CONFIGURATION GUIDE



# Ruckus IoT Controller Configuration Guide, 1.3

Supporting IoT Controller Release 1.3

Part Number: 800-72286-001 Rev A Publication Date: 15 April 2019

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# Preface

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### **Document Conventions**

The following table lists the text conventions that are used throughout this guide.

#### TABLE 1 Text Conventions

Convention	Description	Example
monospace	Identifies command syntax examples	<pre>device(config)# interface ethernet 1/1/6</pre>
bold	User interface (UI) components such as screen or page names, keyboard keys, software buttons, and field names	On the <b>Start</b> menu, click <b>All Programs</b> .
italics	Publication titles	Refer to the Ruckus Small Cell Release Notes for more information.

### Notes, Cautions, and Warnings

Notes, cautions, and warning statements may be used in this document. They are listed in the order of increasing severity of potential hazards.

#### NOTE

A NOTE provides a tip, guidance, or advice, emphasizes important information, or provides a reference to related information.

#### ATTENTION

An ATTENTION statement indicates some information that you must read before continuing with the current action or task.



#### CAUTION

A CAUTION statement alerts you to situations that can be potentially hazardous to you or cause damage to hardware, firmware, software, or data.



#### DANGER

A DANGER statement indicates conditions or situations that can be potentially lethal or extremely hazardous to you. Safety labels are also attached directly to products to warn of these conditions or situations.

# **Command Syntax Conventions**

Bold and italic text identify command syntax components. Delimiters and operators define groupings of parameters and their logical relationships.

Convention	Description
<b>bold</b> text	Identifies command names, keywords, and command options.
<i>italic</i> text	Identifies a variable.
[]	Syntax components displayed within square brackets are optional.
	Default responses to system prompts are enclosed in square brackets.
{ <b>x</b>   <b>y</b>   <b>z</b> }	A choice of required parameters is enclosed in curly brackets separated by vertical bars. You must select one of the options.
x   y	A vertical bar separates mutually exclusive elements.
< >	Nonprinting characters, for example, passwords, are enclosed in angle brackets.
	Repeat the previous element, for example, <i>member[member]</i> .
١	Indicates a "soft" line break in command examples. If a backslash separates two lines of a command input, enter the entire command at the prompt without the backslash.

## **Document Feedback**

Ruckus is interested in improving its documentation and welcomes your comments and suggestions.

You can email your comments to Ruckus at ruckus-docs@arris.com.

When contacting us, include the following information:

- Document title and release number
- Document part number (on the cover page)
- Page number (if appropriate)

For example:

- Ruckus SmartZone Upgrade Guide, Release 5.0
- Part number: 800-71850-001 Rev A
- Page 7

### **Ruckus Product Documentation Resources**

Visit the Ruckus website to locate related documentation for your product and additional Ruckus resources.

Release Notes and other user documentation are available at https://support.ruckuswireless.com/documents. You can locate the documentation by product or perform a text search. Access to Release Notes requires an active support contract and a Ruckus Support Portal user account. Other technical documentation content is available without logging in to the Ruckus Support Portal.

White papers, data sheets, and other product documentation are available at https://www.ruckuswireless.com.

# **Online Training Resources**

To access a variety of online Ruckus training modules, including free introductory courses to wireless networking essentials, site surveys, and Ruckus products, visit the Ruckus Training Portal at https://training.ruckuswireless.com.

# **Contacting Ruckus Customer Services and Support**

The Customer Services and Support (CSS) organization is available to provide assistance to customers with active warranties on their Ruckus products, and customers and partners with active support contracts.

For product support information and details on contacting the Support Team, go directly to the Ruckus Support Portal using https://support.ruckuswireless.com, or go to https://www.ruckuswireless.com and select **Support**.

### What Support Do I Need?

Technical issues are usually described in terms of priority (or severity). To determine if you need to call and open a case or access the self-service resources, use the following criteria:

- Priority 1 (P1)—Critical. Network or service is down and business is impacted. No known workaround. Go to the **Open a** Case section.
- Priority 2 (P2)—High. Network or service is impacted, but not down. Business impact may be high. Workaround may be available. Go to the **Open a Case** section.
- Priority 3 (P3)—Medium. Network or service is moderately impacted, but most business remains functional. Go to the **Self-Service Resources** section.
- Priority 4 (P4)—Low. Requests for information, product documentation, or product enhancements. Go to the **Self-Service Resources** section.

### **Open a Case**

When your entire network is down (P1), or severely impacted (P2), call the appropriate telephone number listed below to get help:

- Continental United States: 1-855-782-5871
- Canada: 1-855-782-5871
- Europe, Middle East, Africa, Central and South America, and Asia Pacific, toll-free numbers are available at https://support.ruckuswireless.com/contact-us and Live Chat is also available.
- Worldwide toll number for our support organization. Phone charges will apply: +1-650-265-0903

We suggest that you keep a physical note of the appropriate support number in case you have an entire network outage.

### **Self-Service Resources**

The Ruckus Support Portal at https://support.ruckuswireless.com offers a number of tools to help you to research and resolve problems with your Ruckus products, including:

Technical Documentation—https://support.ruckuswireless.com/documents

#### Preface

Contacting Ruckus Customer Services and Support

- Community Forums—https://forums.ruckuswireless.com/ruckuswireless/categories
- Knowledge Base Articles—https://support.ruckuswireless.com/answers
- Software Downloads and Release Notes—https://support.ruckuswireless.com/#products\_grid
- Security Bulletins—https://support.ruckuswireless.com/security

Using these resources will help you to resolve some issues, and will provide TAC with additional data from your troubleshooting analysis if you still require assistance through a support case or RMA. If you still require help, open and manage your case at https://support.ruckuswireless.com/case\_management.

# **About This Guide**

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## **Introduction to Ruckus IoT Controller**

This document describes the configuration required for setting up the Ruckus IoT Controller on the network.

This guide is written for service operators and system administrators who are responsible for managing, configuring, and troubleshooting Ruckus devices. Consequently, it assumes a basic working knowledge of local area networks, wireless networking, and wireless devices.

#### NOTE

If release notes are shipped with your product and the information there differs from the information in this guide, follow the instructions in the release notes.

# **Getting Started**

•	Before You Begin	. 1	1
•	Logging In to Ruckus IoT Controller	. 1	1
•	Getting to Know the Dashboard	. 1	5

## **Before You Begin**

The Ruckus IoT Controller must be installed on a hypervisor.

### **Supported Web Browsers**

The Ruckus IoT Controller is primarily accessible using a web browser.

#### TABLE 2 Supported Web Browser Versions

Browser	Version
Google Chrome	63.0 and later
Apple Safari	60.0 and later
Mozilla Firefox	10.1.2 and later

### **Logging In to Ruckus IoT Controller**

To manage IoT APs and devices, you must first log in to the Ruckus IoT Controller.

