



Release Notes for Cisco Aironet 1410 Bridges for Cisco IOS Release 12.3(7)JA

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These release notes describe new features and open and resolved caveats for Cisco IOS Release 12.3(7)JA. They also provide important information about the Cisco Aironet 1410 Wireless Bridge (hereafter called *bridge*).

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Introduction

The Cisco Aironet 1400 Series Bridge is a wireless device designed for building-to-building wireless connectivity. Operating in the 5.8-GHz UNII 3 band (5725 to 5825 MHz), derived from the 802.11a standard, the bridge delivers 6 to 54 Mbps data rates without the need for a license. The bridge is a self-contained unit designed for outdoor installations, providing differing antenna gains as well as coverage patterns and supports both point-to-point and point-to-multipoint configurations.

The bridge uses a browser-based management system, but you can also configure the bridge using the command-line interface (CLI) through a Telnet session, Cisco IOS commands, or Simple Network Management Protocol (SNMP).

System Requirements

You can install Cisco IOS Release 12.3(7)JA on all 1400 series bridges.

Finding the Software Version

To find the version of Cisco IOS software running on your bridge, use a Telnet session to log into the bridge and enter the **show version EXEC** command. This example shows command output from a bridge running Cisco IOS Release 12.2(13)JA2:

```
bridge> show version
Cisco Internetwork Operating System Software
IOS (tm) C1410 Software (C1410-K9W7-M), Version 12.2(13)JA2
Copyright (c) 1986-2003 by Cisco Systems, Inc.
```

You can also find the software version on the System Software Version page in the bridge's web-browser interface.

Upgrading to a New Software Release

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

1. Click this link to go to the Product/Technology Support page:

<http://www.cisco.com/cisco/web/psa/default.html>

Choose **Wireless > Outdoor Wireless > Cisco Aironet 1400 Series**, scroll down and click **Configure Guides**.

2. Click this link to browse to the Cisco IOS Software Center on Cisco.com:

<http://www.cisco.com/cisco/software/navigator.html>

On the Web page, log in to access the Feature Navigator or the Cisco IOS Upgrade Planner, or click **Wireless Software** to go to the Wireless LAN Software page.

New Features

This section lists new features in Cisco IOS Release 12.3(7)JA.

AAA Cache and Profile

AAA cache and profile is a new capability to cache the information returned from the RADIUS or TACACS+ server a more efficient handling of the authentication process.

SSH v2 Server Support

SSH v2 server support is a standards-based protocol to provide secure Telnet capability for router configuration and administration.

Installation Notes

This section contains important information to keep in mind when installing your bridge.

Bridge Installation

The bridge is available in two configurations:

- Integrated antenna bridge (with 22.5-dBi directional antenna)
- External antenna bridge (with antenna connector for use with an external antenna)

**Note**

To meet regulatory restrictions, the external antenna bridge configuration and the external antenna must be professionally installed.

**Note**

When installing the dual-coax cable, it is acceptable to unzip or pull the two cables apart at the ends if more separation is needed between the male F connectors.

Personnel installing the bridge must understand wireless bridging techniques, antenna alignment and adjustment, and grounding methods. The integrated antenna configuration can be installed by an experienced IT professional.

Stacking Bridges

You can double the throughput or create a standby link by stacking two bridges. A stacked installation consists of two bridge systems installed at the same physical location. For detailed mounting instructions refer to the *Cisco Aironet 1400 Series Wireless Bridge Mounting Instructions* that shipped with your bridge.

**Note**

The bridge antennas must be separated by a minimum of 6.56 ft (2 m) from each other and from other co-located antennas.

Important Notes

This section describes important information about the bridge.

Default SSID and Distance Settings Change When You Change Role in Radio Network

If the bridge's SSID has not been changed from the default setting and you select **Install Automatic Mode** as the bridge's role in radio network setting, the SSID automatically changes from *tsunami* to *autoinstall*. When you change the role in radio network from Install Automatic Mode to Root or Non-Root, the SSID changes automatically from *autoinstall* back to *tsunami*. However, if you change the SSID from its default setting, changing the role in radio network setting does not change the SSID.

In Install Automatic Mode, the default distance setting is 99 km. When you change the role in radio network from Install Automatic Mode to Root or Non-Root, the distance setting changes automatically from 99 km to 0 km.

