RELEASE NOTES

Ruckus SmartZone Release Notes for 3.4.2 Patch3

Supporting 3.4.2 Patch 3

Part Number: 800-71884-001 Rev A
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Contents

New and Changed Features

Changed Features

The following are the changed features.

- This fix limits the maximum amount of NAI realms to 32 (inline with AP side) to ensure that the AP kernel does not crash with the right AP configuration updated from controller. **[ER-5489]**
- The logic for generating the Account Session ID has changed. It accommodates for two clients joining the APs simultaneously with last three MAC digits being similar. **[ER-5806]**
- Fixed CNR and RADIUS-D process crashes. From a client perspective this fix has improved user client/user disconnections problems in between or ongoing authentication calls, when the client uses the controller as proxy mode. **[ER-6060]**
- **Logical Volume Manager (LVM) Improvement**:
  - Reload superblock when detecting superblock errors of file system during boot up in *initramfs*
  - Rebuild lVM and file system when the user triggers set-factory option.

Hardware/Software Compatibility and Supported AP Models

Overview

This section provides release information about the SmartCell Gateway 200 (SCG200), the SmartZone 100 (SZ100), Virtual SmartZone (vSZ), and Virtual SmartZone Data Plane (vSZ-D) features with notes on known issues, caveats, and workarounds.

- The SCG200, developed for the service provider market, combines a WLAN access controller with Wi-Fi traffic aggregation, along with a built-in carrier-grade element management system in a 2U rack-mountable, all-in-one hardware form factor.
- The SZ100, developed for the enterprise market, is the next generation midrange, rack-mountable WLAN controller platform for the enterprise and service provider markets. There are two SZ100 models: the SZ104 and the SZ124.
- The vSZ, which is available in *High Scale* and *Essentials* versions, is a Network Functions Virtualization (NFV) based WLAN controller for service providers and enterprises that desire a carrier-class solution that runs in the cloud. It supports all of the WLAN controller features of the industry leading SCG200, while also enabling the rollout of highly scalable and resilient wireless LAN cloud services.
- The vSZ-D offers organizations more flexibility in deploying the SZ data plane as needed in an NFV architecture-aligned fashion. Deploying vSZ-D offers secured tunneling of user data traffic that encrypts payload traffic, maintains flat network topology, enables mobility across L2 subnets, supports POS data traffic for PCI compliance, and offers differentiated per site policy control and QoS, etc.

  NOTE
  By downloading this software and subsequently upgrading the controller and/or the AP to release 2.5.1.0.177 (or later), you understand and agree that:

- The AP may send a query to Ruckus containing the AP's serial number. The purpose of this 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.

- You also understand and agree that this information may be transferred and stored outside of your country of residence where data protection standards may be different.

Release Information

This section lists the version of each component in this release.

NOTE

- Krack fixes are included in this release. Refer to the security advisory for details.

  NOTE
  Users who have loaded AP patch 3.4.2.0.405 for Krack fixes, can upgrade to 3.4.2 Patch-3 (controller build number 3.4.2.217 with AP build number 3.4.2.0.454)

- Refer to the Security Advisory for DNSMASQ vulnerability fixes. **[CVE-2017-14491 CVE-2015-3294]**.
- Fixes for JMX Port Vulnerability fixes are included in this release. Refer to the Security Advisory for details. **[ER-5913]**

SCG 200

- Controller Version: **3.4.2.0.217**
- Control Plane Software Version: **3.4.2.0.107**
- Data Plane Software Version: **3.4.2.0.147**
- AP Firmware Version: **3.4.2.0.454**

SZ 100

- Controller Version: **3.4.2.0.217**
- Control Plane Software Version: **3.4.2.0.107**
- Data Plane Software Version: **3.4.2.0.50**
- AP Firmware Version: **3.4.2.0.454**

vSZ-H and vSZ-E

- Controller Version: **3.4.2.0.217**
- Control Plane Software Version: **3.4.2.0.107**
- AP Firmware Version: **3.4.2.0.454**

vSZ-D

- vSZ-D software version: **3.4.2.0.217**

Supported and Unsupported Access Point Models

Before upgrading to this release, check if the controller is currently managing AP models that are no longer supported in this release.

NOTE
APs preconfigured with the SCG200/SZ100/vSZ AP firmware may be used with the SCG200/SZ100/vSZ in their native default configuration. APs factory-configured with the ZoneFlex-AP firmware may be used with the SCG200/SZ100/vSZ when LWAPP discovery services are enabled.

Supported AP Models

This release supports the following AP models.

TABLE 1 Supported AP Models

C110	C500	R300	R310	R500	R500E
R510	R600	R610	R700	R710	T300
T300E	T301N	T301S	T504	T610	T610s
T710	T710S	H500	H510	ZF7055	ZF7352
ZF7372	ZF7372-E	ZF7781CM	ZF7782	ZF7782-E	ZF7782-N
ZF7782-S	ZF7982				

Unsupported AP Models

The following AP models have reached end-of-life (EoL) status and, therefore, are no longer supported in this release.

SC8800-S	ZF7762	ZF7343	ZF7351-U
SC8800-S-AC	ZF7762-AC	ZF7341	ZF2942
ZF7321	ZF7762-T	ZF7363-U	ZF2741
ZF7321-U	ZF7762-S	ZF7343-U	ZF2741-EXT
ZF7441	ZF7762-S-AC	ZF7025	ZF7962
ZF7761-CM	ZF7363	ZF7351	

Caveats, Limitations, and Known Issues

Caveats, Limitations, and Known Issues

This section contains known issues for 3.4.2 Patch 1, 2 and 3 releases.

AP Known Issues

The following are the known issues related to APs.

Patch 3

- Different APs may generate the same Acct-session-id value in Radius Accounting traffic for two clients. **[SCG-76210]**

Patch 1 and 2

- When the 7273 AP starts downloading the latest firmware from a legacy zone and the controller control IP is unreachable, the AP stops responding. **[SCG-61448]**
- The valid management traffic rates for the 5GHZ radio are 6Mbps,12Mbps, and 24Mbps. Ruckus recommends restricting the management traffic rates to these values using the rate limiting features. **[SCG-60865]**
- When configuring walled garden entries, Ruckus Wireless recommends using IP addresses (not DNS names) to help ensure that the walled garden rules are applied consistent. **[SCG-61183]**
- In a two-node cluster, Smart Monitor causes APs to lose connection with the controller. When an AP resumes its connection with the controller, the AP sends Accounting-On message to the controller, but the controller never forwards the same Accounting-On message to the AAA server. **[SCG-60852]**
- The cable modem-related status LEDs on the C110 AP cannot be disabled from the controller's web interface. **[SCG-56903]**
- AP SNMPv3 displays INFORM when the notification type is set to TRAP. **[SCG-56994]**
- When the C110 AP is using an Ethernet backhaul (instead the CM), the cable modem serial number cannot be displayed on the access point detail page on the controller's web interface. **[SCG-59255]**
- On the controller's web interface, the LAN port status for the C110 is mislabeled. Additionally, LAN1/LAN2 mapping is incorrect. **[SCG-58332]**
- BEACON-MISS may be observed on the wlan63 interface of mesh APs if the channel on the root AP changes continuously. **[SCG-49635]**
- The 802.1X Ethernet port (supplicant) on the H510 AP does not reply to EAP identity requests when the link is disconnected, and then reconnected. **[SCG-51975]**
- The Ethernet port on the H510 AP does not auto negotiate the data transmission rate when the port speed is changed from 10Mbps to 100Mbps. **[SCG-51790]**
- The R710 and R510 APs do not support the RTS packet size threshold when operating in 802.11ac 20MHz mode. **[SCG-45294]**
- Based on the current design, the minimum rate limit per station is 100kbps. As a result, the total rate (station number * 100kbps) will be higher than the SSID rate limit -- this is design intent. For example, if the rate limit for downlink is 10Mbps for one SSID, when an AP has 200 STAs associated with that SSID, the total rate will be 200 * 100kbps = 20,000kbps = 20 Mbps > 10Mbps. **[SCG-43697]**

