Release Notes for Cisco Wireless Controllers and Lightweight Access Points, Cisco Wireless Release 8.10.181.0, 8.10.182.0, and 8.10.183.0

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About the Release Notes

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

Supported Cisco Wireless Controller Platforms

The following controller platforms are supported in this release:

- Cisco 3504 Wireless Controller
- Cisco 5520 Wireless Controller
- Cisco 8540 Wireless Controller
- Cisco Virtual Wireless Controller (vWLC) on the following platforms:
  - VMware vSphere Hypervisor (ESXi) Version 5.x and 6.x
  - Hyper-V on Microsoft Server 2012 and later versions (support introduced in Release 8.4)
  - Kernel-based virtual machine (KVM) (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 3504 Wireless Controller, Cisco 5520 Wireless Controller, and Cisco 8540 Wireless Controller
- Cisco Mobility Express

Note In a network that includes Cisco Catalyst Center (formerly Cisco DNA Center) and Cisco AireOS controller, and the controller fails provisioning with **Error NA serv CA certificate file transfer failed** error, as a workaround, we recommend you reboot the affected AireOS controller.

Supported Cisco Access Point Platforms

The following Cisco AP platforms are supported in this release:

- Cisco Catalyst 9105 Access Points
  - C9105AXI: VID 04 and earlier
  - C9105AXW: VID 04 and earlier
- Cisco Catalyst 9130 Access Points
  - C9130AXE: VID 03 and earlier
  - C9130AXI: VID 03 and earlier
- Cisco Catalyst 9120 Access Points
  - C9120AXI: VID 07 and earlier
  - C9120AXE: VID 07 and earlier
  - C9120AXP: All VIDs
- Cisco Catalyst 9117 Access Points
- Cisco Catalyst 9115 Access Points
- Cisco Aironet 700 Series Access Points
- Cisco Aironet 700W Series Access Points
- Cisco AP803 Integrated Access Point
- Integrated Access Point on Cisco 1100, 1101, and 1109 Integrated Services Routers
- 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 1840 Series Access Points
- Cisco Aironet 1850 Series Access Points
- Cisco Aironet 2700 Series Access Points
- Cisco Aironet 2800 Series Access Points
- Cisco Aironet 3700 Series Access Points
- Cisco Aironet 3800 Series Access Points

- Cisco Aironet 4800 Series Access Points
- Cisco ASA 5506W-AP702
- Cisco Aironet 1530 Series Access Points
- Cisco Aironet 1540 Series Access Points
- Cisco Aironet 1560 Series Access Points
- Cisco Aironet 1570 Series Access Points
- Cisco Industrial Wireless 3700 Series Access Points
- Cisco Catalyst IW6300 Heavy Duty Series Access Points
- Cisco 6300 Series Embedded Services Access Points

Cisco AP803 is an integrated access point module on the Cisco 800 Series Integrated Services Routers (ISRs). For more information about the stock-keeping units (SKUs) for the AP803 Cisco ISRs, see:

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

For more information about the integrated access point on Cisco 1100 ISR, see the product data sheet:

https://www.cisco.com/c/en/us/products/collateral/routers/1000-series-integrated-services-routers-isr/datasheet-c78-739512.html.

For information about the 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 8.10.183.0

There are no new features that are introduced in this release. For more information about updates in this release, see the Unfixed and Fixed Issues in Release 8.10.190.0 section in this document.

Note For a complete list of all the documentation published for Cisco Wireless Release 8.10, see the Documentation Roadmap at: https://www.cisco.com/c/en/us/td/docs/wireless/doc-roadmap/doc-roadmap-release-810.html

What's New in Release 8.10.182.0

There are no new features that are introduced in this release. For more information about updates in this release, see the Unfixed and Fixed Issues in Release 8.10.190.0 section in this document.

Note For a complete list of all the documentation published for Cisco Wireless Release 8.10, see the Documentation Roadmap at: https://www.cisco.com/c/en/us/td/docs/wireless/doc-roadmap/doc-roadmap-release-810.html

What's New in Release 8.10.181.0

There are no new features that are introduced in this release. For more information about updates in this release, see the Unfixed and Fixed Issues in Release 8.10.190.0 section in this document.

Note For a complete list of all the documentation published for Cisco Wireless Release 8.10, see the Documentation Roadmap at: https://www.cisco.com/c/en/us/td/docs/wireless/doc-roadmap/doc-roadmap-release-810.html

Prerequisite to Upgrading to Release 8.10.181.0

To avoid stability issues with Cisco Wave 2 APs (due to CSCwd37092 on Release 8.10.181.0, we recommend that you upgrade to the public release 8.10.182.0.

Software Release Types and Recommendations

Table 1: 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 releases 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 releases 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 2: Upgrade Path to Cisco Wireless Release 8.10.183.0

Current Software Release	Upgrade Path to Release 8.10.183.0
8.5.x	You can upgrade directly to Release 8.10.183.0.
8.6.x	You can upgrade directly to Release 8.10.183.0.
8.7.x	You can upgrade directly to Release 8.10.183.0.

