

# Release Notes for Cisco Embedded Wireless Controller on Catalyst Access Points, Cisco IOS XE Cupertino 17.8.x

First Published: 2022-04-11

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Note

The documentation set for this product strives to use bias-free language. For purposes of this documentation set, bias-free is defined as language that does not imply discrimination based on age, disability, gender, racial identity, ethnic identity, sexual orientation, socioeconomic status, and intersectionality. Exceptions may be present in the documentation due to language that is hardcoded in the user interfaces of the product software, language used based on standards documentation, or language that is used by a referenced third-party product.

# **Introduction to Cisco Embedded Wireless Controller on Catalyst Access Points**

The Cisco Embedded Wireless Controller on Catalyst Access Points is a version of the Cisco IOS XE-based controller software on Catalyst access points. In this solution, a Catalyst access point (AP) that is running the Cisco Embedded Wireless Controller on Catalyst Access Points software, is designated as the primary AP. Other APs, referred to as subordinate APs, associate to this primary AP.

The Cisco Embedded Wireless Controller on Catalyst Access Points provides enterprise-level WLAN features while maintaining operational simplicity and affordability. This solution is targeted at small and medium-sized business (SMB) customers or distributed enterprises, and can be run at single site deployments.

- The controllers come with high availability (HA) and seamless software updates. This keeps your services on always, both during planned and unplanned events.
- The deployment can be managed using a mobile application, Cisco Digital Network Architecture (DNA) Center, Netconf/Restconf, web-based GUI, or CLI.

# What's New in Cisco Embedded Wireless Controller on Catalyst Access Points, Cisco IOS XE Cupertino 17.8.1

**Table 1: New and Modified Software Features** 

Feature Name	Description and Documentation Link
Automated Software Download Version 4 (ASDv4) Migration	Cisco Embedded Wireless Controller on Catalyst Access Points requires Automated Software Download Version 3 (ASDv3) to download software from Cisco.com.
	However, ASDv3 is being replaced by ASDv4 from July 2022. Consequently, the software download feature will not work on older Cisco IOS XE releases.
	We recommend that you upgrade your device software image to Cisco IOS XE Amsterdam 17.3.5a, Cisco IOS XE Bengaluru 17.6.3, Cisco IOS XE Cupertino 17.8.1, or a later release to enable the software download feature with ASDv4.
Base WGB on Indoor 11ax APs	From this release, Workgroup bridge (WGB) is supported on the following Cisco Catalyst 9100 Series Access Points.
	Cisco Catalyst 9105
	Cisco Catalyst 9115
	Cisco Catalyst 9120
Simplifying WGB Configuration	This feature helps to import a running workgroup bridge (WGB) configuration and deploy it in multiple WGBs in a network.
	The following commands are introduced:
	• copy configuration upload
	• copy configuration download
	For more information, see the chapter Workgroup Bridges.



Note

Cisco Catalyst 9136 series Access Points do not run Cisco Embedded Wireless Controllers (EWC) and does not join EWC on access points.

## **Interactive Help**

The Cisco Catalyst 9800 Series Wireless Controller GUI features an interactive help that walks you through the GUI and guides you through complex configurations.

You can start the interactive help in the following ways:

- By hovering your cursor over the blue flap at the right-hand corner of a window in the GUI and clicking **Interactive Help**.
- By clicking Walk-me Thru in the left pane of a window in the GUI.
- By clicking **Show me How** that is displayed in various parts of the GUI. Clicking **Show me How** triggers a specific interactive help that is relevant to the context you are in.

For instance, **Show me How** in **Configure** > **AAA** walks you through the various steps for configuring a RADIUS server. Choose **Configuration**> **Wireless Setup** > **Advanced** and click **Show me How** to trigger the interactive help that walks you through the steps relating to various kinds of authentication.

