

# Ruckus IoT Controller 1.0 Configuration Guide

Supporting Release 1.0

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## Document Conventions

The following tables list the text and notice conventions that are used throughout this guide.

**TABLE 1** Text conventions

| Convention     | Description   | Example  |
|----------------|---|--|
| monospace      | Identifies command syntax examples.   | <code>device(config)# interface ethernet 1/1/6</code>                    |
| <b>bold</b>    | 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> .                    |
| <i>italics</i> | Publication titles  | Refer to the <i>Ruckus Small Cell Release Notes</i> 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.



### 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 text</b>                   | Identifies command names, keywords, and command options.  |
| <i>italic text</i>                 | Identifies a variable.  |
| [ ]                                | Syntax components displayed within square brackets are optional.<br>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.   |
| <b>x</b>   <b>y</b>                | 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> .  |
| \                                  | 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: [docs@ruckuswireless.com](mailto:docs@ruckuswireless.com)

When contacting us, please include the following information:

- Document title and release number
- Document part number (on the cover page)
- Page number (if appropriate)
- For example:
  - Ruckus Small Cell Alarms Guide SC Release 1.3
  - Part number: 800-71306-001
  - Page 88

## 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 documentation by product or perform a text search. Access to Release Notes requires an active support contract and Ruckus Support Portal user account. Other technical documentation content is available without logging into 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 Networks products, and customers and partners with active support contracts.

For product support information and details on contacting the Support Team, go directly to the 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. Request 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, and Asia Pacific, toll-free numbers are available at <https://support.ruckuswireless.com/contact-us> and Live Chat is also available.

### Self-Service Resources

The Support Portal at <https://support.ruckuswireless.com/contact-us> 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>
- **Community Forums**—<https://forums.ruckuswireless.com/ruckuswireless/categories>
- **Knowledge Base Articles**—<https://support.ruckuswireless.com/answers>

## Preface

Contacting Ruckus Customer Services and Support

- [Software Downloads and Release Notes](https://support.ruckuswireless.com/software)—<https://support.ruckuswireless.com/software>
- [Security Bulletins](https://support.ruckuswireless.com/security)—<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](https://support.ruckuswireless.com/case_management)



# About This Guide

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## About this Guide

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.

Most user guides and release notes are available in Adobe Acrobat Reader Portable Document Format (PDF) or HTML on the Ruckus Support Web site at <https://support.ruckuswireless.com/contact-us>.



# Getting Started

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## Overview

Learn how to log in into Ruckus IoT Controller and configure Ruckus IoT Controller services.

The Internet-of-Things Access Points (IoT APs) and devices can be managed using Ruckus IoT Controller.

## Before You Begin

Ruckus IoT Controller must be installed on the hypervisor. For more information, refer to *Ruckus IoT Controller Installation Guide*.

## Supported Web Browsers

Ruckus IoT Controller is primarily accessible using a web browser.

**TABLE 2** Supported Web Browser Versions

| Browser         | Version            |
|-----------------|--------------------|
| Google Chrome   | 63.0               |
| Apple Safari    | 60.0               |
| Mozilla Firefox | 10.1.2 (10603.3.8) |

## Logging In to Ruckus IoT Controller

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

Follow these steps to log on to the Ruckus IoT Controller.

1. Log in into the console of Ruckus IoT Controller.  
Enter **username** "admin" and **password** "admin".
2. Type **1** in the **Enter Choice** field.

## Getting Started

### Logging In to Ruckus IoT Controller

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

**FIGURE 1** Ruckus IoT Controller Main Menu

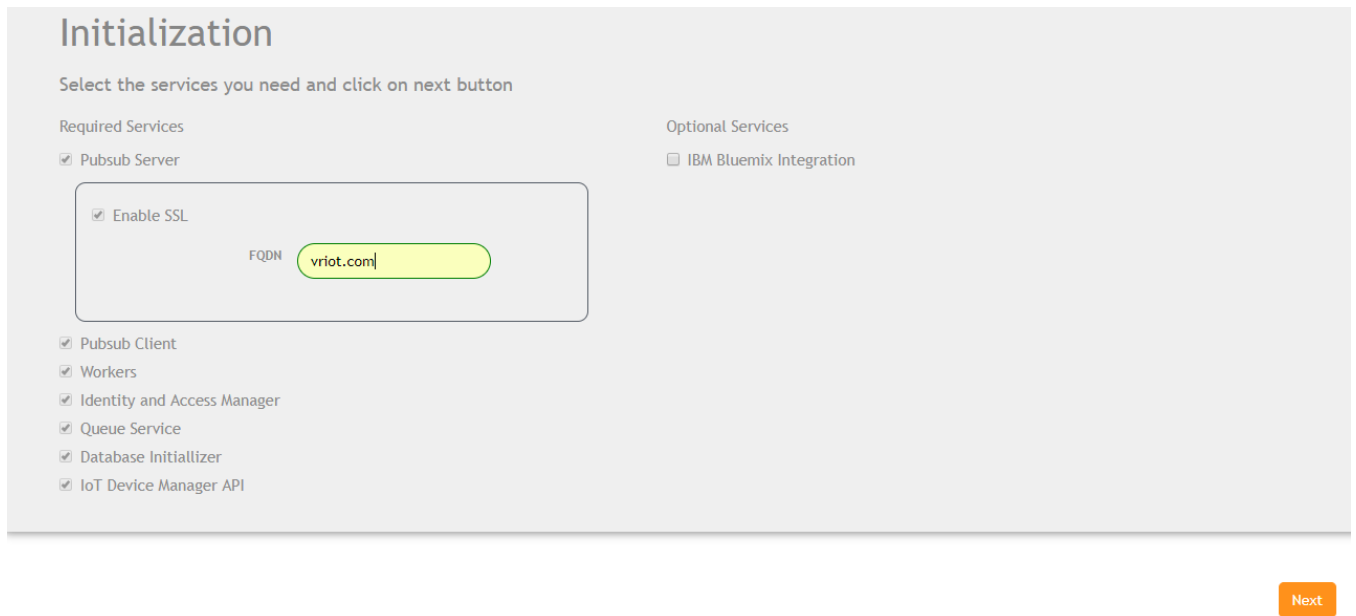
```
vriot [Running]
*****
vRIoT Controller
Main Menu
*****
1 - Get Network Info
2 - Get Application Info
3 - NTP Setting
4 - Restart Application
5 - Reboot System
6 - Reset System
7 - Command Prompt
x - Log Off

Enter Choice: 1

IP (lo):      127.0.0.1/8
IP (eth0):    172.16.112.139/23
Hostname:     vriot
DNS domain:
FQDN:        vriot
DNS:         172.16.200.5 172.16.200.3
```

The **Initialization** service page is displayed.

**FIGURE 2** Initialization Page



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

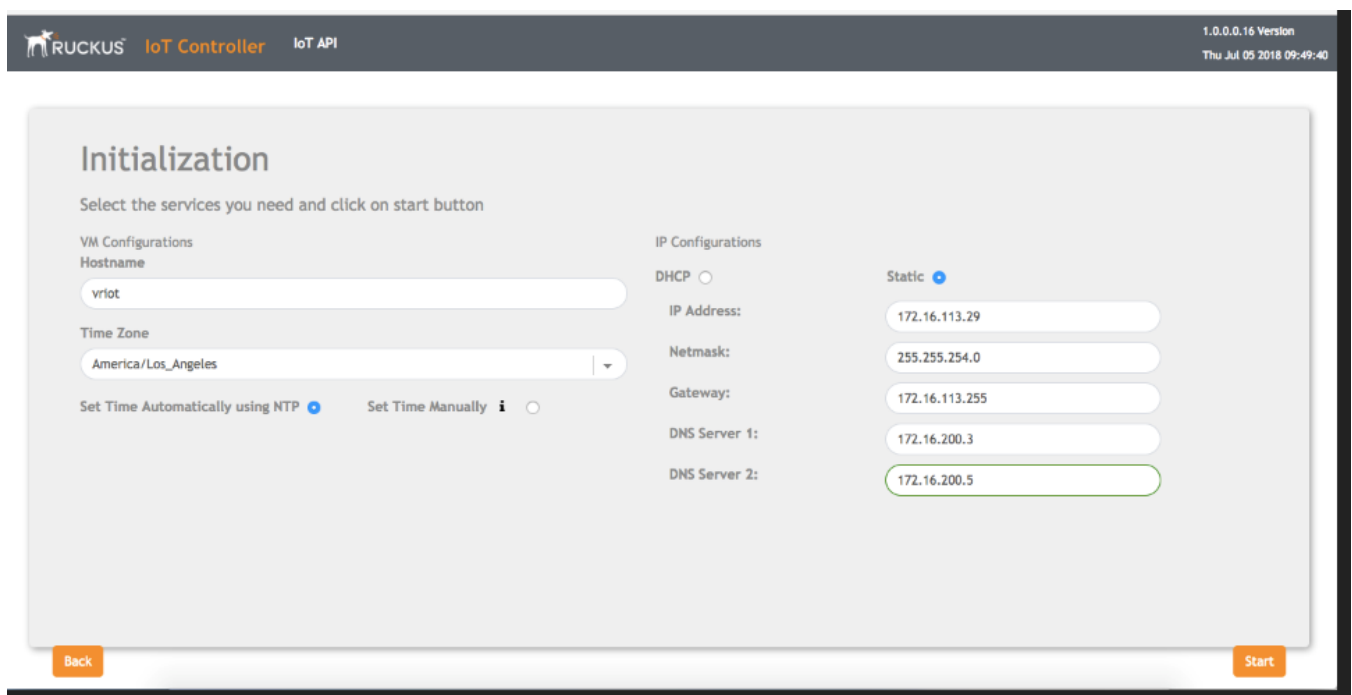
- Pubsub Server
- Pubsub Client
- Workers
- Identity and Access Manager
- Queue Service
- Database\_INITIALIZER
- IoT Device Manager API

PubSub Server works in SSL mode with mutual authentication, so it is required to provide a Fully Qualified Domain Name (FQDN) to generate the certificates.

