



Release Notes for Cisco Wireless Controllers and Lightweight Access Points, Cisco Wireless Release 8.5.160.0 and 8.5.161.0

First Published: 2019-12-10

Last Modified: 2021-02-12

Release Notes for Cisco Wireless Controllers and Lightweight Access Points, Cisco Wireless Release 8.5.160.0 and 8.5.161.0

This release notes document describes what is new or changed in this release, instructions to upgrade to this release, and open and resolved caveats for this release. Unless otherwise noted, in this document, Cisco Wireless Controllers are referred to as *Cisco WLCs*, and Cisco lightweight access points are referred to as *access points* or *Cisco APs*.

Revision History

Table 1: Revision History

Modification Date	Modification Details
February 20, 2020	Included Release 8.5.161.0 <ul style="list-style-type: none">• Added Resolved Caveats

Supported Cisco Wireless Controller Platforms

The following Cisco Wireless Controller platforms are supported in this release:

- Cisco 2500 Series Wireless Controllers (Cisco 2504 Wireless Controller)
- Cisco 3500 Series Wireless Controllers (Cisco 3504 Wireless Controller)
- Cisco 5500 Series Wireless Controllers (Cisco 5508 and 5520 Wireless Controllers)
- Cisco Flex 7500 Series Wireless Controllers (Cisco Flex 7510 Wireless Controller)
- Cisco 8500 Series Wireless Controllers (Cisco 8510 and 8540 Wireless Controllers)
- Cisco Virtual Wireless Controller (vWLC) on the following platforms:
 - VMware vSphere Hypervisor (ESXi) Version 5.x and 6.x
 - Hyper-V on Microsoft Servers 2012 and later versions



Note Support introduced in Release 8.4.

- Kernel-based virtual machine (KVM)



Note Support introduced in Release 8.1. After KVM is deployed, we recommend that you do not downgrade to a Cisco Wireless release that is earlier than Release 8.1.

- Cisco Wireless Controllers for High Availability for Cisco 2504 WLC, Cisco 3504 WLC, Cisco 5508 WLC, Cisco 5520 WLC, Cisco Wireless Services Module 2 (Cisco WiSM2), Cisco Flex 7510 WLC, Cisco 8510 WLC, and Cisco 8540 WLC.
- Cisco WiSM2 for Cisco Catalyst 6500 Series Switches
- Cisco Mobility Express Solution

Supported Cisco Access Point Platforms

The following Cisco AP platforms are supported in this release:

- Cisco Aironet 1600 Series Access Points
- Cisco Aironet 1700 Series Access Points
- Cisco Aironet 1800 Series Access Points
- Cisco Aironet 1810 Series OfficeExtend Access Points
- Cisco Aironet 1810W Series Access Points
- Cisco Aironet 1815 Series Access Points
- Cisco Aironet 1830 Series Access Points
- Cisco Aironet 1850 Series Access Points
- Cisco Aironet 2600 Series Access Points
- Cisco Aironet 2700 Series Access Points
- Cisco Aironet 2800 Series Access Points
- Cisco Aironet 3500 Series Access Points
- Cisco Aironet 3600 Series Access Points
- Cisco Aironet 3700 Series Access Points
- Cisco Aironet 3800 Series Access Points
- Cisco Aironet 700 Series Access Points
- Cisco Aironet 700W Series Access Points

- Cisco AP802 Integrated Access Point
- Cisco AP803 Integrated Access Point
- Integrated Access Point on Cisco 1100 Integrated Services Router
- Cisco ASA 5506W-AP702
- Cisco Aironet 1530 Series Access Points
- Cisco Aironet 1540 Series Access Points
- Cisco Aironet 1550 Series Access Points with 128-MB memory



Note From Release 8.4, Cisco 1550 APs with 64-MB memory are not supported.

- Cisco Aironet 1560 Series Access Points
- Cisco Aironet 1570 Series Access Points
- Cisco Industrial Wireless 3700 Series Access Points



Note • Cisco AP802 and AP803 are integrated access point modules on the Cisco 800 Series Integrated Services Routers (ISRs). For more information about the stock-keeping units (SKUs) for the AP802s and AP803s Cisco ISRs, see

<https://www.cisco.com/c/en/us/products/routers/800-series-routers/brochure-listing.html>.

Before you use a Cisco AP802 series lightweight access point module with Cisco Wireless Release 8.5, you must upgrade the software in the Cisco 800 Series ISRs to Cisco IOS 15.1(4)M or later releases.

- For more information about Integrated Access Point on Cisco 1100 ISR, see the product data sheet at <https://www.cisco.com/c/en/us/products/collateral/routers/1000-series-integrated-services-routers-isr/datasheet-c78-739512.html>.

For information about Cisco Wireless software releases that support specific Cisco access point modules, see the "Software Release Support for Specific Access Point Modules" section in the [Cisco Wireless Solutions Software Compatibility Matrix](#) document.

What's New in Release 8.5.161.0

There are no new features that are introduced in this release. For more information about updates in this release, see the Caveats section in this document.



Note For complete listing of all the documentation that is published for Cisco Wireless Release 8.5, see the Documentation Roadmap:

<https://www.cisco.com/c/en/us/td/docs/wireless/doc-roadmap/doc-roadmap-release-85.html>

What's New in Release 8.5.160.0

There are no new features that are introduced in this release. For more information about updates in this release, see the Caveats section in this document.



Note For complete listing of all the documentation that is published for Cisco Wireless Release 8.5, see the Documentation Roadmap:

<https://www.cisco.com/c/en/us/td/docs/wireless/doc-roadmap/doc-roadmap-release-85.html>

Software Release Types and Recommendations

Table 2: Release Types

Release Type	Description	Benefit
Maintenance Deployment (MD)	Software releases that provide bug-fix support and ongoing software maintenance. These releases are categorized as Maintenance Deployment (MD) These are long-living releases with ongoing software maintenance.	Provides you with a software release that offers stability and long support duration with periodic maintenance releases (MRs).
Early Deployment (ED)	Software releases that provide new features and new hardware platform support in addition to bug fixes. These releases are categorized as Early Deployment (ED). These are short-lived releases.	Allows you to deploy the latest features and new hardware platforms or modules.

For detailed release recommendations, see the *Guidelines for Cisco Wireless Software Release Migration Bulletin* at:

<http://www.cisco.com/c/en/us/products/collateral/wireless/8500-series-wireless-controllers/bulletin-c25-730741.html>

Table 3: Upgrade Path to Cisco WLC Software Release 8.5.161.0

Current Software Release	Upgrade Path to 8.5.161.0 Software
8.0.x.x	You can upgrade directly to Release 8.5.161.0 Note This is applicable only to Cisco 5508 Wireless Controller and Cisco WiSM2.

Current Software Release	Upgrade Path to 8.5.161.0 Software
8.2.16x.0 and later	You can upgrade directly to Release 8.5.161.0 Note Release 8.2.16x.0 is affected by CSCvf12068 . This issue is addressed by upgrading to 8.5.161.0.
8.3.x.0	You can upgrade directly to Release 8.5.161.0
8.4.100.0	You can upgrade directly to Release 8.5.161.0
8.5.x	You can upgrade directly to Release 8.5.161.0



Note If you are using Release 8.2.15x or earlier, we recommend that you upgrade to Release 8.2.16x or 8.3.x and then upgrade to Release 8.5.161.0.

