RUCKUS Edge 144 Quick Setup Guide

This *Quick Setup Guide* provides basic instructions for setting up the RUCKUS Edge 144 on the network. For information on advanced configuration and management options, see the *RUCKUS Edge Installation Guide* and *RUCKUS Edge Configuration Guide*, which are applicable to RUCKUS Edge 144 and are available for download from the RUCKUS Support website:

https://support.ruckuswireless.com/documents

Licensing Information

The RUCKUS Edge 144 device requires a standard license for every device. For more information, refer to *RUCKUS One Subscriptions Licensing Guide*.

Before You Begin

Before deploying RUCKUS products, please check for the latest software and the release documentation.

- Release Notes and other user documentation are available at http://support.ruckuswireless.com/documents.
- Software license and limited warranty information are available at http://support.ruckuswireless.com/warranty.

Package Contents

- One RUCKUS Edge 144 device accessories kit
- One rack mount kit / ear mount kit
- One console cable
- One Cat6 5-foot ethernet cable
- QR Code link insert
- Service Level Agreement/Limited Warranty Statement sheet
- Regulatory Statement sheet

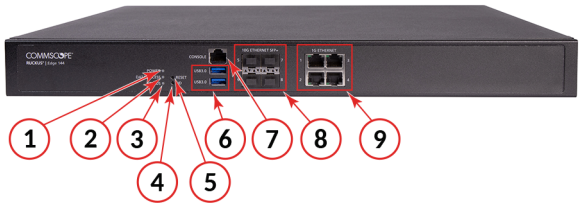
What You Will Need

- An administrative computer (admin PC) with a connection to the local area network
- A web browser, such as Internet Explorer, Mozilla Firefox, Google Chrome, Apple Safari, or Microsoft Edge
- The IP address, netmask, gateway, and DNS server addresses assigned to the RUCKUS Edge 144 — using either DHCP IP address or static IP address which can access the internet
- RUCKUS One credentials
- Outbound HTTPS (TCP 443) from RUCKUS Edge 144 to:
  - https://ap-registrar.ruckuswireless.com
  - https://sw-registrar.ruckuswireless.com
  - https://ocsp.comodoca.com
  - https://ocsp.entrust.net
  - https://ruckus.cloud
  - https://eu.ruckus.cloud
  - https://asia.ruckus.cloud
  - https://device.ruckus.cloud
  - https://device.eu.ruckus.cloud
  - https://device.asia.ruckus.cloud
  - https://storage.googleapis.com
  - https://edge-docker-registry.asia.ruckus.cloud
  - https://edge-docker-registry.eu.ruckus.cloud
  - https://edge-docker-registry.ruckus.cloud

Device SKU

RUCKUS Edge 144 stock keeping unit (SKU) P01-E144-*XX*00 has four (4) 1000Base-T (RJ-45) ports and four (4) 10GbE SFP+ ports.

- **FIGURE 1** RUCKUS Edge 144 Front View



1. Power LED
2. DATA Access LED
3. Status LED
4. Factory default button
5. Reset button
6. USB ports
7. Console port
8. 10G Ethernet SFP+ ports
9. 1G Ethernet ports

NOTE: For hardware reset ((device restart)): Press the **Reset** button.

For factory default reset: Press the **F/D** button for more than 4 seconds.

- **FIGURE 2** RUCKUS Edge 144 Rear View



Step 1: Connecting the RUCKUS Edge 144 to the Network

1. Connect the RUCKUS Edge 144 to a convenient power source —it will automatically power on. When the RUCKUS Edge 144 has started up successfully, the **Status** LED turns to a slow-blinking green light.

   NOTE: The RUCKUS Edge 144 must be powered on for a minimum of five seconds before it is powered off using the power button. To ensure complete shutdown while powering off RUCKUS Edge 144, hold the power button for a minimum of five seconds—untill the Power LED turns off completely.

2. Obtain an Ethernet cable. Connect one end of the Ethernet cable to one of the LAN ports on the RUCKUS Edge 144, and then connect the other end to your network switch or router. A DHCP server should be available in the connected LAN environment for the RUCKUS Edge 144 to get the IP address.

