



# Release Notes for Cisco Aironet Access Points for Cisco IOS Release 12.3(8)JEB

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April 26, 2007

These release notes describe minor features and caveats for Cisco IOS Maintenance Release 12.3(8)JEB. They also provide important information about Cisco Aironet 1100, 1200, and 1230 series autonomous access points. The Cisco Aironet 350 series is no longer supported in this release or any future release.

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## Introduction

The Cisco Aironet Access Point is a wireless LAN transceiver that acts as the connection point between wireless and wired networks or as the center point of a standalone wireless network. In large installations, the roaming functionality provided by multiple access points enables wireless users to move freely throughout the facility while maintaining uninterrupted access to the network.

You can configure and monitor 1100, 1200, and 1230, series access points using the command-line interface (CLI), the web-browser interface, or Simple Network Management Protocol (SNMP).

## System Requirements

Cisco IOS Release 12.3(8)JEB is a general maintenance release that concentrates on bug fixes and includes minor features. You can install Cisco IOS Release 12.3(8)JEB on any Cisco Aironet access point or 1300 series access point/bridge.



### Note

Software upgrades fail when you use the web-browser interface to install Cisco IOS Release 12.3(8)JEB on 1200 series access points. The image size exceeds the access point's 4-MB restriction for software upgrades. Use TFTP to upgrade your access point to this release. For complete instructions on using TFTP to upgrade access point software, see the "Working with Software Images" section in the *Cisco IOS Software Configuration Guide for Cisco Aironet Access Points*. Click this link to browse to that document:

[http://www.cisco.com/en/US/docs/wireless/access\\_point/12.4\\_10b\\_JA/configuration/guide/scg12410b-chap20-firmware.html#wp1035507](http://www.cisco.com/en/US/docs/wireless/access_point/12.4_10b_JA/configuration/guide/scg12410b-chap20-firmware.html#wp1035507)

You can also install this release on 1200 series access points that have been converted to run Cisco IOS software. You can tell whether an access point runs VxWorks or Cisco IOS software by looking at the GUI: the GUI on an access point running VxWorks has a yellow and red color scheme, and the GUI on an access point running Cisco IOS software has a green, light-green, and black color scheme.

Your 1200 series access point must run one of these VxWorks versions before you can convert to IOS software: 12.03T, 12.02T1, 12.01T1, 12.00T, 11.56, or 11.54T. If your access point runs version 12.04, you must downgrade to a supported VxWorks version before upgrading to IOS software.

The conversion upgrade image for 1200 series access points installs Cisco IOS Release 12.2(13)JA2 on your 1200 series access point.



### Note

Do not attempt to load an IOS image on 1200 series access points that have not been converted.

## Finding the IOS Software Version

To find the version of IOS software running on your access point, use a Telnet session to log into the access point and enter the **show version EXEC** command. This example shows command output from an access point running Cisco IOS Release 12.3(8)JA:

```
ap1200>show version
Cisco Internetwork Operating System Software
IOS (tm) C1200 Software (C1200-K9W7-M), Version 12.3(8)JA
Copyright (c) 1986-2006 by Cisco Systems, Inc.
```

On access points running IOS software, you can also find the software version on the System Software Version page in the access point's web-browser interface. If your access point does not run IOS software, the software version appears at the top left of most pages in the web-browser interface.

## Upgrading to a New Software Release

For instructions on installing access point software for your access point:

- 
- Step 1** Follow this link to the Cisco home page:  
<http://www.cisco.com>
  - Step 2** Click **Support**. The Support page appears.
  - Step 3** Click **See Documentation**. The Documentation page appears.
  - Step 4** Click **Wireless**. The Wireless Support Resources page appears.
  - Step 5** Scroll down to the Access Points section.
  - Step 6** Select the access point model for which you need the information. The Introduction page for the model you selected appears.
  - Step 7** Under the Configure section, click **Configuration Guides**. A list of configuration documents appears.
  - Step 8** Click **Cisco IOS Software Configuration Guide for Cisco Aironet Access Points, 12.4(3g)JA and 12.3(8)JEB**.
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For information on Cisco IOS software, click this link to browse to the Cisco IOS Software Center on Cisco.com:

<http://www.cisco.com/public/sw-center/sw-ios.shtml>

## Disable Radios to Prevent Unexpected Reboot When Upgrading System Software

If your access point runs Cisco IOS Release 12.2(11)JA, 12.2(11)JA1, or 12.2(11)JA2, your access point might unexpectedly reboot after you upgrade to a later Cisco IOS Release. Because of a rare timing condition that affects the radios, the access point sometimes reboots immediately after the upgrade when the radios are enabled. However, after the access point reboots the upgrade is complete and the access point operates normally. To prevent the access point from rebooting unexpectedly, disable the radio interfaces before upgrading software.

Follow these steps to disable the radio interfaces using the web-browser interface:

- 
- Step 1** Browse to the Network Interfaces: Radio Settings page. [Figure 1](#) shows the top portion of the Network Interfaces: Radio Settings page.