Ruckus IoT Controller services are sensitive to time synchronization. If 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.

**FIGURE 3** Initialization Page After Accepting Services



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

**NOTE**

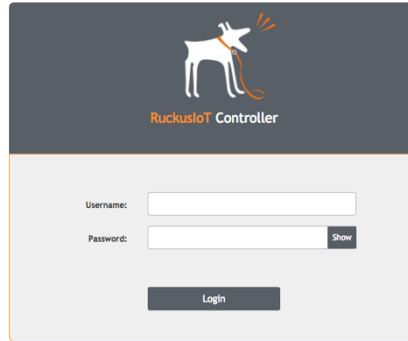
The above screenshot is for static IP configuration.

## Getting Started

### Getting to Know the Dashboard

5. In the **Login** screen enter your **Username** "admin" and **Password** "admin".

**FIGURE 4** Login Screen

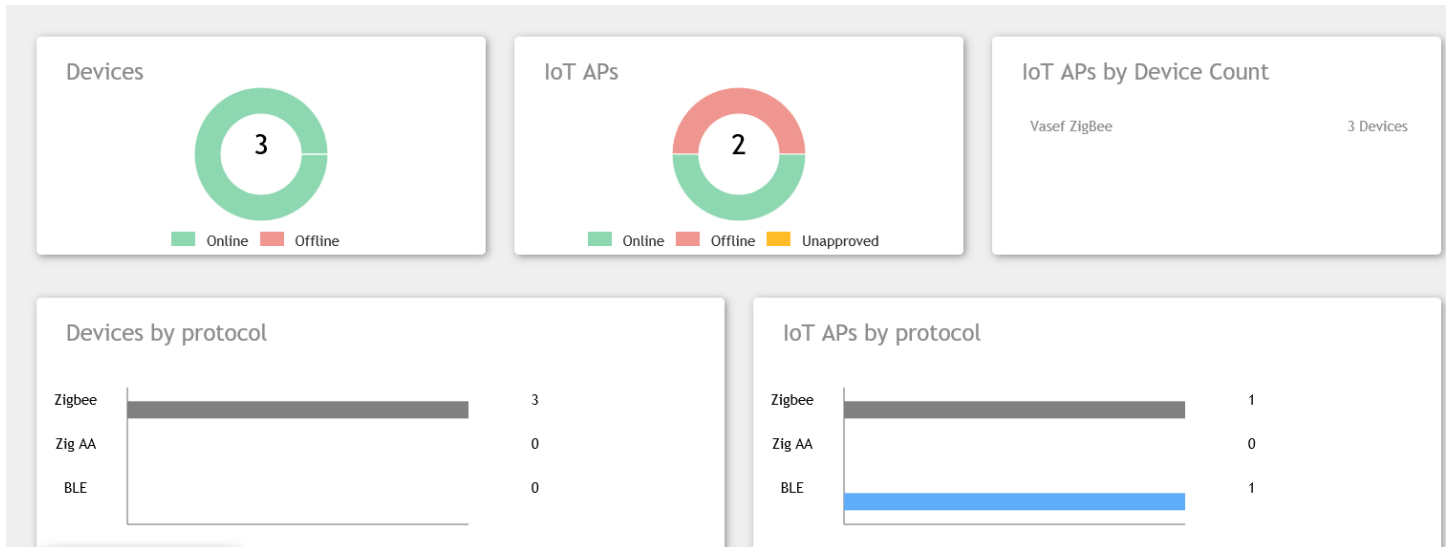


The login operations are now completed.

## Getting to Know the Dashboard

The **Dashboard**, which is the first page that appears after your log on to the Ruckus IoT Controller, offers an overall picture and the status of the IoT infrastructure. The **Dashboard** shows 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



**TABLE 3** Dashboard elements

| Number | Box Name | Description  |
|--------|----------|--|
| 1      | Devices  | Shows the status of devices that are connected to Ruckus IoT Controller. |

**TABLE 3** Dashboard elements (continued)

| Number | Box Name                | Description   |
|--------|-------------------------|---|
| 2      | IoT APs                 | Shows the status of Access Points that are connected Ruckus IoT Controller.   |
| 3      | IoT APs by Device Count | Shows the total number of devices connected per Access Point.   |
| 4      | Devices by Protocol     | Ruckus supports three protocols (BLE, Zigbee, and Zigbee AA (Assa Abloy)).<br>The box shows total devices connected by the Protocol it is using.              |
| 5      | IoT APs by protocol     | Ruckus supports three protocols (BLE, Zigbee, and Zigbee AA (Assa Abloy)).<br>The box shows AP's running mode which can be either BLE or Zigbee or Zigbee AA. |





# Managing IoT Controller System Configuration

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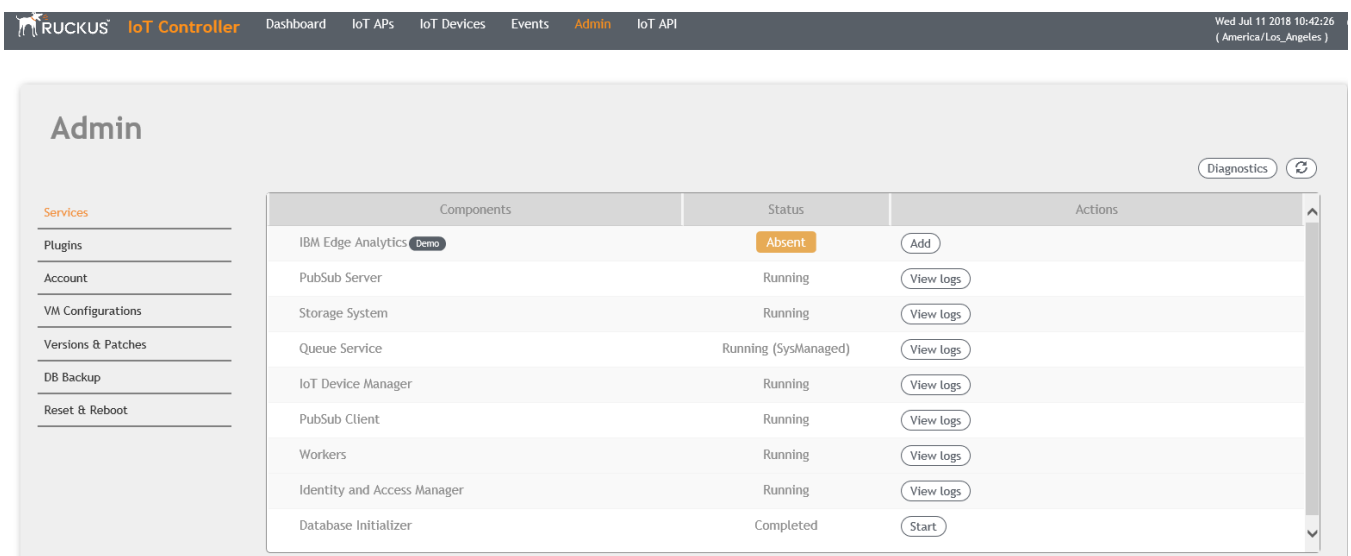
## Activating Services

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

Follow the steps to restart or manage the services.

1. On the **menu**, click **Admin**.
2. In the **Admin** page , click **Services**.  
Currently running services and their details are displayed.
3. Click a **Service**.  
You can view logs, restart a service, and edit a selected service.

**FIGURE 6** Services



The steps for restarting or managing services are completed.