  Workaround: Limit the maximum clients number per WLAN. Using the above example, you can set the maximum clients per WLAN to 100.
- H510 802.1X enabled Ethernet interface configured for MAC-based authentication fails to authenticate supplicants. **[SCG-51986]**
- Microsoft Surface 3 Pro does not respond to ADDBA request frames with Action frames, which can cause the AP to send frames to the client without AMPDU. **[SCG-51385]**
- WISPr client session statistics are not properly moved to historical data after logout. **[SCG-52507]**
- When the Ethernet port on the H510 AP is configured to use either MAC-based or port-based authentication, MAC authentication bypass cannot be enabled using the CLI. **[SCG-53376]**
- When wireless clients based on Intel Dual Band Wireless AC-7256 and Intel Centrino N 6300 AGN, and Samsung S5 mobile devices fail to perform Opportunistic Key Caching (OKC) roaming, they go through full 802.1x authentication instead. **[SCG-48792]**
- AVC with Trend Micro is unsupported on the following AP models: **[SCG-50596]**
  - ZF7982

  - ZF7782/ZF7782-S/ZF7782-N/ZF7782-E
  - ZF7781CM
  - SC8800-S/SC8800-S-AC
  - R300
  - ZF7372/ZF7372-E
  - ZF7352
  - ZF7055
  - H500
- Rebooting the H510 AP using the CLI causes the AP to log a 'Kernel Panic' event. No operational effect is observed beyond the log message during reboot process. **[SCG-54682]**
- The R710 and T710 APs do not honor the idle timeout setting as received in the RADIUS access accept message. **[SCG-48133]**
- Beginning with ZoneFlex standalone AP version 104.0, APs will delay joining a ZoneDirector in favor of joining a SmartZone controller for 30 seconds, if both controllers exist on the sam L2 subnet. However, in some situations, the AP can still potentially join the ZD instead of the SZ when both controllers are set to auto approve. **[SCG-51529]**

  Workaround: Do not deploy both ZD and SZ controllers on the same L2 subnet, or there will be potential for APs to join the ZD instead of the SZ.
- Client events are not shown by default on the Monitor > Events page. To view client events, set the Category filter to Clients, and then click Load Data. **[SCG-54202]**
- Multicast traffic is always directed as unicast traffic, even when the AP has more than five clients associated with it. **[SCG-46967]**
- The 5GHz recovery SSID interface has been disabled on the T710 and R710 APs. **[SCG-44242]**
- Under high channel utilization (>90%), a high number of TX timeouts may occur in the presence of multi AC traffic streams. **[SCG-49373]**
- After the accounting service is disabled for a particular WLAN, Accounting Off messages are not initiated. **[SCG-47772, SCG-40827]**
- Solo APs are unable to discover the controller via Option 52. This is because DHCPv6 solicit messages from solo APs do not include Option 52 information. **[SCG-34885]**
- If APs are discovering the controller on the network using DNS discovery and the DNS server address on the DHCP server is updated, solo APs will continue to use the previous DNS server address, which could result in their inability to discover the controller again on the network.**[SCG-34299]**

  Workaround: To resolve this issue, reboot solo APs after the DNS server address on the DHCP server is updated.
- If only Option 52 (no DNS server address) is configured on the DHCPv6 server, APs are unable to obtain the controller's IP address from the Option 52 information and, therefore, are unable to discover the controller on the network. **[SCG-34981]**

Application Visibility and Control (AVC)

The following are known issues related to AVC.

Patch 1 and 2

- If a wireless client roams from AP1 to AP2, AP1 can update all AVC statistics successfully, but AP2 may lose some AVC recognition updates. **[SCG-43267]**
- AVC is unable to identify BitTorrent traffic accurately. **[SCG-43336]**

- The Trend Micro engine that is used by AVC recognizes TFTP traffic based on port 69. Since only the first packet of TFTP traffic uses port 69, only the first packet is detected as 'tftp'. **[SCG-44064]**
- When AVC cannot determine the application that a device is using, the controller displays the device's IP address as the application name. **[SCG-47746]**
- The AVC denial policy requires both the user-defined app and app port mapping, instead of only the user-defined app name. **[SCG-44724]**
- If a Skype P2P tunnel is set up before the Application Denial Policy is applied, the controller cannot identify the traffic and will allow the call through. **[SCG-52257]**
- AVC is unable to identify Vindictus traffic accurately. **[SCG-43487]**
- When configuring a denial policy in AVC, take note of the following limitations: **[SCG-44384]**
  - When "google.com" is set as the AVC denial policy, traffic to the Google website may not be blocked because most Google traffic is encrypted. Google traffic is marked "Google(SSL)" or "SSL/TLS," which does not match the policy, so traffic is not denied.
  - When "music.baidu.com" is set as the AVC denial policy, traffic to the Baidu web site may not be blocked because most Baidu traffic is marked as "BaiduMusic" or "baidu", which does not match the policy, so traffic is not denied.
  - BitTorrent download traffic may be difficult to block unless the app IDs, such as "BitTorrent Series", "BBtor","eDonkey Series", "SoMud", etc, are specified in the policy. If you set the denial policy to "xxx. net", " xxx.cn", "xxx.org" , etc., AVC will be unable to block such traffic because Trend Micro recognizes the app name without the domain extension.
  - To block Sina mail traffic, deny traffic to both "sina mail" and "sina.com."In the denial policy, the space character is taken into consideration. For example, if you block "qq game" or "sina video", users will still be able to access "qqgame" or "sinavideo" (no space character). Conversely, if you block "baidumusic" (no space character), traffic to "baidu music" will not be blocked.
  - When blocking Hotmail or Outlook.com traffic, set the denial policy to "live" or "live.com". If you block "hotmail" or "outlook.com", user will still be able to access Outlook.com.
- When the authentication type is set to webauth, an application that has been configured to be denied sometimes still passes data through the AP. **[SCG-61444]**

Cassandra

The following are the known issues related to Cassandra.

Patch 1 and 2

- WISPr authentication may fail if the CNR receives an invalid home server type. **[SCG-52520]**

Control CLI

The following are the known issues related to control CLI.

Patch 1 and 2

- The CLI configuration logic differs between configuring individual APs and configuring model-specific settings from the AP group context. **[SCG-52077]**
- When setting up the SZ-100, the DNS IP address has to be configured manually because DNS IP address assignment via DHCP cannot be completed. **[SCG-38184]**

Control Communicator

The following are known issues related to control communicator.

Patch 1 and 2

- APs running earlier releases (for example, release 2.5) are unable to join the controller to upgrade their firmware. This issue occurs because of SSL incompatibility in earlier SmartZone releases. **[SCG-47886]**

Control Domain Known Issues

The following are known issues related to control domain.