Figure 1 Network Interfaces: Radio Settings Page

The screenshot shows the 'Radio0-802.11B Settings' page. On the left is a navigation menu with options like HOME, EXPRESS SET-UP, NETWORK MAP, ASSOCIATION, NETWORK INTERFACES, IP Address, FastEthernet, Radio0-802.11B, Radio1-802.11A, SECURITY, SERVICES, WIRELESS SERVICES, SYSTEM SOFTWARE, and EVENT LOG. The main content area has tabs for RADIO0-802.11B STATUS, DETAILED STATUS, SETTINGS, and CARRIER BUSY TEST. The 'SETTINGS' tab is active. It displays the hostname UD\_AP1230 and uptime of 2 days, 23 hours, 7 minutes. Under 'Network Interfaces: Radio0-802.11B Settings', there are three sections: 'Enable Radio' with radio buttons for 'Enable' and 'Disable' (selected); 'Current Status (Software/Hardware):' showing 'Disabled' and 'Down'; and 'Role in Radio Network' with radio buttons for 'Access Point Root (Fallback to Radio Island)' (selected), 'Access Point Root (Fallback to Radio Shutdown)', 'Access Point Root (Fallback to Repeater)', and 'Repeater Non-Root'. A vertical ID '103037' is on the right side.

- Step 2** Select **Disable** to disable the radio.
- Step 3** Click **Apply** at the bottom of the page.
- Step 4** If your access point has two radios, repeat these steps for the second radio.

Beginning in privileged EXEC mode, follow these steps to disable the access point radios using the CLI:

	Command	Purpose
Step 1	<b>configure terminal</b>	Enter global configuration mode.
Step 2	<b>interface dot11radio {0   1}</b>	Enter interface configuration mode for the radio interface. The 2.4-GHz radio is radio 0, and the 5-GHz radio is radio 1.
Step 3	<b>shutdown</b>	Disable the radio port.
Step 4	<b>end</b>	Return to privileged EXEC mode.
Step 5	<b>copy running-config startup-config</b>	(Optional) Save your entries in the configuration file.

If your access point has two radios, repeat these steps for the second radio. Use the **no** form of the **shutdown** command to enable the radio.

## Converting to Cisco IOS Software

If your 1200 series access point does not run IOS software, you can use the conversion utility or the conversion upgrade image to convert the access point system to IOS software. Use the conversion utility to maintain the current configuration after the conversion, or load the upgrade image to convert to IOS software without saving the current configuration. Your 1200 series access point must be running one of these VxWorks firmware versions before you can convert to IOS software:

- VxWorks version 12.03T, 12.02T1, 12.01T1, 12.00T, 11.56, or 11.54T

The conversion upgrade image for 1200 series access points installs Cisco IOS Release 12.2(13)JA2 on your 1200 series access point.

**Note**

The upgrade image and the conversion tool do not support VxWorks version 12.04. Access points running version 12.04 must be downgraded to a supported operating system version before you can use the upgrade image or the conversion tool.

**Note**

The upgrade to Cisco IOS software is permanent; you cannot revert to non-IOS software. Product warranties do not cover unintended upgrades.

For complete instructions on using the conversion utility, refer to the *Cisco Aironet Conversion Tool for Cisco IOS Software, 2.1 Administrator Guide for Windows*. Click this link to browse to the Administrator Guide:

[http://www.cisco.com/en/US/products/hw/wireless/ps430/products\\_administration\\_guide\\_book09186a008024f246.html](http://www.cisco.com/en/US/products/hw/wireless/ps430/products_administration_guide_book09186a008024f246.html)

To download the conversion utility or the upgrade image, click this link to browse to the Cisco IOS Software Center on Cisco.com:

<http://www.cisco.com/public/sw-center/sw-ios.shtml>

On the Cisco IOS Software Center page, enter your Cisco.com username and password to use the Feature Navigator or the Cisco IOS Upgrade Planner, or click **Wireless Software** to go to the Wireless LAN Software page. Download the conversion utility or the upgrade image for 1200 series access points. You can also download instructions for using the utility and the image.

## Some Fields Not Updated During Upgrade to IOS Software

When you upgrade an access point to run Cisco IOS software, some fields that are reported in the console messages during the upgrade are blank or are populated with zeros. However, blank or zero fields are normal after a successful upgrade, because 1200 series access points do not support that information. This example shows fields that might appear blank or populated with zeros:

```
32K bytes of flash-simulated non-volatile configuration memory.
Base Ethernet MAC Address: 00:05:9A:38:42:91
Part Number: 0-0000-00
PCA Assembly Number: 000-00000-00
PCA Revision Number:
PCB Serial Number:
Top Assembly Part Number: 000-00000-00
Top Assembly Serial Number:
Top Revision Number:
Product/Model Number: AIR-AP352-IOS-UPGRD
```

## New Features

This release contains one new feature:

- WDS-only Mode—You can configure an access point running Cisco IOS Release 12.3(8) JEB to function in WDS-only mode. In this mode the access point functions only as a WDS, providing domain services to other access points and clients.

## Installation Notes

This section contains information you should keep in mind when installing Cisco Aironet autonomous access points.

### Installation in Environmental Air Space

This section provides information on installing 1100 and 1200 series access points in environmental air space, such as above suspended ceilings.

Cisco Aironet 1100, and 1200 series access points provide adequate fire resistance and low smoke-producing characteristics suitable for operation in a building's environmental air space, such as above suspended ceilings, in accordance with Section 300-22(C) of the *National Electrical Code* (NEC) and Sections 2-128, 12-010(3) and 12-100 of the *Canadian Electrical Code*, Part 1, C22.1.

**Caution**

The power injector does not provide fire resistance and low smoke-producing characteristics and is not intended for use in extremely high or low temperatures or in environmental air spaces such as above suspended ceilings.

**Note**

If you plan to mount a 1200 series access point with a 5-GHz radio in an area subject to environmental air space, Cisco recommends that you mount the access point horizontally so that its antennas point down. Doing so ensures that the access point complies with regulatory requirements for environmental air space with the 5-GHz radio installed.

