UBIQUITI®
N E T W O R K S

UniFi®

Enterprise System Controller

Release Version: 4.8.7

USER GUIDE

Table of Contents

Chapter 1: Software Installation

Introduction

Thank you for purchasing the Ubiquiti Networks® UniFi® Enterprise System. The UniFi devices are bundled with the UniFi Controller software, which allows you to manage your UniFi network using a web browser.

This User Guide is for use with version 4.8.7 or above of the UniFi Controller software.

System Requirements

- Linux, Mac OS X, or Microsoft Windows 7/8/10
- Java Runtime Environment 1.6 (1.8 or above recommended)
- Web Browser: Mozilla Firefox, Google Chrome, Microsoft Edge, or Microsoft Internet Explorer 10 (or above)

Network Topology Requirements

- A DHCP-enabled network (so any device can obtain an IP address)
- One of the following:
  - UniFi Cloud Key
  - A management station running the UniFi Controller software, located either on-site and connected to the same Layer-2 network, or off-site* in a cloud or NOC
- For the public address system capability of the UAP-AC-EDU: A compatible Android™ or iOS device located on the same Layer-2 network as the UniFi Controller and UniFi APs

UAP-AC-PRO   UAP-AC-PRO

UAP-AC-Outdoor

UniFi Switch

On-Site Management Station

or

LAN

WAN   UniFi Security Gateway PRO

Off-Site Cloud/NOC

Internet
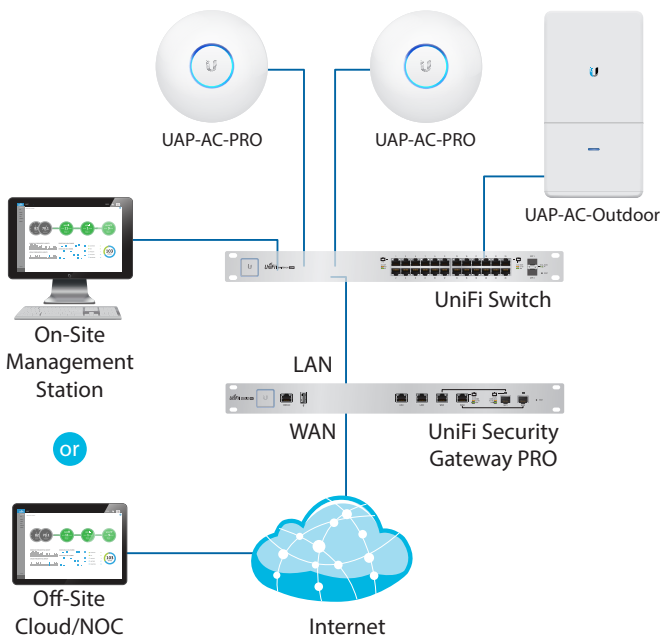
Sample Network Diagram

* Requires Layer-3 adoption. For details, refer to: **http://ubnt.link/UniFi-Layer3-Adoption**

All UniFi devices support off-site management controllers.

Follow the instructions in this chapter after you install the hardware, which is described in the Quick Start Guide.

Software Installation

Download the latest version of the UniFi Controller software at **downloads.ubnt.com/unifi**

Follow the instructions for your specific computer or device type.

UniFi Cloud Key Users

If you have the UniFi Cloud Key, please refer to **"UniFi Cloud Key" on page 5** for more information.

UniFi Cloud Users

If you have a UniFi cloud account, please refer to **"UniFi Cloud Account" on page 12** for more information.

Linux Users

Please refer to the UniFi blog on our community site at: **http://ubnt.link/UniFi-Blog**

Mac Users

1. Launch **UniFi.pkg**.

2. Click **Continue** and follow the on-screen instructions to install the software.
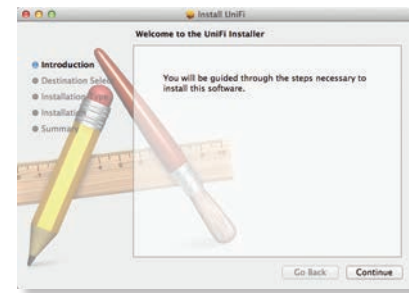
3. Go to **Go** > **Applications** and double-click the *UniFi* icon.

Proceed to **"Configuring the UniFi Controller Software" on page 2**.

PC Users

1. Launch **UniFi-installer.exe**.
2. Click **Install**.

3. If your computer doesn't have Java 1.6 or above installed, you will be prompted to install it. Click **Install** to continue.

4. Click **Next**.
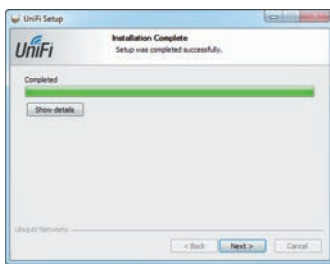
5. Ensure that the *Start UniFi Controller after installation* option is checked and click **Finish**.
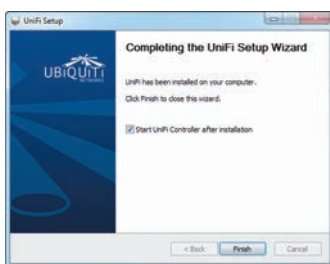
Note: The UniFi Controller software can also be launched from **Start** > **All Programs**.
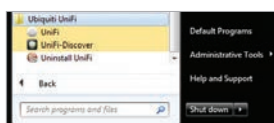
Configuring the UniFi Controller Software

1. The UniFi Controller software startup will begin. Click **Launch a Browser to Manage Wireless Network**.

2. Select your country and time zone. Alternatively, you can click **restore from a previous backup** to use a file that contains your backup settings. Click **Next**.

Note: U.S. product versions are locked to the U.S. Country Code to ensure compliance with FCC regulations.

3. Select the devices that you want to configure and click **Next**.

4. The UniFi Setup Wizard will create a secure primary wireless network for your devices. Perform the following steps:

a. Enter the wireless network name (SSID) in the *Secure SSID* field.

b. Enter a passphrase to be used for your primary network in the *Security Key* field.

c. To enable guest access, select **Enable Guest Access**, and enter a guest network name in the *Guest SSID* field.

d. Click **Next**.

5. Enter an admin name in the *Admin Name* field and password in the *Password* field to use when accessing the management interface as a super admin. Confirm your password in the *Confirm Password* field. Click **Next**.

Note: Only the super admin – not any site admin – can view devices that are *Pending Approval* and then adopt them on the UniFi Controller. Ensure that you save the super admin login information for future use.

6. Review your settings. Click **Finish** to save your settings or click *Back* to make changes. Once the wizard is finished, the browser will be redirected to the management interface.

Congratulations, your wireless network is now configured.

A login screen will appear for the UniFi Controller management interface. Enter the admin name and password that you created and click **Login**.

Proceed to **"Using the UniFi Controller Software" on page 17** for information on using the UniFi Controller software.

Chapter 2: UniFi Cloud

Introduction

You can access the UniFi Controller via the UniFi Cloud Key and/or the UniFi cloud account. This chapter describes the following:

• UniFi Cloud Key

• **"UniFi Cloud Account" on page 12**

UniFi Cloud Key

The UniFi Cloud Key includes the pre-installed UniFi Controller software.

System Requirement

Web Browser: Google Chrome, Mozilla Firefox, Microsoft Edge, or Microsoft Internet Explorer 10 (or above)

Network Topology Requirement

A DHCP-enabled network (for the UniFi Cloud Key to obtain an IP address)

UAP-AC-LR

UAP-PRO

UAP-AC Outdoor

UniFi Switch

UniFi Cloud Key

LAN

WAN   UniFi Security
             Gateway PRO

Internet
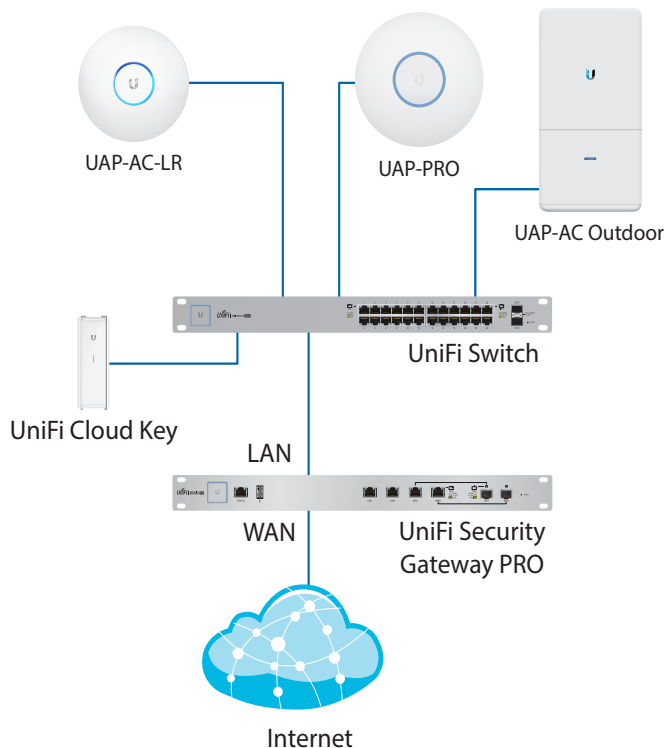
Sample Network Diagram

Software Installation

After you follow the hardware installation instructions in the UniFi Cloud Key Quick Start Guide, use one of the following methods to launch the software:

• If you are using Chrome, go to the *Chrome Instructions* section (recommended).

• If you are using a different web browser, go to **"Instructions for Other Web Browsers" on page 7**.

Chrome Instructions

1. Ensure that your host system is on the same Layer-2 network as the UniFi Cloud Key.

2. Launch the Chrome web browser and type **https://unifi.ubnt.com** in the address field. Press **enter** (PC) or **return** (Mac).

3. Enter the username and password for your UBNT account. Click **Sign In**.

4. Click **Find Cloud Key**.
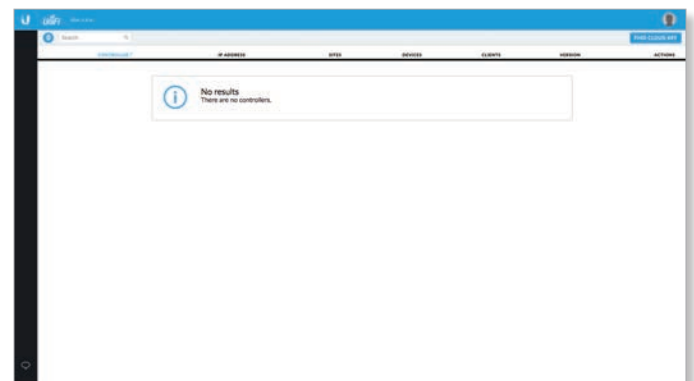
Note: The default fallback IP address of the UniFi Cloud Key is *192.168.1.30*.

5. If the Ubiquiti® Device Discovery Tool is already installed, proceed to step 7.

If the tool is not installed, you will be prompted to add it. Proceed to step 6.

6. To install the tool:
   a. Click **Install**.
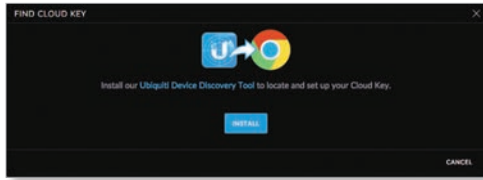
   b. Click **Add app** to confirm.

7. The Ubiquiti Device Discovery Tool will search for the UniFi Cloud Key. Select it to continue.
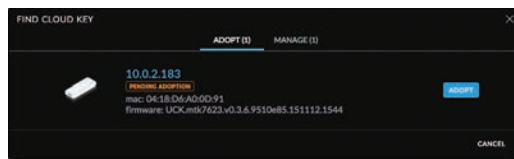
8. Configure the UniFi Controller:
   a. Select the appropriate country.
   b. Select the appropriate time zone.
   c. Enter an admin name in the *Admin Name* field and a password in the *Password* field to use when accessing the management interface.
   d. Confirm your password in the *Confirm Password* field.
   e. Keep the IP address or enter a hostname in the *Controller Hostname* field.
   f. If you want to set up an SSH login for management access to the UniFi Cloud Key, then select **Use non-default SSH credentials**. Enter a username in the *SSH Username* field, and enter a password in the *SSH Password* field.
   g. Click **Submit** to save your changes.
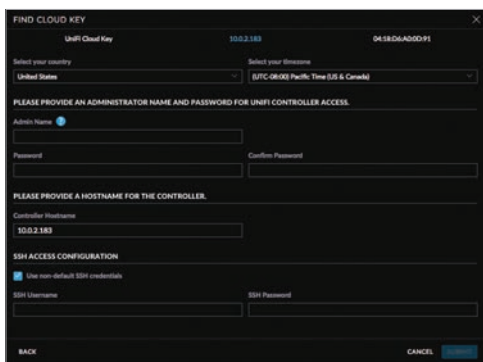
9. Wait for the UniFi Controller to be adopted, and then select it.
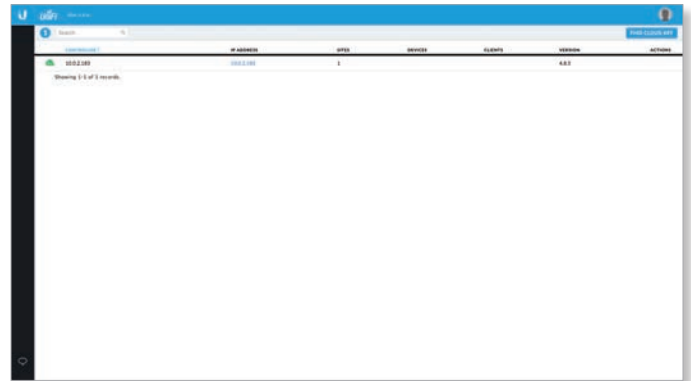
10. Click **Launch Site**.
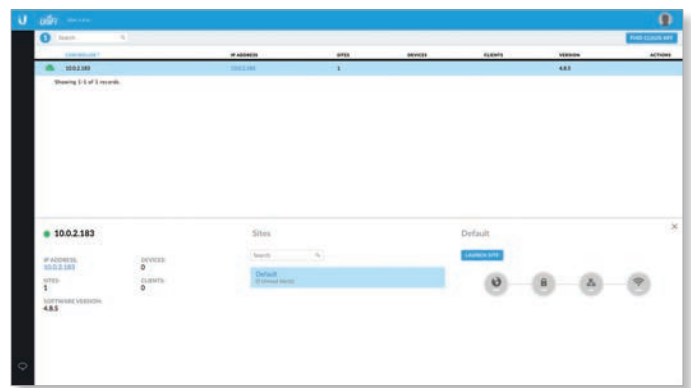
A login screen will appear for the UniFi Controller management interface. Enter the admin name and password that you created and click **Login**.
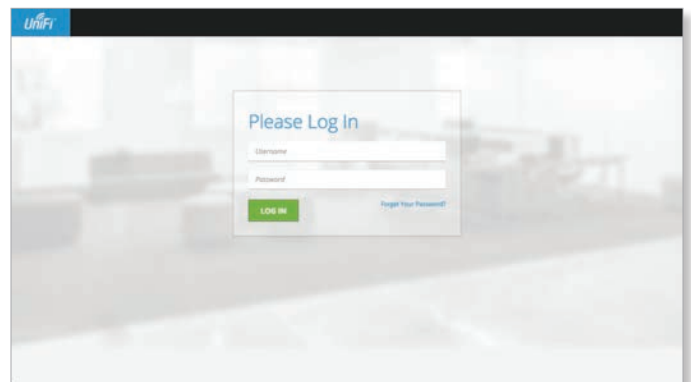
Proceed to **"Using the UniFi Controller Software" on page 17** for information on using the UniFi Controller software.

Note: A future feature will enable backup of the UniFi Controller database and configuration on the included microSD card.

Instructions for Other Web Browsers

1. Ensure that your host system is on the same Layer-2 network as the UniFi Cloud Key.

2. The UniFi Cloud Key is set to *DHCP* by default, so it will try to automatically obtain an IP address. Assign a specific IP address to the UniFi Cloud Key, or check the DHCP server for its IP address.

   > Note: The default fallback IP address of the UniFi Cloud Key is *192.168.1.30*.

3. Launch the web browser. In the address field, type **https://** followed by the appropriate IP address. Press **enter** (PC) or **return** (Mac).

   `◄ ► 🌐 https://<IP_address>`

4. Click **Manage** to run the UniFi Setup Wizard.

   > Note: You can click *Configure* to change the settings of the UniFi Cloud Key (refer to **"UniFi Cloud Key Configuration" on page 8** for more information). The default login is *ubnt/ubnt* or *root/ubnt*.

5. The *UniFi Setup Wizard* screen appears. Alternatively, you can click **restore from a previous backup** to use a file that contains your backup settings. Click **Next**.
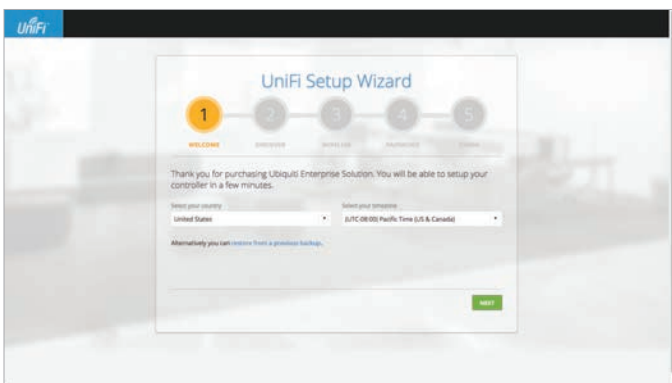
   > Note: U.S. product versions are locked to the U.S. Country Code to ensure compliance with FCC regulations.

6. Select the devices that you want to configure and click **Next**.
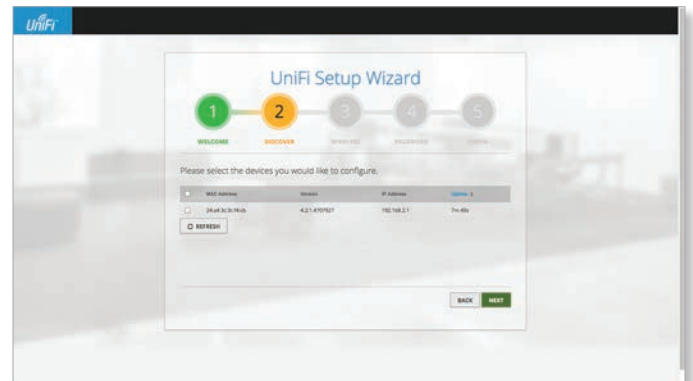
7. The UniFi Setup Wizard will create a secure primary wireless network for your devices. Perform the following steps:

   a. Enter the wireless network name (SSID) in the *Secure SSID* field.

   b. Enter a passphrase to be used for your primary network in the *Security Key* field.

   c. To enable guest access, select **Enable Guest Access**, and enter a guest network name in the *Guest SSID* field.

   d. Click **Next**.

8. Enter an admin name in the *Admin Name* field and password in the *Password* field to use when accessing the management interface as a super admin. Confirm your password in the *Confirm Password* field. Click **Next**.

📋 Note: Only the super admin – not any site admin – can view devices that are *Pending Approval* and then adopt them on the UniFi Controller. Ensure that you save the super admin login information for future use.

9. Review your settings. Click **Finish** to save your settings or click *Back* to make changes. Once the wizard is finished, the browser will be redirected to the management interface.

Congratulations, your wireless network is now configured.

A login screen will appear for the UniFi Controller management interface. Enter the admin name and password that you created and click **Login**.

Proceed to **"Using the UniFi Controller Software" on page 17** for information on using the UniFi Controller software.

📋 Note: A future feature will enable backup of the UniFi Controller database and configuration on the included microSD card.

UniFi Cloud Key Configuration

Login Instructions

1. Ensure that your host system is on the same Layer-2 network as the UniFi Cloud Key.

2. The UniFi Cloud Key is set to *DHCP* by default, so it will try to automatically obtain an IP address. Assign a specific IP address to the UniFi Cloud Key, or check the DHCP server for its IP address.

📋 Note: The default fallback IP address of the UniFi Cloud Key is *192.168.1.30*.

3. Launch the web browser. In the address field, type **https://** followed by the appropriate IP address. Press **enter** (PC) or **return** (Mac).
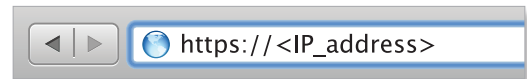

4. You have two options:
   - **Manage** Click **Manage** to access the UniFi Controller. Proceed to **"Using the UniFi Controller Software" on page 17** for more information.
   - **Configure** Click **Configure** to change the settings of the UniFi Cloud Key.

5. After you click *Configure*, enter the *Username* and *Password* (the default login is *ubnt/ubnt*). Then click **Login**.

The *Main* screen will appear.

Navigation Bar

The UniFi Cloud Key configuration consists of three primary pages:

-
-
-
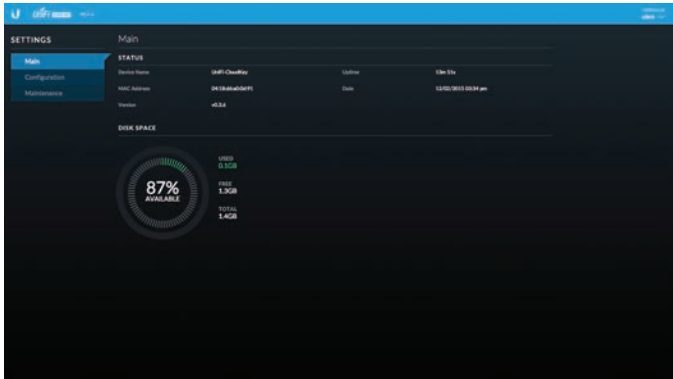
Username

At the top right of each screen, click the *Username* to display the *Change Password* and *Logout* options:
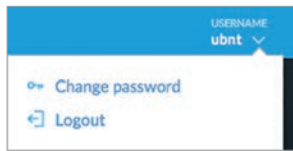
Change password To change the password, click Change password . The *Change Password* screen will appear:

- **Old password** Enter the current password (the default is *ubnt*).
- **New password** Enter the new password.
- **Confirm Password** Enter the new password again.
- **Submit** Click **Submit** to apply changes.
- **Cancel** Click *Cancel* to discard changes.

Logout To manually sign out of the UniFi Cloud Key configuration, click Logout .

Main

The *Main* screen displays basic status information about the UniFi Cloud Key.
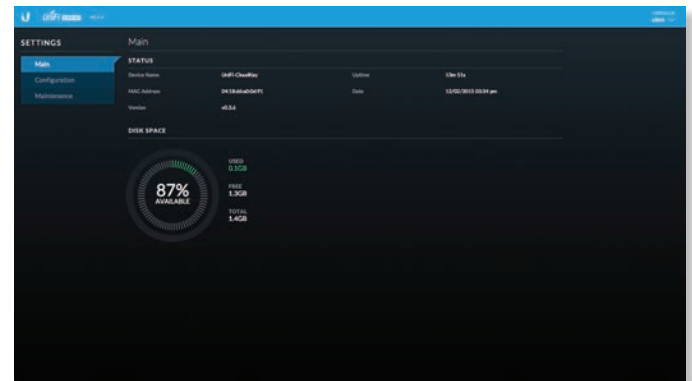
Status

Device Name Displays the hostname or alias of the UniFi Cloud Key.

MAC Address Displays the MAC address or hardware identifier of the UniFi Cloud Key.

Version Displays the version number of the UniFi Cloud Key firmware.

Uptime Displays the duration of time the UniFi Cloud Key has been running.

Date Displays the current date and time.

Disk Space

Available Displays the percentage of available disk space.

Used Displays the amount of used disk space.

Free Displays the amount of available disk space.

Total Displays the total amount of disk space.