# Activating Plugins

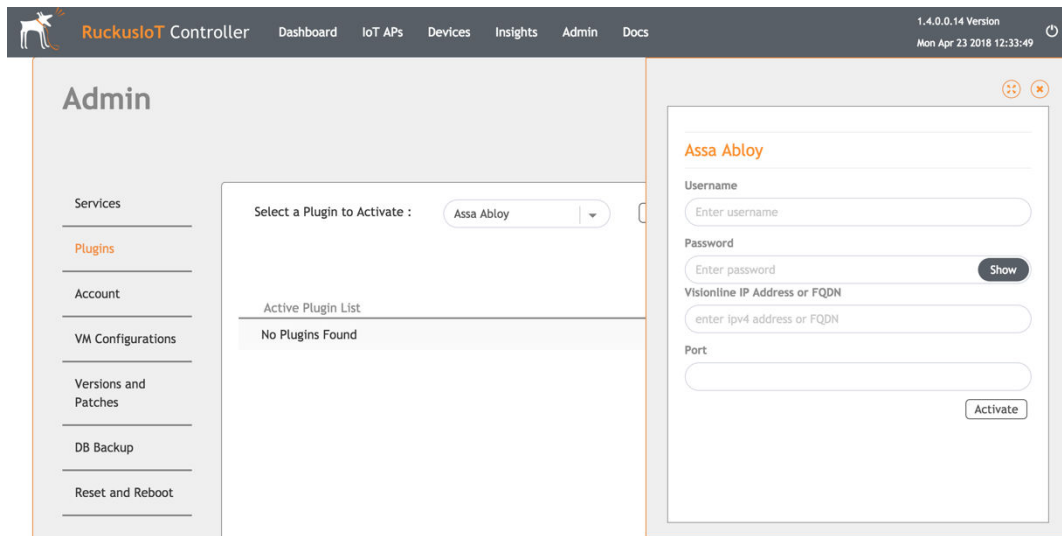
Plugins are the external vendor connectors that can be connected to a vendor infrastructure after the successful activation of a plugin.

Ruckus supports Assa Abloy and Kontakt.io plugins.

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

1. On the **menu** , click **Admin**.

**FIGURE 7** Plugin Activation



2. On the **Admin** page, in the left navigation pane, click **Plugins**.
3. In the **Select a Plugin to Activate** list, select a plugin.

The **Active Plugin List** lists the active plugins.

**NOTE**

Click the active plugin to edit the configuration or deactivate a service.

- 4.

**NOTE**

For the Assa Abloy plugin, edit the following.

Enter the appropriate information in the **Username**, **Password**, **Visionline IP Address or FQDN** and **Port** fields and click **Activate**.

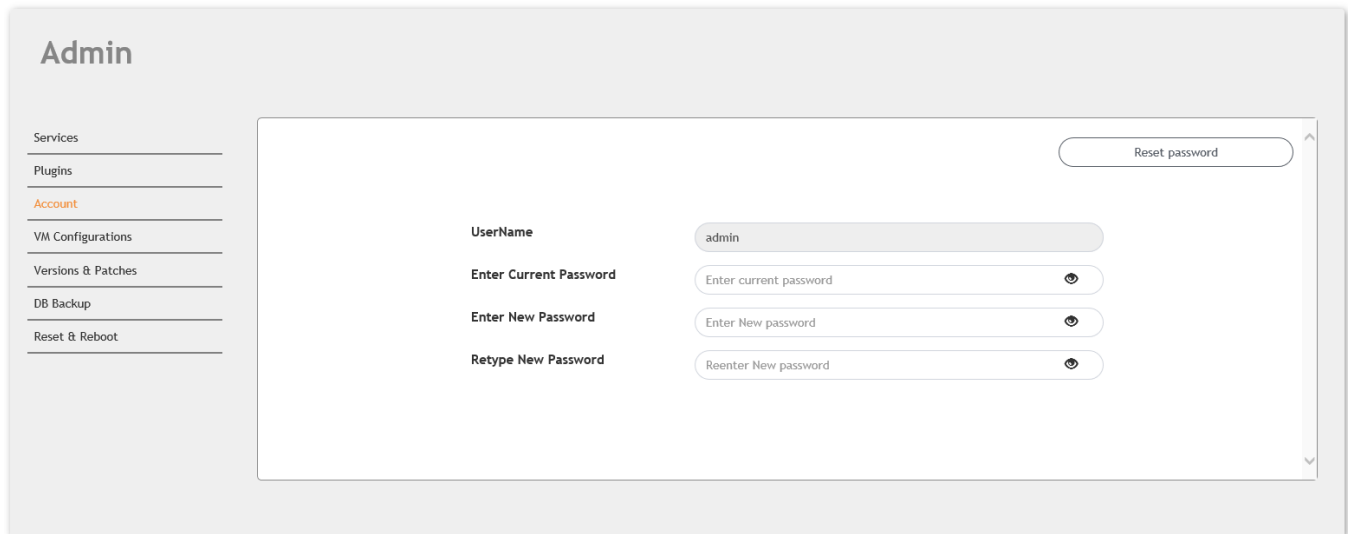
## Changing Password

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 below steps:

1. On the **menu**, click **Admin**.

**FIGURE 8** Changing the password



The screenshot shows the 'Admin' page interface. On the left is a navigation menu with the following items: Services, Plugins, Account (highlighted in orange), VM Configurations, Versions & Patches, DB Backup, and Reset & Reboot. The main content area contains a form for changing the password. The form has four input fields: 'UserName' (pre-filled with 'admin'), 'Enter Current Password', 'Enter New Password', and 'Retype New Password'. Each password field has a toggle icon to show or hide the password. A 'Reset password' button is located in the top right corner of the form area.

2. On the **Admin** page, click **Account**, in the left navigation pane.
3. Change the password, and click **Reset password**.

## Configuring Virtual Machines

Follow the steps to configure a Virtual Machine(VM).

**FIGURE 9** Configuring Virtual Machine

The screenshot shows the 'Admin' interface for configuring a virtual machine. On the left is a navigation menu with the following items: Services, Plugins, Account, VM Configurations (highlighted in orange), Versions & Patches, DB Backup, and Reset & Reboot. The main configuration area contains the following fields and options:

- Hostname\***: A text input field containing 'vriot'.
- Network Mode**: Two radio buttons, 'DHCP' (selected) and 'Static'.
- Time Zone**: A dropdown menu showing 'America/Los\_Angeles'.
- Time Settings**: Two radio buttons, 'Set Time Automatically using NTP' (selected) and 'Set Time Manually' with an information icon.
- Current Certificate**: A section with a 'Common Name : \*.video54.local' and 'Certificate Expires on Dec 15 23:54:33 2019 GMT'. It includes two text areas: 'Paste certificate Here' and 'Paste Key Here'. An 'Update' button is located in the top right corner of this section.

1. On the **menu**, click **Admin**.
2. On the **Admin** page, click **VM Configurations** in the left navigation pane.
3. Enter the host name in the **Hostname** field, and select the time zone from the **Time Zone** list. Click either **Set Time Automatically using NTP** or **Set Time Manually** to set the time. Click either **DHCP** or **Static** to set the Ruckus IoT Controller configuration. 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

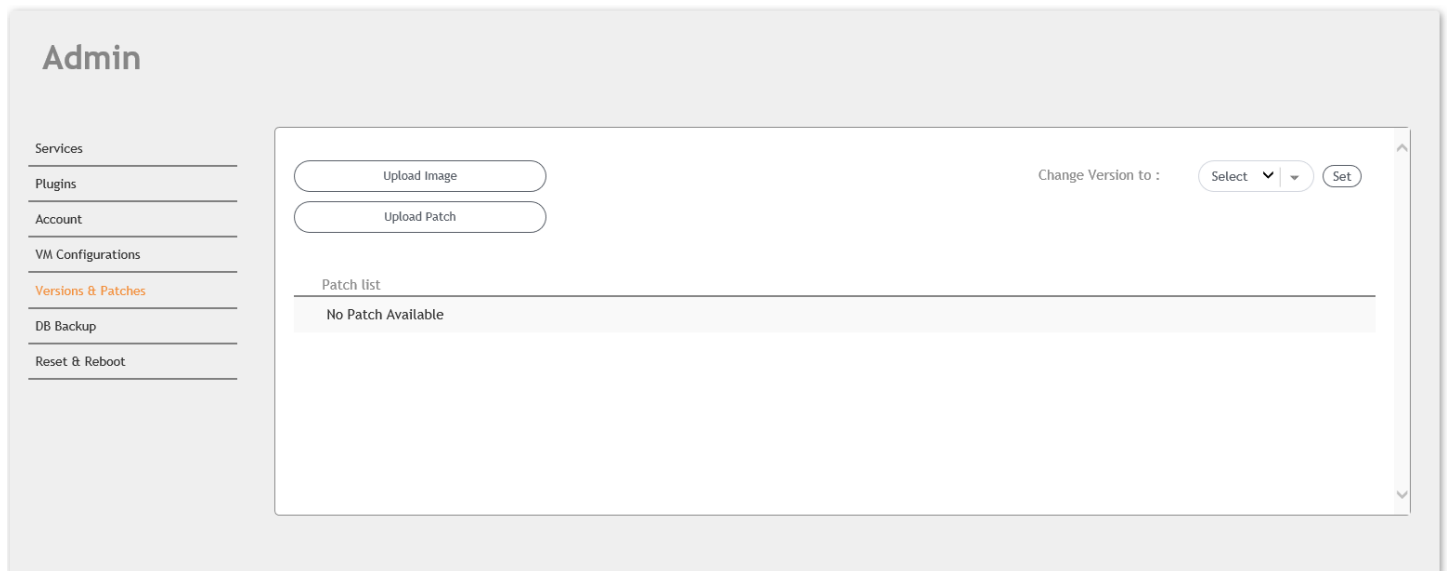
Ruckus frequently releases updated Ruckus IoT Controller. The administrator usually receives an update about the new software in emails.