## Power Considerations

This section describes issues you should consider before applying power to an access point.

**Caution**

The operational voltage range for 1100 series access points is 35 to 57 VDC, and the nominal voltage is 48 VDC. Voltage higher than 60 VDC can damage the equipment.

**Caution**

The nominal voltage for 1200 series access points is 48 VDC, and the access point is operational up to 60 VDC. Voltage higher than 60 VDC can damage the equipment.

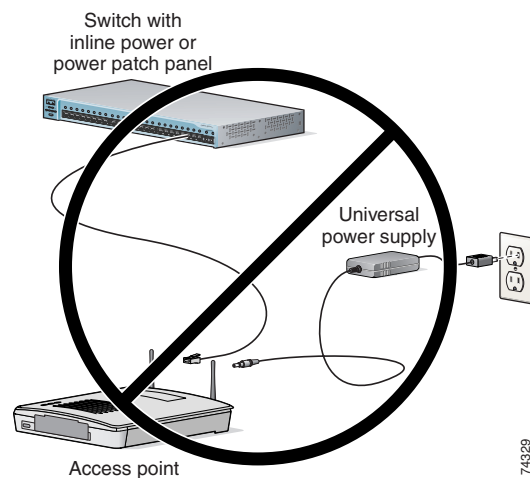
**Caution**

Cisco Aironet power injectors are designed for use with Cisco Aironet access points and bridges only. *Do not use the power injector with any other Ethernet-ready device.* Using the power injector with other Ethernet-ready devices can damage the equipment.

## Use Only One Power Option

You cannot provide redundant power to 1100 and 1200 series access points with both DC power to its power port and inline power from a patch panel or powered switch to the access point's Ethernet port. If you apply power to the access point from both sources, the switch or power patch panel might shut down the port to which the access point is connected. [Figure 2](#) shows the power configuration that can shut down the port on the patch panel or powered switch.

**Figure 2** *Improper Power Configuration Using Two Power Sources*



## Using the AC Power Adapter

If you use the AC power adapter to provide power to the access point, you do not need to adjust the access point configuration.

## Using a Switch Capable of IEEE 802.3af Power Negotiation

If you use a switch to provide Power over Ethernet (PoE) to the access point and the switch supports the IEEE 802.3af power negotiation standard, select **Power Negotiation** on the System Software: System Configuration page.

## Using a Switch That Does Not Support IEEE 802.3af Power Negotiation

If you use a switch to provide Power over Ethernet (PoE) to the access point and the switch does not support the IEEE 802.3af power negotiation standard, select **Pre-Standard Compatibility** on the System Software: System Configuration page.

## Using a Power Injector

If you use a power injector to provide power to the access point, select **Power Injector** on the System Software: System Configuration page and enter the MAC address of the switch port to which the access point is connected.

## Operating 5-GHz Radio Requires Power Injector, Power Module, or Catalyst 3550-24 PWR Switch

The 1200 series power injector and the 1200 series power module support operation of the 5-GHz radio in the access point. Currently, the Catalyst 3550-24 PWR switch supports power for both the 2.4-GHz radio and the 5-GHz radio. Other switches and power patch panels might not provide enough power for the 5-GHz radio.

## Access Point Requires 1200 Series Universal Power Supply and Power Injector

If you use a power injector or a power module to provide power to a 1200 series access point, you must use a 1200 series universal power supply. If you need to use a power injector to inject power into the access point's Ethernet port, you must use a 1200 series power injector.

## Unpowered 1100 Series Access Points Cause Loopback When Connected to Switches Without Loopback Detection

When you connect an unpowered 1100 series access point to a switch without loopback detection, the access point causes a loopback. To avoid this problem, make sure loopback detection is enabled on the switch to which the access point is connected. If your switch does not have loopback detection, disconnect the access point from the switch when the access point power is off.

## Antenna Installation

For instructions on the proper installation and grounding of external antennas for 1200 series access points, refer to the National Fire Protection Association's *NFPA 70, National Electrical Code*, Article 810, and the Canadian Standards Association's *Canadian Electrical Code*, Section 54.



### Warning

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**Do not install the antenna near overhead power lines or other electric light or power circuits, or where it can come into contact with such circuits. When installing the antenna, take extreme care not to come into contact with such circuits, as they may cause serious injury or death.**

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## Important Notes

This section describes important information about the access point.

### CCKM and Fast Roaming on Cisco 7921/7925 IP Phones

When a 7921 or 7925 wireless associates to an access point in a WDS with CCKM, it cannot fast roam because call admission control is not enabled. To work around this issue you must enable admission control by issuing the **admit-traffic** command in the access point SSID configuration as shown in the following example:

```
dot11 ssid voice
vlan 21
authentication open eap eap_methods
authentication network-eap eap_methods
authentication key-management wpa cckm
admit-traffic
```

### Layer 3 Not supported with NAC for MBSSID

Layer 3 is not supported with NAC for MBSSID in this release.

### DFS Enabled by Default on 5-GHz Radios in North America

In this release, Dynamic Frequency Selection (DFS) is automatically enabled on 5-GHz radios configured for use in North America. The 5-GHz radios use DFS to detect radar signals and avoid interfering with them. Radios configured for use in Europe and Singapore also use DFS. Other regulatory domains do not use DFS. Refer to the [“DFS Enabled by Default on 5-GHz Radios in North America” section on page 9](#) for detailed information.

