

What's New in ZoneFlex Software Release 8.2

This application note describes the new features available in Version 8.2 of the Ruckus Wireless ZoneFlex family. This document assumes familiarity with the Ruckus ZoneFlex product line and the features of earlier releases including version 8.1.

Highlights of this Release

ZoneFlex software release 8.2 provides Enterprises, HotZone Operators and Managed Service Providers a higher performing, more reliable, and easier to deploy and use way of providing wireless access to diverse groups of users across multiple locations:

- ZoneFlex 7731 802.11n Outdoor Point-to-Point Bridge
- ZoneFlex 7300 Series 802.11n Access Points
- SmartCast 2.0 enhancements
 - Band Steering
 - Airtime Fairness
- ZoneDirector Smart/OS enhancements
 - Dynamic VLAN
 - AeroScout support
 - Dynamic PSK™ and Zero-IT for Windows 7 and Apple Mac platforms
 - Batch generation of Dynamic PSKs
 - Batch generation of Guest-passes
 - Email server authentication
- FlexMaster enhancements
 - SpeedFlex™
 - Enhanced client association graphs
 - Streamlined dashboard with 2-tier and 3-tier display
 - Disconnected AP-status graph
 - New reports
 - Report customization
 - FlexMaster backup

Supported Platforms

- FlexMaster version 8.2
 - ZoneDirector 1000 Smart/OS version 8.2
 - ZoneDirector 3000 Smart/OS version 8.2
 - ZoneFlex 2942 802.11g Access Point version 8.2
 - ZoneFlex 7942 802.11n Access Point version 8.2
 - ZoneFlex 7343 802.11n Access Point version 8.2
 - ZoneFlex 7363 802.11n Dual-band Access Point version 8.2
 - ZoneFlex 7962 802.11n Dual-band Access Point version 8.2
 - ZoneFlex 2741 802.11g Outdoor Access Point version 8.2
 - ZoneFlex 7762 802.11n Dual-band Outdoor Access Point version 8.2
 - ZoneFlex 7731 802.11n Outdoor Point-to-Point Bridge version 8.2
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1. Introduction to Ruckus Wireless ZoneFlex 7731 802.11n Point-to-Point Bridge

Capable of sustaining throughput of up to 100 Mbps over eight kilometers, the Ruckus Wireless ZoneFlex 7731 Point-to-Point Bridge introduces breakthrough price/performance to backhaul applications.

Featuring a 10/100/1000Mbps port and a purpose-built dual-polarized internal antenna, the ZoneFlex 7731 delivers unparalleled 802.11n throughput over a secure AES-encrypted link, with standard PoE (802.3af), providing rates of up to 300Mbps and minimal latency. Smart channel management automatically optimizes channel selection across the 5GHz spectrum.

Advanced remote Wi-Fi management provided with FlexMaster as well as support for both SNMP and TR-069 to simplify and automate deployment and ongoing administration.

30° beamwidth antenna design, LED-assisted aiming, in addition to built-in performance tools such as SpeedFlex™ make aiming a breeze. Units are pre-paired at the factory and can also be easily provisioned in staging site by connecting them via Ethernet (without the need to login to configure the bridge parameters)

Pole, ceiling or wall mountable, the ZoneFlex 7731 is designed for flexible deployment in hardened environmental conditions. IP-65 rated for water and dust, the ZoneFlex 7731 operates in temperatures ranging from -40°C - 65°C (-40°F - 149°F), leveraging a built-in heater.

A compact and light industrial design, in addition to a built-in antenna, simplifies physical deployment challenges and blends with the environment.

Customer Benefits

- Wire-like performance and reliability over miles
- Automated provisioning, lightweight design, and easy aiming keep things simple and reduce deployment costs
- Standard 802.3af support for painless deployment
- Enabling new business models providing reliable wireless broadband access with unparalleled throughput at a fraction of the cost and time over alternatives
- Cost-effective connectivity for widespread campuses and remote locations
- Ideal for latency sensitive applications
- Easy and affordable extension of indoor managed wireless LAN (WLAN) services to outdoor areas where cabling Ethernet is not possible
- Unified indoor/outdoor WLAN has never been simpler to deploy or manage

Availability

ZoneFlex 7731 802.11n Outdoor Point-to-Point Bridge software release 8.2

2. Introduction to Ruckus Wireless ZoneFlex 7300 Series 802.11n Access Points

The Ruckus Wireless ZoneFlex 7300 Series extends the ZoneFlex product line with the highest-performing, most affordable 802.11n access points in their class. Providing data rates up to 600 Mbps, the ZoneFlex 7300 Series includes the ZoneFlex 7343 single-band (2.4 GHz) 802.11n AP and the ZoneFlex 7363 dual-band (2.4/5 GHz concurrent) 802.11n AP. Designed in an ultra-slim enclosure, each ZoneFlex 7300 Series AP leverages Ruckus' patented BeamFlex smart antenna array to provide high-performing, reliable wireless coverage with up to 4 dBi of signal gain and 10 dB of interference rejection.