Patch 1 and 2

- When testing an IPv6 accounting server, the NAS IP4 attribute is sent in the accounting message. **[SCG-61667]**
- • If VLAN pooling is enabled for a legacy zone running 3.1.1, then DVLAN is always enabled and cannot be disabled. **[SCG-61669]**
- Network tunnel statistics are not displayed for dual stack APs when queried with an IPv6 address. **[SCG-57446]**
- The forwarding service is unsupported on the SZ-100, therefore related options are automatically removed when the controller software is newly installed. However, if forwarding service profiles were created in release 3.1.2 and the controller is upgraded to a newer release, these profiles are not automatically removed and can still be configured in the WLAN settings, but the settings are not applied. **[SCG-45440]**
- When a two-node cluster is freshly installed, the default node affinity profile is created for only one node, not for both nodes. **[SCG-46655]**
- When rate limits are modified, the new limits are not applied to clients that are in the grace period. **[SCG-51422]**
- After the controller is restored from release 3.2 to 2.6, mesh network on the R700 cannot disabled and its 5GHz radio is unable to support 16 WLANs. **[SCG-39742]**

  Workaround: Before restoring the controller from release 3.2 to 2.6, disable mesh networking on the controller.
- When Virtual Router Redundancy Protocol (VRRP) is used to set up redundant SZ-100 controllers and one of the controller is rebooted, it may be unable to obtain an IP address from the DHCP server. To resolve this issue, it is s recommended to assign a static IP address to the SZ-100 network interface. **[SCG-41046]**
- When you restore the system using a cluster backup, configuration backup files may get deleted. It is strongly recommended that you configure an FTP server to which you can automatically export configuration backups that you generate manually or using the backup scheduler. **[SCG-41960]**
- TTG Session Summary is not as part of associated clients for TTG sessions established using a TTG+WISPr profile. **[SCG-32706]**

Control Public API Known Issues

The following are known issues related to control public API.

Patch 1 and 2

- Creating an AAA service for AP zones that are managed by MVNO using the public API is currently unsupported. **[SCG-52111]**

Control and Data Plane Known Issues

The following are known issues related to control and data plane.

Patch 2

- 10.254.x.x is reserved for internal use as communication between control plane and data plane. If a client or a device in the network uses this address, the control plane will not be able to communicate to the data plane due to the ARP being resolved by the client or device. Ensure that this address is reserved and not used.

RAC Known Issues

The following are the known issues related to RAC.

Patch 1 and 2

- When the controller initiates a RADIUS Accounting Off message to an IPv6 Accounting server, the value of Ruckus-SCG-CBlade-IP in the message is zero '0'. This issue occurs when an AP abruptly goes offline and does not come back online within a certain period of time. **[SCG-62289]**
- COANAK/DMNAK is received if COA/DM messages are sent to the node that does not have the corresponding WISPr/WebAuth session. **[SCG-48959]**
- When the primary authentication server is unavailable, wired clients do not use the secondary authentication server that has been configured. **[SCG-52194]**
- When the primary AAA server is unreachable, authentication messages are not forwarded to the secondary AAA server. **[SCG-49493]**
- The Ethernet port-based profile selection feature was added along with AD/LDAP enhancements. However, the related settings are unavailable on the web interface. **[SCG-39032]**
- If LDAP authentication is used to authenticate hotspot (WISPr) users, the full path to the LDAP server must be configured. Otherwise, users will be unable to log on to the hotspot using LDAP. **[SCG-40729]**
- The controller does not support multiple LDAP AAA server profiles that use the same IP address and port number. **[ER-3948]**

Scaling/Performance Known Issues

The following are the known issues related to scaling or performance.

Patch 1 and 2

- A SmartZone backup file exported from release 2.x cannot be imported to a controller running release 3.x. **[SCG-50908]**

SCG200 Known Issues

The following are known issues related to SCG200.

Patch 1 and 2

- On the SCG200 with core network gateways (such as L2oGRE), configuration of host routes to these core network gateways could result in route lookup failure. **[ER-4329]**

Workaround: Configure the subnet routes.

Session Manager Known Issues

The following are known issues related to session manager.

Patch 1 and 2

- When a client that is associated with a legacy AP running release 3.2.1 moves from one SSID to another SSID, and then sends DM from the AAA, the DM response will not be received from controller. **[SCG-63947]**
- Client frame IP addresses are sometimes sent as 0.0.0.0 in AP-initiated accounting messages. **[SCG-47164]**
- The session manager process does not handle the session timeout of WISPr clients after a UE roams from one AP to another. **[SCG-52369]**

SNMP Known Issues

The following are the known issues related to SNMP.

Patch 1 and 2

- The event type and SNMP trap for Event 518 do not match. **[SCG-49689]**

Syslog Known Issues

The following are the known issues related to syslog server.

Patch 1 and 2

- When the primary syslog server is down, syslogs are sent to the secondary server. However, syslogs still shows the IP address of the primary syslog server (instead of the secondary server). **[SCG-57263]**
- Syslog servers that are using IPV6 addresses are currently unsupported. **[SCG-53679]**

System Known Issues

The following are the known issues related to system.

Patch 3

- In session manager the NAS IP address for WISPr client is stored as **0xFFFFFFFF**. This results in a non acknowledgment from the DM, which contains the actual NAS IP address. **[SCG-83023]**
- When a user creates a portal network with SSID containing non-UTF8 language, the allowed SSID in *Guest Details* appears in non-matching UTF-8 characters instead of the configured SSID. This results in an *access denied* error when the users connect to the SSID and tries to login. **[ER-6255]**

Patch 1 and 2

- If the NAT IP address is configured on the controller, the external subscriber portal (SP) can communicate with thecontrol interface but not with the management interface. This is design intent. **[VSCG-1509]**

- When vSZ is upgraded from release 3.2 to a newer release, the web interface cannot be accessed using the Microsoft Internet Explorer 11 browser. **[SCG-48747]**
- Cluster formation fails if nodes that are up and running are not syncing time with the configured upstream NTP server. **[SCG-49736]**
- IPv6 addresses for accounting servers on the SZ-100 and vSZ are unsupported. Only accounting servers on the SCG-200 can be assigned IPv6 addresses. **[SCG-46917]**
- With this release, SmartZone to SCI communications can be enabled through the web interface using the new SCI Management setting in the SZ web interface. However, this feature only works for SCI version 2.0 (and later). If you are using an older version of SCI (1.x), you will still need to execute the "ap-sci enable" command to allow SZ-SCI communications, even after upgrading the SZ to 3.4. **[SCG-51832]**
- After the accounting service is disabled for a particular WLAN, Accounting Off messages are not initiated. **[SCG-47772]**
- On iOS 8.x devices, EAP-FAST does not work without a RADIUS server certificate configured in Wi-Fi profile for the device. **[SCG-47946]**
- In a cluster, if the SCG to which an AP is connected gets rebooted, the AP moves to another SCG in the same cluster. When the SCG node that was rebooted comes up, the WISPR sessions on the AP will get terminated. This is a corner case and is not always observed. **[SCG-39848]**

  Workaround: To clear or update the location information on APs, do it at the AP level (instead of the zone level).
- The controller may be unable to renew its DHCP server-assigned IP address, which may cause all controller services to go down. [SCG-40383]
- To help ensure that the cluster firmware upgrade process can be completed successfully, the cluster interfaces of all nodes must be connected and up. [SCG-34801]
- The controller's management interface IP address may not be changed from DHCP to static IP address mode. **[SCG-35281]**
- When the controller is added to the SCI, the Monitor > Administrator Activities page may show that an administrator (SCI) is logging on to the controller every five minutes. **[SCG-35320]**
- When an AP that is assigned the default static IP of 192.168.0.1 is rebooted, it is unable to establish a tunnel with the controller. **[ER-3433]**
- When the SMTP settings on the controller are configured and the outbound firewall is enabled, the SMTP packets are dropped. **[SCG-64695]**
- When AP Subnet discovery is enabled on the controller and the outbound firewall is enabled, the port 5353 related to subnet discovery packets are dropped. **[SCG-64701]**

UI/UX Known Issues

The following are the known issues related to the system web interface.

