What's New in Unleashed Version 200.9?

This application note describes the new features available in Ruckus Unleashed version 200.9. This document assumes familiarity with the Ruckus Unleashed product line and the features of earlier release version 200.8.

Highlights of this Release

Ruckus Unleashed is a controller-less Wireless LAN (WLAN) solution that enables Small-Medium Business (SMBs) to deliver an optimal wireless experience to their users at an affordable price.

Customers can expand their business to multiple locations seamlessly with Unleashed Multi-Site Manger. If the business scales even further, Ruckus Unleashed offers migration options to Ruckus ZoneDirector, SmartZone or Ruckus Cloud Wi-Fi.

Key features and enhancements in this release are:

Feature	Brief Description and Benefits
Wi-Fi 6 AP Models Support	Adding support for four new Wi-Fi 6 APs, R550, R650, R850 and T750.
Wi-Fi Calling and Wi-Fi Calling Troubleshooting Tool	Improves handling and overall quality of Wi-Fi Calling voice calls over Unleashed access points. When enabled, Unleashed performs additional identification, classification and marking of voice calls when the Wi-Fi calling feature is being used, and provides better voice quality by improving jitter, latency and roaming delays.
Wi-Fi 6 11ax AP Mesh	Adds mesh support for 11ax (Wi-Fi 6) APs.
Shared DPSK	Allows a single user to share a single DPSK across multiple devices. By default, each DPSK is unique and mapped to a single MAC address. This option allows the admin to override this rule and allow a user to share a single DPSK across multiple devices
ICX Backup/Restore via UMM	Provides options to perform a remote backup or restore of ICX switch configuration using Unleashed Multisite Manager (UMM).
WebSocket Support for UMM	Adds WebSocket support for UMM.
Factory Reset with Special Configuration Saved in CLI	Allows saving the current configuration via CLI command so that after a factory reset, the Master AP will come back up with the saved configuration rather than resetting all settings to factory defaults.

Enhancement of API "is-partial" Merge Function	Improves logic of "is-partial" API merge function for mobile app use.
Neighboring AP RF Strength Display	Provides additional information on neighboring APs in the web interface.
Secondary Preferred Master	Allows configuration of up to two preferred Master APs. In the event that the primary preferred Master AP is offline, the secondary preferred Master will assume the Master role. When the primary preferred Master returns online, it will resume the role again once it rejoins the Unleashed network.
Disable WLAN Service Master AP	Allows an admin to set the Master AP to focus on controller tasks. When enabled, the Master AP provides only controller functionality and does not provide WLAN services.
Channel Management Enhancement	Introduces a new automatic channel assignment algorithm using Background Scanning that optimizes for the number of APs and clients and provides user control over when channel changes should occur.
User-Defined Time Zones	Enables user to define custom time zones and Daylight Savings Time start and end times.
Additional AP information in AP Groups	Displays additional AP details in the AP Group section of the web interface.
New CommScope + RUCKUS brand logo	Updates logo to new CommScope branding.
160 MHz Channelization	Introduces 160 MHz channelization support for Wi-Fi 6 APs.
SpeedFlex Security Enhancement	Adds the ability to disable SpeedFlex access from any remote device.
Password Reminder	Displays a pop-up reminder message if the admin has not set up password recovery.

Supported AP models in Unleashed 200.9

Unleashed version 200.9.10.4.202 supports the following RUCKUS Wi-Fi access point models:

Indoor Wi-Fi Access Points	
Unleashed R850	Indoor Wi-Fi 6 Twelve Spatial Streams Access Point
Unleashed R750	Indoor Wi-Fi 6 Access Point with Multi-gigabit Backhaul for Ultra-Dense Device Environments
Unleashed R720	Indoor Wi-Fi 5 Access Point with Multi-gigabit Backhaul for Dense Device Environments
Unleashed R710	Indoor Wi-Fi 5 Access Point for Dense Device Environments
Unleashed R650	Indoor Wi-Fi 6 Six Spatial Streams Access Point
Unleashed R610	Indoor Wi-Fi 5 Access Point for Dense Device Environments
Unleashed R550	Indoor Wi-Fi 6 Four Spatial Streams Access Point
Unleashed R510	Indoor Wi-Fi 5 Access Point for Dense Device Environments
Unleashed H510	Wall-mounted Wi-Fi 5 Access Point for Dense Device Environments
Unleashed M510	Mobile Indoor Wi-Fi 5 Access Point with LTE Backhaul
Unleashed H320	Wall-Mounted Wi-Fi 5 Access Point and Switch
Unleashed C110	Wall-Mounted Wi-Fi 5 Access Point, Switch and Cable Modem
Unleashed R320	Indoor 802.11ac Wi-Fi Access Point

Outdoor Wi-Fi Access Points	
Unleashed T750	Outdoor Wi-Fi 6 Eight Spatial Streams Access Point
Unleashed T710 Series (T710, T710s)	Outdoor Wi-Fi 5 Access Point family with Fiber Backhaul
Unleashed T610 Series (T610, T610s)	Outdoor Wi-Fi 5 Access Point family
Unleashed T310 Series (T310c, T310d, T310n, T310s)	Outdoor 2x2:2 2.4/5GHz Wi-Fi 5 access point family with omni and directed antennae
Unleashed E510	Embedded 802.11ac Outdoor Wave 2 Wi-Fi AP with External BeamFlex+ Antennas

New Feature Details

Details for each new feature and enhancement in Unleashed 200.9 appears below.