A part of the ZoneFlex product line, the ZoneFlex 7300 Series integrates seamlessly into layer 2 or layer 3 Enterprise networks. Deployable as a standalone AP or managed by Ruckus Wireless ZoneDirector controllers, the ZoneFlex 7300 Series provides Enterprise-class wireless networking and security features such as Ruckus SmartCast Quality of Service, VLAN support, guest networking, Smart Mesh Networking, WPA/WPA2 security, and Dynamic PSK.

The ZoneFlex 7300 Series makes it easy to deploy on ceilings and walls with 802.3af Power over Ethernet (PoE). A low profile enclosure blends into the background. With 3 Ethernet ports, the ZoneFlex 7300 Series can be used to bridge Ethernet devices like IP telephones and computers, making it ideal for Enterprise branch offices, in-room hotel deployments, retail establishments, and K-12 schools and colleges.

Customer Benefits

- Most affordable Enterprise-class 802.11n single and dual-band access points
- Wire-like performance and reliability
- Investment protection by supporting legacy clients over 2.4 GHz radio, 802.11n clients over 5 GHz (7363)
- Distributed forwarding architecture eliminates controller bottlenecks with 802.11n APs
- Standard 802.3af support for painless migration leveraging existing PoE switches
- Low profile blends into background and is easy to conceal under desks or counters
- Wired IP phones and computers can be easily bridged onto the network through the available Ethernet ports

Availability

ZoneFlex 7343 and 7363 802.11n Access Points with software release 8.2

3. Band Steering

With this release, Ruckus dual-band APs steer dual-band clients (802.11a/b/g or 802.11a/b/g/n), that are probing for the same SSID on both bands, to the 5GHz band for better utilization of the RF spectrum. In cases where the 5GHz signal (11a or 11n) is not optimal, clients are left on the 2.4GHz band where the signal tends to be stronger.

Customer Benefits

- Enhanced performance in high-density environments
- Increased end-user satisfaction and reduced IT overhead with seamless optimization - no client-side configuration required

Availability

ZoneDirector with Smart/OS software release 8.2, ZoneFlex 7962, 7762, and 7363 Access Points

4. Airtime Fairness

With this release, the Ruckus SmartCast QoS engine schedules clients' transmissions by airtime utilization and potential throughput, in addition to scheduling by the number of packets. This feature ensures that clients get a fair share of the air, allowing clients with higher potential throughput to fully realize the advantages of their capabilities and resulting in more efficient use of the air. By scheduling based on airtime, clients capable of faster transmission rates (such as 802.11n clients with links capable of 300 Mbps) will be able to transmit more packets than if they were only scheduled based on packets. This feature improves individual user experience for higher-rate clients, including legacy 802.11b or 802.11g clients at higher data rates, while improving overall network capacity. It is particularly useful in dense client environments or where client capabilities vary widely, such as in a classroom, auditorium, or other public venue.

With airtime fairness, a maximum per-queue airtime interval and airtime credits are defined. Clients are able to transmit as many packets during their interval so long as they have available airtime credits.

Customer Benefits

- Increased overall network capacity in dense or diverse client environment.
- Improved user experience for higher-rate clients.
- More efficient use of scarce air resource.

Availability

ZoneDirector and with Smart/OS software release 8.2

5. Dynamic VLAN

With this release, Ruckus Wireless supports RADIUS-based VLAN assignment to associated clients. As part of the 802.1x authentication process the Ruckus ZoneDirector can receive the client VLAN assignment from the RADIUS server. Clients on the same WLAN can be assigned to different VLANs based on their attributes on the corporate RADIUS server.

When Dynamic VLAN is enabled and client is associating via 802.1x to a WLAN on one of the ZoneDirector-controlled APs, the ZoneDirector will consider first the VLAN assignment for that user from the RADIUS server, then the Override VLAN configured for that AP, and lastly the VLAN configured on that WLAN.

Customer Benefits

- Improved security and network control
- Reduced management traffic (e.g. fewer beacons) increases overall RF efficiency
- Seamless integration with Network Access Control (NAC) infrastructure

Availability

ZoneDirector with Smart/OS software release 8.2

6. AeroScout Location Services Support

Ruckus Wireless now supports the AeroScout location services systems. Multiple Ruckus APs intercept the communication coming from the AeroScout WiFi active RFID tags and provide that information in addition to signal indication and timestamp to the AeroScout MobileView platform.

The AeroScout MobileView platform then delivers sophisticated mapping, rules-based alerting and reporting functions. With MobileView, users can utilize visibility to track, alert, manage and integrate from a single platform.

The AeroScout support does not require dedicated APs - the same Ruckus AP can continue to serve multiple WLANs and policy configurations while integrating with the AeroScout solution.

Customer Benefits

- Best-in-class asset tracking and monitoring leveraging the WiFi infrastructure for improved ROI

Availability

ZoneDirector with Smart/OS software release 8.2

7. Dynamic PSK™ and Zero-IT for Windows 7 and Apple MacOS Platforms

Starting with software release 8.2, Ruckus Wireless extends its patent-pending DynamicPSK and Zero-IT to support Windows 7 and Apple Mac platforms. Customers with Windows 7 and MacOS machines can now automatically provision the wireless settings (SSID and unique pre-shared key) with Dynamic PSK, while Ruckus's Zero-IT capability can also be used to provision other wireless authentication and security parameters (e.g. configuring SSIDs, 802.1x, ...). Support for Windows 7 and MacOS platforms is in addition to the previous support of Windows XP, Windows Vista, Windows Mobile, Windows CE, and Apple iPhone.