### Change to Default IP Address Behavior

Cisco IOS Releases 12.3(2)JA and later change the default behavior of access points requesting an IP address from a DHCP server:

- When you connect a 1200 or 1230 series access point with a default configuration to your LAN, the access point requests an IP address from your DHCP server and, if it does not receive an address, continues to send requests indefinitely.
- When you connect an 1100 series access point with a default configuration to your LAN, the 1100 series access point makes several attempts to get an IP address from the DHCP server. If it does not receive an address, it assigns itself the IP address 10.0.0.1 for five minutes. During this five-minute window, you can browse to the default IP address and configure a static address. If after five minutes the access point is not reconfigured, it discards the 10.0.0.1 address and reverts to requesting an address from the DHCP server. If it does not receive an address, it sends requests indefinitely. If you miss the five-minute window for browsing to the access point at 10.0.0.1, you can power-cycle the access point to repeat the process.

## Save Interface Level Configuration Before Upgrading to Releases 12.3(8)JEB

If the access points have SSIDs configured at the interface level (rather than at the global level), before upgrading to Cisco IOS Release 12.3(7)JA and above, upgrade to Cisco IOS Release 12.3(4)JA, save the configurations and then upgrade to Release 12.3(8)JEB. This procedure must be followed to make sure that the SSID configurations are converted from the interface level to global level.

## Changes to the Default Configuration—Radios Disabled and No Default SSID

In this release, the radio or radios are disabled by default, and there is no default SSID. You must create an SSID and enable the radio or radios before the access point will allow wireless associations from other devices. These changes to the default configuration improve the security of newly installed access points.

## Clients Using WPA/WPA2 and Power Save May Fail to Authenticate

Certain clients using WPA/WPA2 key management and power save may take many attempts to authenticate or, in some cases, fail to authenticate. Any SSID defined to use authentication key-management wpa, coupled with clients using power save mode and authenticating using WPA/WPA2 may experience this problem.

A hidden configure level command, **dot11 wpa handshake timeout**, can be used to increase the timeout between sending the WPA key packets from the default value (100 ms) to a value between 101 and 2000 ms. The command stores its value in the configuration across device reloads.

## Default Username and Password Are *Cisco*

When you open the access point interface, you must enter a username and password. The default username for administrator login is *Cisco*, and the default password is *Cisco*. Both the username and password are case sensitive.

## Some Client Devices Cannot Associate When QoS Is Configured

Some wireless client devices, including Dell Axim handhelds and Hewlett-Packard iPaq HX4700 handhelds, cannot associate to an access point when the access point is configured for QoS. To allow these clients to associate, disable QoS on the access point. You can use the QoS Policies page on the access point GUI to disable QoS, or enter this command on the CLI:

```
ap(config-if)#no dot11 qos mode
```

## Some Devices Disassociate When Multiple BSSIDs Are Added or Deleted

Devices on your wireless LAN that are configured to associate to a specific access point based on the access point MAC address (such as client devices, repeaters, hot standby units, or workgroup bridges) might lose their association when you add or delete a multiple BSSID. When you add or delete a multiple BSSID, check the association status of devices configured to associate to a specific access point. If necessary, reconfigure the disassociated device to use the BSSID's new MAC address.

## Enabling MBSSIDs Without VLANs Disables Radio Interface

If you use the mbssid configuration interface command to enable multiple BSSIDs on a specific radio interface but VLANs are not configured on the access point, the access point disables the radio interface. To re-enable the radio, you must shut down the radio, disable multiple BSSIDs, and re-enable the radio. This example shows the commands you use to re-enable the radio:

```
AP1134(config)# interface d1
AP1134(config-if)# shut
AP1134(config-if)# no mbssid
AP1134(config-if)# no shut
```

After you re-enable the radio, you can enable VLANs on the access point and enable multiple BSSIDs.

## Cannot Set Channel on DFS-Enabled Radios in Some Regulatory Domains

Access points with 5-GHz radios configured at the factory for use in Europe, Singapore, Korea, Japan, Taiwan, and Israel now comply with regulations that require radio devices to use Dynamic Frequency Selection (DFS) to detect radar signals and avoid interfering with them. You cannot manually set the channel on DFS-enabled radios configured for these regulatory domains.

## Cisco 7920 Phones Require Firmware Version 1.09 or Later When Multiple BSSIDs Are Enabled

When multiple BSSIDs are configured on the access point, Cisco 7920 wireless IP phones must run firmware version 1.09 or later.

## AIR-RM21A/AIR-RM22A Radio Modules Usually Set to Max Transmit Power

AIR-RM21A and AIR-RM22A radio modules measure transmit power in decibels per milliwatt (dBm), but earlier versions of 802.11a radios in Cisco Aironet access points measure power in milliwatts (mW). Because power settings in mW do not translate directly to settings in dBm, the access point usually uses the default power setting of maximum when you install a new AIR-RM21A or AIR-RM22A radio module.

[Table 1](#) lists 802.11a transmit power settings in mW and the power settings that the access point assigns to a new radio module.

**Table 1** Transmit Power Settings Assigned to New Radio Modules

Power Settings in mW	Power Setting Assigned to New Radio Module
5	5 dBm (approximately 3 mW)
10	maximum (17 dBm)
20	maximum
40	maximum

## GRE Tunnelling Through WLSM Sometimes Requires MTU Setting Adjustments

If client devices on your wireless LAN cannot use certain network applications or cannot browse to Internet sites, you might need to adjust the MTU setting on the client devices or other network devices. For more information, refer to the Tech Note at this URL:

[http://www.cisco.com/en/US/tech/tk827/tk369/technologies\\_tech\\_note09186a0080093f1f.shtml](http://www.cisco.com/en/US/tech/tk827/tk369/technologies_tech_note09186a0080093f1f.shtml)

## TACACS+ and DHCP IP Address Sometimes Locks Out Administrators

When you configure an access point for TACACS+ administration and to receive an IP address from the DHCP server, administrators might be locked out of the access point after it reboots if the administrator does not have a local username and password configured on the access point. This issue does not affect access points configured with a static IP address. Administrators who have been locked out must regain access by using the to reset the unit to default settings.