Current Software Release	Upgrade Path to Release 8.10.183.0
8.8.x	You can upgrade directly to Release 8.10.183.0.
8.9.x	You can upgrade directly to Release 8.10.183.0.
8.10.x	You can upgrade directly to Release 8.10.183.0.

Upgrading a 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.

Guidelines and Limitations

- An existing WLAN with *?* in its name continues to be supported with this upgrade. However, you cannot include *?* in the name when creating a new WLAN.
- If an AP locks out the console due to default management user credentials, you must configure the controller AP global credential with non-default username and password to get access to the AP console.
- WPA3 upgrade and downgrade guidelines:
  - If you want to upgrade from Release 8.5 to 8.10 and have WPA1 configured with none of the WPA1 AKM valid for Release 8.10, the WPA1 configuration is disabled after the upgrade.
  - If you downgrade from Release 8.10 to Release 8.5, if any AKM for SAE is configured, the AKM validation fails after the downgrade. The security is set to WPA2 and AKM to 802.1X. However, PMF configuration is retained, which results in an error.
  - FT set to enabled state and PMF set to Required state is allowed in Release 8.10 because PMF and FT configurations are decoupled. However, in Release 8.5, this configuration invalid. Therefore, upon downgrading to Release 8.5, the WLAN might be disabled.
- Software downgrade guidelines for Release 8.10:
  - If you plan to downgrade the Cisco controller from Release 8.10 software, we recommend you to downgrade to Release 8.5.151.0 or later release to prevent the controller configuration files from being corrupted.
  - If you have configured new country codes in Release 8.10 and if you plan to downgrade to an earlier release, then we recommend that you remove the new country code configurations prior to the downgrade. For more information, see CSCvq91895.
- Before downgrading or upgrading the Cisco Controller to another release check for APs or AP modes support. Ensure that only supported APs are connected and also the APs are moved to supported modes on the release that the controller is upgraded or downgraded to.
- Legacy clients that require RC4 or 3DES encryption type are not supported in Local EAP authentication.
- If you downgrade to Release 8.0.140.0 or 8.0.15x.0, and later upgrade to a later release and 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 configuation. For more information, see CSCve41740.

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

- 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 the controller to download a new controller software image or to reboot the controller after the download of the new controller software image. You can forcefully reboot the controller by entering the **reset system forced** command.
- It is not possible to download some of the older configurations from the controller 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.
- When a client sends an HTTP request, the controller intercepts it for redirection to the login page. If the HTTP GET request that is intercepted by the controller is longer than 2000 bytes, the controller drops the packet. Track the Caveat ID CSCuy81133 for a possible enhancement to address this restriction.
- When downgrading from one release to an earlier release, you might lose the configuration from your current release. The workaround is to reload the previous controller configuration files that are saved in the backup server, or to reconfigure the controller.
- When you upgrade a controller to an intermediate release, wait until all the APs that are associated with the controller are upgraded to the intermediate release before you install the latest controller 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 controller 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 controller is also automatically upgraded. When an AP is loading software, each of its LEDs blinks in succession.
- Controllers support standard SNMP MIB files. MIBs can be downloaded from the software download page on Cisco.com.
- The controller software that is factory-installed on your controller and is automatically downloaded to the APs after a release upgrade and whenever an AP joins a controller. 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 controller 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 controller 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.
- The controller 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, from the **Boot Options** menu, choose **Option 2: Run Backup Image** to boot from the backup image. Then, upgrade with a known working image and reboot controller.

- 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 controller.

Note To avoid stranding of APs, you must disable the 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 the controller or any AP during the upgrade process. If you do this, the software image might get corrupted. Upgrading the controller with a large number of 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 controller must not be reset during this time.
- After you perform the following functions on the controller, 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.

Upgrading Cisco Wireless Software (GUI)

Procedure

Step 1 Upload your controller configuration files to a server to back up the configuration files.

Note We highly recommend that you back up your controller configuration files prior to upgrading the controller software.

Step 2 Follow these steps to obtain controller software:

a) Browse to the Software Download portal at: https://software.cisco.com/download/home.
b) Search for the controller model.
c) Click **Wireless LAN Controller Software**.
d) The software releases are labeled as described here to help you determine which release to download. Click a controller 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.

e) Click the filename <*filename.aes*>.
f) Click **Download**.
g) Read the Cisco End User Software License Agreement and click **Agree**.
h) Save the file to your hard drive.
i) Repeat steps *a* through *h* to download the remaining file.

Step 3 Copy the controller software file <*filename.aes*> to the default directory on your TFTP, FTP, SFTP, or USB server.

Step 4 (Optional) Disable the controller 802.11 networks.

Note For busy networks, controllers on high utilization, and small controller 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**, **SFTP**, **HTTP**, or **USB**.

Step 8 Enter the corresponding server details as prompted.

Note Server details are not required if you choose HTTP as the transfer mode.

Step 9 Click **Download** to download the software to the controller.

A message indicating the status of the download is displayed.

Note Ensure that you choose the **File Type** as **Code** for both the images.

Step 10 After the download is complete, click **Reboot**.

Step 11 If you are prompted to save your changes, click **Save and Reboot**.

