

# RUCKUS IoT 1.5.1.1 Release Notes

Supporting IoT Controller Release 1.5.1.1

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# Overview

This document provides release information about Ruckus IoT Suite 1.5.1.1 a versatile system for managing IoT devices. The Ruckus IoT Suite is a collection of network hardware and software infrastructure components used to create an IoT access network that is comprised of four elements:

- Ruckus IoT-ready Access Points (APs)— in addition to the wall-mount H510, the ceiling-mount R510, the outdoor model T310, the ceiling-mount R610, R710, and R720, the outdoor models E510, and T610 as of this release the following additional AP models are now IoT-ready: Indoor Access Point R730 (802.11 ax), the Indoor Access Point C110, the LTE access point M510, Indoor Wi-Fi 6 Access Point for Dense Device Environments R650, Indoor Access Point Indoor Wi-Fi 6 Access Point for Ultra-Dense Device Environments R750, and Outdoor Wi-Fi 6 Access Point with 2.5Gbps Backhaul T750.
- Ruckus IoT Modules—A NEW device that attaches to a Ruckus IoT-ready AP and supports standards such as Bluetooth Low Energy (BLE), Zigbee, LoRa and more. Our first IoT Module, the I100, will support BLE or Zigbee within the same enclosure.
- Ruckus SmartZone Controller—existing WLAN controller, which provides basic networking information for both the WLAN and the IoT access network.
- Ruckus IoT Controller—A NEW virtual controller, deployed in tandem with a Ruckus SmartZone Controller, that performs connectivity, device, and security management functions behind the scenes for non-WiFi devices. Our IoT Controller also facilitates cross-solution endpoint communication and provides APIs for northbound integration with IoT cloud services.

This document provides a list of the release components, their versions, a link to documentation, as well as caveats, limitations, and known issues in this release.

# Document History

**TABLE 1** Document History

Revision Number	Summary of Changes	Publication Date
A	New release	September 2020

# New in This Release

Ruckus IoT-1.5.1.1 Suite provides the following update:

- General Stability Fixes
- Vendor Plugin Fixes
- Security Vulnerability Fixes

# Changed Behavior

After upgrading to the intermediate release (1.5.1.1.17), to access the latest releases (1.5.1.1), user has to upload the image and upgrade to the the build 1.5.1.1.22. After upgrading the user is automatically logged out.

The user has to login in back again where he is prompted to set a new password. With the new password, user can access the 1.5.1.1 system.

**NOTE**

Support for downgrade is not provided. For example, if you are on the latest build (1.5.1.1.22), you cannot downgrade to 1.5.1.1.17 or 1.5.1.0.21 as the system will throw an error

**STOP and READ before upgrading to 1.5****IoT Controller Licensing:**

Before upgrading to 1.5 release, please make sure you have bought an IoT Right to Use (RTU) and IoT capacity license to accommodate the number of IoT gateways you plan to use. The licenses should be uploaded to 1.5 controller for uninterrupted services. Please refer the below links on how to get licenses and to contact support.

**KBA: Support Activation from Support Portal**<https://support.ruckuswireless.com/articles/000008284>

**KBA: On how to find serial number of vRIOT controller**<https://support.ruckuswireless.com/articles/000010095>

<https://support.ruckuswireless.com/contact-us>

**For Patch:**

Patch **vriot-patch-1.5.0.0.34.tar.gz** will be required for those IoT Controller(s) upgrading from 1.5.0.0.34 to a later version. Otherwise upgrade from 1.5.0.0.34 will fail. After applying the patch-1.5.0.0.34, the IoT controller has to be rebooted manually.

**IoT Controller Harddisk Resize:**

In 1.5.0.1 the default IoT Controller's HDD size is increased to 20GB. In pre-1.5 version the size is just 8GB. So before upgrading to 1.5.0.1, customer is expected to increase the HDD to exactly 20GB (less than or more than 20GB will lead to failure during upgrade). Below are the steps and examples.