## Access Points Do Not Support Loopback Interface

You must not configure a loopback interface on the access point.



### Caution

Configuring a loopback interface might generate an IAPP GENINFO storm on your network and disrupt network traffic.

## Non-Cisco Aironet 802.11g Clients Might Require Firmware Upgrade

Some non-Cisco Aironet 802.11g client devices require a firmware upgrade before they can associate to the 802.11g radio in the access point. If your non-Cisco Aironet 802.11g client device does not associate to the access point, download and install the latest client firmware from the manufacturer's website.

## Throughput Option for 802.11g Radio Blocks Association by 802.11b Clients

When you configure the 802.11g access point radio for **best throughput**, the access point sets all data rates to basic (required). This setting blocks association from 802.11b client devices. The **best throughput** option appears on the web-browser interface Express Setup and Radio Settings pages and in the **speed** CLI configuration interface command.

## Transmit Power Set to Maximum When You Install 802.11g Radio

When you replace the 802.11b radio in a 1200 series access point with an 802.11g radio, the 802.11g radio is set to the maximum transmit power allowed in your regulatory domain regardless of the power setting configured on the 802.11b radio. After you install the 802.11g radio and the access point reboots, configure the 802.11g radio to the preferred transmit power.

## Use Auto for Ethernet Duplex and Speed Settings

Cisco recommends that you use **auto**, the default setting, for both the speed and duplex settings on the access point Ethernet port. When your access point receives inline power from a switch, any change in the speed or duplex settings that resets the Ethernet link reboots the access point. If the switch port to which the access point is connected is not set to **auto**, you can change the access point port to **half** or **full** to correct a duplex mismatch and the Ethernet link is not reset. However, if you change from **half** or **full** back to **auto**, the link is reset and, if your access point receives inline power from a switch, the access point reboots.



**Note** The speed and duplex settings on the access point Ethernet port must match the Ethernet settings on the port to which the access point is connected. If you change the settings on the port to which the access point is connected, change the settings on the access point Ethernet port to match.

## Use force-reload Option with archive download-sw Command

When you upgrade access point or bridge system software by entering the **archive download-sw** command on the CLI, you must use the **force-reload** option. If the access point or bridge does not reload the Flash after the upgrade, the pages in the web-browser interface might not reflect the upgrade. This example shows how to upgrade system software successfully using the **archive download-sw** command:

```
AP# archive download-sw /force-reload /overwrite tftp://10.0.0.1/image-name
```

## Radio MAC Address Appears in ACU

When a Cisco Aironet client device associates to an access point running IOS software, the access point MAC address that appears on the Status page in the Aironet Client Utility (ACU) is the MAC address for the access point radio. The MAC address for the access point Ethernet port is printed on the label on the back of the access point.

## Radio MAC Address Appears in Access Point Event Log

When a client device roams from an access point (such as access point *alpha*) to another access point (access point *bravo*), a message appears in the event log on access point alpha stating that the client roamed to access point bravo. The MAC address that appears in the event message is the MAC address for the radio in access point bravo. The MAC address for the access point Ethernet port is printed on the label on the back of the access point.

## Mask Field on IP Filters Page Behaves the Same As in CLI

In Cisco IOS Release 12.2(8)JA and later, the mask that you enter in the Mask field on the IP Filters page in the access point GUI behaves the same way as a mask that you enter in the CLI. If you enter 255.255.255.255 as the mask, the access point accepts any IP address. If you enter 0.0.0.0, the access point looks for an exact match with the IP address that you entered in the IP Address field.

## Repeater Access Points Running IOS Software Cannot Associate to Parent Access Points Running VxWorks

1200 series repeater access points running Cisco IOS software cannot associate to parent access points that do not run IOS software (1200 series access points that have not been converted to run IOS software).

## Repeater Access Points Cannot Be Configured as WDS Access Points

Repeater access points can participate in WDS but they cannot provide WDS. You cannot configure a repeater access point as a main WDS access point, and if a root access point becomes a repeater in fallback mode, it cannot provide WDS.

## Crossover Cable Sometimes Needed When Ethernet Speed and Duplex Set to Fixed on 1100 Series Access Points

If you change the speed and duplex settings from auto to fixed on an 1100 series access point's Ethernet port, the auto-MDIX feature on the port is disabled. When auto-MDIX is disabled, you must determine whether to use a straight-through or a crossover cable to connect the access point Ethernet port to another device. If the Ethernet link goes down after you set the speed and duplex to fixed, try changing the Ethernet cable from crossover to straight-through or from straight-through to crossover.

## Cannot Perform Link Tests on Non-Cisco Aironet Client Devices and on Cisco Aironet 802.11g Client Devices

The link test feature on the web-browser interface does not support non-Cisco Aironet client devices nor Cisco Aironet 802.11g client devices.

