



IQ Engine v10.8.5f Release Notes

New Features, Fixes, and Known Issues

9039242-14 Rev AA
August 2026



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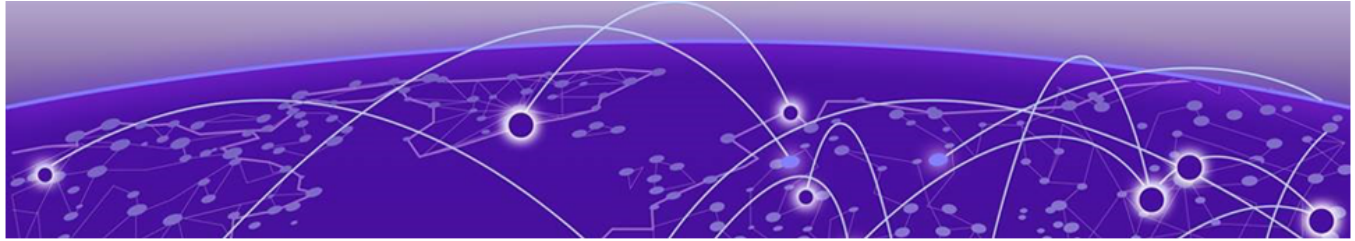
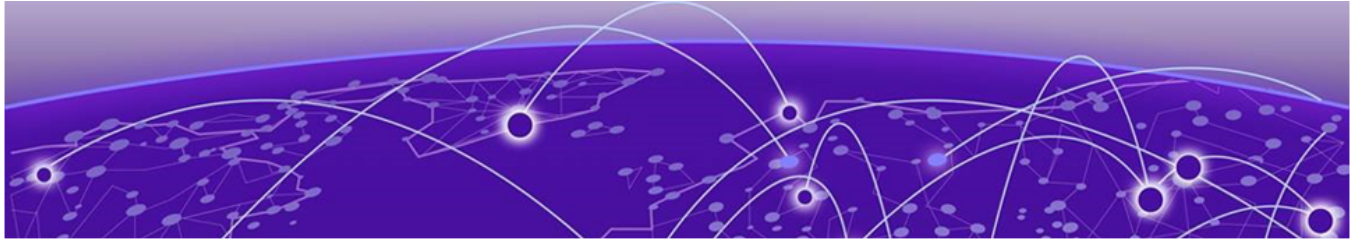


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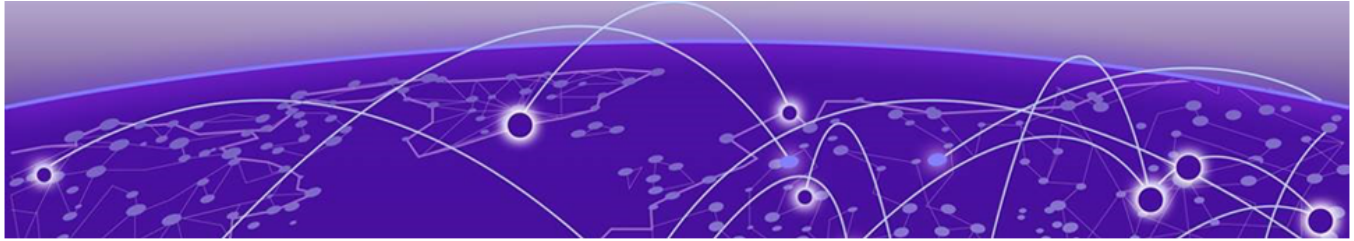
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Abstract

These release notes for ExtremeCloud IQ Engine version 10.8.5f cover new features, addressed issues, and known defects for Extreme Networks wireless access points managed via ExtremeCloud IQ 25.7.0 and later. Released in August 2026, version 10.8.5f introduces no new hardware or features, serving as the recommended alternative to 10.8.7 for deployments that do not require Multi-Link Operation (MLO) support. The release addresses eleven defects across AP4000, AP5010, AP5020, and AP510CX platforms, resolving kernel panics, random reboots triggered by 6 GHz radio scan processing and out-of-memory conditions, inaccurate TX/RX channel utilization reporting, port-based 802.1X PEAP authentication failures on Wi-Fi 6 access points, AeroHive File Server download failures, captive web portal redirection failures with ExtremeCloud IQ Site Engine NAC, and erroneous rate-limit command re-injection during complete configuration updates. Three known issues affect the Enhanced Neighbor Report (eNR) feature on AP5020 and AP5010 platforms, with CLI-based workarounds provided. The document targets network engineers and administrators with intermediate-to-advanced wireless networking proficiency.



Help and Support

If you require assistance, contact Extreme Networks using one of the following methods:

Extreme Portal

Search the GTAC (Global Technical Assistance Center) knowledge base; manage support cases and service contracts; download software; and obtain product licensing, training, and certifications.

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A forum for Extreme Networks customers to connect with one another, answer questions, and share ideas and feedback. This community is monitored by Extreme Networks employees, but is not intended to replace specific guidance from GTAC.

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- A description of the failure
- A description of any actions already taken to resolve the problem
- A description of your network environment (such as layout, cable type, other relevant environmental information)
- Network load at the time of trouble (if known)
- The device history (for example, if you have returned the device before, or if this is a recurring problem)
- Any related RMA (Return Material Authorization) numbers

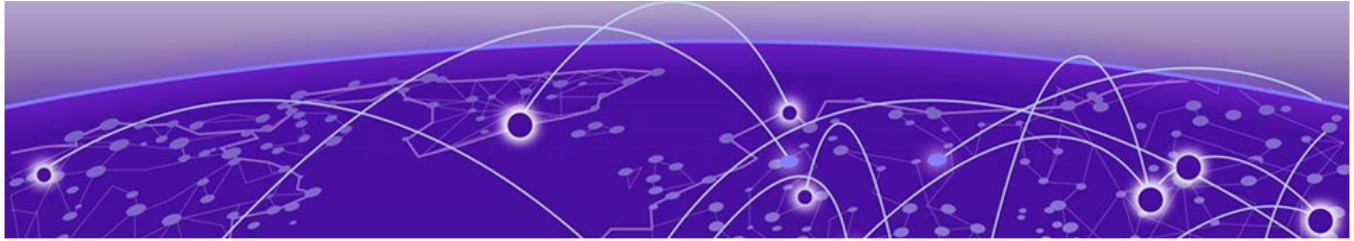
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General Release Information for Release 10.8.5f

Release Date

August 2026

New Hardware Support

There is no new hardware supported for Release 10.8.5f.

