Cisco Wireless Release 8.5

PB739409

Overview

We are pleased to announce the immediate availability of Cisco® Wireless Release 8.5 for Cisco wireless access points and wireless LAN controllers.

Companies can take full advantage of the digital transformation with Cisco's new Digital Network Architecture (Cisco DNA™), which delivers intent-based networking solutions and services that turn network traffic data into actionable insights. It helps customers make business decisions faster, mitigate more security threats, and manage the unprecedented scale of connected devices and services more easily.

With the 8.5 release, it has never been easier for customers to automate and manage their networks. The 8.5 release delivers on three key pillars of Cisco DNA: cloud service management with Cisco DNA Center, automation with Software-Defined Access (SD-Access), and readiness for Analytics and Assurance. New features include integration with Cisco DNA Center, which offers centralized, intuitive management. Additionally, SD-Access introduces the industry's first policy-based automation solution from enterprise edge to the cloud. SD-Access provides identity-based policy and segmentation and a single network fabric, as well as insights and telemetry.

Primary Features in Release 8.5

- **Cisco DNA Automation and Assurance:** Automation offers simple, out-of-the-box deployment based on best-practices, while Assurance enables you to accurately identify and diagnose issues as well as guarantee reliable connectivity and the performance of your overall network. Cisco DNA Center is a management tool that enables customers to experience the benefits of Automation and Assurance across the whole network, including wireless, switches, and routers. Cisco Apple Phase 2 Analytics is unique in the industry, with two-way information about the analytics from the wireless clients and the network to triangulate any connectivity and roaming considerations.

- **SD-Access Wireless:** A single, highly secure fabric (wired and wireless) that provides group-based policy and distributed Layer 2 roaming across the network, aligned with Cisco DNA Center for simplified provisioning.

- **Cisco 3504 Wireless Controller:** Support for Cisco's latest controller, which is Cisco DNA ready.

Platform Support

Cisco Wireless Release 8.5 is supported on the following platforms:

- Cisco Aironet access points running the Control and Provisioning of Wireless Access Points (CAPWAP) protocol
- Lightweight access points: Cisco Aironet 1600, 1700, and 1800 Series; 1810 OfficeExtend Access Point; 1810w, 1815i, 1815m, 1815t, and 1815w; 1830, 1850, 2600, 2700, 2800, 3500, 3600, 3700, 3800, 700, and 700W Series; and the 802, 803, and ASA5506W-AP702
- Outdoor and industrial access points: 1550 (128-MB versions), Cisco Aironet 1530, 1540, 1560, and 1570 Series, and Cisco Industrial Wireless 3700 Series
- Modules: AIR-RM3010L-x-K9= and AIR-RM3000M=
- Cisco 2504 Wireless Controller
- Cisco 3504 Wireless Controller
- Cisco 5500 (5508 and 5520) Series Wireless 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 (Cisco UCS® E-Series)
- Cisco Virtual Wireless Controller (vWLC): VMware ESXi, HyperV, and KVM
- Cisco Mobility Express
- Cisco Mobility Services Engine (MSE)
- Cisco Virtual Mobility Services Engine (vMSE): VMware ESXi and KVM

Management support for Release 8.5 will be delivered as part of Cisco Prime® Infrastructure Release 3.2 and Cisco Application Policy Infrastructure Controller Enterprise Module (APIC-EM) Release 1.5

Recommended release for production deployments

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

- Releases 8.0, 8.3, and 8.5 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

For additional details, including on early deployment releases, refer to the Guidelines for Cisco Wireless Software Release Migration Bulletin.

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 8.5.