Upgrading Cisco Wireless Release

This section describes the guidelines and limitations that you must be aware of when you are upgrading the Cisco Wireless release and the procedure to upgrade.



Caution Before you upgrade to this release, we recommend that you go through the following documents to understand various issues related to Cisco Wave 1 AP flash and the solution to address them:

- Field Notice: <https://www.cisco.com/c/en/us/support/docs/field-notices/703/fn70330.html>
- Understanding Various AP-IOS Flash Corruption Issues: <https://www.cisco.com/c/en/us/support/docs/wireless-mobility/wireless-lan-wlan/213317-understanding-various-ap-ios-flash-corr.html>

Guidelines and Limitations

- We recommend you to perform the following procedure if you have the Cisco Smart License enabled and the Controller is registered on Cisco Smart Account.
Perform this procedure before upgrading the Cisco Controller's boot image.
 1. Deregister the Cisco Controller running the old build from the Cisco Smart Software Manager (CSSM).
 2. Upgrade the Cisco Controller with new boot image.
 3. Reregister the upgraded Cisco Controller with new build on CiscoSmartSoftware Manager (CSSM).
- When the Cisco controller is downgraded from 8.5.140.0 to 8.3.x release, it is possible that the OSU SSID profile name information may be lost and only the OSU SSID name is retained. Reconfigure the controller with the desired profile name to have the HotSpot 2.0 in action after downgrading the controller to 8.3.x release is complete.

- In Release 8.5.135.0, the creation of Authorization server is deprecated. To create an Authorization server, you must create an Authentication server and duplicate it as an Authorization server. Due to this change in functionality, an alarm is generated in Cisco Prime Infrastructure 3.2 as follows:

```
1.Successfully created Authentication server. 2.Failed to create
authorization server:SNMP operation to Device failed: Set Operation
not allowed for TACACS authorization server.1.Successfully created
Accounting server.
```

The workaround on Cisco PI is to uncheck the Authorization server on the Prime template.

For more information about this change in functionality, see [CSCvm01415](#).

- If you are using Release 8.4 and want to upgrade to a later release, it is necessary that you upgrade to Release 8.5.105.0 and then move to a later release.



Note This restriction is applicable only to Release 8.4 and not any other release.

- The image format of Cisco Aironet 1700, 2700, 3700, and IW3702 APs have been changed from ap3g2 to c3700. Therefore, if you are upgrading to Release 8.5 or a later release from Release 8.3 or an earlier release, these APs will download the image twice and reboot twice.
- Support for Dynamic WEP is reintroduced in Cisco Wave1 APs in this release.
- The AAA database size is increased from 2048 entries to 12000 entries for these Cisco WLCs: Cisco Flex 7510, 8510, 5520, and 8540. Therefore, if you downgrade from Release 8.5 to an earlier release that does not include this enhancement, you might lose most of the AAA database configuration, including management user information. To retain at least 2048 entries, including management user information, we recommend that you follow these downgrade instructions and back up the configuration file before proceeding with the downgrade:
 1. From Release 8.5, downgrade to one of the following releases, which support 2048 database size and include the enhancement.
 - Release 8.4.100.0 or a later 8.4 release.
 - Release 8.3.102.0 or a later 8.3 release.
 - Release 8.2.130.0 or a later 8.2 release.
 - Release 8.0.140.0 or a later 8.0 release.
 2. Downgrade to a release of your choice.
- In Release 8.5, the search functionality in the Cisco WLC Online Help for all WLCs is disabled due to memory issues encountered in these WLCs: Cisco 2504, 5508, and WiSM2.
- Release 8.4 and later releases support additional configuration options for 802.11r FT enable and disable. The additional configuration option is not valid for releases earlier than Release 8.4. If you downgrade from Release 8.5 to Release 8.2 or an earlier release, the additional configuration option is invalidated and defaulted to FT disable. When you reboot Cisco WLC with the downgraded image, invalid configurations are printed on the console. We recommend that you ignore this because there is no functional impact, and the configuration defaults to FT disable.
- If you downgrade from Release 8.5 to a 7.x release, the trap configuration is lost and must be reconfigured.

- If you downgrade from Release 8.5 to Release 8.1, the Cisco Aironet 1850 Series AP whose mode was Sensor before the downgrade is shown to be in unknown mode after the downgrade. This is because the Sensor mode is not supported in Release 8.1.
- If you have an IPv6-only network and are upgrading to Release 8.4 or a later release, ensure that you perform the following activities:
 - Enable IPv4 and DHCPv4 on the network—Load a new Cisco WLC software image on all the Cisco WLCs along with the supplementary AP bundle images on Cisco 2504 WLC, Cisco 5508 WLC, and Cisco WiSM2, or perform a predownload of AP images on the corresponding Cisco WLCs.
 - Reboot Cisco WLC immediately or at a preset time.
 - Ensure that all Cisco APs are associated with Cisco WLC.
 - Disable IPv4 and DHCPv4 on the network.
- After downloading the new software to the Cisco APs, it is possible that a Cisco AP may get stuck in an upgrading image state. In such a scenario, it might be necessary to forcefully reboot Cisco WLC to download a new image or to reboot Cisco WLC after the download of the new image. You can forcefully reboot Cisco WLC by entering the **reset system forced** command.
- It is not possible to download some of the older configurations from Cisco WLC because of the Multicast and IP address validations. See the "Restrictions on Configuring Multicast Mode" section in the *Cisco Wireless Controller Configuration Guide* for detailed information about platform support for global multicast and multicast mode.
- If you upgrade from Release 8.0.110.0 to a later release, the **config redundancy mobility mac mac-addr** command's setting is removed. Manually reconfigure the mobility MAC address after the upgrade.
- If you downgrade to Release 8.0.140.0 or 8.0.15x.0, and later upgrade to a later release and also have the multiple country code feature configured, then the configuration file could get corrupted. When you try to upgrade to a later release, special characters are added in the country list causing issues when loading the configuration. For more information, see [CSCve41740](#).



Note Upgrade and downgrade between other releases does not result in this issue.

- If you are upgrading from a 7.4.x or an earlier release to a release later than 7.4, the Called Station ID type information is mapped to the RADIUS Accounting Called Station ID type, which, by default, is set to `apradio-mac-ssid`. You can configure the RADIUS Authentication Called Station ID type information by using the **config radius auth callStationIdType** command.
- When a client sends an HTTP request, the Cisco WLC intercepts it for redirection to the login page. If the HTTP GET request that is intercepted by the Cisco WLC is longer than 2000 bytes, the Cisco WLC drops the packet. Track [CSCuy81133](#) for a possible enhancement to address this restriction.
- We recommend that you install Cisco Wireless Controller Field Upgrade Software (FUS), which is a special AES package that contains several system-related component upgrades. These include the bootloader, field recovery image, and FPGA or MCU firmware. Installing the FUS image requires special attention because it installs some critical firmware. The FUS image is independent of the runtime image. For more information about FUS and the applicable Cisco WLC platforms, see the [Field Upgrade Software release notes listing](#).



Note For Cisco 2504 WLC, we recommend that you upgrade to FUS 1.9.0 release or a later release.

- If FIPS is enabled in Cisco Flex 7510 WLC, the reduced boot options are displayed only after a bootloader upgrade.



Note Bootloader upgrade is not required if FIPS is disabled.