Hardware Platforms Support

- AP302W
- AP305C
- AP305CX
- AP305C-1
- AP410C
- AP410C-1
- AP460C
- AP460S6C
- AP460S12C
- AP510C
- AP510CX
- AP630
- AP650
- AP650X
- AP3000
- AP3000X
- AP4000
- AP4000-1
- AP4020
- AP4020FX
- AP4020X
- AP4060X
- AP5010

- AP5020
- AP5050D
- AP5050U

Management Platforms Supported

ExtremeCloud IQ 25.7.0 and later



Note

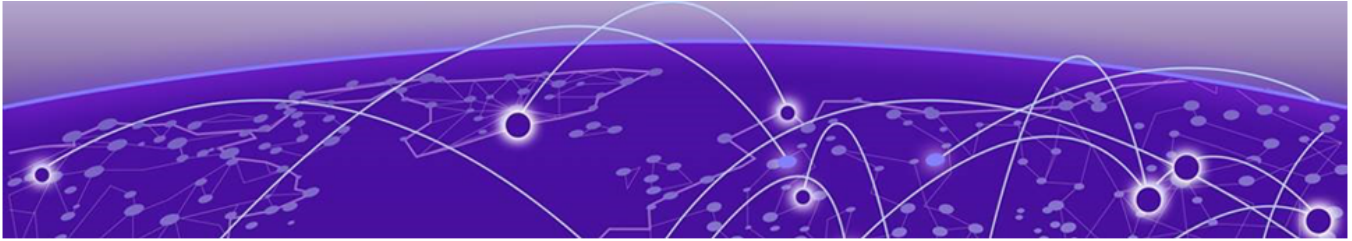
ExtremeCloud IQ Engine Release 10.8.5f is the alternative to 10.8.7 for deployments that do not require support for the Multi-Link Operation (MLO) feature.

Related Links

[New Features in Release 10.8.5f](#) on page 10

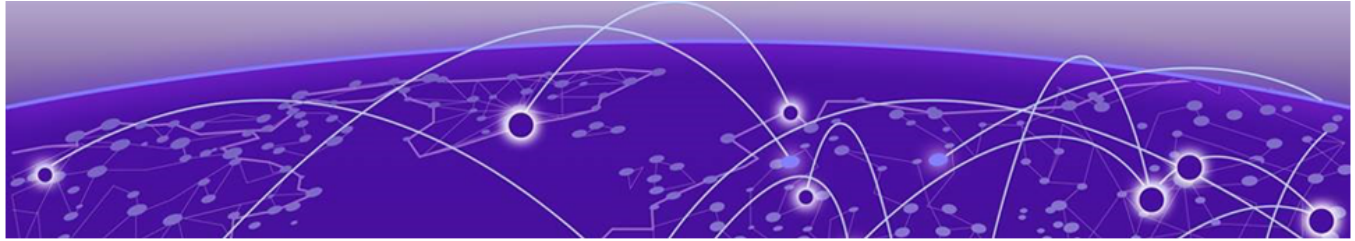
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New Features in Release 10.8.5f

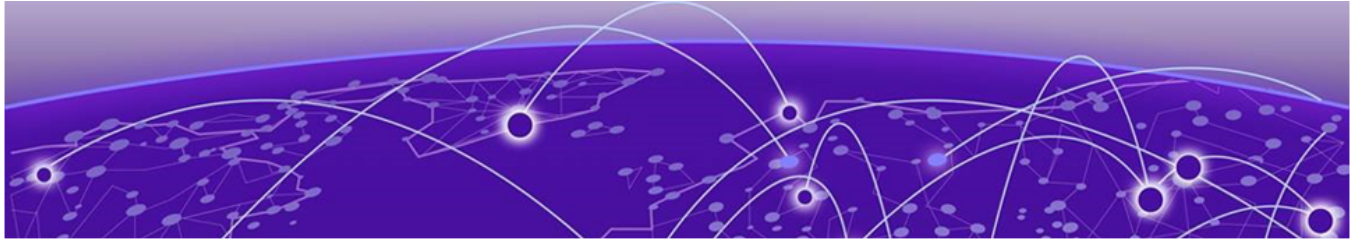
There are no new features for Release 10.8.5f.



Addressed Issues in Release 10.8.5f

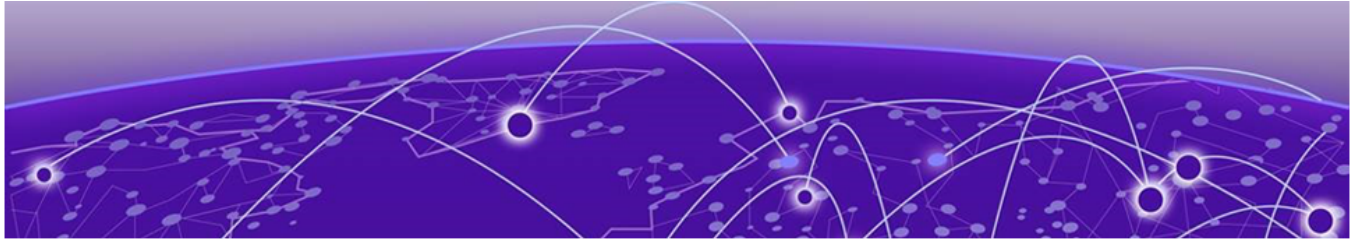
Issue ID	Description
CFD-17549 (03286721)	Addressed the issue where AP4000 access points running IQ Engine 10.8.7 rebooted with a kernel panic and logged the error <code>[wifi]: packet headroom is not big enough</code> .
CFD-17362 (03262604, 03290333, 03290859, 03281481)	Addressed the issue where AP5020 access points running IQ Engine 10.8.5c and using 6 GHz radio rebooted randomly.
CFD-17330 (03273228)	Addressed the issue where AP5020 access points running IQ Engine 10.8.5 and later displayed inaccurate running average TX and RX channel utilization percentages in the <code>show interface wifix</code> output when the interference map was enabled in the radio profile.
CFD-17265 (03275875)	Addressed the issue where AP4000 access points did not respond to directed probe requests for hidden Wi-Fi 6E (6 GHz) SSIDs, preventing clients from connecting to those SSIDs.
CFD-17183 (03243636)	Addressed the issue where port-based 802.1X authentication using PEAP was broken on 802.11ax (Wi-Fi 6) access points running IQ Engine 10.8.5 and later. This issue was a follow-up to CFD-16508, which addressed the same failure for EAP-TLS.
CFD-17065 (03264578)	Addressed the issue where AP4000 access points running IQ Engine 10.8.5 and later failed to download captive web portal pages and configuration or image files from the AeroHive File Server (AFS).
CFD-17060 (03256193)	Addressed the issue where AP5020 access points rebooted due to a firmware out-of-memory condition triggered during 6 GHz radio scan result processing. The reboot reason was reported as <code>hardware watchdog (suspected, possibly NMI)</code> .
CFD-17040 (03261495)	Addressed the issue where client connection history for time ranges longer than one day was not displayed in ExtremeCloud IQ. When selecting 2 Days, 7 Days, or any time range beyond 1 Day in Monitor > Clients for a device, the page displayed "No records found" even though client connections existed for that period.