## Uploading Image

Ruckus frequently releases updated IoT Controller software. You can check your emails to receive periodic notifications for a new software upgrade.

### Upload Image

**FIGURE 10** Uploading Patch



1. On the **menu**, click **Admin**.
2. On the **Admin** page, in the left navigation pane, click **Version and Patches**.
3. Click **Upload Image** to upload the upgrade package.
4. Once uploaded, the newer version is listed in the **Change Version to** drop-down.
5. Select one of the latest versions to either upgrade or downgrade and click **Set**.

## Uploading Patch

A patch can be installed as a version by downloading from the Ruckus Support portal.

### Upload Patch

1. On the **menu**, click **Admin**.
2. On the **Admin** page, in the left navigation pane, click **Version and Patches**.

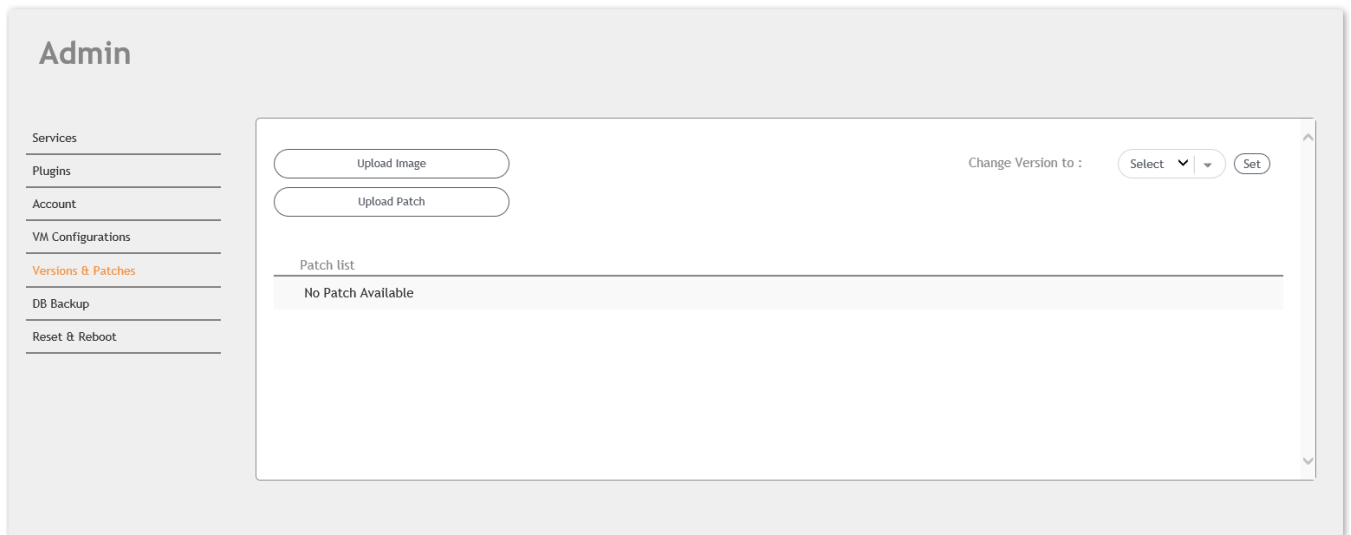
3. Click **Upload Patch** to upload the patch.

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

**NOTE**

You cannot revert a patch.

**FIGURE 11** Uploading Patch



## Backing up Files

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

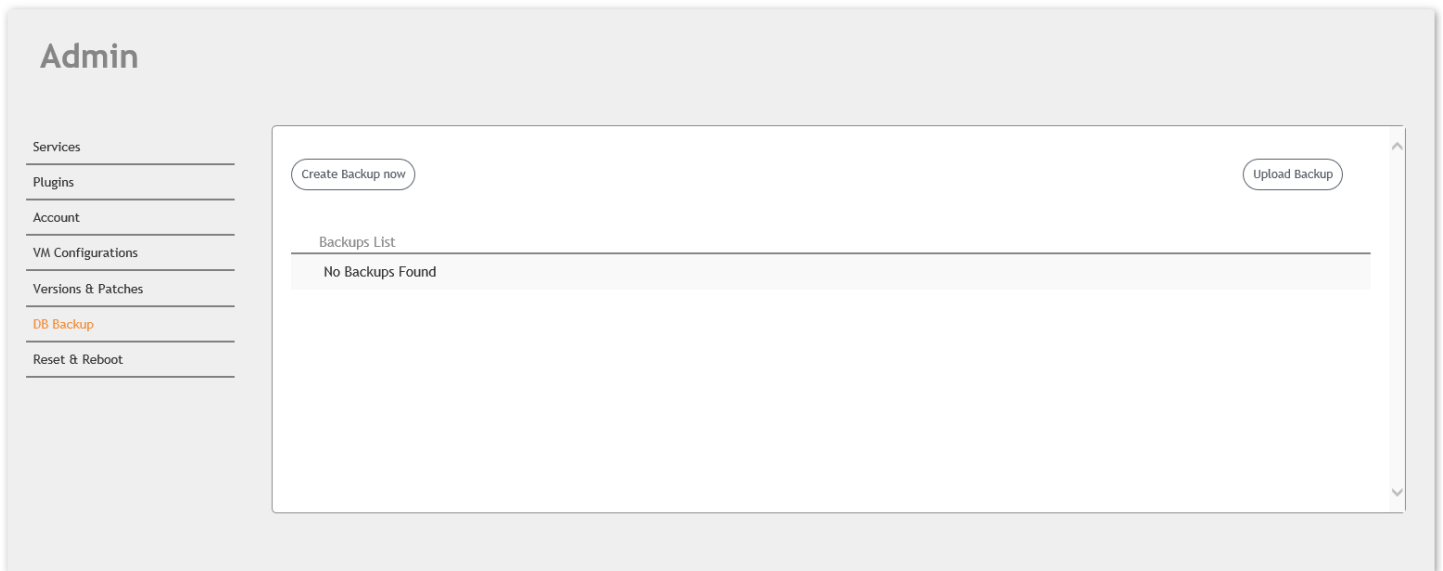
To perform a backup manually, click **Create Backup now**.

**NOTE**

The Ruckus IoT Controller maintains the backup of the last five configuration files. On doing the backup the network settings is reset to DHCP.

Back-up files can be downloaded and re-uploaded by selecting **Upload Backup**.