Configuration

The *Configuration* screen allows you to configure the basic and network settings of the UniFi Cloud Key.
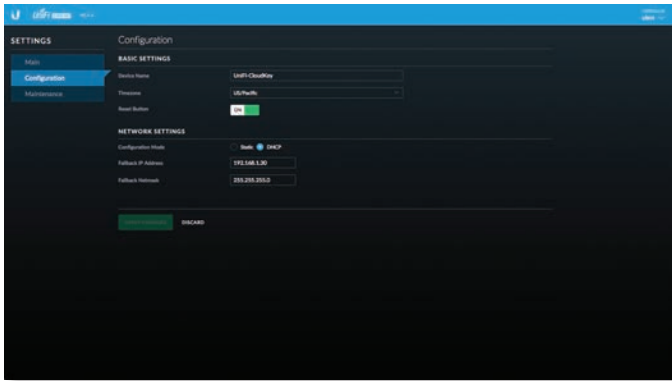
Basic Settings

Device Name Enter a descriptive name or identifier for the UniFi Cloud Key. Also known as a host name.

Time Zone Select the appropriate time zone.

Reset Button Use of the hardware *Reset* button on the UniFi Cloud Key is enabled by default. To prevent an accidental reset to default settings, click to toggle *Off*.

Network Settings

Configuration Mode Select the Internet connection type for your service: **Static** or **DHCP**.

- **Static** The service provider assigns fixed network settings to your service for manual entry. Enter the following information:
  - **IP address** Enter the Internet IP address of the UniFi Cloud Key.
  - **Netmask** Enter the subnet mask of the UniFi Cloud Key.
  - **Gateway** Enter the IP address of the network's gateway router.
  - **Primary DNS** Enter the IP address of the network's primary DNS server.
  - **Secondary DNS** Enter the IP address of the network's secondary DNS server.
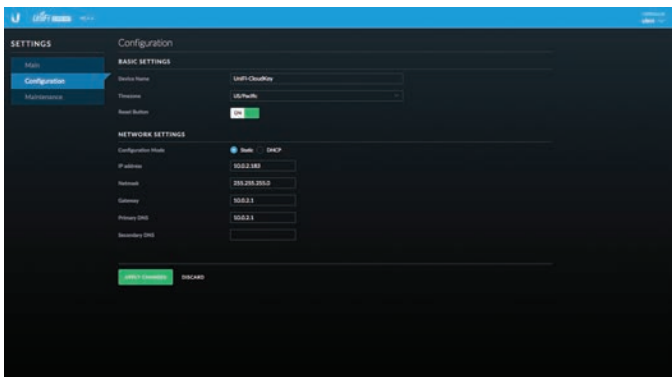
- **DHCP** The use of the Dynamic Host Configuration Protocol (DHCP) is the default. The UniFi Cloud Key automatically acquires network settings from the network's DHCP server.
  - **Fallback IP Address** Enter the IP address for the UniFi Cloud Key to use if an external DHCP server is not found.
  - **Fallback Netmask** Enter the netmask for the UniFi Cloud Key to use if an external DHCP server is not found.
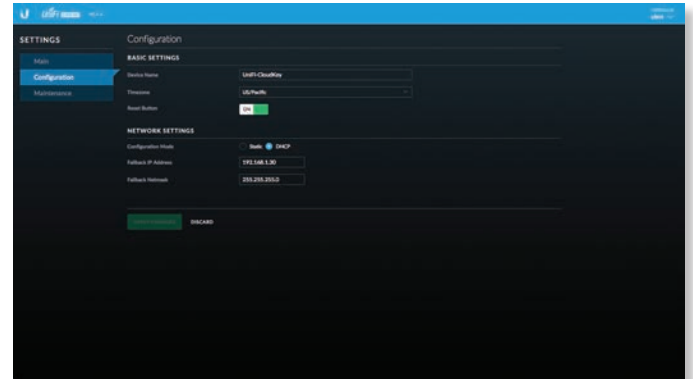
Apply Changes Click **Apply Changes** to save changes.

Discard Click *Discard* to cancel changes.

Maintenance

The *Maintenance* screen contains administrative options, so you can change the password, reboot the UniFi Cloud Key, power it off, reset it to factory defaults, upgrade the UniFi Cloud Key firmware, or upgrade the UniFi Controller software.
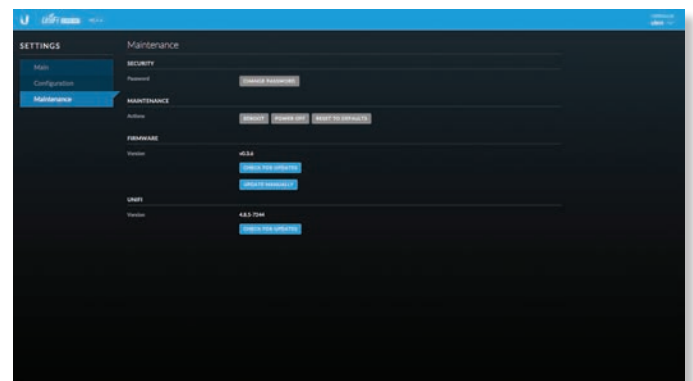
Security

Password To change the password, click **Change Password**. The *Change Password* screen will appear:

- **Old password** Enter the current password (the default is *ubnt*).
- **New password** Enter the new password.
- **Confirm Password** Enter the new password again.
- **Submit** Click **Submit** to apply changes.
- **Cancel** Click *Cancel* to discard changes.

Maintenance

Reboot Click **Reboot** to powercycle the UniFi Cloud Key.

Power Off Click **Power Off** to turn off the UniFi Cloud Key.

Reset to Defaults Click **Reset to Defaults** to reset the UniFi Cloud Key to its factory default settings. This option will reboot the UniFi Cloud Key, and all factory default settings will be restored.

> Note: We recommend that you back up your UniFi Controller configuration (refer to **"Backup" on page 31** for more information) before resetting the UniFi Cloud Key to its defaults.

Firmware

Version Displays the version number of the UniFi Cloud Key firmware.

Check for Updates Click **Check for Updates** to see if there is a newer firmware version. If there is, then you can follow the on-screen instructions to upgrade now.

Update Manually Click **Update Manually** to update the firmware. The *Please Confirm Update* screen will appear.

You have two options:

- **upload file** If you have the firmware saved in a specific location, then click **Select File** to browse for the file.

- **get file from URL** If you know the URL of the firmware's location, then enter it in the *URL* field.

- **Update** Click **Update** to proceed with the update.
- **Cancel** Click *Cancel* to skip the update.

> Note: Updating the UniFi Cloud Key firmware will also update the UniFi Controller software. We recommend that you back up your UniFi Controller configuration (refer to **"Backup" on page 31** for more information) before updating the UniFi Cloud Key firmware.

UniFi

Version Displays the version number of the UniFi Controller software.

Check for Updates Click **Check for Updates** to see if there is a newer software version. If there is, then you can follow the on-screen instructions to upgrade now.

> Note: We recommend that you back up your UniFi Controller configuration (refer to **"Backup" on page 31** for more information) before upgrading.

UniFi Cloud Account

You must be a super admin for initial cloud management. Once cloud access is enabled by the super admin, then any other admin can also enable cloud access.

> **Note:** The cloud account is also known as the Single Sign-On (SSO) account.

Login Instructions

1. Launch the Chrome web browser and type **https://** followed by the appropriate *Controller Hostname/IP* address as specified in **"Settings > Controller" on page 30**. Press **enter** (PC) or **return** (Mac).

https://unifi.yourdomain.com
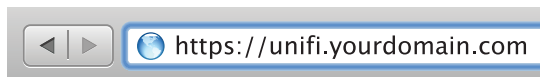
2. Enter the username and password for your UBNT account. Click **Sign In**.

> **Note:** If you do not have an account, click **Register** and follow the on-screen instructions.

A list of UniFi Controllers will appear.
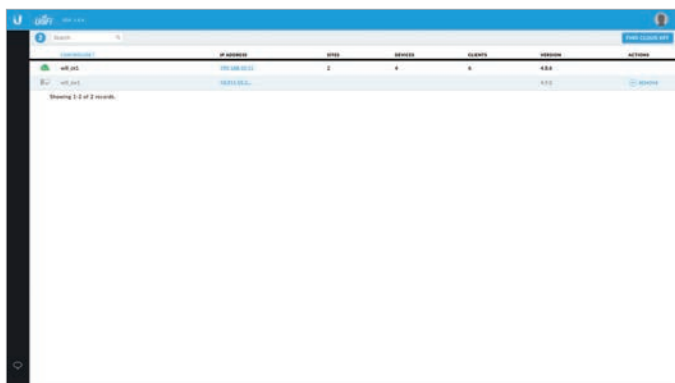
Displays the number of UniFi Controllers.

Search 🔍 Enter the text you want to search for. Simply begin typing; there is no need to press **Enter**.

You can click any of the column headers to change the list order.

(icon) Displays the icon corresponding to the device running the UniFi Controller. Green indicates an active UniFi Controller. Gray indicates an inactive UniFi Controller.

☁️ UniFi Cloud Key

🖥️ Computer

Controller Displays the hostname, alias, or MAC address of the device running the UniFi Controller. You can click the name to get additional details at the bottom of the screen. (Go to **"Additional Details" on page 13** for more information.)

IP Address Displays the IP address of the device running the UniFi Controller.

Sites Displays the total number of sites managed by the UniFi Controller.

Devices Displays the total number of devices managed by the UniFi Controller.

Clients Displays the total number of clients on the sites managed by the UniFi Controller.

Version Displays the software version number of your UniFi Controller.

Actions Click a button to perform the desired action:

• **Remove** Click ⊖ REMOVE to remove the UniFi Controller from your cloud account.

Chat At the lower left of the screen, click 💬 to open a window for online chat support.

Admin

At the top right of the screen, click 👤 to display the *My Account* and *Sign Out* options:
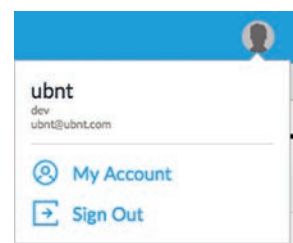
My Account To change your account settings and/or password, click ⊗ My Account . The *Account Settings* screen will appear:
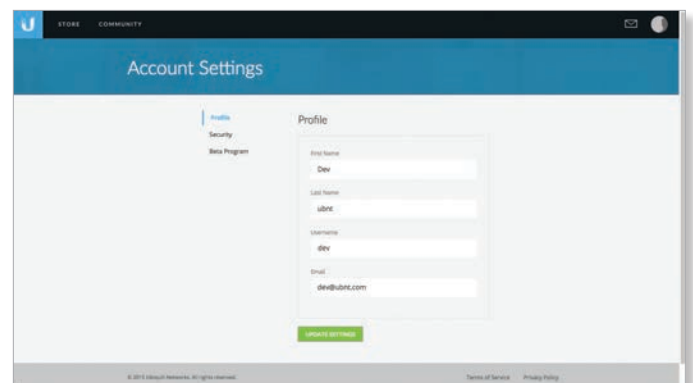
There are three pages available:

- **Profile** Access your account settings:
  - **First Name** Enter your first name.
  - **Last Name** Enter your last name.
  - **Username** Enter your login username.
  - **Email** Enter the email address of your cloud account.
  - **Update Settings** Click to apply your changes.
- **Security** Change your account password:
  - **Create a New Password** Enter a new password with at least eight characters.
  - **Update Settings** Click to apply your changes.
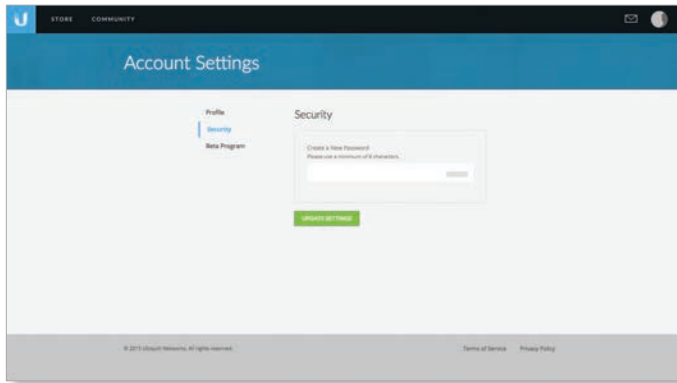
- **Beta Program** Follow the on-screen instructions if you want to join the beta program.

Sign Out To manually sign out of the cloud account, click
⬚ Sign Out .

Find Cloud Key

To add a UniFi Cloud Key, click **Find Cloud Key** at the top right of the screen. The *Find Cloud Key* screen will appear:
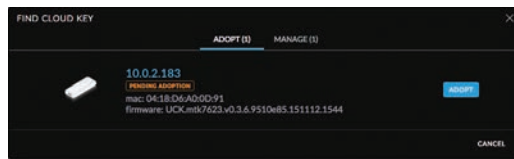
Adopt

IP address Displays the IP address of the UniFi Cloud Key.

(status) Displays the status information: *Pending Adoption*.

mac Displays the MAC address or hardware identifier of the UniFi Cloud Key.

firmware Displays the firmware version number of the UniFi Cloud Key.

Adopt Click to adopt the UniFi Cloud Key. Refer to step 8 of **"Chrome Instructions" on page 5** for more information.

Cancel Click to exit this screen.

Manage
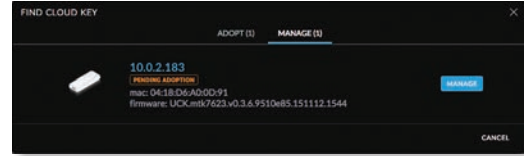
IP address Displays the IP address of the UniFi Cloud Key.

(status) Displays the status information: *Adopted* or *Pending Adoption*.

mac Displays the MAC address or hardware identifier of the UniFi Cloud Key.

firmware Displays the firmware version number of the UniFi Cloud Key.

Manage Click to configure the UniFi Cloud Key. Refer to **"UniFi Cloud Key Configuration" on page 8** for more information.

Cancel Click to exit this screen.

Additional Details

Select a UniFi Controller to display more information at the bottom of the screen.
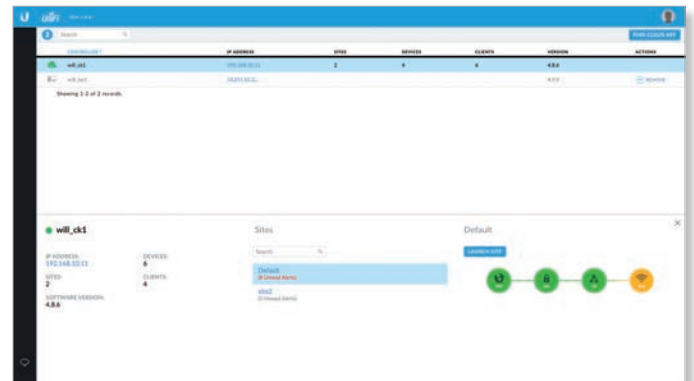
- **(icon)** Green indicates an active UniFi Controller. Gray indicates an inactive UniFi Controller.
- **(controller_name)** Displays the *Controller Hostname/IP* address as specified in **"Settings > Controller" on page 30**.
- **IP Address** Displays the IP address of the device running the UniFi Controller.
- **Sites** Displays the total number of sites managed by the UniFi Controller.
- **Software Version** Displays the software version number of your UniFi Controller.
- **Devices** Displays the total number of devices managed by the UniFi Controller.
- **Clients** Displays the total number of clients on the sites managed by the UniFi Controller.

Sites

- **Search** 🔍 Enter the text you want to search for. Simply begin typing; there is no need to press **Enter**.

- **(site_name)** Displays the name of the site. You can click the name to get additional details on the right.

- **(_ Unread Alerts)** Displays the number of unread alerts.

(site_name)

- **Launch Site** Click **Launch Site** to access the UniFi Controller. Proceed to **"Using the UniFi Controller Software" on page 17** for more information.

- **(map)** Displays a visual representation of your network's status. The status of each dashboard node is indicated by color:

  - **Green** Green indicates that the node is active and all devices are online.
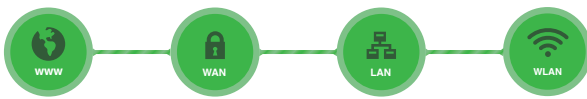
  - **Red** Red indicates one of the following:
    - **WWW** Internet connectivity is down.
    - **WAN** The UniFi Security Gateway is offline.
    - **LAN** One or more Switches are offline.
    - **WLAN** More than half of the APs are offline.
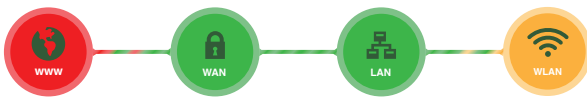
  - **Orange** Orange indicates that half or fewer than half of the APs are offline.

    Note: Orange is not applicable to the *WWW*, *WAN*, and *LAN* nodes.

  - **Gray** Gray indicates that there are no devices available for that node.

You can place the mouse over each node icon to display basic status information.

- **WWW** The basic details of the Internet connection are displayed.

GATEWAY	10.1.0.1
DNS	10.1.0.1 10.1.0.169
IP	10.1.0.143
UPTIME	19m 38s
LATENCY	3 ms
UP	171 B/s
DOWN	4.67 KB/s

  - **Gateway** Displays the IP address of the service provider's gateway.
  - **DNS** Displays the IP addresses of the Domain Name System (DNS) servers.
  - **IP** Displays the Internet IP address of the UniFi Security Gateway.
  - **Uptime** Displays the length of time the Internet connection has been active.
  - **Latency** Displays the amount of time it takes a packet to travel from the UniFi Security Gateway to the service provider's gateway.
  - **Up** Displays the upload rate of your Internet connection.
  - **Down** Displays the download rate of your Internet connection.

- **WAN** The basic details of the UniFi Security Gateway connection are displayed.

LAN IP	192.168.10.1
CLIENTS	4
UP	272 B/s
DOWN	6.00 KB/s

  - **LAN IP** Displays the local IP address of the UniFi Security Gateway.
  - **Clients** Displays the total number of local clients.
  - **Up** Displays the upload rate of the UniFi Security Gateway.
  - **Down** Displays the download rate of the UniFi Security Gateway.

- **LAN** The basic details of the wired network(s) are displayed.

- **Gateway** Displays the IP address of the service provider's gateway.
- **Users** Displays the number of clients connected to the wired network.
- **Guests** Displays the number of clients connected to the guest wired network.
- **Switches** Displays the number of UniFi Switches connected to the wired network.
- **Up** Displays the upload rate of the wired network(s).
- **Down** Displays the download rate of the wired network(s).

- **WLAN** The basic details of the wireless network(s) are displayed.

- **Users** Displays the number of clients connected to the primary wireless network(s).
- **Guests** Displays the number of clients connected to the guest wireless network(s).
- **APs** Displays the number of APs in the primary wireless network(s) and the number of APs in the guest wireless network(s).
- **Up** Displays the upload rate of the wireless network(s).
- **Down** Displays the download rate of the wireless network(s).

Chapter 3: Using the UniFi Controller Software

The UniFi Controller software has a browser-based interface for easy configuration and management.

To access the interface, perform the following steps:

1. Launch the UniFi Controller application if hasn't already been started.
   - Mac users: **Go > Applications > UniFi**
   - Windows users: **Start > All Programs > Ubiquiti UniFi**

2. The UniFi login screen will appear. Enter the username and password in the appropriate fields and click **Log In**.
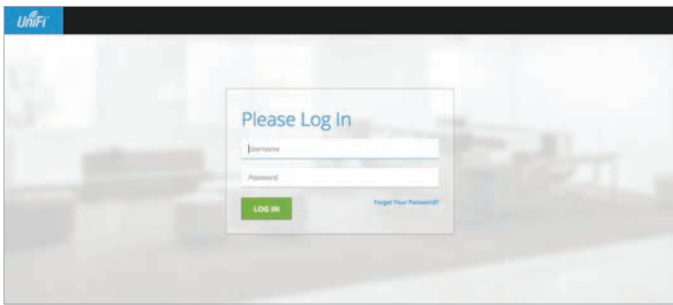
Navigation Bar

The UniFi software consists of six primary pages. This User Guide covers each page with a chapter. For details on a specific page, refer to the appropriate chapter.

"Dashboard" on page 33

"Map" on page 37

"Devices" on page 43

"Clients" on page 51

"Statistics" on page 55

"Insights" on page 59

Common Interface Options

The common interface options are accessible from all tabs in the UniFi interface.
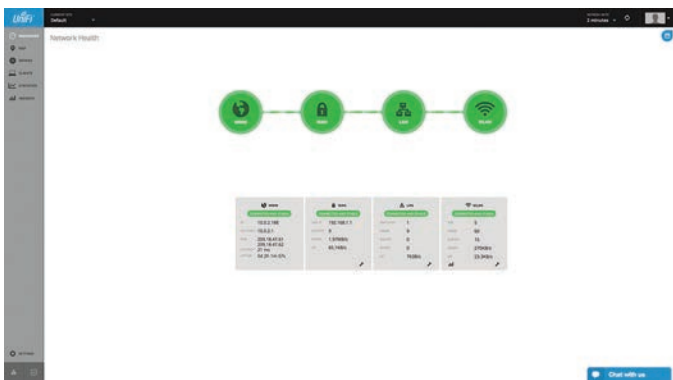
Refresh

Click the *refresh* icon to update the on-screen information. Select the refresh interval: **15 seconds**, **1 minute**, **2 minutes** (default), **5 minutes**, or **Never**.

Admin

At the top right of the screen, click to display the *Change Password* and *Sign Out* options:
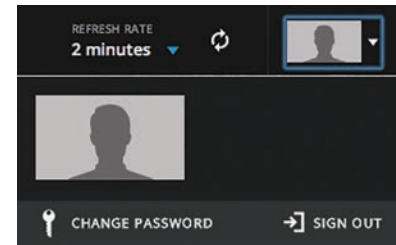
Change Password To change the login name and/or password, click CHANGE PASSWORD. The *Change My Password* screen will appear:

- **Admin** Enter the admin name.
- **Email** Enter the email address of the admin account.
- **Password** Enter the new password.
- **Confirm Password** Enter the new password again.
- **Save** Click ✓ SAVE to apply changes.
- **Cancel** Click × CANCEL to discard changes.

Sign Out To manually sign out of the UniFi Configuration Interface, click SIGN OUT.

Site

The UniFi Controller can manage multiple UniFi networks, which are called sites. Each site has its own configurations, maps, statistics, guest portals, and site administrator accounts. The multiple sites are logically separated, and the initial site is named *Default*.
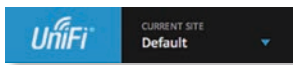
Current Site To create a new site, click the *drop-down* ▼ arrow to display the drop-down menu.

Click **Add Site**, and the *Add Site* screen will appear:
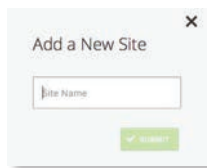
- **Site Name** Enter a name that describes the site. It will be used in the *Current Site* drop-down menu.
- **Submit** Click ✔ SUBMIT to save changes.

Properties

The *Properties* tab is hidden by default. To display it, click the *properties* 🔲 icon.

Information about each selected device appears as a popup within this tab. The information varies depending on the device type. For more information, see the appropriate chapter:

- **"UniFi Security Gateway Details" on page 67**
- **"UniFi Switch Details" on page 75**
- **"UniFi Access Point Details" on page 83**
- **"UniFi VoIP Phone Details" on page 95**
- **"Client Details" on page 97**

Controls and Live Chat

At the bottom left of the screen, there are three controls:

- ⚙ SETTINGS
- ⚠ *Alerts* (see **"Alerts" on page 32**)
- 📅 *Events* (see **"Events" on page 32**)
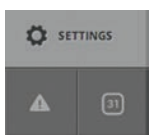
At the bottom right of the screen, there is the live chat tab. Click 💬 Chat with us to open a window for online chat support.