Patch 3

- Even after a WISPr client has signed out, the controller web interface continues to show the client in an authorized state. Manually de-authorizing the client does not change the status. **[SCG-80455]**

Patch 1 and 2

- Some cable modem termination systems (CMTSs) may show the "Reset CM" button on the user interface. Clicking this button only resyncs the signal and does not actually reboot the CM. **[SCG-56905, SCG-57683]**

- On the controller's web interface page for individual access points, the Restart Cable Modem button on the Restart tab is not functional. **[SCG-58881]**
- On the web interface, the client fingerprinting feature displays "N/A" under "OS type" for connected clients running Android 7.0. **[SCG-56991]**
- The AP management VLAN of legacy APs (for example, APs running release 3.1.1 or 3.1.2) cannot be configured from the controller's web interface. As a result, the AP Management VLAN field on the AP Monitor page cannot display the correct information. If you have APs in legacy AP zones, you can view the correct AP management VLAN from the AP CLI. Alternatively, upgrade the legacy AP zones to this release to resolve this issue. **[SCG-48255]**
- The local DB option for the authentication and accounting server is used in earlier releases for the ZeroIT feature. Although Zero IT has been removed in release 3.4, the local DB option is still visible on the web interface. **[SCG-47704]**
- If the administrator changes the channelization setting for the 5GHz radio, the channel settings for the 2.4 GHz radio will be displayed as "Auto." However, the actual channel settings are unaffected; this is only a display bug. **[SCG-52152]**

  Workaround: Reconfigure the 2.4GHz radio settings after changing the 5GHz radio settings, and the 2.4GHz settings will remain the same.
- When the AP bundle is applied to SZ100 or vSZ-E, there is no warning message to warn users that applying the bundle will upgrade and reboot all APs, resulting in a temporary service outage. **[SCG-55178]**
- When the Device Policy feature is enabled, the host name Chrome devices and PlayStation appear as "N/A" on the web interface. This occurs because "DHCP option 12" does not exist in DHCP Discover and DHCP Request. **[SCG-50595]**
- The SZ-100 Setup Wizard does not validate the IPv6 address if the IPv6 prefix is not configured. **[SCG-40257]**
- Administrators who do not have the privilege to manage alarms may be able to clear or acknowledge alarms in bulk. **[SCG-34126]**
- Some of the options for the Certificate Store page may not show up on the Safari web browser. **[SCG-34971]**

Virtual SmartZone Known Issues

The following are known issues related to virtual smartzone.

Patch 1 and 2

- When the controller is behind a NAT server, APs are assigned both public and private IP addresses. **[SCG-46949]**
- Static routes in vSZ cannot be added in bulk. To add multiple static routes, you need to add each static route individually. **[SCG-49186]**
- After nodes in a vSZ cluster running on Microsoft Azure are set to factory settings, the nodes are assigned the same host name, instead of their instance names. When nodes in a cluster have duplicate host names, the vSZ cluster cannot be established. **[SCG-39957]**
- When the controller is installed on Microsoft Azure hypervisor and dynamic mode is enabled on the hypervisor, the controller's private and public IP addresses may change if the hypervisor is shut down. This will disconnect APs from the controller, as well as disconnect nodes that form the cluster. **[SCG-42367]**

  Workaround: Do not shut down the Azure hypervisor, or

  Set a static IP address for the controller on the Azure hypervisor.;
- When vSZ is deployed with vSZ-D, APs running firmware release 3.1.1 (or earlier) cannot obtain the correct vSZ-D IP address and port number and are unable to establish tunnel manager connections. This is because vSZ-D is unsupported in release 3.1.1 and the data plane IP address formats in releases 3.1.1 and 3.2 are different. [SCG-42325]

- vSZ-D only supports IPv4. If the AP IP mode on vSZ is set to IPv6 only, managed APs will be unable to establish tunnels with vSZ-D. **[SCG-39206]**
- Added a default route for IPv6 via the control interface on vSZ when Control Access-Core Separation is enabled on the web interface. **[ER-3843]**
- Clients are unable to use DPSK when using Hyper-V with dynamic MAC since vSZ's br0 MAC address does not match its base board MAC address. **[ER-4806]**

  Workaround: Set the br0 MAC address using Hyper-V's static configuration.
- vSZ does not generate syslog messages about the number of free licenses left. **[ER-4896]**

  Workaround: Set the log level of Scheduler to Info.

Resolved Issues

Resolved Issues

This section contains resolved issues for 3.4.2 Patch 1, 2 and 3 releases.

Patch 3 Resolved Issues

This section contains the resolved issues for 3.4.2 Patch 3 release.

AP Resolved Issues

The following are the resolved issues related to AP.

- Resolved a memory leak issue related to the mesh network process that caused the APs to disconnect and inability to reconnect. **[ER-4265]**
- Resolved an issue where the AP could not forward wireless client multicast packet to the network. **[ER-5100]**
- Resolved an issue where the *Aeroscout* tag feature did not work on H510/R510/R710 APs. **[ER-5191]**
- Resolved an issue where the deleted AP still showed in the statistic report. **[ER-5338]**
- Resolved an issue where 802.11r AP keys were not shared with second hop APs. **[ER-5405]**
- Resolved R710 reboot issue due to target fail detect. **[ER-5440]**
- Revolved an issue where the Ethernet port link for R710/T710/R610/T610/R720 APs could not be seen when connected to switches.**[ER-5466]**
- Resolved an issue where the AP registration rule was unable to set the IP address range from 1.1.1.1 to 255.255.255.254. **[ER-5578]**
- Resolved an issue where T300 AP sent packets with it's MAC address inverted during initial boot up. **[ER-5598]**
- Resolved a RADIUS accounting record issue where the AP MAC addresses were sent as user name upon roaming. **[ER-5623]**
- Resolved an issue where the AP WLAN group became default after quitting the configuration mode of the AP on the controller CLI. **[ER-5661]**
- Resolved an issue where upgrading at the same time a high number of APs caused the process to hang. **[ER-5678]**
- Resolved an issue where ZF7352 AP could not form mesh network. **[ER-5706]**

- Resolved an issue where WLAN did not get enabled when the AP's registration state changed from reject to approve. **[ER-6224, SCG-70528]**
- Resolved an issue where APs only try to connect to the first controller in the cluster when the AP's registration state change from reject to approve. **[ER-6224, SCG-71748]**

Public API

The following are the resolved issues related to Public API.

- Resolved an issue where public API is now mandatory for overriding or disabling override together with all Wi-Fi 24 / 50 attribute. **[ER-5883 SCG-50269 SCG-76430]**

SCI Resolved Issues

The following are the resolved issues related to SCI.

- Resolved an issue where APs were reporting incorrect negative SNR values to SCI. [ER-4795]

System Resolved Issues

The following are the resolved issues related to system.

- Fixed memory leak in multicast table that caused the process to hang. The modified code now prevents invalid entries in the multicast table which can cause memory corruption and system hanging. **[ER-5697]**
- Resolved an issue where adding a management ACL entry caused web service down for 15 to 20 minutes due to DNS reverse lookup performed by the controller. **[ER-5728]**
- Fixed memory leak in multicast table that caused the process to hang. The modified code now prevents invalid entries in the multicast table which can cause memory corruption and system hanging. **[ER-5711]**
- Resolved an issue where the RADIUS process restarted when processing accounting ON/OFF messages. **[ER-5753]**
- Resolved an issue where resources were exhausted by Session Manager. **[ER-5762]**
- Resolved an issue where in a cluster with three or more nodes, WISPr clients could not login after roaming across clusters. **[ER-5943]**

Virtual Data Plane

The following are the resolved issues related to VSZ-D.

- Fixed memory corruption caused by client long packets with fragmentation that potentially could cause RX/TX to freeze. **[ER-5951]**
- Resolved an issue where some clients could not get the IP address from the DHCP server. **[ER-5867]**

Virtual SmartZone Resolves Issues

The following are the resolved issues related to Virtual SmartZone.