Step 12 Click **OK** to confirm your decision to reboot the controller.

Step 13 If you have disabled the 802.11 networks, reenable them.

Step 14 (Optional) To verify that the controller software is installed on your controller, on the controller 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 a version 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 recommended versions addresses the vulnerability tracked in CSCvo01180 caveat.

The certified CIMC images are available at the following locations:

Table 3: CIMC Utility Software Image Information

Controller	Current CIMC Version	Recommended CIMC Version	Link to Download the CIMC Utility Software Image
Cisco 5520 Wireless Controller Cisco 8540 Wireless Controller	2.x	3.0(4r)	https://software.cisco.com/download/home/286281345/type/283850974/release/3.0(4r) **Note** We recommend you to upgrade the firmware from 2.0(13i) to 3.0(4r) using TFTP, SCP protocols only.
Cisco 5520 Wireless Controller Cisco 8540 Wireless Controller	3.0(4d)	3.0(4r)	https://software.cisco.com/download/home/286281345/type/283850974/release/3.0(4r)
Cisco 5520 Wireless Controller Cisco 8540 Wireless Controller	4.0(1a)	4.0(2n)	https://software.cisco.com/download/home/286281345/type/283850974/release/4.0(2n)

Table 4: Firmware Upgrade Path to 4.x version

Current Firmware Version	Upgrade Path to 4.x version
2.x	You must upgrade to a 3.x version and then upgrade to the recommended 4.x version.
3.x	You can upgrade directly to the recommended 4.x version.

- For information about upgrading the CIMS utility version 2.x , see the *Introduction to Cisco IMC Secure Boot* section in the *Cisco UCS C-Series Servers Integrated Management Controller CLI Configuration Guide, Release 3.0*:

  https://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/c/sw/cli/config/guide/3_0/b_Cisco_UCS_C-Series_CLI_Configuration_Guide_301/b_Cisco_UCS_C-Series_CLI_Configuration_Guide_201_chapter_01101.html#d92865e458a1635

  For information about upgrading the CIMS utility version 2.x using webUI , see the *Updating the Firmware* section https://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/c/sw/gui/config/guide/3_0/b_Cisco_UCS_C-Series_GUI_Configuration_Guide_for_HTML5_Based_Servers_301/b_Cisco_UCS_C-Series_GUI_Configuration_Guide_207_chapter_01101.html#task_C137961E9E8A4927A1F08740184594CA.

Note When upgrading the firmware using the webUI method, you must select **Install Firmware through Remote Server** option when prompted in the webUI.

- 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

  Release Notes for Cisco UCS C-Series Software, Release 4.0(2) at:

  https://www.cisco.com/c/en/us/td/docs/unified_computing/ucs/release/notes/b_UCS_C-Series_RN_4_0_2.html

Table 5: Resolved Caveats for Release 4.0(2f)

Caveat ID	Description
CSCvn80088	NI-HUU fails to handle the special characters in the password of CIFS remote share

Table 6: Resolved Caveats for Release 3.0(4I)

Caveat ID	Description
CSCvp41543	SSH weak KeyExchange algorithm [diffie-hellman-group14-sha1] has to be removed

Interoperability with Other Clients

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

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

Table 7: Test Bed Configuration for Interoperability

Hardware or Software Parameter	Hardware or Software Configuration Type
Release	8.10.x
Cisco Wireless Controller	Cisco 3504 Wireless Controller
Access Points	Cisco 9130, 9120 and 3800 APs
Radio	802.11ax (2.4 GHz or 5 GHz), 802.11ac, 802.11a, 802.11g, 802.11n (2.4 GHz or 5 GHz)
Security	Open, WPA3-SAE/OWE (WPA3 Supported Clients), WPA2+WPA3 (Mixed Mode) PSK (WPA2-AES), 802.1X (WPA2-AES)(EAP-PEAP)
RADIUS	Cisco ISE 2.5
Types of tests	Association, Traffic (TCP/UDP/ICMP) and Roaming between APs

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

Table 8: Client Types

Client Type and Name	Driver / Software Version
Wi-Fi 6 Devices (Mobile Phone and Laptop)	
Apple iPhone 11	iOS 14.1
Apple iPhone SE 2020	iOS 14.1
Dell Intel AX1650w	Windows 10 (21.90.2.1)
DELL LATITUDE 5491 (Intel AX200)	Windows 10 Pro (21.40.2)
Samsung S20	Android 10
Samsung S10 (SM-G973U1)	Android 9.0 (One UI 1.1)
Samsung S10e (SM-G970U1)	Android 9.0 (One UI 1.1)

