



Basic Configuration

This chapter describes initial configuration of the access point using the Internet browser-based management system. You can also reach the management system through the access point's serial port or through Telnet. Consult Chapter 2 in the *Cisco Aironet Access Point Software Configuration Guide* for complete instructions on using these interfaces.

This chapter includes the following sections:

- [Before You Start](#)
- [Summary of Configuration Steps](#)
- [Using the IP Setup Utility](#)
- [Entering Basic Settings](#)
- [Default Basic Settings](#)

Before You Start

Before configuring the access point, ask your network administrator for the following information:

- The service set identifier (SSID) for the access point.
- A system name for the access point. The name should describe the location or principal users of the access point.
- If your network does not use DHCP to assign IP addresses, you will need an IP address for the access point.
- If your network uses subnets, you will need a default gateway and an IP subnet mask for the access point.
- The access point's MAC address, which is printed on the label on the bottom of the access point.

Summary of Configuration Steps

You use the Express Setup page to assign basic settings to the access point. For instructions on setting up security, filtering, and other access point features, consult the *Cisco Aironet Access Point Software Configuration Guide* on the access point CD.

You will follow these steps to enter the access point's basic settings:

1. Connect the access point as described in the *Quick Start Guide: Cisco Aironet Access Points*.
2. Use an Internet browser to open the access point's management system by browsing to the access point's IP address. If your network uses a DHCP server, use the IP Setup Utility (IPSU) to find the access point's DHCP-assigned IP address. The [“Using the IP Setup Utility” section on page 3-2](#) describes how to use IPSU.

You can also use a nine-pin, straight-through, male-to-female serial cable to connect your computer's COM1 or COM2 port to the serial port on the back of the access point and use a terminal emulator to open the management system. The [“Using a Terminal Emulator” section on page 3-7](#) describes using a terminal emulator to assign basic settings.

3. Enter basic settings on the Express Setup page.

Using the IP Setup Utility

The IP Setup utility (IPSU) allows you to find the access point's IP address when it has been assigned by a DHCP server. You can also use IPSU to set the access point's IP address and SSID if they have not been changed from the default settings.

**Note**

IPSU can be used only on the following operating systems: Windows 95, 98, NT, 2000, ME, or XP. For other operating systems, you must use the access point console port and a terminal emulator program to configure the access point.

The sections below explain how to install the utility, how to use it to find the access point's IP address, and how to use it to set the IP address and the SSID.

Obtaining and Installing IPSU

IPSU is available on the Cisco web site. Follow these steps to obtain and install IPSU:

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- Step 1** Use your Internet browser to access the Cisco Software Center at the following URL:
<http://www.cisco.com/public/sw-center/sw-wireless.shtml>
 - Step 2** Click **Option 2: Aironet Wireless Software Display Tables**.
 - Step 3** Locate the access point firmware and utilities section and click **Cisco Aironet 350 Series (VXWorks)**.
 - Step 4** Click **IPSUvxxxxxx.exe**. The vxxxxxx identifies the software package version number.
 - Step 5** On the Encryption Authorization Form, enter the requested information, read the encryption information, and check the boxes that apply.
 - Step 6** Click **Submit**.
 - Step 7** Read and accept the terms and conditions of the Software License Agreement.
 - Step 8** Select the file again to download it.
 - Step 9** Download and save the file to a temporary directory on your hard drive and then exit the Internet browser.
 - Step 10** Double-click **IPSUvxxxxxx.exe** in the temporary directory to expand the file.
 - Step 11** Double-click **Setup.exe** and follow the steps provided by the installation wizard to install IPSU.
The IPSU icon appears on your computer desktop.
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Finding the Access Point's IP Address

If your access point receives an IP address from a DHCP server, use IPSU to find its IP address. Run IPSU from a computer on the same network as the access point. Follow these steps to find the access point's IP address:

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- Step 1** When the utility window opens, make sure **Get IP addr** is selected in the Function box.
 - Step 2** Type the access point's MAC address in the Device MAC ID field. The access point's MAC address is printed on the label on the bottom of the unit. It should contain six pairs of hexadecimal digits. Your access point's MAC address might look like the following example:

004096xxxxxx



Note The MAC address field is not case-sensitive.

- Step 3** Click **Get IP Address**.
- Step 4** When the access point's IP address appears in the IP Address field, write it down.
If IPSU reports that the IP address is 10.0.0.1, the default IP address, then the access point did not receive a DHCP-assigned IP address. Steps for assigning an IP address are included in the "Default IP Address" section in Chapter 3 of the *Cisco Aironet Access Point Software Configuration Guide*.
- Step 5** To check the IP address, browse to the access point's browser-based management pages. Open an Internet browser.

