAP-MD5, PEAP, or EAP-SIM authentication is going to be used on a computer running Windows 2000, Service Pack 3 for Windows 2000 and the Windows 2000 Wireless 802.1X hot fix must be installed before installing ACU.

Follow the procedure below if ACU has never been installed on the computer or if ACU version 4.13 or greater is currently installed. If a version of ACU prior to 4.13 is installed on the computer, uninstall it; then follow the steps below to install the latest version. Cisco does not recommend uninstalling ACU version 4.13 or greater before installing the latest version of ACU.

ACU version 5.05.001 or greater must be used with one of the following software combinations:

- PCM/LMC/PCI card driver version 8.2 or greater and firmware version 4.25.30 or greater
- Mini PCI card driver version 3.4 or greater and firmware version 5.00.03 or greater

- PC-Cardbus card driver version 3.4 or greater and firmware version 4.99 or greater

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**Note** The most recent version of the ACU can be obtained through the Software Center on the Cisco Connection Online (CCO)

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- To install or use the client utilities on Windows NT or Windows 2000 systems, a user must log onto the system as a user with administrative privileges. The utilities do not install or operate correctly for users not logged in with administrative rights.
- Select **Start** then **Run** and enter the path for the downloaded ACU setup.exe file.  
To use the CD go to **d:\Utilities\ACU\setup.exe**. "d" is the letter of the CD-ROM drive.
- Execute the ACU setup.exe file. When the Welcome screen appears, click **Next**.
- In the Authentication Method screen, select **None**, the default value, for server-based authentication is not enabled for a client adapter and click **Next**.

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**Note** See the hyperlink in the Resources section to find out more about the Authentication choices.

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- After the client utilities are installed, a user can elect not to implement any security features, or a user can activate some level of security by using WEP keys.
- In the Select Components screen, make sure the client utilities are selected. Make sure that any undesired utilities are deselected. Click **Next**.
- In the Select Program Folder screen, click **Next** to allow icons for the client utilities to be placed in the Cisco Systems, Inc. folder.
- If no server-based authentication was selected in Step 3, select **Launch the Aironet Client Utility** and click **Finish**. The ACU opens so that the client adapter can be configured.

### Step 3 Complete the driver installation without a DHCP server

- Double-click **My Computer**, **Control Panel**, and **Network and Dial-up Connections**.
- Right-click **Local Area Connection**.
- Click **Properties**, **Internet Protocol (TCP/IP)**, and **Properties**.
- Click **Use the following IP address** and enter the IP address, subnet mask, and default gateway address of the computer which can be obtained from the instructor. Click **OK**.
- In the Local Area Connection Properties window, click **OK**.
- If prompted to restart the computer, click **Yes**.
- The driver installation is complete.