**FIGURE 12** Backing up or Restoring files



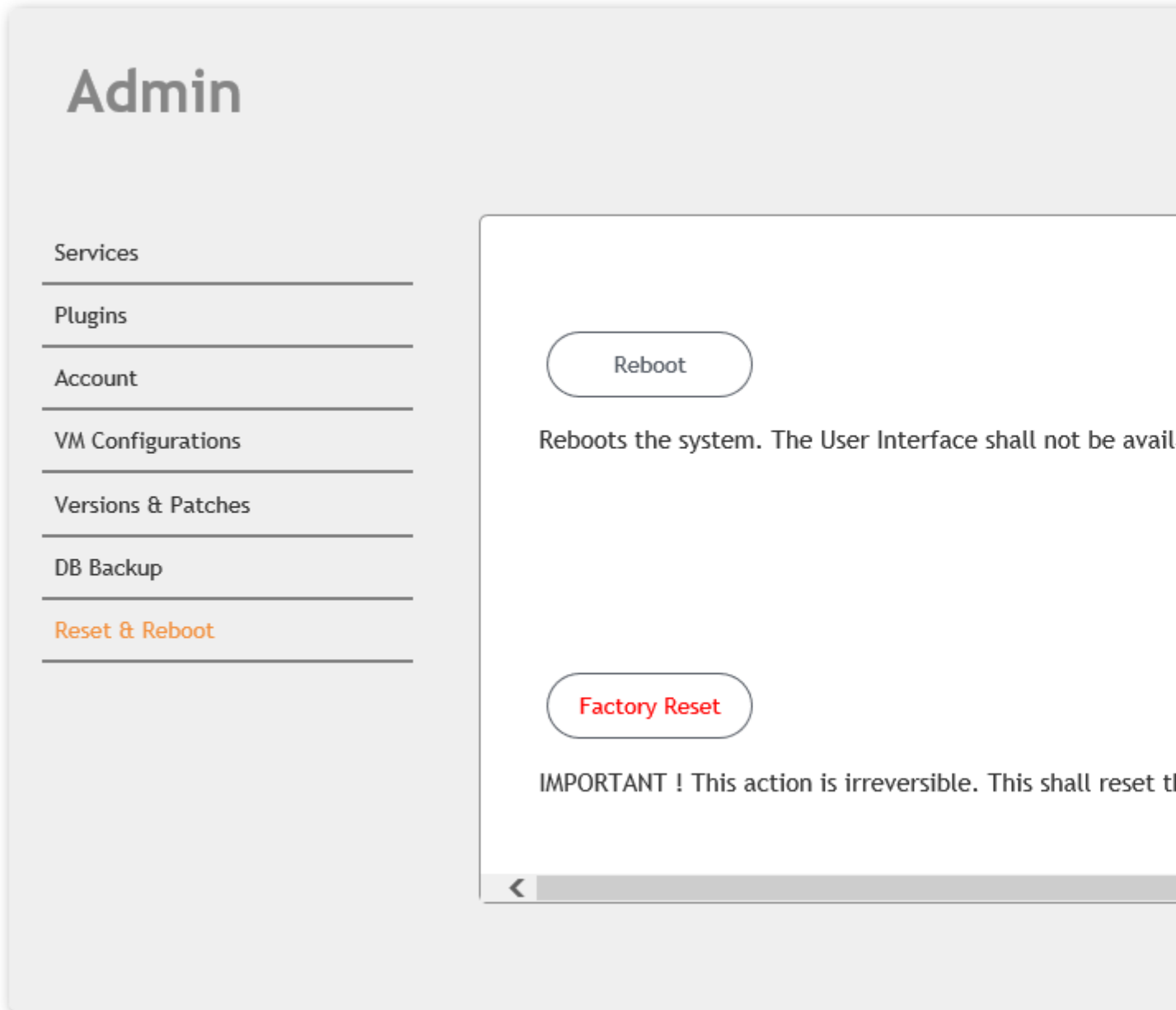
## Rebooting

If Ruckus IoT Controller application is experiencing an issue, try rebooting it and see if it resolves the issue.

Follow these steps to reboot

1. On the **menu** , click **Admin**.

2. On the **Admin** page, in the left navigation pane, click **Reset and Reboot**.



3. Click **Reboot**.

The steps for rebooting the Ruckus IoT Controller are completed.

## Resetting

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

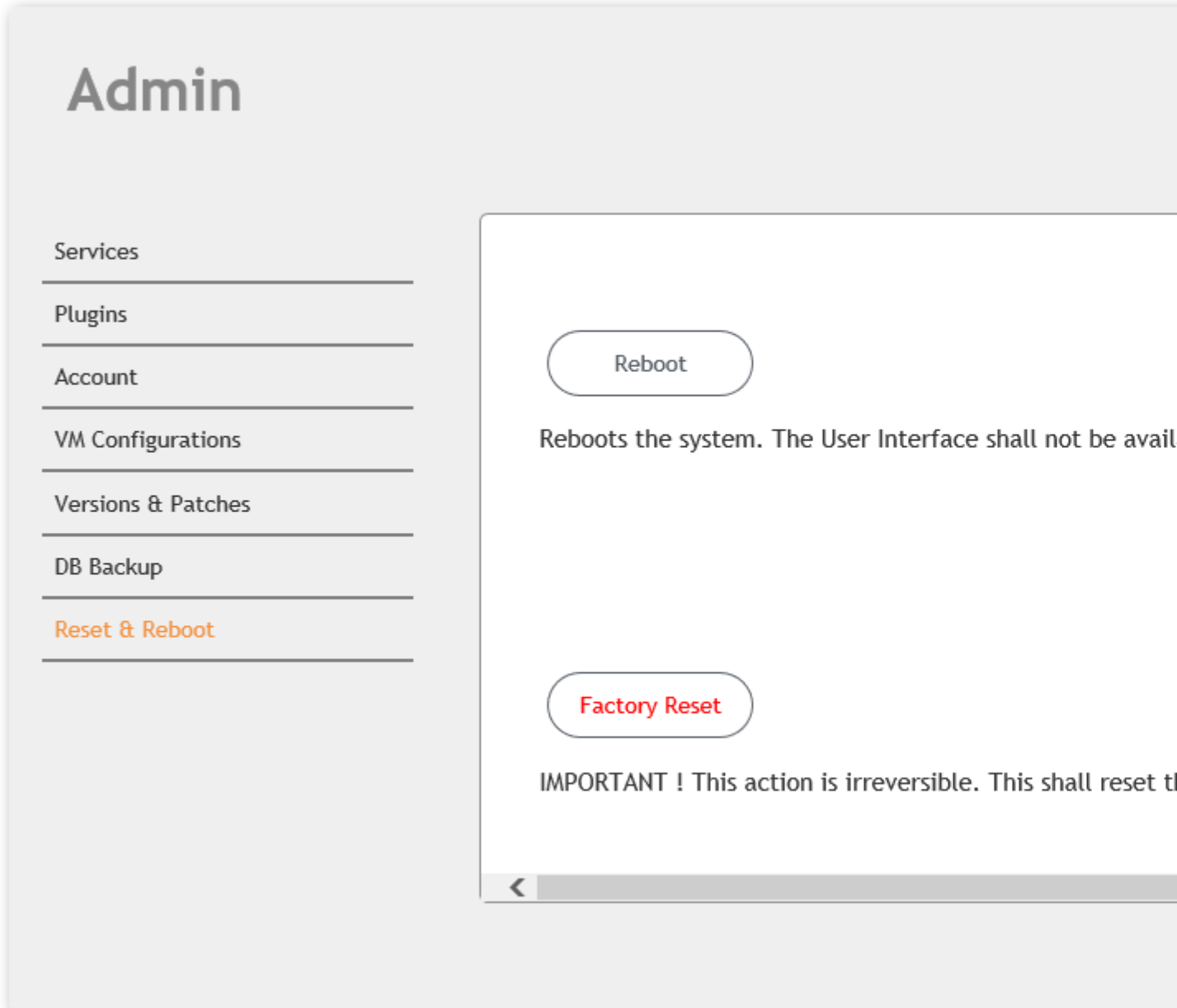
Follow these steps to reset Ruckus IoT Controller to its factory default settings.



**NOTE**

Performing this procedure will erase all of the settings that are configured.

1. On the **menu** , click **Admin**.
2. On the **Admin** page, in the left navigation pane, click **Reset and Reboot**.



3. Click **Factory Reset**.

The steps for resetting the Ruckus IoT Controller to its factory default settings are completed.



# Managing IoT Access Points

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## IoT AP Overview

SmartZone holds the IoT Access Point (AP) firmware. You must make sure the IoT Access Point connects to SZ and downloads the appropriate IoT firmware. An IoT Access Point discovers SZ using discovery methods such as DHCP Option43, Domain Name System (DNS), and Access Point Registry (APR) modes.

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 Ruckus Command Line Interface (RKSLI). RKSLI mode is not encouraged, and should be used only if a DHCP Server is not present.

## DHCP Option 43

IoT Access Point supports Option 43 with the following suboptions.

- Suboption 21: Used to configure an 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 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 (RKCLI)

From RKSLI, the following commands can be used to discover the Ruckus IoT Controller.