- Step 6** Type or paste the access point's IP address in the browser's location or address field. (If you are using Netscape, the field is labeled *Netsite* or *Location*; if you are using Microsoft Explorer, the field is labeled *Address*.)
- Step 7** Press **Enter**. The access point's home page appears.

Setting the Access Point's IP Address and SSID

If your access point does not receive an IP address from a DHCP server, or if you want to change the default IP address, you can use IPSU to assign an IP address. You can set the access point's SSID at the same time.



Note The computer you use to assign an IP address to the access point must have an IP address of its own.



Note IPSU can change the access point's IP address and SSID only from their default settings. After the IP address and SSID have been changed, IPSU cannot change them again. (For additional information see *Using an Internet Browser* or *Using a Terminal Emulator* sections.)

Follow these steps to assign an IP address and an SSID to the access point:

- Step 1** Double-click the **IP Setup** icon on your computer desktop. (If IPSU is not installed on your computer, follow the steps in the "[Obtaining and Installing IPSU](#)" section on page 3-3 to install it.)
- Step 2** When the utility window opens, make sure **Set Parameters** is selected in the Function box.
- Step 3** Type the access point's MAC address in the Device MAC ID field. The access point's MAC address is printed on the label on the bottom of the unit. It should contain six pairs of hexadecimal digits. Your access point's MAC address might look like the following example:

004096xxxxxx



Note The MAC address field is not case-sensitive.

- Step 4** Type the IP address you want to assign to the access point in the IP Address field.
- Step 5** Type the SSID you want to assign to the access point in the SSID field.



Note You cannot set the SSID without also setting the IP address. You can set the IP address without setting the SSID, however.

- Step 6** Click **Set Parameters**.
- Step 7** To test the IP address, open an Internet browser.

- Step 8** Type or paste the access point's IP address in the browser's location or address field. (If you are using Netscape, the field is labeled *Netsite* or *Location*; if you are using Microsoft Internet Explorer, the field is labeled *Address*.)
- Step 9** Press **Enter**. The access point's home page appears.
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Entering Basic Settings

You can open the access point's management system through your Internet browser or through the access point's serial port using a terminal emulator. Each method is described below.

Using an Internet Browser

Follow these steps to enter basic settings with an Internet browser:

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- Step 1** Open an Internet browser.
- Step 2** Type or paste the access point's IP address in the browser's location field. (If you are using Netscape Communicator, the field is labeled *Netsite* or *Location*; if you are using Microsoft Explorer, the field is labeled *Address*.) Press **Enter**.
- Step 3** When the access point's Summary Status page appears, click **Setup**. When the Setup page appears, click **Express Setup**.



Note If the access point is new and its factory configuration has not been changed, the Express Setup page appears instead of the Summary Status page when you first browse to the access point.

- Step 4** Type a system name for the access point in the System Name field. A descriptive system name makes it easy to identify the access point on your network.
- Step 5** Select a configuration server protocol from the Configuration Server Protocol pull-down menu. The configuration server protocol you select should match your network's method of IP address assignment. The **Configuration Server** link takes you to the Boot Server Setup page, which you use to configure the access point to work with your network's BOOTP or DHCP servers for automatic assignment of IP addresses.

The Configuration Server Protocol pull-down menu options include:

- None—Your network does not have an automatic system for IP address assignment.
 - BOOTP—With Bootstrap Protocol, IP addresses are hard-coded based on MAC addresses.
 - DHCP—With Dynamic Host Configuration Protocol, IP addresses are “leased” for predetermined periods of time.
- Step 6** Type an IP address in the Default IP address field. If DHCP is not enabled for your network, the IP address you enter in this field will be the access point's static IP address. If DHCP or BOOTP is enabled, the address you enter in this field provides the IP address only when no server responds with an IP address for the access point.