Issue ID	Description
CFD-17017 (03263775, 03240101, 03245697, 03271580, 03289423)	Addressed the issue where AP5020 access points did not redirect clients to the captive web portal (CWP) when an external CWP was configured through ExtremeCloud IQ - Site Engine (NAC).
CFD-16606 (03247430)	Addressed the issue where performing a complete configuration update on AP510CX access points persistently re-added <code>rate-limit</code> commands to the running configuration, even though rate limiting was not configured in ExtremeCloud IQ. A delta update removed the commands, but a subsequent complete update restored them. The commands were not present in the default or backup configurations.
HOS-25766	Addressed the issue where AP5010 access points logged repeated kernel errors (<code>[wifi]: wll: wlc_bcn_prb_body: buffer too short</code>) when the Enhanced Neighbor Report (eRNR) feature was enabled on an SSID.



Known Issues in Release 10.8.5f

Issue ID	Description
CFD-17902	AP5020 access points experience a memory leak and crash when the Enhanced Neighbor Report (eNRN) feature is enabled.
HOS-18313	AP5010, AP5050D, and AP5050U devices will not boot when some non-Extreme micro-USB cables are connected. Note: Use the Extreme Networks certified ACC-WIFI-MICRO-USB console cable for all Extreme Networks access points. Other MICRO-USB console cables are not tested and certified by Extreme Networks. Workaround: Use an Extreme Networks-certified console cable, or plug in the cable after the AP boots.
HOS-25766	When Enhanced Reduced Neighbor Reporting (eNRN) is enabled on the AP5010, it causes repeated system log errors on the 5 GHz radio. This issue does not affect wireless connectivity, but generates unnecessary and excessive log noise. Workaround: Create a Supplemental CLI (sCLI) to disable Enhanced Reduced Neighbor Reporting (eNRN). no ssid <string> rrm neighbor-list ernr enable
HOS-25885	When Enhanced Reduced Neighbor Reporting (eNRN) is enabled on the AP5020, it can cause unexpected access point reboots. Workaround: Create a Supplemental CLI (sCLI) to disable Enhanced Reduced Neighbor Reporting (eNRN). no ssid <string> rrm neighbor-list ernr enable



Earlier 10.8 Releases

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The following sections provide information about changes for earlier IQ Engine 10.8 releases.

Release 10.8.1 New Features and Addressed Issues

Release Date

March 2025

New Hardware Supported

Release 10.8.1 adds support for the AP4020.

New Features in Release 10.8.1

Feature ID	New feature	Description
HOS-20155	AP4020: Imago Tag ESL Support	The AP4020 supports the VusionGroup ImagoTag ESL dongle.
HOS-20158	AP4020—Wi-Fi mesh support	IQ Engine 10.8.1 supports wireless backhaul mesh for the AP4020.
HOS-20690	AP5020: Wi-Fi 7 11BE—Support for UL MU-MIMO	IQ Engine 10.8.1 supports UL MU-MIMO for the AP5020.
HOS-20722	AP4020: Support for UL MU-MIMO	IQ Engine 10.8.1 supports UL MU-MIMO for the AP4020.

Feature ID	New feature	Description
HOS-20734	AP4020: Support for DL OFDMA	IQ Engine 10.8.1 supports downlink OFDMA for the AP4020.
HOS-20754	AP4020: Support for enhanced packet capture	The AP4020 supports Enhanced Packet Capture.
HOS-21715	AP5020: HotSpot 2.0 Configuration in IQ Engine support	IQ Engine 10.8.1 supports Hotspot 2.0 for the AP5020.
HOS-21793	AP5020: FA (Autosense) IQ Engine Default LLDP Handling	IQ Engine 10.8.1 LLDP is enabled by default for the AP5020.
HOS-22152	AP4020: Support 802.3az Green Ethernet	IQ Engine 10.8.1 supports Energy-Efficient Ethernet (EEE) or IEEE 802.3az for the AP4020. This feature allows physical-layer transmitters to consume less power during idle states or low data activity.
HOS-22381	AP4020—"RegreSSHion" Vulnerability in OpenSSH	CVE-2024-6387, also known as the "regreSSHion" vulnerability, is fixed.

Addressed Issues in Release 10.8.1

Issue ID	Description
CFD-13308	We increased the AUTH timeout value to give users sufficient time to enter the credentials for AP5000 and AP5020.
CFD-13309	We resolved an issue where the AP5020 sent probe responses with a basic rate of 24Mbps instead of the configured 36Mbps.
CFD-13374	We resolved an issue where AP5020 models with shut-down SSIDs were still broadcasting with Open Authentication, even after rebooting.

Release 10.8.2 New Features and Addressed Issues

New Hardware Support

There is no new hardware supported for Release 10.8.2.

Table 1: New features in 10.8.2

Feature ID	New feature	Description
HOS-18924	AP5020: Client mode support 2.4, 5G , 6G	IQ Engine supports Client Mode on 2.4 GHz, 5 GHz, & 6 GHz radios on the AP5020.
HOS-18929	AP5020: Support for Spectrum Analyzer 2.4G/5G	The 2.4 GHz & 5 GHz radios on the AP5020 support Spectrum Intelligence.

