

RUCKUS LTE AP Management Release Notes, 20.03

Supporting Software Release 20.03

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Overview

This release of RUCKUS LTE AP Management includes two main features support for Macro-eNB and PWS: Offending-App in addition to UI enhancements and defect fixes

LTE AP Management 20.03 Release Notes

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New in this Release

Feature List

The following sections lists new features for the LTE AP Management release.

- **Macro-eNB Support**

The LTE inter-frequency neighbours EARFCN, bandwidth, and CIO to be used for all the cells under this EARFCN for each carrier can be added, modified, and/or deleted from the Cloud. The inter-frequency neighbor information is used for measurements and handover of the UE by the AP. These configured neighbours will be applicable for all the RUCKUS APs under the venue. The RUCKUS Small Cell AP supports mobility of UEs to inter-frequency neighbor cells either through S1 or X2 interfaces. The neighbor cells can be of Macro EnodeB or Home EnodeB type. SKU Q950 now supports changing the **Cell Type** to **Macro eNB**.

- PWS feature enhancement: CBSD supports the following PWS.

- **OffendingApp**

OFFENDING_APP.txt is a text file that has the name of the module because of which a crash occurred on the AP. When the Crash logs get extracted, the file can be found here: "`tmp/system_logs/halt_event/OFFENDING_APP.txt.gz`". When a crash occurs on an AP, after rebooting, at startup, the AP fetches the OFFENDING_APP.txt before creating `Q*10_LTE_AP_CrashLogs*.tgz` in the form of string. The fetched Offending_App (`InternetGatewayDevice.DeviceInfo.OffendingApp 0x66012014`) will get streamed with other `ap_cumulative_report.proto` to LKPI/Ruckpi.

For example, if a crash occurs due to some memory leakage. `tmp/system_logs/halt_event/OFFENDING_APP.txt.gz` and `InternetGatewayDevice.DeviceInfo.OffendingApp` reflect the same i.e. some.

On ELKPI, user can apply filter on Discover and fetch the field.

Supported APs

The following table lists the supported LTE APs in the current release.

TABLE 1 Supported LTE APs

APs	Category	Property
Q410	Indoor	<ul style="list-style-type: none"> • Plug-in LTE: Low power AP • Stand-alone or plugged with R510/R610 Wi-Fi AP models. <p>NOTE Q410 always connects with PoE+ source only. Wi-Fi APs may derive power from "PoE out" port on Q410 when plugged-in.</p> <ul style="list-style-type: none"> • Single RF Carrier, 2x2 @ 1/2 W EIRP • Ceiling or Wall mount
Q710	Indoor	<ul style="list-style-type: none"> • High-Capacity LTE • Dual RF Carrier 2x2 @ 1W EIRP • Ceiling or Wall mount
Q910	Outdoor	<ul style="list-style-type: none"> • Category A LTE • Dual RF Carrier 2x2 @ 1W EIRP • Pole, Wall, or Strand-mount
Q950	Outdoor	<ul style="list-style-type: none"> • High Power Outdoor • Category B CBSD • Up to 50/100W EIRP achievable with external antennas • 4T4R, 200Mbps (40MHz) • Fiber AND Ethernet w/daisy chaining • -48VDC

Release Information

This section summarizes product information for the RUCKUS LTE AP Management 20.03 release.

Product Name: RUCKUS LTE AP Management

Release Version: 20.03_LTE

Release available: December 2020

- **Management Service:** Feature enhancements and defect fixes

Server IP Addresses

Service	FQDN	Address	Protocol 1	Protocol 2	Protocol 3	Protocol 4
Qualcomm® Location (XTRA Predicted Satellite Data Service)	xtrapath1.izatcloud.net	Geo	TCP/80 HTTP			
Ruckus SC-Registrar	sc-registrar.ruckuswireless.com	34.211.175.172	ICMP Echo	TCP/443 SSL		

Ruckus SC-Registrar	sc-registrar.ruckuswireless.com	34.212.162.133	ICMP Echo	TCP/443 SSL		
CommScope SAS (STA)	https://stasas.sascms.net:8443	Geo	TCP/443 SSL			
CommScope SAS (Production)	https://cbsd-iot.sascms.net:8443	Geo	TCP/443 SSL			
Federated Wireless SAS	https://sc.federatedwireless.com:443/v1.2	Geo	TCP/443 SSL			
Google SAS (STA)	https://www.google-sas.com/vendor/	Geo	TCP/443 SSL			
Google SAS (Production)	https://sas.goog/v1.2/	Geo	TCP/443 SSL			
Ruckus NTP Server	ntp.cloud.ruckuswireless.com	104.154.107.129	UDP/123 NTP			
Ruckus NTP Server	ntp.cloud.ruckuswireless.com	146.148.32.216	UDP/123 NTP			
Ruckus Cloud HeMS SeGW 1	NA	104.197.44.198	ICMP Echo	UDP/500 IKE	ESP Protocol 50	UDP/4500 NAT-T
Ruckus Cloud HeMS SeGW 2	NA	35.225.228.188	ICMP Echo	UDP/500 IKE	ESP Protocol 50	UDP/4500 NAT-T
Ruckus Cloud HeMS SeGW 3	NA	35.202.152.35	ICMP Echo	UDP/500 IKE	ESP Protocol 50	UDP/4500 NAT-T
Ruckus Cloud HeMS SeGW 4	NA	35.232.65.10	ICMP Echo	UDP/500 IKE	ESP Protocol 50	UDP/4500 NAT-T

NOTE

This list does not contain a DNS server because the AP is using the customer DNS server and therefore doesn't require a special firewall rule.