- Step 7** Enter an IP subnet mask in the Default IP Subnet Mask field to identify the subnetwork so the access point's IP address can be recognized on the LAN. If DHCP or BOOTP is not enabled, this field is the subnet mask. If DHCP or BOOTP is enabled, this field provides the subnet mask only when no server responds to the access point's DHCP or BOOTP request.
- Step 8** Enter the IP address of your default internet gateway in the Default Gateway field. The entry 255.255.255.255 indicates no gateway. Clicking the Gateway link takes you to the Routing Setup page, which you use to configure the access point to communicate with the IP network routing system.
- Step 9** Type an SSID for the access point in the Radio Service Set ID (SSID) field. The SSID is a unique identifier that client devices use to associate with the access point. The SSID can be any alphanumeric entry from two to 32 characters long.
- Step 10** Select a network role for the access point from the Role in Radio Network pull-down menu. The menu contains the following options:
- Access Point/Root—A wireless LAN transceiver that connects an Ethernet network with wireless client stations. Use this setting if the access point will be connected to the wired LAN.
 - Repeater/Non-Root—An access point that transfers data between a client and another access point. Use this setting for access points not connected to the wired LAN.
 - Client/Non-root—A station with a wireless connection to an access point. Use this setting for diagnostics, such as when you need to test the access point by having it communicate with another access point.
- Step 11** Select an Optimize Radio Network For option to assign either preconfigured settings or customized settings for the access point radio:
- Throughput—Maximizes the data volume handled by the access point but might reduce the access point's range.
 - Range—Maximizes the access point's range but might reduce throughput.
 - Custom—The access point will use the settings you enter on the AP Radio Hardware page. Click the Custom link to go to the AP Radio Hardware page.
- Step 12** To automatically configure the access point to be compatible with other devices on your wireless LAN, select an Ensure Compatibility With option:
- 2-Mbps clients—Select this setting if your network contains Cisco Aironet devices that operate at 2 Mbps.
 - non-Aironet 802.11—Select this setting if there are non-Cisco Aironet devices on your wireless LAN.
- Step 13** To use Simplified Network Management Protocol (SNMP), enter a community name in the SNMP Admin. Community field. This name automatically appears in the list of users authorized to view and make changes to the access point's management system.
- Click the **SNMP** link to go to the SNMP Setup page, where you can edit other SNMP settings.
- You can define other SNMP communities with User Management. The “Security Setup” section in Chapter 3 of the *Cisco Aironet Access Point Software Configuration Guide* describes User Management.
- Step 14** Click **OK**. The Setup page appears. If you changed the Role in Radio Network setting, your access point reboots.
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Using a Terminal Emulator

This section provides instructions for Microsoft's HyperTerminal; other programs are similar.

Selecting Pages and Settings

When you type names and settings that appear in brackets you jump to that page or setting. HyperTerminal jumps to the page or setting as soon as it recognizes a unique name, so you need to type only the first few characters in the page or setting name. To jump from the home page to the Setup page, for example, you would only need to type **se**.

Applying Changes to the Configuration

The console interface's auto-apply feature is on by default, so changes you make to any page are applied automatically when you move to another management page. To apply changes and stay on the current page, type **apply** and press **Enter**.

Assigning Basic Settings

Follow these steps to assign basic settings to the access point with a terminal emulator:

- Step 1** Connect a nine-pin, male-to-female, straight-through serial cable to the COM port on a computer and to the RS-232 serial port on the back of the access point. [Figure 3-1](#) and [Figure 3-2](#) show the location of the access point's serial port.

Figure 3-1 Connecting the Serial Cable for 340 Series and 350 Series Access Points

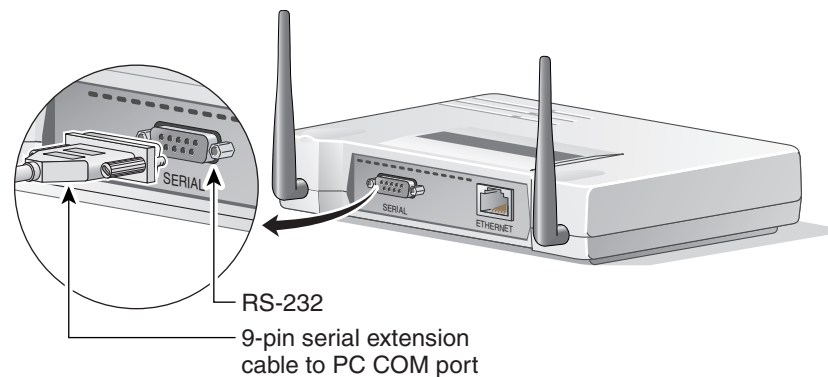
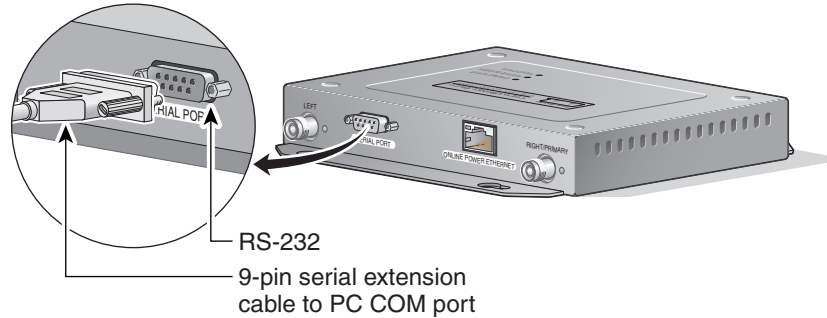