Settings

The ⚙ SETTINGS tab displays a list of available sub-tabs:

- **Site** Site-related settings.
- **Wireless Networks** Wireless network and group setup, including Zero Handoff Roaming.
- **Networks** Wired network setup.
- **Guest Control** Guest portal and policies.
- **Admins** Admin accounts and privileges.
- **User Groups** User group settings.
- **VoIP** VoIP setup.
- **Extensions** VoIP extension, group, and conference options.
- **Controller** Identity, discovery, and email server settings.
- **Cloud Access** Cloud login credentials.
- **Maintenance** System configuration backup, system configuration restore, and support files.

Settings > Site

Configure the site-specific settings. To switch sites, select a different site from the *Current Site* drop-down menu at the top of any screen.
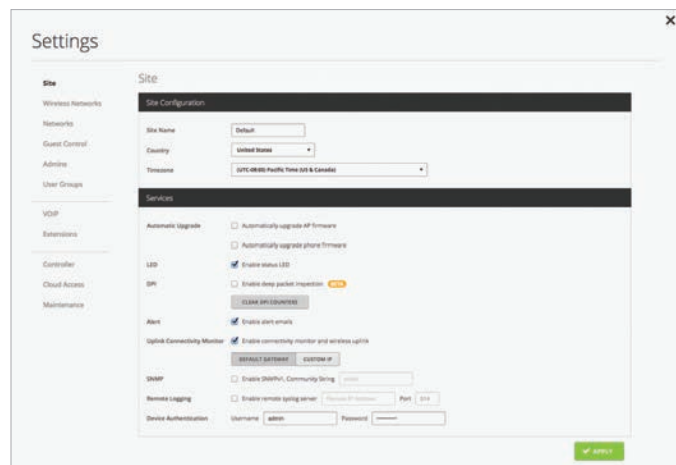
Site Configuration

Site Name Change the name of the site.

Country Select the appropriate country.

Time Zone Select the appropriate time zone.

Services

Automatic Upgrade When enabled, the following options will automatically upgrade your firmware when an update is available.

- **Automatically upgrade AP firmware** Select this option to automatically upgrade firmware on the APs.
- **Automatically upgrade phone firmware** Select this option to automatically upgrade firmware on the Phones.

LED When enabled, the LED on the UniFi device will light up. When disabled, the LED will turn off.

DPI (Beta) Deep Packet Inspection (DPI) is more advanced than conventional Stateful Packet Inspection (SPI) filtering for traffic analysis. Ubiquiti's proprietary DPI engine includes the latest application identification signatures to track which applications (and IP addresses) are using the most bandwidth.

• **Clear DPI Counters** Click to delete all collected DPI data. Click **Confirm** or *Cancel*.

Alert Select this option to enable alert emails, which will be sent to the email addresses of the administrators.

Uplink Connectivity Monitor It monitors the uplinks of the managed APs, either wired or wireless, by checking to see if the gateway/custom IP can be reached. The monitor and wireless uplink capability are enabled by default.

• **Default Gateway** Enabled by default. All managed APs will use the gateway of the AP that is providing IP information, either by *DHCP* or *Static* designation.

• **Custom IP** Click to specify an IP address.

 - **Uplink IP Address** All managed APs will use the IP address you enter.

SNMP Select this option to activate the SNMP (Simple Network Monitor Protocol) agent. SNMP is an application layer protocol that facilitates the exchange of management information between network devices. Network administrators use SNMP to monitor network-attached devices for issues that warrant attention.

• **Community String** Specify the SNMP community string. It is required to authenticate access to MIB (Management Information Base) objects and functions as an embedded password. The device supports a read-only community string; authorized management stations have read access to all the objects in the MIB except the community strings, but do not have write access. The device supports SNMP v1. The default is *public*.

Remote Logging Enable to define a remote syslog server.

• **Remote IP Address** Enter the IP address of the syslog server.

• **Port** Enter the port number of the syslog server. The default is *514*.

Device Authentication This option protects SSH access to the UniFi devices. All devices in the same site share the same SSH username and password. You can also make changes:

• **Username** Enter the new username.

• **Password** Enter the new password.

Apply Click ✓ APPLY to save changes.

Settings > Wireless Networks

Configure the wireless networks for each site. You can have up to four wireless network names or SSIDs per WLAN group.

WLAN Group The *Default* WLAN group is automatically created.

Add a New WLAN Group To add a new WLAN group, click the ⊞ button. Go to the *Add or Edit a WLAN Group* section.

Add or Edit a WLAN Group
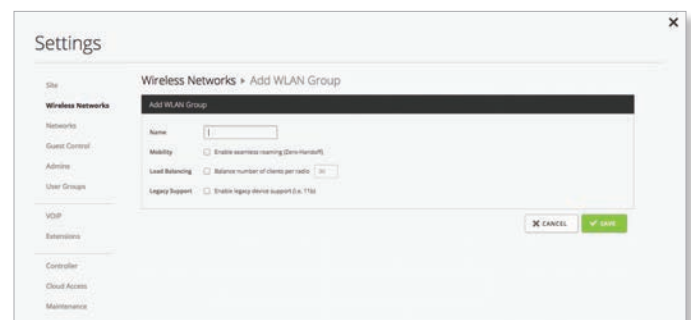
• **Name** Enter or edit a descriptive name for the WLAN group.

• **Mobility** To enable seamless roaming (Zero Handoff), select the checkbox.

> 📋 Note: The UAP-AC, UAP-AC-Outdoor, UAP-AC-LITE, UAP-AC-LR, UAP-AC-PRO, and UAP-AC-EDU do not support Zero Handoff Roaming.

When you enable this option, multiple Access Points (APs) act as an AP cluster, appearing as a single AP. The wireless client detects only one AP, so it seamlessly roams from AP to AP – there is no need to re-negotiate. The APs determine which AP has the best connection and should serve the client. They use multicasting to communicate so they must be wired in the same Layer 2 domain.

Zero Handoff Roaming does not support wireless uplinks and can only be used on a secured network. It is also not meant for all scenarios. For example, if there is too much load or interference, then Zero Handoff Roaming may not be appropriate for your scenario.
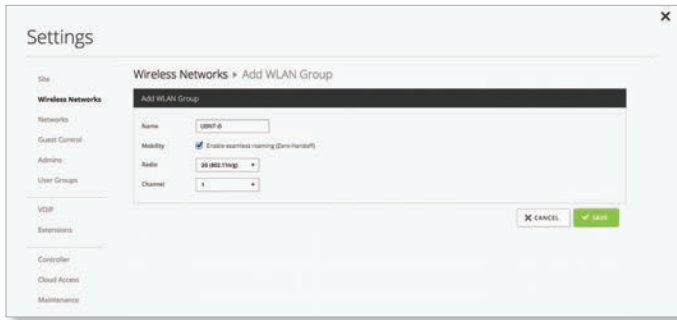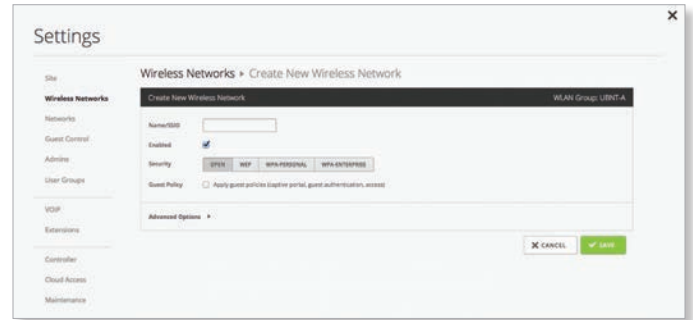
Configure the following options:

- **Radio** Select the appropriate radio, **2G** or **5G**.

- **Channel** Select the channel that all of the APs will use for Zero Handoff Roaming.

Load Balancing (Not available if you enabled the *Mobility* option.) Select this option to balance the number of clients you specify per radio. Then enter the number of clients in the field provided.

Legacy Support (Not available if you enabled the *Mobility* option.) By default, legacy devices, such as 802.11b devices, are excluded. Select this option if you want to support legacy devices.

Save Click ✓ SAVE to apply changes.

Cancel Click ✕ CANCEL to discard changes.

For each WLAN group, you have the following:

- **Remove a WLAN Group** To remove a WLAN group, select it from the drop-down menu, and then click the ⊟ button.

- **Options** To make changes, select the WLAN group from the drop-down menu, and then click ⚙ OPTIONS . Go to **"Add or Edit a WLAN Group" on page 19**.

Wireless Networks

Name Displays the wireless network name or SSID.

Security Displays the type of security being used on your wireless network.

Guest Network Indicates whether or not the network is a guest network.

Actions Click a button to perform the desired action:

- **Edit** Click 🖹 EDIT to make changes to the wireless network settings. Go to the *Create or Edit a Wireless Network* section in the next column.

- **Delete** Click 🗑 DELETE to remove the wireless network.

Create Wireless Network Click ⚙ CREATE WIRELESS NETWORK to add a wireless network. Go to the *Create or Edit a Wireless Network* section in the next column.

Create or Edit a Wireless Network

- **Name/SSID** Enter or edit the wireless network name or SSID.

- **Enabled** Select this option to make this network active.

- **Security** Select the type of security to use on your wireless network.

  - **Open** This option is typically only used on the guest network. When enabled, wireless network access is open to anyone without requiring a password.

  - **WEP** WEP (Wired Equivalent Privacy) is the oldest and least secure security algorithm. WPA™ security methods should be used when possible.
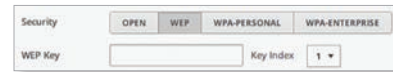
  - **WEP Key** Enter a WEP encryption key in hexadecimal format. You can enter a 64-bit or 128-bit key:

Type	Hex
64-bit	10 Hexadecimal Characters (0-9, A-F, or a-f) Example: **00112233AA** Note: You can use 5 printable characters, which will be translated to the corresponding HEX code.
128-bit	26 Hexadecimal Characters (0-9, A-F, or a-f) Example: **00112233445566778899AABBCC** Note: You can use 13 printable characters, which will be translated to the corresponding HEX code.

  - **Key Index** Specify which Index of the WEP Key to use. Four different WEP keys can be configured at the same time, but only one is used. Select the effective key: **1**, **2**, **3**, or **4**.

  - **WPA-Personal** WPA or Wi-Fi Protected Access was developed as an encryption method stronger than WEP. WPA-Personal requires a passphrase to connect to the wireless network.

  - **Security Key** Enter the passphrase that users will use to connect to the wireless network.

- **WPA-Enterprise** WPA Enterprise uses a RADIUS server to authenticate users on the wireless network.

- **RADIUS Auth Server**   Provide the following information about the RADIUS authentication server:
  - **IP Address** Enter the IP address.
  - **Port** Enter the port number. The default is *1812*.
  - **Password** Enter the password.
  - **Delete** Click the *delete* × icon to remove this authentication server.
  - **Add Auth Server** If you have another authentication server, click this option and complete the *IP Address*, *Port*, and *Password* fields.
- **RADIUS Accounting Server**   Provide the following information about the RADIUS server:
  - **IP Address** Enter the IP address.
  - **Port** Enter the port number. The default is *1813*.
  - **Password** Enter the password.
  - **Delete** Click the *delete* × icon to remove this accounting server.
  - **Add Acct Server** If you have another accounting server, click this option and complete the *IP Address*, *Port*, and *Password* fields.
- **Guest Policy** Select this option to enable guest access policies on this wireless network.

Advanced Options
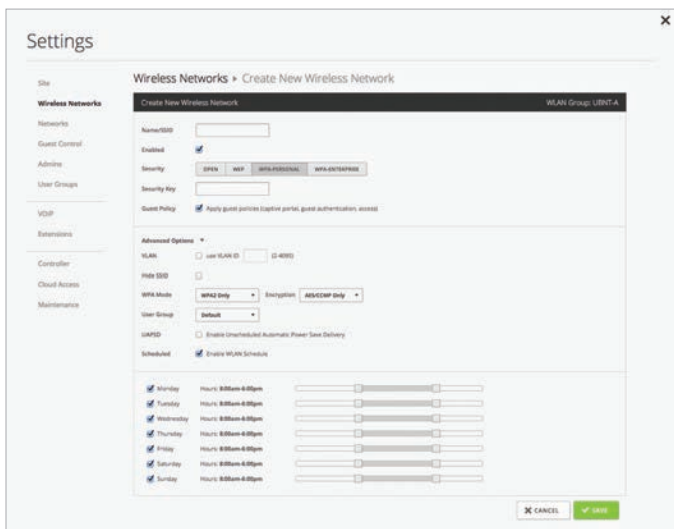
- **VLAN** To use a VLAN, select **Use VLAN ID** and enter the VLAN ID number.

- **Hide SSID** Select this option if you don't want the wireless network name or SSID to be broadcast.
- **WPA Mode** (Available if WPA security is enabled.) Select the appropriate WPA method: **Both**, **WPA1 Only**, or **WPA2 Only** (default).
- **Encryption** Select the appropriate encryption method: **Auto**, **TKIP Only**, or **AES/CCMP Only** (default).
- **User Group** Assign wireless users to a specific user group. For more information about user groups, see **"Settings > User Groups" on page 28**.
- **UAPSD** Disabled by default. Unscheduled Automatic Power Save Delivery. Select this option to enable the power save mode of Wi-Fi devices.
- **Scheduled** Select **Enable WLAN Schedule** to restrict wireless access to the schedule you set.
  - **Monday-Sunday** Select the days you want to schedule.
  - **Hours** Use the sliders to select the start and end times of the day's wireless access.
- **Save** Click ✔ SAVE to apply changes.
- **Cancel** Click × CANCEL to discard changes.

Settings > Networks

Configure the networks for each site.
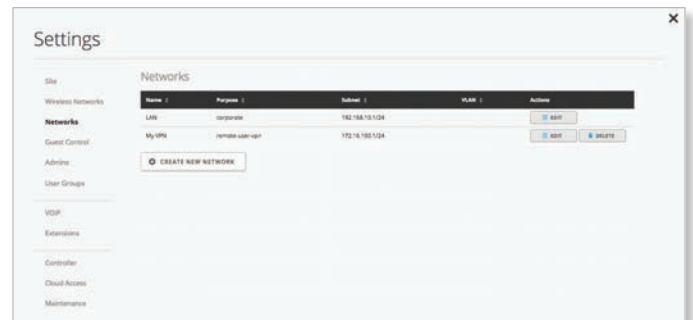
Networks

Name Displays the network name.

Purpose Displays a description of this network.

Subnet Displays the IP address and prefix size.

VLAN Displays the VLAN ID, if applicable.

Actions Click a button to perform the desired action:

- **Edit** Click 🖉 EDIT to make changes to the network settings. Go to **"Create or Edit a Network" on page 22**.
- **Delete** (Not available for the default network.) Click 🗑 DELETE to remove the network.

Create New Network Click ⚙ CREATE NEW NETWORK to add a network. Go to **"Create or Edit a Network" on page 22**.

Create or Edit a Network

- **Name** Enter or edit the network name.
- **Purpose** Select the most appropriate description: **Corporate**, **Guest**, **Remote User VPN**, **Site-to-Site VPN**, **Voice**, or **VLAN Only**. Then follow the instructions for your selection:

Corporate or Guest Network

- **IP/Subnet** Enter the IP address and prefix size.
- **VLAN** (Not available for the default *Corporate* network, *LAN*.) Enter the VLAN ID.
- **IGMP Snooping** Select this option to monitor IGMP (Internet Group Management Protocol) traffic and thereby manage multicast traffic.
- **DHCP Server** Enabled by default. The local DHCP server assigns IP addresses to DHCP clients on the network.
- **DHCP Range** Enter the starting and ending IP addresses of the range in the fields provided.
- **DHCP Name Server** Configure the name or DNS (Domain Name System) server setting.
  - **Auto** Enabled by default. Name servers are automatically assigned by the DHCP server.
  - **Manual** Select this option to manually select name servers.
    - **Name Server 1/2** Enter the IP address of the name server in each field.

- **DHCP WINS Server** Select this option to designate WINS (Windows Internet Naming Service) server(s).
  - **WINS Server 1/2** Enter the IP address of the WINS server in each field.
- **DHCP Lease Time** The IP addresses assigned by the DHCP server are valid only for the duration specified by the lease time. Increasing the time ensures client operation without interruption, but could introduce potential conflicts. Decreasing the lease time avoids potential address conflicts, but might cause more slight interruptions to the client while it acquires a new IP address from the DHCP server. Enter the number of seconds.
- **DHCP Guarding** Disabled by default. Select this option to detect and block unauthorized DHCP servers.
  - **Trusted DHCP Server IP** Enter the IP address of the trusted DHCP server.
- **Save** Click ✔ SAVE to apply changes.
- **Cancel** Click ✕ CANCEL to discard changes.

Remote User VPN

- **IP/Subnet** Enter the IP address and prefix size.
- **IP Pool** The starting and ending IP addresses of the pool automatically appear after you complete the IP/Subnet field.
- **Name Server** Configure the name or DNS (Domain Name System) server setting.
  - **Auto** Enabled by default. Name servers are automatically assigned by the DHCP server.
  - **Manual** Select this option to manually select name servers.
    - **Name Server 1/2** Enter the IP address of the name server in each field.
- **WINS Server** Select this option to designate WINS (Windows Internet Naming Service) server(s).
  - **WINS Server 1/2** Enter the IP address of the WINS server in each field.
- **RADIUS IP** Enter the IP address of the RADIUS server, which is used for authentication.
- **RADIUS Password** Enter the password of the RADIUS server.

- **Site-to-Site VPN** Enabled by default. The remote user can access the site's resources as well as the resources of any other VPNs connected to the site. If you disable this option, then the remote user can only access the site's resources.

- **Save** Click ✓ SAVE to apply changes.

- **Cancel** Click ✕ CANCEL to discard changes.

Site-to-Site VPN
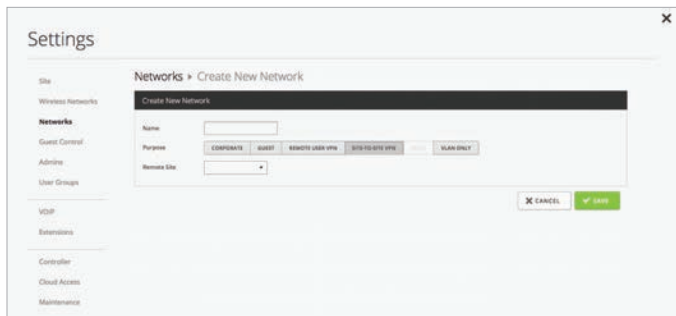
- **Remote Site** Select the appropriate site from the drop-down list.

> 📋 Note: If you have admin privileges for the local and remote sites, then you can view and select sites.

- **Save** Click ✓ SAVE to apply changes.

- **Cancel** Click ✕ CANCEL to discard changes.

Voice
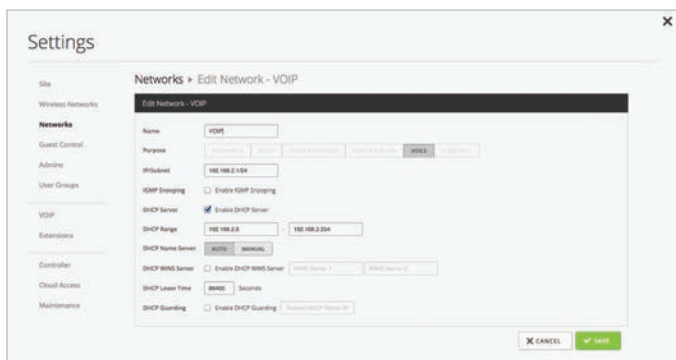
If you enable VoIP, then the UniFi Controller automatically creates a *Voice* network; otherwise this network option is not available.

- **IP/Subnet** Enter the IP address and prefix size.

- **IGMP Snooping** Select this option to monitor IGMP (Internet Group Management Protocol) traffic and thereby manage multicast traffic.

- **DHCP Server** Enabled by default. The local DHCP server assigns IP addresses to DHCP clients on the network.

- **DHCP Range** Enter the starting and ending IP addresses of the range in the fields provided.

- **DHCP Name Server** Configure the name or DNS (Domain Name System) server setting.

  - **Auto** Enabled by default. Name servers are automatically assigned by the DHCP server.

  - **Manual** Select this option to manually select name servers.

    - **Name Server 1/2** Enter the IP address of the name server in each field.

- **DHCP WINS Server** Select this option to designate WINS (Windows Internet Naming Service) server(s).

  - **WINS Server 1/2** Enter the IP address of the WINS server in each field.

- **DHCP Lease Time** The IP addresses assigned by the DHCP server are valid only for the duration specified by the lease time. Increasing the time ensures client operation without interruption, but could introduce potential conflicts. Decreasing the lease time avoids potential address conflicts, but might cause more slight interruptions to the client while it acquires a new IP address from the DHCP server. Enter the number of seconds.

- **DHCP Guarding** Select this option to detect and block unauthorized DHCP servers.

  - **Trusted DHCP Server IP** Enter the IP address of the trusted DHCP server.

- **Save** Click ✓ SAVE to apply changes.

- **Cancel** Click ✕ CANCEL to discard changes.

VLAN Only
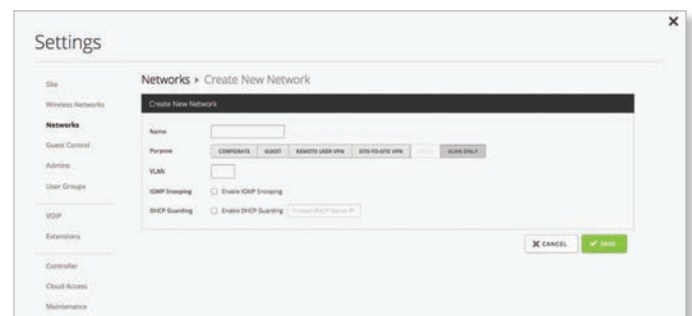
- **VLAN** Enter the ID number of the VLAN. Devices belonging to the same VLAN communicate as if they were attached to the same wire. Every VLAN ID represents a different VLAN. The VLAN ID range is 2 to 4009.

- **IGMP Snooping** Select this option to monitor IGMP (Internet Group Management Protocol) traffic and thereby manage multicast traffic.

- **DHCP Guarding** Select this option to detect and block unauthorized DHCP servers.

  - **Trusted DHCP Server IP** Enter the IP address of the trusted DHCP server.

- **Save** Click ✓ SAVE to apply changes.

- **Cancel** Click ✕ CANCEL to discard changes.

Settings > Guest Control

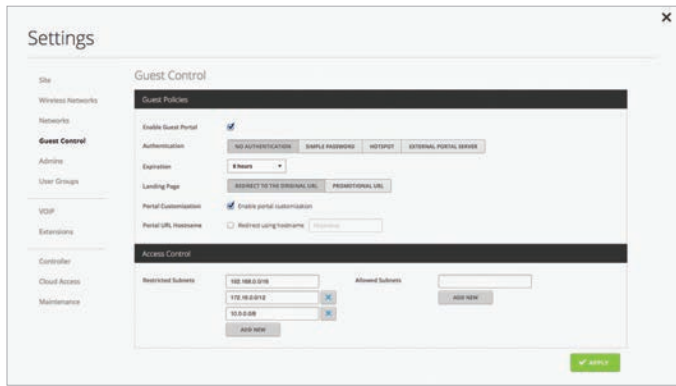The *Guest Control* screen displays the following sections:

- *Guest Policies* (see below)
- **"Hotspot" on page 25** (for *Hotspot* authentication)
- **"Access Control" on page 27**
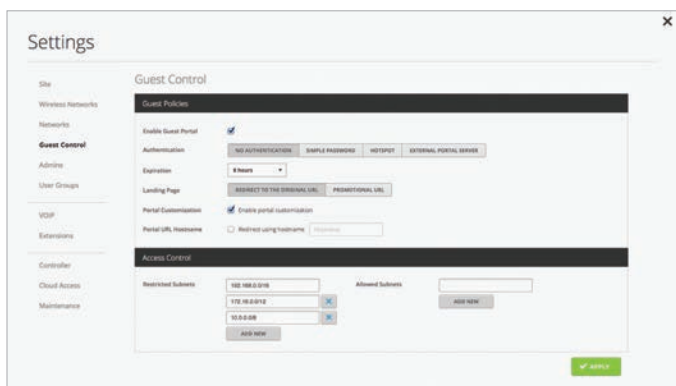

Guest Policies

Enable Guest Portal Disabled by default. When disabled, guests can access the Internet without entering a password or accepting the Terms of Use. When this option is enabled, you can control the *Guest Portal*.

