Aruba Instant 8.11.2.0

Release Notes

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The following table provides the revision history of this document.

Table 1: *Revision History*

Revision	Change Description
Revision 01	Initial release.

Chapter 1
Release Overview

This Aruba Instant release notes includes the following topics:

- What's New on page 8
- Supported Hardware Platforms on page 1
- Regulatory Updates on page 12
- Resolved Issues on page 13
- Known Issues and Limitations on page 15
- Upgrading an Instant AP on page 17

For the list of terms, refer to the Glossary.

Important Upgrade Information for Clusters that Include 320 Series, 330 Series, 340 Series, and 387 Series Access Points

Starting from Aruba Instant 8.11.0.0, 320 Series, 330 Series, 340 Series, and 387 Series access points are no longer supported. However, the 320 Series, 340 Series, and 387 Series access points use the Hercules and Draco images, which are also used by AP platforms that have not been deprecated in this release. As such, these images are available for upgrading to Aruba Instant 8.11.0.0. Attempting to install Aruba Instant 8.11.x.x firmware on the aforementioned APs may cause these APs to disconnect themselves from the current cluster and form a new cluster running the software version available in their partition.

Therefore, in addition to 330 Series access points, please ensure that any 320 Series, 340 Series, and 387 Series access points are removed from the cluster before upgrading it to Aruba Instant 8.11.x.x.

Related Documents

The following guides are part of the complete documentation for the Aruba user-centric network:

- *Aruba AP Software Quick Start Guide*
- *Aruba Instant User Guide*
- *Aruba Instant CLI Reference Guide*
- *Aruba Instant REST API Guide*
- *Aruba Instant Syslog Messages Reference Guide*
- *Aruba Instant AP Troubleshooting Guide*

Supported Browsers

The following browsers are officially supported for use with the Instant WebUI:

Web Browser	Operating System
Microsoft Edge (Microsoft Edge 92.0.902.62 and Microsoft EdgeHTML 18.19041) or later	■ Windows 10 or later ■ macOS
Firefox 107.0.1 or later	■ Windows 10 or later ■ macOS
Apple Safari 15.4 (17613.1.17.1.13) or later	■ macOS
Google Chrome 108.0.5359.71 or later	■ Windows 10 or later ■ macOS

Terminology Change

As part of advancing HPE's commitment to racial justice, we are taking a much-needed step in overhauling HPE engineering terminology to reflect our belief system of diversity and inclusion. Some legacy products and publications may continue to include terminology that seemingly evokes bias against specific groups of people. Such content is not representative of our HPE culture and moving forward, Aruba will replace racially insensitive terms and instead use the following new language:

Usage	Old Language	New Language
Campus Access Points + Controllers	Master-Slave	Conductor-Member
Instant Access Points	Master-Slave	Conductor-Member
Switch Stack	Master-Slave	Conductor-Member
Wireless LAN Controller	Mobility Master	Mobility Conductor
Firewall Configuration	Blacklist, Whitelist	Denylist, Allowlist
Types of Hackers	Black Hat, White Hat	Unethical, Ethical

Contacting Support

Table 2: *Contact Information*

Main Site	arubanetworks.com
Support Site	https://asp.arubanetworks.com/
Airheads Social Forums and Knowledge Base	community.arubanetworks.com
North American Telephone	1-800-943-4526 (Toll Free) 1-408-754-1200
International Telephone	arubanetworks.com/support-services/contact-support/
Software Licensing Site	lms.arubanetworks.com
End-of-life Information	arubanetworks.com/support-services/end-of-life/
Security Incident Response Team	Site: arubanetworks.com/support-services/security-bulletins/ Email: aruba-sirt@hpe.com

This chapter describes the features, enhancements, and behavioral changes introduced in this release.

New Features and Enhancements

This section describes the features and enhancements introduced in this release.

