



Ruckus Wireless™ ZoneDirector™ Version 9.12.2 MR2 Refresh 1

Release Notes

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Introduction

This document provides release information on ZoneDirector release 9.12.2, including new features, enhancements, known issues, caveats, workarounds, upgrade details and interoperability information for version 9.12.2.

NOTE: By downloading this software and subsequently upgrading the ZoneDirector and/or the AP to version 9.12.2, please be advised that:

- The ZoneDirector will periodically connect to Ruckus and Ruckus will collect the ZoneDirector serial number, software version and build number. Ruckus will transmit a file back to the ZoneDirector and this will be used to display the current status of the ZoneDirector Support Contract.
- The AP may send a query to Ruckus containing the AP's serial number. The purpose is to enable your AP to autonomously connect with a wireless LAN controller operated by your choice of cloud service provider. Ruckus may transmit back to the AP, the Fully Qualified Domain Name (FQDN) or IP address of the controller that the AP will subsequently attempt to join.

Please be advised that this information may be transferred and stored outside of your country of residence where data protection standards may be different.

Supported Country Codes

Refer to the Ruckus Wireless Price List for available country certifications.

What's New in This Release

Please refer to the Release Notes for prior releases for information on previously documented caveats, limitations, enhancements and resolved issues. These Release Notes can be found at:

<https://support.ruckuswireless.com/>

Supported Platforms and Upgrade Information

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Supported Platforms

ZoneDirector version 9.12.2.0.219 supports the following ZoneDirector models:

- ZoneDirector 1200
- ZoneDirector 3000
- ZoneDirector 5000

Access Points

ZoneDirector version **9.12.2.0.219** supports the following Access Point models:

- H500
- R300
- R310
- R500
- R600
- R700
- R710
- SC8800-S
- SC8800-S-AC
- T300
- T300e
- T301n
- T301s
- ZF7055
- ZF7321
- ZF7231-u
- ZF7341
- ZF7343

- ZF7352
- ZF7363
- ZF7372
- ZF7372-E
- ZF7441
- ZF7761-CM
- ZF7762
- ZF7762-AC
- ZF7762-S
- ZF7762-S-AC
- ZF7762-T
- ZF7781CM
- ZF7782
- ZF7782-E
- ZF7782-N
- ZF7782-S
- ZF7982

Upgrading to This Version

This section lists important notes on upgrading ZoneDirector to this version.

Officially Supported 9.12.2 Refresh Upgrade Paths

The following ZoneDirector builds can be directly upgraded to ZoneDirector build 9.12.2.0.219:

- 9.9.0.0.205 (9.9 GA release)
- 9.9.0.0.216 (9.9 GA refresh)
- 9.9.1.0.31 (9.9 MR 1 release)
- 9.10.0.0.214 (9.10 GA release)
- 9.10.0.0.218 (9.10 GA refresh)
- 9.10.1.0.59 (9.10 MR 1 release)
- 9.10.2.0.11 (9.10 MR 2 release)
- 9.12.0.0.336 (9.12 GA release)
- 9.12.1.0.140 (9.12 MR 1 release)
- 9.12.1.0.148 (9.12 MR 1 refresh)
- 9.12.2.0.101 (9.12 MR 2 release)
- 9.12.2.0.204 (9.12.2 Patch 1 release)

NOTE: If you do not have a valid Support Entitlement contract, you will be unable to upgrade ZoneDirector to this release. See *Administer > Support* page for information on Support Entitlement activation.

If you are running an earlier version, you must first upgrade to one of the above builds before upgrading to this release.

Enhancements and Resolved Issues

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This section lists new features and enhancements that have been added in this release and resolved issues from previous releases.

Resolved Issues

ZoneDirector

- Resolved an issue where the R710 PoE operating mode set via AP CLI would not survive a reboot when the AP was managed by ZoneDirector. [ER-3841]
- Resolved an issue that could cause repeated HTTP redirect failures due to an invalid HTTP header without HTTP version string. [ER-3822]
- Resolved an issue with Self Service Guest Pass validity periods. [ER-3749]
- Resolved an issue that could cause DNS spoofing to be incorrectly applied to all WLANs after a Social Media WLAN was created, which could prevent clients from connecting to a Standard Usage WLAN. [ER-3599]
- Resolved an issue that could result in Smart Redundancy failovers due to a “cluster connection_closure” error. [ER-3565]
- Resolved an issue with the station manager process on ZoneDirector 3000 consistently increasing memory usage, eventually leading to reboot. [ER-3275]
- Resolved an issue that could cause ZoneDirector to become unresponsive or reboot when autonomous WLANs were deployed and the connection between the AP and ZoneDirector was unstable or the AP or ZD was under heavy load. [ER-3157]
- Resolved an issue with sporadic GUI inaccessibility on ZoneDirector 5000 running 9.8.3. [ER-3080]
- Resolved an issue with Hotspot HTTPS redirection that could cause the redirection to fail when a Walled Garden was configured. [ER-2581]
- Resolved an issue where APs could become unreachable due to an IP address conflict when a 192.168.50.0 subnet was used. [ER-2338]