- Pre-1.5 IoT Controller shut down (power off).
- Resize or Expand the partition to exactly 20GB. (less than or more than 20GB will lead to failure during upgrade)
- **VirtualBox:**
  - Go to Vbox installed location and use VBoxManage (cli command tool) to resize. Installed location (HDD) can be acquired from the VBox UI.
  - Execute “VBoxManage modifymedium vriot-1.4.0.0.17.vdi --resize 20480” . In the above command vriot-1.4.0.0.17.vdi, should be replaced with the name of the VDI file of the IoT Controller.
  - Power on VM.
- **VMWare (Workstation or ESX/ESXi):**
  - Go to settings (edit settings) and click on existing HDD.
  - Click on Expand option and set value as 20GB and perform expand.
  - Power on VM.
- Bring up 1.4 controller.
- Upload the 1.5.0.1 image. In case the free space is less than 3GB, then need to free up space before the upload.
- Perform upgrade as usual.

**KBA: Firmware Upgrade Matrix**

<https://support.ruckuswireless.com/articles/000010364>

## Hardware and Software Support

This release is compatible with the following controller and access point hardware and software.

**Compatible Hardware:**

- C110 Access Point (C110)
- H510 Access Point (H510)

## Release Information

- R510 Access Point (R510)
- R610 Access Point (R610)
- R710 Access Point (R710)
- R720 Access Point (R720)
- T310 Access Point (T310)
- E510 Access Point (E510)
- T610 Access Point (T610)
- R650 Access Point (R650)
- R730 Access Point (R730)
- R750 Access Point (R750)
- T750 Access Point (T750)
- M510 Access Point (M510)
- I100 IoT Module (I100)

### Compatible Software:

- Virtual SmartZone High Scale (vSZ-H)
- Virtual SmartZone Essentials (vSZ-E)
- SmartZone 100 (SZ-100)
- Ruckus IoT Controller (RIoT)

## Release Information

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

### vSCG (vSZ-H and vSZ-E), and SZ-100:

- WLAN Controller version: 5.2.0.0.699
- Control plane software version in the WLAN Controller: 5.2.0.0.770
- AP firmware version in the WLAN Controller: 5.2.0.0.1412
- IoT Gateway Version: 1.5.1.0.15030

### RIoT:

- Ruckus IoT Controller version: 1.5.1.0.22
- VMWare ESXi version: 5.5 and later
- VMWare VM Player version: 12 and later
- KVM Linux virtualizer version: 1:2.5+dfsg-5ubuntu10.42 and later
- Google Chrome version: 61 and later
- Mozilla Firefox version: 56 and later