### Step 4 Verify the TCP/IP settings

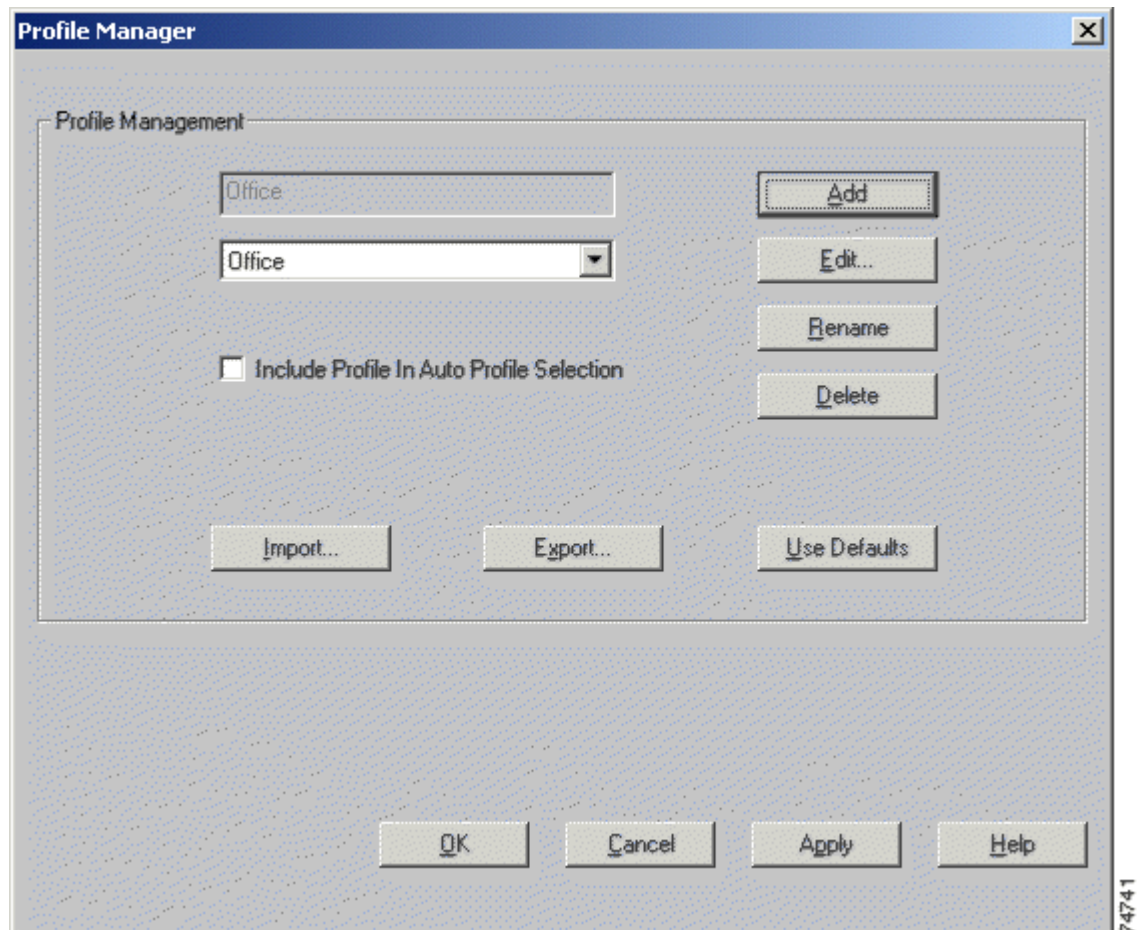
- Select **Start > Run** and enter the following:
- On Win2000 or XP, enter **cmd** to bring up the command prompt. While at the command prompt, type in **ipconfig /all** to verify the IP settings.

## Step 5 (Optional) Installing on other operating systems

The URLs below provide information for installing the Aironet Client Adapter card on non-Windows Operating Systems:

- a. [http://www.cisco.com/en/US/products/hw/wireless/ps4555/products\\_installation\\_and\\_configuration\\_guides\\_list.html](http://www.cisco.com/en/US/products/hw/wireless/ps4555/products_installation_and_configuration_guides_list.html)
- b. <http://www.cisco.com/en/US/products/hw/wireless/ps4555/ps448/index.html>

## Step 6 Using the Profile Manager



- a. Double-click the **Aironet Client Utility (ACU)** icon on your desktop to open the ACU's profile manager.
- b. Click the **Profile Manager** icon or select **Profile Manager** from the Commands drop-down menu. The Profile Manager screen appears.

What tasks does the Profile manager allow?

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## Step 7 Creating a new profile

**340 Series Properties - [Office]**

System Parameters | RF Network | **Advanced (Infrastructure)** | Network Security

Client Name:

SSID1:

SSID2:

SSID3:

Power Save Mode:

- ☒ CAM (Constantly Awake Mode)
- ☐ Max PSP (Max Power Savings)
- ☐ Fast PSP (Power Save Mode)

Network Type:

- ☐ Ad Hoc
- ☒ Infrastructure

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Follow the steps below to create a new profile.

- Click **Add**. A cursor appears in the Profile Management edit box.
- Enter the name for the first new profiles named "Office"
- Press **Enter**. The Properties screens appear with the name of the new profile in parentheses.