Authentication When the *Guest Portal* is enabled, the authentication options will appear:

- **"Authentication > No Authentication" on page 24**
- **"Authentication > Simple Password" on page 24**
- **"Authentication > Hotspot" on page 25**
- **"Authentication > External Portal Server" on page 27**

Authentication > No Authentication

Select this option if guests are not required to log in, but must accept the Terms of Use. You must also select **Enable Guest Portal** under *Settings > Guest Control* to enforce selection of the Terms of Use by the guest. See **"Guest Policy" on page 21** for more information.

Expiration Specify the guest login expiration after a designated period of time: *8 hours*, *24 hours, 2 days, 3 days*, *4 days*, *7 days*, or *User-defined*, which can be designated in *minutes*, *hours*, and *days*.

Landing Page After accepting the Terms of Use, guests are redirected to the landing page. Select one of the following options:

- **Redirect to the original URL** After accepting the Terms of Use, guests are directed to the URL they requested.
- **Promotional URL** After accepting the Terms of Use, guests are redirected to the URL that you specify. Ensure that the URL begins with **http://**.
  Example: http://www.ubnt.com

Portal Customization Select this option to have customized portal pages appear in place of the default login pages. See **"Portal Customization" on page 107** for details on setting up custom portal pages.

Portal URL Hostname Select this option to enter and use a hostname for the portal URL in place of the default IP address. Paired with an SSL certificate, this ensures that site certificates are displayed as trusted in the guest browser. Example: www.ubnt.com

When logging in with *No authentication*, guests will be required to accept the Terms of Use before gaining access to the Internet.
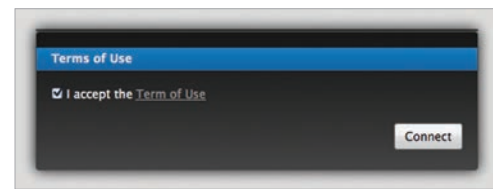
Authentication > Simple Password

Select this option if guests are required to enter a simple password and accept the Terms of Use. You must also select **Enable Guest Portal** under *Settings > Guest Control* to enforce password entry and selection of the Terms of Use by the guest. See **"Guest Policy" on page 21** for more information.
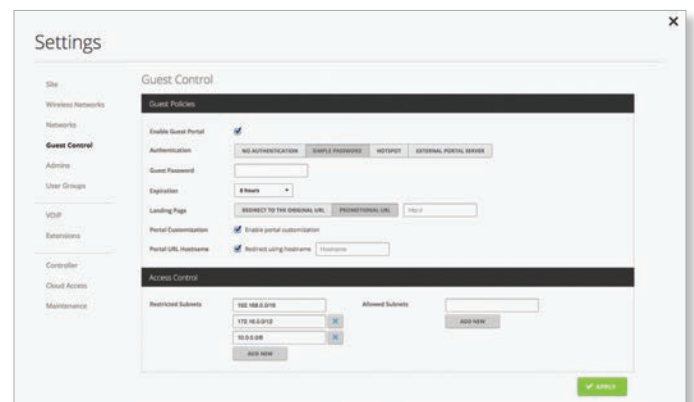
Guest Password Enter a password that guests must enter before accepting the Terms of Use and connecting to the Internet.

Expiration Specify the guest login expiration after a designated period of time: *8 hours*, *24 hours, 2 days, 3 days*, *4 days*, *7 days*, or *User-defined*, which can be designated in *minutes*, *hours*, and *days*.

Landing Page After accepting the Terms of Use, guests are redirected to the landing page. Select one of the following options:

- **Redirect to the original URL** After accepting the Terms of Use, guests are directed to the URL they requested.
- **Promotional URL** After accepting the Terms of Use, guests are redirected to the URL that you specify. Ensure that the URL begins with **http://**
Example: http://www.ubnt.com

Portal Customization Select this option to have customized portal pages appear in place of the default login pages. See **"Portal Customization" on page 107** for details on setting up custom portal pages.

Portal URL Hostname Select this option to enter and use a hostname for the portal URL in place of the default IP address. Paired with an SSL certificate, this ensures that site certificates are displayed as trusted in the guest browser. Example: www.ubnt.com

When logging in with *Simple Password* authentication, guests will be required to enter the *Guest Password* and accept the Terms of Use before gaining access to the Internet.
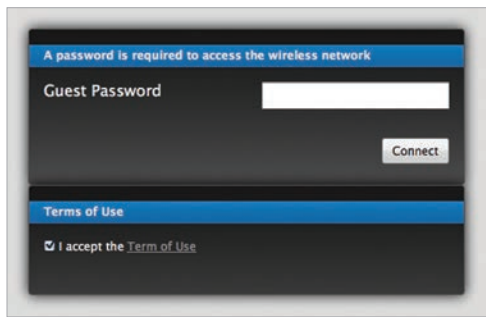
Authentication > Hotspot

Select this option to enable *Hotspot* functionality, including the ability to customize portal login pages and bill customers using major credit cards or other supported methods. You must also select **Enable Guest Portal** under *Settings > Guest Control* to enforce voucher entry, payment, and selection of the Terms of Use by the guest. See **"Guest Policy" on page 21** for more information.

Hotspot

When *Hotspot* authentication is selected, the *Hotspot* section is displayed.
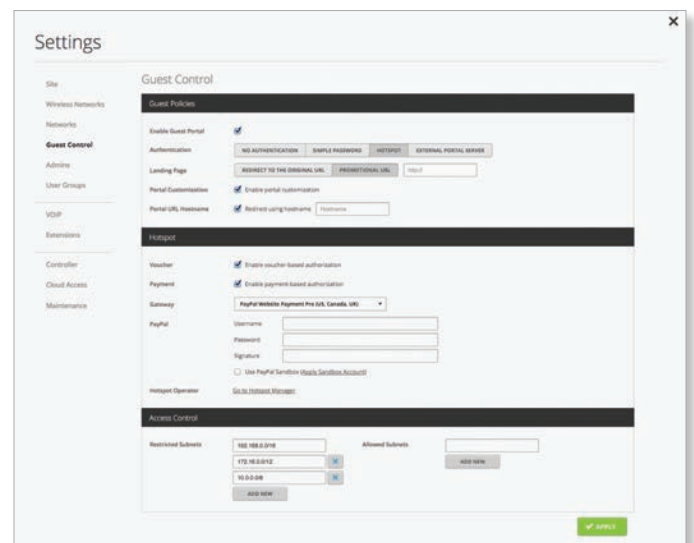
Select the **Voucher** or **Payment** method of authorization:

- **Voucher** Use Hotspot Manager to create vouchers (including distributable code, duration values, and use restrictions). See **"Hotspot Manager" on page 103**.
- **Payment** Set up payment-based authentication. If you select this option, then the *Gateway* option will appear.
- **Gateway** (Available only for payment-based authentication.) You have multiple options:
  - **PayPal™ Website Payment Pro (US, Canada, UK)** Use your **PayPal Website Payments Pro** account. To manage payments and transactions, use Hotspot Manager and see **"Hotspot Manager" on page 103**.

Enter the PayPal account details:

- **Username** Enter the corresponding *Username.*
- **Password** Enter the corresponding *Password*.
- **Signature** Enter the corresponding *Signature* for the PayPal account that will receive payments.
- **Use PayPal Sandbox** For PayPal testing purposes, select this option. Then click **Apply Sandbox Account** to set up or access your **PayPal Sandbox Test Environment**.

- **Stripe (US, Canada)** Use your **Stripe** account. To manage payments and transactions, use Hotspot Manager and see **"Hotspot Manager" on page 103**.

Enter the Stripe account detail:

- **API Key** Enter the live secret API key.

 Note: We recommend that you perform a test transaction with the test secret API key first before using the live secret API key.

- **Quickpay (Europe)** Use your **Quickpay** account. To manage payments and transactions, use Hotspot Manager and see **"Hotspot Manager" on page 103**.

Enter the Quickpay account details:

- **Merchant ID** Enter the ID for your merchant account.
- **MD5 Secret** Enter the MD5 secret key.

- **Authorize.Net® (US, Canada)** Use your **Authorize.Net** account. To manage payments and transactions, use Hotspot Manager and see **"Hotspot Manager" on page 103**.

Enter the Authorize.Net account details:

- **API Login ID** Enter the API login ID used to identify yourself as an authorized user.
- **Transaction Key** Enter the key used to authenticate transactions.
- **Use Test Account** For Authorize.Net testing purposes, select this option. Then click **Apply Test Account** to set up or access your **Authorize.Net test account**.

- **Merchant Warrior (Australia, New Zealand)** Use your **Merchant Warrior** account. To manage payments and transactions, use Hotspot Manager and see **"Hotspot Manager" on page 103**.

Enter the Merchant Warrior account details:

- **Merchant UUID** Enter the ID for your merchant account.
- **API Key** Enter the API key.
- **API Passphrase** Enter the API passphrase.
- **Use Test Account** For Merchant Warrior testing purposes, select this option. Then click **Apply Test Account** to set up or access your **Merchant Warrior test account**.

- **IPpay™ (US, Canada)** Use your **IPpay** account. To manage payments and transactions, use Hotspot Manager and see **"Hotspot Manager" on page 103**.

Enter the IPpay account details:

- **Terminal ID** Enter the terminal number for your merchant account.
- **Use Test Account** For IPpay testing purposes, select this option. Then click **Apply Test Account** to set up or access your **IPpay test account**.

- **Hotspot Operator** Click **Go to Hotspot Manager** to manage *Wireless Guests, Payments/Transactions, Vouchers,* and *Operator Accounts*. See **"Hotspot Manager" on page 103**.

When logging in with voucher-based *Hotspot* authentication, guests will be required to enter the voucher number and accept the Terms of Use before gaining access to the Internet.
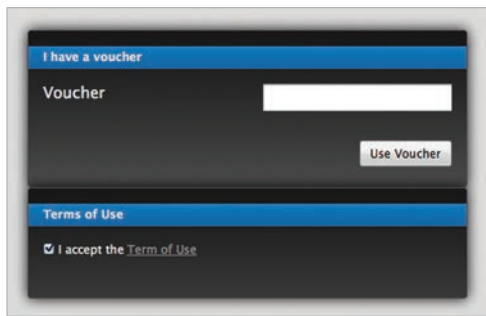
When logging in with payment-based *Hotspot* authentication, guests will be required to select the package type, click the payment choice, and accept the Terms of Use before gaining access to the Internet.
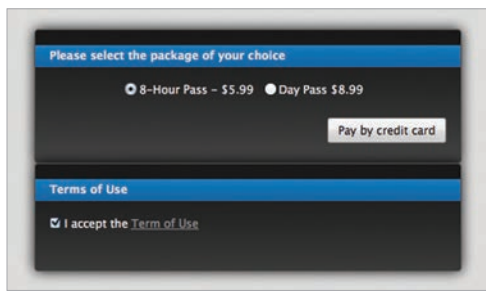
Authentication > External Portal Server

Select this option if you are using an external server to host a custom guest portal.
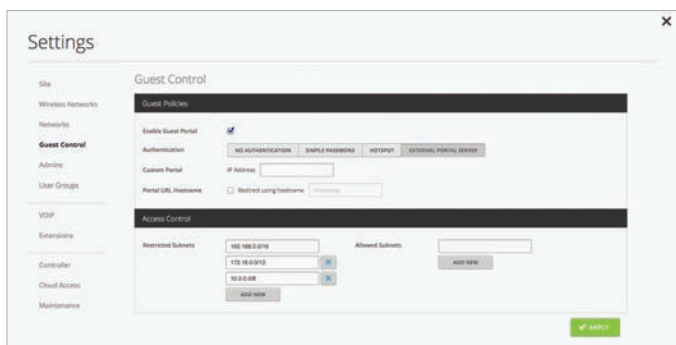
Custom Portal Enter the IP address in the *IP Address* field.

Portal URL Hostname Select this option to enter and use a hostname for the portal URL in place of the default IP address. Paired with an SSL certificate, this ensures that site certificates are displayed as trusted in the guest browser. Example: www.ubnt.com

Access Control
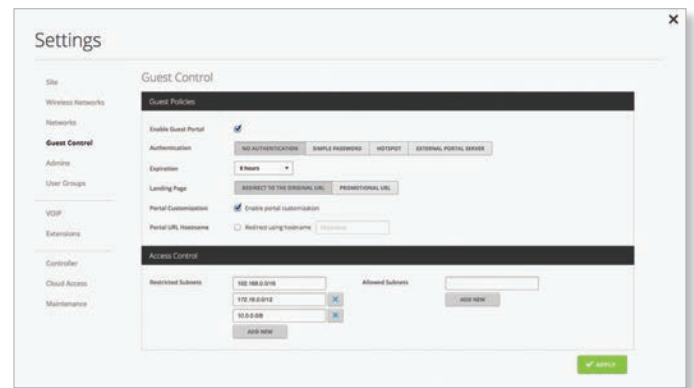
Restricted Subnets Enter any subnets that you don't want guests to be able to access. Click the *delete* ⊠ icon to remove a subnet from this list.

- **Add New** Click **Add New** to add more restricted subnets.

Allowed Subnets Enter any subnets that you want guests to be able to access. Click the *delete* ⊠ icon to remove a subnet from this list.

- **Add New** Click **Add New** to add more allowed subnets.

Apply Click ✓ APPLY to save changes.

Settings > Admins

You can create administrator accounts that are site-specific; these site administrators can only see the sites they manage and cannot see any devices that are *Pending Approval*.

The super admin account is created during the Setup Wizard and has global admin (read/write) access; this super admin account cannot be revoked or re-invited. Only the super admin – not any site admin – can view devices that are *Pending Approval* and then adopt them on the UniFi Controller.

📄 Note: Ensure that you save the super admin login information for future use, including the adoption of new devices.

To create operator accounts for the Hotspot Manager, see **"Operator Accounts" on page 105**.

Username Displays the name of the administrator.

Email Displays the email address of the administrator.

Role Displays the permissions level: *Admin* (read/write access) or *Read Only*.

Actions Click a button to perform the desired action:

- **Revoke** Click ✕ REVOKE to remove the selected account.
- **Re-invite** Click ✉ RE-INVITE to re-send an invitation to a pending account.
- **Edit** Click 📝 EDIT to make changes.

Create New Admin Click ⚙ CREATE NEW ADMIN to add a new site admin. Go to the *Create or Edit an Admin* section.

To create operator accounts for the Hotspot Manager, see **"Operator Accounts" on page 105**.

Create or Edit an Admin

- **Email** Enter the email address of the new administrator.
- **Admin Name** Enter the name of the new administrator.
- **Invite to SDN** Select this option to allow the new administrator access to SDN (Software-Defined Networking) settings. The new administrator must use his or her own cloud account (linked to the same email address) to manage the UniFi Controller. The admin who issued the invitation can select which role the new administrator will have with respect to the UniFi Controller.
- **Role** Select **Administrator** (read/write access) or **Read Only**.
- **Invite** Click ✓ INVITE to send an email invitation.
- **Cancel** Click ✕ CANCEL to discard changes.

Settings > User Groups

Configure user groups on this screen. The default user group is named *Default* and has no bandwidth limits.

User Group Settings

Name Displays the name of the user group.

Bandwidth Limit Displays the upload and download limits.

Actions Click a button to perform the desired action:

- **Edit** Click 📝 EDIT to make changes to the user group settings. Go to the *Create or Edit a User Group* section.
- **Delete** Click 🗑 DELETE to delete the user group. (The *Default* user group cannot be deleted.)

Create New User Group Click ⚙ CREATE NEW USER GROUP to create a new user group. Go to the *Create or Edit a User Group* section.

Create or Edit a User Group

- **Name** Enter or edit the name of the user group.
- **Bandwidth Limit (Download)** Select to limit the download bandwidth. Enter the maximum in Kbps.
- **Bandwidth Limit (Upload)** Select to limit the upload bandwidth. Enter the maximum in Kbps.
- **Save** Click ✓ SAVE to apply changes.
- **Cancel** Click ✕ CANCEL to discard changes.

See **"Wireless Client – Configuration" on page 99** or **"Wired Client – Configuration" on page 101** for information on how to assign a user or guest to a user group.

Settings > VoIP

Enable the VoIP feature and configure the VoIP settings of the UniFi Controller.

Global

VoIP Select this option to enable the VoIP feature.

Provider Setup

SIP Server Enter the IP address of the SIP (Session Initiation Protocol) server.

**SIP Authentication Method** Select the authentication method used for your SIP account:

- **User-Based (Most Common)** If your VoIP system uses a dynamic IP address, then select this option.
  - **Advanced Options** Click the ▼ arrow to display the following:
    - **Outbound Proxy** Enter the URL or IP address of the SIP proxy server.
    - **SIP Voicemail** Enter the URL or IP address of the SIP voicemail server.
- **IP-Based** If your VoIP system uses a static IP address, then select this option.
  - **Advanced Options** Click the ▼ arrow to display the following:
    - **Outbound Proxy** Enter the URL or IP address of the SIP proxy server.
    - **SIP Voicemail** Enter the URL or IP address of the SIP voicemail server.

- **Apply** Click ✔ APPLY to save changes.

Settings > Extensions

The *Extensions* tab appears if VoIP is enabled.
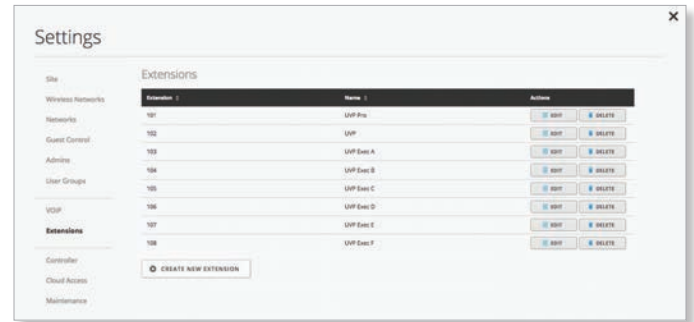
Extension Displays the number of the extension.

Name Displays the name of the extension.

Actions Click a button to perform the desired action:

- **Edit** Click 🖉 EDIT to make changes to the extension settings. Go to the *Create or Edit an Extension* section.
- **Delete** Click 🗑 DELETE to delete the extension.

Create New Extension Click ⚙ CREATE NEW EXTENSION to add a new extension. Go to the *Create or Edit an Extension* section.

Create or Edit an Extension
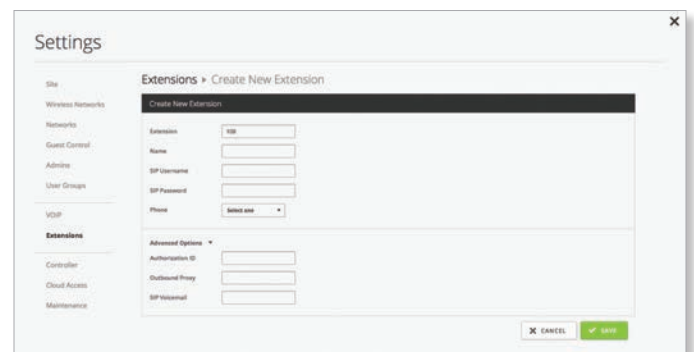
- **Extension** Enter the extension number. The default is *101*.
- **Name** Enter a name for the extension.
- **SIP Username** (Only available if you are using *User-Based* SIP authentication.) Enter the username for your SIP account.
- **SIP Password** (Only available if you are using *User-Based* SIP authentication.) Enter the password for your SIP account.
- **Phone** Select the MAC address of the appropriate UniFi VoIP Phone.
- **Advanced Options** Click the ▼ arrow to display the following:
  - **Authorization ID** (Only available if you are using *User-Based* SIP authentication.) Enter the username used for authorization or authentication.
  - **Outbound Proxy** Enter the URL or IP address of the SIP proxy server.

- **SIP Voicemail** Enter the URL or IP address of the SIP voicemail server.

• **Save** Click ✓ SAVE to apply changes.

• **Cancel** Click ✕ CANCEL to discard changes.

Settings > Controller

Configure the system settings of the UniFi Controller.
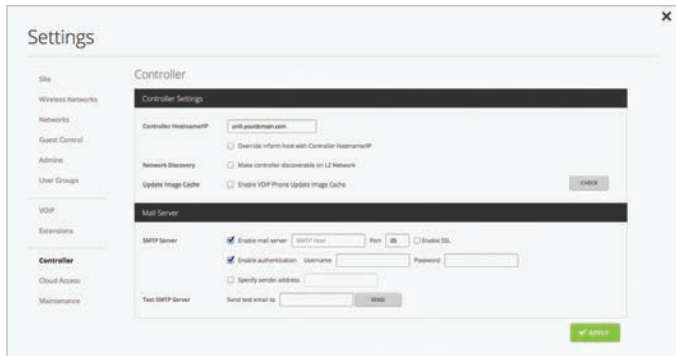
Controller Settings

Controller Hostname/IP Enter the hostname or IP address of the UniFi Controller.

> Note: When alert emails are sent out, the *Controller Hostname/IP* will be specified in the *Controller URL* at the bottom of every message.

• **Override inform host with Controller Hostname/IP** An inform host URL is used for layer-3 device adoption using the UniFi Discovery Utility. Select this option to override the inform host URL. Then enter the appropriate hostname or IP address.

> Note: The default inform port is *8080*. (You can customize this in system.properties.)

Network Discovery When enabled, this option allows UniFi to be discoverable via UPnP. This option is disabled by default.

Update Image Cache Disabled by default. Select this option to enable the automatic update of the cached VoIP phone image.

Mail Server

When enabled, UniFi will send email alerts triggered by disconnected UniFi devices. Specify the administrator email address when you create an account under **"Settings > Admins" on page 27**.

**SMTP Server** Select this option to enable emails.

• **Enable mail server** Enter the outgoing (SMTP) mail server name.

• **Port** The default is *25*. If Secure Sockets Layer (SSL) is enabled, then the port number will automatically change to *465*.

• **Enable SSL** You can enable SSL to enhance secure communications over the Internet.

• **Enable authentication** Select this option to enable authentication.

- **Username** Enter the username required by the mail server.

- **Password** Enter the password required by the mail server.

• **Specify sender address** Select this option to specify the sender email address. Enter the email address that will appear as the sender of the email alert.

• **Test SMTP Server** Enter an email address and click **Send** to test the mail server setup.

Apply Click ✓ APPLY to save changes.

Settings > Cloud Access

Set up the login for cloud access.
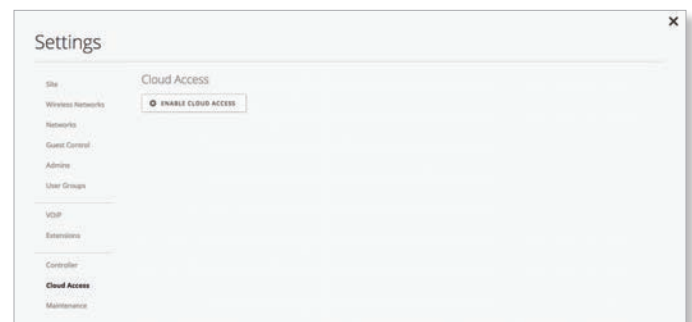
Enable Cloud Access Click ⚙ ENABLE CLOUD ACCESS to configure the login. The *Cloud Login Credentials* screen will appear.