1. **Support for WiFi 6 Access Points R850, R650, R550 and T750**

   Unleashed R850

   The Unleashed R850 is a dual-band Wi-Fi 6 Indoor access point with 12 radio chains, operating in 8x8:8 mode on the 5GHz band and in 4x4:4 mode on the 2.4GHz band, supporting peak PHY rates of 4.8Gbps (5GHz) and 1.148Gbps (2.4GHz). The R850 has one 5 Gbps PoE Ethernet port and one 1 Gbps port, onboard BLE and Zigbee radios for IOT applications, and a USB port for additional connectivity. The R850 will operate with PoH, uPOE and 802.3at power.

   Key Features

   - 5 Gbps Ethernet backhauling improves throughput for 12 radio chains.

   - Provides great performance with latest Wi-Fi standard, extended range and support for 1,024 clients.

   - Extends coverage with patented BeamFlex™ adaptive antenna technology while mitigating interference by utilizing multi-directional antenna patterns.

   - ChannelFly dynamic channel technology uses machine learning to automatically find the least congested channels. You always get the highest throughput the band can support.

   Unleashed R650

   The Unleashed R650 is a dual-band 4x4:4 indoor Wi-Fi 6 Access Point featuring one 2.5 Gbps Ethernet port that supports 802.3af/at Power Over Ethernet, one 1 Gbps (non-PoE) Ethernet port, onboard BLE/ZigBee, and a USB port for IoT applications. Designed for medium to high density venues, such as education, the R650 is a mid-high tier AP appropriate for many verticals such as carrier, enterprise, hospitality, health care, and retail deployments.

   Key Features

   - 2.5 Gbps Ethernet backhauling improves throughput for 8 radio chains.

   - Provides great performance with latest Wi-Fi standard, extended range and support for 512 clients.

   - Extends coverage with patented BeamFlex™ adaptive antenna technology while mitigating interference by utilizing multi-directional antenna patterns.

   - ChannelFly dynamic channel technology uses machine learning to automatically find the least congested channels. You always get the highest throughput the band can support.

   Unleashed R550

   The Unleashed R550 is a 2x2:2 802.11ax access point with integrated 2-port Ethernet interfaces designed for medium-density, small to mid-sized indoor enterprise WLAN applications. The R550 provides two 1 Gbps Ethernet port that supports 802.3af/at PoE, a USB port and onboard Zigbee/BLE radio support for IoT applications.

Key Features

- 1 Gbps Ethernet backhauling provides throughput for 4 radio chains.

- Provides great performance with latest Wi-Fi standard, extended range and support for 512 clients.

- Extends coverage with patented BeamFlex™ adaptive antenna technology while mitigating interference by utilizing multi-directional antenna patterns.

- ChannelFly dynamic channel technology uses machine learning to automatically find the least congested channels. You always get the highest throughput the band can support.

Unleashed T750

The Unleashed T750 is a carrier-grade dual-band concurrent 4x4:4 outdoor Wi-Fi 6 Access Point featuring an SFP/SFP+ fiber backhaul option, one 2.5 Gbps Ethernet port that supports 802.3af/at/bt Power Over Ethernet, one 1 Gbps (non-PoE) Ethernet port, onboard BLE/ ZigBee, and a USB port for IoT applications. Targeted for service provider outdoor WLAN applications, the T750 form factor allows mounting to outdoor street furniture, buildings and rooftops and inside pedestals.

Key Features

- 2.5 Gbps Ethernet backhauling improves throughput for 8 radio chains.

- Provides great performance with latest Wi-Fi standard, extended range and support for 1,024 clients and 802.3bt additional PoE support

- Extends coverage with patented BeamFlex™ adaptive antenna technology while mitigating interference by utilizing multi-directional antenna patterns.

- ChannelFly dynamic channel technology uses machine learning to automatically find the least congested channels. You always get the highest throughput the band can support.

