

Cisco Wireless Release 8.3

PB737803

Overview

We are pleased to announce immediate availability of Cisco Wireless Release 8.3 for Cisco® wireless access points and wireless LAN controllers.

Digitization is transforming businesses in every industry, including mobility, opening up a \$2.1 trillion global market opportunity by 2019, according to IDC.¹ The path to digitization requires a digital network that evolves beyond just connectivity. Cisco recently announced the [Cisco Digital Network Architecture \(Cisco DNA\)](#), an open, extensible, and software-driven architecture for digital business. With Cisco DNA, Cisco customers can raise the profile of the network from simple connectivity to a foundation for automation, policy-driven security, and insightful analytics.

Cisco delivers on the building blocks of Cisco DNA by introducing the Flexible Radio-enabled Cisco Aironet® 2800 and 3800 Series 802.11ac Wave 2 access points, along with security innovations such as Network-as-a-Sensor functionality (Lancope Stealthwatch integration) and simplified licensing using smart licensing. Cisco Wireless Release 8.3 continues to build upon the innovations and market leadership by delivering features for each of the Cisco DNA pillars:

- **Analytics:** Presence analytics and the ability to connect with CMX Cloud Connector
- **Automation:** Simplified network provisioning of Cisco access points with the Cisco Application Policy Infrastructure Controller Enterprise Module (APIC-EM) Plug and Play
- **Assurance:** Client Troubleshooting tool for easier troubleshooting of issues, and Apple partnership for an optimized client application experience

Primary Features in Release 8.3

- **Optimized Wi-Fi connectivity and ability to prioritize business apps in Cisco and Apple environments:** At the center of the Apple and Cisco collaboration is a unique handshake between Cisco WLAN and iOS 10 beta Apple devices. This handshake enables Cisco WLAN to provide an optimal Wi-Fi roaming experience to Apple devices. Additionally, Cisco WLAN trusts Apple devices and gives priority treatment for business-critical apps specified by Apple devices.
- **URL filtering for internal domains:** An additional level of security has been added on the Cisco wireless controller to allow or block domains in addition to IP addresses. This enhancement enables end users to restrict traffic by managing DNS domains instead of IP addresses.
- **Simplified access point deployment:** Preprovisioning of the access point details from a central service (APIC-EM) greatly simplifies access point deployment by significantly reducing configuration errors. It also helps customers save on operational costs of configuring access points before shipping to the actual access point location and travel costs of an IT installer. In Release 8.3, this feature will be supported for all indoor access points for local as well as Cisco Flex® deployments.

¹ <https://www.idc.com/getdoc.jsp?containerId=prUS40978116>

- **CMX Cloud Connector:** The Cisco Connected Mobile Experiences (CMX) Cloud Connector provides the ability to send Network Mobility Services Protocol (NMSP) data seamlessly and securely from a wireless LAN controller to the CMX Cloud over HTTPS. This allows for delivery of Wi-Fi location-based services, including analytics, from the cloud without the need to install and manage CMX Cloud Proxy on-premises. For more information on CMX Cloud, go to <http://support.cmx.cisco.com>.
- **Client Troubleshooting tool:** The Client Troubleshooting tool on the Cisco wireless controller helps network administrators troubleshoot clients and get insights into client behavior in real time. This on-demand tool provides features such as packet captures, ping tests, connection analysis, and event log.
- **Mobility Express enhancements:** The Aironet 2800 and 3800 Series access points can now run Cisco Mobility Express. Software updates and access point image management have been improved with direct download from cisco.com. Integration with CMX Cloud has been added for both guest services and presence analytics. Mobility Express GUI localization has added Japanese and Korean.
- **OfficeExtend mode support for 802.11ac Wave 2 access points:** Support for OfficeExtend mode has been added to our 802.11ac Wave 2 access points. This allows for a highly secure enterprise wireless and wired connection to the home, micro-branch, or other types of remote sites.

Platform Support

Cisco Wireless Release 8.3 is supported on the following platforms:

- Cisco Aironet access points running the Control and Provisioning of Wireless Access Points (CAPWAP) protocol
- Lightweight access points: 1040, 1140, 1260, 1600, 1700, 1810 OEAP, 1810W, 1830, 1850, 2600, 2700, 2800, 3500e, 3500i, 3500p, 3600e, 3600i, 3600p, 3702e, 3702i, 3702p, 3800, 600 OEAP, 700, 700W, 802, 803, and ASA5506W-AP702
- Outdoor and industrial access points: 1530, 1550, 1570, and IW3700
- Modules: AIR-RM3010L-x-K9= and AIR-RM3000M=

Note: The Cisco Aironet 1040 Series, 1140 Series, and 1260 Series access points have feature parity with Cisco Wireless Release 8.0. Features introduced in Cisco Wireless Release 8.1 and later are not supported on these access points.