- Resolved an issue with the emfd process that could prevent the process from recovering after a process crash. [ZF-15378]
- Resolved a ZoneDirector 3000 issue that could prevent the system from recovering when the station manager process hangs. [ZF-15225]
- Resolved an issue with H500 Mesh APs losing heartbeats after mesh link disconnection. [ER-3853]
- Resolved an issue that could prevent the standby ZoneDirector from properly taking over control of the APs after a Smart Redundancy failover. [ER-3876]
- Recategorized the “user.warn kernel: ath_get_radio_stats” informational message as a debug message to prevent these messages from filling up customer support logs. [ER-3468]
- Resolved an issue where no Groups would be associated when running Test Authentication using Mac OS X LDAP open directory server for web authentication. [ER-3063]
- Resolved an issue where clients would be unable to pass traffic after roaming when Force DHCP is enabled on the WLAN. [ER-2900]
- Resolved a ZoneDirector 3000 issue that could cause the emfd process to hang when calling “fprintf()” in “get_QueueEvent” function. [ER-3926]
- Resolved a ZoneDirector 1200 issue that could cause the emfd process to hang on the active ZoneDirector in a Smart Redundancy pair. [ER-3880]
- Resolved an issue where SNMP queries would return incorrect speed values for the br0 Ethernet interface; SNMP would display 10Mbps when the actual speed was 1000Mbps. [ER-3904]
- Resolved a ZoneDirector 5000 issue that could result in rhttpd process restart. [ER-3822]
- Updated access point copyright messages from 2014-2015 to 2016. [ER-3898]
- Updated ZoneDirector max WLANs for H500 APs to eight per radio, to match the AP’s maximum. [ZF-15444]
- Corrected the ZoneDirector CLI help description for R710 power mode CLI commands. [ZF-15435]
- Resolved an issue that could cause the SNMP process to hang when conducting an SNMP walk on ZoneDirector. [ZF-15451]
- Resolved an issue where ZoneDirector would not accept both APs locked to the IL (Israel) country code and APs locked to the “Zone 2” country code at the same time. [ZF-15389]

- Resolved an issue that could potentially cause ARP entry leaks, which could eventually lead to ZoneDirector reboots. [ZF-15476]

Access Points

- This release adds support for 10 minute CAC for channels 120 through to 128 when the AP country code is set to an ETSI frequency domain. [ZF-14670]
- Resolved an issue with high CPU utilization on R600 APs. [ER-3716, SCG-48499]
- Values for Airtime stats are now retrievable from standalone AP as well as ZoneDirector SNMP queries. [ER-2845]
- Resolved an issue with R710 APs where, when the max clients for a WLAN was set to 512, the AP would incorrectly limit the max client count to two. [ZF-15243]
- Resolved an issue with AP reboots due to target inactivity. [ZF-14960]
- Resolved an R700 AP issue that could cause the AP to hang during roaming when the max number of clients was connected. [SCG-46498]

Caveats, Limitations, and Known Issues

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This section lists the caveats, limitations, and known issues in this release.

Ethernet Port Settings

ZoneFlex AP Ethernet ports can become disabled if half-duplex is forced on any port. [ID ER-1208, ER-1229]

This problem affects the following:

- APs: ZoneFlex 7341, 7343, 7363, 7761, and 7762

Workaround: Uplink switch ports must be set to 100Mbps auto-negotiation or 1000Mbps auto-negotiation.

R710 Known Issues

- No Syslog message is sent for 802.3af PoE mode change. [ZF-13160]
- R710 AP continues to request 25W power from the PoE switch even when the AP is configured to 802.3af mode. [ZF-14489]

Workaround: Disable LLDP Power-Via-MDI TLV on the PoE switch (this is only necessary if you wish to force the AP into 802.3af PoE mode on an 802.3at PoE+ switch for power budgeting reasons). On some switches, you may need to reset the AP connected Ethernet port/s to force the switch to renegotiate the new power level.

R710 Features Not Supported in This Release

Support for these features is planned for a future release.