Step 2: Obtaining the Serial Number

You can get the serial number of the device using the following methods:

- From the sticker label at the bottom of the device: Manually copy the serial number that follows SN or scan the barcode using the RUCKUS One mobile app on a mobile device.
- Using the CLI command:
  1. Log in to the console using the credentials: **Username**: admin, **Password**: admin.
  2. To view the device serial number, enter the command **show serial**.

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FIGURE 3 Using the show serial Command



Step 3: Onboarding RUCKUS Edge 144 to RUCKUS One

RUCKUS One is used to manage your RUCKUS Edge 144 device.

Adding a RUCKUS Edge through the Web User Interface

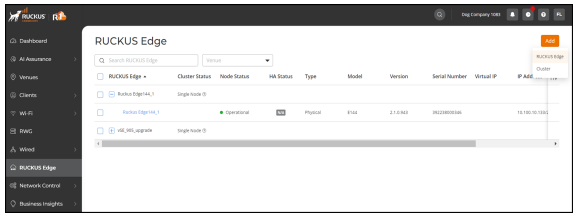
The first step of the RUCKUS Edge 144 onboarding process is to add your RUCKUS Edge 144 device to RUCKUS One.

To add a RUCKUS Edge via the RUCKUS One web interface, perform the following:

1. Log in to the RUCKUS One web user interface with your RUCKUS One credentials.
2. In the **RUCKUS One** menu, click **RUCKUS Edge**.

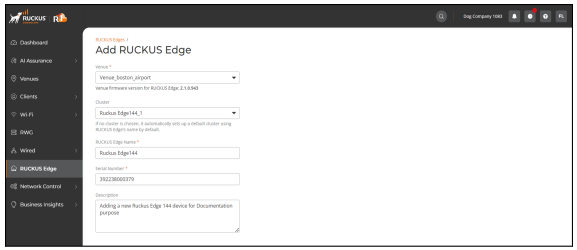
   This displays the **RUCKUS Edge** page.
3. In the **RUCKUS Edge** page, click **Add** and select **RUCKUS Edge**. This displays the **Add RUCKUS Edge** page.

FIGURE 4 Add RUCKUS Edge



4. In the **Add RUCKUS Edge** page, enter the following details:
   - **Venue**: Click the drop-down arrow to select a site to associate with the RRUCKUS Edge device. A venue represents a physical space where networking devices are deployed.
   - **Cluster**: (Optional) Click the drop-down arrow to select the cluster to associate with RUCKUS Edge device. Set this field only if you are adding multiple RUCKUS Edge devices for redundancy. A cluster is a group of nodes which act as a single system to provide high availability and load balancing.
   - **RUCKUS Edge Name**: Enter a meaningful name for the RUCKUS Edge device.
   - **Serial Number**: Enter the serial number of the RUCKUS Edge device. Refer to Step 2: Obtaining the Serial Number on page 1 for more information.
   - **Description** (Optional): Enter a purposeful description for the RUCKUS Edge device.

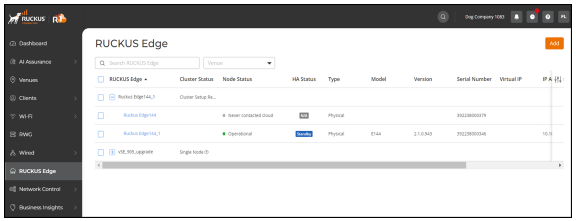
FIGURE 5 Add RUCKUS Edge Device



5. Click **Add**.

   This displays the newly added RUCKUS Edge device on the **RUCKUS Edge** screen.

FIGURE 6 New RUCKUS Edge Device



NOTE: Upon onboarding to RUCKUS One, the device will automatically upgrade to the latest firmware version associated with the venue.

Adding RUCKUS Edge through the Mobile Application

To add any RUCKUS Edge device using the RUCKUS One mobile application, download the RUCKUS One application from the **Play Store** (for Google Android phones) or **App Store** (for Apple iPhones).