The following features have an associated interactive help:

- · Configuring AAA
- Configuring FlexConnect Authentication
- Configuring 802.1x Authentication
- · Configuring Local Web Authentication
- Configuring OpenRoaming
- Configuring Mesh APs



Note

If the WalkMe launcher is unavailable on Safari, modify the settings as follows:

- Navigate to **Preferences > Privacy**.
- On the Website tracking field, uncheck the checkbox to disable Prevent cross-site tracking.
- On the Cookies and website data field, uncheck the checkbox to disable Block all cookies.

## **Supported Cisco Access Point Platforms**

The following Cisco access points are supported in the Cisco Embedded Wireless Controller on Catalyst Access Points network. Note that the APs listed as primary APs can also function as subordinate APs.

Table 2: Cisco APs Supported in Cisco Embedded Wireless Controller on Catalyst Access Points

Primary AP	Subordinate AP
Cisco Catalyst 9115 Series	Cisco Aironet 1540 Series
Cisco Catalyst 9117 Series	Cisco Aironet 1560 Series
Cisco Catalyst 9120 Series	Cisco Aironet 1815i
Cisco Catalyst 9124AXE/I/D	Cisco Aironet 1815w
Cisco Catalyst 9130	Cisco Aironet 1830 Series
Cisco Catalyst 9105AXI	Cisco Aironet 1840 Series
	Cisco Aironet 1850 Series
	Cisco Aironet 2800 Series
	Cisco Aironet 3800 Series
	Cisco Aironet 4800 Series
	Cisco Catalyst 9115 Series
	Cisco Catalyst 9117 Series
	Cisco Catalyst 9120 Series
	Cisco Catalyst 9124AXE/I/D
	Cisco Catalyst 9130
	Cisco Catalyst 9105AXW
	Cisco Catalyst 9105AXI
	Cisco Catalyst Industrial Wireless 6300 Heavy Duty Series Access Points
	Cisco 6300 Series Embedded Services Access Points

#### Table 3: Image Types and Supported APs in Cisco Embedded Wireless Controller on Catalyst Access Points

Image Type	Supported APs
ap1g4	Cisco Aironet 1810 Series
	Cisco Aironet 1830 Series
	Cisco Aironet 1850 Series
ap1g5	Cisco Aironet 1815i
	Cisco Aironet 1815w
	Cisco Aironet 1540 Series
	Cisco Aironet 1850 Series
ap1g6	Cisco Catalyst 9117 Series

Image Type	Supported APs
ap1g6a	Cisco Catalyst 9130
	Cisco Catalyst 9124AXE/I/D
ap1g7	Cisco Catalyst 9115 Series
	Cisco Catalyst 9120 Series
ap1g8	Cisco Catalyst 9105 Series
ap3g3	Cisco Aironet 2800 Series
	Cisco Aironet 3800 Series
	Cisco Aironet 4800 Series
	Cisco Aironet 1560 Series

# **Maximum APs and Clients Supported**

Table 4: Scale Supported in Cisco EWC Network

Primary AP Model	Maximum APs Supported	Maximum Clients Supported
Cisco Catalyst 9105 AWI	50	1000
Cisco Catalyst 9115 Series	50	1000
Cisco Catalyst 9117 Series	50	1000
Cisco Catalyst 9120 Series	100	2000
Cisco Catalyst 9124AXE/I/D	100	2000
Cisco Catalyst 9130	100	2000



Note

If 25 to 100 APs have joined the EWC network, the maximum clients on the EWC internal AP is limited to 20.

## **Compatibility Matrix**

The following table provides software compatibility information:

Table 5: Compatibility Information

Cisco Embedded Wireless Controller on Catalyst Access Points	Cisco ISE	Cisco CMX	Cisco DNA Center
Cupertino 17.8.x	3.0	10.6.3	See Cisco DNA Center
	2.7	10.6.2	Compatibility Information
	2.6	10.6	
	2.4	10.5.1	
	2.3		

# **Supported Browsers and Operating Systems for Web UI**



Note

The following list of Supported Browsers and Operating Systems is not comprehensive at the time of writing this document and the behavior of various browser for accessing the GUI of the EWC is as listed below.