## 1100 Series Access Points with Boot Loader Version 12.2(4)JA Boot into Monitor Mode

When the Ethernet port is disabled on an 1100 series access point running boot loader version 12.2(4)JA, the access point boots into monitor mode when it reboots. To avoid this problem, connect the access point Ethernet port to one of the following:

- a wired LAN
- the Ethernet port on a PC

Remove power from the access point and reapply power to reboot the unit. When the access point senses an Ethernet connection, it boots normally.

## Corrupt EAP Packet Sometimes Causes Error Message

During client authentication, the access point sometimes receives a corrupt EAP packet and displays this error message:

```
Oct 1 09:00:51.642 R: %SYS-2-GETBUF: Bad getbuffer, bytes= 28165
-Process= "Dot11 Dot1x process", ipl= 0, pid= 32
-Traceback= A2F98 3C441C 3C7184 3C604C 3C5E14 3C5430 124DDC
```

You can ignore these messages.

## When Cipher Is TKIP Only, Key Management Must Be Enabled

When you configure **TKIP-only** cipher encryption (not **TKIP + WEP 128** or **TKIP + WEP 40**) on any radio interface or VLAN, every SSID on that radio or VLAN must be set to use WPA or CCKM key management. If you configure TKIP on a radio or VLAN but you do not configure key management on the SSIDs, client authentication fails on the SSIDs.

## Cisco CKM Supports Spectralink Phones

Cisco CKM (CCKM) key management is designed to support voice clients that require minimal roaming times. To date, CCKM supports only Spectralink and Cisco 7920 Version 2.0 Wireless Phones. Other voice clients have not been tested with CCKM and are not supported.

## Non-Cisco Aironet Clients Sometimes Fail 802.1x Authentication

Some non-Cisco Aironet client adapters do not perform 802.1x authentication to the access point unless you configure **Open authentication with EAP**. To allow both Cisco Aironet clients using LEAP and non-Cisco Aironet clients using LEAP to associate using the same SSID, you might need to configure the SSID for both **Network EAP** authentication and **Open authentication with EAP**.

## Pings and Link Tests Sometimes Fail to Clients with Both Wired and Wireless Network Connections

When you ping or run a link test from an access point to a client device installed in a PC running Microsoft Windows 2000, the ping or link test sometimes fails when the client has both wired and wireless connections to the LAN. Microsoft does not recommend this configuration. For more information, refer to Microsoft Knowledge Base article 157025 at this URL:

<http://support.microsoft.com/default.aspx?scid=kb;en-us;157025&Product=win2000>

## Layer 3 Mobility Not Supported on Repeaters and Workgroup Bridges

Repeater access points and workgroup bridges cannot associate to an SSID configured for Layer 3 mobility. Layer 3 mobility is not supported on repeaters and workgroup bridges.

## WLSM Required for Layer 3 Mobility

You must use a Wireless LAN Services Module (WLSM) as your WDS device in order to properly configure Layer 3 mobility. If you enable Layer 3 mobility for an SSID and your WDS device does not support Layer 3 mobility, client devices cannot associate using that SSID.

## Caveats

This section lists open and resolved caveats for access points.

### Open Caveats

These caveats are open in Cisco IOS Release 12.3(8)JEB:

- CSCek46661—VLAN assignment fails when using local radius server.  
After passing EAP-FAST authentication, the client is not placed into the VLAN defined by the group configured in the local RADIUS server. Instead, the client remains in the VLAN assigned by the SSID.
- CSCsc83206—A nested repeater access point fails to notify radar detection  
If radar is detected on a nested repeater in a nested repeater chain, no action is being taken by either the repeater or root/parent to notify the detection.
- CSCsc94510—GUI can set illegal combination of Low Latency Rates  
The GUI can set an illegal combination of low latency rates on the access point. Rates of 48 and 54Mbps set as both nominal and non-nominal can occur. Once the rates are set, you can not disable them and they stay set as non-nominal.
- CSCsd69733—Hot standby access point cannot associate  
The hot standby access point almost always fails to authenticate with the error *cannot associate: Not standby parent (from incorrect mac address)*. The incorrect mac address is the mac address of another access point on the same network but not its parent device's mac address. In other words, the hot standby unit attempts to authenticate with an access point that is not its parent and fails.
- CSCse34644—Shared authentication with a non-native vlan does not operate properly

## Resolved Caveats

These caveats are resolved in Cisco IOS Release 12.3(8)JEB:

- CSCsb12598

Cisco IOS device may crash while processing malformed Secure Sockets Layer (SSL) packets. In order to trigger these vulnerabilities, a malicious client must send malformed packets during the SSL protocol exchange with the vulnerable device.

Successful repeated exploitation of any of these vulnerabilities may lead to a sustained Denial-of-Service (DoS); however, vulnerabilities are not known to compromise either the confidentiality or integrity of the data or the device. These vulnerabilities are not believed to allow an attacker will not be able to decrypt any previously encrypted information.

Cisco IOS is affected by the following vulnerabilities:

- Processing ClientHello messages, documented as Cisco bug ID CSCsb12598
- Processing ChangeCipherSpec messages, documented as Cisco bug ID CSCsb40304
- Processing Finished messages, documented as Cisco bug ID CSCsd92405

Cisco has made free software available to address these vulnerabilities for affected customers. There are workarounds available to mitigate the effects of these vulnerabilities.

This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20070522-SSL.shtml>.



### Note

Another related advisory has been posted with this advisory. This additional advisory also describes a vulnerability related to cryptography that affects Cisco IOS. This related advisory is available at the following link:

<http://www.cisco.com/warp/public/707/cisco-sa-20070522-crypto.shtml>.