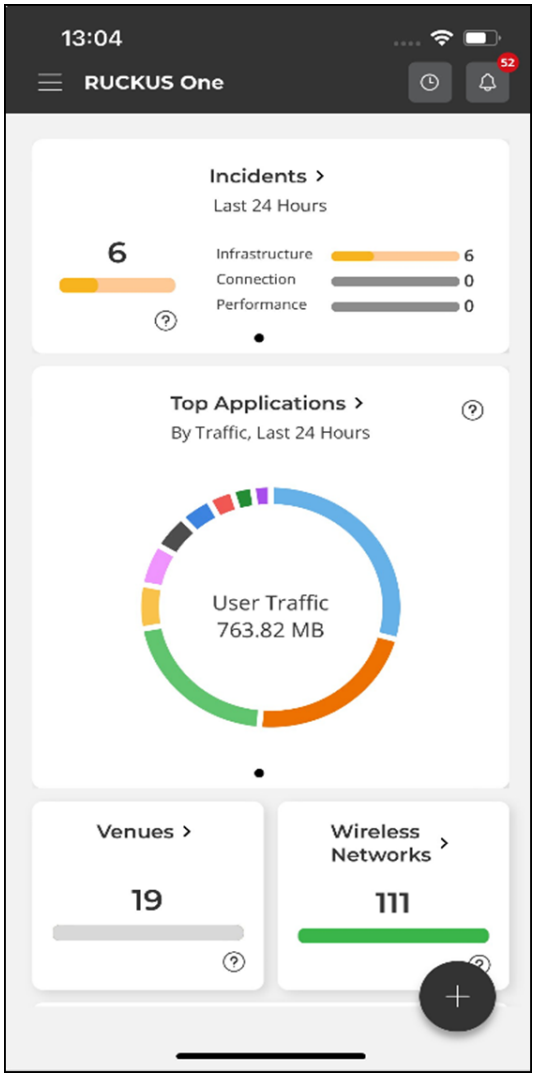
After downloading the RUCKUS One application on your mobile device, perform the following:

1. Log in to the **RUCKUS One** application with your credentials and select the region from the drop-down menu.

   This displays the **RUCKUS One Dashboard**.

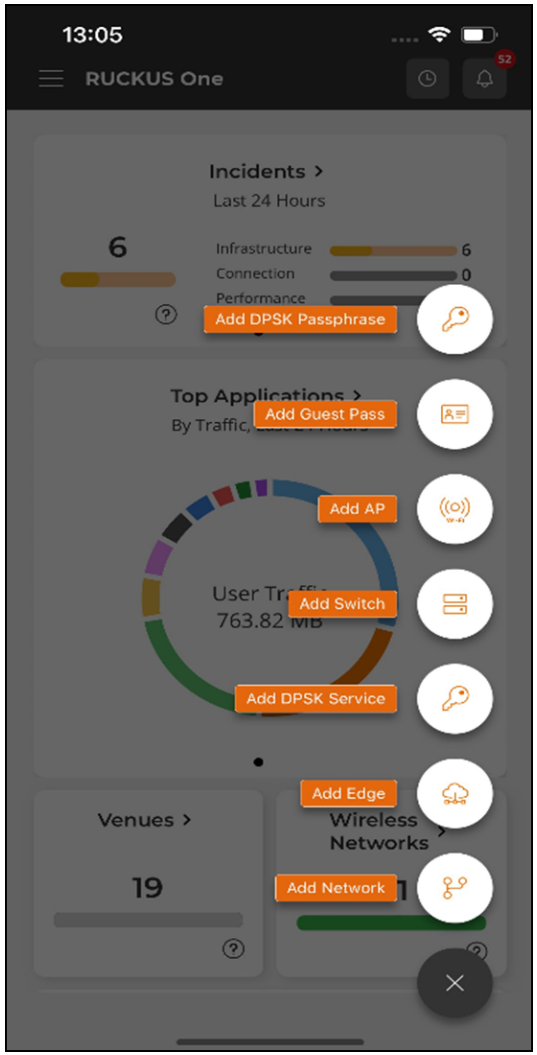
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FIGURE 7 RUCKUS One Dashboard