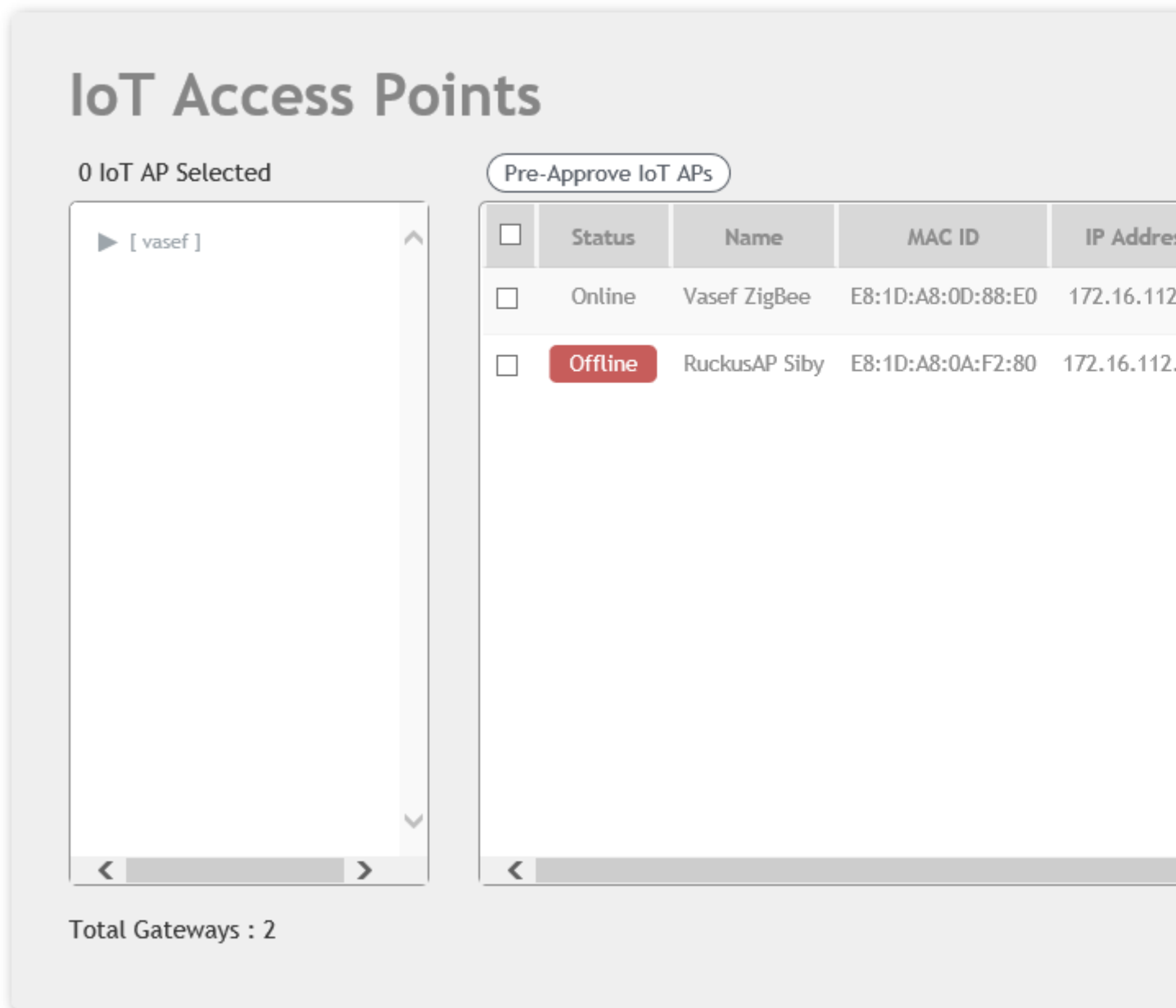
- Set **iotg-mqtt-brokerip** <Ruckus IoT Controller (IP Address)>.

## Adding IoT AP

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

The administrator must follow these steps to add IoT AP to Ruckus IoT Controller.

1. On the **menu**, click **IoT AP**.  
The **IoT Access Point** page appears.



2. Click **Pre-Approve IoT APs**.  
The **Pre-Approve IoT AP** page appears.

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

**FIGURE 13** Adding Single IoT AP

The screenshot shows a dialog box titled "Pre Approve IoT APs". At the top, there are two buttons: "Single" (highlighted in orange) and "Batch". Below the buttons is a horizontal line. Underneath the line, there are two input fields. The first is labeled "MAC \*" and contains the text "0E:0D:6F:00:0F:00". The second is labeled "Tag" and contains the text "Add new tag". At the bottom of the dialog box, there are two buttons: "Cancel" on the left and "Save" on the right.

**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 14** Adding IoT AP in Batch

The screenshot shows a web interface for adding IoT APs in batch. At the top, there is a section titled "Pre Approve IoT APs" with two buttons: "Single" and "Batch". The "Batch" button is highlighted in orange. Below this, there is a button labeled "Download CSV Template". Underneath that is a file upload field with a "Browse..." button. At the bottom of the interface, there are two buttons: "Cancel" on the left and "Upload" on the right.

4. Enter MAC address of the IoT AP and click **Save**.  
The IoT AP is now added in the IoT AP List.
5. Approve the selected IoT AP.

# Editing an IoT AP

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

## Single IoT Access Point Mode

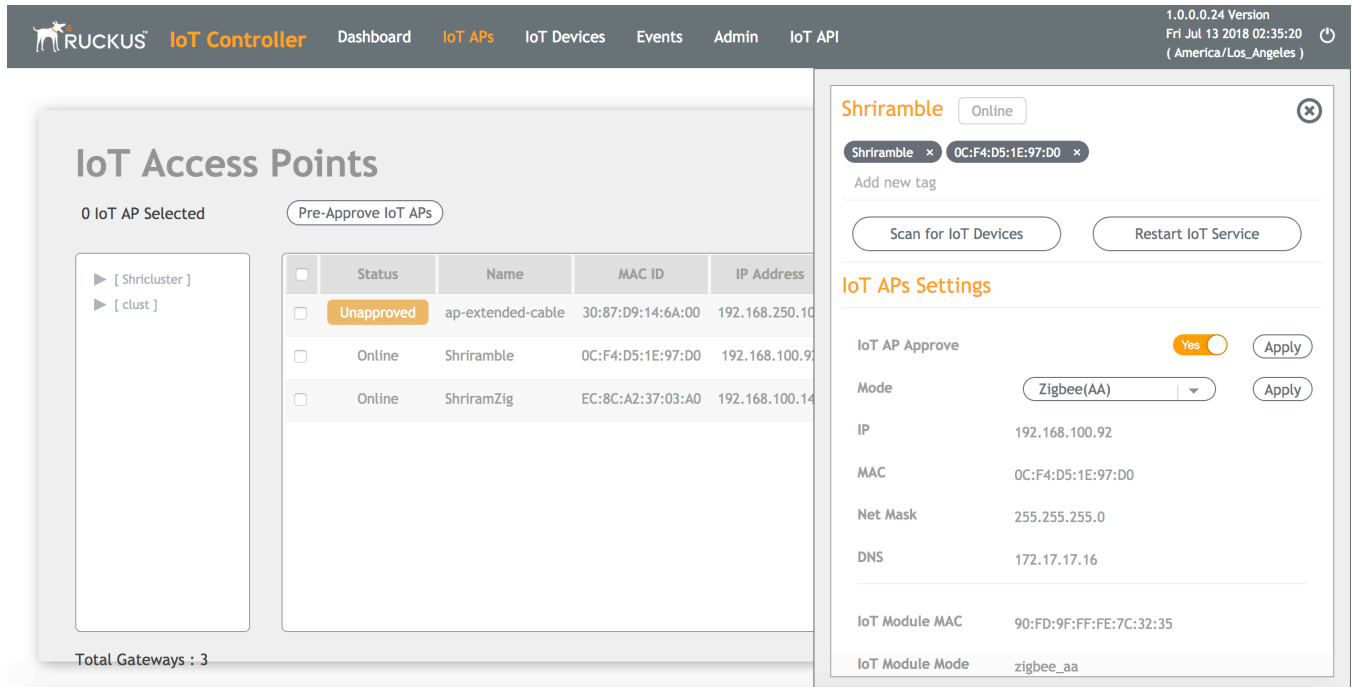
You can use Single IoT Access Point (AP) Mode to edit an IoT AP.

The Administrator must follow these steps to edit an IoT AP:

1. On the **menu**, click **IoT APs**.  
A list of selected IoT APs are displayed.

2. Click an IoT AP to edit.

**FIGURE 15** Single IoT AP Mode



Existing information displays, and administrator can edit the following fields:

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

In addition, the administrator can read the status of the IoT AP module such as network information, IoT AP module information, and properties.

The administrator has completed editing a single IoT AP.



## Bulk AP Mode

Bulk AP Mode allows the administrator to edit more than one IoT AP.

The Administrator must follow these steps to edit a bunch of IoT APs.

1. On the **menu**, click **IoT APs**  
**IoT Access Point** page appears. A list of selected IoT APs is displayed.
2. Select the IoT APs to perform edit.  
Administrator can edit the following in bulk options.
  - Scan Devices
  - Set Channel
  - Set Tx Power
  - DeApprove
  - Restart
  - Remove AP
3. Select the option and click **Apply**.

The administrator has completed editing IoT APs using bulk update.

## 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 the configuration form) or on multiple APs (using the bulk update option).