Cloud Login Credentials
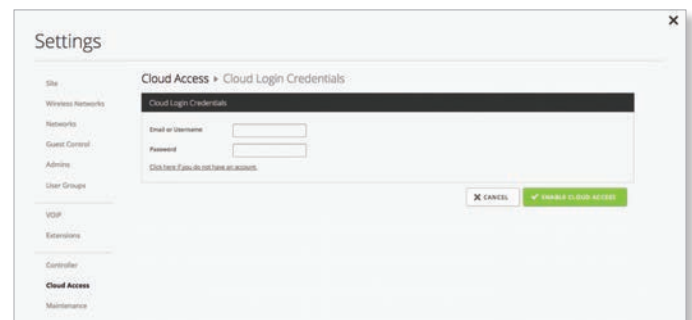
• **Email or Username** Enter the email address or username of your UBNT account.

• **Password** Enter the password of your UBNT account.

• **Click here if you do not have an account** If you do not have a UBNT account, click here to visit this link: **https://account.ubnt.com/register**

Follow the on-screen instructions to set up a UBNT account.

• **Enable Cloud Access** Click ✓ ENABLE CLOUD ACCESS to save changes.

• **Cancel** Click ✕ CANCEL to discard changes.

Controller Cloud Access

If the login for cloud access is configured, then the *Controller Cloud Access screen* will appear:
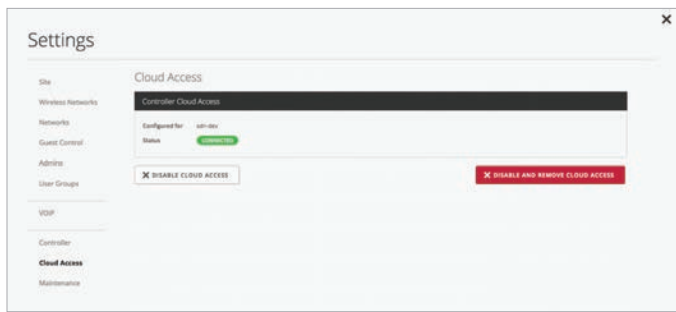
Configured for Displays the username or email address of your UBNT account.

Status Displays "Connected" if cloud access is active.

Disable Cloud Access Click ✕ DISABLE CLOUD ACCESS to disable cloud access.

Disable and Remove Cloud Access Click ✕ DISABLE AND REMOVE CLOUD ACCESS to disable cloud access and remove the cloud login credentials.

> Note: Enabling or disabling cloud access will affect cloud access for all admins on that UniFi Controller.

Settings > Maintenance

The *Maintenance* screen contains administrative options, so you can customize logs, manage system backups, and download configuration information to assist in support issues.

If your UniFi Controller is running on a UniFi Cloud Key, you can use the *Maintenance* tab to upgrade the UniFi Cloud Key firmware, upgrade the UniFi Controller software located on the UniFi Cloud Key, reboot the UniFi Cloud Key, power it off, or reset it to factory defaults.
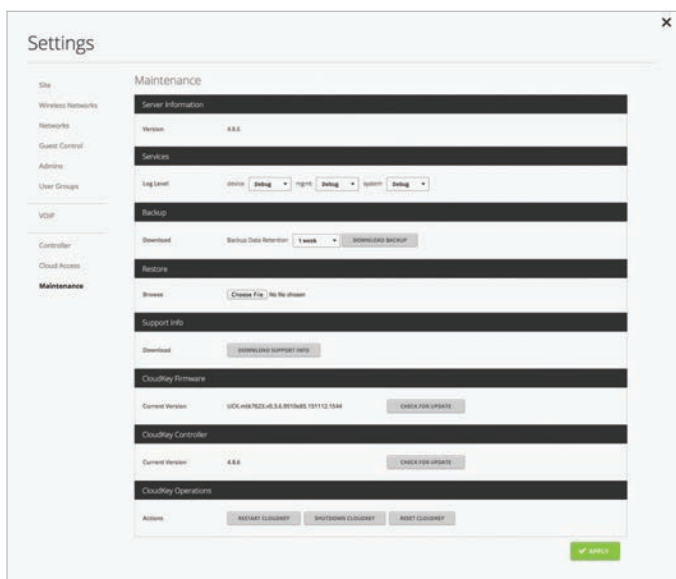
Server Information

Version Displays the software version.

Services

Log Level You can customize the support information that is collected:

- **device** Select the level of severity required to trigger device log entries: **Normal**, **More**, or **Debug**. The default is *Normal*.
- **mgmt** Select the level of severity required to trigger management log entries: **Normal**, **More**, or **Debug**. The default is *Normal*.
- **system** Select the level of severity required to trigger system log entries: **Normal**, **More**, or **Debug**. The default is *Normal*.

Backup

Download You can download a backup of your settings and data retained for the duration you specify.

Backup Data Retention Select the time duration of the backup: **1 week**, **30 days**, **60 days**, **90 days**, **180 days**, **365 days**, or **All time**. The default is *1 week*.

Download Backup Click this option to download a file that contains all of your settings so you can restore them later if you choose.

Restore

Browse Click **Choose File** to select a backup file that you've already downloaded. Follow the on-screen instructions to restore settings from the selected file.

Support Info

Download Click this option to download a file to your computer with information about your configuration. You can email this file to our support team.

Cloud Key Firmware

Current Version Displays the version number of the UniFi Cloud Key firmware.

Available Update If there is an available update, then the available firmware version number is displayed. Click **Apply Update** to upgrade the firmware.

Check for Update Click this option to see if there is a newer firmware version. If there is, then you can follow the on-screen instructions to upgrade now.

> Note: We recommend that you back up your UniFi Controller configuration (refer to the *Backup* section for more information) before upgrading.

Cloud Key Controller

Current Version Displays the version number of the UniFi Controller software.

Available Update If there is an available update, then the available software version number is displayed. Click **Apply Update** to upgrade the software.

Check for Update Click this option to see if there is a newer software version. If there is, then you can follow the on-screen instructions to upgrade now.

> **Note:** We recommend that you back up your UniFi Controller configuration (refer to the *Backup* section for more information) before upgrading.

Cloud Key Operations

Restart Cloud Key Click this option to powercycle the UniFi Cloud Key.

Shut Down Cloud Key Click this option to turn off the UniFi Cloud Key.

Reset Cloud Key Click this option to reset the UniFi Cloud Key to its factory default settings. This option will reboot the UniFi Cloud Key, and all factory default settings will be restored.

> **Note:** We recommend that you back up your UniFi Controller configuration (refer to **"Backup" on page 31** for more information) before resetting the UniFi Cloud Key to its defaults.

Apply Click ✓ APPLY to save changes.

Alerts

The *Alerts* ⚠ tab displays a list of important events, along with the corresponding date, time, and message. When there is a new alert, a red icon displaying the number of new alerts appears.

Show archived alerts Select this option to display all of the archived alert messages.

Archive All Click **Archive All** to archives all of the alert messages.

Search 🔍 You can enter text that you want to search for. Simply begin typing; there is no need to press **Enter**.

Archive Click ▤ to archive the selected alert message.

Clicking an Alert Device Link

The messages have clickable links (white text on a blue background) for client and UniFi devices:

- **"UniFi Security Gateway Details" on page 67**
- **"UniFi Switch Details" on page 75**
- **"UniFi Access Point Details" on page 83**
- **"UniFi VoIP Phone Details" on page 95**
- **"Client Details" on page 97**

Events

The *Events* 📅 tab displays a list of recent events, along with the corresponding date, time, and message.

You can apply one of the following filters:

- **All** Display all of the recent events.
- **Admin** Only display recent events for the administrator.
- **LAN** Only display recent events for the wired network.
- **WLAN** Only display recent events for the wireless networks.

within Filter recent events based on the time period you specify. Select **1 hour**, **8 hours**, **24 hours**, **2 days**, **7 days**, **2 weeks**, or **1 month**.

Search 🔍 You can enter text that you want to search for. Simply begin typing; there is no need to press **Enter**.

Clicking an Event Device Link

The messages have clickable links (white text on a blue background) for client and UniFi devices:

- **"UniFi Security Gateway Details" on page 67**
- **"UniFi Switch Details" on page 75**
- **"UniFi Access Point Details" on page 83**
- **"UniFi VoIP Phone Details" on page 95**
- **"Client Details" on page 97**
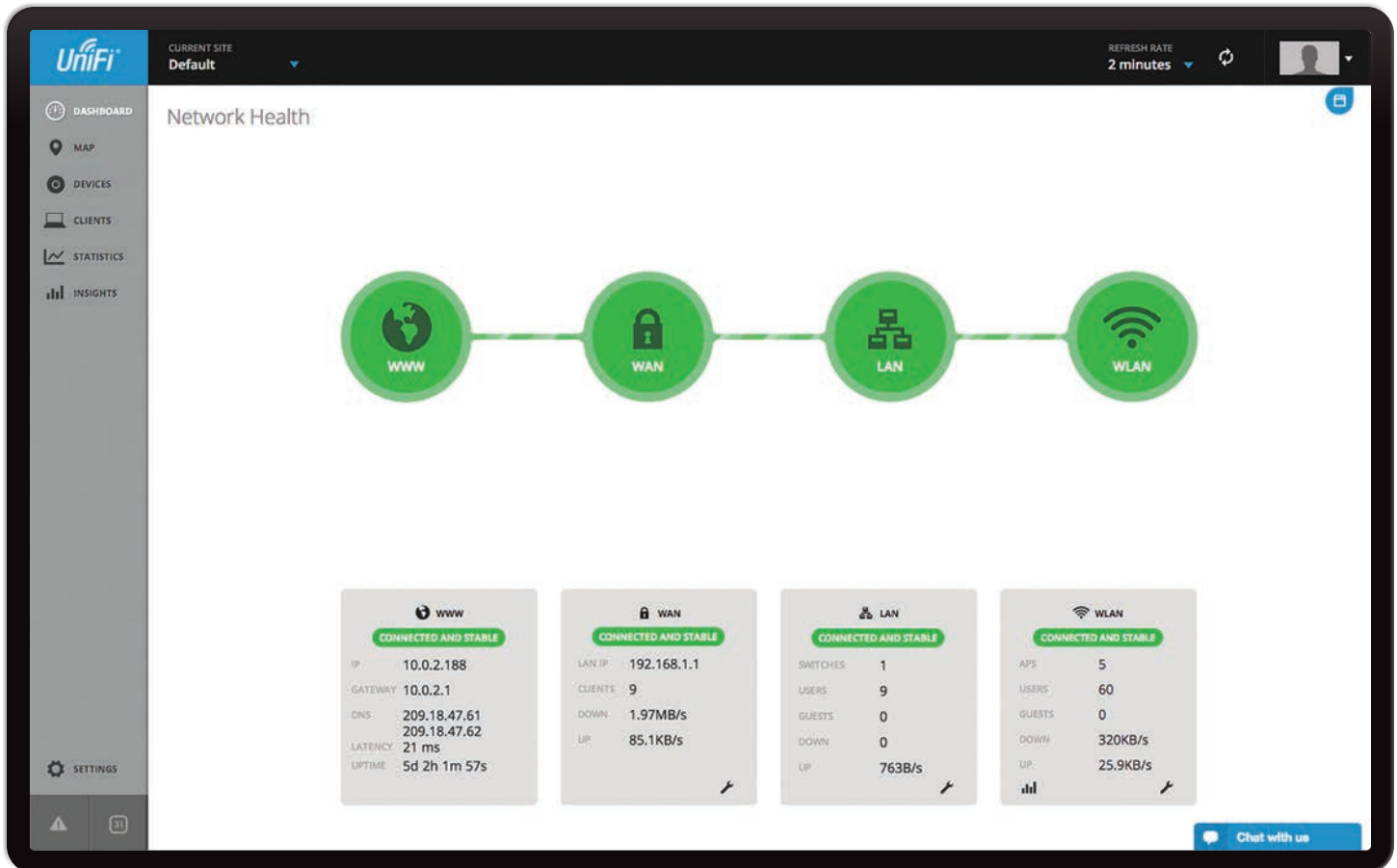
Chapter 4: Dashboard

The *Dashboard* screen provides a visual representation of your network's status. Basic information is provided for each node:

- **"Internet" on page 34**
- **"Gateway/Router" on page 34**
- **"Local Area Network" on page 35**
- **"Wireless Local Area Network" on page 35**

Green Green indicates that the dashboard node is active and all devices are online.

- **Speed Test** If your WAN connection is active, then you can place the mouse over the WWW icon to display the test.
    - **Start Now** Click **Start Now** to run the test.
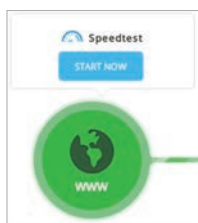
After the Speed Test is complete, the following will be displayed:

- Duration of the average *Ping* round-trip time
- *Download* speed
- *Upload* speed

- **Re-Test** Click **Re-Test** to run the test again.

Red Red indicates one of the following:

- **WWW** Internet connectivity is down.
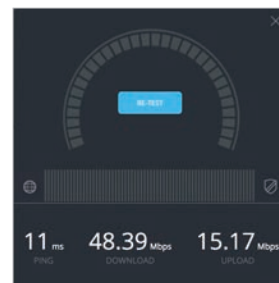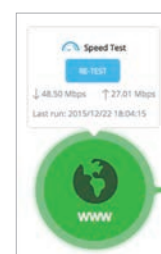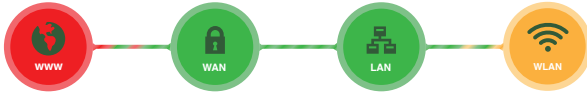- **WAN** The UniFi Security Gateway is offline.
- **LAN** One or more Switches are offline.
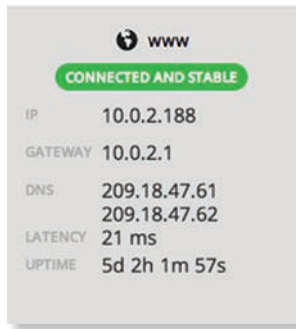- **WLAN** More than half of the APs are offline.

Orange Orange indicates that half or fewer than half of the APs are offline.

Note: Orange is not applicable to the *WWW*, *WAN*, and *LAN* nodes.

Gray Gray indicates that there are no devices available for that dashboard node.

Internet

The basic details of the Internet connection are displayed.

Status Displays the status of the node: *Connected and Stable*, *Unreachable*, or *No Data Available*.

IP Displays the Internet IP address of the UniFi Security Gateway.

Gateway Displays the IP address of the service provider's gateway.
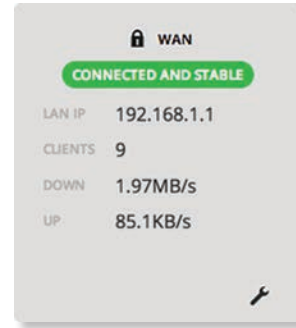
DNS Displays the IP addresses of the Domain Name System (DNS) servers.

Latency Displays the amount of time it takes a packet to travel from the UniFi Security Gateway to the service provider's gateway.

Uptime Displays the length of time the Internet connection has been active.

Gateway/Router

The basic details of the UniFi Security Gateway are displayed.

Status Displays the status of the node: *Connected and Stable*, *Gateway Down*, *Unreachable*, or *No Data Available*.

LAN IP Displays the local IP address of the UniFi Security Gateway.

Clients Displays the total number of local clients.

Down Displays the download rate of your Internet connection.

Up Displays the upload rate of your Internet connection.

Configuration Click the *configuration* ⚒ icon to edit the configuration. Go to **"UniFi Security Gateway Details" on page 67** for more information.

If the DPI feature is enabled (refer to **"Settings > Site" on page 18** for more information), then you can place the mouse over the WAN icon for a top-level view of DPI categories with the bandwidth usage broken down by percentages.

Place the mouse over a specific category to view the download and upload bandwidth usage.
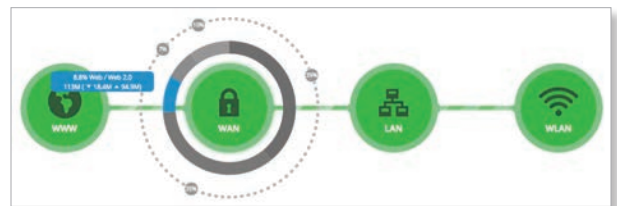
Click a specific category to view a deeper level of details, the subcategories with the bandwidth usage broken down by percentages.

Place the mouse over a specific subcategory to view the download and upload bandwidth usage.

Click the subcategory to open the *Statistics* tab of the *UniFi Security Gateway* screen. For more information, go to **"UniFi Security Gateway – Statistics" on page 69**.

Local Area Network

The basic details of the wired network(s) are displayed:

Status Displays the status of the node: *Connected and Stable*, *Switch Down*, *Unreachable*, or *No Data Available*.

Switches Displays the number of UniFi Switches managed on this site.

Users Displays the number of clients connected to the wired network.

Guests Displays the number of clients connected to the guest wired network.

Down Displays the download rate of the wired network(s).

Up Displays the upload rate of the wired network(s).

Configuration Click the *configuration* icon to edit the configuration. Go to **"Settings > Networks" on page 21** for more information.

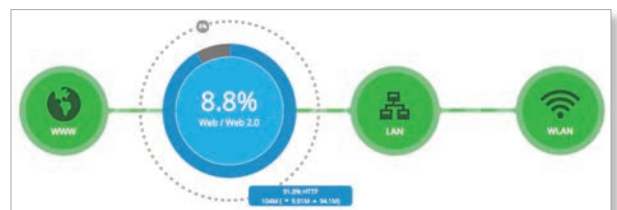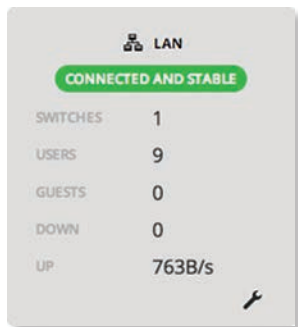## Wireless Local Area Network

The basic details of the wireless network(s) are displayed.

Status Displays the status of the node: *Connected and Stable*, *Devices Down*, *Unreachable*, or *No Data Available*.

APs Displays the number of APs managed on this site.

Users Displays the number of clients connected to the primary wireless network(s).

Guests Displays the number of clients connected to the guest wireless network(s).

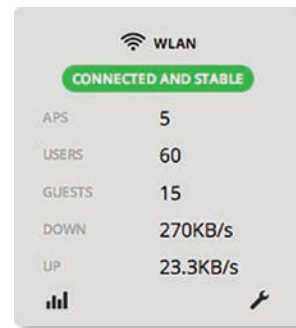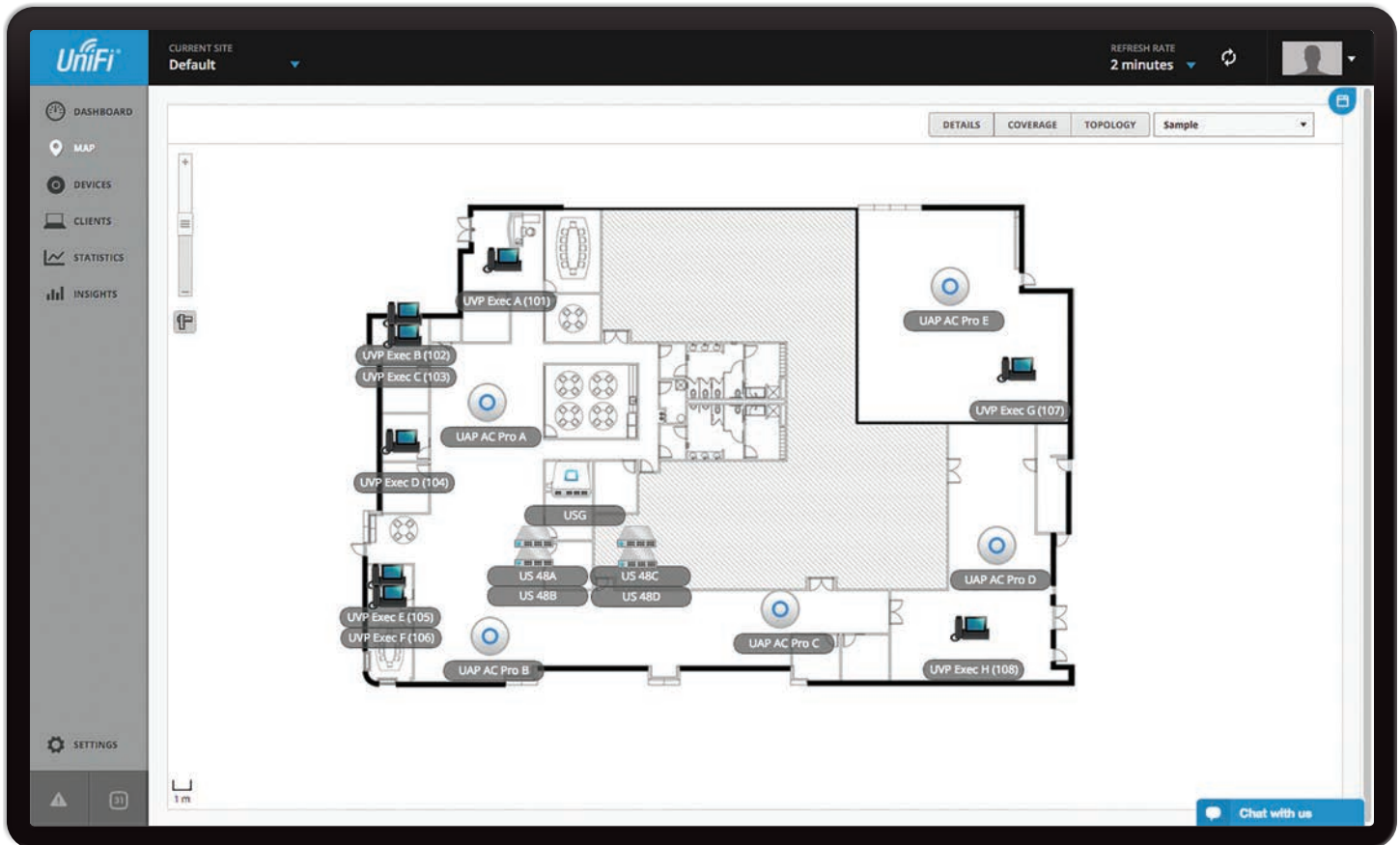**Down** Displays the download rate of the wireless network(s).

Up Displays the upload rate of the wireless network(s).

Graph Click the *graph* icon to view detailed status information. Go to **"Statistics" on page 55** for more information.

Configuration Click the *configuration* icon to edit the configuration. Go to **"Settings > Wireless Networks" on page 19** for more information.

Chapter 5: Map

The UniFi Controller software allows you to upload custom map images of your location(s) or use Google Maps™ for a visual representation of your UniFi network. When you initially launch the UniFi Controller application, a default map is displayed. The legend at the bottom of the map shows the scale of the map.

Adding Custom Maps

To add a custom map, you must first create the image using an illustration, image editing, or blueprint application that exports a file in .jpg, .gif, or .png file format.