2. In the **Dashboard**, locate and click ⊕.
   This displays the **Add** menu.

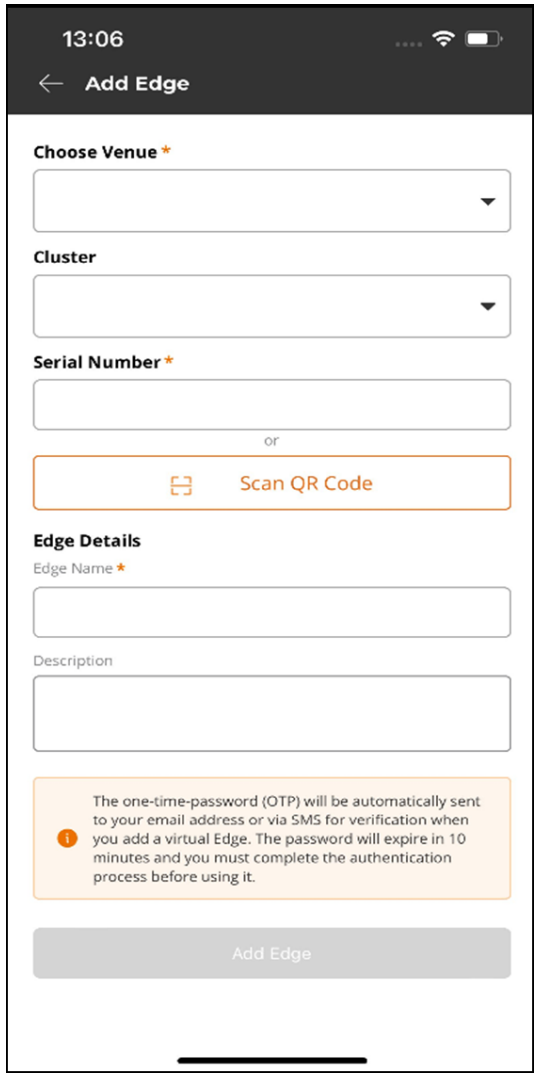
FIGURE 8 Add Menu



3. Click the **Add Edge** button or icon.
   This displays the **Add Edge** screen.
4. In the **Add Edge** screen, enter the following details:
   - **Choose Venue**: Click the drop-down arrow and choose the venue. A venue represents a physical space where networking devices are deployed.
   - **Cluster**: Click the drop-down arrow and choose the venue to which all traffic is tunneled in the specified venue.
   - **Serial Number**: Enter the serial number of the RUCKUS Edge device. Refer to Step 2: Obtaining the Serial Number on page 1 for more information.
   - **Edge Details**: Enter a meaningful name for the RUCKUS Edge device.
   - **Description** (optional): Enter a purposeful description for the RUCKUS Edge device.

   After all required fields are filled, the **Add Edge** button becomes active.

FIGURE 9 Add Edge Details Screen

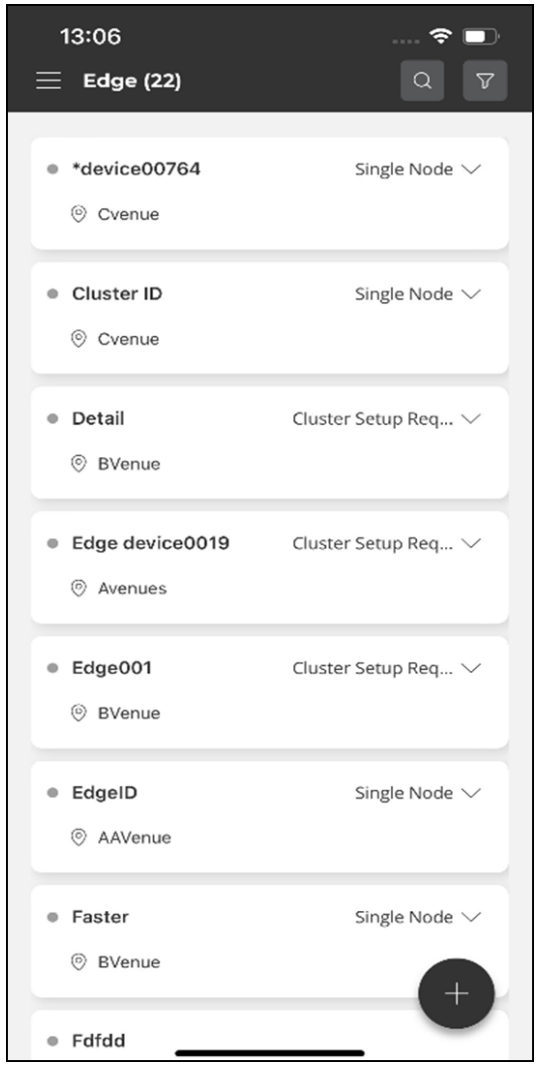


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5. Click **Add Edge**.