- Cisco 2504 Series Wireless LAN Controllers
- Cisco 5500 (5508 and 5520) Series Wireless LAN Controllers
- Cisco Catalyst® 6500 Series Wireless Services Module 2 (WiSM2)
- Cisco Flex 7500 Series Wireless Controllers
- Cisco 8500 (8510 and 8540) Series Wireless Controllers
- Cisco Wireless LAN Controller Module for Integrated Services Routers G2 (UCS-E)
- Cisco Virtual Wireless Controller (vWLC): VMware ESXi and KVM
- Cisco Mobility Services Engine (MSE)
- Cisco Virtual Mobility Services Engine (vMSE): VMware ESXi and KVM

Management support for Release 8.3 will be delivered as part of the Cisco Prime™ Infrastructure Release 3.1 Tech Pack 2 and APIC-EM release GA.3.

Recommended Release for Production Deployments

Maintenance Deployment (MD) releases: These long-lived software releases provide bug fixes and ongoing software maintenance.

- Releases 8.0 and 8.3 are the next MD release trains (a release in this train will be qualified as MD).
- Release 7.4 is the current MD release train, and 7.4.140.0 is the latest recommended release.

Early Deployment (ED) releases: These software releases provide new features and new hardware platform support as well as bug fixes.

- Release 8.0 is recommended for customers with 802.11ac deployments. Customers are advised to upgrade to Release 8.0.133.0 to take advantage of multiple software fixes in the release.
- Customers with earlier ED release versions of 7.2 or 7.3 should upgrade to 7.4.140.0. Customers with earlier ED release versions of 7.5 should upgrade to 8.0.133.0.

Wireless Solutions Compatibility Matrix

The [Wireless Solutions Compatibility Matrix](#) provides detailed information on compatibility across releases for Cisco Prime Infrastructure and Mobility Services Engine (MSE).

New Access Point and Wireless Controller Features

Table 1 describes the new features in Cisco Wireless Release 8.3.

Table 1. New Access Point and WLC Features

Feature	Description	Benefit
Optimized Wi-Fi connectivity and ability to prioritize business apps in Cisco and Apple environments	At the center of Apple and Cisco collaboration is a unique handshake between Cisco WLAN and iOS 10 beta Apple devices. This handshake enables Cisco WLAN to provide an optimal Wi-Fi roaming experience to Apple devices. Additionally, Cisco WLAN trusts Apple devices and gives priority treatment for business-critical apps specified by the Apple devices.	The Apple and Cisco collaboration positively affects Apple device users and IT administrators. <ul style="list-style-type: none"> • Higher reliability for real-time apps: 66 times improvement in voice call success • Improved quality of experience: 10 times improving in web browsing experience • Enhanced network performance: 86% reduction in network message load from the device during roaming • Ease of management: Up to 50% reduction in network overhead due to SSIDs Platform restrictions: Feature not supported on 1810, 1810w, 1830, 1850, 2800, and 3800 Series access points
URL filtering for domains	An additional level of security has been added for wireless by allowing blocked listing or allowed listing of a specific set of URL domains. Domain filtering allows administrators to define an HTTP URL-based access control list (ACL) in order to allow or disallow traffic.	The URL filtering feature helps optimize network bandwidth utilization by restricting access to websites. This feature enables you to build URL ACLs that can either permit or deny access to websites. These ACLs can be applied to locations, access point groups, WLAN profiles, and trusted and nontrusted clients within the same SSID.
Access point provisioning using Plug and play (PnP)	PnP ability to configure access points using the APIC-EM. Supported on the following series in Cisco Flex and local mode: AP702i, 702w, 1600, 2600, 3600, 1700, 2700, 3700, 1810, 1810w, 1830, 1850, 2800, and 3800.	Helps preprovision the access point details from a central service (APIC-EM) and eases the steps taken by the local installer.