A combined software table for Cisco IOS is available to aid customers in choosing a software releases that fixes all security vulnerabilities published as of May 22, 2007. This software table is available at the following link:

<http://www.cisco.com/warp/public/707/cisco-sa-20070522-cry-bundle.shtml>.

- CSCsd85587

A vulnerability has been discovered in a third party cryptographic library which is used by a number of Cisco products. This vulnerability may be triggered when a malformed Abstract Syntax Notation One (ASN.1) object is parsed. Due to the nature of the vulnerability it may be possible, in some cases, to trigger this vulnerability without a valid certificate or valid application-layer credentials (such as a valid username or password).

Successful repeated exploitation of any of these vulnerabilities may lead to a sustained Denial-of-Service (DoS); however, vulnerabilities are not known to compromise either the confidentiality or integrity of the data or the device. These vulnerabilities are not believed to allow an attacker will not be able to decrypt any previously encrypted information.

The vulnerable cryptographic library is used in the following Cisco products:

- Cisco IOS, documented as Cisco bug ID CSCsd85587
- Cisco IOS XR, documented as Cisco bug ID CSCsg41084
- Cisco PIX and ASA Security Appliances, documented as Cisco bug ID CSCse91999
- Cisco Unified CallManager, documented as Cisco bug ID CSCsg44348
- Cisco Firewall Service Module (FWSM)

This vulnerability is also being tracked by CERT/CC as VU#754281.

Cisco has made free software available to address this vulnerability for affected customers. There are no workarounds available to mitigate the effects of the vulnerability.

This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20070522-crypto.shtml>.




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**Note** Another related advisory is posted together with this Advisory. It also describes vulnerabilities related to cryptography that affect Cisco IOS. A combined software table for Cisco IOS only is available at <http://www.cisco.com/warp/public/707/cisco-sa-20070522-cry-bundle.shtml> and can be used to choose a software release which fixes all security vulnerabilities published as of May 22, 2007. The related advisory is published at <http://www.cisco.com/warp/public/707/cisco-sa-20070522-SSL.shtml>.

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- CSCsd92405

Cisco IOS device may crash while processing malformed Secure Sockets Layer (SSL) packets. In order to trigger these vulnerabilities, a malicious client must send malformed packets during the SSL protocol exchange with the vulnerable device.

Successful repeated exploitation of any of these vulnerabilities may lead to a sustained Denial-of-Service (DoS); however, vulnerabilities are not known to compromise either the confidentiality or integrity of the data or the device. These vulnerabilities are not believed to allow an attacker will not be able to decrypt any previously encrypted information.

Cisco IOS is affected by the following vulnerabilities:

- Processing ClientHello messages, documented as Cisco bug ID CSCsb12598
- Processing ChangeCipherSpec messages, documented as Cisco bug ID CSCsb40304
- Processing Finished messages, documented as Cisco bug ID CSCsd92405

Cisco has made free software available to address these vulnerabilities for affected customers. There are workarounds available to mitigate the effects of these vulnerabilities.

This advisory is posted at <http://www.cisco.com/warp/public/707/cisco-sa-20070522-SSL.shtml>.




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**Note** Another related advisory has been posted with this advisory. This additional advisory also describes a vulnerability related to cryptography that affects Cisco IOS. This related advisory is available at the following link: <http://www.cisco.com/warp/public/707/cisco-sa-20070522-crypto.shtml>.

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A combined software table for Cisco IOS is available to aid customers in choosing a software releases that fixes all security vulnerabilities published as of May 22, 2007. This software table is available at the following link: <http://www.cisco.com/warp/public/707/cisco-sa-20070522-cry-bundle.shtml>.

- CSCse16085—Wi-Fi WMM test failure no longer occurs.

- CSCsf04754—Multiple Cisco products contain either of two authentication vulnerabilities in the Simple Network Management Protocol version 3 (SNMPv3) feature. These vulnerabilities can be exploited when processing a malformed SNMPv3 message. These vulnerabilities could allow the disclosure of network information or may enable an attacker to perform configuration changes to vulnerable devices. The SNMP server is an optional service that is disabled by default. Only SNMPv3 is impacted by these vulnerabilities. Workarounds are available for mitigating the impact of the vulnerabilities described in this document.

The United States Computer Emergency Response Team (US-CERT) has assigned Vulnerability Note VU#878044 to these vulnerabilities.

Common Vulnerabilities and Exposures (CVE) identifier CVE-2008-0960 has been assigned to these vulnerabilities.