   The screen refreshes, showing a list of all RUCKUS Edge devices that have been added.

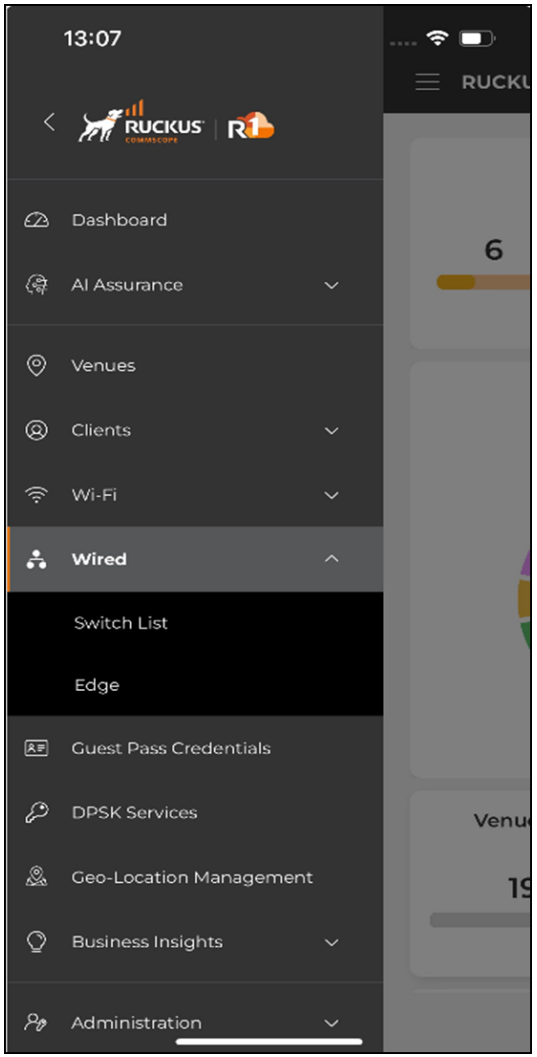
FIGURE 10 List of Devices on the Edge Screen



6. Click on the device name to view and monitor the RUCKUS Edge. In an operational device you can monitor the following activities:
   - **Overview** - Displays the Edge Status, Traffic by Volume, Resource Utilization, and other activities.
   - **Services** - Displays all the service-related information.
   - **DHCP** - Displays the device-related information such as Ports, Sub Interfaces, and so on.
   - **Timeline** - Displays the Alarms and Events.
   - **Events** - The severity types are defined by color codes. Event types are defined by severity; they are classified as **Critical**, **Major**, **Minor**, **Warning**, and **Informational**.

NOTE: At any time, you can view and monitor a specific RUCKUS Edge device by navigating the sidebar menu on RUCKUS One mobile app. Refer to Figure 11.

FIGURE 11 RUCKUS One Mobile Application Sidebar Menu



Step 4: Configuring RUCKUS Edge 144 on RUCKUS One Management Platform

After the RUCKUS Edge 144 device is onboarded successfully, the device is displayed on RUCKUS One with the status as **Needs Configuration**. You must configure the interfaces to change the status of the device to **Operational**.

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Configuring the Port Details

After the RUCKUS Edge device is onboarded on the RUCKUS One management platform, the status of the RUCKUS Edge and ports is displayed as **Needs Configuration** and **Unconfigured** port type, respectively.