#### Table 6: Supported Browsers and Operating Systems

Browser	Version	Operating System Status		Workaround
Google Chrome	77.0.3865.120	macOS Mojave Version 10.14.6	Works	Proceed through the browser warning.
Safari	13.0.2 (14608.2.40.1.3)	macOS Mojave Version 10.14.6	Works	Proceed through the browser warning.
Mozilla Firefox	69.0.1	macOS Mojave Version 10.14.6	Works only if exception is added.	Set the exception.
Mozilla Firefox	69.0.3	macOS Mojave Version 10.14.6	Works only if exception is added.	Set the exception.
Google Chrome	77.0.3865.90	Windows 10 Version 1903 (OS Build 18362.267)	Works	Proceed through the browser warning.
Microsoft Edge	44.18362.267.0	Windows 10 Version 1903 (OS Build 18362.267)	Works	Proceed through the browser warning.
Mozilla Firefox	68.0.2			Proceed through the browser warning.
Mozilla Firefox	69.0.3	Windows 10 Version 1903 (OS Build 18362.267)	Works only if exception is added.	Set the exception.

Browser	Version	Operating System	Status	Workaround
Google Chrome	78.0.3904.108	macOS Catalina 10.15.1	Does not work	NA

## **Upgrading the Controller Software**

This section covers the various aspects of upgrading the controller software.

For information on ASDv4 migration, see the What's New in Cisco Embedded Wireless Controller on Catalyst Access Points, Cisco IOS XE Cupertino 17.8.1, on page 2 section.



Note

Before converting from CAPWAP to embedded wireless controller (EWC), ensure that you upgrade the corresponding AP with the CAPWAP image in Cisco AireOS Release 8.10.105.0. If this upgrade is not performed, the conversion will fail.

### **Finding the Software Version**

The following table lists the Cisco IOS XE 17.8.x software for Cisco Embedded Wireless Controller on Catalyst Access Points.

Choose the appropriate AP software based on the following:

- Cisco Embedded Wireless Controller on Catalyst Access Points software to be used for converting the AP from an unified wireless network CAPWAP lightweight AP to a Cisco Embedded Wireless Controller on Catalyst Access Points-capable AP (primary AP)
- AP software image bundle to be used either for upgrading the Cisco Embedded Wireless Controller on Catalyst Access Points software on the primary AP or for updating the software on the subordinate APs or both

Prior to ordering Cisco APs, see the corresponding ordering guide for your Catalyst or Aironet access point.

Table 7: Cisco Embedded Wireless Controller on Catalyst Access Points Software

Primary AP	AP Software for Conversion from CAPWAP to Cisco EWC	AP Software Image Bundle for Upgrade	AP Software in the Bundle
Cisco Catalyst 9115 Series	C9800-AP-universalk9.17.08.01.zip	C9800-AP-universalk9.17.08.01.zip	ap1g7
Cisco Catalyst 9117 Series	C9800-AP-universalk9.17.08.01.zip	C9800-AP-universalk9.17.08.01.zip	ap1g6
Cisco Catalyst 9120 Series	C9800-AP-universalk9.17.08.01.zip	C9800-AP-universalk9.17.08.01.zip	ap1g7
Cisco Catalyst 9124AXE/I/D	C9800-AP-universalk9.17.08.01.zip	C9800-AP-universalk9.17.08.01.zip	ap1g6a

Primary AP	AP Software for Conversion from CAPWAP to Cisco EWC	AP Software Image Bundle for Upgrade	AP Software in the Bundle
Cisco Catalyst 9130	C9800-AP-universalk9.17.08.01.zip	C9800-AP-universalk9.17.08.01.zip	ap1g6a

## **Guidelines and Restrictions**

Internet Group Management Protocol (IGMP)v3 is not supported on Cisco Aironet Wave 2 APs.

Embedded Wireless Controller SNMP configuration is supported in DNAC.

High memory usage on AP running Embedded Wireless Controller. Enabling **crash kernel** on the AP consumes additional memory on the AP. Hence, if **crash kernel** is enabled, the overall memory usage of the device will increase and will impact the scale numbers. On Cisco Catalyst 9130 Access Points, the memory consumption is a high of 128 MB.