- Resolved an issue where R3.4 software defect caused multiple database retrievals for a single domain data which resulted in performance issues. **[ER-5467]**
- Resolved an issue where the log SNR had a false value (negative number). SNR is now termed as *ReceivedSignalStrength* on the controller. **[ER -5483]**
- Fixed the memory corruption, which was caused by client long packets with fragmentation that potentially caused RX/TX to freeze. **[ER-5592]**

- Resolved an issue where the serial number of vSZ changed after reboot, especially seen in AWS based vSZ. **[ER-6235]**

Patch 1 and 2 Resolved Issues

This section lists previously known issues and internally-found issues that have been resolved in 3.4.2. Patch 1 and 2 releases.

Patch 1

- Resolved an LLDP MAC address issue. Now, APs use br0 MAC address for LLDP packets. **[ER-5228/AP-4919]**
- Resolved an issue where TCP MSS synchronization failed between the AP and server. **[ER-4042]**
- Resolved an issue where, if Force DHCP was enabled, clients would be de-authenticated after roaming to another AP if the VLAN was the same as the previous VLAN after roaming. **[ER-4992]**
- Resolved a device fingerprinting issue where Ubuntu clients failed to be categorized as Linux OS clients. **[ER-5121]**
- Resolved an issue of excessive AP-to-AP ARP traffic, which caused network congestion in high-density settings. Resulting in port isolation usage rather than fast roaming. **[ER-5138]**
- Resolved an issue, where the cloud license server was unreachable when the firewall was enabled. **[ER-5168]**
- Resolved an issue where when the AP's settings were configured from the controller's CLI, some other AP settings were modified incorrectly. **[ER-5208]**
- Resolved an issue where the guest pass configuration could not import the alphabets i,I,l,L,o,O and numbers 0 and 1. **[ER-5260]**
- Resolved an issue where the AP kernel panic reboot was caused on receiving malformed BTM response frame from certain type of clients. **[ER-5386]**
- Resolved an issue of failed login attempt logs were not sent to the remote syslog server. **[ER-5443]**
- Resolved issues, by: **[SCG-68035/ER-5358/ER-5222/ER-5009/]**
  - Adding IP source guard entries at relaying DHCP offer from TTG to virtual DHCP server
  - Adding IP source guard entry on Gateway IP
  - Resolving the browsing issue when roaming from Bridge WLAN to TTG WLAN
  - Setting the DHCP lease time to 3600 seconds on TTG WLAN to prevent IP to MAC binding ION data plane prematurely aging out
  - Avoiding potential packet access after it is free
  - Avoiding potential memory corruption on 3rd Party AP configuration
  - Dropping DNS packets which uses GTP port which causes the core to hang.
  - Eliminating core dump utility in the controller SCG200 which caused the core to hang. This was caused by logging problematic packets.
- Resolved an issue of load balancing in tunnel manager. **[SCG-68531/SCG-68532/SCG-68530/ER-5245]**
- Resolved an issue where the code logic is fixed to get the latest tunnel information for both access and core sides. **[ER-5311]**
- Resolved an issue where Northbound/Core process did not retry socket connection towards MsgDist after the first failure, which caused login failure of WISPr clients. **[ER-5382]**
- Resolved an issue where AP could fail to stay on a statically configured channel. **[ER-5074]**
- Resolved vDP logging issue in order to manage the amount of logs to be archived. **[ER-5092]**
- Resolved issues on the vDP side by: **[ER-5424/ER-5476]**
  - Adding validation of tunnel keepalive packet to avoid receiving false packet which cause MTU size spike.
  - Adding validation of MAC address in the tunnel keepalive message to avoid duplicate tunnel identifiers.

- Resolved an issue where the Guest Pass expiration validation was invalid on authentication failure after the expiration time. **[ER-5399]**
- Resolved an issue where migration of guestpass configuration from ZD (9.13.0.0 build 232)failed and required support of alphabets i, I,l,L,o,O and numbers 0 and 1. **[ER-5334]**
- Resolved an issue where message digest and Java were consistently spiking. **[ER-5128]**
- Resolved an issue where the log showed that the AP was reset to factory defaults. **[ER-4282**]
- Resolved an issue where one of the data plane's rebooted after data plane´s core dead. **[ER-3902]**
- Resolved a memory leak issue which caused R510s to target assert. [ER-5383]
- Resolved an issue of LWAPP2SCG crash due to checking of nullpointers. **[ER-5018]**
- Resolved an issue on QoS classification. **[ER-5319]**
- Resolved an issue where incorrect traffic counter values were included in Accounting Stop for a TTG client, which roamed across different data planes and control planes in quick succession. **[ER-5372]**
- For resolution of CVE-2004-2761, refer to the security advisory https://www.ruckuswireless.com/security **[ER-4478]**

Patch 2

- Optimization of tunnel performance for Wave-2 APs.
- Resolved an issue where if 802.11R roaming was enabled and when a client roamed from AP1 to AP2, the Class and Chargeable-User-Identity attributes were missing in the Interim-Update packet sent by AP2. **[SCG-70831]**
- Resolved an issue where H510 Ethernet was stuck when the Ethernet data rate was configure as 10/100 Mbps and the AP was trying to send higher data rate to a wired client connected to the Ethernet port. **[ER-5329]**
- Resolved an issue where wired UEs were not able to get the IP address when tunnel encryption was enabled. **[ER-5589]**
- Resolved an issue where the tunnel WLAN was crypto enabled and involved file transfer, which caused an occasional blip in the packet being corrupted. **[ER-5570]**
- Resolved an issue where wired clients on different APs were not able to ping each other if the tunnel encryption was enabled. **[ER-5569]**

Upgrading to This Release

Upgrading to This Release

This section lists important information that you must be aware of when upgrading the controller to this release.

Step-by-step instructions for performing the upgrade are provided in the corresponding Administrator Guide for your controller platform.

NOTE

- Uploading to a new AP Patch
- Losing the previous AP patch
- Before uploading a new AP patch, Ruckus strongly recommends that you save a cluster backup, in case you want to restore the previous AP patch.

NOTE
Before uploading a new AP patch, Ruckus strongly recommends that you save a cluster backup, in case you want to restore the previous AP patch.

NOTE
Before upgrading the controller, Ruckus strongly recommends that you back up the entire cluster. In case the upgrade fails, you can use the cluster backup to roll back the cluster to its previous state.

NOTE
When upgrading vSZ-E/vSZ-H, if the memory/CPU allocation of the current VM instance does not match the lowest resource level of the new VM instance to which the new vSZ-E/vSZ-H version will be installed, you will be unable to perform the upgrade. On the other hand, if the new VM instance has insufficient hard disk space, a warning message appears after you upload the upgrade image but you will still be able to perform the upgrade.

NOTE
In pre-3.2 releases, AP firmware download from the controller is performed over an HTTP connection on port 91 in the clear.
In release 3.2, the controller uses an HTTPS connection and an encrypted path for the firmware downloads. The port used for AP firmware downloads was also changed from port 91 to 11443 to distinguish between the two methods.
In release 3.4, the controller uses port 443 for AP firmware downloads. To ensure that all APs can be upgraded successfully to release 3.4, open ports 443, 11443 (for cluster restore to release 3.2), and 91 in the network firewall.

Using the "Extend Upload Precheck Timeout" Script

Whenever you upload an upgrade image to the controller, the controller starts a timer to monitor the status of the upload process at set intervals. If the upload process is not completed within 10 minutes, the controller terminates the upload process and aborts the upgrade attempt.

In release 3.2.1, Ruckus introduced a data migration precheck process that must be completed before the upgrade process can start. When you upload an upgrade image, the controller will first check the database for issues before it starts the upgrade process. This new pre-check increases the duration of the image upload process and could potentially cause the upload timer to time out and the upgrade attempt to fail.