1. Log in to the console of the Ruckus IoT Controller using the username "admin" and password "admin".

2. Enter **1** in the **Enter Choice** field to get the IP address.

FIGURE 1 Ruckus IoT Controller Main Menu

Ruckus IoT Controller Main Menu 1 - Ethernet Network 2 - Get Application Info 3 - NTP Setting 4 - Restart Application 5 - Reboot System 6 - Reset System 7 - Command Prompt 8 - Comm Debugger 9 - N+1 x - Log Off Enter Choice: 1 \_\_\_\_\_ Network info : \_\_\_\_\_ \_\_\_\_\_ IP (eth0) : 10.137.37.32/23 Gateway : 10.137.36.1 Hostname : RIoT DNS domain : FQDN : RIoT DNS : 10.42.50.240 10. DNS : 10.42.50.240 10.0.248.1 N+1 Status : Disabled \_\_\_\_\_ Set Network(1) or Exit(x). Select [1/x]:

3. Open a web browser, enter the IP address in the address bar, and press **Enter**.

The **Initialization** page is displayed.

#### FIGURE 2 Initialization Page

RUCKUS IOT Controller IOT API		1.3.0.0.11 Version 1 April 2019 2:21:35 America/Los_Angele
Initialization		
Select the services you need and click on next button		
Required Services	Optional Services	
🖉 Pubsub Server	IBM Bluemix Integration	
☑ Pubsub Client		
☑ Workers		
Identity and Access Manager		
Queue Service		
Database Initiallizer		
IoT Device Manager API		
		Next

The mandatory and optional services are listed on the **Initialization** page. The following services are mandatory:

- Pubsub Server
- Pubsub Client
- Workers
- Identity and Access Manager
- Queue Service
- Database Initializer
- IoT Device Manager API

Pubsub Server works in SSL mode.

Ruckus IoT Controller services are sensitive to time synchronization. If the NTP Sync option is not available (such as in an isolated setup), ensure NTP Sync is disabled in the CLI (Option 3).

Optional services and connectors that can be started include IBM Bluemix Integration. When starting an optional service, additional values must be provided. For example, for IBM Bluemix Integration, the API Key, API Secret, Organization ID, Gateway ID, Gateway Type, and Gateway Token values must be provided.

4. Enter the **Hostname**, **Time Zone**, and select the **IP Configuration** (**DHCP** or **Static**), and click **Start** to start all the services in the Ruckus IoT Controller.

FIGURE 3 Intialization Page After Accepting Services

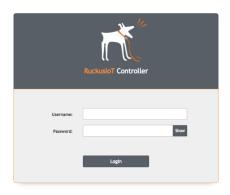
RUCKUS IoT Controller IoT API			1.3.0.0.11 Version 1 April 2019 2:21:48 America/Los_Angele
Initialization			
Select the services you need and click on start button			
VM Configurations Hostname	IP Configurations	Static 🔿	
vriot			
Time Zone			
America/Los_Angeles			
Set Time Automatically using NTP Set Time Manually i			
NTP Address Default : ntp.ubuntu.com (Optional)			
Back			Start

#### NOTE

The figure shows a DHCP configuration.

5. On the **Ruckus IoT Controller Login** page, enter the username "admin" and password "admin".

FIGURE 4 Ruckus IoT Controller Login Page



You are logged in to the Ruckus IoT Controller.

## **Getting to Know the Dashboard**

The **Dashboard**, which is the first page that appears after you log in to the Ruckus IoT Controller, offers an overall picture and status of the IoT infrastructure. The **Dashboard** shows the total number of IoT devices and IoT APs, the top IoT APs by device count, and the devices and APs by protocol.

#### FIGURE 5 Ruckus IoT Controller Dashboard

RUCKUS IoT Controller Dashboard	oT APs loT Devices Events Admin loT API	skalfantbons 1.3.00.13 Version N-1 : Enabled 3 April 2018 856:16 Europe/Medrid
Dashboard		Settings
Devices By Lastseen • Greater than 1 Day • 1 Hour to 1 Day • 5 Minutes to 1 Hours • Less than 5 Minutes	IoT APs by Device Count SM-AP HS10_Shetty 8510_OUT_RuckusAP_Shriram	Total devices Total IoT APs 13 Devices 16 10 10 10 10 10 10 10 10 10 10 10 10 10
Devices Offline Online	Active Plugins Assabloy Kontal Tilo Track Beacon Eddysto	v Offline • Online • Unapproved 12
	IoT AP By Protocol	Ble

#### **TABLE 3** Dashboard Elements

Box Name	Description
Devices By Lastseen	Shows the total number of devices last seen.
loT APs By Device Count	Shows the total number of devices connected per Access Point.
Total Devices	Shows the count of total number of devices.
Total IoT APs	Shows the count of total number of Access Points.
Devices	Shows the status of devices that are connected to the Ruckus IoT Controller.
Active Plugins	Shows the plugins that are enabled.
IOT AP	Shows the status of Access Points that are connected to the Ruckus IoT Controller.
IoT AP By Protocol	Shows the number of APs running by the protocol being used.
	Ruckus supports two protocols: BLE, Zigbee.
Device By Protocol	Shows the total number of devices connected by the protocol being used.
	Ruckus supports two protocols: BLE, Zigbee.

# Configuring N+1

Ruckus IoT Controller N+1 high availability (HA) feature ensures high system availability, reliability and scalability of the controller, and also enables load balancing, backup, and failover. To configure an HA cluster, all the hosts in the cluster must have access to the same shared storage, which allows virtual machines (VMs) on a given host to fail over to another host without any downtime in the event of a failure.

Before beginning to use N+1, pay attention to the following prerequisites for configuring the master and slave:

- The master and slave must be in the same subnet and reachable.
- The master and slave must be configured with static IP addresses.
- The master and slave must be running the same version.
- The master and slave must have a synchronized date and time.
- The master and slave must have different hostnames.
- The slave services must be started for N+1 to work.

# Configuring Static Addresses for Master and Slave

The static IP addresses of the master and slave can be configured in two ways:

- From the Ruckus IoT Controller main menu, select Admin -> VM Configurations. Click Static to set the master and slave configuration.
- In the Logging In to Ruckus IoT Controller on page 11 section, go to the step 4 Figure 3 on page 14 to set the static address of the master and slave.

# **Configuring the N+1 feature**

After configuring the static IP addresses for master and slave, N+1 can be enabled by performing the following steps.

1. Log in to the console of the Ruckus IoT Controller.

2. Enter **9** in the **Enter Choice** field .

FIGURE 6 Ruckus IoT Controller Main Menu

***************************************	***************************************
	s IoT Controller
	Main Menu
*************	***************************************
<pre>1 - Ethernet Network 2 - Get Application Info 3 - NTP Setting 4 - Restart Application 5 - Reboot System 6 - Reset System 7 - Command Prompt 8 - Comm Debugger 9 - N+1 x - Log Off</pre>	
Enter Choice: 9	
N+1 Status:	
N+1 Mode : Disabled	

N+1 Configure(1) / Disable(2) / Exit(x) :

3. Enter **1** to continue the configuration.

FIGURE 7 Continuing the Configuration

Ruckus IoT Controller Main Menu 1 - Ethernet Network 2 - Get Application Info 3 - NTP Setting 4 - Restart Application 5 - Reboot System 6 - Reset System 7 - Command Prompt 8 - Comm Debugger 9 - N+1 x - Log Off Enter Choice: 9 \_\_\_\_\_ N+1 Status: \_\_\_\_\_ \_\_\_\_\_ N+1 Mode : Disabled \_\_\_\_\_ N+1 Configure(1) / Disable(2) / Exit(x) :1