- When downgrading from one release to another, you might lose the configuration from your current release. The workaround is to reload the previous Cisco WLC configuration files that are saved in the backup server, or to reconfigure Cisco WLC.
- It is not possible to directly upgrade to this release from a release that is earlier than Release 7.0.98.0.
- When you upgrade Cisco WLC to an intermediate release, wait until all the APs that are associated with Cisco WLC are upgraded to the intermediate release before you install the latest Cisco WLC software. In large networks, it can take some time to download the software on each AP.
- You can upgrade to a new release of the Cisco WLC software or downgrade to an earlier release even if FIPS is enabled.
- When you upgrade to the latest software release, the software on the APs associated with the Cisco WLC is also automatically upgraded. When an AP is loading software, each of its LEDs blinks in succession.
- We recommend that you access the Cisco WLC GUI using Microsoft Internet Explorer 11 or a later version, or Mozilla Firefox 32 or a later version.
- Cisco WLCs support standard SNMP MIB files. MIBs can be downloaded from the software download page on Cisco.com.
- The Cisco WLC software is factory installed on your Cisco WLC and is automatically downloaded to the APs after a release upgrade and whenever an AP joins a Cisco WLC. We recommend that you install the latest software version available for maximum operational benefit.
- Ensure that you have a TFTP, HTTP, FTP, or SFTP server available for the software upgrade. Follow these guidelines when setting up a server:
 - Ensure that your TFTP server supports files that are larger than the size of Cisco WLC software image. Some TFTP servers that support files of this size are tftpd32 and the TFTP server within Cisco Prime Infrastructure. If you attempt to download the Cisco WLC software image and your TFTP server does not support files of this size, the following error message appears:


```
TFTP failure while storing in flash
```
 - If you are upgrading through the distribution system network port, the TFTP or FTP server can be on the same subnet or a different subnet because the distribution system port is routable.
- When you plug a Cisco WLC into an AC power source, the bootup script and power-on self test is run to initialize the system. During this time, press **Esc** to display the bootloader **Boot Options** menu. The menu options for the Cisco 5508 WLC differs from the menu options for the other Cisco WLC platforms.

The following is the Bootloader menu for Cisco 5508 WLC:

```

Boot Options
Please choose an option from below:
1. Run primary image
2. Run backup image
3. Change active boot image
4. Clear Configuration
5. Format FLASH Drive
6. Manually update images
Please enter your choice:

```

The following is the Bootloader menu for other Cisco WLC platforms:

```

Boot Options
Please choose an option from below:
1. Run primary image
2. Run backup image
3. Manually update images
4. Change active boot image
5. Clear Configuration
Please enter your choice:

```

Enter 1 to run the current software, enter 2 to run the previous software, enter 4 (on Cisco 5508 WLC), or enter 5 (on Cisco WLC platforms other than 5508 WLC) to run the current software and set the Cisco WLC configuration to factory defaults. Do not choose the other options unless directed to do so.



Note See the Installation Guide or the Quick Start Guide of the respective Cisco WLC platform for more details on running the bootup script and the power-on self test.

- The Cisco WLC Bootloader stores a copy of the active primary image and the backup image. If the primary image becomes corrupted, you can use the Bootloader to boot with the backup image. With the backup image stored before rebooting, choose **Option 2: Run Backup Image** from the **Boot Options** menu to boot from the backup image. Then, upgrade with a known working image and reboot Cisco WLC.
- You can control the addresses that are sent in the Control and Provisioning of Wireless Access Points (CAPWAP) discovery responses when NAT is enabled on the Management Interface, using the following command:

```
config network ap-discovery nat-ip-only {enable | disable}
```

The following are the details of the command:

enable—Enables use of NAT IP only in a discovery response. This is the default. Use this command if all the APs are outside the NAT gateway.

disable—Enables use of both NAT IP and non-NAT IP in a discovery response. Use this command if APs are on the inside and outside the NAT gateway, for example, Local Mode and OfficeExtend APs are on the same Cisco WLC.



Note To avoid stranding of APs, you must disable AP link latency (if enabled) before you use the disable option in the **config network ap-discovery nat-ip-only** command. To disable AP link latency, use the **config ap link-latency disable all** command.

- Do not power down Cisco WLC or any AP during the upgrade process. If you do this, the software image might get corrupted. Upgrading Cisco WLC with many APs can take as long as 30 minutes, depending on the size of your network. However, with the increased number of concurrent AP upgrades supported, the upgrade time should be significantly reduced. The APs must remain powered, and Cisco WLC must not be reset during this time.
- To downgrade from this release to Release 6.0 or an earlier release, perform either of these tasks:
 - Delete all the WLANs that are mapped to interface groups, and create new ones.
 - Ensure that all the WLANs are mapped to interfaces rather than interface groups.
- After you perform the following functions on Cisco WLC, reboot it for the changes to take effect:
 - Enable or disable LAG.
 - Enable a feature that is dependent on certificates (such as HTTPS and web authentication).
 - Add a new license or modify an existing license.



Note Reboot is not required if you are using Right-to-Use licenses.

- Increase the priority of a license.
- Enable HA.
- Install the SSL certificate.
- Configure the database size.
- Install the vendor-device certificate.
- Download the CA certificate.
- Upload the configuration file.
- Install the Web Authentication certificate.
- Make changes to the management interface or the virtual interface.

Changes in Images and Installation Procedure for Cisco 2504 WLC, Cisco 5508 WLC, and Cisco WiSM2

Due to an increase in the size of the Cisco WLC software image, the Cisco 2504 WLC, Cisco 5508 WLC, and Cisco WiSM2 software images are split into the following two images:

- Base Install image, which includes the Cisco WLC image and a subset of AP images (excluding some mesh AP images and AP80x images) that are packaged in the Supplementary AP Bundle image.
- Supplementary AP Bundle image, which includes AP images that are excluded from the Base Install image. The APs that feature in the Supplementary AP Bundle image are:
 - Cisco AP802
 - Cisco AP803
 - Cisco Aironet 1530 Series AP
 - Cisco Aironet 1550 Series AP (with 128-MB memory)
 - Cisco Aironet 1570 Series APs
 - Cisco Aironet 1600 Series APs



Note There is no change with respect to the rest of the Cisco WLC platforms.

Image Details

The following table lists the Cisco WLC images that you have to download to upgrade to this release for the applicable Cisco WLC platforms:

Table 4: Image Details of Cisco 2504 WLC, 5508 WLC, and WiSM2

Cisco WLC	Base Install Image	Supplementary AP Bundle Image ¹
Cisco 2504 WLC	AIR-CT2500-K9-8-5-161-0.aes	AIR-CT2500-AP_BUNDLE-K9-8-5-161-0.aes
Cisco 5508 WLC	AIR-CT5500-K9-8-5-161-0.aes	AIR-CT5500-AP_BUNDLE-K9-8-5-161-0.aes
	AIR-CT5500-LDPE-K9-8-5-161-0.aes	AIR-CT5500-LDPE-AP_BUNDLE-K9-8-5-161-0.aes
Cisco WiSM2	AIR-WISM2-K9-8-5-161-0.aes	AIR-WISM2-AP_BUNDLE-K9-8-5-161-0.aes

¹ AP_BUNDLE or FUS installation files from Release 8.5 for the incumbent platforms should not be renamed because the filenames are used as indicators to not delete the backup image before starting the download.