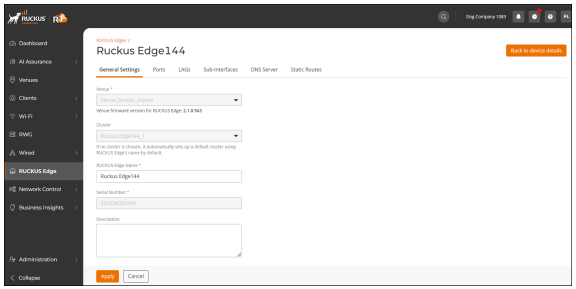
To configure the ports on the RUCKUS Edge device via the RUCKUS One interface, perform the following:

1. Log in to RUCKUS One.
2. On the navigation bar, click **RUCKUS Edge**.

   This displays the **RUCKUS Edge** page.
3. Select a RUCKUS Edge from the list and click **Configure**.

   This displays the **General Settings** tab, by default.

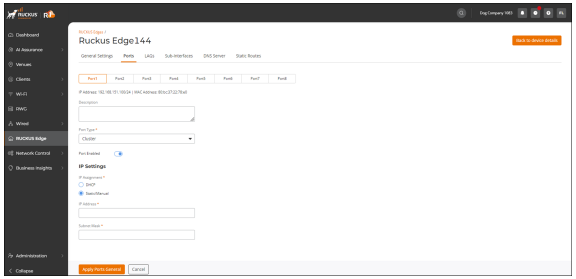
FIGURE 12 Port Configuration - General Settings



4. Click the **Ports** tab.

   This displays the **Ports** page.

FIGURE 13 Ports Configuration



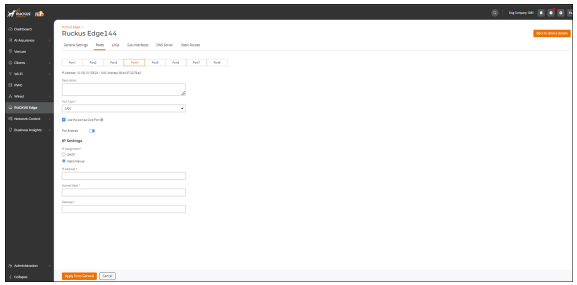
5. In the **Ports** page, configure the following:
   - **Description**: Enter a purposeful statement for **Port1**.
   - **Port Type**: Select the port type as **WAN**, **LAN**, or **Cluster**. Select **LAN** from the drop-down list. This displays **Use this port as Core Port** option.
     - **Use this port as Core Port**: This option utilizes the port for SD-LAN service, the core port on this RUCKUS Edge device establishes a tunnel for directing data transfer effectively.
   - **Port Enabled**: By default, the port is enabled. Click the toggle button to disable the port.

IP Settings

- **IP Assignment**
  - **DHCP**: Select the DHCP option to automatically provide the IP host with the device IP address and related configuration.
  - **Static/Manual**: Select the Static/Manual option to and enter the IP details in the fields that appear on the screen.
    - **IP Address**: Enter a valid IP address.
    - **Subnet Mask**: Enter the subnet mask.
    - **Gateway**: Enter the IP gateway address.

NOTE: If you are using a static IP, make sure the DNS server IP address is entered. Refer to Configuring the DNS Server on page 6 for details.

FIGURE 14 Port 4 Configuration



6. Click the **Port4** sub-tab and set the required fields. Refer to Step 5 for field descriptions.
7. Click **Apply Ports General**.

   The status of the device is displayed as **Applying Configuration** and then changes to **Operational**.

Configuring a RUCKUS Edge Link Aggregation Group

To configure a Link Aggregation Group (LAG), follow these steps:

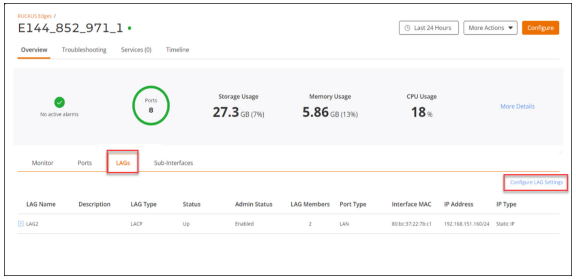
A RUCKUS Edge device or cluster of devices must already be onboarded and in operational state.

1. On the RUCKUS One navigation bar, click on **RUCKUS Edge**.

   This displays the RUCKUS Edge devices.
2. Select a device and click the ⊞ icon to expand and view the associated devices.
3. Click on the device name. This displays the **Overview** page.
4. In the **Overview** page, click the **Configure** button on upper-right hand corner and click the **LAGs** sub-tab. Alternatively, you can directly click the **LAGs** tab on the **Overview** page and click **Configure LAG Settings**.