Start Master(1) / Slave(2) / Exit(x) :

4. To configure the master, enter **1** and type the IP address of the slave in the **Enter the Slave** IP field.

#### FIGURE 8 Configuring the Master

Ruckus IoT Controller Main Menu 1 - Ethernet Network 2 - Get Application Info 3 - NTP Setting 4 - Restart Application 5 - Reboot System 6 - Reset System 7 - Command Prompt 8 - Comm Debugger 9 - N+1 x - Log Off Enter Choice: 9 N+1 Status: N+1 Mode : Disabled \_\_\_\_\_ \_\_\_\_ N+1 Configure(1) / Disable(2) / Exit(x) :1 Start Master(1) / Slave(2) / Exit(x) :1 N+1 Configure: To Configure N+1 ensure following requirements: \*\*\*\*\*\* \* Master and Slave should be in same subnet and reachable. \* Master and Slave should be configured with static ip address. \* Master and Slave should be running in same version. \* Master and Slave should have synchronized date/time. Enter Slave IP :10.137.37.32

5. Type the preferred IP address in the Enter the preferred Virtual IP address field.

FIGURE 9 Entering the Preferred Virtual IP Address

Ruckus IoT Controller Main Menu 1 - Ethernet Network 2 - Get Application Info 3 - NTP Setting 4 - Restart Application 5 - Reboot System 6 - Reset System 7 - Command Prompt 8 - Comm Debugger 9 - N+1x - Log Off Enter Choice: 9 N+1 Status: N+1 Mode : Disabled N+1 Configure(1) / Disable(2) / Exit(x) :1 Start Master(1) / Slave(2) / Exit(x) :1 N+1 Configure: To Configure N+1 ensure following requirements: \*\*\*\*\*\* \* Master and Slave should be in same subnet and reachable. \* Master and Slave should be configured with static ip address. \* Master and Slave should be running in same version. \* Master and Slave should have synchronized date/time. Enter Slave IP :10.137.37.32 Enter preferred Virtual IP :10.137.37.33

6. Enter **Y** to continue with the N+1 configuration.

FIGURE 10 Completing the Master Configuration

```
Ruckus IoT Controller
                            Main Menu
1 - Ethernet Network
2 - Get Application Info
3 - NTP Setting
4 - Restart Application
5 - Reboot System
6 - Reset System
7 - Command Prompt
8 - Comm Debugger
9 - N+1
x - Log Off
Enter Choice: 9
       N+1 Status:
      N+1 Mode : Disabled
N+1 Configure(1) / Disable(2) / Exit(x) :1
Start Master(1) / Slave(2) / Exit(x) :1
N+1 Configure:
To Configure N+1 ensure following requirements:
* Master and Slave should be in same subnet and reachable.
* Master and Slave should be configured with static ip address.
* Master and Slave should be running in same version.
* Master and Slave should have synchronized date/time.
  Enter Slave IP :10.137.37.32
  Enter preferred Virtual IP :10.137.37.33
  N+1 will stop all services & configurations in Slave. Enter Y/N to continue : Y
      Configuring takes around 5-10 minutes. Please wait
      Master configuration started..
_
```

After the master configuration has completed, the slave configuration begins.

#### FIGURE 11 Continuing with the Slave Configuration

```
Ruckus IoT Controller
                            Main Menu
1 - Ethernet Network
2 - Get Application Info
3 - NTP Setting
4 - Restart Application
5 - Reboot System
6 - Reset System
7 - Command Prompt
8 - Comm Debugger
9 - N+1
x - Log Off
Enter Choice: 9
N+1 Status:
                -------
      N+1 Mode : Disabled
_____
N+1 Configure(1) / Disable(2) / Exit(x) :1
Start Master(1) / Slave(2) / Exit(x) :1
N+1 Configure:
            To Configure N+1 ensure following requirements:
******
* Master and Slave should be in same subnet and reachable.
* Master and Slave should be configured with static ip address.
* Master and Slave should be running in same version.
* Master and Slave should have synchronized date/time.
  Enter Slave IP :10.137.37.32
  Enter preferred Virtual IP :10.137.37.33
  N+1 will stop all services & configurations in Slave. Enter Y/N to continue : Y
      Configuring takes around 5-10 minutes. Please wait
      Master configuration started..
      Slave configuration started..
H
```

#### FIGURE 12 N+1 Configuration Completed

```
Ruckus IoT Controller
                              Main Menu
1 - Ethernet Network
2 - Get Application Info
3 - NTP Setting
4 - Restart Application
5 - Reboot System
6 - Reset System
7 - Command Prompt
8 - Comm Debugger
9 - N+1
x - Log Off
Enter Choice: 9
N+1 Status:
     N+1 Mode : Disabled
N+1 Configure(1) / Disable(2) / Exit(x) :1
Start Master(1) / Slave(2) / Exit(x) :1
N+1 Configure:
To Configure N+1 ensure following requirements:
* Master and Slave should be in same subnet and reachable.
* Master and Slave should be configured with static ip address.
* Master and Slave should be running in same version.
* Master and Slave should have synchronized date/time.
  Enter Slave IP :10.137.37.32
  Enter preferred Virtual IP :10.137.37.33
  N+1 will stop all services & configurations in Slave. Enter Y/N to continue : Y
      Configuring takes around 5-10 minutes. Please wait
      Master configuration started..
      Slave configuration started..
      Configuring N+1 completed...
                               _____
```

You have configured N+1 successfully.

7. To verify the IP address of **Master** or **Active Master** and **Slave** or **Active Slave**, Enter **9** in the **Enter choice** field.

FIGURE 13 Verifying the IP Address of the Active Master

Ruckus IoT Controller Main Menu 1 - Ethernet Network 2 - Get Application Info 3 - NTP Setting 4 - Restart Application 5 - Reboot System 6 - Reset System 7 - Command Prompt 8 - Comm Debugger 9 - N+1 x - Log Off Enter Choice: 9 \_\_\_\_\_ N+1 Status: \_\_\_\_\_ N+1 Mode : Enabled Virtual IP : 10.137.37.33 : Active Master Mode : 10.137.37.30 My IP Slave IP : 10.137.37.32 Node Status : RIoT(2): normal vriot(1): normal

N+1 Configure(1) / Disable(2) / Exit(x) :

FIGURE 14 Verifying the IP Address of the Slave

Ruckus IoT Controller Main Menu 1 - Ethernet Network 2 - Get Application Info 3 - NTP Setting 4 – Restart Application 5 - Reboot System 6 - Reset System 7 - Command Prompt 8 - Comm Debugger 9 - N+1 x - Log Off Enter Choice: 9 \_\_\_\_\_ N+1 Status: \_\_\_\_\_ N+1 Mode : Enabled Virtual IP : 10.137.37.33 Mode : Slave My IP : 10.137.37.32 Master IP : ["10.137.37.30"] ConfigSync : 04/08/2019 12:20:40 Node Status : RIoT(2): normal vriot(1): normal \_\_\_\_\_

N+1 Configure(1) / Disable(2) / Exit(x) :

# Managing IoT Controller System Configuration

•	Managing Services	27
	Activating and Editing the Plugins	
	Changing the Password	
	Configuring Virtual Machines	
	Uploading Versions and Patches	
	Backing Up Files	
	Rebooting Ruckus IoT Controller	
	Resetting Ruckus IoT Controller	

### **Managing Services**

The administrator can restart or manage the mandatory and optional services.