NOTE

Geo = IP may change depending upon the geo-location. Please type "nslookup <FQDN>" on cmd/ Terminal prompt to detect the exact IP address.

NOTE

This list contains ports for IKE/EXP with or without NAT-T. This list does not contain an EPC SeGW; customer is using private EPC. Addresses marked "Geo" are using geographic DNS resolution and must be statically configured on the MEC DNS server.

How Do I Get Support?

For product support information and details on contacting the RUCKUS Customer Services and the Support Team, go to the RUCKUS Support portal: <https://support.ruckuswireless.com>, or <https://www.ruckuswireless.com> and select **Support**.

Upgrading AP Software

This topic provides information on upgrading the AP to secure SmallCell 4.2 default build (15 onwards) or above and downgrading from from the secure SmallCell 4.2 default build (15 onwards) or above.

Follow these steps to upgrade the AP software.

Case 1: Base build on AP is SmallCell 4.1 or above.

1. Directly upgrade AP to SC4.2 default build (build 15) or above

Case 2: Base build on AP is lower than SmallCell 4.1 (SC4.0, SC3.0, SC2.4, and so on).

2. Upgrade the AP software to SC 4.2 intermediate (build 14).
3. Upgrade the AP to secure SC 4.2 default build (build 15) or above.

Downgrading AP Software

Follow these steps to downgrade the AP software.

Case 1: Base build on AP is SmallCell 4.2 patch build or above to any other SC 4.2 patch build or default build (build 15)

1. Directly downgrade AP to any other SC 4.2 patch build or default build (build 15)

Case 2: Base build on AP is any SC 4.2 patch build or default build (build 15) to lower builds (SC4.0, SC3.0, SC2.4, and so on).

2. Downgrade the AP software to SC 4.2 intermediate (build 14).
3. Downgrade the AP software to lower builds.

Determining Software Upgrade or Downgrade

Use this table to determine software upgrade and downgrade.

Base Build	Destination Build	Actions
SC 4.2 Default Build	SC 4.2 Patch Build	Upgrade
SC 4.1 or above	SC 4.2 Default Build (build 15) or above	Upgrade
Build lower than SC4.1 (SC 4.0, SC 3.0, SC 2.4, and so on.)	SC 4.2 Default Build (build 15) or above	Upgrade AP to SC 4.2 intermediate (build 14) and then upgrade AP to secure SC 4.2 default build (build 15) or above.
SC 4.2 Patch Build	SC 4.2 Default Build	Downgrade
SC 4.2 Default Build	Build lower than SC 4.2 (SC 4.1, SC 4.0, SC 3.0, SC 2.4, and so on)	Downgrade AP to SC 4.2 intermediate (build 14) and then downgrade AP to lower builds.

Issues and Fixes

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Resolved Issues

The following table provides information on the known issues in the current release.

Resolved Issues	Description
LTE-7266	AP disconnection status updated with delayed time in GUI (around 4min).
LTE-7249	Parameters not visible in Cloud even after AP is operational, primarily timing status.
LTE-7248	Alarms not arriving in Cloud(tp2).
LTE-7246	Issues in Macro HO configuration
LTE-7114	"Crypto Profile Settings" window: "Reset Crypto Profile Settings" hyperlink is missing.
LTE-7101	LTE network issues : not able to delete network and not able to attach network to venue
LTE-7093	"Dashboard" menu - "Alarms" widget / Alarms Bell: There is gap between last alarm and end of window.
LTE-7087	Merge Failed - "Venue Display name is not unique".
LTE-7052	"Add Macro EARFCN" + "Edit Macro EARFCN" - UX incorrect implementation.
LTE-7043	"Venues" page - "Venue LTE Settings" window : Tooltip location is not in middle of toggle when "Ruckus Private LTE Network Service Access Restriction" toggle is "OFF" (Administration level).
LTE-7043	"Venues" page - "Venue LTE Settings" window : Tooltip location is not in middle of toggle when "Ruckus Private LTE Network Service Access Restriction" toggle is "OFF" (Administration level).
LTE-7024	User is not warned about AP reboot follow re-assigning LTE network to the venue that already activating another network
LTE-7017	"Create AP" + "Create New Venue" windows: incorrect text message under AP Name + Venue name when filling one character in text boxes.
LTE-6765	UI changes should be done for Q 950 edit AP parameters
LTE-6343	AP Slave wrong IP in Timing Role field.
LTE-6120	AP Overview page - Expand alarms - Severity column is missing.
LTE-6082	LTE APs table - Certification column - "Remove CPI button" should be aligned with the triangle icon.
LTE-5814	Administration - SAS Account tab - Help icon should be closer to the Registration Mode value.
LTE-5015	Resizing 'description' for Dashboard alarms expand should back to defaults UI size.
LTE-334	Able to creat duplicate AP name as it should be unique
LTE-6799	Column title cannot be clearly viewed follow incorrect default (fixed) wight and no tool-tip displayed on several screens.
LTE-7118	Technical error message is showing when we are doing any operation in Cloud.
LTE-7036	Custom venue profile not displaying in venue type drop down of venue LTE configurations.
LTE-7150	With AP LEDs off "EPC (S1) Connection status" showing Disconnected even when s1 is up.
	LTE-7031: Cloud events and notification are delayed or missing.
LTE-7143	Unable to set IPsec crypto profile params in network settings.
LTE-7115	Cloud API error-message: Network Element Driver error edit error for device acs1.
LTE-7079	User does not have Certify or Save button.
LTE-7149	Technical error while configuring PTP external master in IPv6 venue.
LTE-7058	PLMN List for secondary PLMNs are not sent while triggering factory reset from Cloud.