Table 1: New features in 10.8.2 (continued)

Feature ID	New feature	Description
HOS-20276	Enhancement to Reduced Neighbor Report (RNR) - AP3K, AP5010/5050	The AP3000, AP3000X, AP5010, AP5050U, and AP5050D support Enhanced Reduced Neighbor Report (eRNR). This feature adds advanced RNR capability and provides useful information to Wi-Fi 6E/7 clients by probing in the 2.4 and 5 GHz bands for Wi-Fi 6 SSID capabilities for the radio housed in the AP. The probe also looks for neighbor APs to which the client could eventually roam. The Co-Located bit in the RNR IE indicates that the 6 GHz radio is housed in the same AP. A value of 0 indicates a different BSSID for a neighboring 6 GHz radio.
HOS-20642	AP5020: Support for WPA3 Beacon Protection	The AP5020 supports Wi-Fi 7 Beacon Protection to protect Wi-Fi beacon frames from disruption or interference.
HOS-20751	AP4020: Support for AKM 24 for WPA3-Personal (SAE)	The AP4020 supports WPA-3 Personal (SAE) AKM 24.
HOS-20752	AP4020: Support for WPA3 Beacon Protection	The AP4020 supports Wi-Fi 7 Beacon Protection to protect Wi-Fi beacon frames from disruption or interference.
HOS-21357	AP4020: Support for Spectrum Analyzer 2.4G/5G	The 2.4 GHz & 5 GHz radios on the AP4020 support Spectrum Intelligence.
HOS-21359	AP4020: Client Mode supports 2.4, 5G, 6G	IQ Engine supports Client Mode on 2.4 GHz, 5 GHz, & 6 GHz radios on the AP4020.
HOS-21537	AP4020: Support for Essentials Sensing 4th radio	IQ Engine supports the 4th radio on the AP4020 reporting to Essentials.
HOS-21713	AP4020: Support for dynamic packet capture	The AP4020 supports Dynamic Packet Capture.
HOS-21979	Port Description (TLV) to LLDP Neighbor (AX & 4000)	We added the "Port Description" to the #show LLDP Neighbor output in IQ Engine (AP305C, AP410C, AP460C, AP305CX, AP460S6, S12, and 4000)
HOS-22052	HotSpot 2.0 Configuration In IQ Engine for the AP4000	The AP4000 supports HotSpot 2.0.
HOS-22053	HotSpot 2.0 Configuration In IQ Engine for the AP4020	The AP4020 supports HotSpot 2.0.

Table 1: New features in 10.8.2 (continued)

Feature ID	New feature	Description
HOS-22078	Enable the FIPS feature for AP4020	The AP4020 supports Secure-Mode for GovRAMP-compliant RDCs.
HOS-22239	Report BLE Scan Results via HTTPS with Token Renewal for WiFi 6E	WiFi 6E APs support a token-based secure method of sending BLE Data to an HTTPS server.

Table 2: Addressed issues in 10.8.2

Issue ID	Description
CFD-12903 (03038362)	We resolved an issue where the error "^\-- unknown keyword or invalid input" occurred when using CLI Access from ExtremeCloud IQ.
CFD-12949 (03038743)	We resolved an issue where a vulnerability was detected for HTTP/HTTPS on APs running IQ Engine 10.7r3.
CFD-13238 (03056232)	We resolved a latency issue with the AP5010 running IQ Engine Release 10.7.3 or 10.7.5.
CFD-13524 (03074406)	We resolved an issue where local PPSK user groups caused the configuration audit for APs running IQ Engine Release 10.7.5 to report missing users.
CFD-13628 (03082265)	We resolved an issue where some APs in the same management VLAN flooded logs with "pmksa_cache_auth_add". The issue occurred with the 11r feature enabled in ExtremeCloud IQ, when an 11r-supported client connected or disconnected. This issue is fixed in Release 10.8.2 by enabling the log only when debug auth is on.
HOS-22363	We resolved an issue where packet captures for an AP4020 running IQ Engine 10.8.1 using the Enhanced Packet Capture tool in ExtremeCloud IQ did not include beacon frames.
HOS-22445	We resolved an issue with the AP4020 and ADSP-sensor mode and BSS/air-termination, where the sensor successfully sent DeAuth packets, and errors occurred after a few hours.
HOS-22670	We resolved an issue with the error: Check certificates and key files failed. For IQ Engine Release 10.8.2, we strongly recommend updating your certificates to use cryptographic keys of at least 2048 bits with a widely accepted strong algorithm.

Release 10.8.2a New Features and Addressed Issues

New Hardware Support

There is no new hardware supported for Release 10.8.2a.

New Features in Release 10.8.2a

There are no new features in this release.

Addressed Issues in Release 10.8.2a

This patch release resolves an issue for the AP4020 and AP5020 access points, where the ACSP (RRM protocol) could select the same 6 GHz channel as a neighboring access point.

Release 10.8.3 New Features and Addressed Issues

New Hardware Support

There is no new hardware supported for Release 10.8.3.

New Features in 10.8.3

Feature ID	New feature	Description
HOS-21750	Wi-Fi 7 Platforms - Enhancement to Reduced Neighbor Report (RNR)	Enhanced Reduced Neighbor Report (RNR) provides improved roaming for 6 GHz clients.
HOS-22323	Fabric-Attach (Autosense) IQ Engine new Default LLDP Handling (AP302W, AP305C, AP410C, AP460C, AP510C)	IQ Engine 10.8.3 enables LLDP for the AP302W, AP305C, AP410C, AP460C, and AP510C by default.
HOS-22984	Fabric-Attach (Autosense) IQ Engine new Default LLDP Handling (AP4000)	IQ Engine 10.8.3 enables LLDP for the AP4000 by default.