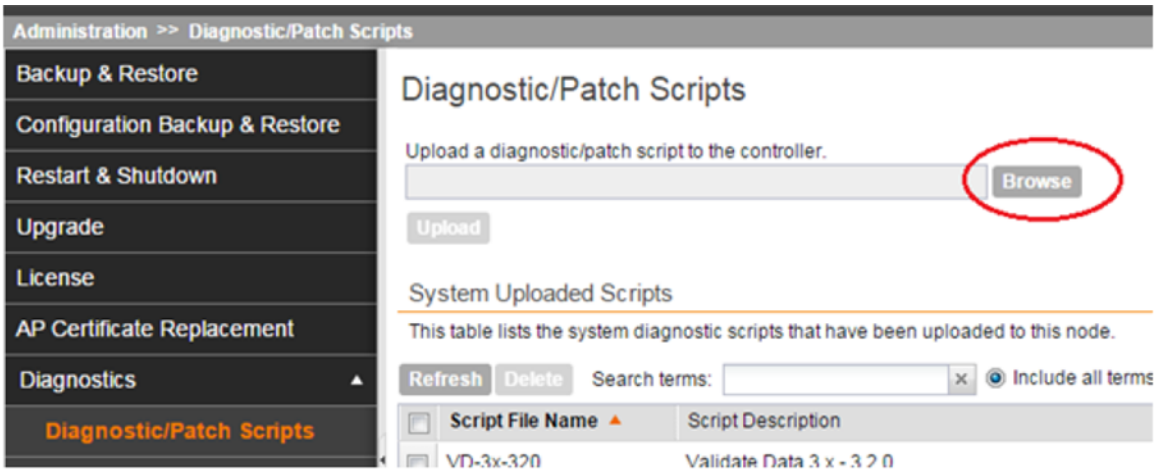
To ensure that the upload timer does not time out, apply the extend upload precheck timeout KSP (script file).

NOTE

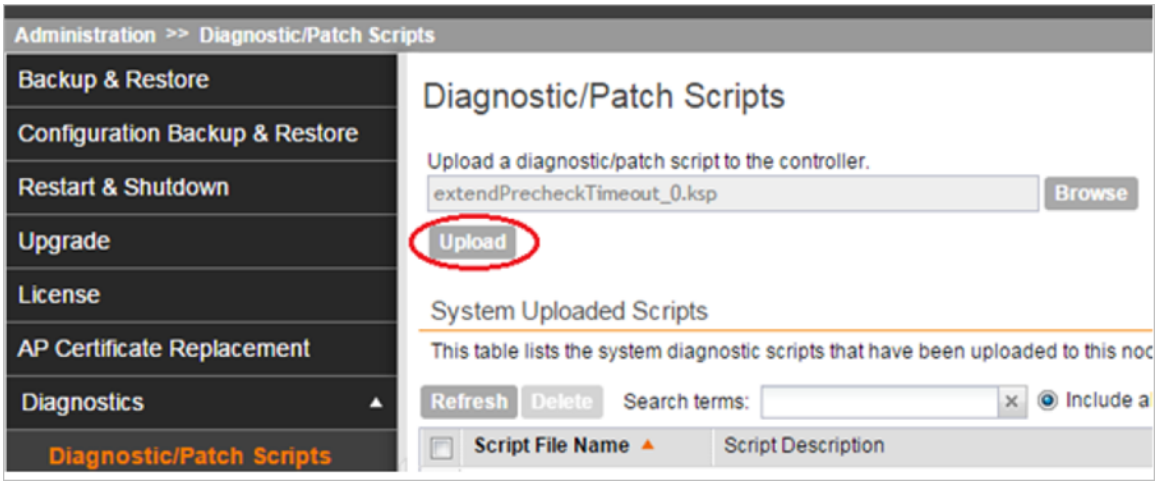
Apply the KSP before you upload the upgrade image file.

NOTE
The precheck process requires at least 2GB of available system memory to proceed with the upgrade. If the system has less than 2GB of available system memory, the precheck process will abort the upgrade attempt.

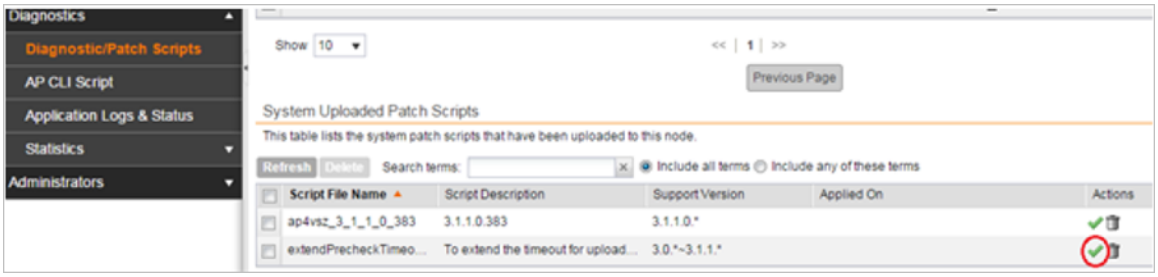
1. Download the KSP file from the Support website to your computer. The file name is *extendPrecheckTimeout_0.ksp*.
2. Log on to the controller, and then go to **Administration** > **Diagnostics** > **Diagnostic/Patch Scripts**.
3. Click **Browse**, and select the KSP file that you downloaded.



4. Click *Upload*.



5. When the KSP file appears on the list of available scripts, click the green check mark under the Actions column.



After the KSP script is applied, upload the upgrade image file, and then upgrade the controller to this release.

Performing Preupgrade Validation

Another enhancement to the upgrade process that added in this release is preupgrade validation.

Preupgrade validation automatically runs if you are upgrading from release 3.2 or earlier. However, if you are upgrading from an earlier 3.2.1 release, you need to manually enable preupgrade validation by going to **Administration** > **Upgrade**, and then selecting the **Run Pre-Upgrade Validations** check box.

Preupgrade validation checks for data migration errors before performing the upgrade. If data migration was unsuccessful, this error message is displayed: *Exception occurred during the validation of data migration. Please apply the system configuration backup and contact system administrator.* If this occurs, take a backup of the system configuration and contact Ruckus support to resolve the issue.

To access the logs of the validation process, log on to the web interface, and then navigate to **Administration** > **Diagnostics** > **Application Logs** > **Datamanager** > **datamanager.log**.

NOTE

If data migration validation fails due to insufficient memory, the following error message appears: *Insufficient memory. The system requires at least 2 GB of available memory to complete data validation*. Therefore, it recommends the following:

- If you are upgrading a physical controller, restart the controller to free up memory.
- If you are upgrading a virtual controller, allocate additional memory to the virtual machine, and then restart the virtual machine instance.
- Alternatively, clear the check box above to upgrade the controller to the new release without completing data validation.

Supported Upgrade Paths

Before you upgrade the controller, verify that it is running a release build that can be upgraded to this release.

NOTE
Users who have loaded AP patch 3.4.2.0.405 for Krack fixes, can upgrade to 3.4.2 Patch-3 (controller build number 3.4.2.217 with AP build number 3.4.2.0.454)

The table below lists previous releases that can be upgraded to this release.