Issues and Fixes

Open Issues

Resolved Issues	Description
LTE-7142	Range for fragment size param not defined in Crypto Profile settings.
LTE-7066	Not able to delete APs from Kumodev14 QA cloud instance.
LTE-7077	Dashboard -> Alarms -> Expand AP Link (Source column).
LTE-7138	Unable to add AP to Cloud, throwing error "serial number already exist".
LTE-7116	Seeing duplicate records being send out to EPC for the access restriction feature.
LTE-7074	APs stuck in the never contacted state.
LTE-6918	Unable to add AP to any instance after deleting AP.
LTE-6959	Users cannot certify APs.
LTE-6969	Events are delayed by hours or missing entirely.
LTE-6917	Certify AP option is disable; works after factory reset AP again.
LTE-6970	Predefined SAS URL is sometimes cut, due to fixed URL size.
LTE-6980	Partner Authentication Failure Error observed on TPS2 cloud .
LTE-7086	Access restriction feature not working in tps2.flash environment.
LTE-7104	SAS URL when configured as IPV6 address, says invalid URL.
LTE-7086	Access restriction feature not working in tps2.flash environment.
LTE-7147	Unable to create any new LTE network.
LTE-7166	EPC restriction tenant name is wrong.
LTE-7109	Available ECGI Records are not displayed (when creation date is older).
LTE-7140	AP cannot be configured due to SAS tasks failure.
LTE-7144	Cannot replace between Timing M APS (when moving between Venues).
LTE-709	Remove PLMN SPV failing in ACS) and same not becoming Enable=false in CBSD.
LTE-7127	Enabled feature Crypto Profile in network is failed.
LTE-7106	Unable to configure IPv6 address of the external PTP master.
LTE-7158	Network switch to new created network failed due to empty value sent for crypto params.
LTE-7148	No AP events are updated on Cloud.

Open Issues

Following is a list of unresolved issues in this release.

Open Issues	Description
LTE-5165	An unexpected technical error access denied appears while navigating for the AP view.
LTE-6127	In certain corner cases, the available ECGI count shows lower than expected.
LTE-6504	Not removing invalid e-mail addresses causes Amazon to lock our account
LTE-6981	Invalid date is displayed for alarms.
LTE-7141	CMP re- enrollment should not be initiated on updating crypto parameters from Cloud, and on AP reboot.
LTE-7146	Throughput is not getting updated on the Cloud.
LTE-7159:	A customer inherits the privileges from the superuser account instead of the customer account.
LTE-7160	The delete AP operation fails (error - the configuration database is locked).
LTE-7163	AP is not operational after a software downgrade.
LTE-7171	Cloud is sending the venue level LED parameter during changing any venue level parameter or software upgrade and downgrade causing the AP level LED OFF state change to ON.

Open Issues	Description
LTE-7173	GPV is failing when adding AP.
LTE-7178	Errors when adding AP/Factory Reset AP and not become operational.
LTE-7181	Adding PLMN ID and re-ordering PLMN IDs fails with Error Code 9003.
LTE-7286	GPV failure when changing cell type and AP model builds are different in SKUs.

Limitations

Band Change

NOTE

We are changing the default AP configuration to Band 48 (CBRS Band). You can check the band of operation for your AP by clicking on **AP** -> **AP Properties** -> **More**.

If your Venue was previously customized to operate on Band 42/43, and you want to continue to do so, do get in touch with your Ruckus Representative for help, or open a support case.

Adding AP After Deletion

Following the deletion of AP from a Venue, you must wait for a few minutes before adding back to the Venue to prevent a scenario where the delete operation is not completed prior to the add operation.

CBSD- SAS Communication

The AP registration with SAS cycle (CPAS) may take up to 24 hours; thus, grant may not be available for up to 24 hours.