Feature	Description	Benefit
CMX Cloud Connector	CMX Cloud Connector provides the ability to send NMSP data seamlessly and securely from a wireless LAN controller to the CMX Cloud over HTTPS. This allows for delivery of Wi-Fi location-based services, including analytics, from the cloud without the need to install and manage CMX Cloud Proxy on-premises. For more information on CMX Cloud, go to http://support.cmxcisisco.com .	Integrated cloud connector on the controller and Mobility Express platform for seamless integration and easier provisioning.
Client Troubleshooting tool	The Client Troubleshooting tool on the Cisco wireless controller helps network administrators troubleshoot clients and get insights into client behavior.	This on-demand tool provides features such as packet captures, ping tests, connection analysis, and event log to debug and troubleshoot issues in real time
Mobility Express enhancements	<ul style="list-style-type: none"> • Aironet 2800 and 3800 Series access points can now run Mobility Express. • Software updates and access point image management have been improved with direct download from cisco.com. • Integration with CMX Cloud has been added for both guest services and presence analytics. • Mobility Express GUI localization has added Japanese and Korean. 	Easier and localized setup, provisioning, and management for Mobility Express deployments on extended 802.11ac Wave 2 Aironet portfolio, with improved guest services and presence analytics.
Default FlexConnect group	Default FlexConnect Group is a container where Cisco FlexConnect® access points that are not part of an administrator-configured Cisco FlexConnect group are added automatically when they associate with a Cisco WLC.	Simplifies the Cisco FlexConnect deployment, with the Flex mode access points joining the default Cisco FlexConnect group with a set, customer-defined configuration and the ability to move to an administrator-defined Cisco FlexConnect group as needed.
IPv6 EoGRE tunnel (IPv6 tunnel support)	Ethernet over generic routing encapsulation (EoGRE) is a solution for aggregating Wi-Fi traffic from hotspots. This solution enables customer premises equipment (CPE) devices to bridge the Ethernet traffic coming from an end host and encapsulate the traffic in Ethernet packets over an IP(v4/v6) GRE tunnel. Release 8.3 brings IPv6 support for EoGRE tunnels.	Clients can maintain IPv4 and IPv6 addresses and policy across heterogeneous access networks with different technologies and/or vendors.
Mesh access point background scanning	Mesh access points will periodically go off channel and scan all channels to update neighbor lists.	Improvement in mesh convergence performance by always having a complete list of available neighbors for the map to join the best one.
Protocol pack upgrade for WLCs and access points	Support for protocol pack (PP) 19, which will be the default PP for Release 8.3. The access point PP is upgraded to PP 14.	Support for Skype for Business, Wi-Fi calling, etc.
OfficeExtend support for Wave 2 802.11ac access points	OfficeExtend mode allows a remote access point to connect to the home or remote site broadband Internet access and establish a secure tunnel to the corporate network.	Enables remote employees to access data, voice, video, and cloud services for a mobility experience consistent with the experience in the corporate office.
HALO enhancements	Hyperlocation (HL) Module software has been updated to enhance high availability and to support the new – B domain for the Industrial Wireless 3702-B access point, along with new code updates.	<ul style="list-style-type: none"> • HL updates do not stop and do not have to reconfigure HL should a WLC fail switchover occur. • Higher simultaneous angle of arrival (AoA) client processing, more location accuracy, greater stability. • Regulatory, FCC new AP3702-B.
Wi-Fi Protected Access 2 (WPA2) with Central Web Authentication (CWA)	Support for a WLAN to be configured with WPA/WPA2-PSK plus MAC filtering and RADIUS NAC.	Securing guest traffic with the encryption and privacy of WPA2 in addition to using advanced guest access changes of authorization (CoAs) with Cisco Identity Services Engine (ISE) and WLC. Protect the guest network Dynamic Host Configuration Protocol (DHCP) pools from IP address resource exhaustion due to non-802.1X devices and unwanted guest devices.
EoGRE enhancements	Extend support for WPA2-PSK and internal web-auth WLANs for EoGRE clients in addition to 802.1X.	Enables new deployment options such as tunneling guest and BYOD user traffic to router platforms such as the Cisco ASR 1000 Series to provide secure guest access.

Cisco Prime Infrastructure 3.1

Cisco Prime Infrastructure is a network management platform that supports lifecycle management of the entire network infrastructure from one GUI. It provides network administrators with a “single pane of glass” solution for provisioning, monitoring, optimizing, and troubleshooting both wired and wireless devices. Robust GUIs make device deployments and operations simple and cost-effective.

Cisco Prime Infrastructure 3.1 Tech Pack 1 allows basic monitoring and management of Cisco Wireless Release 8.3 with technology packs to enable new feature support.

Service and Support

Services from Cisco and our partners can help you assess, design, tune, and operate your wireless LAN to transparently integrate mobility services and take advantage of the systemwide capabilities of the Cisco Unified Wireless Network.

Our professional services help you align your interference management, performance, and security needs with your technical requirements to better use the self-healing, self-optimizing features built into the silicon-level intelligence of Cisco CleanAir[®] technology and the increased performance of the 802.11ac standard. These services can enhance deployment and operational efficiencies to reduce the cost and complexity of transitioning to new technologies.

Our Technical Support Services help you maintain network availability and reduce risk. Optimization services provide ongoing assistance with performance, secure access, and maintaining a strong foundation for business evolution and innovation.

For More Information

For more information about planning, building, and running services for Cisco CleanAir technology, Cisco 802.11ac, and the Cisco Unified Wireless Network, visit Cisco Technical Support Services or Cisco Professional Services at <http://www.cisco.com/go/services>.

For more information about Cisco wireless products, visit <http://www.cisco.com/go/wireless>.



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