Once you've created the map, you can upload it to the UniFi Controller software:

1. Click the drop-down menu at the top right of the screen and then click ⚙ CONFIGURE MAPS .
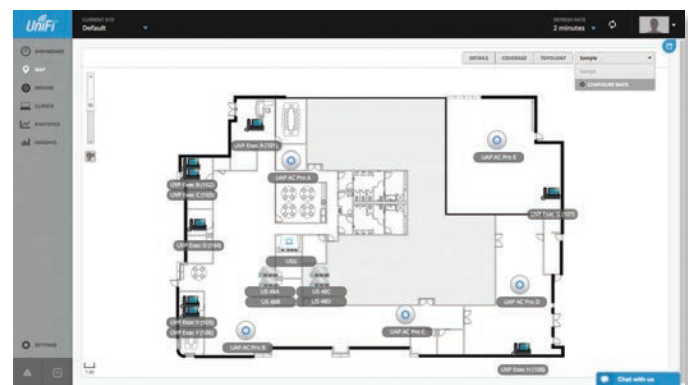
2. Click ✓ ADD A MAP .
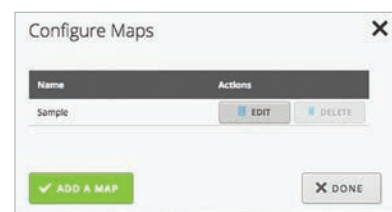
3. Locate the file to use as a map (valid file formats are .jpg, .gif, and .png) and then click **Open**. If you do not want to upload a file, click *Cancel*.
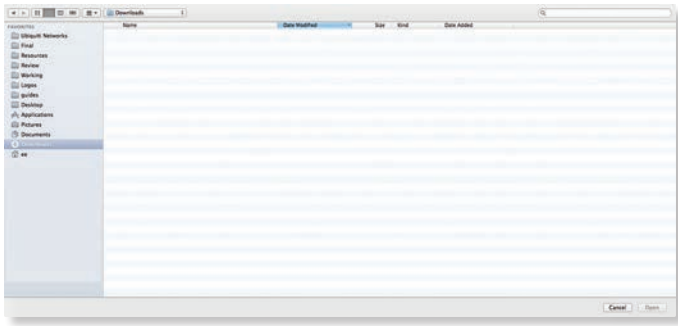
4. Enter a map name in the field provided and click ✓ **DONE** .

> 📝 Note: If the map is incorrect, click **Select a different map** and try again.

Adding a Google Map

To add a *Google Map* to the UniFi Controller software *Map* view:

1. Click the drop-down menu at the top right of the screen and then click ⚙ **CONFIGURE MAPS** .

2. Click ✓ **ADD A MAP** .

3. Click **Cancel**.

4. Enter a map name in the *Description* field and click **Google Maps**.
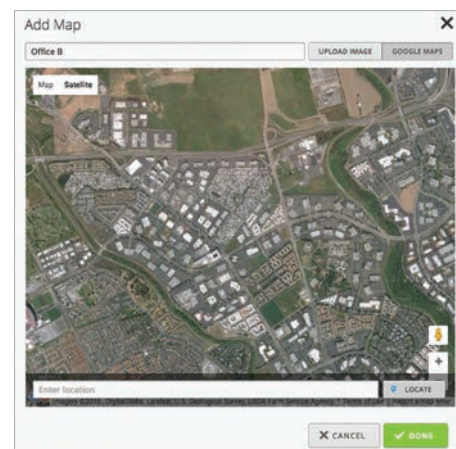
5. The default view is *Satellite* view, which allows the use of labels.

    Use the tools to navigate the map or zoom in/out.

    Click **Labels** to display street and location names.
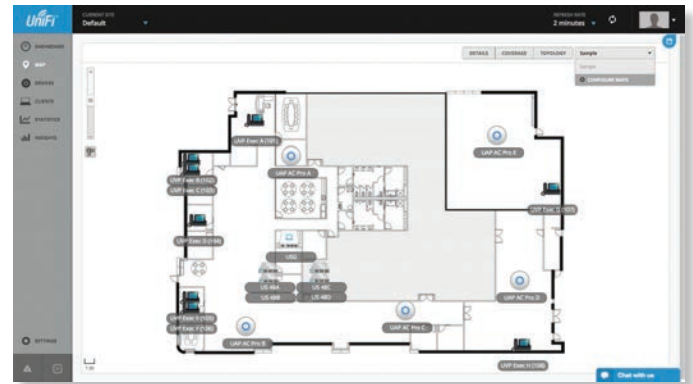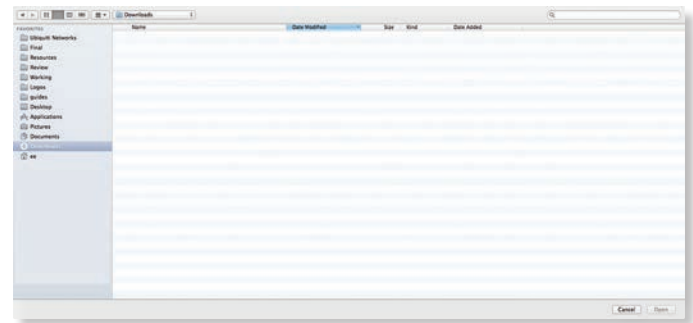
    In the *Location* field, enter an address or the latitude and longitude of a specific location. Then click LOCATE .
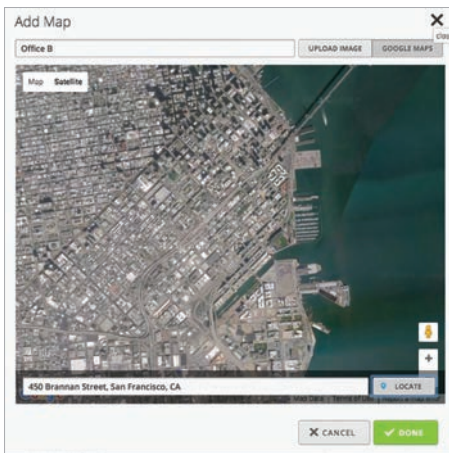
    You can also click **Map**, which looks like a street map. Click **Terrain** to display geographic markers.
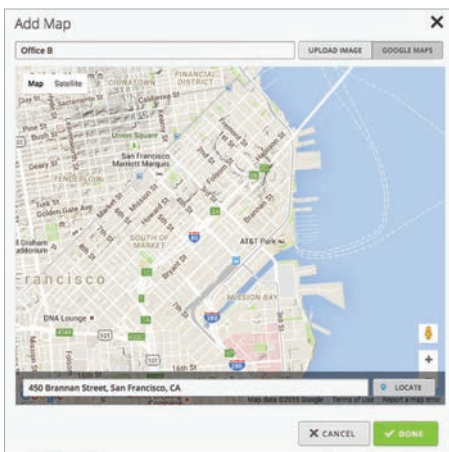
    Click DONE to save the map.

You can adjust the zoom using the **+** and **-** buttons.

Placing Devices on the Map

1. Click **Unplaced Devices** at the lower right.

2. Drag each device icon from the *Unplaced Devices* list to the appropriate location on the map.
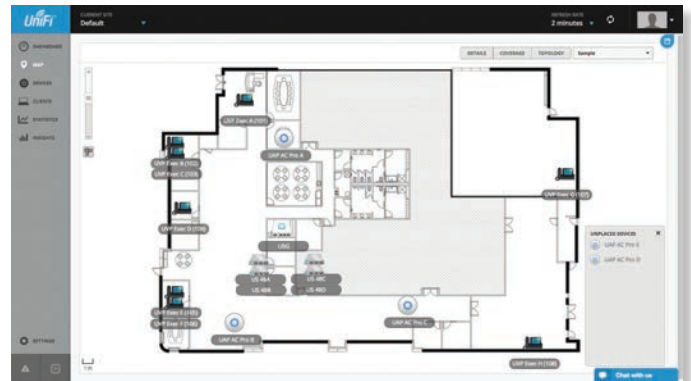
The device icon will appear in the area that you placed it.
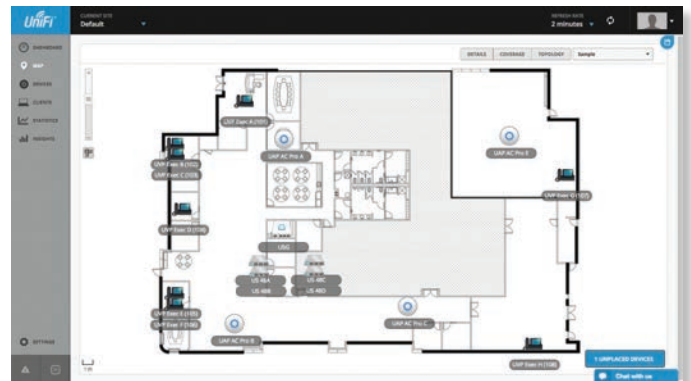
Status

The device icon indicates the UniFi model (not all icons are shown below):

- UniFi AP AC
- UniFi AP Pro, UniFi AP AC Lite/LR/Pro
- UniFi AP/AP LR
- UniFi AP AC Outdoor
- UniFi AP Outdoor+
- UniFi AP Outdoor5
- UniFi Security Gateway
- UniFi Security Gateway Pro
- UniFi 24-Port Switch
- UniFi 48-Port Switch
- UniFi VoIP Phone/Pro
- UniFi VoIP Phone Executive

The LED color of the icon indicates the device status.

- **Blue/Green** Indicates the device is connected.
- **Red/Orange** Indicates the device is disconnected. A *disconnected* icon also marks the device icon.

Options

Click a UniFi icon to reveal options. Click the UniFi icon again to hide them.

  🔒 **Lock** Lock the device icon to its current location.

  ⚙ **Details** Display the *Details* screen. For more information, go to the appropriate chapter:

- **"UniFi Security Gateway Details" on page 67**
- **"UniFi Switch Details" on page 75**
- **"UniFi Access Point Details" on page 83**
- **"UniFi VoIP Phone Details" on page 95**

  📊 **Statistics** (Available for the UAP-AC-LITE, UAP-AC-LR, UAP-AC-PRO, and UAP-AC-EDU only.) Displays the *RF Environment* screen. For more information, go to **"RF Environment" on page 86**.

  ✖ **Remove** Remove the device icon from its location.

Map Display Options

The *Map* screen can display the devices with the following options:
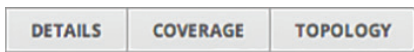
Each device is displayed with its names. If no custom label is applied, the device's MAC address will be displayed.

To change a name applied to a device, refer to *Alias* in the appropriate section:

- **"UniFi Security Gateway – Configuration" on page 70**
- **"UniFi Switch – Configuration" on page 79**
- **"UniFi Access Point – Configuration" on page 88**
- **"Create or Edit an Extension" on page 29** (to change the name of a UniFi VoIP Phone)
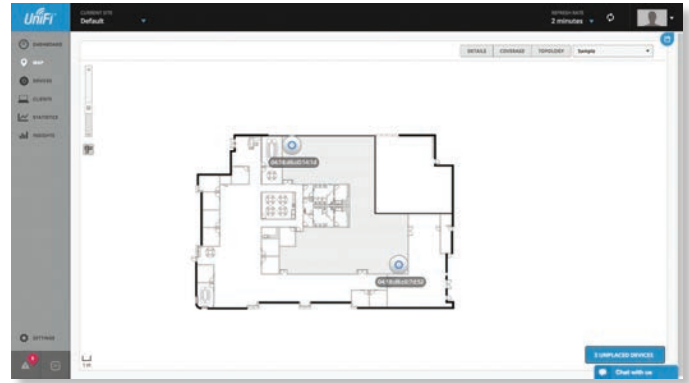
Details Displays the applicable information: transmit/receive channel, signal strength, supported standards, device name, MAC address, number of users connected, and number of guests connected.

You can apply one of the following filters:

- **2G** Displays the 2.4 GHz information.
- **5G** Displays the 5 GHz information.

Coverage Displays a visual representation of the wireless range covered by any APs.

You can apply one of the following filters:

- **2G** Displays the 2.4 GHz information.
- **5G** Displays the 5 GHz information.
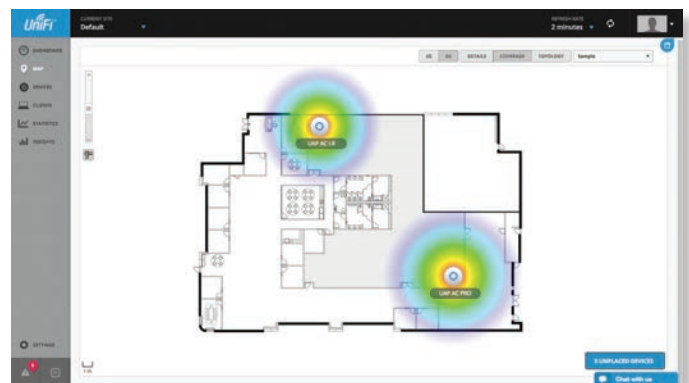
Topology Displays a visual representation of the network configuration and connections between any APs. A dashed line will indicate the wireless AP and its uplink to a wired AP.
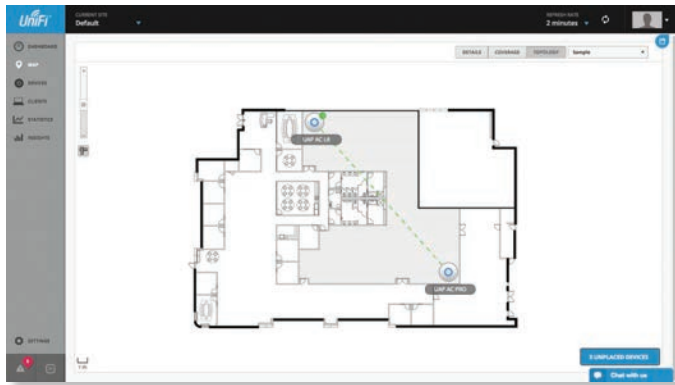
(Map) If multiple maps have been uploaded, you can select which map you want to view using this option.
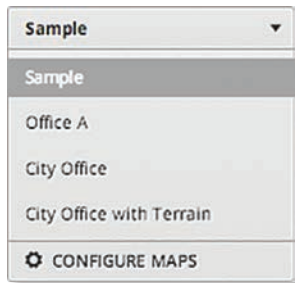
Configure Maps Click [⚙ CONFIGURE MAPS] to add maps or edit the current map(s).

Zoom Slider Use to zoom the map detail in and out.
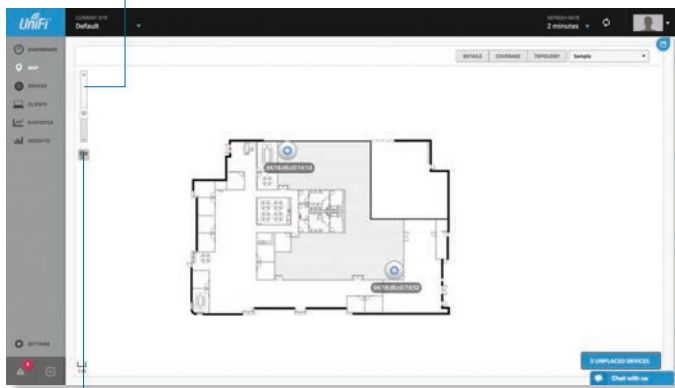
Set Map Scale Use this option to define the scale of the map. You will draw a line and define the distance that the line represents.

Setting the Map Scale

1. Click the *set map scale* [⌖] button.
2. Click and hold to draw a line in the area that you want to use to set the scale of the map. If you need to redraw the line, just click and hold again to draw a new line.
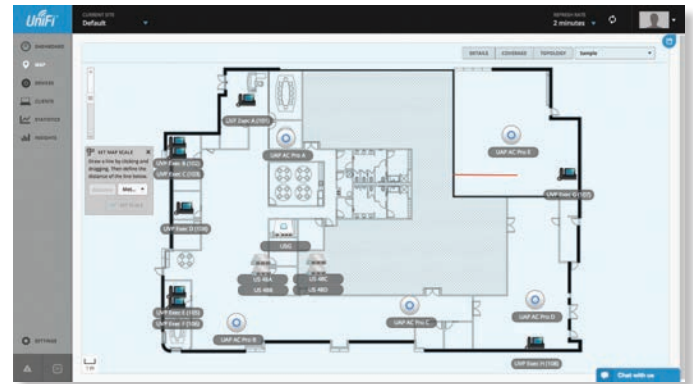
3. Enter the distance that the line represents in the *Distance* field. By default, the distance is specified in meters but you can switch to feet using the drop-down menu on the right. Click [✓ SET SCALE].
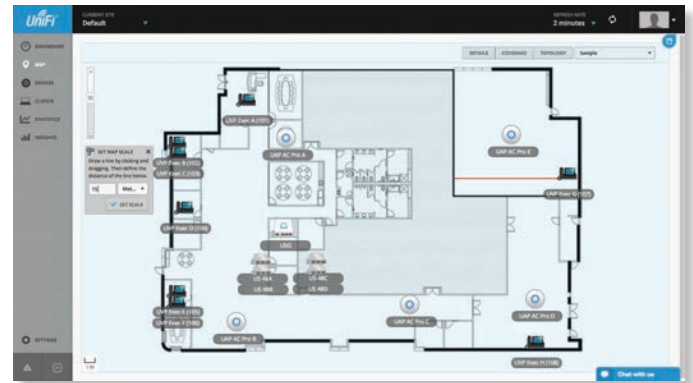
The legend at the bottom of the map shows the new scale of the map.
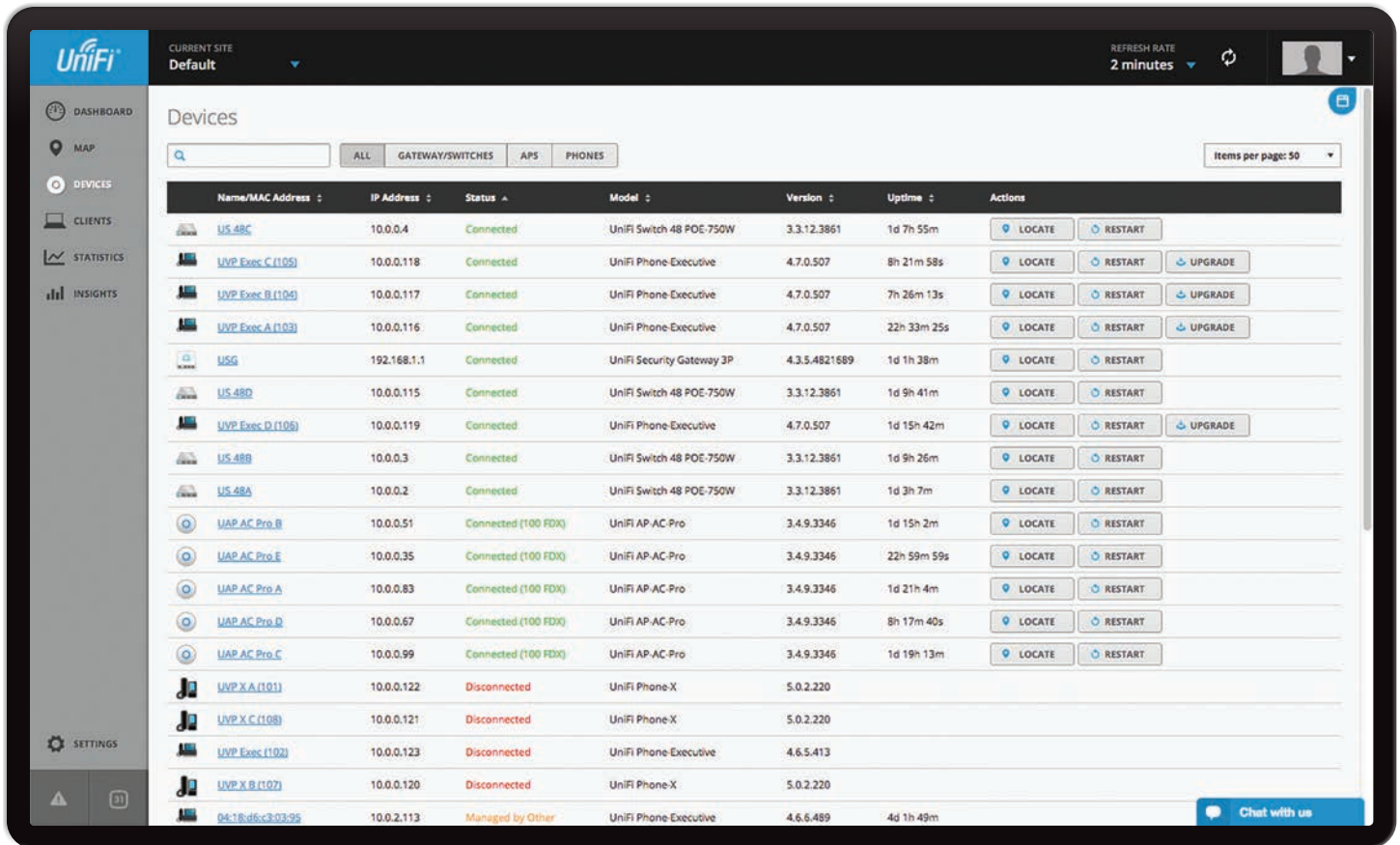
Chapter 6: Devices

The *Devices* screen displays a list of UniFi devices discovered by the UniFi Controller. You can click any of the column headers to change the list order.

Search 🔍 Enter the text you want to search for. Simply begin typing; there is no need to press **Enter**.

You can apply one of the following primary filters:

- **All** Displays all UniFi devices.
- **Gateway/Switches** Displays all UniFi Security Gateways and Switches.
- **APs** Displays all UniFi APs.
- **Phones** Displays all UniFi VoIP Phones. (Enable VoIP using **"Settings > VoIP" on page 29**.)

If the *APs* filter is applied, then another filter is available:

- **Overview** Displays the number of clients, amount of data downloaded, amount of data uploaded, and channel setting.
- **Config** Displays the WLAN and radio settings for the 2.4 GHz and 5 GHz radio bands.
- **Performance** Displays the number of 2.4 GHz and 5 GHz clients, overall transmit rate, overall receive rate, transmit rates in the 2.4 GHz and 5 GHz radio bands, and channel setting.

Items per page Select how many results are displayed per page: **10**, **50**, **100**, or **200**.

The columns of information vary depending on which primary filter (*All*, *Gateway/Switches*, *APs*, or *Phones*) is applied.

If there is more than one page of entries to display, click the navigation controls or page numbers at the bottom right of the screen to display different pages.

All

All UniFi device types are displayed.

(icon) Displays the icon corresponding to the UniFi device (not all icons are shown below):

▫	UniFi AP AC
◉	UniFi AP Pro, UniFi AP AC Lite/LR/Pro
◎	UniFi AP/AP LR
▫	UniFi AP AC Outdoor
▫	UniFi AP Outdoor+
▫	UniFi AP Outdoor5
▫	UniFi Security Gateway
▱	UniFi Security Gateway Pro
▱	UniFi 24-Port Switch
▱	UniFi 48-Port Switch
▮	UniFi VoIP Phone/Pro
▬	UniFi VoIP Phone Executive

If displayed, the LED color of the device icon indicates the device status.

- **Blue/Green** Indicates the device is connected.
- **Red/Orange** Indicates the device is disconnected or not managed by this site (*Pending Approval* or *Managed by Other*).

Name/MAC Address Displays the hostname, alias, or MAC address of the UniFi device. You can click the name to get additional details. For more information, see the appropriate chapter:

- **"UniFi Security Gateway Details" on page 67**
- **"UniFi Switch Details" on page 75**
- **"UniFi Access Point Details" on page 83**
- **"UniFi VoIP Phone Details" on page 95**

IP Address Displays the IP address used by the UniFi device.

Status Indicates the device status: *Connected*, *Disconnected*, *Pending Approval*, *Adopting*, *Upgrading*, *Managed by Other*, or *Isolated* (APs only).

Only the super admin – not any site admin – can view devices that are *Pending Approval* and then adopt them on the UniFi Controller.

> 📋 Note: The super admin account was created during the initial installation; for more information, see **"Configuring the UniFi Controller Software" on page 2**.

Model Displays the model name of the UniFi device.

Version Displays the version number of the UniFi device's firmware.

Uptime Displays the duration of time the UniFi device has been running.

Actions Click a button to perform the desired action:

- **Locate** For most devices, click 📍 LOCATE to flash the LED on the physical device and the device's icon on the *Map* tab so you can locate it. The LED will flash until the *Locate* button is clicked again. (The icon on the *Map* tab will flash three times and stop.)

  If the device is a Phone, then click 📍 LOCATE to ring the Phone and flash the Phone's icon on the *Map* tab so you can locate it. The Phone will ring until you click *Locate* again. (The icon on the *Map* tab will flash three times and stop.)

- **Restart** Click ↻ RESTART to restart the selected device.

- **Upgrade** If a software upgrade is available for the device, click ⬇ UPGRADE to install the latest UniFi firmware on the device. The *Status* will appear as *Upgrading* until the process is complete and the device reconnects to the UniFi Controller software.