Addressed Issues in 10.8.3

Issue ID	Description
CFD-13644 (03082327)	We resolved an issue where ExtremeCloud IQ and CLI displayed different values for the AP5020 WiFi2 channel width.
CFD-13950 (03056147)	We resolved an issue where ExtremeCloud IQ did not reflect a change in VLAN/Subnet in "show int usb0".
HOS-22705	We resolved an issue where the AP4020 crashed when using Spectrum Intelligence on WiFi0 (2.4 GHz).
HOS-22838	We increased the allocated memory for 3-radio access points (AP4000, AP4000U, AP4020, AP5010, AP5020, AP5050D, AP5050U) from 20 Mb to 64 Mb. This increase resolves issues reported in CFD-13612.

Issue ID	Description
HOS-22874	We implemented a fix to add 6G neighbors (different SSID) with ERNR enabled to all 2.4G and 5G BSS with ERNR enabled.
HOS-22959	We resolved an issue where an L7 crash occurred on the AP4020 with the AVC (ZOOM) application.
HOS-22967	We resolved an issue where IDM authentication (Enterprise and PPSK) failed on FIPS-enabled APs.
HOS-22982	We resolved an issue where parsing certificates and key files failed on the AP5020.
HOS-23131	We resolved an issue where the IDM Certificate failed to apply on AP3000, AP5010, and AP5050 devices. We strongly advise that you upgrade your certificates to use cryptographic keys of at least 2048 bits with a widely accepted strong algorithm.

Release 10.8.4 New Features and Addressed Issues

New Hardware Support

Release 10.8.4 introduces support for the following new hardware:

- AP4020FX
- AP4020X
- AP4060

New Features in 10.8.4

Feature ID	New feature	Description
HOS-20013	AP5020 to AP5020 WiFi mesh support for WDO	The AP5020 supports mesh/wireless bridge on 2.4 GHz, 5 GHz, and 6 GHz.
HOS-21281	Change Primary Default IQE Public DNS (Including Factory Images)	OpenDNS became unavailable in certain countries and territories. Therefore, we changed the primary public DNS for IQ Engine from OpenDNS to Cloudflare (1.0.0.1). The secondary public DNS entry for IQ Engine is still OpenDNS (208.67.220.220). This change applies to the following models: AP3000, AP3000X, AP4020, AP4020X, AP4020FX, AP5010, AP5020, AP5050D, and AP5050U.
HOS-21553	IQ Engine Support for the AP4020FX Platform	IQ Engine supports the AP4020FX platform.
HOS-21554	IQ Engine Support for the AP4060X Platform	IQ Engine supports the AP4060X platform.
HOS-21556	IQ Engine Support for the AP4060 Platform	IQ Engine supports the AP4060 platform.

Feature ID	New feature	Description
HOS-21587	AP4020FX: Support for Indoor AFC	The AP4020FX supports Indoor AFC.
HOS-21810	Solum dongle support for WiFi 7 APs	The AP4020, AP4020X, AP4020FX, and AP5020 support the Solum dongle.
HOS-21811	Hanshow dongle support for WiFi 7 APs	The AP4020, AP4020X, AP4020FX, and AP5020 support the Hanshow dongle.
HOS-22600	Update Curl in IQ Engine—11ax and AP4000	IQ Engine for the 802.11AX APs and the AP4000 has been updated to address two CVEs: • CVE-2018-1000005 • CVE-2018-1000007
HOS-22626	Update the OpenSSH Version to the Latest (AX & 4K)	We strongly recommend that you upgrade OpenSSH to the latest available version. For more information, see CVE-2024-6387.
HOS-22811	AP4060/X: Add Outdoor Mode to Access Point (IQ Engine Only)	The AP4060 and AP4060X support outdoor AFC for 6 GHz standard power (IQ Engine only).
HOS-22858	IQ Engine: Standards-Based GRE Failover	IQ Engine supports a secondary Standards-based GRE IP Address. This feature introduces the new Failover IP Address field.
HOS-23199	Fabric Attach Redundancy Support	Fabric Attach for IQ Engine supports redundancy (red0) on AP3000, AP3000X, AP4000, AP4000U, AP4020, AP5010, AP5020, and AP5050D. Therefore, when a failover from Eth0 to Eth1 occurs, the failover maintains the VLAN to I-SID mapping.
HOS-23248	WBA OpenRoaming Support In IQ Engine—AP4020X support	The AP4020X supports the WBA OpenRoaming feature.
HOS-23332	AP4060/AP4060X for Outdoor AFC Support	The AP4060 & AP4060X support outdoor AFC (6 GHz Standard Power, for IQ Engine only).

Addressed Issues in 10.8.4

Issue ID	Description
CFD-13173 (03053176)	We resolved an issue where a scheduled scan did not run, even when a trigger condition existed.
CFD-13506 (03064391)	We resolved an issue where communication occurred between devices connected to an AP5020, with the Inter-station Traffic setting disabled.
CFD-13749 (03087413)	We resolved an issue where incorrectly displayed network health as 0/100 Poor .

Issue ID	Description
CFD-13977 (03094885)	We resolved an issue where AP302W devices configured for a maximum power drop of 3dB, were dropping by 11dB.
CFD-14176 (03101888)	We resolved an issue where ExtremeCloud IQ ignored the RADIUS VLAN attribute when using PPSK with MAC authentication and user profile classification.
CFD-14224 (03097693)	We resolved an issue where neighboring APs chose the same 5GHz DFS channel when the SDR profile was enabled.
CFD-14289 (03123431)	We resolved an issue where AP410C devices experienced random high CPU usage spikes.
CFD-14436 (02916216)	We resolved an issue where an AP5010 repeatedly experienced an Unable to handle kernel paging request at virtual address 000103f4aa00040b error.
CFD-14956 (03154832)	We resolved an issue where wifi0 radio went down for AP5020 devices upgraded to 10.8.3 and was restored after downgrading to 10.8.2a.
HOS-23136	We resolved an issue where beacon protection was not enabled for all 6GHz SSIDs. For example, if an SSID is on both the 5GHz and 6GHz bands and beacon protection is disabled on 5GHz, beacon protection is still mandatory for the 6GHz band.

Release 10.8.5 New Features and Addressed Issues

New Hardware Support

There is no new hardware supported for Release 10.8.5.