This advisory will be posted at

<http://www.cisco.com/warp/public/707/cisco-sa-20080610-snmv3.shtml>

- CSCsf22409—Fastethernet interface no longer stops processing entries on rx ring.
- CSCse29487—Repeater to Repeater roaming no longer fails.
- CSCsg26708—Access point no longer stops passing broadcast traffic from wired to wireless side.
- CSCsg79644—1230 in workgroup bridge mode no longer stop broadcast and multicast traffic with 1310 access point/bridge.
- CSCsf18528—Unexpected SNMP traffic no longer causes 1200 series access point restart.
- CSCsf07847—CDP no longer fails to discover neighbor information in releases.
- CSCsc95298—Deauthentication reassociation messages now appear on event log.
- CSCsh22776—Wireless client no longer fails to associate in WDS environment if EAP is configured as optional.
- CSCsh62835—EAP-FAST no longer fails with local authentication & open source cards.
- CSCsh83796—Repeater access point no longer loses association after re-configuring the association mac-list.
- CSCsc88186—Non-root to non-root association for BR1310 now documented.
- CSCsh52582—Association table in GUI and CLI will displays proper amount of characters.
- CSCsh53511—1131 access point no longer loses connection with an Intel 3945 Wireless NIC.
- CSCsc60071—ImportAP Authorization List into the doc has been clarified.
- CSCsf95975—Access point no longer crashes when AeroScout server address is misconfigured.
- CSCsf08775—EAP-FAST supplicant now operates properly with Steel Belt RADIUS server.
- CSCsg99358—Traceback/crashes no longer occur in unconfigured VLAN.
- CSCse95836—Access point no longer forwards invalid Ethernet frame length=0 over wireless.
- CSCse84920—Access point no longer reloads to ROM with unknown system cause.
- CSCse70031—Accounting record no longer uses MAC address for username with WPAv2.
- CSCse72925—SNMP mib community-map engineID command no longer causes traceback on access points.
- CSCsd62772—Radius accounting start/stop records are now sent for associated client.
- CSCek46852—EAP-FAST works with open source client and local radius.
- CSCsg48579—**no led display alternate** CLI is now removed from the running configuration.

- CSCsd54914—802.1x reauthentication interval behavior is now correct for non-root bridge.
- CSCsg20744—Turn off MBSSID now appears when configuring access point to sensor mode.
- CSCsg16033—cDot11ClientStatistics & cDot11ClientConfiguration messages are now consistent with workgroup bridges.
- CSCsb78160—Access point system error messages updated in documentation.
- CSCsg91315—WDS does now returns reports to WLSE
- CSCed45578—Console no longer locks after booting with system accounting.
- CSCeg62070—Tracebacks no longer occur during HTTP transactions with long URLs.
- CSCdk32069—AAA authorization if-authenticated is now a terminating method.
- CSCse67605—CLI displays a warning for fallback repeater mode when attempting to change role.
- CSCse77577—Ambiguous command on modifying snmp trap receiver no longer occurs.
- CSCsf95967—Access point now forwards packets from an AeroScout server.
- CSCsg05807—7920 phone roaming now operates correctly with MBSSID enabled.
- CSCsg58791—Client now can ping to a gateway via the native VLAN.
- CSCsg71594—CLI no longer permits configuring both EAP and WPA-PSK on the same SSID.
- CSCsg80960—Access point no longer reloads when receiving multicast from an unconfigured dot1q VLAN.
- CSCsh33598—Access point now conforms with mainstream IOS behavior.
- CSCsh47853—**show dot11 associations** command now shows correct output bytes.
- CSCsh71209—Disabling Aironet extensions on root now prevents repeater joining.
- CSCsh71226—It is no longer possible for a repeater to send traffic directly to the native VLAN.
- CSCsh80023—Apostrophe in hostname no longer causes GUI to malfunction.
- CSCsh83796—Repeater access point no longer loses association after association MAC list reconfiguration.
- CSCsh85001—Access point GUI now displays time zone name as an offset of GMT.
- CSCsb58098—MBSSID enabled hot standby access point now EAP associates to a primary access point.
- CSCsg68227—QoS class parameters for CWmax are no longer reset after radio interface shut down.

## If You Need More Information

If you need information about a specific caveat that does not appear in these release notes, you can use the Cisco Bug Toolkit to find select caveats of any severity. Click this URL to browse to the Bug Toolkit:

[http://www.cisco.com/cgi-bin/Support/Bugtool/launch\\_bugtool.pl](http://www.cisco.com/cgi-bin/Support/Bugtool/launch_bugtool.pl)

(If you request a defect that cannot be displayed, the defect number might not exist, the defect might not yet have a customer-visible description, or the defect might be marked Cisco Confidential.)

# Troubleshooting

For the most up-to-date, detailed troubleshooting information, refer to the Cisco TAC website at <http://www.cisco.com/tac>. Click **Technology Support**, choose **Wireless** from the menu on the left, and click **Wireless LAN**.

## Documentation Updates

This section lists changes, errors, and omissions from user documentation for access points.

## Changes

This section describes changes to access point and bridge documentation for this release.

## New IOS CLI Commands

This section identifies and describes new IOS CLI commands included in release 12.3(8)JEB. They will be documented in a future revision of the *Cisco IOS Software Configuration Guide for Cisco Aironet Access Points* and *Cisco IOS Command Referenced for Access Points and Bridges*.

## Related Documentation

This section lists documents related to Cisco IOS Release 12.3(8)JEB and to 1100, 1200, and 1230 series access points.

- *Cisco Aironet Conversion Tool for Cisco IOS Software, 2.0 Administrator Guide for Windows*
- *Quick Start Guide: Cisco Aironet 1100 Series Access Points*
- *Quick Start Guide: Cisco Aironet 1200 Series Access Points Running Cisco IOS Software*
- *Cisco IOS Software Configuration Guide for Cisco Aironet Access Points*
- *Cisco IOS Command Reference for Cisco Aironet Access Points and Bridges*
- *Cisco Aironet 1100 Series Access Point Hardware Installation Guide*
- *Cisco Aironet 1200 Series Access Point Hardware Installation Guide*
- *Installation Instructions for Cisco Aironet Power Injectors*

# Obtaining Documentation, Obtaining Support, and Security Guidelines

For information on obtaining documentation, obtaining support, providing documentation feedback, security guidelines, and also recommended aliases and general Cisco documents, see the monthly *What's New* in Cisco Product Documentation, which also lists all new and revised Cisco technical documentation, at:

<http://www.cisco.com/en/US/docs/general/whatsnew/whatsnew.html>

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