If renamed and if they do not contain “AP_BUNDLE” or “FUS” strings in their filenames, the backup image will be cleaned up before starting the file download, anticipating a bigger sized regular base image.

Upgrading Cisco WLC Software (GUI)

Procedure

-
- Step 1** Upload your Cisco WLC configuration files to a server to back up the configuration files.
- Note** We highly recommend that you back up your Cisco WLC configuration files prior to upgrading the Cisco WLC software.
- Step 2** Follow these steps to obtain Cisco Wireless software:
- Browse to Cisco Software Central at: <https://software.cisco.com/download/navigator.html>.
 - Click **Software Download**.
 - On the **Download Software** page, choose **Wireless > Wireless LAN Controller**.

The following options are displayed. Depending on your Cisco WLC platform, select one of these options:

 - **Integrated Controllers and Controller Modules**
 - **Mobility Express**
 - **Standalone Controllers**
 - Select the Cisco WLC model number or name.
 - Click **Wireless LAN Controller Software**.
 - The software releases are labeled as described here to help you determine which release to download. Click a Cisco WLC software release number:
 - **Early Deployment (ED)**—These software releases provide new features and new hardware platform support as well as bug fixes.
 - **Maintenance Deployment (MD)**—These software releases provide bug fixes and ongoing software maintenance.
 - **Deferred (DF)**—These software releases have been deferred. We recommend that you migrate to an upgraded release.
 - Click the filename (*filename.aes*).

Note For Cisco 2504 WLC, Cisco 5508 WLC, and Cisco WiSM2, the Cisco WLC software image is split into two images, the Base Install image and the Supplementary AP Bundle image. Therefore, in order to upgrade, repeat Step 2 through Step 14 to complete the installation of both the Base Install image and the Supplementary AP Bundle image.

Download the Supplementary AP Bundle image only if you are using any of these APs: AP802, AP803, Cisco Aironet 1530 Series AP, Cisco Aironet 1550 Series AP (with 128-MB memory), Cisco Aironet 1570 Series APs, Cisco Aironet 1600 Series APs, or all of these APs.
 - Click **Download**.
 - Read the Cisco End User Software License Agreement and click **Agree**.
 - Save the file to your hard drive.
 - Repeat steps *a* through *j* to download the remaining file.
- Step 3** Copy the Cisco WLC software file (*filename.aes*) to the default directory on your TFTP, FTP, or SFTP server.

- Step 4** (Optional) Disable the Cisco WLC 802.11 networks.
- Note** For busy networks, Cisco WLCs on high utilization, and small Cisco WLC platforms, we recommend that you disable the 802.11 networks as a precautionary measure.
- Step 5** Choose **Commands > Download File** to open the **Download File to Controller** page.
- Step 6** From the **File Type** drop-down list, choose **Code**.
- Step 7** From the **Transfer Mode** drop-down list, choose **TFTP**, **FTP**, or **SFTP**.
- Step 8** In the **IP Address** field, enter the IP address of the TFTP, FTP, or SFTP server.
- Step 9** If you are using a TFTP server, the default value of 10 retries for the **Maximum Retries** field, and 6 seconds for the **Timeout** field should work correctly without any adjustment. However, you can change these values, if required. To do so, enter the maximum number of times the TFTP server attempts to download the software in the **Maximum Retries** field and the amount of time (in seconds) for which the TFTP server attempts to download the software, in the **Timeout** field.
- Step 10** In the **File Path** field, enter the directory path of the software.
- Step 11** In the **File Name** field, enter the name of the software file (*filename.aes*).
- Step 12** If you are using an FTP server, perform these steps:
- In the **Server Login Username** field, enter the username with which to log on to the FTP server.
 - In the **Server Login Password** field, enter the password with which to log on to the FTP server.
 - In the **Server Port Number** field, enter the port number on the FTP server through which the download occurs. The default value is 21.
- Step 13** Click **Download** to download the software to the Cisco WLC.
- A message indicating the status of the download is displayed.
- Note** For Cisco 2504 WLC, Cisco 5508 WLC, and Cisco WiSM2, the Cisco WLC software image is split into two images: the Base Install image and the Supplementary AP Bundle image. Therefore, in order to upgrade, repeat Step 2 through Step 14 to complete the installation of both the Base Install image and the Supplementary AP Bundle image.
- Download the Supplementary AP Bundle image only if you are using any of these APs: AP802, AP803, Cisco Aironet 1530 Series AP, Cisco Aironet 1550 Series AP (with 128-MB memory), Cisco Aironet 1570 Series APs, Cisco Aironet 1600 Series APs, or all of these APs.
- Note** Ensure that you choose the **File Type** as **Code** for both the images.
- Step 14** After the download is complete, click **Reboot**.
- Step 15** If you are prompted to save your changes, click **Save and Reboot**.
- Step 16** Click **OK** to confirm your decision to reboot the Cisco WLC.
- Step 17** For Cisco WiSM2, check the port channel and re-enable the port channel, if necessary.
- Step 18** If you have disabled the 802.11 networks, re-enable them.
- Step 19** To verify that the Cisco WLC software is installed on your Cisco WLC, on the Cisco WLC GUI, click **Monitor** and view the **Software Version** field under **Controller Summary**.
-

CIMC Utility Upgrade for 5520 and 8540 Controllers

The AIR-CT5520-K9 and AIR-CT8540-K9 controller models are based on Cisco UCS server C series, C220 and C240 M4 respectively. These controller models have CIMC utility that can edit or monitor low-level physical parts such as power, memory, disks, fan, temperature, and provide remote console access to the controllers.

We recommend that you upgrade the CIMC utility to Version 3.0(4d) that has been certified to be used with these controllers. Controllers that have older versions of CIMC installed are susceptible to rebooting without being able to access FlexFlash, with the result that the manufacturing certificates are unavailable, and thus SSH and HTTPS connections will fail, and access points will be unable to join. See: [CSCvo33873](#).

The CIMC 3.0(4d) images are available at the following locations

Table 5: CIMC Utility Software Image Information

Controller	Link to Download the CIMC Utility Software Image
Cisco 5520 Wireless Controller	https://software.cisco.com/download/home/286281345/type/283850974/release/3.0%25284d%2529
Cisco 8540 Wireless Controller	https://software.cisco.com/download/home/286281356/type/283850974/release/3.0%25284d%2529

For information about upgrading the CIMC utility, see the "Updating the Firmware on Cisco UCS C-Series Servers" chapter in the *Cisco Host Upgrade Utility 3.0 User Guide*:

https://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/c/sw/lomug/2-0-x/3_0/b_huu_3_0_1/b_huu_2_0_13_chapter_011.html

Updating Firmware Using the Update All Option

This section mentions specific details when using CIMC utility with Cisco 5520 or 8540 controllers. For general information about the software and UCS chassis, see *Release Notes for Cisco UCS C-Series Software, Release 3.0(4)* at:

https://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/release/notes/b_UCS_C-Series_Release_Notes_3_0_4.html

Table 6: Open Caveats for Release 3.0(4d)

Caveat ID	Description
CSCvj80941	After upgrading CIMC to 3.04d, only after power reset, UCS-based controller is coming up.
CSCvj80915	Not able to logon to the CIMC GUI with the username and password that are configured from the controller.