SNMP Configuration `snmp-server ifindex persist` Causes Continuous Reboot

Access points and bridges sometimes continuously reboot when the configuration contains this line:

```
snmp-server ifindex persist
```

Remove this line from the configuration before upgrading to this release. If you upgrade to this release and the configuration contains this line, remove the line and delete the `ifIndex-table` file from NVRAM.

Default Encryption Key 2 Is Set by Bridge

The encryption key in slot 2 is the transmit key by default. If you enable WEP with MIC, use the same WEP key as the transmit key in the same key slot on both root and non-root bridges.

Limitation to PAgP Redundancy on Switches Connected by Bridge Links

When two switches configured for Port Aggregation Protocol (PAgP) are connected by redundant wireless bridge links, the PAgP switchover takes at least 30 seconds, which is too slow to maintain TCP sessions from one port to another.

CLI Command `power client n` Is Not Supported

The bridge does not support the `power client n` configuration interface command in the web-browser or CLI interfaces. The bridge does not perform any action when you enter this command.

Default Infrastructure SSID

When VLAN is enabled, the WEP encryption mode and the WEP key are applicable only to a native VLAN. Any SSID configured should have the Infrastructure-SSID parameter enabled for that SSID. With the Infrastructure-SSID parameter enabled, the bridge ensures that a non-native VLAN cannot be assigned to that SSID.

ARP Table Is Corrupted When Multiple BVIs Are Configured

The bridge supports only one bridge virtual interface (BVI). Multiple BVIs should not be configured because the ARP table may become corrupted.

Bridge Power Up LED Colors

During power up the bridge LEDs display the following color sequences:

1. The Install LED is initially turned off.
2. The Install LED turns amber.
3. The Status LED turns amber during the boot loader process.
4. The Ethernet, Status, and Radio LEDs turn green during the loading of the operating system.
5. The Ethernet, Status, and Radio LEDs turn amber during the loop-back test.
6. The Status LED starts to blink green then the Ethernet LED starts to blink green.
7. The Ethernet, Status, and Radio LEDs blink amber twice to indicate that the auto install process has started.
8. During the auto install process, the Ethernet, Status, and Radio LEDs turn off for a short time period then go through a blinking sequence twice. Each LED sequentially blinks at the following rates before becoming continuously amber:
 - a. Slow blinking rate of 1 blink per second.
 - b. Medium blinking rate of 2 blinks per second.
 - c. Fast blinking rate of 4 blinks per second.
9. The Install LED starts to blink amber to indicate that the bridge is searching for a root bridge.
10. When the bridge associates to a root bridge, the Install LED turns amber.
11. When the bridge becomes a root bridge and is waiting for a non-root bridge to associate, the Install LED blinks green.
12. When the root bridge has a non-root bridge associated, the Install LED turns green.

Bridge Cannot Detect Simultaneous Image Downloads

Do not attempt to load software images into the bridge from both a Telnet session and console session simultaneously. The bridge cannot detect that two images are being loaded at the same time. For best results, use the **archive download** command in the CLI.

Bridge Cannot Detect Invalid Software When Using copy Command

The bridge sometimes cannot detect invalid software images when you load software using the copy command. For best results, use the **archive download** command in the CLI to load new software.

Telnet Session Sometimes Hangs or Will Not Start During Heavy Traffic

When the bridge is transmitting and receiving heavy traffic, you sometimes cannot start a Telnet session and some existing Telnet sessions freeze or hang. However, this behavior is expected because the bridge gives top priority to data traffic and a lower priority to Telnet traffic.

Caveats

This section lists open and resolved caveats in Cisco IOS Release 12.3(7)JA for the bridge.

Open Caveats

These caveats are open in Cisco IOS Release 12.3(7)JA:

- CSCsb19000—The 1400 bridge bootloader LED test lights are incorrect.
The bootloader LED test sequence is amber to red to green. They should change from red to green.
- CSCed36477—VLAN keyword with encryption command on bridges is limited.
Wireless bridges, such as the BR1410, do not support using different crypto settings on different VLANs.
- CSCed36462—Per-VLAN crypto settings are nonfunctional with wireless bridges.
On wireless bridges, all VLANs traversing the bridge link must use the same encryption settings. To avoid confusion, do not use the “vlan <vlan-id>” keyword on the encryption command as shown in the following example:


```
interface dot11radio0
encryption key 1 size 128bit AAAAABBBBBCCCCDDDDDEEEEEE transmit-key
encryption mode wep mandatory mic
```
- CSCej08390—Access points and bridges sometimes continuously reboot when the configuration contains this line:


```
snmp-server ifindex persist
```

 Remove this line from the configuration before upgrading to this release. If you upgrade to this release and the configuration contains this line, remove the line and delete the ifIndex-table file from NVRAM.
- CSCsa54608—
The Cisco IOS Firewall Authentication Proxy for FTP and/or Telnet Sessions feature in specific versions of Cisco IOS software is vulnerable to a remotely-exploitable buffer overflow condition. Devices that do not support, or are not configured for Firewall Authentication Proxy for FTP and/or Telnet Services are not affected.
Devices configured with only Authentication Proxy for HTTP and/or HTTPS are not affected.