# Managing Devices

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## Devices Overview

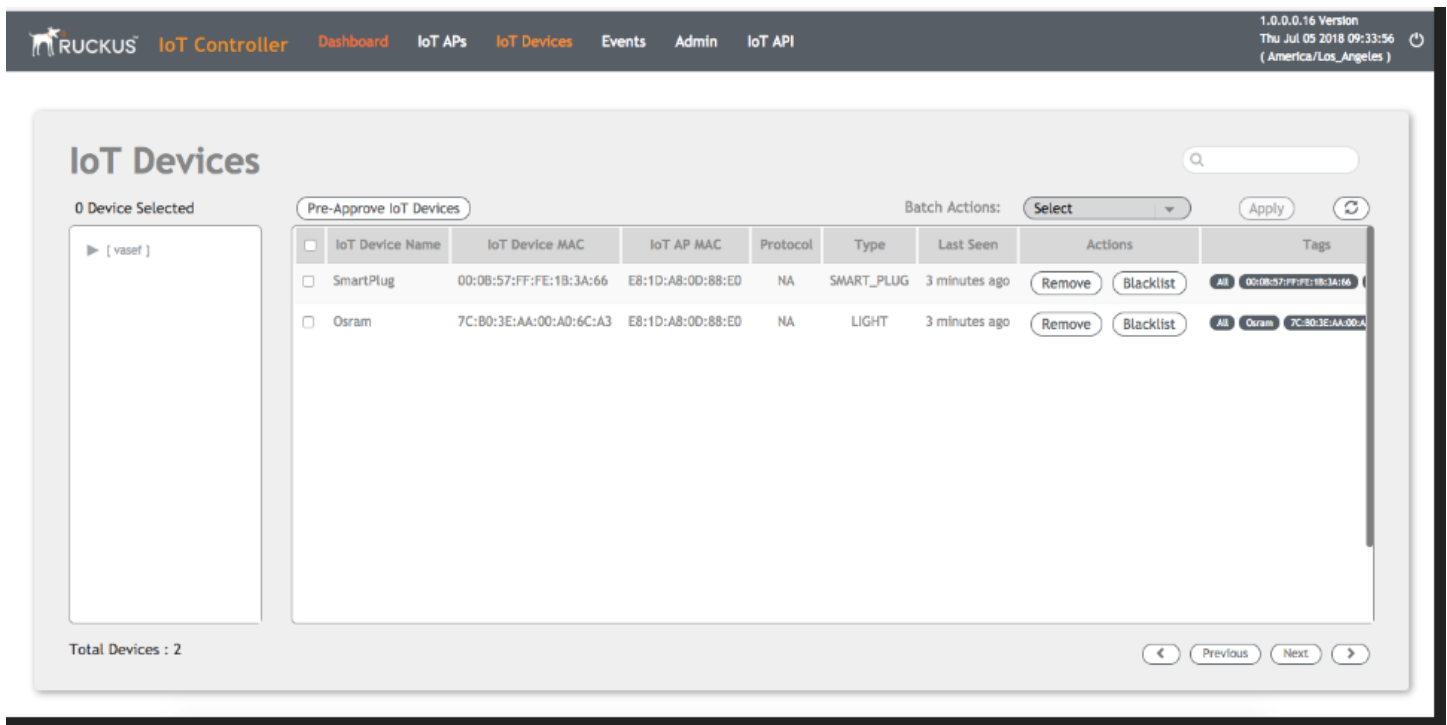
The Ruckus IoT Controller requires explicit user approval of devices. Only an approved device can be allowed into the IoT infrastructure.

To add devices to Ruckus IoT Controller, on the **menu**, click **IoT Devices**.

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

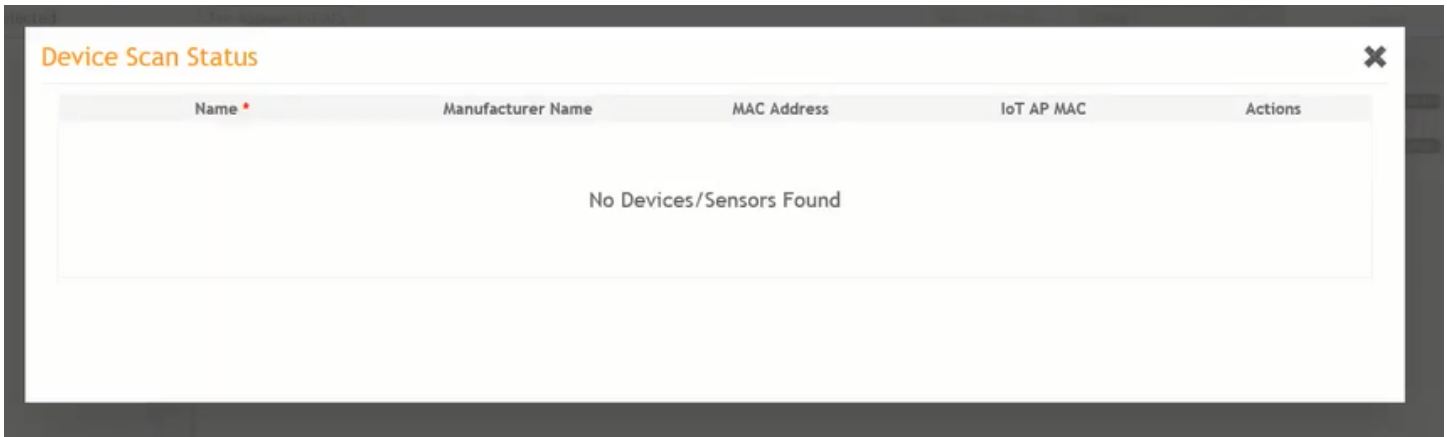
- A list of devices
- The operations on devices (such as remove, blacklist, and device-specific operations).

**FIGURE 16** Device Page



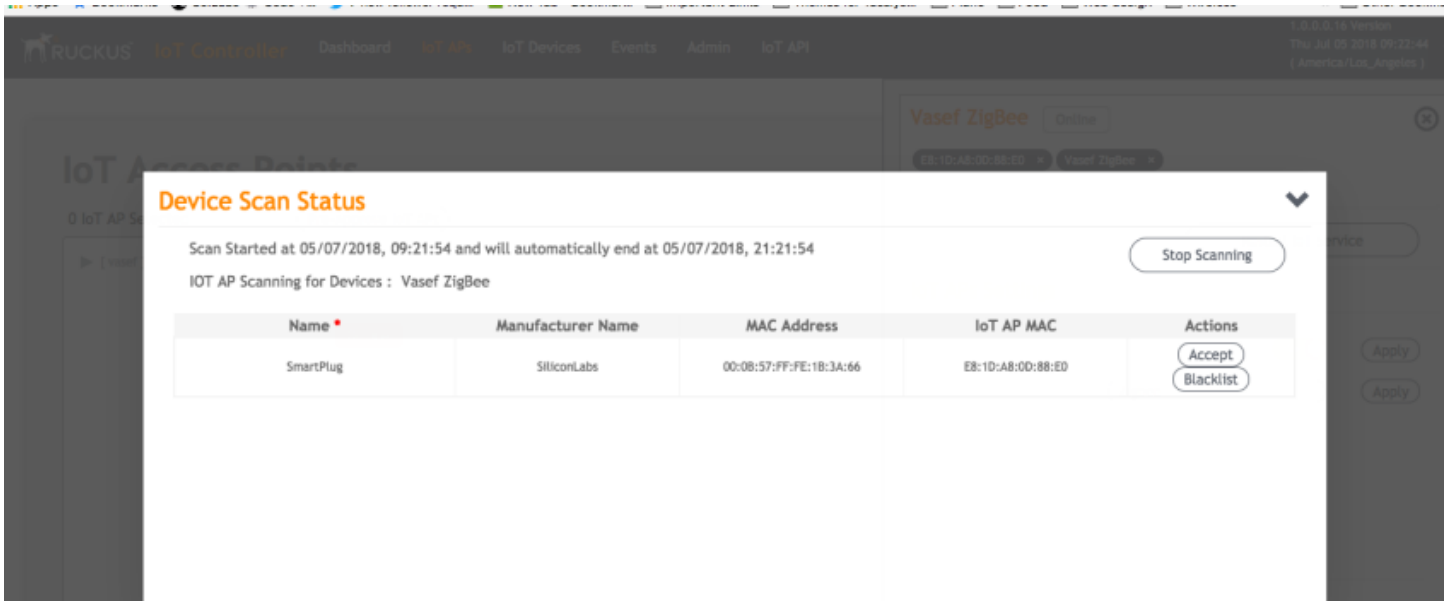
The device scan operation must be performed to start the device discovery process on the gateway. Upon starting device discovery, a dialog box is displayed, as shown in the following figure.

FIGURE 17 Device Discovery Dialog Box



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. If the discovered device is not pre-approved, then the user has to select **Accept** or **Blacklist**. If the device is accepted then it joins.