Table 7: Resolved Caveats for Release 3.0(4d)

Caveat ID	Description
CSCvd86049	<p>Symptom: The system will stop working or reboot during OS operation with PROCHOT, MEMHOT, and DMI Timeout-related events reported in the System Event Log (SEL).</p> <p>Conditions: C220-M4 or C240-M4</p> <p>Workaround: No workaround is available.</p> <p>This bug fix changes the default BIOS option for ASPM (Active State Power Management) from 'L1 only' to 'Disabled', and the ASPM setting can no longer be modified. This change was made to help increase system stability and eliminate some system crash scenarios.</p>
CSCvf78458	<p>Symptom: The system will stop working or reboot during OS operation with PROCHOT, MEMHOT, and DMI Timeout-related events reported in the System Event Log (SEL).</p> <p>Conditions: C220-M4 or C240-M4</p> <p>Workaround: No workaround is available.</p> <p>This bug fix changes the BIOS option "Package C-State limit" default value from C6 Retention to C0/C1 to help increase system stability and eliminate some crash scenarios.</p> <p>Once upgraded, reset the BIOS settings to default or manually change Package C-State limit to C0/C1.</p>

Interoperability with Other Clients

This section describes the interoperability of Cisco WLC software with other client devices.

The following table describes the configuration used for testing the client devices.

Table 8: Test Bed Configuration for Interoperability

Hardware or Software Parameter	Hardware or Software Configuration Type
Release	8.5.x.x
Cisco WLC	Cisco 5520 Wireless Controller
Access Points	AIR-AP2802I-B-K9, AIR-AP1852E-B-K9, AIR-AP1810W-B-K9, AIR-AP3802I-B-K9

Hardware or Software Parameter	Hardware or Software Configuration Type
Radio	802.11ac, 802.11a, 802.11g, 802.11n (2.4 GHz or 5 GHz)
Security	Open, PSK (WPA-TKIP-WPA2-AES), 802.1X (WPA-TKIP-WPA2-AES) (EAP-FAST, EAP-TLS)
RADIUS	Cisco ACS 5.3, Cisco ISE 2.2, Cisco ISE 2.3
Types of tests	Connectivity, traffic (ICMP), and roaming between two APs

The following table lists the client types on which the tests were conducted. Client types included laptops, handheld devices, phones, and printers.

Table 9: Client Types

Client Type and Name	Version
Laptop	
Intel 6300	15.16.0.2
Intel 6205	15.16.0.2
Intel 7260	18.33.3.2
Intel 7265	19.10.1.2
Intel 3160	18.40.0.9
Intel 8260	19.10.1.2
Broadcom 4360	6.30.163.2005
Dell 1520/Broadcom 43224HMS	5.60.48.18
Dell 1530 (Broadcom BCM4359)	5.100.235.12
Dell 1560	6.30.223.262
Dell 1540	6.30.223.215
Samsung Chromebook	55.0.2883.103
HP Chromebook	55.0.2883.103
MacBook Pro	OSX 10.12.6
MacBook Air	OSX 10.12.6
Macbook Pro with Retina Display	OSX 10.12.3
Macbook New 2015	OSX 10.12 beta
Tablets	
Amazon Kindle	Android 6.2.2
Apple iPad	iOS 9.3.1

Client Type and Name	Version
Apple iPad3	iOS 10
Apple iPad mini	iOS 9.3.5
Apple iPad mini 2	iOS 10.3.1
Apple iPad mini 4	iOS 10
Apple iPad Air	iOS 10.1.1
Apple iPad Air 2	iOS 10.2.1
Apple iPad Pro	iOS 11.0.3
Samsung Galaxy Tab Pro SM-T320	Android 4.4.2
Samsung Galaxy Tab 10.1- 2014 SM-P600	Android 4.4.2
Samsung Galaxy Note 3 - SM-N900	Android 5.0
Microsoft Surface Pro 3	Windows 8.1 Driver: 15.68.3093.197
Microsoft Surface Pro 2	Windows 8.1 Driver: 14.69.24039.134
Microsoft Surface Pro 4	Windows 10 Driver: 15.68.9040.67
Google Nexus 9	Android 6.0.1
Google 10.2" Pixel C	Android 7.1.1
Toshiba Thrive AT105	Android 4.0.4
Zebra ET50PE	Android 5.1.1
Mobile Phones	
Apple iPhone 4S	iOS 10.2.1
Apple iPhone 5	iOS 10.3.1
Apple iPhone 5s	iOS 10.2.1
Apple iPhone 5c	iOS 10.3.1
Apple iPhone 6	iOS 11.3
Apple iPhone 6 Plus	iOS 10.3.1
Apple iPhone 6s	iOS 10.2.1
Apple iPhone 7	iOS 11.0.3
Apple iPhone X	iOS 11.1.2
HTC One	Android 5.0.2
Motorola MotoX 2nd Gen	Android 5.0

Client Type and Name	Version
OnePlusOne	Android 4.3
OnePlus3	Android 6.0.1
Samsung Galaxy S4 T-I9500	Android 5.0.1
Sony Xperia Z Ultra	Android 4.4.2
Nokia Lumia 925	Windows 8.1 Mobile
Nokia Lumia 1520	Windows 10 Mobile
Google Nexus 5	Android 6.0.1
Google Nexus 6	Android 5.1.1
Google Nexus 7	Android 6.0
Google Nexus 9	Android 6.0.1
Google Pixel	Android 7.1.1
Samsung Galaxy Note3	Android 5.0
Samsung Galaxy Note4 edge	Android 6.0.1
Samsung Galaxy S4	Android 5.0.1
Samsung Galaxy S6	Android 7.0
Samsung Galaxy S7	Android 7.0
Samsung Galaxy S8	Android 7.0
Samsung Galaxy Nexus GTI9200	Android 4.4.2
Samsung SM-P600	Android 4.4.2
LG G4	Android 5.1
LG D855	Android 5.0
Xiaomi Mi 4c	Android 5.1.1
Zebra ET1	Android 2.3.4
Zebra TC510K	Android 6.0.1
Zebra TC8000	Android 4.4.3

Key Features Not Supported in Controller Platforms

This section lists the features that are not supported on the different controller platforms:



Note In a converged access environment that has controllers running AireOS code, High Availability Client SSO and native IPv6 are not supported.

Key Features Not Supported in Cisco 2504 WLC

- Domain-based ACLs
- Autoinstall
- Controller integration with Lync SDN API
- Application Visibility and Control (AVC) for FlexConnect locally switched APs
- Application Visibility and Control (AVC) for FlexConnect centrally switched APs



Note AVC for local mode APs is supported.

- URL ACL
- Bandwidth Contract
- Service Port
- AppleTalk Bridging
- Right-to-Use Licensing
- PMIPv6
- EoGRE
- AP Stateful Switchover (SSO) and client SSO
- Multicast-to-Unicast
- Cisco Smart Software Licensing



Note

- The features that are not supported on Cisco WiSM2 and Cisco 5508 WLC are not supported on Cisco 2504 WLCs too.
- Directly connected APs are supported only in local mode.