### SDK:

- Ruckus IoT SDK version: SDK-1.1

**TABLE 2** Release Build Compatibility Matrix

Release	IoT Controller	SZ	AP	Supported AP Models
<b>IoT GA 1.0</b>	1.0.0.0.25	3.6.1.2.10051	3.6.1.2.10040	H510, R510, T310d
<b>IoT GA 1.1</b>	1.1.0.0.6	3.6.1.2.12010	3.6.1.2.12007	H510, R510, T310d
<b>IoT GA 1.1MR1</b>	1.1.0.0.6	3.6.1.2.12012	3.6.1.2.12009	H510, R510, T310d
<b>IoT GA 1.2</b>	1.2.0.0.22	3.6.1.2.12535	3.6.1.2.12535	H510, R510, T310d, R610, R710, R720, T610
<b>IoT GA 1.2MR1</b>	1.2.0.0.24	3.6.1.2.12538	3.6.1.2.12538	H510, R510, T310d, R610, R710, R720, T610
<b>IoT GA 1.3</b>	1.3.0.0.14	3.6.1.2.13022	3.6.1.2.13022	H510, R510, T310d, R610, R710, R720, T610
<b>SZ 5.1.1.0</b>	1.2.0.0.24	5.1.1.0.589	5.1.1.0.619	H510, R510, T310d, R610, R710, R720, T610, R730
<b>SZ 5.1.1.0MR1</b>	1.2.0.0.24	5.1.1.0.598	5.1.1.0.624	H510, R510, T310d, R610, R710, R720, T610, R730
<b>SZ 5.1.1.2</b>	1.3.1.0.1	5.1.1.2.14019	5.1.1.2.14019	H510, R510, T310d, R610, R710, R720, T610, R730
<b>SZ 5.1.2</b>	1.3.1.0.1	5.1.2.0.302	5.1.2.0.373	H510, R510, T310d, R610, R710, R720, T610, R730, R750
<b>IoT GA 1.4</b>	1.4.0.0.17	5.1.1.2.15014	5.1.1.2.15014	H510, R510, T310d, R610, R710, R720, T610, R730, C110
<b>IoT 1.5</b>	1.5.0.0.34	5.1.1.2.15524	5.1.1.2.15524	H510, R510, T310d, E510, R610, R710, R720, T610, R730, C110, M510
<b>IoT 1.5MR1</b>	<b>1.5.0.0.38</b>	5.1.1.2.15524	5.1.1.2.15524	H510, R510, T310d, E510, R610, R710, R720, T610, R730, C110, M510
<b>IoT 1.5.0.1</b>	1.5.0.1.21	5.2.0.0.699	5.2.0.0.1412 IoT Version : 1.5.0.1.15027	H510, R510, T310d, E510, R610, R650, R710, R720, T610, R730, R750, T750, C110, M510
<b>IoT 1.5.1.0</b>	1.5.1.0.21	5.2.0.0.699	5.2.0.0.1412 IoT Version : 1.5.1.0.15030	H510, R510, T310d, E510, R610, R650, R710, R720, T610, R730, R750, T750, C110, M510
<b>IoT 1.5.1.1</b>	1.5.1.1.22	5.2.0.0.699	5.2.0.0.1412 IoT Version : 1.5.1.0.15030	H510, R510, T310d, E510, R610, R650, R710, R720, T610, R730, R750, T750, C110, M510

**TABLE 3** IoT Upgrade Support Matrix

Controller Version	AP Version	GA-1.3.1.0	GA-1.4.0.0	GA-1.5.0.0	GA-1.5MR1	GA-1.5.0.1	GA-1.5.1.0	GA-1.5.1.1
<b>GA-1.3.1.0</b>	<b>5.1.1.2/5.1.2</b>	Yes	Yes	No	No	No	No	No
<b>GA-1.4.0.0</b>	<b>5.1.1.2</b>	No	Yes	Yes	Yes	No	No	No
<b>GA-1.4.0.0</b>	<b>5.2.0.0</b>	No	Yes	No	No	Yes	Yes	No
<b>GA-1.5.0.0</b>	<b>5.1.1.2</b>	No	No	Yes	Yes	No	No	No
<b>GA-1.5MR1</b>	<b>5.1.1.2</b>	No	No	No	Yes	Yes	Yes	No
<b>GA-1.5.0.1</b>	<b>5.2.0.0</b>	No	No	No	No	Yes	Yes	No
<b>GA-1.5.1.0</b>	<b>5.2.0.0</b>	No	No	No	No	No	Yes	Yes

**TABLE 3** IoT Upgrade Support Matrix (continued)

Controller Version	AP Version	GA-1.3.1.0	GA-1.4.0.0	GA-1.5.0.0	GA-1.5MR1	GA-1.5.0.1	GA-1.5.1.0	GA-1.5.1.1
GA-1.5.1.1	5.2.0.0	No	No	No	No	No	No	Yes

## Known Issues

The following are the caveats, limitations and known issues.

### Component: IoT feature in Access Point with IoT Module I100

- IOTC-2691-Ruckus IOT Controller: Three network interfaces are shown for the R730 AP while connecting the AP to old Controller

**Workaround** - None

### Component: RUCKUS IoT Controller

- IOTC-3331 - Once "Beacon as a Service" feature is enabled even if subsequently disable, Factory will fail.

**Workaround** - None

- IOTC-3355 - User will not be able to load .mov format file to node-red file manager.

**Workaround** - None

- IOTC-3314 - Heartbeat message is not sent when enabled only on Vendor 2.