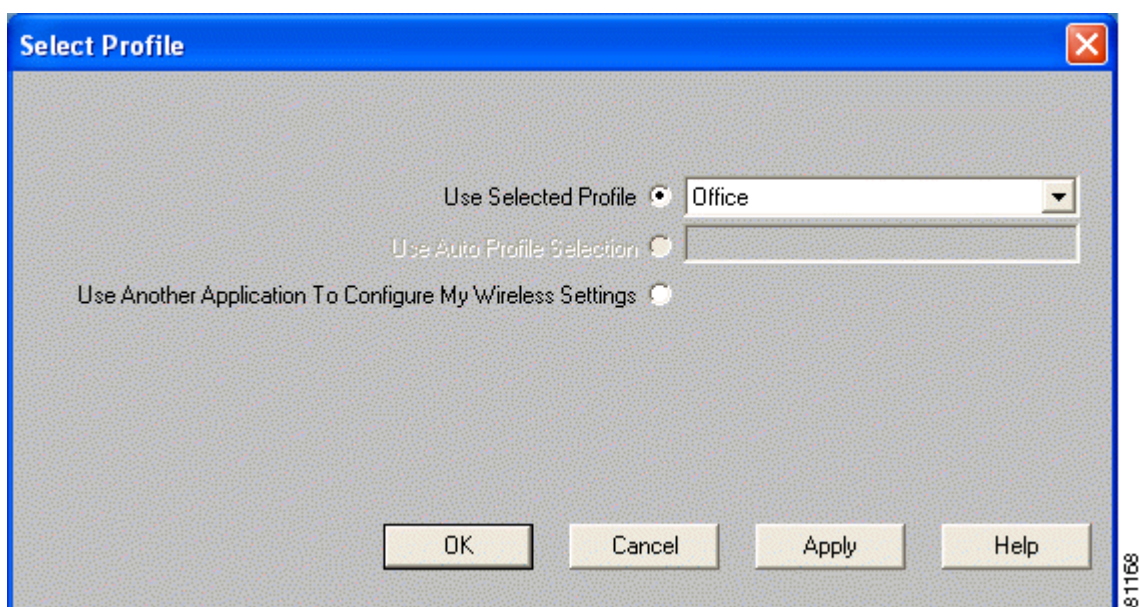
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**Note** To use the default values, click **OK**. The profile is added to the list of profiles on the Profile Manager screen.

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- Configure the Client name and SSID for the Office profile as directed by the instructor in order to connect to the AP.
- Click **OK** or **Apply** to save your profile.
- Create profiles named "Home" and "Airport"

## Step 8 Selecting the active profile



Follow the steps below to specify the profile that the client adapter is to use.

- Open ACU; click the **Select Profile** icon or select **Select Profile** from the Commands drop-down menu. The Select Profile screen appears.
- Select **Use Selected Profile**
- Now select the Office Profile.
- Click **OK** or **Apply** to save the selection. The client adapter starts using a profile based on the option selected above.

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**Note** If the client adapter cannot associate to an AP or loses association while using the selected profile, the adapter does not attempt to associate using another profile. To associate, a different profile must be selected or select Use Auto Profile Selection. **Use Auto Profile Selection**—This option causes the client adapter's driver to automatically select a profile from the list of profiles that were set up to be included in auto profile selection. **Use Another Application To Configure My Wireless Settings**—This option allows an application other than ACU to configure the client adapter. Examples of such applications include Windows XP and Boingo. You must select this option if you are configuring your card through Windows XP or 2000 but want to use ACU's diagnostic tools.

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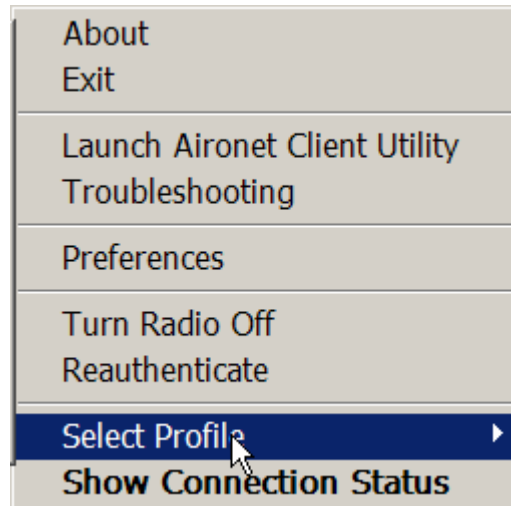
## Step 9 Using the Aironet Client Monitor (ACM)

ACM is an optional application that provides a small subset of the features available through ACU. Specifically, it enables you to access status information about your client adapter and perform basic tasks. ACM is accessible from an icon in the Windows system tray, making it easily accessible and convenient to use.