- AirTime Fairness
- Smart Mesh
- Spectrum Analysis
- WLAN Prioritization

H500, R310, R500, R600, R700 and T300 Series APs

The following features are not included in this release:

- Airtime Fairness on 5 GHz radio
- Spectrum Analysis on 5 GHz radio
- WLAN Prioritization on 5 GHz radio

Ethernet Port Redundancy

- If both ZoneDirector ports are connected to the same switch, clients connected to a tunneled WLAN may become unable to access the Internet after eth0 goes down when the VLAN is not 1. This issue does not occur when the two ports are connected to separate switches. [ZF-13793]

SPoT Location Services

- When Location Services is enabled in an AP group, and the SPoT server configured in venue configuration is not reachable, other AP Groups may be unable to communicate with the SPoT server.

Workaround: Disable SPoT location service on any AP groups that are configured with unreachable venues. [ZF-9747, ZF-9750]

FlexMaster SSL Certificate

- As a result of the new FlexMaster SSL certificate into ZoneDirector, ZoneDirector 9.12.2.0 will NOT work with FlexMaster 9.12.1 and prior versions. Customers who use FlexMaster to manage ZoneDirector will need to upgrade FlexMaster to 9.12.2 to continue to be able to communicate with ZoneDirector 9.12.2.

ZoneDirector Controller and SmartZone Controller Interoperability

To ensure reliable network operations, it is recommended that ZoneDirector controllers and SmartZone controllers (SmartCell gateway and SmartZone controllers) not be deployed on the same IP subnet or in such a way as the controllers share the same DHCP address scopes and domain name servers (DNS) as there may be limitations or restrictions in AP controller discovery capabilities. An effective network segmentation strategy should be developed when ZoneDirector and SmartZone controllers co-exist in the same network.

Redeploying ZoneFlex APs with SmartZone Controllers

Note that a supported ZoneFlex AP configured to operate with ZoneDirector will require an upgrade to a compatible SmartZone controller approved software release prior to interoperating with a SmartZone controller. Once the AP firmware is updated, the AP will no longer be able to communicate with its old ZoneDirector controller. The AP must be reset to factory-default setting before attempting to configure the AP from the SmartZone controller.

NOTE: There are established ZD to SZ controller migration tools and procedures. Contact support.ruckuswireless.com for the latest available procedures and utilities.

ZoneFlex Release 9.9 and AP Standalone Mode and FlexMaster Managed Mode Operation

Starting January 1, 2015 the default image that ships from the factory on Ruckus access points (APs) will change from ZoneFlex Release 9.8.x to ZoneFlex Base Image Release 100.0.x. Most customers will not notice any difference in AP operation. The APs will continue to support standalone mode and FlexMaster managed mode operations and will automatically discover and connect to ZoneDirector or SmartZone controllers.

Beginning in ZoneFlex Release 9.9 and higher, the AP has a new behavior: once an AP connects to a controller the AP will no longer support standalone mode and FlexMaster managed mode operation after the controller completes the necessary AP firmware update during initialization.

An AP removed from a controller managed network may be restored to operate in standalone mode and FlexMaster managed mode operation by updating the AP firmware back to ZoneFlex Base Image Release 100.0.x or to a ZoneFlex-AP Release 9.8.x or lower.

These software images are available on the Ruckus support site, see support.ruckuswireless.com for more information.

AP Interoperability

APs with ordering number prefix 901- (example 901-T300-WW81), may now be supplied with an AP base image release 100.0. or higher.

The AP base image is optimized for controller-discovery compatibility to support all Ruckus Wireless controller products including ZoneDirector, SCG, vSCG, Smart-Zone and SAMS.

Once the AP discovers and joins a controller (for example ZoneDirector), the AP is updated to the compatible controller-specific AP firmware version. The updated AP firmware version becomes the factory-default image. The updated AP firmware version (for example ZoneFlex 9.9) will remain persistent on the AP after reset to factory defaults.

An AP configured with base image release 100.0 may be managed by the FlexMaster management tool or may be used in standalone controller-less operation if controller discovery is disabled on the AP web UI.

Client Interoperability

ZoneDirector and ZoneFlex APs use standard protocols to interoperate with third-party Wi-Fi devices. Ruckus Wireless qualifies its functionality on the most common clients.

The following client operating systems and browsers have been tested for compatibility with this release (for specific OS and browser limitations, including compatibility with Zero-IT, see subsequent sections below).