Support for AP-654 Access Points

The AP-654 access point is the external antenna platform variant of the 650 Series, supporting two sets of antenna interfaces for 2.4 GHz and 5 GHz (A, left side) as well as 6 GHz (B, right side). The Aruba 650 Series access points are high performance, multi-radio access points that can be deployed in either controller-based (ArubaOS) or controller-less (Aruba Instant) network environments. These APs deliver comprehensive tri-band coverage across 2.4 GHz, 5 GHz, and 6 GHz 802.11ax Wi-Fi (Wi-Fi 6E) functionality with concurrent 4x4 MU-MIMO radios for both uplink and downlink in the 5 GHz and 6 GHz bands, while also supporting 802.11a, 802.11b, 802.11g, 802.11n, 802.11ac, and 802.11ax wireless services.

Additional features include:

- Up to 7.8 Gbps combined peak data rate
- Dual wired 5 Gbps Smart Rate ethernet ports for hitless failover
- Orthogonal Frequency Division Multiple Access (OFDMA)
- Aruba Advanced Cellular Coexistence (ACC)
- IoT-ready (integrated Bluetooth 5 and 802.15.4 radio for Zigbee support)
- Ultra Tri-Band (UTB) filtering
- Maximum ratio combining (MRC)
- Intelligent Power Monitoring (IPM)
- Dynamic frequency selection (DFS)

For complete technical details and installation instructions, see the *Aruba* 650 Series *Access Points Installation Guide*.

Support for AP-634 Access Points

The AP-634 access point is the external antenna platform variant of the 630 Series, supporting two sets of antenna interfaces for 2.4 GHz and 5 GHz (A, left side) as well as 6 GHz (B, right side). The Aruba 630 Series access points are high performance, multi-radio access points that can be deployed in either controller-based (ArubaOS) or controller-less (Aruba Instant) network environments. These APs deliver comprehensive tri-band coverage across 2.4 GHz, 5 GHz, and 6 GHz 802.11ax Wi-Fi (Wi-Fi 6E) functionality with concurrent 2x2 MIMO radios for both uplink and downlink in the 5 GHz and 6 GHz bands, while also supporting 802.11a, 802.11b, 802.11g, 802.11n, 802.11ac, and 802.11ax wireless services.

Additional features include:

- Up to 3.9 Gbps combined peak data rate
- Dual wired 2.5 Gbps Smart Rate ethernet ports for hitless failover
- Orthogonal Frequency Division Multiple Access (OFDMA)
- Aruba Advanced Cellular Coexistence (ACC)
- IoT-ready (integrated Bluetooth 5 and 802.15.4 radio for Zigbee support)
- Ultra Tri-Band (UTB) filtering
- Maximum ratio combining (MRC)
- Intelligent Power Monitoring (IPM)
- Dynamic frequency selection (DFS)

For complete technical details and installation instructions, see the *Aruba* 630 Series *Access Points Installation Guide*.

Support for SSL Throttling

SSL throttle can now be configured manually using the **set-sysctl ssl_throttle_table** command to a value between 1–32; the default value is 16. The **get-sysctl ssl_throttle_table** command can be used to view the configured SSL throttle value.

Enable Certificate Validation to Upgrade 630 Series and 650 Series Aruba Instant Access Points

Starting from Aruba Instant 8.11.2.0, software upgrades performed in Aruba Central or Aruba Central (on-premises) will enforce certificate validation for APs in FIPS mode. Aruba Central or Aruba Central (on-premises) will check FIPS mode and turn the certificate check ON or OFF accordingly. The default behavior will be same for non-Central connected APs.

Enhanced Support for Instant AP IPv6 Address Generation

In the updated IPv6 address generation process, users can now seamlessly switch between address generation methods. While the default method remains the Instant AP MAC address (EUI-64) format, an option to change to the Stable Privacy method is now available. This update introduces a new set of commands for easy switching between these methods. This enhancement introduces the following set of commands.

- **ipv6 addr-gen-mode eui64**
- **ipv6 addr-gen-mode stable-privacy**
- **no ipv6 addr-gen-mode**

Regulatory Information Added to show tech-support Command

The output of the **show tech-support** command is enhanced to include the AP regulatory information.

Behavioral Changes

This release does not introduce any changes in Aruba Instant behaviors, resources, or support that would require you to modify the existing system configurations after updating to 8.11.2.0.