   This displays LAG details page.

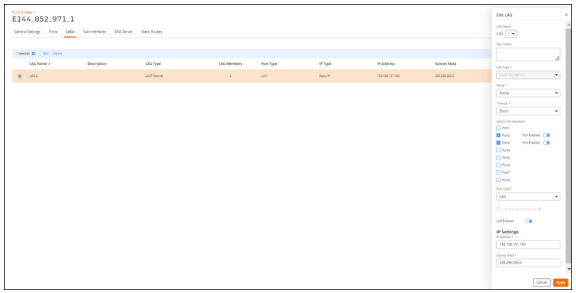
FIGURE 15 LAG Configuration



5. In the **LAGs** page, click **Add LAG**.

   This displays the **Add LAG** sidebar.

FIGURE 16 Add LAG



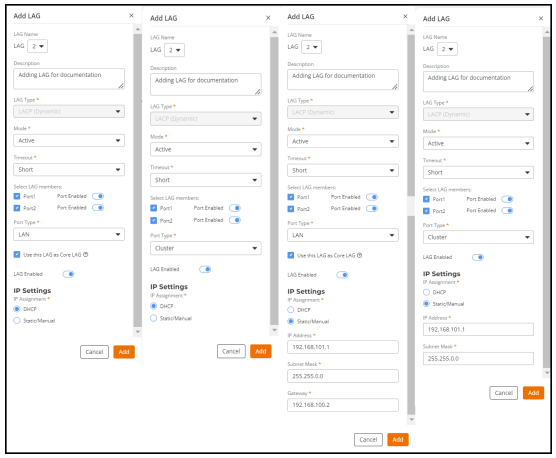
Enter the following details to add a LAG to the RUCKUS Edge device.

- **LAG Name**: Select name of the LAG from the drop-down list. The LAG name is a numeric value between 0 to 3. After the LAG is created, you cannot edit the LAG name.
- **Description**: Enter a meaningful short description about the LAG.
- **LAG Type**: The default type is **LACP (Dynamic)** as RUCKUS Edge does not support static LAG.

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- **Mode**: Click the drop-down list and select the mode of the LAG. There are two types of modes:
  - *Active* : Always initiates Link Aggregation Control Protocol (LACP) and Protocol Data Unit (PDU) to the peer. This is the default mode for RUCKUS Edge LACP LAG.
  - *Passive* : Never initiates any LACP exchange on its own. It responds only after receiving LACP and PDU messages from the peer/partner device. Hence, both peers cannot be in passive mode. At least one of the peers should be configured in active mode.
- **Timeout**: Time interval indicates how long the LACP should wait before declaring the partner as down. This interval also defines the rate at which LACP hello packets are exchanged among the peers. There are two types of timeout.
  - Long/Slow Timeout: The value of this timeout is 90 seconds. Hello packets are transmitted every 30 seconds. After 3 misses (3*30s = 90 seconds), the peer information is flushed and LACP state is declared as down.
  - Short/Fast Timeout: The value of this timeout is 3 seconds. Hello packets are transmitted every 1 second. After 3 misses (3*1s = 3 seconds), the peer information is flushed. This is the default timeout for RUCKUS Edge LACP LAG.
- **Select LAG Members**: A physical port associated with a LAG interface is a LAG member. To associate LAG members, select the ports which need to be a member of a LAG and enter the following details:
  - Port Type - Select the type of port from the drop-down list.
    - LAN: If **LAN** is selected as the port type, **Use this LAG as Core LAG** is activated for SD-LAN service.
    - Cluster: Select **Cluster** to connect two RUCKUS Edge devices for clustering in a High Availability (HA) deployment.
- **IP Settings**: Select one of the following for **IP Assignment**.
  - DHCP - Dynamic Host Configuration Protocol (DHCP) is a client or server protocol that automatically provides and Internet Protocol (IP) with its host IP address.
  - Static/Manual - Enter the IP address, Subnet Mask, and Gateway Protocol manually.