The profile can also be quickly switched through the system tray using ACM.



- a. Left click on the ACU icon and go to **Select Profile**, then choose the Home profile.
- b. The client will now associate to the second AP. Observe the ACM icon.
- c. Now select the Airport profile. Observe the ACM icon turn gray
- d. Finally, re-select the Office profile to connect to the first AP. The ACM icon should turn green.



The appearance of the ACM icon indicates the connection status of your client adapter. ACM reads the client adapter status and updates the icon every 2 seconds

Icon	Description
	The client adapter's radio is turned off.
	The client adapter is not associated to an AP.
	The client adapter is associated to an AP, but the user is not authenticated.
	The client adapter is associated to an AP, and the link quality is excellent or good.
	The client adapter is associated to an AP, and the link quality is fair.
	The client adapter is associated to an AP, and the link quality is poor.

- e. What is the status of the client adapter?
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## Step 10 Modifying a Profile (Optional)

This section provides instructions for modifying an existing profile. Follow the steps in the corresponding section below to edit, set to default values, rename, or delete a profile.

### Editing a Profile

- Open ACU; click the **Profile Manager** icon or select **Profile Manager** from the Commands drop-down menu. The Profile Manager screen appears.
- From the Profile Management drop-down box, select the profile that you want to edit.
- Click **Edit**. The Properties screens appear with the name of the profile in parentheses.
- Change any of the configuration parameters for this profile.
- Click **OK** or **Apply** to save your configuration changes.

### Setting a Profile to Default Values

- Open ACU; click the **Profile Manager** icon or select **Profile Manager** from the Commands drop-down menu. The Profile Manager screen appears.
- From the Profile Management drop-down box, select the profile that you want to set to default values.



- c. Click **Use Defaults**.
- d. When prompted, click **Yes** to confirm your decision.
- e. Click **OK** or **Apply** to save your change. The profile is saved with default values.

### Renaming a Profile

- a. Open ACU; click the **Profile Manager** icon or select **Profile Manager** from the Commands drop-down menu. The Profile Manager screen appears.
- b. From the Profile Management drop-down box, select the profile that you want to rename.
- c. Click **Rename**. The Profile Management edit box becomes enabled.
- d. Enter a new name for the profile.
- e. Click **OK** or **Apply** to save your change. The profile is renamed and added to the list of profiles.

### Deleting a Profile

- a. Open ACU; click the **Profile Manager** icon or select **Profile Manager** from the Commands drop-down menu. The Profile Manager screen appears.
- b. From the Profile Management drop-down box, select the profile that you want to delete.
- c. Click **Delete**.
- d. When prompted, click **Yes** to confirm your decision.
- e. Click **OK** or **Apply** to save your change. The profile is deleted.

## Step 11 Importing and exporting profiles

This section provides instructions for importing and exporting profiles. You may want to use the import/export feature for the following reasons:

- To back up profiles before uninstalling the client adapter driver or changing radio types
- To set up your computer with a profile from another computer
- To export one of your profiles and use it to set up additional computers

Follow the steps in the corresponding section below to import or export profiles.

### Exporting a Profile

- a. Insert a blank floppy disk into your computer's floppy drive, if you wish to export a profile to a floppy disk. Or save the file to the PC hard disk.
- b. Open ACU; click the **Profile Manager** icon or select **Profile Manager** from the Commands drop-down menu. The Profile Manager screen appears.
- c. From the Profile Management drop-down box, select the profile that you want to export.
- d. Click **Export**. The Save Profile As screen appears. The default filename is *ProfileName.pro*, where *ProfileName* is the name of the selected profile, and the default directory is the directory in which ACU was installed.
- e. If you want to change the profile name, enter a new name in the File name edit box.
- f. Select a different directory (for example, your computer's floppy disk drive or a location on the network) from the Save in drop-down box.
- g. Click **Save**. The profile is exported to the specified location.