- **Adopt** Click ＋ ADOPT to adopt a device that appears as *Pending Approval* for its status. The *Status* will appear as *Adopting* until the device is connected.

Gateway/Switches

All UniFi Gateway and Switch devices are displayed.
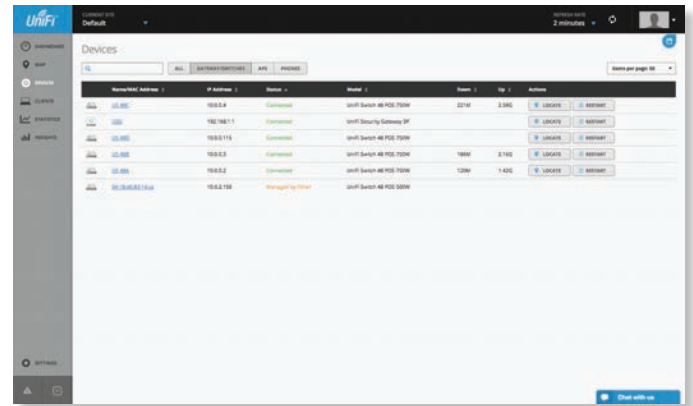
(icon) Displays the icon corresponding to the UniFi device (not all icons are shown below):

- 🖥 UniFi Security Gateway
- 🗄 UniFi Security Gateway Pro
- 🗄 UniFi 24-Port Switch
- 🗄 UniFi 48-Port Switch

The LED color of the device icon indicates the device status.

- **Blue** Indicates the device is connected.
- **Red** Indicates the device is disconnected or not managed by this site (*Pending Approval* or *Managed by Other*).

Name/MAC Address Displays the hostname, alias, or MAC address of the UniFi device. You can click the name to get additional details. For more information, see the appropriate chapter:

- **"UniFi Security Gateway Details" on page 67**
- **"UniFi Switch Details" on page 75**

IP Address Displays the IP address used by the UniFi device.

Status Indicates the device status: *Connected*, *Disconnected*, *Pending Approval*, *Adopting*, *Upgrading*, or *Managed by Other*.

Only the super admin – not any site admin – can view devices that are *Pending Approval* and then adopt them on the UniFi Controller.

> 📋 Note: The super admin account was created during the initial installation; for more information, see **"Configuring the UniFi Controller Software" on page 2**.

Model Displays the model name of the UniFi device.

Down Displays the total amount of data downloaded by the UniFi device.

Up Displays the total amount of data uploaded by the UniFi device.

Actions Click a button to perform the desired action:

- **Locate** Click 📍 LOCATE to flash the Status LED on the Gateway/Switch and its icon on the *Map* tab so you can locate it. The LED will flash until the *Locate* button is clicked again. (The icon on the *Map* tab will flash three times and stop.)

- **Restart** Click ↻ RESTART to restart the selected device.

- **Upgrade** If a software upgrade is available for the device, click ⬇ UPGRADE to install the latest UniFi firmware on the device. The *Status* will appear as *Upgrading* until the process is complete and the device reconnects to the UniFi Controller software.

- **Adopt** Click ✚ ADOPT to adopt a device that appears as *Pending Approval* for its status. The *Status* will appear as *Adopting* until the device is connected.

APs

You can apply one of the following filters to display different status information:

- **Overview** Displays the number of clients, amount of data downloaded, amount of data uploaded, and channel setting.

- **Config** Displays the WLAN and radio settings for the 2.4 GHz and 5 GHz radio bands.

- **Performance** Displays the number of 2.4 and 5 GHz clients, overall transmit rate, overall receive rate, 2.4 and 5 GHz transmit rates, and channel setting.

On any sub-tab, you can initiate a rolling upgrade of the firmware for all APs.

Start Rolling Upgrade Click ⬇ START ROLLING UPGRADE to begin automatically upgrading APs, one by one, except for wirelessly uplinked APs, which are intentionally excluded from upgrading.

Overview

(icon) Displays the icon corresponding to the AP model (not all icons are shown below):

- ▫ UniFi AP AC

- ◎ UniFi AP Pro, UniFi AP AC Lite/LR/Pro

- ◉ UniFi AP/AP LR

- ⬚ UniFi AP AC Outdoor

- ⬚ UniFi AP Outdoor+

- ⬚ UniFi AP Outdoor5

The LED color of the icon indicates the device status.

- **Blue/Green** Indicates the device is connected.

- **Red/Orange** Indicates the device is disconnected or not managed by this site (*Pending Approval* or *Managed by Other*).

Name/MAC Address Displays the hostname, alias, or MAC address of the AP. You can click the name to get additional details; see **"UniFi Access Point Details" on page 83** for more information.

IP Address Displays the IP address of the AP.

Status Displays the connection status.

- **Connected** The AP is physically wired to the network.

- **Connected (100 FDX)** The AP is physically wired to the network at 100 Mbps in full-duplex mode.

- **Connected (wireless)** The AP is wirelessly uplinked to a physically wired AP.

- **Disconnected** The AP is unreachable by the UniFi Controller software.

- **Isolated** A managed AP is unable to locate its uplink.

- **Managed by Other** The AP is not in the default state but it is not controlled by the UniFi Controller.

- **Pending Approval** The AP is in the default state and is available for adoption.

  Only the super admin – not any site admin – can view devices that are *Pending Approval* and then adopt them on the UniFi Controller.

  📄 Note: The super admin account was created during the initial installation; for more information, see **"Configuring the UniFi Controller Software" on page 2**.

Model Displays the model name of the UniFi device.

Clients Displays the number of clients connected to the AP.

Down Displays the total amount of data downloaded by the AP.
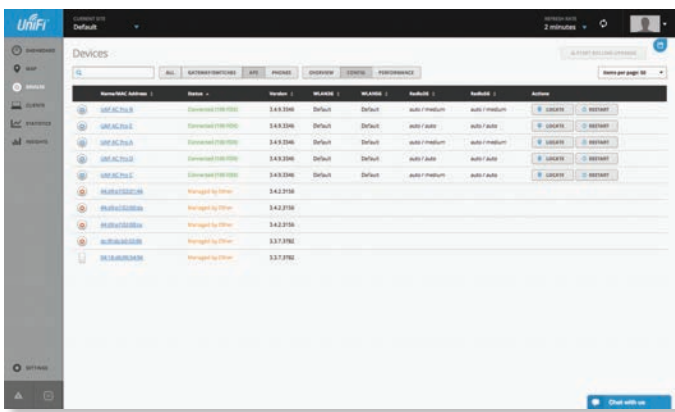
Up Displays the total amount of data uploaded by the AP.

Channel Displays the transmit/receive channel being used by the AP. The radio band is represented as *(ng)* for 2.4 GHz and *(na)/(ac)* for 5 GHz.

Actions Click a button to perform the desired action:

- **Locate** Click 📍 LOCATE to flash the LED on the AP and the AP's icon on the *Map* tab so you can locate it. The LED will flash until the *Locate* button is clicked again. (The icon on the *Map* tab will flash three times and stop.)

- **Restart** Click ↻ RESTART to restart the selected device.

- **Upgrade** If a software upgrade is available for the device, click ⬆ UPGRADE to install the latest UniFi firmware on the device. The *Status* will appear as *Upgrading* until the process is complete and the device reconnects to the UniFi Controller software.

- **Adopt** Click ➕ ADOPT to adopt a device that appears as *Pending Approval* for its status. The *Status* will appear as *Adopting* until the device is connected.

Config

(icon) Displays the icon corresponding to the AP model (not all icons are shown below):

- ▫ UniFi AP AC

- ◎ UniFi AP PRO, UniFi AP AC Lite/LR/Pro

- ◎ UniFi AP/AP LR

- ⬚ UniFi AP AC Outdoor

- ⬚ UniFi AP Outdoor+

- ⬚ UniFi AP Outdoor5

The LED color of the icon indicates the device status.

- **Blue/Green** Indicates the device is connected.

- **Red/Orange** Indicates the device is disconnected or not managed by this site (*Pending Approval* or *Managed by Other*).

Name/MAC Address Displays the hostname, alias, or MAC address of the AP. You can click the name to get additional details; see **"UniFi Access Point Details" on page 83** for more information.

Status Displays the connection status.

- **Connected** The AP is physically wired to the network.

- **Connected (100 FDX)** The AP is physically wired to the network at 100 Mbps in full-duplex mode.

- **Connected (wireless)** The AP is wirelessly uplinked to a physically wired AP.

- **Disconnected** The AP is unreachable by the UniFi Controller software.

- **Isolated** A managed AP is unable to locate its uplink.

- **Managed by Other** The AP is not in the default state but it is not controlled by the UniFi Controller.

- **Pending Approval** The AP is in the default state and is available for adoption.

  Only the super admin – not any site admin – can view devices that are *Pending Approval* and then adopt them on the UniFi Controller.

  📋 Note: The super admin account was created during the initial installation; for more information, see **"Configuring the UniFi Controller Software" on page 2**.

Version Displays the version number of the UniFi AP's firmware.

WLAN 2G Displays the name of the WLAN group using the 2.4 GHz radio band.

WLAN 5G Displays the name of the WLAN group using the 5 GHz radio band.

Radio 2G Displays the channel and TX power settings used in the 2.4 GHz radio band.

Radio 5G Displays the channel and TX power settings used in the 5 GHz radio band.

Actions Click a button to perform the desired action:

- **Locate** Click 📍 LOCATE to flash the LED on the AP and the AP's icon on the *Map* tab so you can locate it. The LED will flash until the *Locate* button is clicked again. (The icon on the *Map* tab will flash three times and stop.)

- **Restart** Click ↻ RESTART to restart the selected device.

- **Upgrade** If a software upgrade is available for the device, click ⬆ UPGRADE to install the latest UniFi firmware on the device. The *Status* will appear as *Upgrading* until the process is complete and the device reconnects to the UniFi Controller software.

- **Adopt** Click ➕ ADOPT to adopt a device that appears as *Pending Approval* for its status. The *Status* will appear as *Adopting* until the device is connected.
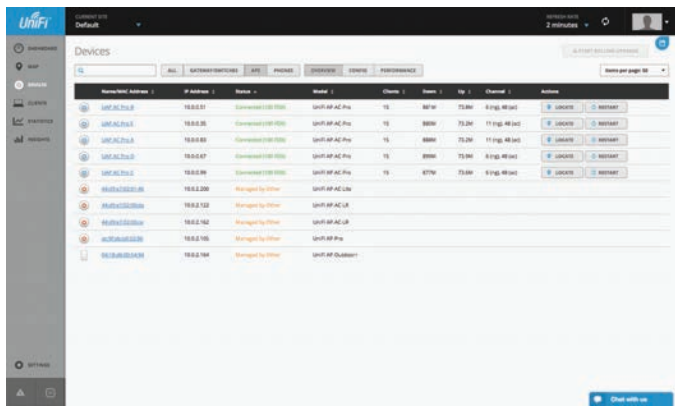
Performance

(icon) Displays the icon corresponding to the AP model (not all icons are shown below):

⊡ UniFi AP AC

◉ UniFi AP PRO, UniFi AP AC Lite/LR/Pro

◉ UniFi AP/AP LR

▯ UniFi AP AC Outdoor

▯ UniFi AP Outdoor+

▯ UniFi AP Outdoor5

The LED color of the icon indicates the device status.

- **Blue/Green** Indicates the device is connected.
- **Red/Orange** Indicates the device is disconnected or not managed by this site (*Pending Approval* or *Managed by Other*).

Name/MAC Address Displays the hostname, alias, or MAC address of the AP. You can click the name to get additional details; see **"UniFi Access Point Details" on page 83** for more information.

IP Address Displays the IP address of the AP.

Status Displays the connection status.

- **Connected** The AP is physically wired to the network.
- **Connected (100 FDX)** The AP is physically wired to the network at 100 Mbps in full-duplex mode.
- **Connected (wireless)** The AP is wirelessly uplinked to a physically wired AP.
- **Disconnected** The AP is unreachable by the UniFi Controller software.
- **Isolated** A managed AP is unable to locate its uplink.
- **Managed by Other** The AP is not in the default state but it is not controlled by the UniFi Controller.
- **Pending Approval** The AP is in the default state and is available for adoption.

  Only the super admin – not any site admin – can view devices that are *Pending Approval* and then adopt them on the UniFi Controller.

📋 Note: The super admin account was created during the initial installation; for more information, see **"Configuring the UniFi Controller Software" on page 2**.

**2G Clients** Displays the number of clients connected to the AP using the 2.4 GHz band.

5G Clients Displays the number of clients connected to the AP using the 5 GHz band.

TX Displays the overall TX (transmit) rate.

RX Displays the overall RX (receive) rate.

TX 2G Displays the overall TX rate for the 2.4 GHz radio band. The different colors represent different types of packet activity:

Color	Packet Activity
🟩	Packets sent
🟧	Packets retried
🟥	Packets not sent due to likely interference

TX 5G Displays the overall TX rate for the 5 GHz radio band. The different colors represent different types of packet activity:

Color	Packet Activity
🟩	Packets sent
🟧	Packets retried
🟥	Packets not sent due to likely interference

Channel Displays the transmit/receive channel being used by the AP. The radio band is represented as *(ng)* for 2.4 GHz and *(na)/(ac)* for 5 GHz.

Actions Click a button to perform the desired action:

- **Locate** Click ⊙ LOCATE to flash the LED on the AP and the AP's icon on the *Map* tab so you can locate it. The LED will flash until the *Locate* button is clicked again. (The icon on the *Map* tab will flash three times and stop.)
- **Restart** Click ⟳ RESTART to restart the selected device.
- **Upgrade** If a software upgrade is available for the device, click ⬇ UPGRADE to install the latest UniFi firmware on the device. The *Status* will appear as *Upgrading* until the process is complete and the device reconnects to the UniFi Controller software.
- **Adopt** Click ＋ ADOPT to adopt a device that appears as *Pending Approval* for its status. The *Status* will appear as *Adopting* until the device is connected.

Phones

VoIP is available with UniFi Controller version 4.6 or higher.
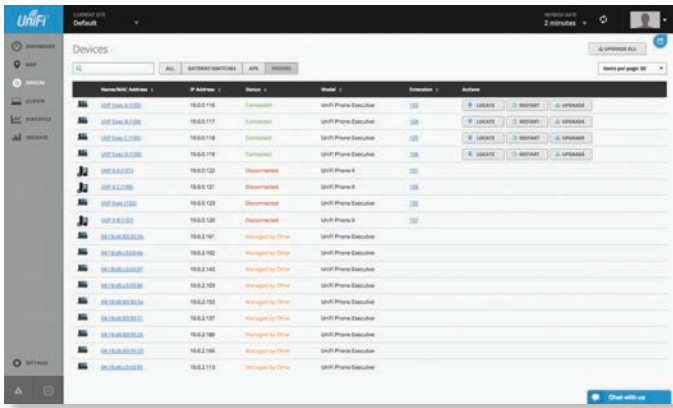
Upgrade All Click ⟳ UPGRADE ALL to begin automatically upgrading the firmware of all Phones.

(icon) Displays the icon corresponding to the Phone (not all icons are shown below):

📱 UniFi VoIP Phone/Pro

🖥 UniFi VoIP Phone Executive

Name/MAC Address Displays the hostname, alias, or MAC address of the Phone. You can click the name to get additional details; see **"UniFi VoIP Phone Details" on page 95** for more information.

IP Address Displays the IP address used by the Phone.

Status Indicates the device status: *Connected*, *Disconnected*, *Pending Approval*, *Adopting*, *Upgrading*, or *Managed by Other*.

Only the super admin – not any site admin – can view devices that are *Pending Approval* and then adopt them on the UniFi Controller.

📋 Note: The super admin account was created during the initial installation; for more information, see **"Configuring the UniFi Controller Software" on page 2**.

Model Displays the model name of the UniFi device.

Extension Displays the extension of the Phone. You can click the extension to get additional details; see **"UniFi VoIP Phone – Details" on page 95** for more information.

Actions Click a button to perform the desired action:

• **Locate** Click 📍 LOCATE to ring the Phone and flash the Phone's icon on the *Map* tab so you can locate it. The Phone will ring until you click *Locate* again. (The icon on the *Map* tab will flash three times and stop.)

• **Restart** Click ⟳ RESTART to restart the selected device.

• **Upgrade** If a software upgrade is available for the device, click ⟳ UPGRADE to install the latest UniFi firmware on the device. The *Status* will appear as *Upgrading* until the process is complete and the device reconnects to the UniFi Controller software.

• **Adopt** Click + ADOPT to adopt a device that appears as *Pending Approval* for its status. The *Status* will appear as *Adopting* until the device is connected.

Properties

The *Properties* tab is hidden by default. To display it, click the *properties* 🗗 icon. The *Properties* tab appears on the right side of the *Devices* screen.

Information about each selected device appears as a popup within this tab. The information varies depending on the device type.

For more information, see the appropriate chapter:

• **"UniFi Security Gateway Details" on page 67**
• **"UniFi Switch Details" on page 75**
• **"UniFi Access Point Details" on page 83**
• **"UniFi VoIP Phone Details" on page 95**

Close Click 🗗 to close the *Properties* tab and device popups.

Minimize Click ▤ to close and re-open the device popups.

Each row displays the following:

- **(icon)** Displays the icon of the device (the icon will vary depending on the model).
- **Name/MAC Address** Displays the hostname, alias, or MAC address of the device.
- **Display** Click ▶ to display the device information.
- **Detach** Click ⬚ to display the same information in a separate popup screen that can be moved anywhere within the browser screen.
- **Close** Click ✕ to close the *Properties* tab and device popups.

Hide Click ▶ to hide the *Properties* tab but allow the device popups to remain accessible from this tab.
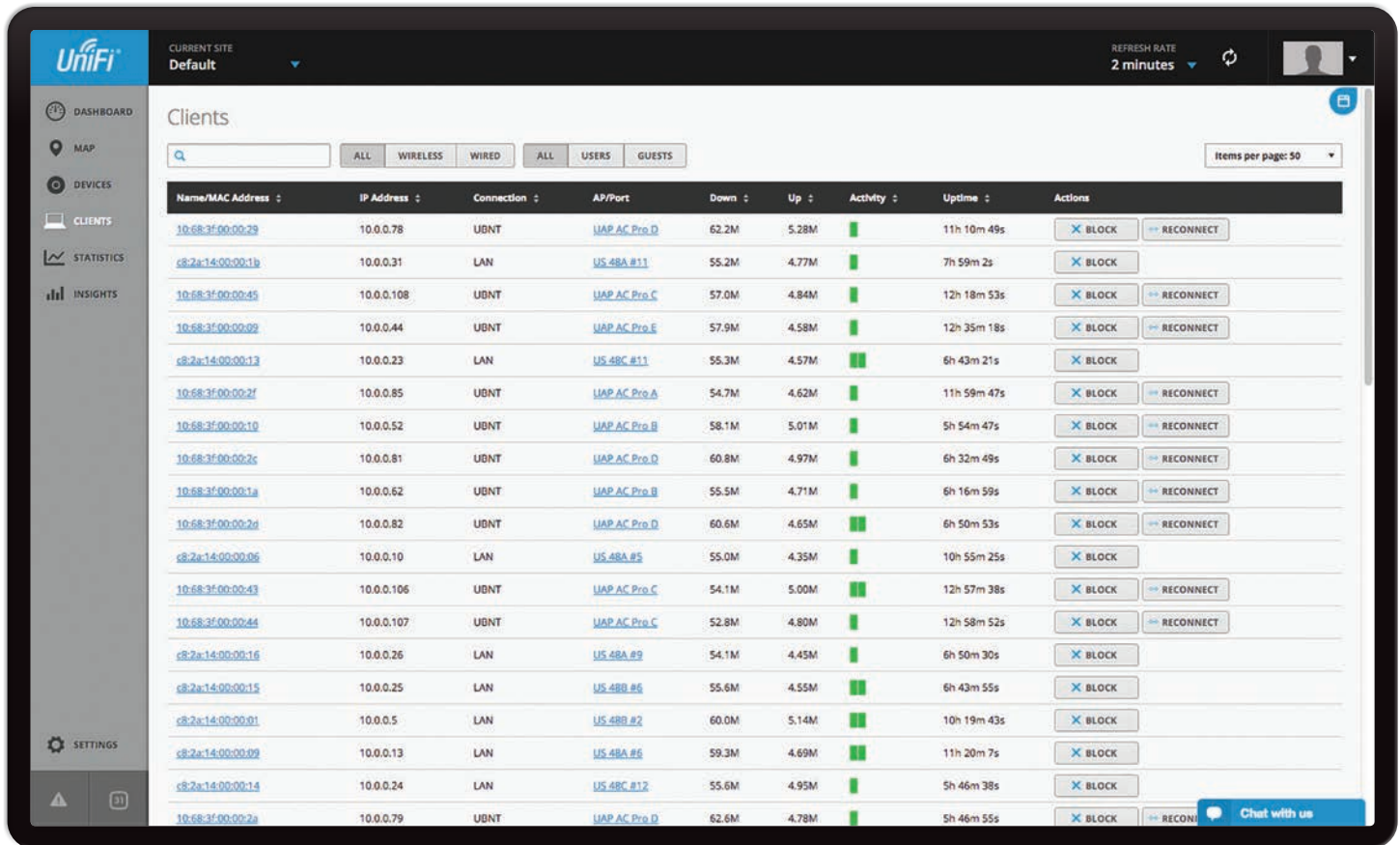
Chapter 7: Clients

The *Clients* screen displays a list of network clients. You can click any of the column headers to change the list order.

Search 🔍 Enter the text you want to search for. Simply begin typing; there is no need to press **Enter**.

You can apply one of the following primary filters:

- **All** Displays all clients, regardless of connection type.
- **Wireless** Displays all wireless clients.
- **Wired** Displays all wired clients.

A secondary filter is available:

- **All** Displays all users and guests.
- **Users** Only displays users.
- **Guests** Only displays guests.

Items per page Select how many results are displayed per page: **10**, **50**, **100**, or **200**.

The columns of information vary depending on which primary filter (*All*, *Wireless*, or *Wired*) is applied.

If there is more than one page of entries to display, click the navigation controls or page numbers at the bottom right of the screen to display different pages.

All

Name/MAC Address Displays the hostname, alias, or MAC address of the connected client. You can click the name to get additional details; refer to **"Client Details" on page 97** for more information.

IP Address Displays the IP address used by the client.

Connection Indicates which local network is used. If the connection is wireless, then this displays the wireless network name or SSID.

AP/Port Indicates which AP or switch port is used.

Down Displays the total amount of data downloaded by the client.

Up Displays the total amount of data uploaded by the client.

Activity Displays the level of activity for each client.

Bars	Activity Level (Bytes per second)
	Idle
■	500
■■	8000
■■■	64000
■■■■	512000
■■■■■	2048000

Uptime Displays the amount of time the client has been connected for this session.

Actions Click a button to perform the desired action:

- **Block** Click ✕ BLOCK to block this client from accessing the network.

- **Reconnect** Click ↔ RECONNECT to reconnect a wireless client. You can click ↔ RECONNECT to kick out a client, which usually reconnects back quickly; this is useful for troubleshooting or resolving a problematic wireless connection.

- **Unauthorize/Authorize** (Available for *Guests* only.) Click ✕ UNAUTHORIZE to remove authorization of guest access and disconnect the guest, or click + AUTHORIZE for guests pending authorization.

Wireless

Frequency band If the *Wireless* filter is applied, then the *Frequency band* filter is available:

- **All** Displays all wireless clients.
- **2G** Only displays 2.4 GHz clients.
- **5G** Only displays 5 GHz clients.

AP Select the AP whose clients you want displayed. Each option in the drop-down list also indicates the number of wireless clients in parentheses.

Name/MAC Address Displays the hostname, alias, or MAC address of the connected client. You can click the name to get additional details; refer to **"Client Details" on page 97** for more information.

IP Address Displays the IP address used by the client.