Customer Benefits

- Highly secure and easy to deploy wireless for Windows and Apple Mac machines

Availability

ZoneDirector with Smart/OS software release 8.2

8. Batch Generation of Dynamic PSKs

With this release, administrators can create a batch of Dynamic PSK keys for easier maintenance of multiple machines. These keys, provided via a CSV file, can then be added to any script designed to image an end device.

These Dynamic PSK keys can be assigned to a specific MAC address upon creation or handed out in a later point to a user/machine and be tied to the MAC address at that point.

Customer Benefits

- Scalable and simple deployment of secure WiFi
- Zero-touch deployment for end users
- Ability to integrate into existing device imaging for automated IT process

Availability

ZoneDirector with Smart/OS software release 8.2

9. Batch Generation and Print-out of Guest-passes

With this release, Ruckus Wireless provides the ability to create a batch of guest-passes. Administrators or authorized users (e.g. receptionists) can choose to create more than one guest-pass at a time by specifying a number or uploading a CSV file with usernames and optionally pre-defined keys. Generated guest-passes can then be printed at once or one-by-one selecting from existing printout templates.

Customer Benefits

- Scalable and easy-to-use guest-access solution for large-scale events (e.g. conferences)

Availability

ZoneDirector with Smart/OS software release 8.2

10. Email Server Authentication

With this release, ZoneDirector can authenticate with the organization email server when sending email alarms.

Customer Benefits

- Enhanced security and seamless integration with existing infrastructure

Availability

ZoneDirector with Smart/OS software release 8.2

11. SpeedFlex™ Performance Characterization on FlexMaster

From FlexMaster's UI, the network operator can now run point-to-point or end-to-end throughput measurements to detect the quality of the link. End points can span across multiple ZoneDirectors.

Customer Benefits

- Easy centralized troubleshooting and monitoring of wireless client performance
- Increased IT administrator productivity by eliminating the need to physically be where the wireless client is
- Enhanced end user satisfaction
- Improved capacity planning capabilities allows better planning for coverage and performance

Availability

FlexMaster with software release 8.2

12. Enhanced Client Association Graphs on FlexMaster

With this release, FlexMaster dashboard's client association graph can be drilled down from a ZoneDirector group all the way down to individual ZoneDirector, individual AP, and a specific WLAN. In addition, operators can now modify the time scale to review the result.

Customer Benefits

- Quick at-a-glance view of client load versus time
- Monitor trends for capacity management and network health
- Detailed drill down to individual devices and services for enhanced troubleshooting

Availability

FlexMaster with software release 8.2

13. Streamlined FlexMaster Dashboard with 2-tier and 3-tier View

Based on the network topology, the FlexMaster dashboard can now be customized for a 2-tier mode, where FlexMaster manages standalone AP or for a 3-tier mode, where it manages ZoneDirectors (which manage the APs). The view profile is saved for specific administrator.

Customer Benefits

- Improved usability by providing more user control on graphs and dashboards

Availability

FlexMaster with software release 8.2

14. Disconnected AP Status Graph on FlexMaster (in 3-tiers topology)

With this release, FlexMaster can display the number of Disconnected APs that are managed by ZoneDirectors on the dashboard. FlexMaster also adds two additional user control toggles for:

- Choice between ZoneDirector-managed APs (default) and ZoneDirectors
- Choice between Connected and Disconnected AP

Customer Benefits

- Customized graphs for critical data for enhanced monitoring and troubleshooting

Availability

FlexMaster with software release 8.2

15. New FlexMaster Reports

With the 8.2 release, FlexMaster provides additional reports displaying critical data such as:

- AP uptime (% of the time that the AP is up during the sampled period)
- Maximum client count
- Minimum client count
- Average RSSI level of associated clients
- Connected APs that do not have associated client during a specified period
- And more...

These reports can be generated in ad-hoc or periodic mode.

Customer Benefits

- Comprehensive reporting for better troubleshooting and capacity planning
- Easy detection of connected APs with incorrect settings for improved troubleshooting of faulty APs

Availability

FlexMaster with software release 8.2

16. FlexMaster Report Customization

FlexMaster now provides administrators the option to customize reports with defined parameters (columns). These reports can be saved, regenerated, and generated in ad-hoc or periodic fashion.

Customer Benefits

- Comprehensive and personalized reports for improved network analysis

Availability

FlexMaster with software release 8.2

17. FlexMaster Backup

With this release, FlexMaster provides an intuitive and automatic method for regular database backup. The current supported command line script is enhanced to allow administrators to activate the script via simple UI options. FlexMaster supports both backup and restore functions.

Customer Benefits

- Improved system reliability to meet service provider high tolerance requirement

Availability

FlexMaster with software release 8.2