New Features in 10.8.5

Feature ID	New Feature	Description
HOS-23332	AP4060/4060X Outdoor AFC Support	Added Automated Frequency Coordination support for AP4060 and AP4060X access points operating in outdoor mode.
HOS-23092	AP4060/X Essentials Sensing 4th Radio Support	Introduced shared sensing support for 2.4 GHz and 5 GHz bands on the fourth radio to enable WIPS Essentials applications and ADSP on-premises functionality on AP4060/X platforms.
HOS-23079	AP4020FX Essentials Sensing 4th Radio Support	Introduced shared sensing support for 2.4 GHz and 5 GHz bands on the fourth radio to enable WIPS Essentials applications and ADSP on-premises functionality on AP4020FX platforms.

Feature ID	New Feature	Description
HOS-23062	AP4020X Essentials Sensing 4th Radio Support	Introduced shared sensing support for 2.4 GHz and 5 GHz bands on the fourth radio to enable WIPS Essentials applications and ADSP on-premises functionality on AP4020X platforms.
HOS-22905	OpenSSH Version Update	Updated OpenSSH to version 10.0p2 for AX and 4K series access points (platforms 302W, 305C, 410C, 460C, 510C, 4000) to address CVE-2024-6387 security vulnerability.
HOS-22811	AP4060/X Outdoor Mode Support	Added outdoor operational mode configuration capability for AP4060 and AP4060X access points, including support for outdoor omni-angle mount and outdoor fixed-angle mount deployment options.
HOS-22770	LLDP System Capabilities Enhancement	Enhanced LLDP neighbor information by adding system capabilities and enabled capabilities data to the LLDP/CDP Info EVENT, enabling improved network topology visibility and switch identification.
HOS-21556	AP4060 IQEngine Platform Support	Introduced IQEngine support for the AP4060 access point platform, including indoor and outdoor mode configurations.
HOS-21554	AP4060X IQEngine Platform Support	Introduced IQEngine support for the AP4060X access point platform with external antenna capability.

Addressed Issues in 10.8.5

Issue ID	Description
HOS-23697	Fixed an issue where AP5020 access points were missing power configurations for radios A, AN-HT20, and AC-VT80 in the Isle of Man (IM) country code. The compliance table has been updated to include the correct power settings for this region.
HOS-21883	Addressed the issue where AP5020, AP5000, AP4000, AP5050, and AP4060 access points exhibited low antenna power output when increasing transmit power settings. This affected multiple channel bandwidths (20MHz, 40MHz, and 80MHz) on the 5GHz band, where certain antennas showed significantly reduced power levels at higher configured power settings.

Release 10.8.5b New Features and Addressed Issues

New Hardware Support

There is no new hardware supported for Release 10.8.5b.

New Features in 10.8.5b

Feature ID	New Feature	Description
HOS-19952	Support for Packet Capture on Thread interface —AP5010	The Packet Capture tool supports the Thread Interface on the AP5010.
HOS-23474	Thread: Refactor commissioner start and stop	When the Thread Commissioner Start or Stop function is used, the commissioning operation applies at the building level rather than targeting individual device IDs. This change improves device onboarding in scenarios where the Thread network has become segmented, resulting in multiple isolated Thread network partitions.
HOS-23898	IQ Engine to Add MD4 for Legacy Supplicant Authentication	We added the MD4 cryptographic module back into IQ Engine to support backwards compatibility for legacy authentication, such as PEAP-MSCHAPv2, for both wired and wireless. This update resolves CFD-14824.

Addressed Issues in 10.8.5b

Issue ID	Description
CFD-15141 (03169486)	Fixed an issue where the 6th- and 9th-generation Apple iPad (MR7F2LL/A) failed to connect to a WPA3 SSID with 802.11r enabled on AP5010 running IQ Engine 10.8.3. The AP incorrectly processed iPad association requests, treating the WPA IE version as WPA2 and rejecting the RSN information element when 802.11r mobility domain information was present.
CFD-15234 (03176342)	Fixed an issue where the client snapshot report on AP5020 displayed SSID names as unrecognizable or corrupted symbols. The SSID name field in the DCD stats snapshot incorrectly populated with garbage values instead of the actual SSID string upon client association.
CFD-15356 (03177352)	Addressed the issue where AP5020 units running IQ Engine 10.8.2a reported a gradual increase in memory utilization from approximately 48% after reboot to up to 70% over the course of a week, along with FWTRAP-related reboots. The memory usage increase and FW trap crashes are resolved in IQ Engine 10.8.3a and later.
CFD-15385 (03172946, 03218917, 03225560)	Fixed an issue where Wi-Fi sub-interfaces were missing from the authentication host access point daemon (HAPD) interface list after an SSID un-bind and re-bind sequence or following a power outage. This caused security SSIDs to broadcast as Open SSIDs, or prevented Open SSIDs from assigning IP addresses to clients.

Issue ID	Description
CFD-15554 (03192730)	Fixed an issue where AP5020 and AP4020 units running IQ Engine 10.8.4 or 10.8.5 crashed with a kernel panic triggered by a NULL pointer dereference in the Broadcom Wi-Fi driver key management receive path (wlc_keymgmt_recvdata). The crash also occurred in the ADSP sensor receive path (ah_adsp_sensor_rx) under IQ Engine 10.8.5.
CFD-15607 (03193484, 03237962)	Fixed an issue where AP4020 units running IQ Engine 10.8.3a or 10.8.4 rebooted randomly because an attempt to read from an unreadable memory address in the wlc_keymgmt_recvdata path of the Broadcom WLAN driver cause a kernel panic.
CFD-15648 (03175771)	Fixed an issue where Zebra MC3300x and WT6000 handheld scanners periodically disconnected from AP510CX. The ARP requests from the scanners were held in the AP beyond the tolerance threshold of the client before being forwarded, causing the client to interpret the lack of response as a connectivity failure and disconnect.
CFD-15695 (03201360)	Fixed an issue where AP5010 units running IQ Engine 10.8.3a rebooted frequently with a kernel panic triggered by a NULL pointer dereference in the wipsk (WIPS) module during ADSP air termination processing. The crash occurred in the Fpm_ThreadFunc path when the ADSP sensor transmitted deauthentication frames to rogue clients.
CFD-15764 (03190727)	Fixed an issue where the lighttpd web server process on AP5020 units running IQ Engine 10.8.2a and 10.8.5 failed to restart automatically after a crash, causing the Guest Essentials captive portal to stop functioning. TCP traffic interception was also disrupted due to TCP RST packets. A factory reset was required to restore portal functionality.
CFD-15804 (03209689)	Fixed an issue where AP410C-1 units running IQ Engine 10.8.4 and 10.8.5 crashed with a kernel panic in the ah_cwp_vector function within the forwarding engine (fe) module. The crash occurred during ingress packet processing and affected multiple APs across deployments.
CFD-15819 (03208411)	Fixed an issue where AP5020 units did not apply the configured 2.4 GHz minimum basic rate (MBR) after any type of reboot, including factory reset. The AP broadcasted legacy 802.11b rates (1, 2, 5.5, 11 Mbps) despite the running configuration reflecting the correct MBR settings. A Delta update or CLI push was required to enforce the correct rates in the current boot cycle.
CFD-15880 (000131745)	Fixed an issue where the SNMP process on AP5020 units running IQ Engine 10.8.2a failed and generated core dumps within hours of a complete configuration push. Rebooting the AP temporarily restored SNMP functionality, but the process continued to fail intermittently.
CFD-15948 (03202131)	Addressed the issue where Windows clients failed to connect to a WPA3 SSID on AP410C running IQ Engine 10.8.5, while macOS clients connected successfully. The issue persisted even with 802.11r disabled and with updated Windows Wi-Fi drivers. Enabling WPA2 as a workaround restored client connectivity.