TABLE 2 Previous release builds that can be upgraded to this release

Platform	Release Build	Release Build
SCG200	3.1.0.0.236	3.2.1.0.134
SZ100	3.1.0.0.249	3.2.1.0.139
vSZ (vSCG)	3.1.1.0.442	3.2.1.0.163
vSZ-D	3.1.1.0.450	3.2.1.0.193
	3.1.1.0.474	3.2.1.0.217
	3.1.1.0.476	3.2.1.0.245
	3.1.2.0.95	3.2.1.0.247
	3.1.2.0.513	3.2.1.0.253
	3.1.2.0.520	3.4.0.0.659

TABLE 2 Previous release builds that can be upgraded to this release (continued)

Platform	Release Build	Release Build
	3.1.2.0.536	3.4.0.0.745
	3.1.2.0.1015	3.4.1.0.208
	3.4.0.0.976	3.4.2.0.169
	3.4.2.0.152	3.4.2.0.176
	3.2.0.0.790	

Upgrading With Unsupported APs

If the controller is currently managing APs that are unsupported in this release, here are a few issues that you may encounter when you upgrade to this release and their workarounds.

AP models that have already reached End-of-Life (EoL) status (for example, the 2942) are unsupported in this release. If you currently have AP models that are unsupported, you will be able to upgrade the controller to this release but not the AP zones to which the EoL APs belong.

- After you upload the upgrade (`.ximg`) file the **Administration** > **Upgrade** page of the web interface, the web interface will inform you that the upgrade cannot be started because the controller is managing at least one AP that is unsupported by this release.
- If you click Upgrade or Backup & Upgrade on the **Administration** > **Upgrade**page, the upgrade process will start, but it will eventually fail. **[SCG-41229]**

Issues and Workarounds for Upgrading Unsupported APs to This Release

The following tables summarize some of the upgrade issues that you may encounter if the SZ100 or SCG200 is managing APs that have reached EoL and the possible workarounds for each issue. **[SCG-42511, SCG-43360]**

TABLE 3 Issues and workarounds for upgrading the SZ100 with EoL APs

Release	Issue Workaround	Version
3.1, 3.1.1	When you attempt to upgrade the controller, a warning message appears and informs you that the system cannot be upgraded because there are APs that are unsupported in the new release. The message identifies these unsupported APs. The following is an example of the warning message: Your current system cannot be upgraded. Reason: The system cannot be upgraded, because the following AP model(s) will be unsupported: ZF7343 * 1" Despite this limitation, the Upgrade and Backup & Upgrade buttons remain visible and clickable, which seem to indicate that the controller can still be upgraded. However, when you click Upgrade or Backup & Upgrade, the upgrade attempt fails because of the unsupported APs.	To be able to upgrade the system, do one of the following: • On the web interface, clear the Automatically approve all join requests from APs check box. • Delete any unsupported APs from the controller. • Before running the upgrade, apply the KSP file for this issue. Contact Ruckus support for more information.
3.2	When you attempt to upgrade the controller, a warning message appears and informs you that the system cannot be upgraded because there are APs that are unsupported in the new release. The message identifies these unsupported APs.	To be able to upgrade the system, do one of the following: • On the web interface, clear the Automatically approve all join requests from APs check box.

TABLE 3 Issues and workarounds for upgrading the SZ100 with EoL APs (continued)

	The **Upgrade** and **Backup & Upgrade** buttons are hidden to prevent you from attempting to upgrade the system before one of available workarounds to the issue is applied.	• Delete any unsupported APs from the controller. • Before running the upgrade, apply the KSP file for this issue. Contact Ruckus support for more information.

When you attempt to upgrade the SCG200 to this release, the upgrade script will check if the controller has any AP zones using AP firmware releases that are unsupported in this release. If the upgrade script finds at least one AP zone that is using an unsupported AP firmware release, the upgrade process will aborted.

TABLE 4 Issues and workarounds for upgrading the SCG200 with EoL APs

Release	Issue Workaround	Version
3.1, 3.1.1	When you attempt to upgrade the controller, a warning message appears and informs you that the system cannot be upgraded because there are APs that are unsupported in the new release. The message identifies these unsupported APs. The following is an example of the warning message: Your current system cannot be upgraded. Reason: The system cannot be upgraded, because the following AP model(s) will be unsupported: ZF7343 * 1" The following is an example of the warning message: Your current system cannot be upgraded. Reason: The system cannot be upgraded, because the following zone(s) will be unsupported: v1.1.2.0.93 * Despite this limitation, the Upgrade and Backup & Upgrade buttons remain visible and clickable, which seem to indicate that the controller can still be upgraded. However, when you click Upgrade or Backup & Upgrade, the upgrade attempt fails because of the unsupported APs.	To be able to upgrade the system, do one of the following: • Move the EoL APs to the Staging Zone.. • Upgrade the AP zones to the latest available AP firmware release. • Before running the upgrade, apply the KSP file for this issue. Contact Ruckus support for more information.
3.2	When you attempt to upgrade the controller, a warning message appears and informs you that the system cannot be upgraded because there are APs that are unsupported in the new release. The message identifies these unsupported APs. The **Upgrade** and **Backup & Upgrade** buttons are hidden to prevent you from attempting to upgrade the system before one of available workarounds to the issue is applied.	To be able to upgrade the system, do one of the following: • Move the EoL APs to the *Staging Zone*. • Upgrade the AP zones to the latest available AP firmware release. • Before running the upgrade, apply the KSP file for this issue. Contact Ruckus support for more information.

Multiple AP Firmware Support in the SCG200/vSZ-H

In the SCG200/vSZ-H, the AP firmware releases that APs use are configured at the zone level. This means that APs that belong to one zone could use a different AP firmware release from APs that belong to another zone.

In the current release and earlier releases, when the SCG200 software is upgraded to a newer release, the upgrade mechanism does not require the administrator to upgrade the AP firmware releases that managed APs are using. In contrast, the SZ100 and vSZ-E automatically upgrade both the controller firmware and AP firmware when the system is upgraded.

Up to Three Previous Major AP Releases Supported

Every SCG200/vSZ-H release can support up to three major AP firmware releases, including (1) the latest AP firmware release and (2) two of the most recent major AP firmware releases. This is known as the N-2 (n minus two) firmware policy.

> **NOTE**
> A major release version refers to the first two digits of the release number. For example, 3.5 and 3.5.1 are considered part of the same major release version, which is 3.1.

The following releases can be upgraded to release 3.4.x:

- 3.2
- 3.2.x
- 3.1.x
- 3.1

The AP firmware releases that the SCG200/vSZ-H will retain depend on the SCG200/vSZ-H release version from which you are upgrading.

- If you are upgrading the SCG200/vSZ-H from release 3.2, then the AP firmware releases that it will retain after the upgrade will be 3.4 and 3.2
- If you are upgrading the SCG200 from release 3.1, then the AP firmware releases that it will retain after the upgrade will be 3.4 and 3.2 and 3.1.

All other AP firmware releases that were previously available on the SCG200 will be deleted automatically.

EoL APs and APs Running Unsupported Firmware Behavior

Understanding how the SCG200 handles APs that have reached EoL status and AP running unsupported firmware can help you design an upgrade plan that will minimize impact on wireless users in your organization.

EoL APs

> **NOTE**
> To check if an AP that you are managing has reached EoL status, visit the ZoneFlex Indoor AP and ZoneFlex Outdoor AP product pages on the Ruckus support website. The icons for EoL APs appear with the *END OF LIFE* watermark.

- An EoL AP that has not registered with the SCG200 will be moved to the Staging Zone and its state set to Pending. This AP will be unable to provide WLAN service to wireless clients.
- If an EoL AP is already being managed by the SCG200 and you attempt to upgrade the controller, the firmware upgrade process will be unsuccessful. The web interface may or may not display a warning message (see Upgrading With Unsupported APs). You will need to move the EoL AP to the Staging Zone to upgrade the controller successfully.

An EoL AP that has not registered with the SCG200 will be moved to the Staging Zone and its state set to Pending. This AP will be unable to provide WLAN service to wireless clients.

APs Running Unsupported Firmware Releases

- APs running AP firmware releases that are unsupported by the SCG200 release can still connect to the controller.
- Once connected to the controller and assigned to a zone, the AP will be upgraded to the AP firmware assigned to the zone to which it belongs.