During the EWC HA pair selection, after a power outage, the standby AP fails to come up in the new EWC HA pair. Another EWC capable AP becomes the standby AP and fails to come up as well. To avoid this situation, ensure that the same IP address is enforced on the active or standby APs during HA pair selection.

## **Interoperability with Clients**

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

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

Table 8: Test Configuration for Interoperability

Hardware or Software Parameter	Hardware or Software Type
Release	Cisco IOS XE Cupertino 17.8.x

Hardware or Software Parameter	Hardware or Software Type
Access Points	Cisco Aironet Series Access Points
	• 1540
	• 1560
	• 1815i
	• 1815w
	• 1830
	• 1840
	• 1850
	• 2800
	• 3800
	• 4800
	Cisco Catalyst 9105AX Access Points
	Cisco Catalyst 9115AX Access Points
	Cisco Catalyst 9117AX Access Points
	Cisco Catalyst 9120AX Access Points
	Cisco Catalyst 9124AXE/I/D Access Points
	Cisco Catalyst 9130AX Access Points
Radio	• 802.11ax
	• 802.11ac
	• 802.11a
	• 802.11g
	• 802.11n (2.4 GHz or 5 GHz)
Security	Open, PSK (WPA2-AES), 802.1X (WPA2-AES) (EAP-FAST, EAP-TLS), WPA3.
Cisco ISE	See Compatibility Matrix, on page 5.
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, hand-held devices, phones, and printers.

#### Table 9: 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)
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)

Client Type and Name	Driver / Software Version
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 redrivers if advertised SSIDs are not visible.	ecommend you to update to the latest Intel wireless
Tablets	
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

Client Type and Name	Driver / Software Version
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
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

Client Type and Name	Driver / Software Version	
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		
Intel 11ax 200	Driver v22.20.0	
Intel AC 9260	Driver v21.40.0	
Intel Dual Band Wireless AC 8260	Driver v19.50.1.6	

## **Caveats**

Caveats describe unexpected behavior in Cisco IOS releases. Caveats that are listed as Open in a prior release are carried forward to the next release as either Open or Resolved.



Note

All incremental releases will cover fixes from the current release.

## **Cisco Bug Search Tool**

The Cisco Bug Search Tool (BST) allows partners and customers to search for software bugs based on product, release, and keyword, and aggregates key data such as bug details, product, and version. The BST is designed to improve the effectiveness in network risk management and device troubleshooting. The tool has a provision to filter bugs based on credentials to provide external and internal bug views for the search input.

To view the details of a caveat, click the corresponding identifier.

### **Open Caveats for Cisco IOS XE 17.8.1**

Caveat ID	Description
CSCwa31604	AP ethernet link is not stable when port speed is set to auto.

Caveat ID	Description
CSCwa75556	Device reloads unexpectedly due to IAPP when receiving IAPP TLV with a header type of 4.
CSCwa99904	Controller deletes client when DHCP release is sent by client during posture.
CSCwb05551	Cisco Catalyst 9100 AP is crashing with no coredumps.
CSCwb17255	The <b>show aaa servers</b> command output shows WNCD platform state as DEAD.
CSCwb01752	XOR radio is displaying Radio Type as "802.11ax - 2.4/5 GHz".
CSCwb10265	Cisco Catalyst 9120 AP fails to forward traffic to wireless client for about 60 seconds.
CSCwb21141	WLAN configuration is not pushed to APs on specific wncd.
CSCwb36531	Cisco Catalyst 9130 AP is not able to process fragmented EAP frames from client when doing EAP-TLS.
CSCwa33537	Cisco Catalyst 9117AX AP radio reloads unexpectedly due to partial command issues.
CSCwa88777	1-2% nano write error on Kioxia Nand.
CSCwb01500	Tx power of an AP shows incorrect value on AP iCAP Radio 1 page.
CSCwb15031	Client is not able to pass traffic after roaming using WPA2 OKC.
CSCwb31470	No data for certain parameters in APs in Cisco DNA-C.
CSCwb42262	Cisco Catalyst 9124AX AP took longer time to change to static IP; CAPWAP DTLS teardown is also observed.
CSCwa44152	Rogue detection/containment debug with BSSID filter option is not working.
CSCwb46170	SELinux denials observed during platform testing.