Issue ID	Description
CFD-15960 (03220254)	Fixed an issue where AP5020 units running IQ Engine 10.8.4 and 10.8.5 rebooted due to firmware (FW) trap events, primarily TRAP type 0x7, and non-maskable interrupt (NMI)-triggered hardware watchdog resets. The issue affected approximately 6 out of 100 APs in the deployment.
CFD-16013 (03223115, 03231632)	Fixed an issue where Windows 11 clients failed to authenticate to an 802.1x SSID when the AP acting as the RADIUS server ran IQ Engine 10.8.5. The client connected successfully on IQ Engine 10.8.3 and 10.8.4. Other client operating systems such as Android and iOS were unaffected.
CFD-16064 (03223727)	Fixed an issue where Wi-Fi clients intermittently failed to obtain a DHCP IP address when connecting to a Guest Essentials SSID on AP5020 running IQ Engine 10.8.5. The forwarding engine dropped DHCP Discover packets with a "dhcp: blocked, drop pak" error. The issue did not occur on IQ Engine 10.8.2a.
CFD-16085 (03225809)	Addressed the issue where the active client count displayed in XIQ under Manage > Devices did not match the actual client count reported by the AP CLI. The discrepancy occurred randomly across APs in environments with mixed XIQ-SE and standard AP data sources.
CFD-16150 (03227182)	Fixed an issue where the weak SNR probe request suppression feature did not function on AP5020 running IQ Engine 10.7r5 and later, including 10.8.3 and 10.8.5. Clients with an SNR below the configured suppression threshold were still permitted to associate. The feature worked correctly on IQ Engine 10.7.3. The root cause is related to a conflict with the dynamic capture function.
CFD-16261 (03234068)	Fixed an issue where AP5020 units continued to broadcast beacon and probe response frames for SSIDs that were in a shutdown state during the ACSP channel selection process. Clients associated with the shut-down SSID received an IP address of 0.0.0.0 and could not complete the connection process.
HOS-22918	Fixed an issue where iPhone 16 failed to roam with WPA3 FT-SAE+beacon protection (5ghz/6ghz) configured on AP5020 and AP4020 APs.
HOS-24087	Fixed an issue where AP3000 and AP5000 series clients failed to connect to the AD server.

Release 10.8.5c New Features and Addressed Issues

New Hardware Support

There is no new hardware supported for Release 10.8.5c.

New Features in 10.8.5c

There are no new features for Release 10.8.5c.

Addressed Issues in 10.8.5c

Issue ID	Description
CFD-15343 (03178845)	Fixed an issue where user profile/VLAN assignment could remain incorrect after a username change (user versus machine authentication) by redoing reassignment instead of using stale roaming-cache data.
CFD-16019 (03213922)	Fixed ECWP fallback roaming where the AP could send a disassociation during client reassociation by removing vendor driver logic that initiated disassociation during TX validation (multicast L3 roaming scenarios).
CFD-16175 (03230588)	Fixed AP5020 upstream QoS rate limiting not being enforced by ensuring the FE correctly detects QoS-flagged packets and applies the configured per-client limit.
CFD-16508 (03220996, 03243636)	Fixed wired 802.1X supplicant authentication failures (EAP-TLS) after an OpenSSL upgrade by loading/parsing the private key in the application and attaching it directly to the SSL object.
HOS-23531	Fixed a defect with 802.11w/MFP mode configuration.
HOS-23898	Fixed a backwards compatibility issue for legacy authentication (such as PEAP-MSCHAPv2) for both wired and wireless (related: CFD-14824) by adding the MD4 cryptographic module back into IQ Engine.

Release 10.8.5d New Features and Addressed Issues

New Hardware Support

There is no new hardware supported for Release 10.8.5d.

New Features in 10.8.5d

There are no new features for Release 10.8.5d.

Addressed Issues in 10.8.5d

Issue ID	Description
CFD-17073 (03266411, 03267150, 03269930)	Addressed the issue where the self-signed TLS certificate used for AP management access over HTTPS (AP Web UI) was nearing expiration. The certificate was renewed as a source code fix. The certificate is not used by ExtremeCloud IQ or for captive web portal (CWP) access.
CFD-17057 (03256706)	Addressed the issue where the captive web portal did not display for clients connecting to an SSID with HTTP/HTTPS redirect enabled.
CFD-16706 (03250843)	Addressed the issue where the authentication process on AP410C devices running IQ Engine 10.8.6 failed when memory usage gradually increased beyond 20 MB.