Complete the following steps to restart or manage the services.

1. From the main menu, click **Admin**.

FIGURE 15 Services

2. In the left navigation pane, click **Services**.

RUCKUS IoT Controlle	<mark>er</mark> Dashboard IoT APs IoT Devices Events Admin Io	JT API		Wed Jul 11 2018 10:4 ( America/Los_Angel
Admin				(Diagnostics) (🕃
Services	Components	Status	Actions	
Plugins	IBM Edge Analytics Demo	Absent	Add	
Account	PubSub Server	Running	(View logs)	
VM Configurations	Storage System	Running	(View logs)	
Versions & Patches	Queue Service	Running (SysManaged)	(View logs)	
DB Backup	IoT Device Manager	Running	(View logs)	
Reset & Reboot	PubSub Client	Running	View logs	
	Workers	Running	(View logs)	
	Identity and Access Manager	Running	(View logs)	
	Database Initializer	Completed	Start	

The currently running services and their details are displayed.

3. Select a service to edit, restart, or view logs.

# **Activating and Editing the Plugins**

Plugins are the external vendor connectors that can be connected to a vendor infrastructure after the successful activation of a plugin. Ruckus supports Assa Abloy locks and plugins such as Kontakt.io, iBeacon, and Eddystone.

### Activating and Editing the Kontakt.io Beacons Plugin

The Ruckus IoT Controller provides support for the Kontakt.io Beacons plugin.

To establish a connection to a vendor infrastructure, the administrator must perform the following steps.

- 1. From the main menu, click **Admin**.
- 2. In the left navigation pane, click Plugins.
- 3. In the Select a Plugin to Activate list, select the Kontakt.io plugin and click Activate.

After the plugin is activated, map each IoT AP to a SoftAPID. SoftAPID is a feature of Kontakt.io available from the Kontakt.io system. The SoftAPID (for example, xyz12) must be mapped to an IoT AP using the tag feature. The tag value is kontakt:*softapid*, for example, kontakt:xyz12. SoftAPID can be obtained from the Kontakt.io cloud under the **Gateway** tab. After the Kontakt.io plugin has been activated, and the SoftAPID tags are present, beacon management is performed from the Kontakt.io cloud panel and applications.

RUCKUS IoT Controller	Dashboard IoT APs IoT Devices	Events Admin IoT API	_		1.2.0.0.11 Version Mon Nov 05 2018 15:33:48 ( ( Asia/Kolkata )
Admin				Kontakt.io	8
				API Key	
				(	Show
Services	Select a Plugin to Activate :	Kontakt.io	· (4	URL (https://api.kontakt.io	
Plugins				Version	)
Account				9	
VM Configurations	Active Plugin List				Apply
Versions & Patches	Active Plugin List				
DB Backup					
Reset & Reboot					

#### FIGURE 16 Activating the Kontakt.io Plugin

- 4. After the Kontakt.io plugin is activated, enter the following configuration parameters.
  - a) Enter the API Key.

The Ruckus IoT Controller posts the beacon messages using the API Key provided. The Vendor application is responsible for authenticating the API Keys.

b) Enter the API URL.

The Ruckus IoT Controller connects to the vendor/connector URL to send the beacon messages. The URL can be a DNS-resolvable, FQDN-based address.

#### NOTE

The plugin supports HTTP and HTTPS modes.

c) Enter the Version number.

The default version number is 9.

5. Click Apply.

The Kontakt.io plugin is added in the Active Plugin List.

6. To deactivate the Kontakt.io plugin, select it and click **Deactivate**.

#### FIGURE 17 Deactivating the Kontakt.io Plugin

RUCKUS IoT Controller	Dashboard IoT APs IoT Devices Events Admin IoT API	1.2.0.0.11 Version Mon Nov 05 2018 15:36:13 ( Asia/Kolkata )	¢
Admin			
Services Plugins	Select a Plugin to Activate : Select - Activate		
Account			
VM Configurations	Active Plugin List		
Versions & Patches	Kontakt.io	Deactivate	
DB Backup			
Reset & Reboot			

7. To edit the configurations of the Kontakt.io plugin, select it and click **Update**.

	Dashboard IoT APs IoT Devices Events Admin IoT API			1.2.0.0.11 Version Mon Nov 05 2018 15:37:23 ( ( Asia/Kolkata )
Admin			Kontakt.io	۲
Services Plugins Account VM Configurations Versions & Patches DB Backup Reset & Reboot	Select a Plugin to Activate : Select	Œ	Status: Reachable API Key URL (https://api.kontakt.io Version 9	Show
		-		

#### FIGURE 18 Updating the Configuration Parameters

### **Activating and Editing the Eddystone Plugin**

The Ruckus IoT Controller provides support for the Bluetooth Low Energy (BLE) Eddystone plugin. The Ruckus IoT Controller reads the packet from IoT AP, and routes the packets to the BLE beacon vendor cloud services.

To establish a connection to a vendor infrastructure, the administrator must perform the following steps.

- 1. From the main menu, click Admin.
- 2. In the left navigation pane, click **Plugins**.

3. In the Select a Plugin to Activate list, select the Eddystone plugin and click Activate.

1.2.0.0.11 ov 05 2018 15:46:37 Dashboard IoT APs IoT Devices Admin IoT API RUCKUS IoT Controller Events Eddystone ⊗ Admin Key Show API URL Services Select a Plugin to Activate : ( Eddystone \_ (http://10.137.36.58 Plugins Port Account (8000 VM Configurations API Endpoint Active Plugin List Endpoint /eddystone Versions & Patches Apply DB Backup Reset & Reboot

FIGURE 19 Activating the Eddystone Plugin

- 4. After the Eddystone plugin is activated, enter the following configuration parameters.
  - a) Enter the Key.

The Ruckus IoT Controller posts the beacon messages using the Key provided. The Vendor application is responsible for authenticating the Keys.

b) Enter the API URL.

The Ruckus IoT Controller connects to the vendor/connector URL to send the beacon messages. The URL can be a DNS-resolvable, FQDN-based address.

#### NOTE

The plugin supports HTTP and HTTPS modes.

c) Enter the Port number.

This is the port number on which the vendor/connector web server is running.

d) Enter the API Endpoint.

This is the API route where the BLE beacon vendor cloud services receive the beacon payload.

5. Click Apply.

The Eddystone plugin is added in the **Active Plugin List**.