Client Type and Name	Driver / Software Version
Samsung Galaxy S10+	Android 9.0
Samsung Galaxy Fold 2	Android 10
Samsung Galaxy Flip Z	Android 10
Samsung Note 20	Android 10
Laptops	
Acer Aspire E 15 E5-573-3870 (Qualcomm Atheros QCA9377)	Windows 10 Pro (12.0.0.832)
Apple Macbook Air 11 inch	OS Sierra 10.12.6
Apple Macbook Air 13 inch	OS Catalina 10.15.4
Apple Macbook Air 13 inch	OS High Sierra 10.13.4
Macbook Pro Retina	OS Mojave 10.14.3
Macbook Pro Retina 13 inch early 2015	OS Mojave 10.14.3
Dell Inspiron 2020 Chromebook	Chrome OS 75.0.3770.129
Google Pixelbook Go	Chrome OS 84.0.4147.136
HP chromebook 11a	Chrome OS 76.0.3809.136
Samsung Chromebook 4+	Chrome OS 77.0.3865.105
DELL Latitude 3480 (Qualcomm DELL wireless 1820)	Win 10 Pro (12.0.0.242)
DELL Inspiron 15-7569 (Intel Dual Band Wireless-AC 3165)	Windows 10 Home (18.32.0.5)
DELL Latitude E5540 (Intel Dual Band Wireless AC7260)	Windows 7 Professional (21.10.1)
DELL XPS 12 v9250 (Intel Dual Band Wireless AC 8260)	Windows 10 (19.50.1.6)
DELL Latitude 5491 (Intel AX200)	Windows 10 Pro (21.40.2)
DELL XPS Latitude12 9250 (Intel Dual Band Wireless AC 8260)	Windows 10 Home (21.40.0)
Lenovo Yoga C630 Snapdragon 850 (Qualcomm AC 2x2 Svc)	Windows 10(1.0.10440.0)
Lenovo Thinkpad Yoga 460 (Intel Dual Band Wireless-AC 9260)	Windows 10 Pro (21.40.0)
Note For clients using Intel wireless cards, we recommend you to update to the latest Intel wireless drivers if advertised SSIDs are not visible.	
Tablets	

Client Type and Name	Driver / Software Version
Apple iPad Pro	iOS 13.5
Apple iPad Air2 MGLW2LL/A	iOS 12.4.1
Apple iPad Mini 4 9.0.1 MK872LL/A	iOS 11.4.1
Apple iPad Mini 2 ME279LL/A	iOS 12.0
Microsoft Surface Pro 3 – 11ac	Qualcomm Atheros QCA61x4A
Microsoft Surface Pro 3 – 11ax	Intel AX201 chipset. Driver v21.40.1.3
Microsoft Surface Pro 7 – 11ax	Intel Wi-Fi chip (HarrisonPeak AX201) (11ax, WPA3)
Microsoft Surface Pro X – 11ac & WPA3	WCN3998 Wi-Fi Chip (11ac, WPA3)
Mobile Phones	
Apple iPhone 5	iOS 12.4.1
Apple iPhone 6s	iOS 13.5
Apple iPhone 8	iOS 13.5
Apple iPhone X MQA52LL/A	iOS 13.5
Apple iPhone 11	iOS 14.1
Apple iPhone SE MLY12LL/A	iOS 11.3
ASCOM SH1 Myco2	Build 2.1
ASCOM SH1 Myco2	Build 4.5
ASCOM Myco 3 v1.2.3	Android 8.1
Drager Delta	VG9.0.2
Drager M300.3	VG2.4
Drager M300.4	VG2.4
Drager M540	DG6.0.2 (1.2.6)
Google Pixel 2	Android 10
Google Pixel 3	Android 11
Google Pixel 3a	Android 11
Google Pixel 4	Android 11
Huawei Mate 20 pro	Android 9.0
Huawei P20 Pro	Android 9.0
Huawei P40	Android 10
LG v40 ThinQ	Android 9.0
One Plus 8	Android 10

Client Type and Name	Driver / Software Version
Oppo Find X2	Android 10
Redmi K20 Pro	Android 10
Samsung Galaxy S7	Andriod 6.0.1
Samsung Galaxy S7 SM - G930F	Android 8.0
Samsung Galaxy S8	Android 8.0
Samsung Galaxy S9+ - G965U1	Android 9.0
Samsung Galaxy SM - G950U	Android 7.0
Sony Experia 1 ii	Android 10
Sony Experia xz3	Android 9.0
Xiaomi Mi10	Android 10
Spectralink 8744	Android 5.1.1
Spectralink Versity Phones 9540	Android 8.1
Vocera Badges B3000n	4.3.2.5
Vocera Smart Badges V5000	5.0.4.30
Zebra MC40	Android 5.0
Zebra MC40N0	Android Ver: 4.1.1
Zebra MC92N0	Android Ver: 4.4.4
Zebra TC51	Android 7.1.2
Zebra TC52	Android 8.1.0
Zebra TC55	Android 8.1.0
Zebra TC57	Android 8.1.0
Zebra TC70	Android 6.1
Zebra TC75	Android 6.1.1
Printers	
Zebra QLn320 Printer	LINK OS 6.3
Zebra ZT230 Printer	LINK OS 6.3
Zebra ZQ310 Printer	LINK OS 6.3
Zebra ZD410 Printer	LINK OS 6.3
Zebra ZT410 Printer	LINK OS 6.3
Zebra ZQ610 Printer	LINK OS 6.3
Zebra ZQ620 Printer	LINK OS 6.3
Wireless Module	

Client Type and Name	Driver / Software Version
Intel 11ax 200	Driver v21.40.1.3, v21.20.1.1
Intel AC 9260	Driver v21.40.0
Intel Dual Band Wireless AC 8260	Driver v19.50.1.6