2. **WebSocket Support**

Enhancement SSH tunnel to improve UMM performance using WebSocket

Customer Benefits

- Significantly increase scalability to support 10,000 Unleashed networks under single UMM (1 to 3 APs and 1 switch per network), no client data and reports

3. **Master AP Enhancements**
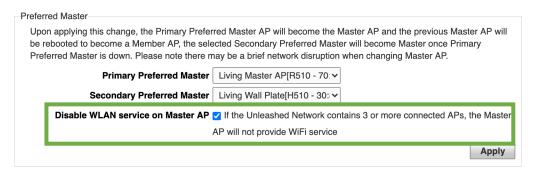
Disable Wi-Fi Service on Master AP

- Allows admin to set Master AP to focus on controller tasks
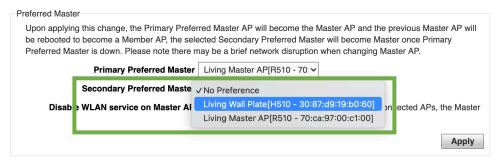- When enabled, Master AP provides only controller functionality and does not provide WLAN services

Preferred Secondary Master

- Allows configuration of up to two preferred Master AP
- In case of Master AP failure, preferred secondary Master will assume Master role
- Original Master AP resumes master role when it rejoins the Unleashed network

Customer Benefits

- These two features together facilitate Unleashed active-passive controller redundancy. Secondary Master when assumes master role would inherit the Disable Wi-Fi Service setting which allows this AP to serve same number of APs/Clients as the failed Master AP (if secondary master has same or better spec than failed master).

Preferred Master

Upon applying this change, the Primary Preferred Master AP will become the Master AP and the previous Master AP will be rebooted to become a Member AP, the selected Secondary Preferred Master will become Master once Primary Preferred Master is down. Please note there may be a brief network disruption when changing Master AP.

Primary Preferred Master [Living Master AP[R510 - 70 ⌄]

Secondary Preferred Master [Living Wall Plate[H510 - 30 ⌄]

Disable WLAN service on Master AP ☑ If the Unleashed Network contains 3 or more connected APs, the Master AP will not provide WiFi service

[Apply]

Preferred Master

Upon applying this change, the Primary Preferred Master AP will become the Master AP and the previous Master AP will be rebooted to become a Member AP, the selected Secondary Preferred Master will become Master once Primary Preferred Master is down. Please note there may be a brief network disruption when changing Master AP.

Primary Preferred Master [Living Master AP[R510 - 70 ⌄]

Secondary Preferred Maste ✓ No Preference

Disable WLAN service on Master AI Living Wall Plate[H510 – 30:87:d9:19:b0:60] onnected APs, the Master

Living Master AP[R510 – 70:ca:97:00:c1:00]

[Apply]

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4. **Channel Management Enhancement**

   Previously auto channel selection only uses inter Root AP interference as Inter-AP Interference measurement but did not take AP client load into account.
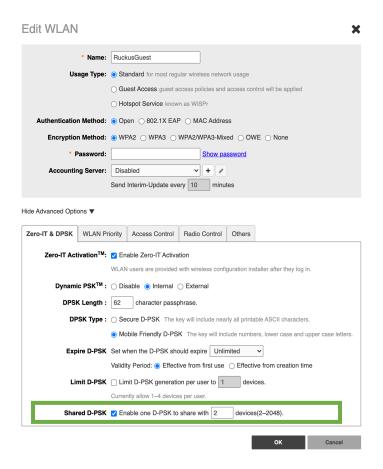
   Customer Benefits

   - This enhancement introduces a new automatic channel assignment algorithm using Background Scanning that optimizes for the number of APs and clients and provides user control over when channel changes should occur

5. **Shared DPSK**

   Allows a single user to share a single DPSK across multiple devices. By default, each DPSK is unique and mapped to a single MAC address.

   Customer Benefits

   - This option allows the admin to override this rule and allow a user to share a single DPSK across multiple devices
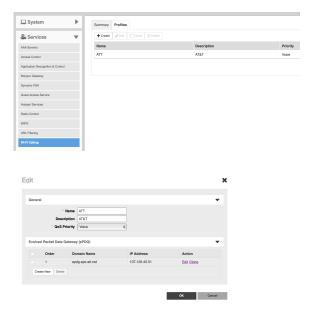
6. **Wi-Fi Calling and Wi-Fi Calling Troubleshooting Tool**

   This feature improves handling and overall quality of W-Fi Calling voice calls over Unleashed AP. When enabled, Unleashed performs additional identification, classification and marking of voice calls using Wi-Fi Calling feature.

   Customer Benefits:

   - It provides better voice quality by improving jitter, latency and roaming delays

7. **Password Recovery Reminder**

   Password Recovery allows admin to recover admin password using the easy to use self-service tool. However it is not mandatory to enable password recovery, this new feature adds reminder pop-up for admin to easy setup of the recovery setting.

   Customer Benefits:

   - Easier to recover lost password