6. To deactivate the Eddystone plugin, select it and click **Deactivate**.

#### FIGURE 20 Deactivating Eddystone Plugin

RUCKUS IoT Controller	Dashboard IoT APs IoT Devices Events Admin IoT API	1.2.0.0.11 Version Mon Nov 05 2018 15:47:47 ( (Asia/Kolkata)
Admin		
Services Plugins Account	Select a Plugin to Activate : Select + Activate	
VM Configurations Versions & Patches	Active Plugin List Eddystone	Deactivate
DB Backup Reset & Reboot		

7. To edit the configurations of the Eddystone plugin, select it and click **Update**.

FIGURE 21 Updating the Configuration Parameters

	Dashboard IoT APs IoT Devices Events Admin IoT API	1.2.0.0.11 Version Mon Nov 05 2018 15:48:30 () ( Asia/Kolkata )
EVERCIS OF Controller  Admin  Services  Plugins  Account  VM Configurations  Versions & Patches  DB Backup  Reset & Reboot	Dashboard       IoT APs       IoT Devices       Events       Admin       IoT API         Select a Plugin to Activate :       select       v       G       Status:       Not reachable         Active Plugin List       v       G       Multip://10.137.36.58       Port         Eddystone       Active Plugin List       Boot       Apl URL       Multip://10.137.36.58         Eddystone       Apl Component       Apl Component       Multip://10.137.36.58       Port         Gooto       Apl Component       Apl Component       Apl Component       Apl Component	Mon Nov 05 2018 15:48:30

### Activating and Editing the iBeacon Plugin

The Ruckus IoT Controller provides support for the Bluetooth Low Energy (BLE) iBeacon plugin. The Ruckus IoT Controller reads the packet from the IoT AP, and routes the packets to the BLE beacon vendor cloud services.

To establish a connection to a vendor infrastructure, the administrator must perform the following steps

- 1. From the main menu, click Admin
- 2. In the left navigation pane, click **Plugins**.
- 3. In the Select a Plugin to Activate list, select the iBeacon and click Activate.

	Dashboard IoT APs IoT Devices	Events Admin IoT API		1.2.0.0.11 Version Mon Nov 05 2018 15:38:32 🕐 ( Asia/Kolkata )
Admin			iBeacon Key	8
Services Plugins Account VM Configurations Versions & Patches DB Backup Reset & Reboot	Select a Plugin to Activate : Active Plugin List Kontakt.lo	Beacon	 Enter Key API URL	
	<u> </u>			

FIGURE 22 Activating iBeacon Plugin

- 4. After the iBeacon plugin is activated, enter the following configuration parameters.
  - a) Enter the Key.

The Ruckus IoT Controller posts the beacon messages using the Key provided. The Vendor application is responsible for authenticating the Keys.

b) Enter the API URL.

The Ruckus IoT Controller connects to the vendor/connector URL to send the beacon messages. The URL can be a DNS-resolvable, FQDN-based address.

#### NOTE

The plugin supports HTTP and HTTPS modes.

c) Enter the Port number.

This is the port number on which the vendor/connector web server is running.

d) Enter the API Endpoint.

This is the API route where the BLE beacon vendor cloud services receive the beacon payload.

5. Click Apply.

The iBeacon plugin is added in the **Active Plugin List**.

6. To deactivate the iBeacon plugin, select it and click **Deactivate**.

#### FIGURE 23 Deactivating the iBeacon Plugin

RUCKUS IoT Controller	Dashboard IoT APs IoT Devices Events Admin IoT API	1.2.0.0.11 Version Mon Nov 05 2018 15:43:15 ( ( Asia/Kolkata )
Admin		
Services Plugins Account	Select a Plugin to Activate : Select Activate	
VM Configurations Versions & Patches DB Backup	Active Plugin List iBeacon	Deactivate
Reset & Reboot		

7. To edit the configurations of the iBeacon plugin, select it and click **Update**.

FIGURE 24 Updating the Configuration Parameters

	Dashboard IoT APs IoT Devices Events Admin IoT API	1.2.0.0.11 Version Mono vo 50 2018 15:4:03 ♥ (Asia/Kotkata )
Admin		iBeacon
Services Plugins	Select a Plugin to Activate :	Status: Not reachable Key Show
Account VM Configurations	Active Plugin List	API URL (http://10.137.36.58 ) Port
Versions & Patches DB Backup Reset & Reboot	iBeacon	(8000       API Endpoint       Endpoint /eddystone
		Update

### **Changing the Password**

A single administrator is responsible for creating a Ruckus IoT Controller account. This administrator manages system operations.

To change the password, the administrator must perform the following steps.

1. From the main menu, click **Admin**.

2. In the left navigation pane, click **Account**.

#### FIGURE 25 Changing the Password

		(	Update password
UserName	admin		
Enter Current Password	Enter current password	٢	
Enter New Password			
Enter New Password	Enter New password	۲	
Retype New Password	Reenter New password	۲	
	Enter Current Password Enter New Password	Enter Current Password Enter New Password Enter New Password Enter New Password	Enter Current Password Enter current password  Enter New Password  Enter New password

3. Change the password and click **Update password**.

# **Configuring Virtual Machines**

Complete the following steps to configure a virtual machine (VM).

1. From the main menu, click Admin.

2. In the left navigation pane, click VM Configurations.

vices				
gins	Hostname*	OHCP	Static	Current Certificate
count	RIOT Time Zone			Common Name : local-mqtt.video54.local Certificate Expires on Mar 25 16:13:59 2029 GMT Paste certificate Here
Configurations	America/Los_Angeles	•		
sions & Patches	Set Time Automatically using NTP     NTP Address			Paste Key Here
Backup	ntp.ubuntu.com	ional)		
et & Reboot	Set Time Manually i			

#### FIGURE 26 Configuring a Virtual Machine

- 3. Complete the configuration information.
  - a) In the **Hostname** field, enter the host name.
  - b) In the **Time Zone** list, select the time zone.
  - c) Select Set Time Automatically using NTP or Set Time Manually to set the time.
  - d) Click **DHCP** or **Static** to set the Ruckus IoT Controller configuration.

#### NOTE

The Ruckus IoT Controller is configured with a self-signed certificate, but a proper (CA-signed) certificate can be added to the system.

4. Click Update.

### **Uploading Versions and Patches**

Ruckus frequently releases updates to Ruckus IoT Controller. The administrator normally receives any updates about new and updated software by email.

### **Uploading an Image**

Ruckus sends periodic notifications by email regarding new versions of the Ruckus IoT Controller.

2. In the left navigation pane, click **Version & Patches**.

#### FIGURE 27 Uploading an Image

Admin		
Services		^
Plugins	Upload Image Change Version	to: Select 🗸 💌 Set
Account	Upload Patch	
VM Configurations		
Versions & Patches	Patch list	
DB Backup	No Patch Available	
Reset & Reboot		
		$\sim$

3. Click **Upload Image** to upload the upgrade package.

Once uploaded, the new version is listed in the **Change Version to** list.

4. Select the latest version to upgrade and click **Set**.

### **Uploading a Patch**

Patches to the software can be downloaded from the Ruckus Support portal.

2. In the left navigation pane, click Versions & Patches.

#### FIGURE 28 Uploading a Patch

Admin		
Services	Upload Image	Change Version to : Select V V Set
Plugins Account VM Configurations	Upload Patch	Change Version to : Select V V Set
Versions & Patches DB Backup	Patch list No Patch Available	
Reset & Reboot		
		~

3. Click **Upload Patch** to upload the patch.

The **Patch list** shows all the applied patches with their statuses and dates.

#### ATTENTION

You cannot revert a patch.

## **Backing Up Files**

The Ruckus IoT Controller allows you to back up and restore the configuration and data files. You can restore an existing configuration file on the Ruckus IoT Controller from which it originated, or restore a configuration file from a different Ruckus IoT Controller. Backed up files are in the tar.gz format.