Key Features Not Supported in Controller Platforms

This section lists the features that are not supported on various 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 3504 Wireless Controller

- 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 5520 and 8540 Wireless Controllers

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

Key Features Not Supported in Cisco Virtual Wireless Controller

- Cisco Umbrella
- Software-defined access
- Domain-based ACLs
- Internal DHCP server
- Cisco TrustSec
- Access points in local mode
- Mobility or Guest Anchor role
- 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 only in 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

This section lists the key features that are not supported on various Cisco Aironet AP platforms. For detailed information about feature support on Cisco Aironet Wave 2 and 802.11ax APs, see:

https://www.cisco.com/c/en/us/td/docs/wireless/access_point/feature-matrix/ap-feature-matrix.html

Key Features Not Supported in Cisco Aironet 1800i, 1810 OEAP, 1810W, 1815, 1830, 1850, 2800, 3800, and 4800 Series APs

Table 9: Key Features Not Supported in Cisco Aironet 1800i, 1810 OEAP, 1810W, 1815, 1830, 1850, 2800, 3800, and 4800 Series APs

Operational Modes	• Autonomous Bridge and Workgroup Bridge (WGB) mode **Note** WGB is supported in Cisco Aironet 2800, 3800 Series APs. • Mesh mode **Note** Mesh mode is supported in Cisco Aironet 1815i, 1815m, 1830, 1850, 2800, 3800, and 4800 Series APs in Release 8.10.x. • LAG behind NAT or PAT environment
Protocols	• Full Cisco Compatible Extensions (CCX) support • Rogue Location Discovery Protocol (RLDP) • Telnet
Security	• CKIP, CMIC, and LEAP with Dynamic WEP • Static WEP for CKIP • WPA2 + TKIP **Note** WPA +TKIP and TKIP + AES protocols are supported.
Quality of Service	Cisco Air Time Fairness (ATF) **Note** ATF is supported in Cisco Aironet 2800, 3800, and 4800 Series APs in Release 8.10.

FlexConnect Features	• PPPoE
	• Multicast to Unicast (MC2UC)
	Note VideoStream is supported
	• Traffic Specification (TSpec)
	  • Cisco Compatible eXtensions (CCX)
	  • Call Admission Control (CAC)
	• VSA/Realm Match Authentication
	• 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 10: Key Features Not Supported in Cisco Aironet 1800i, 1810 OEAP, and 1810W Series APs

Operational Modes	Mobility Express
FlexConnect Features	Local AP authentication
Location Services	Data RSSI (Fast Locate)

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

Table 11: 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
Location Services	Data RSSI (Fast Locate)

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

Key Features Not Supported on Cisco Aironet 1560 APs

- MAC Authentication FlexConnect Local Authentication
- Noise-tolerant fast convergence
- Static WEP

Key Features Not Supported on Cisco Catalyst IW6300 Heavy Duty Series AP and 6300 Series Embedded Services AP

- MAC Authentication FlexConnect Local Authentication
- Noise-tolerant fast convergence
- Static WEP

Unfixed and Fixed Issues in Release 8.10.190.0

Open Caveats for Release 8.10.183.0

Table 12: Open Caveats

Identifier	Headline
CSCvw28085	OEAP flooding syslog messages: "parse_tx_bcn: Bcn payload is NULL"
CSCvw70260	Cisco Aironet 1572EAC Access Point does not respond to the Canadian EIRP regulation
CSCvy93234	High Channel Utilization issue is seen in AP device 360 but not in ICAP RF Stats Channel Utilization
CSCvz59428	Unclear reason for Radio reset due to role change sent from Controller to DNA Center
CSCvz90902	Cisco 9130 AP: Probe suppression for Macro Micro cell client steering not working
CSCwa04589	Cisco 9120AXP-E: AP max transmit power is low on Radio 1 -E domain
CSCwa25735	AP1832 does not forward packets to radio (SF 05778975/05852147/06092559)
CSCwa30098	AP9136 disconnects the clients during GTK rekeying interval (SF05549686)
CSCwa68709	Cisco 9115 AP reports DFS on channels incorrectly: "blocked list due to be cleared"
CSCwa73818	Cisco 9130AX AP radio firmware crash: ar_wal_peer.c:8149 Assertion !WAL_IS_TID_QOS_DATA[SF 05684825]
CSCwa76206	Kernel panic : PC is at mv_pp3_dev_open+0xbfc/0x1014 on 17.3.5EFT
CSCwa76218	Kernel panic : PC is at pci_common_init_dev+0xa4/0x2c0 on 17.3.5EFT
CSCwb23886	Cisco 1810W: RLAN DHCP issues with certain client models