Chapter 3
Supported Hardware Platforms

The following table displays the Instant AP platforms supported in Aruba Instant 8.11.2.x release.

Table 3: *Supported Instant AP Platforms*

Instant AP Platform	Minimum Required Instant Software Version
630 Series — AP-634 650 Series — AP-654	Instant 8.11.2.0 or later
500 Series — AP-503	Instant 8.11.1.0 or later
610 Series — AP-615	Instant 8.11.0.0 or later
580 Series — AP-584, AP-585, and AP-587 580EX Series — AP-585EX and AP-587EX 650 Series — AP-655	Instant 8.10.0.0 or later
630 Series — AP-635	Instant 8.9.0.0 or later
500H Series — AP-503H 560 Series — AP-565 and AP-567	Instant 8.7.1.0 or later
500H Series — AP-505H 518 Series — AP-518 570 Series — AP-574, AP-575, and AP-577 570EX Series — AP-575EX and AP-577EX	Instant 8.7.0.0 or later
500 Series — AP-504 and AP-505	Instant 8.6.0.0 or later
530 Series — AP-534 and AP-535 550 Series — AP-555	Instant 8.5.0.0 or later
303 Series — AP-303P 510 Series — AP-514 and AP-515	Instant 8.4.0.0 or later
303 Series — AP-303 318 Series — AP-318 370 Series — AP-374, AP-375, and AP-377 370EX Series — AP-375EX and AP-375EX	Instant 8.3.0.0 or later
303H Series — AP-303H 360 Series — AP-365 and AP-367	Instant 6.5.2.0 or later
300 Series — IAP-304 and IAP-305	Instant 6.5.1.0-4.3.1.0 or later
310 Series — IAP-314 and IAP-315	Instant 6.5.0.0-4.3.0.0 or later

Deprecated Instant APs

The following Instant APs are no longer supported from Aruba Instant 8.11.0.0 onwards:

- 203H Series — AP-203H
- 203R Series — AP-203R and AP-203RP
- 207 Series — IAP-207
- 320 Series — IAP-324 and IAP-325
- 330 Series — IAP-334 and IAP-335
- 340 Series — AP-344 and AP-345
- 387 Series — AP-387

Chapter 4
Regulatory Updates

This chapter contains the Downloadable Regulatory Table (DRT) file version introduced in this release.

Periodic regulatory changes may require modifications to the list of channels supported by an AP. For a complete list of channels supported by an AP using a specific country domain, access the Instant AP Command Line Interface (CLI) and execute the **show ap allowed-channels** command.

For a complete list of countries and the regulatory domains in which the APs are certified for operation, refer to the Downloadable Regulatory Table or the DRT Release Notes at asp.arubanetworks.com.

The following DRT file version is part of this release:

- DRT-1.0_87407

Chapter 5
Resolved Issues

The following issues are resolved in this release.