- 1. From the main menu, click Admin.
- 2. In the left navigation pane, click **DB Backup**.

#### FIGURE 29 Backing Up or Restoring Files

Admin		
Services Plugins	Create Backup now Upload Backup	^
Account VM Configurations Versions & Patches	Backups List No Backups Found	_
DB Backup Reset & Reboot		
		<u>_</u>

- 3. Click Create Backup now to perform a backup manually.
- 4. Click Upload Backup to download and re-upload the backup files.

#### NOTE

The Ruckus IoT Controller maintains the backups of the last five configuration files. Upon completing the backup, the network settings are reset to DHCP.

## **Rebooting Ruckus IoT Controller**

If the Ruckus IoT Controller is experiencing an issue, attempt a reboot to resolve the issue.

Complete the following steps to reboot the Ruckus IoT Controller.

2. In the left navigation pane, click **Reset & Reboot**.

#### FIGURE 30 Rebooting Ruckus IoT Controller

Admin		
Services		^
Plugins		
Account	Reboot	
VM Configurations	Reboots the system. The User Interface shall not be available until the system restarts !	
Versions & Patches		
DB Backup		
Reset & Reboot		
	Factory Reset	
	IMPORTANT ! This action is irreversible. This shall reset the whole system. All the data saved shall be lost.	
		~
	(	>

3. Click Reboot.

### **Resetting Ruckus IoT Controller**

To remove all of the settings that are configured on the Ruckus IoT Controller, reset it to the factory default settings.

Complete the following steps to reset the Ruckus IoT Controller to its factory default settings.



#### CAUTION Performing the reset action is irreversible.

2. In the left navigation pane, click **Reset & Reboot**.

#### FIGURE 31 Resetting Ruckus IoT Controller

Admin		
Services		
Plugins		
Account	Reboot	
VM Configurations	Reboots the system. The User Interface shall not be available until the system restarts I	
Versions & Patches		
DB Backup		
Reset & Reboot		
	Factory Reset	
	IMPORTANT ! This action is irreversible. This shall reset the whole system. All the data saved shall be lost.	
		~

3. Click Factory Reset.

# Managing IoT Access Points

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•	Editing an IoT AP	47
•	Approval of IoT APs	48

### **IoT AP Overview**

SmartZone (SZ) holds the IoT AP firmware. You must make sure the IoT Access Point (AP) connects to SZ and downloads the appropriate IoT firmware. An IoT AP discovers SZ using discovery methods such as DHCP Option 43, Domain Name System (DNS), and Access Point Registry (APR) modes.

The Ruckus IoT Controller displays the IoT AP hierarchy (Domain, Zone, Group) information, which is derived from the IoT AP and SmartZone connection. Therefore, it is important to ensure that the IoT AP is running the latest appropriate IoT firmware.

An IoT Access Point discovers the Ruckus IoT Controller by using Option 43 or the Ruckus Command Line Interface (RKSCLI). RKSCLI mode is not encouraged, and must be used only if a DHCP server is not present.

### **DHCP Option 43**

The IoT Access Point supports Option 43 with the following suboptions:

- Suboption 21: Used to configure a Ruckus IoT Controller IPv4 address or FQDN (mandatory)
- Suboption 22: Used to set the control VLAN for IoT Control/Data traffic (optional)

Option 43 supports both binary and ASCII formats. The IoT Access Point bootup process checks for Option 43 and suboptions 21 and 22. Once the application receives this information, it uses the information to connect to the Ruckus IoT Controller over the Pubsub channel.

#### NOTE

Configuring a Windows or Linux DHCP server to set up Option 43 is out of scope of this configuration guide.

### **Ruckus Command Line Interface**

The **iotg-mqtt-brokerip** *Ruckus-IoT-Controller-IP-address* command can be used to discover the Ruckus IoT Controller.

## Adding an IoT AP

The administrator can add an IoT AP to the Ruckus IoT Controller to manage IoT devices.

Complete the following steps to add an IoT AP to the controller.

1. From the main menu, click **IoT APs**.

The IoT Access Points page is displayed.

#### FIGURE 32 IoT Access Points Page

) IoT AP Selected	Pre	Approv	ve loT APs					Ba	tch Ad	tions	Select
► [ chaos ]			Name	MAC ID	IP Address	Protocol	Channel	Uptime	Act	ions	Tags
<ul> <li>[ 13-QA-VSZ ]</li> <li>[ VRIOTQA-CLST ]</li> </ul>		•	Karthik-R510-Desk	D8:38:FC:1C:10:90	10.74.136.40	ble	NA	2 days, 0:02:59	Q	Û	All and kentakt:Rucket800000 (text
▶ [ QA-VSZ-5-1-460 ]		•	R710	44:1E:98:13:FB:20	192.168.100.37	zigbee_aa	25	5 days, 3:48:52	Q	Û	All 4418-36137830 (kontakeRadiusE00002) (8710)
		•	R610_Shetty	B4:79:C8:04:D9:40	192.168.100.39	ble	NA	NA		î	(4) (5477.CE:015749) (66)
		٠	R730	18:7C:0B:20:DC:F0	192.168.100.15	zigbee	20	0 days, 0:12:54		î	All (18:70:08:20:00:F0) (8730)
			R510_OUT_RuckusAP_Shriram	EC:8C:A2:37:03:A0	192,168,100,59	zigbee	14	NA		Û	All ECISCURESTICISAD R510_OUT_RIGhteAP_Shrinam
		•	R510_Shetty	D8:38:FC:18:FC:D0	192.168.100.77	zigbee	20	NA		Û	All DR:367C-187C:00 Backsade
		•	H510_Shetty	30:87:D9:14:69:00	192.168.100.62	ble	NA	5 days, 3:29:55	Q	î	All (H510_Shetty) (kontakt:Ruckuz600.001) (30:87:07:14:69:00)
		•	SM-AP	30:87:D9:15:40:40	192.168.100.58	zigbee	20	2 days, 0:05:36	Q	Û	ALL SM-AP (\$2387.09(15:40:40)
		H510-RuckusAP-Shriram	0C:F4:D5:1E:97:D0	192.168.100.92	zigbee	19	5 days, 3:49:27	Q	ŝ	All 00:14:05:10:97:00 (H510-BackasAP-Shriram)	
		•	R610_AP_Shriram-test	B4:79:C8:01:F0:30	192.168.100.54	zigbee_aa	16	5 days, 2:32:23	Q	Î	(41) (669,425minntest) (64.77(16957030)

#### 2. Click Pre-Approve IoT APs.

The **Pre-Approve IoT APs** page is displayed.

3. To add a single IoT AP, click **Single**.

#### FIGURE 33 Adding a Single IoT AP

Approve IoT APs	Single	Batch	
MAC *			
0E:0D:6F:00:0F:00			
Tag			
Add new tag			
Const			5
Cancel			Save

4. Enter the MAC address of the IoT AP and click **Save**.

The IoT AP is now added to the IoT AP list.

#### NOTE

To add multiple IoT APs, click **Batch** and download the CSV template. Enter the required details in the CSV template and click **Upload**.

FIGURE 34 Adding a Batch of IoT APs

Pre Approve IoT APs Single	Batch
Download CSV Template	
Choose File No file chosen	
Cancel	Upload

## **Editing an IoT AP**

The administrator can edit an IoT AP to change its settings and name. Edits can be made on a single IoT AP or on IoT APs in bulk.