Identifier	Headline
CSCwb41815	AP not copy DHCP ACK packets to WLC after enable "cts manual" on switch in 8.10
CSCwb45619	Cisco AP reloads unexpectedly due to soft lockup - PC is at _raw_spin_unlock_irqrestore+0x10
CSCwb45628	Cisco 9120 AP reloads unexpectedly on RHL with PC is at __rhb_send_cmd_shm+0xf8
CSCwb74334	Unable to set QoS OID - 1.3.6.1.4.1.9.9.512.1.1.3.1.1 using CPI and snmpset command
CSCwb79809	Upstream video traffic drops on Cisco 9124 AP
CSCwb80959	Cisco 8540 Controller is dropping ARP packets upstream
CSCwc02477	Cisco 9130 AP does not transmit EAP Identity Request [SF 05884552]
CSCwc06996	Cisco 1852 AP: Reboot request event radio recovery failed; brain: safe_read_select failed
CSCwc12918	Cisco controller reloads unexpectedly in SNMPTask due to Reaper Reset
CSCwc28757	Cisco 3800 AP Radio reloads unexpectedly on Slot 0 ap-17.9.0.135
CSCwc29375	Cisco 2800 AP detects it own BSSID as Rogue - No NDP MSG in debug
CSCwc32182	AP 1852 Radio Firmware Crash (SF 06029787/06121536)
CSCwc38912	LWA Client is immediately deleted when joining Flex WLAN after Site/Policy Tag change
CSCwc42728	Cisco AP reloads unexpectedly due to WCPD process
CSCwc49464	Cisco 9115 and 9120 stuck in boot loop due to signature verification failure
CSCwc49841	WLC not sending OpenRoaming measurement information to DNAS Connector
CSCwc49970	Cisco Aironet 2800, 3800, 4800 Channel 165 not allowed
CSCwc56767	Cisco 5520 Controller reloads unexpectedly when executing the command "show tech"
CSCwc59814	Disable Burst Beacon by default for 11ac Wave2 QCA APs
CSCwc61347	Cisco 9136I AP Kernel crash on ap-17.9.1.7
CSCwc64201	Cisco 9105 as WGB fails to forward packets OTA producing gaps in the communication
CSCwc67150	DCA triggering multiple channel changes on 2.4G in clean env
CSCwc70979	Cisco 9130 kernel panic due to DFS detection (PC is at 0xffffffbffd31da70)
CSCwc72194	AP9120: Radio Core Dump: wl0: wlc_check_assert_type HAMMERING; CS00012258561
CSCwc73462	For FlexConnect groups config,backslash \ in the end of the radius servers shared secret not allowed

Identifier	Headline
CSCwc73671	Cisco Wave 2 AP sending too many client deauth frames with code 0x0007
CSCwc73906	Wired LAN incorrect anchor export map
CSCwc75732	Firmware Radio crash on Cisco 4800 Access point on 17.3.5b code
CSCwc81467	RHL reset observed in 9120

Resolved Caveats for 8.10.183.0, 8.10.182.0, 8.10.181.0

Table 13: Resolved Caveats for Release 8.10.183.0

Identifier	Headline
CSCwd80290	IOS AP image validation certificate Failed/Expired; causing AP join issues

Table 14: Resolved Caveats for Release 8.10.182.0

Identifier	Headline
CSCvx32806	Cisco 2800, 3800 series APs stuck in bootloop due to image checksum verification failed
CSCwc78435	Cisco Catalyst 9130 sending incorrect channel list on out of band DFS event causing client connectivity issues
CSCwd11897	Power parameter for AP803 under the radio interface shows ambiguous
CSCwd37092	Cisco 2800,3800,4800,1562,6300 series AP:Slow TCP downloads, failing EAP-TLS in release 8.10.181.0/17.3.6

Table 15: Resolved Caveats for Release 8.10.181.0

Identifier	Headline
CSCvv11509	Command "debug dot11 client rate" shows legacy Tx/Rx data rates for 11ax clients
CSCvv20610	WGB does not support PSK with 63 characters
CSCvv30453	Cisco 1800APs: add FW checksum and auto refresh to avoid FW assert radio crash by bitflip
CSCvw10013	Cisco Aironet 1852 AP radio hangs causing packets drops
CSCvx48053	Access point beacons incorrect rates; clients cannot associate
CSCvy50461	Sometimes, after WGB reloads, WGB wired traffic never gets restored
CSCvy50461	WGB wired traffic sometimes never gets restored after WGB reloads
CSCvy59547	GUI displays incorrect tagged VLAN data