**Workaround** - Configure all vendor 2 configuration in Vendor 1 if required only in one vendor and if required on both enabling heartbeat on vendor 1 sends the message on both

- IOTC-3313 - Heartbeat message is sent for both the vendors even if enabled for only for vendor1.

**Workaround** - None

- IOTC-3227 - LNS tab does not present the LoRa Network Server after upgrade.

**Workaround** - Go to Admin tab, stop the LoRa Network Server and start it again.

- Disabling N+1 resets the fallback node and removes the default license.

**Workaround**- Redeploy the VM in case of using a default license. In case of using a licensed version upload the license and then enable N +1.

- IOTC-3087/IOTC-3005-In a DB restored controller license alert and second license upload will not work.

**Workaround** - None

- IOTC-3078-Total LNS count is displaying blank in dashboard page in firefox browser.

**Workaround** - Go to Admin tab, stop the LoRa Network Server and start it again.

- IOTC-3075-Only the first 10 APs is shown in the Beacons (IoT Devices) page irrespective of AP being BLE or Zigbee.

**Workaround** - Filter via tree view but even in that the first 10 only will be shown.

- IOTC-3069-In a N+1 setup traffic going from controller to cloud will not use Virtual IP in the packet.

**Workaround** - Configure firewall to allow traffic to pass from primary IP and secondary IP.

- IOTC-3067-N+1 configuration failed if primary and secondary have same hostname is upper and lower case.

**Workaround** - Configure different names for primary and secondary.



- IOTC-3060- Telkonet cloud issue: Telkonet EcoCentral status may display down for all end devices even when device is operational.  
**Workaround** - None
- IOTC-2980-connection lost message seen on switching from rules dashboard to rules configuration.  
**Workaround** - None (property of node-red design).
- IOTC-2868-Clicking on LoRa tab in Firefox browser gives Potential Security Issue page.  
**Workaround** - Right-click the lock icon at the top left corner of the iframe, then navigate to This Frame->Show Only This Frame, then you see the "Advanced" -> "Accept the Risk and Continue" button. Click it. After that hit "back" twice and refresh .
- IOTC-2948 - Time mismatch is seen between the actual time and the time shown in Controller.  
**Workaround** - None
- IOTC-2597-Controller: Factory default AP tx power shows as 6 not setting to max value.  
**Workaround** - Manually set the tx-power to max from the UI.
- IOTC-2711-Concurrent ZigBee-ZigBee or BLE-BLE on dual-radio platform is not supported.  
**Workaround** - None

## Resolved Issues

### NOTE

A number of additional issues have been resolved internal to the product.

- IOTC-3335 - Plugin status is not updated for Soter plugin
- IOTC-3204 - Sometimes IOT Protocols and AP name are not updated for pre-approved AP's.
- IOTE-71-1.5.1.0.21 Unresponsive due to Hard disk full
- IOTC-3586-Soter payload changes in the controller to correctly parse data from soter device

## Caveats

- Disk Space must re-size from 8GB to exactly 20GB (less than or greater than 20GB will cause failure) when IoT Controller is upgraded from 1.4.0.0.17 to 1.5.0.1.
- The IoT stack will not come up if the IoT controller with IoT Access Points were to upgrade from (AP FW:5.1.1.2) 1.5.0.0 to 5.2.0.0 and back to (5.1.1.2) 1.5.0.0. The work around for this issue is as follows:
  - Need to move the AP back to release 5.2.0.0
  - Run the **uboot\_ctrl.sh enable** command
  - Reboot the AP
  - Downgrade the AP to Release 1.5 (5.1.1.2.15524)
  - Check that the IoT stack has come up and that the IoT Dongle was detected.

## Supported Devices

This section documents the supported IoT end devices. Multiple other devices may work with this release but they have not been validated.