FIGURE 18 Device Discovery Add



## Managing OSRAM Light Bulbs

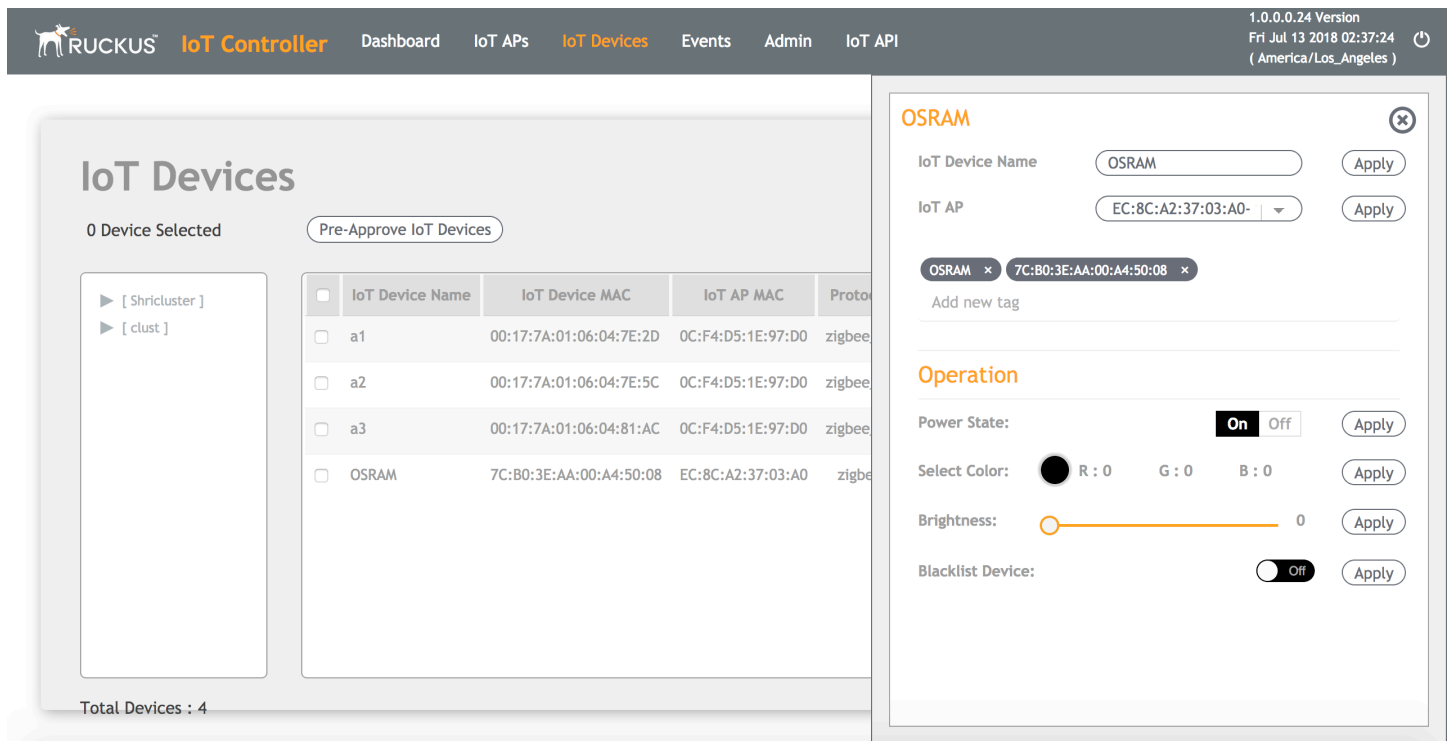
To discover OSRAM bulbs, complete the following operations.

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 for five times.
5. Switch on the power.

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

**FIGURE 19 OSRAM Light Bulb**



By clicking on the device, the right pane appears. 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 AP association from **IoT AP** drop-down, device tag from the **Add new tag** and set device blacklist from the **BlackList Device**. Device operations depend on the device selected.

**NOTE**

In the above figure, we have device operations as on/off, color and brightness, as the discovered device type is light bulb.

## Managing Assa Abloy Lock

Assa Abloy locks cannot be controlled using 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).

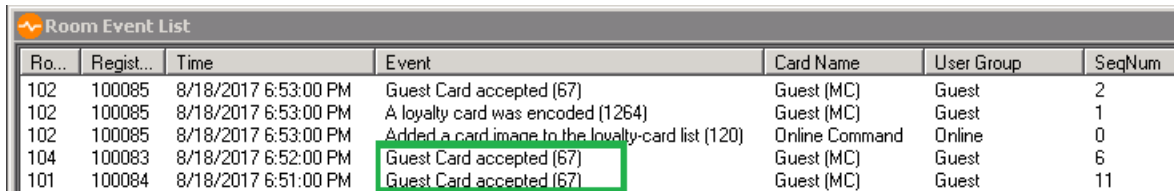
Assa Abloy locks are operated using the Visionline server. To establish the initial connection (after adding the lock) between an Assa Abloy lock and the Visionline server, perform the following steps.

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 20** Visionline Server Event Log



| 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 loyalty-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     |

## Managing Kontakt.io Beacons

For Kontakt.io, first activate the plugin. To activate plugin refer [Activating Plugins](#) on page 18. After the plugin is activated, map each IoT AP to a SoftAPIID. SoftAPIID is a feature of Kontakt.io and the user should be able to get it from the the Kontakt.io system. The SoftAPIID (for example xyz12) should be mapped to an IoT AP, using the tag feature. Tag value should be kontakt:<softapid>, for example kontakt:xyz12. SoftAPIID can be obtained from the cloud Kontakt.io under the **Gateway** tab. Once Kontakt.io plugin has been activated, and the SoftAPIID tags are present, beacon management is performed from the Kontakt.io cloud panel and applications.

# Events

- Viewing Events..... 39

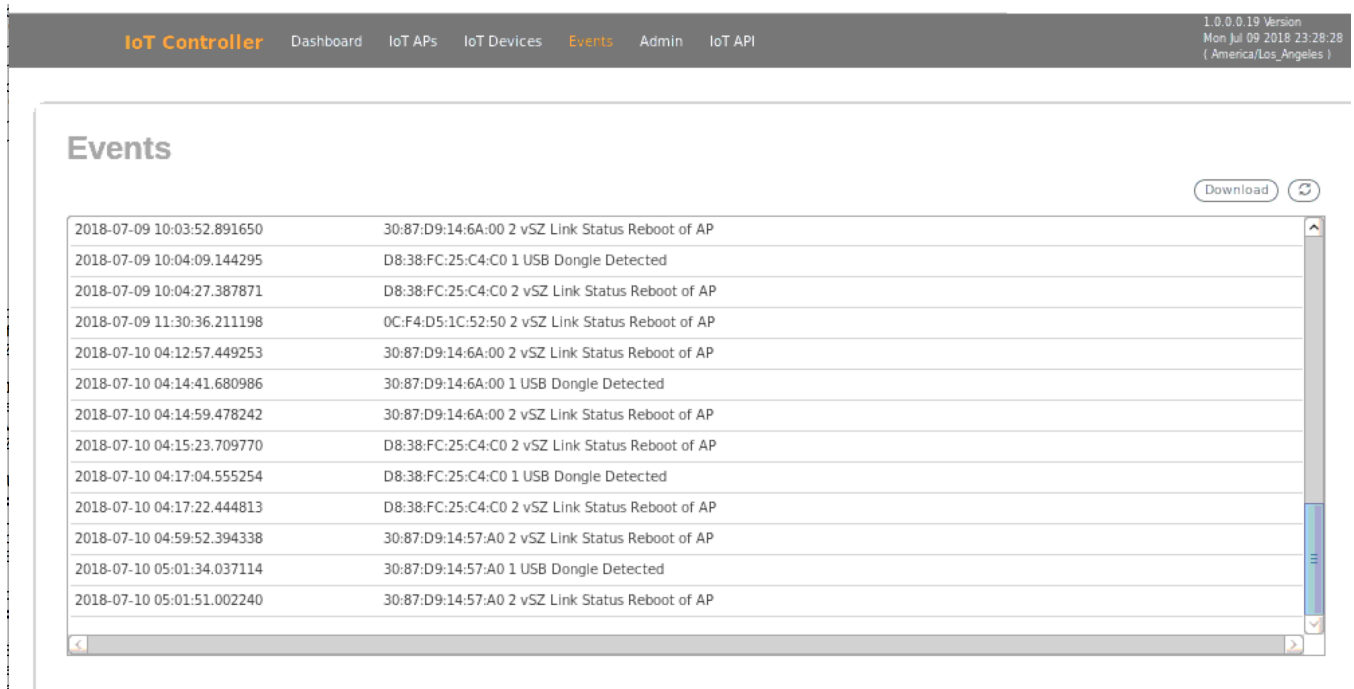
## Viewing Events

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

Follow these steps to view events.

1. On the **menu**, click **Events**.  
The **Event** page appears.

**FIGURE 21** Events



2. Click **Download**.

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



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