Key Features Not Supported in Cisco 3504 WLC

- Cisco WLAN Express Setup Over-the-Air Provisioning
- Mobility controller functionality in converged access mode
- VPN Termination (such as IPsec and L2TP)

Key Features Not Supported in Cisco WiSM2 and Cisco 5508 WLC

- Domain-based ACLs

- VPN Termination (such as IPSec and L2TP)—IPSec for RADIUS/SNMP is supported; general termination is not supported.
- Fragmented pings on any interface
- Right-to-Use Licensing
- Cisco 5508 WLC and Cisco WiSM2 cannot function as mobility controller (MC). However, it can function as guest anchor in a New Mobility environment.
- Cisco Smart Software Licensing

Key Features Not Supported on Cisco Flex 7510 WLC

- Domain-based ACL
- Cisco Umbrella—Not supported in FlexConnect locally switched WLANs; however, it is supported in centrally switched WLANs.
- Static AP-manager interface



Note For Cisco Flex 7510 WLCs, it is not necessary to configure an AP-manager interface. The management interface acts as an AP-manager interface by default, and the APs can associate with the controller on this interface.

- IPv6 and dual-stack client visibility



Note IPv6 client bridging and Router Advertisement Guard are supported.

- Internal DHCP server
- APs in local mode



Note A Cisco AP associated with a controller in local mode should be converted to FlexConnect mode or monitor mode, either manually or by enabling the autoconvert feature. From the Cisco Flex 7510 WLC CLI, enable the autoconvert feature by entering the **config ap autoconvert enable** command.

- Mesh (Use Flex + Bridge mode for mesh-enabled FlexConnect deployments)
- Cisco Flex 7510 WLC cannot be configured as a guest anchor controller. However, it can be configured as a foreign controller to tunnel the guest traffic to a guest anchor controller in a DMZ.
- Multicast



Note FlexConnect locally switched multicast traffic is bridged transparently for both wired and wireless on the same VLAN. FlexConnect APs do not limit traffic based on Internet Group Management Protocol (IGMP) or MLD snooping.

- PMIPv6
- Cisco Smart Software Licensing

Key Features Not Supported in Cisco 5520, 8510, and 8540 WLCs

- Internal DHCP Server
- Mobility controller functionality in converged access mode
- VPN termination (such as IPsec and L2TP)
- Fragmented pings on any interface



Note Cisco Smart Software Licensing is not supported on Cisco 8510 WLC.

Key Features Not Supported in Cisco Virtual WLC

- Cisco Umbrella
- Domain-based ACLs
- Internal DHCP server
- Cisco TrustSec
- Access points in local mode
- Mobility/Guest Anchor
- Wired Guest
- Multicast



Note FlexConnect locally switched multicast traffic is bridged transparently for both wired and wireless on the same VLAN. FlexConnect APs do not limit traffic based on IGMP or MLD snooping.

- FlexConnect central switching in large-scale deployments



-
- Note**
- FlexConnect central switching is supported in only small-scale deployments, wherein the total traffic on controller ports is not more than 500 Mbps.
 - FlexConnect local switching is supported.
-

- Central switching on Microsoft Hyper-V deployments
- AP and Client SSO in High Availability
- PMIPv6
- Datagram Transport Layer Security (DTLS)
- EoGRE (Supported in only local switching mode)
- Workgroup bridges
- Client downstream rate limiting for central switching
- SHA2 certificates
- Controller integration with Lync SDN API
- Cisco OfficeExtend Access Points

Key Features Not Supported in Access Point Platforms

Key Features Not Supported in Cisco Aironet 1540, 1560, 1800i, 1810 OEAP, 1810W, 1815, 1830, 1850, 2800, and 3800 Series APs

Table 10: Key Features Not Supported in Cisco Aironet 1540, 1560, 1800i, 1810 OEAP, 1810W, 1815, 1830, 1850, 2800 and 3800 Series APs

Operational Modes	<ul style="list-style-type: none"> • Autonomous Bridge and Workgroup Bridge (WGB) mode • Mesh mode Note Supported on 1540 and 1560 APs. • Flex + Mesh • 802.1x supplicant for AP authentication on the wired port • LAG behind NAT or PAT environment
-------------------	--

Protocols	<ul style="list-style-type: none"> • Full Cisco Compatible Extensions (CCX) support • Rogue Location Discovery Protocol (RLDP) • Telnet • Internet Group Management Protocol (IGMP)v3
Security	<ul style="list-style-type: none"> • CKIP, CMIC, and LEAP with Dynamic WEP • Static WEP for CKIP • WPA2 + TKIP <p>Note WPA +TKIP and TKIP + AES protocols are supported.</p>
Quality of Service	Cisco Air Time Fairness (ATF)
Location Services	Data RSSI (Fast Locate)
FlexConnect Features	<ul style="list-style-type: none"> • Bidirectional rate-limiting • Split Tunneling • PPPoE • Multicast to Unicast (MC2UC) • Traffic Specification (TSpec) <ul style="list-style-type: none"> • Cisco Compatible Extensions (CCX) • Call Admission Control (CAC) • VSA/Realm Match Authentication • Link aggregation (LAG) • SIP snooping with FlexConnect in local switching mode



Note For Cisco Aironet 1850 Series AP technical specifications with details on currently supported features, see the [Cisco Aironet 1850 Series Access Points Data Sheet](#).

Key Features Not Supported in Cisco Aironet 1800i, 1810 OEAP, and 1810W Series APs

Table 11: Key Features Not Supported in Cisco Aironet 1800i, 1810 OEAP and 1810W Series APs

Operational Modes	Mobility Express
FlexConnect Features	Local AP authentication

Key Features Not Supported in Cisco Aironet 1830, 1850, and 1815 Series APs

Table 12: Key Features Not Supported in Cisco Aironet 1830, 1850, and 1815 Series APs

Operational Modes	Mobility Express is not supported in Cisco 1815t APs.
FlexConnect Features	Local AP Authentication

Key Features Not Supported in Mesh Networks

- Load-based call admission control (CAC). Mesh networks support only bandwidth-based CAC or static CAC.
- High availability (Fast heartbeat and primary discovery join timer).
- AP acting as supplicant with EAP-FASTv1 and 802.1X authentication.
- AP join priority (Mesh APs have a fixed priority)
- Location-based services

Key Features Not Supported in Cisco Aironet 1540 Mesh APs

- Dynamic Mesh backhaul data rate.



Note We recommend that you keep the Bridge data rate of the AP as auto.

- Background scanning
- Noise Tolerant Fast Convergence
- Flex+Mesh

Key Features Not Supported on Cisco Aironet 1560 Mesh APs

- Noise Tolerant Fast Convergence
- Flex+Mesh

Caveats

Open Caveats

Table 13: Open Caveats

Caveat ID Number	Description
CSCvb26809	Cisco Controller should use port MAC for non LAG and box MAC for LAG