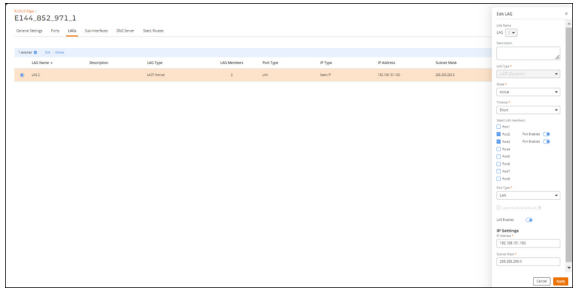
FIGURE 17 Add LAG - Examples of IP Settings Options



6. After entering all the details, click **Add**.

   The newly created LAG port is displayed in the RUCKUS Edge page under **LAGs** tab. You can also view the LAG information in the RUCKUS Edge **Overview** page.

FIGURE 18 New LAG with Port Information



Configuring the DNS Server

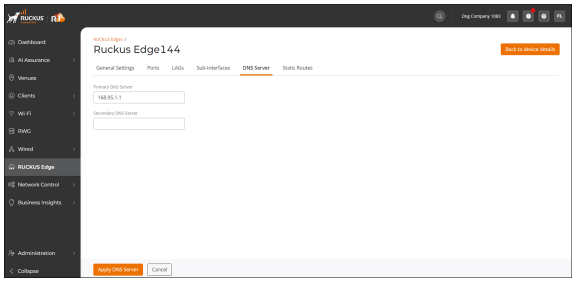
Manual DNS server configurations are supported at the device level. The DNS server, when configured manually, overrides the server list received from the DHCP option.

1. On the navigation bar, click **RUCKUS Edge**.

   This displays the **RUCKUS Edge** page.
2. Select a RUCKUS Edge device from the list and click **Configure**.

   This displays the **General Settings** tab, by default.
3. Select the **DNS Server** tab and add the **Primary** and **Secondary** DNS Server IP addresses.

FIGURE 19 DNS Server



4. Click **Apply DNS Server**.

Configuring Static Routes

Device-level static route configuration is supported at the device level.

If you are using a static IP, make sure the DNS server IP address is entered. Refer to Configuring the DNS Server on page 6 for details.

1. On the navigation bar, click **RUCKUS Edge**.

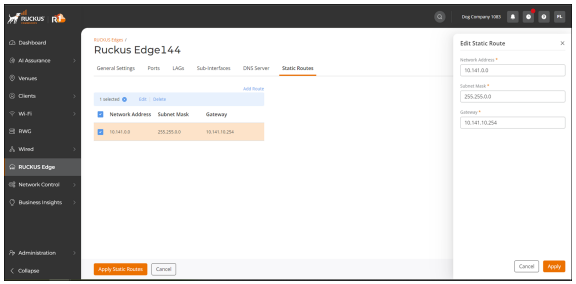
   This displays the **RUCKUS Edge** page.
2. Select a RUCKUS Edge from the list and click **Configure**.

   This displays the **General Settings** tab, by default.
3. Select the **Static Routes** tab and click **Add Route**.

   This displays **Add Static Route** sidebar window.. In this window, enter the following:
   - **Network Address**: Is a host on a communication network. Enter the network IP address.
   - **Subnet Mask**: Is a 32-bit number created by the host. Enter a valid subnet mask.
   - **Gateway**: Is a system between two different networks. Enter a valid gateway address.

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FIGURE 20 Add Static Route



4. Click **Add**.
5. Click **Apply Static Routes**.

Related Documentation

If you need more information about the RUCKUS Edge 144, refer to the following documents, which are available for download on the https://support.ruckuswireless.com Support website:

- For information on how to mount and install the RUCKUS Edge 144 and how to complete the essential configuration tasks, refer to the *RUCKUS Virtual Edge Getting Started Guide*.
- For information on how to perform advanced configuration tasks and AP management and monitoring, refer to the *RUCKUS Edge Configuration Guide*.
- For a complete list of documentation on the RUCKUS Edge 144, refer to the *RUCKUS Edge Release Notes*.
- For more information on how to manage your RUCKUS Edge 144 licenses, refer to the *RUCKUS One Subscriptions Licensing Guide*.

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