Figure 3-2 Connecting the Serial Cable for 350 Series Metal Case Access Points



- Step 2** Open a terminal emulator.
- Step 3** Enter these settings for the connection:
- Bits per second (baud rate): 9600
 - Data bits: 8
 - Parity: No parity
 - Stop bits: 1
 - Flow control: Xon/Xoff
- Step 4** Press **=** to display the home page of the access point. If the access point is new and its factory configuration has not been changed, the Express Setup page appears; if the access point has been configured, the Summary Status page appears.
- Step 5** Press **n** to select System Name. Type a system name for the access point and press **Enter**. A descriptive system name makes it easy to identify the access point on your network.
- Step 6** Press **t** and then press **Enter** to select Terminal Type. Press **t** and then press **Enter** to select teletype display on the console interface. Press **a** and then press **Enter** to select ANSI display on the console interface.
- Step 7** Press **pr** and then press **Enter** to select Config Server Protocol. Press **n** to select none; press **b** to select BOOTP; press **d** to select DHCP. Press **Enter** after you make your selection.
- Step 8** Press **ad** and then press **Enter** to select IP Address. Enter an IP address for the access point. If DHCP is not enabled for your network, the IP address you enter is the access point's static IP address. If DHCP is enabled, the address you enter provides the IP address only when no DHCP server responds with an IP address for the access point.
- Step 9** Press **su** and then press **Enter** to select IP Subnet Mask. Enter an IP subnet mask to identify the subnetwork so the access point's IP address can be recognized on the LAN. If DHCP is not enabled, the subnet you enter is the static subnet mask. If DHCP is enabled, your entry provides the subnet mask only when no DHCP server responds to the access point's DHCP request.
- Step 10** Press **g** and then press **Enter** to select Default Gateway. Enter the IP address of your default internet gateway. The entry 255.255.255.255 indicates no gateway.
- Step 11** Press **ra** and then press **Enter** to select Radio Service Set ID (SSID). Enter an SSID for the access point. The SSID is a unique identifier that client devices use to associate with the access point. The SSID can be any alphanumeric entry from two to 32 characters long.

- Step 12** Press **ro** and then press **Enter** to select Role in Radio Network. The network roles include the following options:
- Access Point/Root—Press **a** and then press **Enter** to select this setting. A wireless LAN transceiver that connects an Ethernet network with wireless client stations. Use this setting if the access point will be connected to the wired LAN.
 - Repeater/Non-Root—Press **r** and then press **Enter** to select this setting. An access point that transfers data between a client and another access point. Use this setting for access points not connected to the wired LAN.
 - Client/Non-root—Press **c** and then press **Enter** to select this setting. A station with a wireless connection to an access point. Use this setting for diagnostics, such as when you need to test the access point by having it communicate with another access point.
- Step 13** Press **op** and then press **Enter** to select Optimize Radio Network For. These options assign either preconfigured settings or customized settings for the access point radio:
- Throughput—Press **t** and then press **Enter** to select this setting. Maximizes the data volume handled by the access point but might reduce the access point's range.
 - Range—Press **r** and then press **Enter** to select this setting. Maximizes the access point's range but might reduce throughput.
 - Custom—Press **c** and then press **Enter** to select this setting. The access point will use the settings you enter on the AP Radio Hardware page. Chapter 3 of the *Cisco Aironet Access Point Software Configuration Guide* describes the AP Radio Hardware page.
- Step 14** Use the Ensure Compatibility With setting to automatically configure the access point to be compatible with other devices on your wireless LAN:
- 2-Mbps clients—Press **2** and then press **Enter** to select this setting. Select this setting if your network contains Cisco Aironet devices that operate at 2 Mbps.
 - non-Aironet 802.11—Press **no** and then press **Enter** to select this setting. Select this setting if there are non-Cisco Aironet devices on your wireless LAN.
- Step 15** Press **sn** and then press **Enter** to select SNMP Admin. Community. Enter an SNMP community name. This name automatically appears in the list of users authorized to view and make changes to the access point's management system.
- You can define other SNMP communities with User Management. The “Security Setup” section in Chapter 3 of the *Cisco Aironet Access Point Software Configuration Guide* describes User Management.
- Step 16** Press **ap** and press **Enter** to apply your basic settings. If you changed the Role in Radio Network setting, your access point reboots.
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Default Basic Settings

Table 3-1 lists the default settings on the access point's Express Setup page.

Table 3-1 *Default Settings on the Express Setup Page*

Setting Name	Default Value
System Name	AIR-AP350_XXXXXX (the last six characters of the unit's MAC address)
Terminal Type (on Console interface only)	teletype
Config Server Protocol	DHCP
IP address	10.0.0.1
IP Subnet Mask	255.255.255.0
Default Gateway	255.255.255.255
SSID	tsunami
Role in Radio Network	Access Point/Root
Optimize Radio Network For	Throughput
Ensure Compatibility With	—
SNMP Admin. Community	admin