Caveat ID Number	Description
CSCvf00768	Cisco 3800 AP reloads unexpectedly in aptracek module
CSCvf57867	Only single IMM / CIMC IP addr configured for both controller active and standby
CSCvf92382	"debug client" reports wrong BSSID in (Re) association message
CSCvh17281	WLC sends 11r in beacons for WebAuth SSID (L2 open security) and client 11r roaming fails
CSCvh68195	8.8: 5520 Tracebacks observed 0x135956f 0x135af79 0x1362144 0x12ee263 0x3ba6c07dff 0x7f4ede3a439d
CSCvi16371	Flex central auth fails to send Assoc-Req to CAPWAP; core-hostapd file seen
CSCvj32199	SSH/Management Access of Primary controller is not possible when HA failover occurs in 8.5.120.0
CSCvj32563	Transfer download on Cisco controller fails with error message when no APs are upgrading
CSCvk27250	System not operational with task apfRogueTask_3
CSCvk57014	AP: Sometimes creates empty radio core files without any information
CSCvk79765	apstatEngineMsgQ MSGQ_RUNNING_HIGH or MSGQ_SEND_FAILED Queue Utilization Issues
CSCvm10538	IMM username command changes password of second IMM/CIMC user always
CSCvm37510	Cisco controller reloads unexpectedly due to SNMP memory corruption
CSCvm63736	Erratic multicast throughput
CSCvm79740	NMSP: Multiple HTTPS stream enhancement
CSCvn04046	Cisco 2800,3800 AP does not map the DSCP to the correct WMM UP Value for FlexConnect Local Switching
CSCvn14292	Cisco 3800 AP running 8.2.170.2 code reloads unexpectedly
CSCvo18663	'Native VLAN Inheritance' is changed after controller switchover
CSCvo26193	WLC not sending RADIUS authentication request for MAC auth when other WLAN profile has local entry
CSCvo33808	Cisco 2802,3802,4800,1562 AP reloads unexpectedly with radio firmware crash
CSCvo41224	Cisco 1832,1852 Observing False RADAR detection in 20 MHz
CSCvo56563	AP still shows up in WLC GUI/CLI even though manually removed from switchport
CSCvo59784	AP usage shows discrepancy through pages

Caveat ID Number	Description
CSCvp36496	The beamforming configuration gets back to the default after AP reload and rejoined to controller
CSCvp61350	Unable to erase Cisco IW3702 Autonomous AP configuration
CSCvp68494	Cisco 2800 AP reloads unexpectedly due to exception when having MU-MIMO clients in network
CSCvp70358	Cisco 2802 AP reloads unexpectedly with watchdog process sxpd
CSCvp74792	Client with aaa-override VLAN gets mapped to default WLAN VLAN after roaming failure
CSCvp82961	Cisco 2800 AP in local mode running 8.5.144.33: AID cannot be freed
CSCvq28024	Cisco 3802I AP 2.4GHz band did not show correct Noise Information
CSCvq59233	Cisco 2802AP: Kernel panic crash: PC is at _Z27clickps_atomic_dec_and_testP8atomic_t
CSCvq71200	WLC Sent RST after TACACS+ authentication request cause login failed.
CSCvq76143	Cisco 2800 AP reloads unexpectedly on Sxpd process
CSCvq83205	After AP-SSO failover, WLC fails to send EAPOL M1
CSCvr09231	WLC settings gone if the power is turned OFF within several seconds after obtained the backup config
CSCvr16233	Cisco 2802 AP beacon loss issue
CSCvr18534	Cisco 8540 WLC stopped working - "Crash function not supported by this task: RRM-MGR-2_4-GRP"
CSCvr27788	5GHz radio on 1562E-G APs Operationally Down - Regulatory Domain Failure when Pakistan is Configured
CSCvr28017	Cisco WLC does not show -A regulatory domain for 5 GHz radio with country code PA (Panama)
CSCvr29590	Cisco Controller local EAP does not send access-reject on auth failure
CSCvr35607	WLC displays login banner after login, not before login like in older codes
CSCvr43311	Unable to set syslog login level to all the APs "Unable to set the Log Trap level"
CSCvr46272	Web Auth is required when client move to another AP during 4-way handshake
CSCvr55603	Cisco 3700 AP with HALO experiences unexpected multiple reloads in sensord
CSCvr63068	Cisco Controller RADIUS or TACACS+ servers in disabled state after multiple reboots
CSCvs04059	Cisco 3602 APs reload unexpectedly.

Caveat ID Number	Description
CSCvs08825	Cisco 1815t AP LAN port 3 passing traffic while not enabled in the AP group

Resolved Caveats

Table 14: Resolved Caveats for 8.5.161.0

Caveat ID Number	Description
CSCvi48253	Self-signed certificates expire on 00:00 1 Jan 2020 UTC, cannot be created after that time
CSCvq66811	Cisco Wave 1 AP goes out of memory and fails to reply to assoc/reassoc from clients
CSCvr82520	Cisco Wave 1 AP Software reloads unexpectedly when configuring a long SNMP-server community string
CSCvs16432	Cisco AireOS Controller reloads unexpectedly on IPv6_Msg_Task
CSCvs25798	Clients not receiving ARP response on Cisco Wave 2 APs doing flex local switching
CSCvs45806	Flex AP looking for RADIUS to try Local Authentication when configured for Central Authentication
CSCvs70502	Cisco Wave 1 AP reloads unexpectedly which relates to fast roaming state machine
CSCvs79813	Cisco Wave 1 APs still stuck in downloading state

Table 15: Resolved Caveats for 8.5.160.0

Caveat ID Number	Description
CSCve09716	AP radio crashes due to TCQVerify!= 0;beacons stopped for several seconds; false high CU
CSCvi93045	Cisco 2800 AP CleanAir goes down (sensord died)
CSCvj94204	eCA: WLC failed to deregister client after idle timeout with dot1x
CSCvk19398	802.11v DMS enabled WLAN config not pushed to Cisco 3800AP when moved to S->C on flex.
CSCvm22760	dot1x Supplicant config is not removed from Cisco Wave 1 AP after disabled globally on controller
CSCvm68624	Cisco Wave 1 AP console display logs 'DTX DUMP'
CSCvm91561	Clients deleted due to DOT11r pre-authentication failure
CSCvn42067	MAPs Client radio (slot 0) chanAutoCfg changes from CONFIG_AUTO to CONFIG_STATIC at random

Caveat ID Number	Description
CSCvn53435	C3702AP on 8.5.140.0: %DOT11-2-RADIO_RX_BUF: 1E72C72C leads to unexpected reloads with reason 44
CSCvo18656	Several AP configurations are changed after switchover
CSCvo26217	Fabric Enabled Wireless: Cisco 5520 WLC does not reconnect to CP
CSCvo31548	Cisco IW3702 AP and 3702 AP WGB reloads unexpectedly on 15.3(3)JF9 with PEAP authentication
CSCvo35484	RTS threshold is zero in show CAPWAP client config; excessive RTS sent; client connectivity problems
CSCvo49625	Cisco 802 AP does not complete ARP
CSCvo51266	EAP TLS failure with WGB
CSCvo91229	AP death client with reason 7 after success re-association due to 'Unknown Mn,calling delete'
CSCvp04283	Cisco 1552H AP: HEAP MEMORY CRASH
CSCvp26672	Cisco 702 APs fail to authenticate clients due to decrypt error on the AP
CSCvp30608	Cisco Wave2 AP with data DTLS encryption drop out of order CAPWAP data packets
CSCvp33020	IOS AP stops forwarding multicast traffic under high load
CSCvp35686	Cisco 5508/ 5520 controller running 8.5.140.0 dropping all wireless clients
CSCvp40627	Cisco controller fails to initiate 1x message
CSCvp43164	Cisco 2800, 3800 APs: 11k failure in flex LS mode as no RM IE in reassociation response
CSCvp43376	IP Phone cannot associate after modify WLAN configure/profile, delete client, idle timeout etc.
CSCvp45146	Downstream packet drop on Cisco 1815 AP
CSCvp48157	Cisco 1570 RAP intermittently drops broadcast packets
CSCvp53747	LLDP traffic observed on Cisco 1815 APs
CSCvp58062	Cisco 1800 series AP Radio core dump due to beacon stuck FW hang
CSCvp64806	Cisco 3700 AP reloads due to power fluctuations when connected to AT switches.
CSCvp66546	Cisco 702w AP Radio reset due to Tx stuck
CSCvp71391	WLC lobby ambassador GUI become unresponsive with Form submit action failed due to Cross Site Attack

