

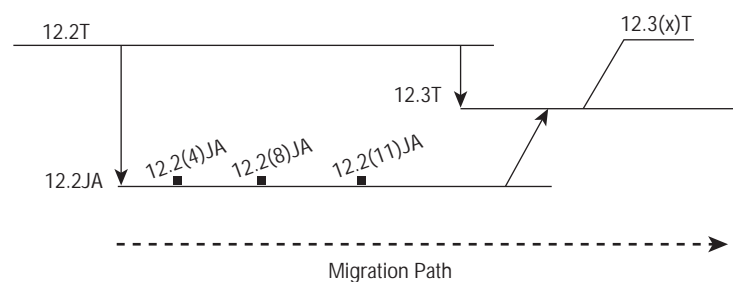
# Cisco IOS Software Deployment Release 12.2(11)JA

This product bulletin describes the content and delivery information concerning Cisco® IOS® Software early deployment Release 12.2(11)JA supporting Cisco Aironet® 1100 Series access points, Cisco Aironet 1200 Series access points and the Cisco Aironet 1410 wireless bridge of the Cisco Aironet 1400 Series. This release contains new features as well as all of the features delivered in Cisco IOS Software Release 12.2(8)JA described in Product Bulletin No. 2059.

Cisco IOS Software Release 12.2(11)JA delivers support for four new wireless LAN (WLAN) security and management features for Cisco Aironet access points: Wi-Fi Protected Access (WPA), fast secure roaming, IEEE 802.1X local authentication service, and wireless domain services. The release also introduces support for the new Cisco Aironet 1400 Series wireless bridge platform with support for Cisco Aironet 1410 wireless bridges. The Cisco Aironet 1400 Series wireless bridge is the premier high-speed, high-performance outdoor bridging solution for line-of-sight point-to-point or point-to-multipoint applications.

These Cisco IOS Software features are available as a free software upgrade for Cisco Aironet 1200 and 1100 Series access points and Cisco Aironet 1400 Series wireless bridges. Figure 1 displays the Cisco IOS Software Release 12.2(11)JA release train and recommended migration path.

Figure 1 Cisco IOS Software Release 12.2(11)JA Release Train and Recommended Migration Path



## New Features in Cisco IOS Software Release 12.2(11)JA

Table 1 lists the new features delivered in Cisco IOS Software Release 12.2(11)JA. These features are supported in this release for the platforms noted, with continued support for the features introduced in Cisco IOS Software Release 12.2(8)JA unless otherwise indicated.



Table 1 Cisco IOS Software Release 12.2(11)JA New Features

New Features	Cisco Aironet 1100 Series Access Point	Cisco Aironet 1200 Series Access Point	Cisco Aironet 1400 Series Wireless Bridge
Wi-Fi Protected Access (WPA)	X	X	
Fast secure roaming	X	X	
IEEE 802.1X local authentication service	X	X	
Wireless Domain Services (WDS)	X	X	
Antenna alignment assistance			X
Wireless programmable clear channel assessment			X
Wireless root bridge			X
Wireless non-root bridge			X
Wireless packet concatenation			X
Wireless link distance adjustment			X

Features Not Supported in Cisco IOS Software Release 12.2(11)JA by the Cisco Aironet 1400 Series Wireless Bridge

Table 2 lists the features that were introduced in Cisco IOS Software Release 12.2(8)JA or Release 12.2(4)JA that are not supported in early deployment Release 12.2(11)JA by the Cisco Aironet 1400 Series wireless bridge platform and Cisco Aironet 1410 wireless bridges.

Table 2 Cisco IOS Software Release 12.2(11)JA Features Not Supported by Cisco Aironet 1400 Series Wireless Bridges

Features Not Supported by Cisco Aironet 1400 Series Wireless Bridges
Broadcast key rotation
Hot standby
Multiple service set identifiers (SSIDs)
Proxy mobile Internet Protocol
World mode



## Detailed Information

### **Wi-Fi Protected Access**

Wi-Fi Protected Access (WPA) is now supported on Cisco Aironet access points. WPA is the Wi-Fi Alliance specification for interoperable wireless LAN security. It supports IEEE 802.1X authentication using extensible authentication protocol (EAP) authentication types and temporal key integrity protocol (TKIP) encryption.

### **Wireless Domain Services**

Wireless domain services (WDS) is a collection of Cisco IOS Software features that enhance WLAN client mobility and simplify WLAN deployment and management. The wireless domain services feature set supported in this release includes fast secure roaming and IEEE 802.1X local authentication service.

### **Fast Secure Roaming**

Fast secure roaming is available with Cisco IOS Software Release 12.2(11)JA for Cisco or Cisco Compatible wireless client devices using the Cisco Centralized Key Management (CCKM) protocol. Fast secure roaming is used to support time-sensitive applications such as wireless voice over IP (VoIP), enterprise resource planning (ERP), or Citrix-based solutions. Fast secure roaming is a component of the wireless domain services feature set.