Identifier	Headline
CSCvz15425	Cisco Aironet 1815w AP experiences kernel panic when upgraded to the latest 8.5.176.0
CSCvz35716	Cisco 3802 AP: ME Controller reloads unexpectedly with OOM due to: process naconnector
CSCvz41113	AP will reload unexpectedly if shutdown uplink switchport or wl0/1/8
CSCvz59191	APs do not send NDP packets on slot 1
CSCvz66623	EAP-TLS is failing for the wired clients behind MAP. MVL Case #00259413
CSCvz95502	WGB Wired Clients MAC Flapping Between The Actual Port And the WGB Switch Port
CSCvz96924	Cisco 9130 Access Point does not send M1 over the Air
CSCwa05828	AP does not respond to controller's Discovery Response: Error connecting TLS context
CSCwa08478	AP4800 core-radio0FW [cmd timeout] wifi0: 0x9201=GetRadioStatus after 4 days up running
CSCwa19345	Cisco 9115AX AP: assert:"SCB_DEL_IN_PROGRESS(scb)" failed: "wlc_assoc.c:11911" wl: Bad Address
CSCwa26370	grpc_server Process crash seen and Core generated due to panic: send on closed channel
CSCwa26814	3800 AP not passing ARP requests on central WLAN when configured on Custom Flex Group
CSCwa31596	Cisco 9130AX AP: high channel utilization and client lags with 9 or more clients using MS TEAMS
CSCwa33537	Cisco 9117AX AP radio reloads unexpectedly due to partial command issues (SF 05580128)
CSCwa36216	C9120AXI sends weaker beacons than AP2802I CS00012215351/CS00012224614
CSCwa42620	9130 - AP dropping packets On-Air for Phoenix WinNonlin Application (SF 05979576)
CSCwa47154	Controller Details Are Not Refreshed in Umbrella After a failover
CSCwa48648	Wireless devices getting Invalid FT IE when using FT over the DS to roam
CSCwa49086	Cisco 3802 FQI/NMI reset: LocateAddr & extStaDb_GetStaInfo
CSCwa49112	Cisco 3802 FQI/NMI reset: loop_delay & wlRecv
CSCwa49124	Cisco 3802 kernel panic - _ZN19ProbeRequestTracker13simple_actionEP6Packet
CSCwa49135	Cisco 3802 kernel panic - sys_sigreturn & recalc_sigpending
CSCwa53592	Cisco 9120AX APs show as Flexible Radio Assignment (FRA) not capable on 17.3.4c release

Identifier	Headline
CSCwa53727	Cisco 9117AX AP reloads unexpectedly at cmnos_thread.c:3493
CSCwa54943	Cisco Wave 2 APs with RLAN port connecting to device running LLDP would reboot due to Out of Memory
CSCwa57078	The flap between DHCP and static IP address when Ethernet VLAN tagging on access point is enabled
CSCwa59673	Cisco 3802 FQI/NMI reset at rb_next+0xc
CSCwa61087	Cisco 1562 AP acting as WGB is unable to pass multicast traffic to passive client behind it
CSCwa61885	Cisco controller reloads unexpectedly due to timer leak on apfMsConnTask
CSCwa65318	Cisco 9130 AP: Tx power for Microcell created by the AP for slot2
CSCwa68439	3800 AP sends a burst of deauth frames after each session timeout for each AP in PSK WLAN
CSCwa70278	Cisco Wave 2 APs: MAP is failed to form 5 hop stable mesh tree
CSCwa73535	1830/1850 AP (EGYPT) won't advertise HT/VHT IE in beacons/probes without custom channel width change
CSCwa73820	Cisco 4800 AP would not negotiate full power via LLDP
CSCwa75901	Cisco 9117 Beacon stuck-reloads unexpectedly due to radio failure (radio recovery failed)
CSCwa76008	The value of "Channel Center Segment 0" in " VHT Operation Info"
CSCwa77205	AP1832/1852/1815 : Kernel Panic @wlan_handle_napi
CSCwa77633	Cisco 1832 AP reloads unexpectedly due to kernel panic
CSCwa79564	Cisco 2800,3800 APs on 8.10.162: Power Type displayed is incorrect when static power is set to 15.4W
CSCwa81190	Null pointer de-reference in wlc_wnm_is_wnmsleeping
CSCwa82660	AP2800/AP3800 with CAC configured only updating QBSS_AAC sent by WLC after radio reset
CSCwa85088	Wired client behind Cisco WGB is not taking DHCP IP address
CSCwa86015	C9120 Kernel panic crash - PC is at __kmalloc+0x5c/0x140
CSCwa86610	Cisco 2802 and 3802: Kernel panic crash running 8.10.151.0 image
CSCwa88621	C9120AXI - capwapd.service failed
CSCwa90871	9120AP:wcpd.service failed SW crashed on Process wcpd on 9120AP running 17.7.1.11