Device	Type	Mode	Manufacturer	Basic Name	Basic Model
Vingcard Signature	Lock	Zigbee	Assa-Abloy	AA_LOCK	
Vingcard Essence	Lock	Zigbee	Assa-Abloy	AA_LOCK	
Yale YRD220/240 TSDB Display Lock	Lock	Zigbee	Assa-Abloy	Yale	YRD220/240 TSDB
Yale YRD210 Push Button Lock	Lock	Zigbee	Assa-Abloy	Yale	YRD210 Push
Smartcode 916	Lock	Zigbee	Kwikset	Kwikset	SMARTCODE_DEADBOLT_10T
Smartcode 910 (450201)	Lock	Zigbee	Kwikset	Kwikset	
Lightify (RGB) Model 73674	Bulb	Zigbee	Osram	OSRAM	LIGHTIFY A19 RGBW
Lightify Model 73693	Bulb	Zigbee	Osram	OSRAM	LIGHTIFY A19 Tunable White45856
Lightify Model 73824	Bulb	Zigbee	Osram	OSRAM	
Element Color Plus	Bulb	Zigbee	Sengled	sengled	E11-N1EA
Bulb - LED	Bulb	Zigbee	Sengled	sengled	Z01-A19NAE26
E11-G13	Bulb	Zigbee	Sengled	sengled	E11-G13
Lux	Bulb	Zigbee	Philips	Philips	LWB004
SLV E27 Lamp Valetto (Zigbee 3.0)	Bulb	Zigbee 3.0	SLV		
GE Smart Dimmer	Switch	Zigbee	GE	Jasco Products	45857
GE Smart Switch	Switch	Zigbee	GE	Jasco Products	45856
Smart Plug	Plug	Zigbee	Centralite	Centralite	4257050-ZHAC
Zen Thermostat	Thermostat	Zigbee	Zen Within	Zen Within	Zen-01
ZBALRM	Alarm	Zigbee	Smartenit		Model #1021 A
Temp, Humidity Sensor	Sensor	Zigbee	Heiman	HEIMAN	HT-N
Gas detector	Sensor	Zigbee	Heiman	HEIMAN	GASSensor-N
Contact Sensor/Door Sensor	Sensor	Zigbee	Centralite	Centralite	3300-G
3-Series Motion Sensor	Sensor	Zigbee	Centralite	Centralite	3305-G
Temperature Sensor	Sensor	Zigbee	Centralite	Centralite	3310-G
Multipurpose Sensor	Sensor	Zigbee	Smart things	Samjin	
Button	Sensor	Zigbee	Smart things	Samjin	
Motion Sensor	Sensor	Zigbee	Smart things	Samjin	
Water Leak Sensor	Sensor	Zigbee	Smart things	Samjin	
Motion Sensor	Sensor	Zigbee	Aduro SMART ERIA	ADUROLIGHT	
Smart Plug	Plug	Zigbee	Smart Things	Samjin	
Bulb	Bulb	Zigbee	Aduro SMART ERIA		
Bulb	Bulb	Zigbee	Cree		BA19-08027OMF-12CE26-1C100
Smart Plug	Plug	Zigbee	INNR		
Smart Blinds	Blinds	Zigbee	Axis Gear		
Occupancy Sensor	Sensor	Zigbee	Telkonet		
Door Sensor	Sensor	Zigbee	Telkonet		
Thermostat	Thermostat	Zigbee	Telkonet		

Device	Type	Mode	Manufacturer	Basic Name	Basic Model
Picocell	Gateway	LoRa	Semtech		
Mini Hub/ Basic station	Gateway	LoRa	TABS		
Door Sensor	Sensor	LoRa	TABS		
Occupancy Sensor	Sensor	LoRa	TABS		
Panic Button	Beacon	BLE	TraknProtect		
Tray Beacon	Beacon	BLE	TraknProtect		
Asset Beacon	Beacon	BLE	TraknProtect		
Card Beacon	Beacon	BLE	TraknProtect		
Card Tag	Beacon	BLE	Kontakt.io		CT18-3
Beacon Pro	Beacon	BLE	Kontakt.io		BP16-3
Asset Tag	Beacon	BLE	Kontakt.io		S18-3
Vape/Sound Sensor	Sensor	Wired	Soter		FlySense