Table 1. New Access Point and WLC Features

Feature	Description	Benefit
SD-Access Wireless	Software- Defined Access (SD-Access) is Cisco's next-generation architecture for the enterprise network, aligned with Cisco DNA.	Key benefits of SD-Access Wireless include simplified provisioning of your wired and wireless network, group-based policy for users and connected devices, and Layer 2 roaming across the network for distributed traffic. Learn more here.
Cisco DNA Center: Automation and Assurance	Cisco DNA Center offers centralized, intuitive management that makes it fast and easy to design, provision, and apply policy across your entire network environment.	Cisco DNA Automation simplifies network deployment by automating Cisco wireless and wired network design, policy, and provisioning. AireOS 8.5 is Cisco DNA Center Assurance ready, enabling controllers (3504, 5520, 8540) to stream telemetry data to Cisco DNA Center for proactive monitoring and troubleshooting. Additionally, AireOS 8.5 includes Apple Phase Analytics, where Apple device profiles, insights into the client's view of the network, and disconnect activities are reported. Cisco DNA Assurance benefits: Please refer to the **Cisco DNA Center Analytics and Assurance page** and **At-a-Glance**.
Cisco 3504 Wireless Controller	The 3504 wireless controller enables next-generation wireless networks for small to medium-sized enterprises and branch office deployments.	The 3504 wireless controller with Cisco Multigigabit Ethernet technology is a compact, highly scalable, service-rich, resilient, and flexible platform. It is optimized for 802.11ac Wave 2 performance, high scale, and enhanced system uptime. As a component of the Cisco DNA ready infrastructure, the 3504 controller fully supports SD-Access Wireless and Assurance capabilities. These controllers support all the same features as the existing 5520 and 8540 controllers.
APeX Extender Module Hardware Development Kit	The Access Point Extensions (APeX) Extender Module Hardware Development Kit (HDK) enables developers to quickly prototype applications based on standard off-the-shelf development platforms. APeX HDK connectivity is currently supported on the Cisco Aironet 3800 Series access points.	The APeX HDK is a Printed Circuit Board Assembly (PCBA), with an interface for connecting to supported Cisco Aironet access points. The board has mounting holes to accommodate several standard development platforms that work within the power budget of the board. The HDK can also be used as a standalone device without the resources of a host access point. Browse the contents of this guide for detailed specifications of the board.
Identity Pre-Shared Key (iPSK)	iPSK delivers per-client pre-shared keys for a given SSID.	The advent of Internet of Things (IoT) devices increases the threat surface exponentially. iPSK delivers per-client PSK for a given SSID and identity-based security without the overhead of 802.1X security, making it simple to onboard IoT devices on Cisco wireless networks with no security compromise.
CNAME support for pre-auth DNS access control lists (ACLs) (IPV4 and IPV6)	Support for domain ACLs to redirect pre-auth guest traffic for both IPv4 and IPv6 traffic.	This enhancement adds support for DNS responses with nested CNAME as well as responses where the CNAME to IP address resolution is across multiple responses.
Monitor mode support for Cisco Aironet 1800 and 1560 Series Access Points	Cisco Aironet 1800 and 1560 Series support for the Monitor operating mode.	Brings support for Monitor mode to the Aironet 1800 and 1560 Series access points. Monitor mode listens to all channels on the 2.4- and 5-GHz bands. Depending on the vendor's solution, the information gleaned from listening is used to analyze the state of wireless connectivity (typically signal strength), as well as to identify potential security threats.
Cisco FlexConnect® support for VLAN-based central switching on Wave 2 access points	VLAN-based central switching support for Aironet 802.11ac Wave 2 access points.	When an access point is operating in Cisco FlexConnect mode, VLAN-based central switching allows VLANs to switch between local and central termination based on authentication, authorization, and accounting (AAA) attributes. This applies to all Cisco 802.11ac Wave 2 access points.
Passpoint support on all 802.11ac Wave 2 access points	Passpoint support on all Cisco 802.11ac Wave 2 access points.	Brings Wi-Fi Alliance "Wi-Fi CERTIFIED Passpoint" support to all Cisco 802.11ac Wave 2 access points. For Passpoint details, please refer to **this document**.
Mobility Express user interface	The Mobility Express user interface adds support for Apple Fast Lane, Passpoint, TACACS+, access point	Mobility Express solution brings additional features into its GUI, with a focus on user workflows.

Feature	Description	Benefit
	conversion, and external antenna configuration.	

Feature	Description	Benefit
Mobility Express support for Network Address Translation (NAT)	Support for central NAT on a per-WLAN basis.	Mobility Express allows WLANs in which the primary access point acts as a gateway to the traffic coming from the clients connected to the specific WLAN and do NAT/PAT translation to the northbound traffic.
Cisco Aironet 1540 Series support	Cisco Aironet 1540 Series outdoor access points are high-performance radios in an extremely compact yet rugged outdoor package.	The Cisco Aironet 1540 Series outdoor access points are compact, lightweight outdoor access points ideal for enterprises and service providers. With support for 802.11ac Wave 2 wireless standards and Gigabit Ethernet wired connectivity in a rugged outdoor package, the 1540 Series can be powered by standard 802.3af Power over Ethernet (PoE) supplied by the switch. The 1540 is a 2x2 multiple-input multiple-output (MIMO) dual-radio access point with internal antennas and provides best-in-class performance in an easy-to-deploy package. The 1540 Series supports local, Cisco FlexConnect, Mobility Express, and mesh operational modes.
Client-aware Flexible Radio Assignment (FRA)	Aironet 3800 and 2800 Series FRA enhancements for increasing client density.	Client-aware FRA allows 3800 and 2800 Series access points to dynamically adjust the wireless network to match the density of the clients. For example, as a large auditorium fills up with meeting attendees, the access point detects the increased density and automatically adjusts the radios for high density. When the meeting ends, the access point returns each radio back to its initial role.

Cisco Prime Infrastructure 3.2

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 3.2 allows basic monitoring and management of Cisco Wireless Release 8.5 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 https://www.cisco.com/go/services.

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

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