Table 4: *Resolved Issues in Instant 8.11.2.0*

Bug ID	Description	Reported Version
AOS-244434	Instant APs were incorrectly classified as rogue APs by RAPIDS. The BSSIDs of the rogue APs were not listed in the output of the **show log security** command. The fix ensures that APs are not incorrectly classified as rogue APs by RAPIDS. This issue was observed in Central-managed APs running Aruba Instant 8.6.0.0 or later versions.	Aruba Instant 8.10.0.5
AOS-244395	An Instant AP failed to decapsulate fragmented EAP-TLS packets when Wi-Fi offload was enabled. The AP experienced defragmentation failure in the NSS FW. The fix ensures that fragmented EAP-TLS packets are reassembled as expected in the NSS FW. This issue was observed in APs running Aruba Instant 8.6.0.0 or later versions.	Aruba Instant 8.10.0.6
AOS-242271	Multiple DHCP server connection errors were reported on the **AI Insights** dashboard of the Central UI. The fix ensures that the process works as expected. This issue was observed in Central-managed APs running Aruba Instant 8.7.1.0 or later versions.	Aruba Instant 8.7.1.0
AOS-239309	Client throughput did not exceed 200 Mbps for Instant APs. This issue occurred when **url-visibility** was enabled but **dpi** was not enabled. The fix ensures that the client throughput for combinations of **dpi** and **url-visibility** is not limited to 200 Mbps. This issue was observed in Central-managed APs running Aruba Instant 8.6.0.0 or later versions.	Aruba Instant 8.6.0.0
AOS-239919	An Instant AP connected to a switch port with single stack IPv6 VLAN was unable to obtain DHCPv6 addresses. This caused the AP to revert to IAP mode. The fix ensures that the IPv6 process for obtaining the DHCPv6 addresses is restarted if the AP fails to obtain the addresses. This issue was observed in APs running Aruba Instant 8.10.0.1 or later versions.	Aruba Instant 8.10.0.1
AOS-240080 AOS-245100	After configuring multiple DNS IP servers by using a separating comma, the **Overview > Summary > DNS NAME SERVERS** section of the Central UI showed an incorrect number of DNS servers. The fix ensures the saved configuration is displayed accurately in the UI. This issue was observed in Instant APs managed by Central running Aruba Instant 8.11.1.0 or later versions.	Aruba Instant 8.11.1.0
AOS-243125 AOS-245986	In some Instant APs, high memory utilization was observed when Central connection was down and there were many client devices connected at that time to the AP. The fix ensures that the APs function as expected .This issue was observed in Central-managed APs running Aruba Instant 8.11.1.0 or later versions.	Aruba Instant 8.11.1.0

Table 4: *Resolved Issues in Instant 8.11.2.0*

Bug ID	Description	Reported Version
AOS-243414	An online Instant AP did not send updated DNS server details to Central. The fix ensures that the APs work as expected. This issue was observed in Central-managed APs running Aruba Instant 8.7.1.5 or later versions.	Aruba Instant 8.7.1.5
AOS-243107	Clients could not connect to the MAC+ enhanced open SSID after the connection switched from Dot1x/WPA3-SAE to the MAC+ enhanced open SSID. This issue occurred when the 4-way handshake failed due to a missing PMK cache entry. The issue was resolved by retaining the PMK cache entry after switching to the SSID through the CLI. This issue was observed in APs running Aruba Instant 8.10.0.0 or later versions.	Aruba Instant 8.10.0.0
AOS-245401	HE capabilities were configured on the beacon and probe response for **2.4GHz** radio even though the **HE** knob was disabled. The fix ensures that HE capabilities are not configured on the beacon and probe response when the **HE** knob is disabled. This issue was observed in 500 Series access points running Aruba Instant 8.9.0.0 or later versions.	Aruba Instant 8.10.0.6

This chapter describes the known issues and limitations observed in this release.

Limitations

This section describes the limitations in Aruba Instant 8.11.2.0.

AP-615, AP-635, and AP-655 Access Points

The AP-615, AP-635, and AP-655 access points have the following limitations:

- All radios for these APs currently do not support spectrum analysis.
- 802.11mc responder and initiator functionality, Hotspot configuration, and Air Slice configuration are not supported on the 6 GHz radio.
- Users can configure only up to 4 VAPs on the 6 GHz radio, instead of 16 VAPs.

AP-654 and AP-634 Access Points

For the current release of Aruba Instant, AP-654 and AP-634 access points do not support 6 GHz band operation. Support for 6 GHz will be enabled in a future software release, and will depend on the local regulatory status reflected in the DRT file.

Air Slice

Air Slice is partially enabled on 500 Series and 510 Series access points. However, WMM boost will be functional even if Air Slice high-priority queuing is disabled.

Airtime Fairness Mode

Airtime Fairness Mode is not supported in 802.11ax access points.

AP Hostname Character Limit Extension

The number of ASCII characters allowed in the Instant AP hostname is increased from 32 to 128 characters. The following configuration settings do not support the new limit of 128 ASCII characters in Instant 8.11.1.0:

- The AP Name field in Role Derivation or VLAN Derivation.
- The AP Name field in beacon and probe response frames.
- The AP Name field in the **show ap mesh link** and **ap mesh neighbor** commands.