Issue ID	Description
CFD-16517 (03240349, 03241206)	Addressed the issue where refreshing or navigating the AP Web UI caused a CGI 500 Internal Error and restarted the php-cgi process on APs running IQ Engine 10.8.5 and 10.8.6.
CFD-16510 (03237962)	Addressed the issue where AP5010 devices running IQ Engine 10.8.6 failed with a system core dump when Fine Timing Measurement (FTM) was enabled.
CFD-16228 (03231996)	Addressed the out-of-memory issue that caused AP460C and AP460S6C devices to fail after approximately 80 days of uptime.
CFD-16073 (03224570)	Addressed the issue where AP4000 devices experienced repeated kernel panics, including hung task failures and NULL pointer dereferences, during QoS packet processing under high traffic and client roaming conditions.
CFD-14035 (03098163)	Addressed the issue where SNMP polling stopped working on AP3000 after an AP reboot in environments that also use ExtremeCloud IQ Site Engine. After rebooting, ExtremeCloud IQ Site Engine displayed the AP as disconnected and SNMP polling failed.
HOS-25318	Addressed the issue where pushing a delta configuration that changes the radio profile from ExtremeCloud IQ caused a kernel panic and AP reboot on AP5010 devices running IQ Engine 10.8.5b when FTM clients were actively performing ranging operations.
HOS-25266	Addressed the issue where pushing a delta configuration that changes the radio profile from ExtremeCloud IQ caused a firmware trap and AP reboot on AP5020 and AP4020 devices. The issue occurred in both directions of the radio profile change.
HOS-25249	Addressed the issue where AP5020 devices failed with a kernel panic caused by Wi-Fi driver log flooding under high client load conditions.
HOS-24991	Addressed the issue where clients associated with an SSID configured for Management Frame Protection (MFP/802.11w) were disconnected when forged deauthentication frames were sent by an attacker or a neighboring WIPS. The issue affected AP510C, AP650, and AP460S6C devices running IQ Engine 10.6.7.

Release 10.8.5e New Features and Addressed Issues

New Hardware Support

There is no new hardware supported for Release 10.8.5e.

New Features in 10.8.5e

Feature ID	New Feature	Description
HOS-24798	Thread interface uptime added to CLI output	The <code>show interface thr0</code> command displays the Thread interface uptime. Previously, uptime was only available using the <code>int thr0 ot-ctl "uptime"</code> command.
HOS-24771	CLI support for configuring maximum Thread child devices	The <code>interface thr0</code> CLI supports the <code>childmax</code> command to configure the maximum number of Thread child devices that an AP can support as a parent. The valid range is 1 to 64, with a default of 32.
HOS-23674	NAT64 mapping table size increased	The NAT64 mapping table size is increased from 254 to 1024 entries to support Thread networks with more than 254 child devices. The NAT64 CIDR configuration in OTBR and the Thread startup script is updated accordingly.
HOS-23474	Thread commissioner start and stop follows the Leader role	To ensure that each partition in a partitioned Thread network has an active commissioner, the Thread commissioner process starts and stops based on the Thread role of the AP. When ExtremeCloud IQ sends the joiner table and the commissioner start command to all APs configured with a Thread IoT profile, only the AP that holds the Thread Leader role starts the commissioner process. If the AP loses the Leader role, the commissioner process stops.
HOS-23268	OTBR log messages suppressed on CLI session socket close	The OTBR agent no longer generates warning log messages when a CLI session socket is closed by the peer. Previously, messages such as <code>Failed to write CLI output: Broken pipe</code> and <code>Daemon read: Connection reset by peer</code> were logged repeatedly at log levels 3 and 4, adding significant noise to log output.
HOS-19952	Packet capture support on the Thread interface for the AP5010	Packet capture is now supported on the Thread interface (<code>iotgw</code>) of the AP5010. The capture point is the <code>iotgw</code> interface, which is the end of the virtual Ethernet pair exposed in the default Linux namespace.

Addressed Issues in 10.8.5e

Issue ID	Description
HOS-25474	Addressed the issue where Thread dataset hex fields (network key, PAN ID, extended PAN ID, and mesh local prefix) were compared using a case-sensitive string comparison between the DCD configuration and the OpenThread Border Router (OTBR) stored values. When values differed only in case, the comparison incorrectly triggered a factory reset, causing Thread network instability. The network key is also no longer exposed in error logs.
HOS-25465	Addressed the issue where the log message <code>ah_dcd_show_fa_map_db: get fa map db on iotgw failed</code> was generated unnecessarily and suppressed it.
HOS-24904	Addressed the issue where the OTBR service performed a factory reset every time the Thread stack restarted after an RCP timeout. The factory reset caused the AP to generate a new extended MAC address and RLOC16, forcing all child devices and peer routers to reattach and causing temporary communication loss. The OTBR service no longer performs a factory reset on restart unless a dataset mismatch, credential corruption, or persistent RCP failure is detected.
HOS-24686	Addressed the issue where the log message <code>No need to update thread commissioner</code> was generated every 60 seconds when the Thread interface was disabled.
HOS-24677	Addressed the issue where connecting more than 10 Sleepy End Devices (SEDs) to a Thread network on the AP5010 caused <code>SPINEL_STATUS_NOMEM</code> errors from the OTBR RCP interface. Over time, all connected SEDs transitioned to the detached state.
HOS-24376	Addressed the issue where the NAT64 idle timeout was set to 30 seconds when the NAT64 mapping table size was increased to 1024 entries. The short timeout made it difficult to verify traffic crossing the Thread IPv6 mesh to the wired IPv4 network. The idle timeout is reverted to 7200 seconds.
HOS-24284	Addressed the issue where the Thread Border Router service could start before the <code>veth0</code> virtual interface had a valid IP address assigned. Starting the Border Router service without a valid <code>veth0</code> address could cause a traffic outage between the Thread IPv6 mesh and the off-mesh IPv4 wired network. The service now verifies that <code>veth0</code> has a valid IP address before starting, and logs an error if it does not.

Issue ID	Description
HOS-24047	Addressed the issue where multiple threads concurrently accessed the OTBR daemon UNIX domain socket (<code>/tmp/openthread-wpan0.sock</code>), causing race conditions. A mutex now serializes access to the OTBR socket across the monitor loop, CLI handlers, and data collectors.
HOS-23918	Addressed the issue where the Thread network data buffer, which has a maximum size of 254 bytes, could become full and prevent the commissioner service from starting and delay or block updates to advertised NAT64 prefixes. When the commissioner could not start, new devices could not join the Thread network. When NAT64 prefix updates were blocked, Thread devices lost access to IPv4 resources on the wired network.