### **IEEE 802.1X Local Authentication Service**

This feature allows a Cisco IOS Software-enabled device to authenticate wireless clients when connectivity to the authentication, authorization, and accounting (AAA) server is not available. It incorporates an IEEE 802.1X enabled Remote Authentication Dial-In User Service (RADIUS) server that supports EAP authentication types into Cisco IOS Software. This feature allows the Cisco Aironet access point to authenticate wireless clients when the WAN link is down or the RADIUS server at the central site is not available. It also provides remote site survivability by allowing an access point to continue to access local resources such as file servers or printers in remote site deployments with non-redundant WAN links.

Cisco IOS Software Release 12.2(11)JA supports the EAP authentication type Cisco LEAP and interoperates with Cisco Secure Access Control Server (ACS) Version 2.6 or later. IEEE 802.1X local authentication service is a component of the wireless domain services feature set.

### **Antenna Alignment Assistance**

This feature provides a wireless bridge with an autoconfiguration and installation mode for out-of-the-box deployment of point-to-point links without requiring configuration via Telnet, file transfer protocol (FTP), or Simple Network Management Protocol (SNMP). This mode drives light emitting diodes (LEDs) and a Received Signal Strength Indicator (RSSI) port with a voltage output proportional to the received signal strength for use during the installation and alignment process. This allows a wireless bridge installation team without knowledge of Cisco IOS Software or data networking to install and verify the quality of the wireless link.

### **Wireless Programmable Clear Channel Assessment**

With the programmable clear channel assessment feature, wireless bridges can be configured to a particular background interference level found in a specific environment, for reduced overhead contention with other wireless systems.



### Wireless Root Bridge

A wireless bridge can be configured as a wireless root bridge to provide support for point-to-point or point-to-multipoint bridging.

### Wireless Non-Root Bridge

A wireless bridge can be configured as a wireless non-root bridge to allow operation as the remote node in a point-to-point or point-to-multipoint network.

### Wireless Packet Concatenation

Wireless packet concatenation is the ability to concatenate smaller packets into larger ones to more efficiently use the wireless medium and provide higher overall data throughputs on a wireless bridge.

### Wireless Link Distance Adjustment

The wireless link distance adjustment parameter allows the user to tune the carrier sense multiple access with collision avoidance (CSMA/CA) parameters for a particular range to maximize the performance of a wireless bridge.

### Support

Cisco IOS Software Release 12.2(11)JA follows the standard Cisco support policy. For more information, visit: [www.cisco.com/en/US/products/products\\_end-of-life\\_policy.html](http://www.cisco.com/en/US/products/products_end-of-life_policy.html)

### Product Features and Model Numbers

Cisco IOS Software Release 12.2(11)JA feature sets, images, and memory recommendations are listed in Table 3. The products supported by this release are listed in Table 4.

Table 3 Cisco IOS Software Release 12.2(11)JA Feature Sets, Images, and Memory Recommendations

Platform	Software Feature Set	Product Code	Image	Flash	DRAM
Cisco Aironet 1400 Series Wireless Bridge	Wireless LAN	S141W7K9-12211JA	c1410-k9w7-tar.122-11.JA	8	16
Cisco Aironet 1200 Series Access Point	Wireless LAN	S12W7K9-12208JA	c1200-k9w7-tar.122-11.JA	8	16
Cisco Aironet 1100 Series Access Point	Wireless LAN	S11W7K9-12208JA	c1100-k9w7-tar.122-11.JA	8	16



Table 4 Products Supported by Cisco IOS Software Release 12.2(11)JA

Platform	Model Number
Cisco Aironet 1400 Series Wireless Bridge	BR1410A
Cisco Aironet 1200 Series Access Point	AP1210, AP1230A, AP1230B
Cisco Aironet 1100 Series Access Point	AP1100B

### Download Information

Cisco IOS Software Release 12.2(11)JA can be downloaded from the following Cisco.com locations:

<http://tools.cisco.com/support/downloads/pub/MDFTree.x?butype=wireless>

[www.cisco.com/public/sw-center/sw-ios.shtml](http://www.cisco.com/public/sw-center/sw-ios.shtml)



Corporate Headquarters  
Cisco Systems, Inc.  
170 West Tasman Drive  
San Jose, CA 95134-1706  
USA  
www.cisco.com  
Tel: 408 526-4000  
800 553-NETS (6387)  
Fax: 408 526-4100

European Headquarters  
Cisco Systems International BV  
Haarlerbergpark  
Haarlerbergweg 13-19  
1101 CH Amsterdam  
The Netherlands  
www-europe.cisco.com  
Tel: 31 0 20 357 1000  
Fax: 31 0 20 357 1100

Americas Headquarters  
Cisco Systems, Inc.  
170 West Tasman Drive  
San Jose, CA 95134-1706  
USA  
www.cisco.com  
Tel: 408 526-7660  
Fax: 408 527-0883

Asia Pacific Headquarters  
Cisco Systems, Inc.  
Capital Tower  
168 Robinson Road  
#22-01 to #29-01  
Singapore 068912  
www.cisco.com  
Tel: +65 6317 7777  
Fax: +65 6317 7799

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