Dynamic Multicast Optimization Unsupported with VLAN Derivation

Aruba Instant does not support Dynamic Multicast Optimization when the SSID is configured with VLAN derivation.

Inbound Firewall

The **apip-all** configuration is not supported by the **inbound-firewall** command in Instant AP cluster deployments. It is only supported in standalone or single-AP modes of deployment.

Unified Communications Manager

UCM does not prioritize NAT traffic.

Known Issues

Following are the known issues observed in this release.

Table 5: *Known Issues in Instant 8.11.2.0*

Bug ID	Description	Reported Version
AOS-245510	Instant APs reboot unexpectedly. The log file lists the reason for reboot as **Panic:Out of memory Warm-reset**. This issue is observed in APs running Aruba Instant 8.10.0.0 or later versions.	Aruba Instant 8.10.0.5

Chapter 7
Upgrading an Instant AP

This chapter describes the Instant software upgrade procedures and the different methods for upgrading the image on the Instant AP.

While upgrading an Instant AP, you can use the image check feature to allow the Instant AP to find new software image versions available on a cloud-based image server hosted and maintained by Aruba. The location of the image server is fixed and cannot be changed by the user. The image server is loaded with the latest versions of the Instant software.

Topics in this chapter include:

- Upgrading an Instant AP and Image Server on page 17
- Upgrading an Instant AP Using the Automatic Image Check on page 19
- Upgrading to a New Version Manually Using the WebUI on page 19
- Upgrading an Instant AP Image Using CLI on page 21
- Upgrade from Instant 6.4.x.x-4.2.x.x to Instant 8.11.0.x on page 21

Upgrading an Instant AP and Image Server

Instant supports mixed Instant AP class Instant deployment with all Instant APs as part of the same virtual controller cluster.

Image Management Using AirWave

If the multi-class Instant AP network is managed by AirWave, image upgrades can only be done through the AirWave WebUI. The Instant AP images for different classes must be uploaded on the AMP server. If new Instant APs joining the network need to synchronize their software with the version running on the virtual controller, and if the new Instant AP belongs to a different class, the image file for the new Instant AP is provided by AirWave. If AirWave does not have the appropriate image file, the new Instant AP will not be able to join the network.

The virtual controller communicates with the AirWave server if AirWave is configured. If AirWave is not configured on the Instant AP, the image is requested from the Image server.

Image Management Using Cloud Server

If the multi-class Instant AP network is not managed by AirWave, image upgrades can be done through the Cloud-Based Image Check feature. If a new Instant AP joining the network needs to synchronize its software version with the version on the virtual controller and if the new Instant AP belongs to a different class, the image file for the new Instant AP is provided by the cloud server.

Configuring HTTP Proxy on an Instant AP

If your network requires a proxy server for Internet access, ensure that you configure the HTTP proxy on the Instant AP to download the image from the cloud server. The **Username** and **Password**

configuration is supported only for cloud services. After setting up the HTTP proxy settings, the Instant AP connects to the Activate server, AMP, Central, OpenDNS, or web content classification server through a secure HTTP connection. The proxy server can also be configured and used for cloud services. You can also exempt certain applications from using the HTTP proxy (configured on an Instant AP) by providing their host name or IP address under exceptions.

The following procedure describes how to configure the HTTP proxy settings using the WebUI:

1. Navigate to **Configuration** > **System** > **Proxy**.
2. Enter the HTTP proxy server IP address in the **Auth Server** text box.
3. Enter the port number in the **Port** text box.
4. If you want to set an authentication username and password for the proxy server, enable the **Proxy requires authentication** toggle switch.
5. Enter a username in the **Username** text box.
6. Enter a password in the **Password** text box.
7. If you do not want the HTTP proxy to be applied for a particular host, click **+** to enter that IP address or domain name of that host in the **Exceptions** section.
8. Click **Save**.