### **Single IoT Access Point Mode**

You can use Single IoT Access Point Mode to edit a single IoT AP.

Complete the following steps to edit a single IoT AP.

From the main menu, click **IoT APs**.
 A list of selected IoT APs is displayed.

2. Click an IoT AP to edit.

#### FIGURE 35 Single IoT AP Mode

0 IoT AP Selected	(Pre-Approv	ve loT APs				44:1E:98:13:FB:20 × kontakt:RuckusBDC002 × R710 ×
► [ chaos ]		Name	MAC ID	IP Address	Protocol Ch	Add new tag
<ul> <li>[ 13-QA-VSZ ]</li> <li>[ VRIOTQA-CLST ]</li> </ul>	•	Karthik-R510-Desk	08:38:FC:1C:10:90	10.74.136.40	ble	Scan for IoT Devices Restart IoT Service
▶ [ QA-VSZ-5-1-460 ]	•	R710	44:1E:98:13:FB:20	192.168.100.37	zigbee_aa	IoT APs Settings
	•	R610_Shetty	B4:79:C8:04:D9:40	192.168.100.39	ble	
		R730	18:7C:08:20:DC:F0	192.168.100.15	zigbee	IoT AP Approve (Yes Apply)
		R510_OUT_RuckusAP_Shriram	EC:8C:A2:37:03:A0	192,168,100,59	zigbee	Mode (Zigbee(AA) - Apply)
		R510_Shetty	D8:38:FC:18:FC:D0	192.168.100.77	zigbee	IP 192.168.100.37
		H510_Shetty	30:87:D9:14:69:00	192,168,100.62	ble	MAC 44:1E:98:13:FB:20
		SM-AP	30:87:D9:15:40:40	192,168,100.58	zigbee	Net Mask 255.255.255.0
		H510-RuckusAP-Shriram	0C:F4:D5:1E:97:D0	192.168.100.92	zigbee	DNS 10.0.248.1
	•	R610_AP_Shriram-test	84:79:C8:01:F0:30	192.168.100.54	zigbee_aa	IoT Module MAC 90:FD:9F:FF:FE:7C:32:A3
						IoT Module Mode zigbee_aa
						Advanced Mode

Existing information displays, and the following options can be edited:

- Add New Tag
- Scan for IoT Devices
- Restart IoT Service
- IoT AP Approve
- Mode (Zigbee, BLE, Zigbee Assa Abloy)
- IoT Coexistence
- Set Channel
- Set TxPower
- Enable VLAN
- AP Firmware
- AP Model

In addition, the status of the IoT AP module is available, such as network information, IoT AP module information, and properties.

## **Approval of IoT APs**

The IoT APs must be approved by the administrator. The Ruckus IoT Module is activated only for approved APs. There is an option to disapprove a previously approved AP. This operation can be performed on a single AP (using Single IoT Access Point Mode) or on multiple APs (using Bulk AP Mode).

# **Managing Devices**

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### **Devices Overview**

The Ruckus IoT Controller requires explicit user approval of devices. Only an approved device can be allowed into the IoT infrastructure.

To add devices to the Ruckus IoT Controller, from the main menu, click IoT Devices.

The **IoT Devices** page shows the following items:

- A list of devices
- The operations on devices (such as remove, blacklist, and device-specific operations)

#### FIGURE 36 IoT Devices Page

0 Device Selected	Pre-	Approve IoT Device	8)						Batch Actions:	Selec	t	Apply)
▶ [ chaos ]		Name	MAC ID	IoT AP MAC	Protocol	Туре	LQI	RSSI	Last Seen	Act	tion	Tags
<ul> <li>[ 13-QA-VSZ ]</li> <li>[ VRIOTQA-CLST ]</li> </ul>		Heiman_01	00:15:8D:00:01:DE:EB:A2	30:87:D9:15:40:40	zigbee	IAS Zone	69	-56	a day ago	0	û	All Heiman_01 00:15:80:00:01:02:68:42
<ul> <li>[QA-VSZ-5-1-460]</li> </ul>	8	<ul> <li>ZigbeeAlarm</li> </ul>	00:13:7A:00:00:01:E8:5B	30:87:D9:15:40:40	zigbee	IAS Warning Device	71	-55	a day ago	0	首	All 00:13:74:00:00:01:25:55 Alaram
		<ul> <li>Revogl_Ble</li> </ul>	00:00:F4:04:4C:0C:58:33	30:87:D9:14:69:00	ble	On / Off Light	NA	0	4 minutes ago	Ø	â	All (00:00:FE0EHC0C:58:33) (adf) (Revog)_Bio
		Jasco_1	00:22:A3:00:00:17:A8:74	30:87:D9:15:40:40	zigbee	Dimmer Switch	72	-54	a day ago	0	前	All (Jaco_1) (00:22:A3:00:00:17:48:74) adas
		Heiman_02	00:15:8D:00:01:DE:EB:91	30:87:D9:15:40:40	zigbee	IAS Zone	74	-53	a day ago	0	â	All (Heiman_00) (00:15:80:00:01:0E:E8:91)
		Sengled_1	B0:CE:18:14:03:10:09:28	30:87:D9:15:40:40	zigbee	Dimmable Light	80	-49	a day ago	0	â	All Sengled_1 30.87207:15:40.40
		Sing-1	B0:CE:18:14:00:01:1F:E3	30:87:D9:15:40:40	zigbee	Color Dimmable Light	75	-52	a day ago	0	â	Al Sign BOCE1814000011PE
		NewBlub	B0:CE:18:14:03:02:CE:C5	30:87:D9:15:40:40	zigbee	Dimmable Light	83	-47	a day ago	0	首	All 60:02:18:14:03:02:02:05 (NewBlab)
		sing-2	B0:CE:18:14:00:01:21:B4	30:87:D9:15:40:40	zigbee	Color Dimmable Light	83	-47	a day ago	0	â	All (sing 2) (8000E-18:14:00001:21:84)
		Center-1	00:0D:6F:00:03:4A:94:E3	30:87:D9:15:40:40	zigbee	Dimmable Light	100	-36	a day ago	0	Ê	(A) Centers1 (00:00:07:00:0344-94-02)
Total Devíces : 14												

The device scan operation must be performed to start the device discovery process on the gateway. Upon starting device discovery, a dialog box is displayed, as shown in the following figure.

#### FIGURE 37 Device Discovery Dialog Box

ected	5.0		And Address of Concession, Name	
Device Scan Status				×
Name *	Manufacturer Name	MAC Address	IoT AP MAC	Actions
	No Dev	ices/Sensors Found		

A device gets added to the Ruckus IoT Controller through Discover IoT Devices operations. If a device is pre-approved, the discovered device automatically joins the list of discovered devices. If the discovered device is not pre-approved, then you must select **Accept** or **Blacklist**. If the device is accepted, it joins the list of discovered devices.