Caveat ID Number	Description
CSCvp72309	Cisco 3800 AP stops passing traffic under client load Intel NIC 8260/8265 load in MU-MIMO deployment
CSCvp73800	AP wrongly set 'Channel Center Segment 0' to '42' in Assoc Resp while it's operating on CH144/80MHz
CSCvp78698	Cisco WLC reloads unexpectedly during mesh tree update
CSCvp82616	Cisco 3800 AP transmitting 802.11n with WMM disabled on 2.4GHz after manually FRA switch
CSCvp86151	Cisco Wave1 APs radio reset with code 44, mostly seen on 2.4GHz radio
CSCvp92098	Cisco Wireless LAN Controller HTTP Parsing Engine Denial of Service Vulnerability
CSCvp96611	WLC generating client traps without a session-id
CSCvq00695	3700 AP does not perform DFS CAC after radio is admin down for over a minute
CSCvq10242	Client obtains IPv6 link local address with IPv6 disabled
CSCvq22269	APs stuck in downloading state
CSCvq25317	PMIPv6 - WLC as MAG sends DHCP ACK with subnet mask 0.0.0.0 and router addr 0.0.0.0 on DHCP renewal
CSCvq25654	Cisco 2702 AP sent deauthentication to multicast MAC address
CSCvq27679	Radio reset due to pak count mismatch false detection in Cisco 1572AP
CSCvq40071	ME/Flex LS // Wireless client devices unable to join SSID
CSCvq49277	Cisco 8540 controller reloads unexpectedly on Task name: emWeb
CSCvq52834	AP2800/3800/4800 doing CAC after radio up/down on DFS channel in Local Mode
CSCvq54695	Traffic from home network is seen by client on Cisco 1815t RLAN port
CSCvq59683	Cisco Wireless LAN Controller Path Traversal Vulnerability
CSCvq60744	HA SSO active WLC reloads unexpectedly due to apfReceiveTask
CSCvq63117	Client can not send the traffic, when two clients in different VNID joins the network
CSCvq69068	IOS AP drops M2 when client is roaming
CSCvq72473	WLC Reaper Reset in Process Bonjour_Process_Task
CSCvq81388	Wave1 AP resetting 5GHz radio often with radio reset code 44, messages with "DTX marked with poison"
CSCvq83638	Cisco Wave 2 APs: 1562APs does not pass traffic in Ethernet Bridging Mode on 8.5.151

Caveat ID Number	Description
CSCvq87566	Cisco 2802 AP drops client ARP packets
CSCvq91568	WGB CCKM Roaming Issues with Cisco Wave 2 APs (Initial Auth succeeded) on 2.4GHz radio only
CSCvq92184	Clients unable to connect to AP with data encryption enabled
CSCvr36185	Cisco 2800 series APs are using 802.11n rates with WPA+TKIP only WLAN
CSCvr37120	HTTPS traffic to SP of WLC always allowed even if CPU ACL is configured in 8.5 and above
CSCvr51351	Cisco 8540 Controller can only accept 1 SSH user 2nd session will be refused.
CSCvr59114	Cisco 2800, 3800APs: Kernel Panic Crash
CSCvr75831	FEW Cisco Wave 1 AP client is losing connectivity on roaming
CSCvr97368	HTTPS and SSH traffic dead slow with CTS inline tagging enabled
CSCvs01333	Cisco Controller sending incorrect certificate password for Cisco FlexConnect local auth EAP-TLS
CSCvs22835	Cisco 3600AP: SHA2 MIC certificate failing to join WLC with config ap cert-expiry-ignore mic enable
CSCvs27550	Cisco 1815 AP Kernel Panic pointing to Ethernet driver with large size packet traffic

Related Documentation

Wireless Products Comparison

- Use this tool to compare the specifications of Cisco wireless access points and controllers:
<https://www.cisco.com/c/en/us/products/wireless/wireless-lan-controller/product-comparison.html>
- Product Approval Status:
https://prdapp.cloudapps.cisco.com/cse/prdapp/jsp/externalsearch.do?action=externalsearch&page=EXTERNAL_SEARCH
- Wireless LAN Compliance Lookup:
<https://www.cisco.com/c/dam/assets/prod/wireless/wireless-compliance-tool/index.html>

Cisco Wireless Controller

For more information about the Cisco WLCs, lightweight APs, and mesh APs, see these documents:

- The quick start guide or installation guide for your particular Cisco WLC or access point
- [Cisco Wireless Solutions Software Compatibility Matrix](#)

- [Cisco Wireless Controller Configuration Guide](#)
- [Cisco Wireless Controller Command Reference](#)
- [Cisco Wireless Controller System Message Guide](#)

For all Cisco WLC software related documentation, see:

<http://www.cisco.com/c/en/us/support/wireless/wireless-lan-controller-software/tsd-products-support-series-home.html>

Cisco Mobility Express

- [Cisco Mobility Express Release Notes](#)
- [Cisco Mobility Express User Guide](#)
- [Cisco Aironet Universal AP Priming and Cisco AirProvision User Guide](#)

Cisco Aironet Access Points for Cisco IOS Releases

- [Release Notes for Cisco Aironet Access Points for Cisco IOS Releases](#)
- [Cisco IOS Configuration Guides for Autonomous Aironet Access Points](#)
- [Cisco IOS Command References for Autonomous Aironet Access Points](#)

Open Source Used in Controller and Access Point Software

Click this link to access the documents that describe the open source used in controller and access point software:

<https://www.cisco.com/c/en/us/about/legal/open-source-documentation-responsive.html>

Cisco Prime Infrastructure

[Cisco Prime Infrastructure Documentation](#)

Cisco Mobility Services Engine

[Cisco Mobility Services Engine Documentation](#)

Cisco Connected Mobile Experiences

[Cisco Connected Mobile Experiences Documentation](#)

Cisco Digital Network Architecture

<https://www.cisco.com/c/en/us/support/wireless/dna-spaces/series.html>

Communications, Services, and Additional Information

- To receive timely, relevant information from Cisco, sign up at [Cisco Profile Manager](#).
- To get the business impact you're looking for with the technologies that matter, visit [Cisco Services](#).

- To submit a service request, visit [Cisco Support](#).
- To discover and browse secure, validated enterprise-class apps, products, solutions, and services, visit [Cisco DevNet](#).
- To obtain general networking, training, and certification titles, visit [Cisco Press](#).
- To find warranty information for a specific product or product family, access [Cisco Warranty Finder](#).

Cisco Bug Search Tool

[Cisco Bug Search Tool](#) (BST) is a gateway to the Cisco bug-tracking system, which maintains a comprehensive list of defects and vulnerabilities in Cisco products and software. The BST provides you with detailed defect information about your products and software.

Documentation Feedback

To provide feedback about Cisco technical documentation, use the feedback form available in the right pane of every online document.

Cisco and the Cisco logo are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. To view a list of Cisco trademarks, go to this URL: <https://www.cisco.com/c/en/us/about/legal/trademarks.html>. Third-party trademarks mentioned are the property of their respective owners. The use of the word partner does not imply a partnership relationship between Cisco and any other company. (1721R)

© 2019–2021 Cisco Systems, Inc. All rights reserved.