The following procedure describes how to configure the HTTP proxy settings using the CLI:

```
(Instant AP)(config)# proxy server 192.0.2.1 8080 example1 user123
(Instant AP)(config)# proxy exception 192.0.2.2
(Instant AP)(config)# end
(Instant AP)# commit apply
```

HTTP Proxy Support through Zero Touch Provisioning

Instant APs experience issues when connecting to AirWave, Central, or Activate through the HTTP proxy server which requires a username and password. The ideal way to provide seamless connectivity for these cloud platforms is to supply the proxy information to the Instant AP through a DHCP server.

Starting with Aruba Instant 8.4.0.0, besides being able to authenticate to the HTTP proxy server, the factory default Instant APs can also communicate with the server through a HTTP proxy server DHCP which does not require authentication.

In order for the factory default Instant AP to automatically discover the proxy server, you need to configure the HTTP proxy information in the DHCP server option. The Instant AP will receive the proxy information and store it in a temporary file.

To retrieve the port and the proxy server information, you need to first configure the DHCP **option 60** to **ArubaInstantAP** as shown below:

```
(Instant AP)(config)# ip dhcp <profile_name>
(Instant AP)("IP DHCP profile-name")# option 60 ArubaInstantAP
```

Secondly, use the following command to configure the proxy server:

```
(Instant AP)(config)# proxy server <host> <port> [<username> <password>]
```

Use the text string **option 148 text server=host_ip,port=PORT,username=USERNAME,password=PASSWORD** to retrieve the details of the proxy server.

Rolling Upgrade on Instant APs with AirWave

Starting from Aruba Instant 8.4.0.0, Rolling Upgrade for Instant APs in standalone mode is supported with AirWave. The upgrade is orchestrated through NMS and allows the Instant APs deployed in standalone mode to be sequentially upgraded such that the APs upgrade and reboot one at a time. With Rolling Upgrade, the impact of upgrading a site is reduced to a single AP at any given point in time. This enhances the overall availability of the wireless network. For more information, see *AirWave 8.2.8.2 Instant Deployment Guide* and *AirWave 8.2.8.2 Release Notes*.

Upgrading an Instant AP Using the Automatic Image Check

You can upgrade an Instant AP by using the Automatic Image Check feature. The automatic image checks are performed once, as soon as the Instant AP boots up and every week thereafter.

If the image check locates a new version of the Instant software on the image server, the new version available link is displayed on the Instant main window.

If AirWave is configured, the automatic image check is disabled.

The following procedure describes how to check for a new version on the image server in the cloud using the WebUI:

1. Go to **Maintenance** > **Firmware**.
2. In the **Automatic** section, click **Check for New Version**. After the image check is completed, one of the following messages is displayed:
   - No new version available—If there is no new version available.
   - Image server timed out—Connection or session between the image server and the Instant AP is timed out.
   - Image server failure—If the image server does not respond.
   - A new image version found—If a new image version is found.
3. If a new version is found, the **Upgrade Now** button becomes available and the version number is displayed.
4. Click **Upgrade Now**.

The Instant AP downloads the image from the server, saves it to flash, and reboots. Depending on the progress and success of the upgrade, one of the following messages is displayed:

- Upgrading—While image upgrading is in progress.
- Upgrade successful—When the upgrade is successful.
- Upgrade failed—When the upgrade fails.

If the upgrade fails and an error message is displayed, retry upgrading the Instant AP.

Upgrading to a New Version Manually Using the WebUI

If the Automatic Image Check feature is disabled, you can manually obtain an image file from a local file system or from a remote server accessed using a TFTP, FTP or HTTP URL.