#### FIGURE 38 Adding Device After Discovery

	• • • • • • • • • • • • • • • • • • • •			-,		
RUCKUS						
IoT A	coose Dointe			E8:1D:A8:0D:88:E0 × Vasef Zig	lee ×	
0 IoT AP Se	Device Scan Status					~
	Scan Started at 05/07/2018, 09:21:54	and will automatically end at 05	5/07/2018, 21:21:54		Stop Scanning	arvice )
► [vasef	IOT AP Scanning for Devices : Vasef 2					
	Name *	Manufacturer Name	MAC Address	IoT AP MAC	Actions	
	SmartPlug	SiliconLabs	00:08:57:FF:FE:18:3A:66	E8:1D:A8:0D:88:E0	Accept Blacklist	(Apply)

### **Managing OSRAM Light Bulbs**

To discover OSRAM light bulbs, complete the following operations.

- 1. Ensure that the bulb is in the OFF state.
- 2. Switch on the power for five seconds.

- 3. Switch off the power for two seconds.
- 4. Repeat steps 2 and 3 five times.
- 5. Switch on the power.

The OSRAM light bulb on the Reset/Initiate discovery blinks blue, green, and red, and then the light bulb remains on.

#### FIGURE 39 Managing OSRAM Light Bulb

Device Selected	Pre-Approve IoT Devi	ces				Osram IoT Device Name (	Osram	(Apply)
[ QA-Cluster ]	IoT Device Nat	ne loT Device MAC	IOT AP MAC	Protocol	Туре	IoT AP	0C:F4:D5:1C:52:50- RuckusAP   ▼	(Apply)
[Test-upgrade]	aasf	00:0B:57:FF:FE:1B:3B:64	0C:F4:D5:1E:3C:40	zigbee	Smart plug	7C:B0:3E:AA:00:A4:5E:69 × s4	×	
	🔲 s1	00:13:7A:00:00:01:E8:5B	0C:F4:D5:1C:52:50	zigbee	IAS Warning Devic	Add new tag		
	🔲 s2	00:15:8D:00:01:DE:EA:EC	0C:F4:D5:1C:52:50	zigbee	IAS Zone	Blacklist Device:	Off	(Apply)
	<ul> <li>Osram</li> </ul>	7C:B0:3E:AA:00:A4:5E:69	0C:F4:D5:1C:52:50	zigbee	Color Dimmable Lig		_	
	🔲 yale	00:0D:6F:00:05:24:20:CE	0C:F4:D5:1C:52:50	zigbee	Smart plug	Device Information		
						Level Control		
						CurrentLevel	255	
						Basic		
						ZCL Version	1(Version)	
						PowerSource	Mains (single phase) ( 1	)
						Manufacturer Name	OSRAM	
						Color Control		
						CurrentX	54	
						Primary5Y	0	
						Primary4X	0	
						CurrentY	22	
						CurrentSaturation	226	
						Primary1X	23471	

After clicking the device, the right pane is displayed. In this pane, you can edit device configurations and device operations. To change device configurations, set the device name in the **IoT Device Name** field, select an AP association from the **IoT AP** list, select the device tag from the **Add new tag** list, and set the device blacklist from the **BlackList Device** list. Device operations depend on the device selected.

#### NOTE

In the preceding figure, the device operations are on/off, color, and brightness, because the discovered device type is an OSRAM light bulb.

### **Managing an Assa Abloy Lock**

Assa Abloy locks cannot be controlled using the Ruckus IoT Controller. To discover an Assa Abloy lock and to add it in the Ruckus IoT Controller, perform the following steps.

- 1. Swipe the AA Lock Discover Card across the lock.
- 2. Ensure that the LED blinks green.
- 3. Add the lock to the Ruckus IoT Controller (if it is not already pre-approved).

Assa Abloy locks operate using the Visionline server. To establish the initial connection (after adding the lock) between an Assa Abloy lock and the Visionline server, perform the following steps.

- 1. Swipe the card (guest or staff card) in front of the lock.
- 2. Verify the event log from the Visionline Server Event Log to ensure that the connection is established.

#### NOTE

For more information, refer to the Visionline documentation for instructions on installing Visionline.

#### FIGURE 40 Visionline Server Event Log

🔶 Roo	🔶 Room Event List									
Ro	Regist	Time	Event	Card Name	User Group	SeqNum				
102	100085	8/18/2017 6:53:00 PM	Guest Card accepted (67)	Guest (MC)	Guest	2				
102	100085	8/18/2017 6:53:00 PM	A loyalty card was encoded (1264)	Guest (MC)	Guest	1				
102	100085	8/18/2017 6:53:00 PM	Added a card image to the lovalty-card list (120)	Online Command	Online	0				
104	100083	8/18/2017 6:52:00 PM	Guest Card accepted (67)	Guest (MC)	Guest	6				
101	100084	8/18/2017 6:51:00 PM	Guest Card accepted (67)	Guest (MC)	Guest	11				

# **Events**

•	Viewing Events	.5	3

## **Viewing Events**

An event is an occurrence or the detection of certain conditions in and around the Ruckus IoT Module. An AP rebooting, detection of a Ruckus IoT Module, module undetection, and module swap are all examples of events.

Complete the following steps to view events.

1. From the main menu, click **Events**.

The **Events** page is displayed.

#### FIGURE 41 Events Page

RUCKUS IoT Controller Dashboar	d IoT APs IoT Devices Events Admin IoT API	1.2.0.0.10 Version Fri Nov 02 2018 11:50:53 ( Asia/Kolkata )
Events		
		(Download) (Clear)
Time	Event	
2018-10-30 10:35:18.764607	EC:8C:A2:37:03:A0 1 USB Dongle Undetected	
2018-10-30 10:35:27.707165	0C:F4:D5:1E:97:D0 1 USB Dongle Undetected	
2018-10-30 10:38:18.403691	EC:8C:A2:37:03:A0 1 USB Dongle Detected	
2018-10-30 10:38:30.679008	0C:F4:D5:1E:97:D0 1 USB Dongle Detected	
2018-10-30 10:40:21.459694	0C:F4:D5:1E:97:D0 4 Dongle MAC Changed Dongle MAC Changed: 90:FD:9F:FF:FE:7C:34:E3 90:FD:9F:FF:FE:7C:32:35	
2018-10-30 12:57:29.834099	D8:38:FC:38:4B:70 2 vSZ Link Status Reboot of AP	
2018-10-30 12:58:20.888413	D8:38:FC:38:4B:70 1 USB Dongle Detected	
2018-10-31 08:53:07.062976	D8:38:FC:38:4B:70 2 vSZ Link Status Reboot of AP	
2018-10-31 08:53:24.600395	D8:38:FC:38:4B:70 1 USB Dongle Undetected	
2018-10-31 09:32:23.702590	D8:38:FC:38:4B:70 2 vSZ Link Status Reboot of AP	
2018-10-31 12:08:09.128733	D8:38:FC:38:4B:70 2 vSZ Link Status Reboot of AP	
2018-10-31 12:09:47.966640	D8:38:FC:38:4B:70 2 vSZ Link Status Reboot of AP	
2018-10-31 12:10:03.626165	D8:38:FC:38:4B:70 1 USB Dongle Undetected	
2018-10-31 12:11:19.637362	D8:38:FC:38:4B:70 1 USB Dongle Detected	

2. Click **Download** to download the event logs file.

The event logs file contains the time of the event occurrence, its MAC address, and event name.

3. Click **Clear** to clear the log file.



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