Identifier	Headline
CSCwa95705	Cisco 2802 AP reloads unexpectedly due to FIQ/NMI reset
CSCwa96198	CWA clients with Run state cannot go online even though it is run state
CSCwa96429	Cisco Wave 2 AP disconnects from the WLC after cts switchport config
CSCwa97033	Cisco 9120 AP: Kernel crash seen while bringing up the slot1 radio
CSCwb02488	9120 Kernel Crash PC is at number.isra & LR is at vsnprintf
CSCwb05556	AP does not send multicast data till it snoops IGMPv2
CSCwb05569	AP 9130 is randomly not transmitting beacons (SF 05737407)
CSCwb07125	APs own MAC is detected as rogue on slot1/slot3 intermittently with empty SSID
CSCwb08755	Cisco 9130, 9120 AP in FlexConnect mode is not sending SA query
CSCwb08956	2800 APs changing the TID for eapol packets from 6 to 0 after changing rf profile in 9800
CSCwb09248	High latency and drops when associated to Cisco 9130 AP
CSCwb11711	Cisco 9120, 9130 APs in FlexConnect mode, send Assoc reject after the 1st successful connection
CSCwb11854	Low Throughput with WLC8540 and AP1852
CSCwb16632	AireOS SMART Licensing registration/renewal due to SSL certificate problem
CSCwb19448	Cisco 9117 running 8.10mr6 reloads unexpectedly due to kernel panic in cisco_wlan_crypto_decap
CSCwb19680	Incorrect kernel assertion in checking invalid timer objects
CSCwb19993	After a software upgrade, the Cisco Wave 2 AP might lose its configuration.
CSCwb23976	Cisco 9117 reloads unexpectedly due to Kernel panic dp_print_host_stats with fix for CSCwa52449
CSCwb28006	AP3800 plumbing client to VLAN 1 instead of native VLAN 0 causing ARP drops OUTER_UCAST_VLAN_BLOCK
CSCwb30993	Kernel panic crashes on Cisco 9117AXI-E
CSCwb32121	Cisco 1832 reloads due to radio failure - Beacon Stuck- reset radio for recovery
CSCwb34215	AP assert:"0" failed: file "wlc_pcb.c:384" (CS00012237864)
CSCwb34231	Cisco 9115 AP: Power Saving Client State on radio
CSCwb36531	AP 9130 not able to process fragmented EAP frames from client when doing EAP-TLS
CSCwb37452	Anchor Passthrough webauth presents PEM timeout after hitting RUN

Identifier	Headline
CSCwb45599	Cisco AP reloads unexpectedly with ppr_create_prealloc+0xbc
CSCwb51769	8.10.171.0 showing Junk character with command Show ap join stats summary all
CSCwb53348	Cisco 9130 APs generating radio coredumps
CSCwb62329	Cisco 9120 not sending A-MPDUs for WPA1 AES clients in WPA1 and WPA2 mixed mode
CSCwb68720	AP sending ARP packet without VXLAN encapsulation
CSCwb69256	AireOS system reloads unexpectedly due to Task Name emWeb Due to NTP
CSCwb70757	Cisco 9130 AP reloads unexpectedly due kernel panic
CSCwb71679	Cisco 4800 Series AP on 8.10.171.0 crash due to FIQ/NMI reset
CSCwb73294	C9105 AP has low throughput on 2.4GHz with AX clients with adjacent channel interference
CSCwb76882	Rogue: Cisco Catalyst 9130 AP detects its own BSSID as Rogue in 5-Ghz channel
CSCwb76935	Cisco 1815-T OEAP Kernel Panic Crash on 17.8.1CCO
CSCwb94209	Cisco 9115 AP: Mode reset button does not clear CC mode and console blocking config
CSCwb95196	non-GA - webauth presents PEM timeout after hitting RUN
CSCwb95980	C9130 Kernal crash - PC is at _ZN10CACMetrics25accumulate
CSCwb98247	Cisco AP reloads unexpectedly in wlan_objmgr_peer_release_ref running 17.3.5
CSCwc04079	8.10.171.4 || WGB mode - Unable to assign static IP with subnet mask other than /24
CSCwc05350	Cisco Wave 2 APs: CAPWAP MTU flapping due to asymmetric MTU between AP to WLC and WLC to AP
CSCwc06293	Cisco 9120 AP stops beaconing
CSCwc07421	Cisco 4800-NDP: APs own MAC address added in NDP neighbor list
CSCwc09461	Cisco 9120 AP's delaying Authentication response frame
CSCwc14934	Outlook access not work on OEAP split tunnel but intranet/internet works fine
CSCwc15152	WLC does not show TSM Reports
CSCwc15229	Cisco 1832 reloads due to radio failure - Beacons stuck on Radio
CSCwc17045	AP console locks out after FIPS enable and AP full factory reset from eWLC, before CAPWAP rejoin

Identifier	Headline
CSCwc20929	APP hosting segmentation does not work on Cisco 9100 AP and C9800 controller running 17.6.3
CSCwc22254	[AireOS]: With FIPS enabled on 3504 and 5520, Mobility Tunnel does not comes up
CSCwc23892	GUI-AP Join statistics page ap names are not showing in GUI mode
CSCwc35321	Wave 2 APs in local mode sending ARP requests to wireless clients from 10.128.128.128 IP address
CSCwc51428	Cisco 9130 AP: Kernel panic. __dma_inv_range+0x20/0x50
CSCwc51894	Cisco 9117 AP reloads unexpectedly due to Kernel panic, dp_print_host_stats
CSCwc54470	Cisco Wave 2 AP command "config boot crashkernel enable" does not generate kernel core to USB
CSCwc56774	WGB with Static IP loses IP address after multiple roams
CSCwc71198	CAPWAP flapping when VRRPv3 is present in network
CSCwc75102	Mobility Express AP Conversion to CAPWAP via DHCP Option 43 not working

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 controllers, lightweight APs, and mesh APs, see these documents:

- The quick start guide or the installation guide for your particular controller or access point
- Cisco Wireless Solutions Software Compatibility Matrix
- Cisco Legacy Wireless Solutions Software Compatibility Matrix
- Cisco Wireless Controller Configuration Guide
- Cisco Wireless Controller Command Reference

- Cisco Wireless Controller System Message Guide

For all controller 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 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

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