The following procedure describes how to manually check for a new firmware image version and obtain an image file using the webUI:

1. Navigate to **Maintenance** > **Firmware**.
2. Expand **Manual** section.
3. The firmware can be upgraded using a downloaded image file or a URL of an image file.
   a. To update firmware using a downloaded image file:
      i. Select the **Image file** option. This method is only available for single-class Instant APs.
      ii. Click on **Browse** and select the image file from your local system. The following table describes the supported image file format for different Instant AP models:

Access Points	Image File Format
AP-615	ArubaInstant_Leo_8.11.0.x_xxxx
AP-635 and AP-655	ArubaInstant_Norma_8.11.0.x_xxxx
AP-514, AP-515, AP-518, AP-574, AP-575, AP-575EX, AP-577, and AP-577EX	ArubaInstant_Draco_8.11.0.x_xxxx
AP-503H, AP-504, AP-505, AP-505H, AP-565, and AP-567.	ArubaInstant_Gemini_8.11.0.x_xxxx
IAP-314, IAP-315, AP-374, AP-375, AP-377, and AP-318.	ArubaInstant_Hercules_8.11.0.x_xxxx
AP-534, AP-535, AP-555, AP-584, AP-585, AP-585EX, AP-587, and AP-587EX	ArubaInstant_Scorpio_8.11.0.x_xxxx
AP-303, AP-303H, 303P Series, IAP-304, IAP-305, AP-365, and AP-367	ArubaInstant_Ursa_8.11.0.x_xxxx

   b. To upgrade firmware using the URL of an image file:
      i. Select the **Image URL** option to obtain an image file from a HTTP, TFTP, or FTP URL.
      ii. Enter the image URL in the **URL** text field. The syntax to enter the URL is as follows:
      - HTTP - http://<IP-address>/<image-file>. For example, http://<IP-address>/ArubaInstant_Hercules_8.11.0.x_xxxx
      - TFTP - tftp://<IP-address>/<image-file>. For example, tftp://<IP-address>/Aruba Instant_Hercules_8.11.0.x_xxxx
      - FTP - ftp://<IP-address>/<image-file>. For example, ftp://<IP-address>/Aruba Instant_ Hercules_8.11.0.x_xxxx
      - FTP - ftp://<user name:password>@<IP-address>/<image-file>. For example, ftp://<aruba :123456>@<IP-address>/ArubaInstant_Hercules_8.11.0.x_xxxx

The FTP server supports both **anonymous** and **username:password** login methods.

Multiclass Instant APs can be upgraded only in the URL format, not in the local image file format.

4. Disable the **Reboot all APs after upgrade** toggle switch if required. This option is enabled by default to allow the Instant APs to reboot automatically after a successful upgrade. To reboot the Instant AP at a later time, clear the **Reboot all APs after upgrade** check box.
5. Click **Upgrade Now** to upgrade the Instant AP to the newer version.
6. Click **Save**.

Upgrading an Instant AP Image Using CLI

The following procedure describes how to upgrade an image using a HTTP, TFTP, or FTP URL:

```
(Instant AP)# upgrade-image <ftp/tftp/http-URL>
```

The following is an example to upgrade an image by using the FTP URL :

```
(Instant AP)# upgrade-image ftp://192.0.2.7/ArubaInstant_Hercules_8.11.0.x_xxxx
```

The following procedure describes how to upgrade an image without rebooting the Instant AP:

```
(Instant AP)# upgrade-image2-no-reboot <ftp/tftp/http-URL>
```

The following is an example to upgrade an image without rebooting the Instant AP:

```
(Instant AP)# upgrade-image2-no-reboot ftp://192.0.2.7/Aruba Instant_Hercules_
8.11.0.x_xxxx
```

The following command describes how to view the upgrade information:

```
(Instant AP)# show upgrade info
Image Upgrade Progress
----------------------
Mac IP Address AP Class Status Image Info Error Detail
--- --------- -------- ------ ---------- ------------
d8:c7:c8:c4:42:98 10.17.101.1 Hercules image-ok image file none
Auto reboot :enable
Use external URL :disable
```

Upgrade from Instant 6.4.x.x-4.2.x.x to Instant 8.11.0.x

Before you upgrade an Instant AP running Instant 6.5.4.0 or earlier versions to Instant 8.11.0.x, follow the procedures mentioned below:

1. Upgrade from Instant 6.4.x.x-4.2.x.x or any version prior to Instant 6.5.4.0 to Instant 6.5.4.0.
2. Refer to the *Field Bulletin AP1804-1* at asp.arubanetworks.com.
3. Verify the affected serial numbers of the Instant AP units.