## **Resolved Caveats for Cisco IOS XE 17.8.1**

Caveat ID	Description
CSCvz82550	Perform the configured action or alarm only when APs hit high CPU or memory usage.
CSCvz86070	Controller crashes after 11i-fast inter-wncd roam with aaa-override.
CSCvz88475	Disable target wake time (TWT) and TWT broadcast by default.
CSCwa40959	Cisco Catalyst 9136 AP: Google Remote Procedure Call (gRPC) server crash is observed.
CSCwa65724	Memory leak and Linux IOSd core are observed on the standby controller.
CSCvz36463	Cisco Catalyst 9130 AP: The AP flashes insufficient power LED when USB is enabled on PoE+ Switch.
CSCvz38425	Remove audit data option from link latency in AP Profile feature.
CSCvz90902	Cisco Catalyst 9130 AP: Probe suppression for macro-micro cell client steering is not working.
CSCvz91097	Cisco Catalyst 9130 AP: RADIUS TTLS method authentication failure is observed.
CSCwa34086	Multicast Domain Name System (mDNS) cache details shows default mDNS policy for wired services instead of custom mDNS policy.
CSCwa34872	Memory leak is observed on the controller.
CSCwa35350	AP flaps when WNCd to which it maps report high CPU utilization.
CSCwa37963	Unable to add more than one MAC address starting with 000 in wired service filter.
CSCwa38466	Client stays in web authentication state when moves from FlexConnect central authentication to FlexConnect local authentication.
CSCwa38566	Memory leak is observed on the controller.
CSCwb05110	mDNS wired-filter changes are not working.
CSCwb06831	For Basic Service Set (BSS) coloring, controller webUI is showing mismatch between controller side and AP side.

## **Troubleshooting**

For the most up-to-date, detailed troubleshooting information, visit the Cisco TAC website at:

https://www.cisco.com/en/US/support/index.html

Go to **Product Support** and select your product from the list, or enter the name of your product. Look under **Troubleshoot and Alerts** to find information about the problem that you are experiencing.

### **Related Documentation**

Information about Cisco IOS XE 16 is available at:

https://www.cisco.com/c/en/us/products/ios-nx-os-software/ios-xe/index.html

All the support documentation for Cisco Catalyst 9100 Access Points are available at: https://www.cisco.com/c/en/us/support/wireless/catalyst-9100ax-access-points/tsd-products-support-series-home.html

Cisco Validated Designs documents are available at:

https://www.cisco.com/go/designzone

#### **Cisco Embedded Wireless Controller on Catalyst Access Points**

For support information, see the following documents:

- Cisco Wireless Solutions Software Compatibility Matrix
- Cisco Embedded Wireless Controller on Catalyst Access Points Online Help
- Cisco Embedded Wireless Controller on Catalyst Access Points Software Configuration Guide
- Cisco Embedded Wireless Controller on Catalyst Access Points Command Reference Guide

Installation guides for Catalyst Access Points are available at:

https://www.cisco.com/c/en/us/support/wireless/catalyst-9100ax-access-points/products-installation-guides-list.html

For all Cisco Wireless Controller software-related documentation, see:

https://www.cisco.com/c/en/us/support/wireless/catalyst-9800-series-wireless-controllers/tsd-products-support-series-home.html

#### **Wireless Products Comparison**

- Use this tool to compare the specifications of Cisco wireless APs 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 Connected Mobile Experiences**

Cisco Connected Mobile Experiences Documentation

#### **Cisco DNA Center**

Cisco DNA Center Documentation

## **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 Marketplace.
- 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 web-based tool that acts as a gateway to the Cisco bug tracking system that maintains a comprehensive list of defects and vulnerabilities in Cisco products and software. BST provides you with detailed defect information about your products and software.

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