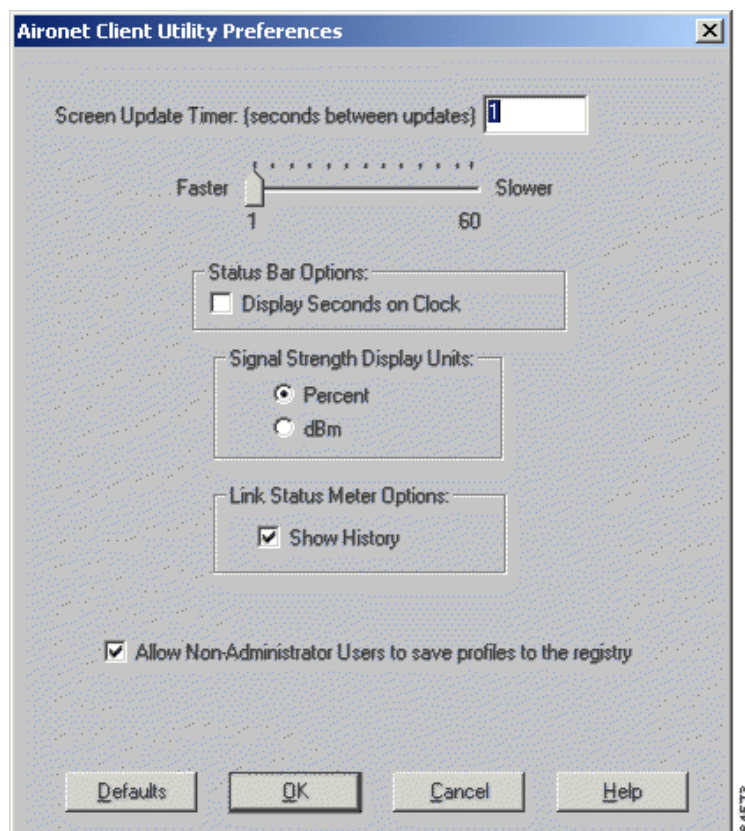
## Importing a Profile

- a. If the profile that you want to import is on a floppy disk, insert the disk into your computer's floppy drive.
- b. Open ACU; click the **Profile Manager** icon or select **Profile Manager** from the Commands drop-down menu. The Profile Manager screen appears.
- c. Click **Import**. The Import Profile screen appears.
- d. Find the directory where the profile is located.
- e. Click the profile so it appears in the File name box at the bottom of the Import Profile screen.
- f. Click **Open**. The imported profile appears in the list of profiles on the Profile Manager screen.

## Step 12 Denying access to non-administrative users

By default, ACU allows regular-class users to modify and save profiles to the registry. However, if you have administrative rights, you can prevent regular-class users from saving profiles on computers running Windows NT, 2000, or XP. (This option is not available for Windows 95, 98, and Me because these versions of Windows do not support different classes of users.)

Follow the steps below if you wish to prevent users without administrative rights from modifying and saving profiles (or to allow regular-class users to save profiles if permission was denied previously).



- a. Open ACU by double-clicking the Aironet Client Utility (ACU) icon on your desktop.
- b. Click the Preferences icon or select Preferences from the Options drop-down menu. The Aironet Client Utility Preferences screen appears.
- c. Deselect the **Allow Non-Administrator Users to save profiles to the registry** check box (or select this check box if you wish to allow regular-class users to save profiles).
- d. Click **OK** to save your changes.

## Step 13 Uninstall the Aironet Client Utilities (optional)

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**Note** If this step is performed, the ACU will have to be reinstalled before the next lab.

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- a. Uninstall the Client Utilities
- b. Close any Windows programs that are running.
- c. Insert the Cisco Aironet Series Wireless LAN Adapters CD into the computer CD-ROM drive.
- d. Select **Start** then **Run** and enter the following path: **d:\Utilities\ACU\setup.exe**. d is the letter of the CD-ROM drive.
- e. When the Welcome screen appears, select **Remove** and click **Next**.
- f. When asked if selected applications should be completely removed, click **Yes**.
- g. If a message appears indicating that a file was detected that may no longer be needed by any application but deleting the file may prevent other applications from running, click **Yes**.
- h. If a message is received indicating that locked files were detected, click **Reboot**.
- i. In the Maintenance Complete screen, click **Finish**.
- j. If prompted to restart the computer, remove the CD from the computer CD-ROM drive and click **Yes**.