Compatibility with 64MB APs

Ruckus APs with 64MB memory have reached end-of-life (EoL) status and are no longer supported in this and later releases. If you have 64MB APs that are being managed by the controller and you want to keep using these APs to provide Wi-Fi services to users, ensure that these APs belong to zones running release 3.1.x or earlier.

TABLE 5 To continue managing 64MB APs, they must belong to zones running release 3.1.x or earlier

Release	Compatible Release as a 64MB AP Support Zone	64MB AP Support
3.4	• 3.1 • 3.1.x • 3.2 • 3.2.x	64MB APs must belong to a zone running release 3.1.x or earlier.

Interoperability 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 later (including 104.0).

The AP base image is optimized for controller-discovery compatibility to support all Ruckus controller products including ZoneDirector, SCG200, vSZ, SZ- 100, and SAMs.

Once the AP discovers and joins a controller (for example, the SZ100), 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, vSZ AP 100.x) 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 interface.

Enabling ZoneFlex AP Discovery to a SmartZone Controller Using DHCP Option 43

To ensure reliable discovery of ZoneFlex APs to SmartZone controllers, the DHCP server must be configured to support DHCP Option 43 settings as outlined in the Getting Started Guide for your controller. DHCP option 43 sub codes 03 and 06 IP address assignments must both point to the SmartZone controller's control plane IP address to ensure reliable discovery services.

Enabling ZoneFlex AP Discovery to a SmartZone Controller Using DNS

To ensure reliable discovery of ZoneFlex APs to SmartZone controllers using DNS resolution, the DNS server must be configured to have two DNS entries. The first DNS entry must use the “RuckusController” prefix and the second entry the “zonedirector” prefix.

Refer to the *Getting Started Guide* for your SmartZone controller for instructions on how to connect the AP to the controller using DNS.

Redeploying ZoneFlex APs with SmartZone Controllers

NOTE
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 an SCG, SZ, vSZ, or SAMs 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 ZoneDirector to SmartZone controller migration tools and procedures. Contact support.ruckuswireless.com for the latest available procedures and utilities.

Converting Standalone APs to SmartZone

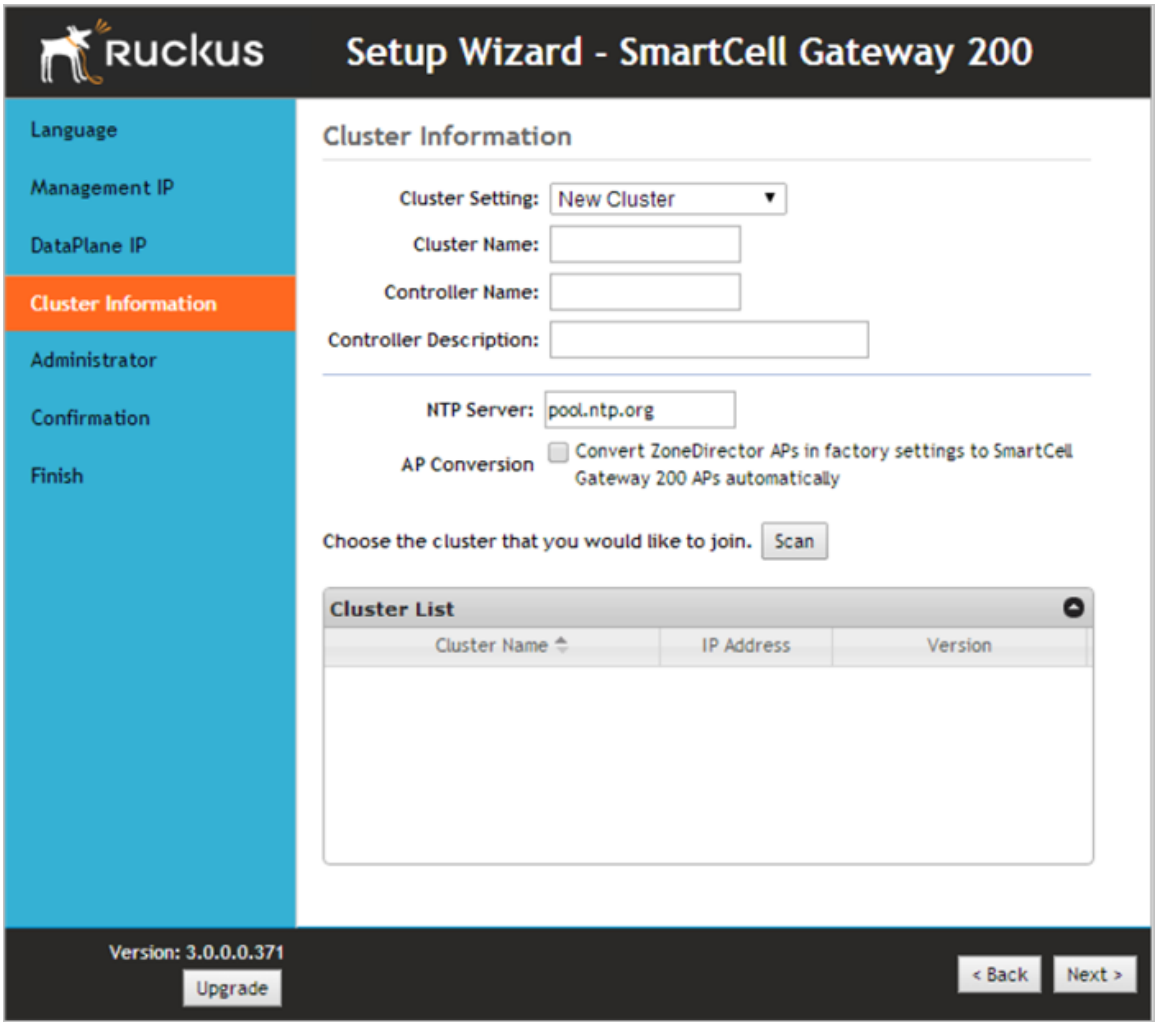
The information in this section applies to standalone ZoneFlex APs (those that are not managed by ZoneDirector), in factory default configuration, to the SCG- 200/SZ-100/vSZ.

Follow these steps to convert standalone ZoneFlex APs to the SCG-200/SZ-100/ vSZ firmware so that they can be managed by the SCG-200, SZ-100, or vSZ.

1. When you run the SCG-200, SZ-100, or vSZ Setup Wizard, select the **AP Conversion** check box on the **Cluster Information** page.

   NOTE
   The figure below shows the AP Conversion check box for the vSZ Setup Wizard. If you are setting up SZ300, SCG200, or SZ100 the check box description may be slightly different.

FIGURE 1 Select the AP Conversion check box to convert standalone ZoneFlex APs to SCG 200/SZ100/vSZ APs



2. After you complete the Setup Wizard, connect the APs to the same subnet as the SCG-200/SZ-100/vSZ.

   When the APs are connected to the same subnet, they will detect the SCG-200/ SZ-100/vSZ on the network, and then they will download and install the AP firmware from SCG-200/SZ-100/vSZ. After the SCG-200/SZ-100 firmware is installed on the APs, the APs will automatically become managed by the SCG-200/SZ-100/vSZ on the network.

ZoneDirector Controller and SmartZone Controller Compatibility

If you have a ZoneDirector controller on the same network, take note of this important information.

To ensure reliable network operations, it is recommended that ZoneDirector controllers and SmartZone controllers (SCG, SZ, vSZ, SAMs 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 coexist on the same network.

Client Interoperability

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

Ruckus Wireless, Inc., a wholly owned subsidiary of ARRIS International plc.
350 West Java Dr., Sunnyvale, CA 94089 USA
www.ruckuswireless.com