Only devices running certain versions of Cisco IOS are affected.

Cisco has made free software available to address this vulnerability. There are workarounds available to mitigate the effects of the vulnerability.

This advisory will be posted at this URL:

http://www.cisco.com/warp/public/707/cisco-sa-20050907-auth_proxy.shtml.

- CSCsa68144—Default bridge configuration is invalid.

When a defaulted 1400 series bridge boots up, it displays an error that the RTS threshold contains invalid input. The RTS threshold is set to 4000. Entering a ? after entering RTS threshold indicates the maximum value is 4000 but a system error occurs when attempting to set it. The maximum value that the CLI allows is 2347.

- CSCsb04925—Bridge displays junk characters when **show controllers** command is issued.

When **show controllers dot110** is entered, it displays a serial number with a junk character.

Resolved Caveats

These caveats are resolved in Cisco IOS Release 12.3(7)JA:

- CSCsb24007

Multiple voice-related vulnerabilities are identified in Cisco IOS software, one of which is also shared with Cisco Unified Communications Manager. These vulnerabilities pertain to the following protocols or features:

- Session Initiation Protocol (SIP)
- Media Gateway Control Protocol (MGCP)
- Signaling protocols H.323, H.254
- Real-time Transport Protocol (RTP)
- Facsimile reception

Cisco has made free software available to address these vulnerabilities for affected customers. Fixed Cisco IOS software listed in the Software Versions and Fixes section contains fixes for all vulnerabilities mentioned in this advisory.

There are no workarounds available to mitigate the effects of any of the vulnerabilities apart from disabling the protocol or feature itself.

This advisory is posted at

<http://www.cisco.com/warp/public/707/cisco-sa-20070808-IOS-voice.shtml>

- CSCsb06824—Open authentication is no longer added to an EAP SSID when a non-root bridge configuration is loaded.
- CSCsa72936—The results for the show controller d0 command now includes the radio serial number.
- CSCsb08590—Bridge now flashes radio firmware correctly on IOS upgrade.
- CSCeb52431—Bridge no longer bombards AAA server with HTTP authentication requests.
- CSCsb14318—Bridge out-of-box boot behavior has been reverted to its original behavior.

Troubleshooting

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

Documentation Updates

The *Cisco Aironet 1400 Series Wireless Bridge Mounting Instructions* provides detailed instructions for installing and mounting the bridge.

Stacking Bridges Section Changes

The separation distance between the two stacked bridge antennas is a minimum of 6.56 ft (2 m).

Related Documentation

These documents describe the installation and configuration of the bridge:

- *Quick Start Guide: Cisco Aironet 1400 Series Wireless Bridge*
- *Cisco Aironet 1400 Series Wireless Bridge Software Configuration Guide*
- *Cisco Aironet 1400 Series Wireless Bridge Hardware Installation Guide*
- *Cisco IOS Command Reference for Access Points and Bridges*
- *Cisco Aironet 1400 Series Wireless Bridge Mounting Instructions*
- *Cisco Aironet 1400 Series Wireless Bridge 9-dBi Omnidirectional Antenna*
- *Cisco Aironet 1400 Series Wireless Bridge 10-dBi Sector Antenna*
- *Cisco Aironet 1400 Series Wireless Bridge 28-dBi Dish Antenna*
- *Cisco Aironet 1400 Series Wireless Bridge Roof Mount Assembly Instructions*

Obtaining Documentation and Submitting a Service Request

For information on obtaining documentation, submitting a service request, and gathering additional information, 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>

Subscribe to the *What's New in Cisco Product Documentation* as a Really Simple Syndication (RSS) feed and set content to be delivered directly to your desktop using a reader application. The RSS feeds are a free service and Cisco currently supports RSS Version 2.0.

This document is to be used in conjunction with the documents listed in the “[Related Documentation](#)” section.

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