PC OS:

- Windows 7
- Windows 8
- Windows 8.1
- Windows 10
- Mac OS 10.8.5
- Mac OS 10.9.3
- Mac OS 10.9.4
- Mac OS 10.10
- Mac OS 10.11

Smart Phone/Tablet OS:

- iOS (6.x, 7.x, 8.0, 8.0.2, 8.1, 9.0)
- Android (4.0.4, 4.1.2, 4.4.2, 4.4.4, 5.0.1)
- Windows Phone (8, 8.1, 10)
- BlackBerry OS (10.1.0.4633, 10.3.0.1172)
- Kindle (7.4.9)
- Chrome OS

Officially Supported Browsers:

- Internet Explorer 10, 11
- Firefox 34 and later
- Chrome 39 and later

Not Officially Supported Browsers:

Safari, Dolphin, Opera Mini, Android Default, BlackBerry Default, etc.

Zero-IT Compatibility with Client Devices

Table 1. Zero-IT Compatibility

OS	WPA2 WLAN			802.1x EAP (external Radius Server)		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
iOS 6.x	Y	Y	N(ZF-2888)	Y	Y	N(ZF-2888)
iOS 7.x	Y	Y	N(ZF-2888)	Y	Y	N(ZF-2888)
iOS 8.0	Y	Y	N(ZF-2888)	Y	Y	N(ZF-2888)
iOS 8.0.2	Y	Y	N(ZF-2888)	Y	Y	N(ZF-2888)
iOS 8.1	Y	Y	N(ZF-2888)	Y	Y	N(ZF-2888)
iOS 9.0	Y	Y	N(ZF-2888)	Y	Y	N(ZF-2888)
MAC OS 10.8.5	Y	Y	Y	Y	Y	N(ZF-4699)
Mac OS 10.9.3	Y	Y	Y	Y	Y	N(ZF-4699)
MAC OS 10.9.4	Y	Y	Y	Y	Y	N(ZF-4699)
Mac OS 10.9.5	Y	Y	Y	Y	Y	N(ZF-4699)
Mac OS 10.10	Y	Y	Y	Y	Y	N(ZF-4699)
Mac OS 10.11	Y	Y	Y	Y	Y	N (ZF-4699)
Windows 7	Y	Y	Y	Y	Y	Y
Windows 8	Y	Y	Y	Y	Y	Y
Windows 8.1	Y	Y	Y	Y	Y	Y
Windows 10	Y	Y	Y	Y	Y	Y
Windows Phone 8	N (ZF-3478)	N (ZF-3478)	N (ZF-3478)	N (ZF-3478)	N (ZF-3478)	N (ZF-3478)
Windows Phone 8.1	N (ZF-3478)	N (ZF-3478)	N (ZF-3478)	N (ZF-3478)	N (ZF-3478)	N (ZF-3478)
BlackBerry OS 10.1	N (ZF-6402)	N (ZF-6402)	N (ZF-6402)	N (ZF-6402)	N (ZF-6402)	N (ZF-6402)
BlackBerry OS 10.3	N (ZF-6402)	N (ZF-6402)	N (ZF-6402)	N (ZF-6402)	N (ZF-6402)	N (ZF-6402)
Kindle 7.4.9	Y	Y	Y	Y	Y	Y
Android 4.0.4	Y	Y	Y	Y	Y	Y

Table 1. Zero-IT Compatibility

	WPA2 WLAN			802.1x EAP (external Radius Server)		
	Android 4.1.2	Y	Y	Y	Y	Y
Android 4.4.4	Y	Y	Y	Y	Y	Y
Android 5.0	Y	Y	Y	Y	Y	Y
Chrome OS	N (ZF-8076)	N (ZF-8076)	N (ZF-8076)	N (ZF-8076)	N (ZF-8076)	N (ZF-8076)

- Step 1: Download Zero-IT file
- Step 2: Install Zero-IT script
- Step 3: Automatically connect to the appropriate SSID

Client Interoperability Issues

- Zero-IT is not supported on Windows Phone 7/8/8.1 devices. [ZF-3478]
- Zero-IT is not supported on Blackberry OS devices. [ZF-6402]
- Zero-IT is not supported on Chrome OS devices. [ZF-8076]
- iOS clients cannot connect to the Zero-IT WLAN automatically. Users must reconnect to the target WLAN after installing the Zero-IT configuration file. [ZF-2888]
- Mac OS 10.7 and 10.8 cannot automatically connect to an 802.1x EAP WLAN after installing Zero-IT script. [ZF-4699]
- In some situations, Chromebook clients can take up to 10-50 seconds to resume sending traffic after a channel change. [ZF-14883]



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