Status (Displayed when the *Guests* filter is applied.) Displays *Authorized* for all authorized guests or *Pending* for guests pending authorization.

WLAN Displays the name of the wireless network.

Access Point Displays the name of the connected AP.

Signal Displays the signal strength level and signal type:

Icon	Clients	Mode
ac	5 GHz (802.11ac)	Active
ac	5 GHz (802.11ac)	Power Save
n	5 GHz (802.11n)	Active
n	5 GHz (802.11n)	Power Save
n	2.4 GHz (802.11n)	Active
n	2.4 GHz (802.11n)	Power Save
g	2.4 GHz (802.11g)	Active
g	2.4 GHz (802.11g)	Power Save
b	2.4 GHz (802.11b)	Active
b	2.4 GHz (802.11b)	Power Save

Down Displays the total amount of data downloaded by the client.

Up Displays the total amount of data uploaded by the client.

Activity Displays the level of activity for each client.

Bars	Activity Level (Bytes per second)
	Idle
■	500
■■	8000
■■■	64000
■■■■	512000
■■■■■	2048000

Uptime Displays the amount of time the client has been connected for this session.

Actions Click a button to perform the desired action:

- **Block** Click ✕ BLOCK to block this client from accessing the network.

- **Reconnect** Click ↔ RECONNECT to reconnect a wireless client. You can click ↔ RECONNECT to kick out a client, which usually reconnects back quickly; this is useful for troubleshooting or resolving a problematic wireless connection.

- **Unauthorize/Authorize** (Available for *Guests* only.) Click ✕ UNAUTHORIZE to remove authorization of guest access and disconnect the guest, or click + AUTHORIZE for guests pending authorization.

Wired

Network If the *Wired* filter is applied, then the *Network* filter is available. Each option in the drop-down list also indicates the number of wired clients in parentheses.

- **All** Displays all wired clients.
- **(name)** Select the network whose clients you want displayed.

Name/MAC Address Displays the hostname, alias, or MAC address of the connected client. You can click the name to get additional details; refer to **"Client Details" on page 97** for more information.

IP Address Displays the IP address used by the client.

Network Indicates which local network is used.

Port Displays the name of the network device and port number used by the client. You can click the name to get additional details; refer to **"UniFi Switch Details" on page 75** for more information.

Down Displays the total amount of data downloaded by the client.

Up Displays the total amount of data uploaded by the client.

Activity Displays the level of activity for each client.

Bars	Activity Level (Bytes per second)
	Idle
▉	500
▉▉	8000
▉▉▉	64000
▉▉▉▉	512000
▉▉▉▉▉	2048000

Uptime Displays the amount of time the client has been connected for this session.

Actions Click a button to perform the desired action:

- **Block** Click ✕ BLOCK to block this client from accessing the network.

- **Unauthorize/Authorize** (Available for *Guests* only.) Click ✕ UNAUTHORIZE to remove authorization of guest access and disconnect the guest, or click + AUTHORIZE for guests pending authorization.

Properties

The *Properties* tab is hidden by default. To display it, click the *properties* 🔲 icon. The *Properties* tab appears on the right side of the *Clients* screen.

Information about each selected client appears as a popup within this tab. The information varies depending on whether the client is wired or wireless:

- **"Wireless Client – Details" on page 97**
- **"Wired Client – Details" on page 100**
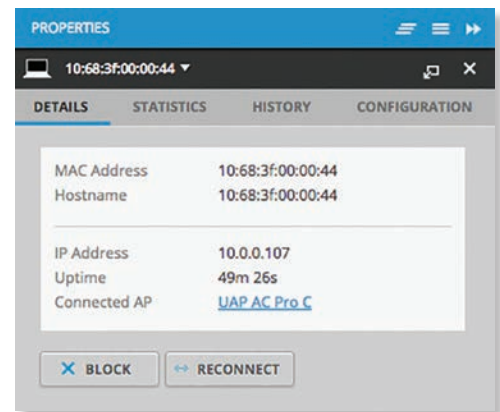
Close Click ▤ to close the *Properties* tab and client popups.

Minimize Click ▤ to close and re-open the client popups.
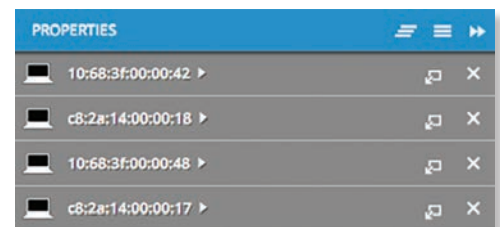
Each row displays the following:

- **(icon)** Displays the icon of the device.
- **Name/MAC Address** Displays the hostname, alias, or MAC address of the client.
- **Display** Click ▶ to display the client information.
- **Detach** Click ⧉ to display the same information in a separate popup screen that can be moved anywhere within the browser screen.
- **Close** Click ✕ to close the client popup.

Hide Click ⏩ to hide the *Properties* tab but allow the client popups to remain accessible from this tab.
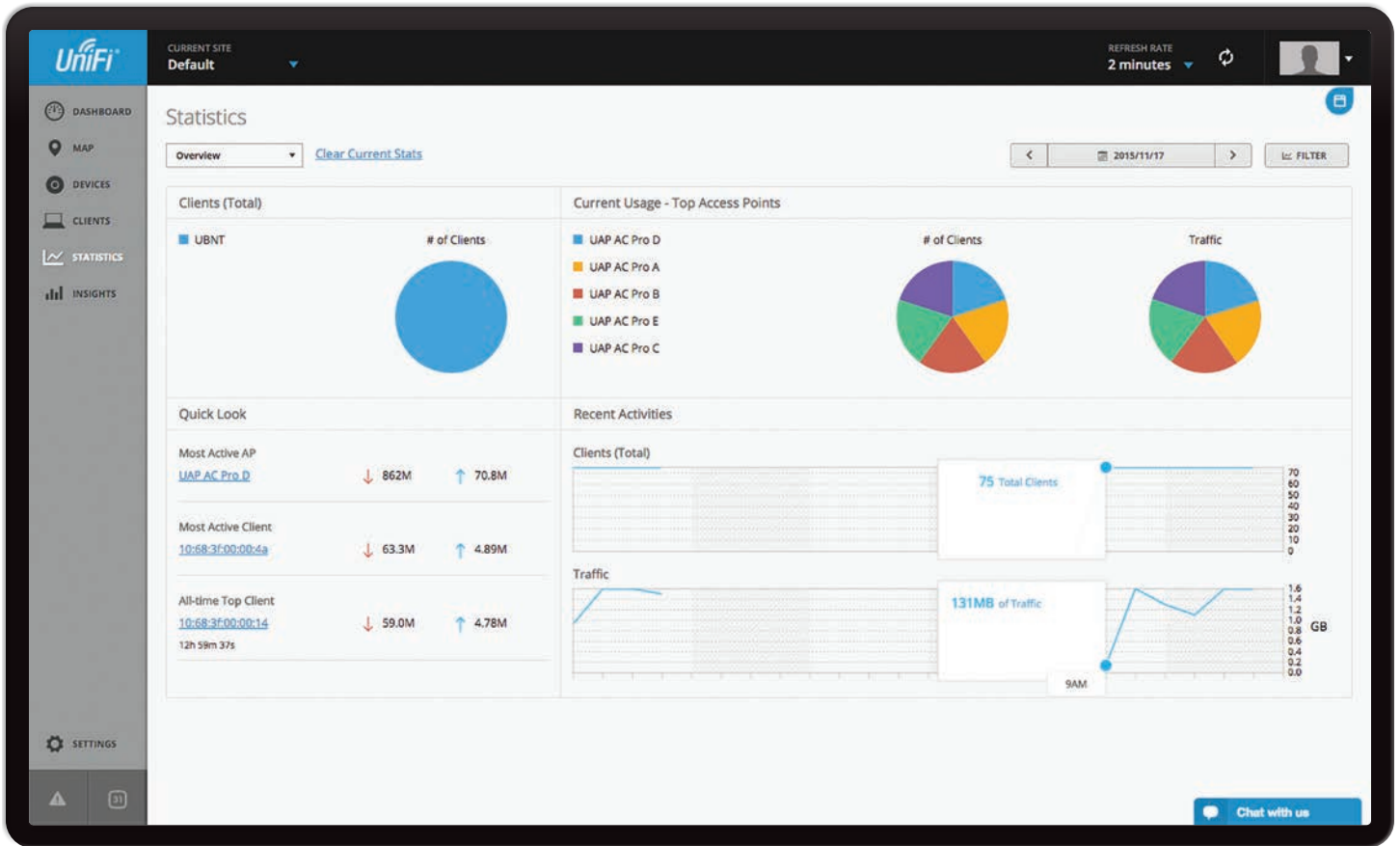
Chapter 8: Statistics

The *Statistics* screen provides a visual representation of the clients and network traffic connected to your managed UniFi network.
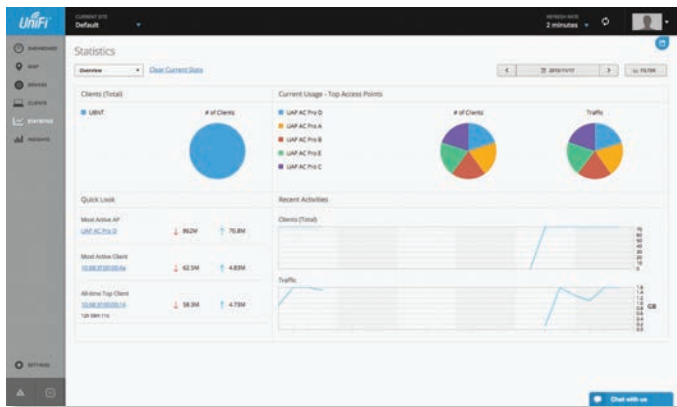
Overview The default view.

Clear Current Stats Reset the current statistics to start over.

Time and Date At the top right of the screen, you can filter by date and time period. You can also change the duration interval by toggling between *24 Hour* and *Month*.

- **Update** Click ✓ UPDATE to apply the new filter.
- **Cancel** Click ✕ CANCEL to discard changes.

Clients (Total)

# of Clients A visual pie chart represents the client distribution amongst the APs. Place the mouse cursor over the chart for the number of clients per network.

Quick Look
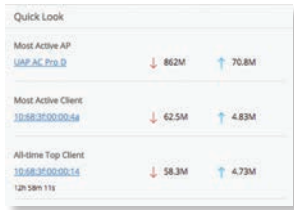
Most Active AP

The details of the most active Access Point are displayed:

Name or MAC address You can click this link to open the *AP Details* screen. See **"UniFi Access Point Details" on page 83** for additional information.

Download Displays the total amount of data downloaded by the AP.

Upload Displays the total amount of data uploaded by the AP.

Most Active Client

The details of the most active client in current use are displayed:

Name or MAC address You can click this link to open the *Client Details* screen. See **"Client Details" on page 97** for additional information.

Download Displays the total amount of data downloaded by the client.

Upload Displays the total amount of data uploaded by the client.

All-Time Top Client

The details of the all-time, most active client are displayed:

Name or MAC address You can click this link to open the *Client Details* screen. See **"Client Details" on page 97** for additional information.

Uptime Displays the duration of time the client has been connected.

Download Displays the total amount of data downloaded by the client.

Upload Displays the total amount of data uploaded by the client.

Current Usage - Top Access Points

The details of the most active Access Points in current use are displayed.
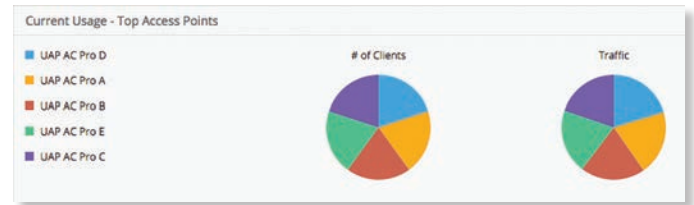
# of Clients A pie chart represents the client distribution on the most active Access Points. Place the mouse cursor over the chart for the number of clients per specified AP.

Traffic A pie chart represents traffic on the most active Access Points. Place the mouse cursor over the chart for the amount of traffic per specified AP.

Recent Activities

The details of recent network activities are displayed.
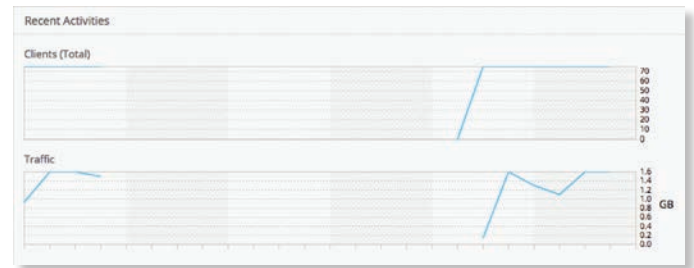
Clients (Total) A graph displays the number of clients connected during the selected time period. Place the mouse cursor over an hour or day to display the exact number.

Traffic A graph displays the network traffic during the selected time period. Place the mouse cursor over an hour or day to display the specific amount of data.

Filter

You can view the number of clients and amount of traffic by device. The *Filter* drop-down list displays managed devices by name or MAC address and amount of traffic.

Click the appropriate device from the *Filter* drop-down list.

A second line that is color-coded to the selected device appears in the time period selected.
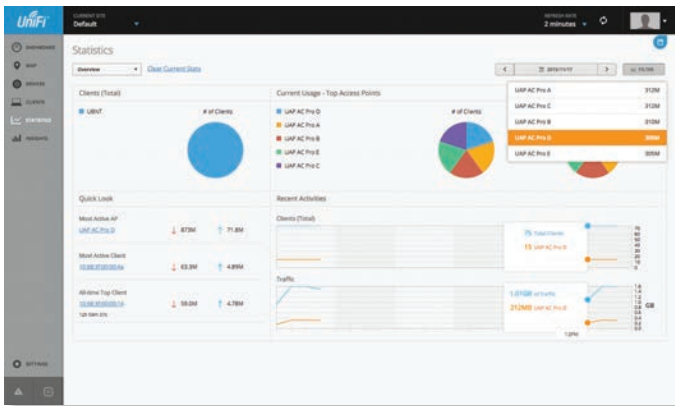
You can place your mouse over an hour or day to display the number of clients and amount of data in total and per the selected device.
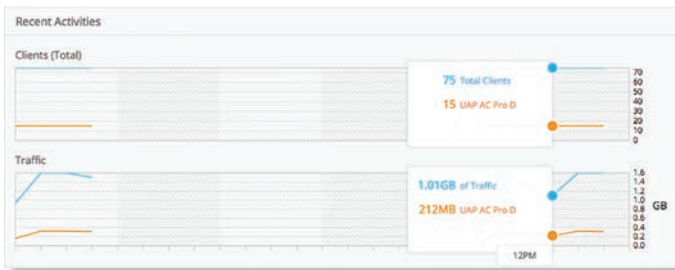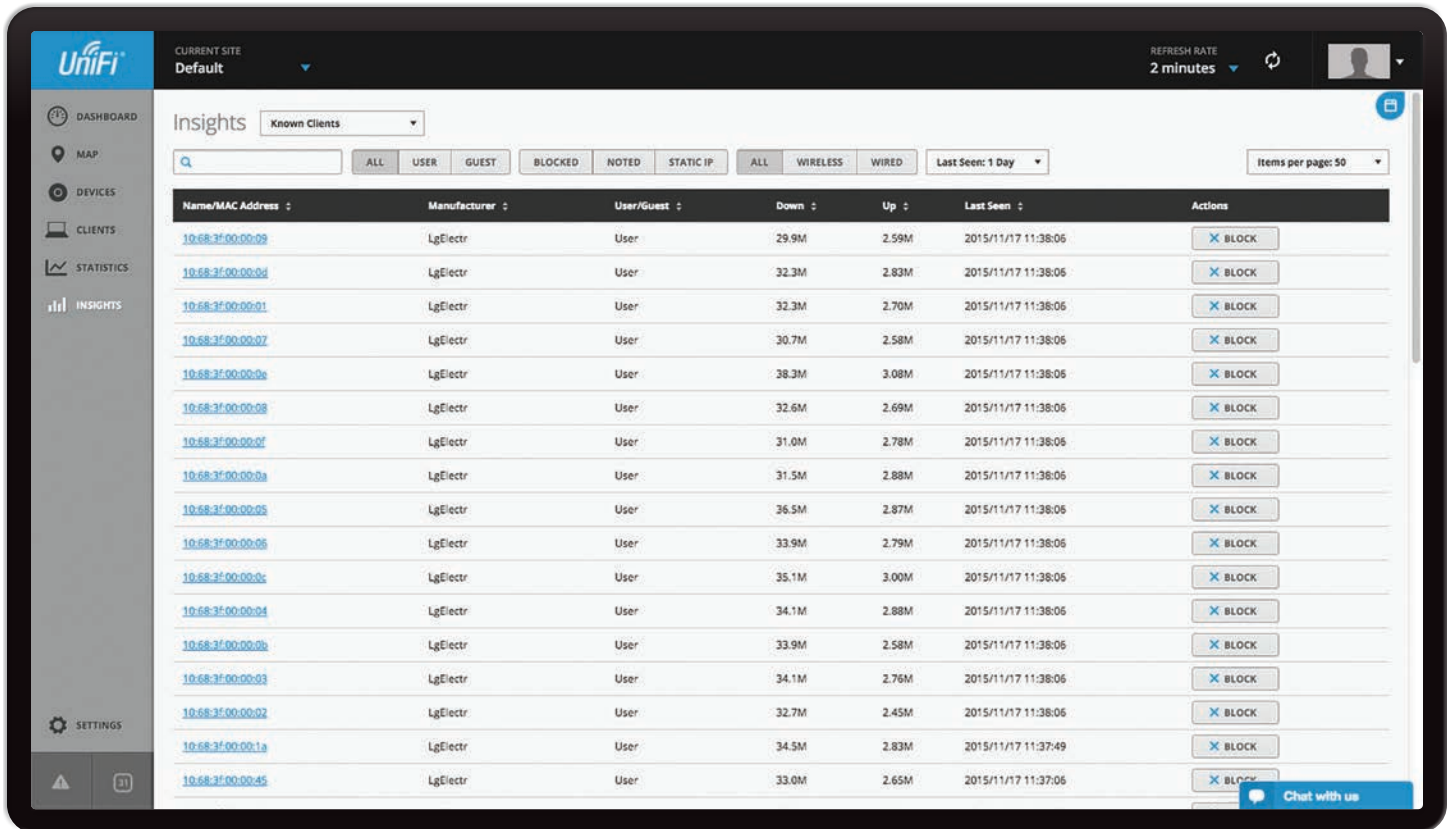
Chapter 9: Insights

The *Insights* screen displays different kinds of status information. Eight filters are available:

- **Known Clients** Displays information about detected clients.
- **Rogue Access Points** Displays information about wireless devices not managed by the UniFi Controller.
- **Past Connections** Displays information about previous client connection sessions (for example, a client can have multiple sessions from different days).
- **Past Guest Authorizations** Displays information about the authorization of previous guest connections.
- **Switch Stats** Displays information about the status, ports, PoE, and traffic activity of the UniFi Switches.
- **Remote User VPN** Displays information about the remote user VPN connections.
- **Dynamic DNS** Displays information about the use of DDNS services.
- **Port Forward Stats** Displays information about the port forwarding entries used by the UniFi Security Gateway.

These sub-tabs share common options:

Search Enter the text you want to search for. Simply begin typing; there is no need to press **Enter**.

Items per page Select how many results are displayed per page: **10**, **50**, **100**, or **200**.

On any sub-tab, you can click any of the column headers to change the list order.

If there is more than one page of entries to display, click the navigation controls or page numbers at the bottom right of the screen to display different pages.

Known Clients
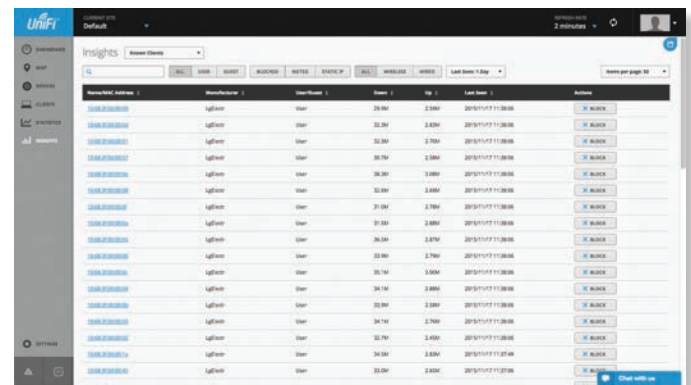
You can apply one of the following primary filters:

- **All** Display all users and guests.
- **User** Only display users.
- **Guest** Only display guests.

A secondary filter is available:

- **Blocked** Only display blocked clients.
- **Noted** Only display clients whose configurations include notes. (See **"Wireless Client – Configuration" on page 99** or **"Wired Client – Configuration" on page 101** for more information.)
- **Static IP** Only display clients using static IP addresses.

A tertiary filter is available:

- **All** Display all clients, regardless of connection type.
- **Wireless** Display all wireless clients.
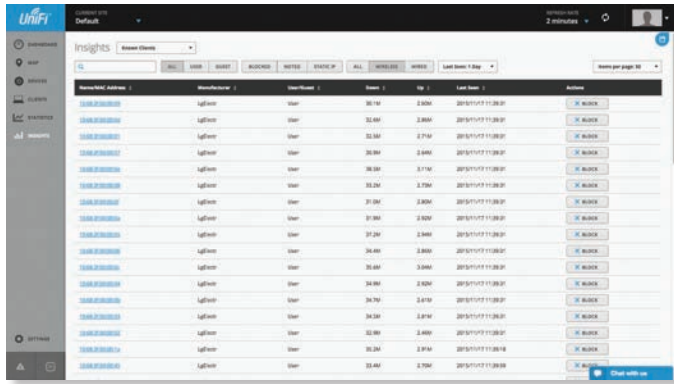
- **Wired** Display all wired clients.
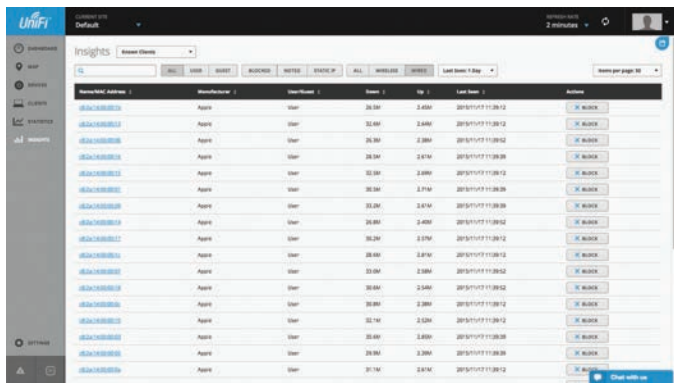
Last Seen Filter the results on the page based on the date the client was last seen. Select **1 Day**, **3 Days**, **7 Days**, **2 Weeks**, **1 Month**, **2 Months**, or **1 Year**.

Name/MAC Address Displays the hostname, alias, or MAC address of the connected client. You can click the name to get additional details; see **"Client Details" on page 97** for more information.

Manufacturer Displays the name of the device manufacturer.

User/Guest Indicates whether the client is/was connected to a primary or guest network.

Down Displays the total amount of data downloaded by the client.

Up Displays the total amount of data uploaded by the client.

Last Seen Displays the last date and time the client was connected.

Actions Click a button to perform the desired action:

- **Block** Click ✕ BLOCK to block this client from accessing the network.
- **Reconnect** Click ↔ RECONNECT to reconnect a wireless client. You can click ↔ RECONNECT to kick out a client, which usually reconnects back quickly; this is useful for troubleshooting or resolving a problematic wireless connection.
- **Unauthorize/Authorize** (Available for *Guests* only.) Click ✕ UNAUTHORIZE to remove authorization of guest access and disconnect the guest, or click ↔ AUTHORIZE for guests pending authorization.

Rogue Access Points
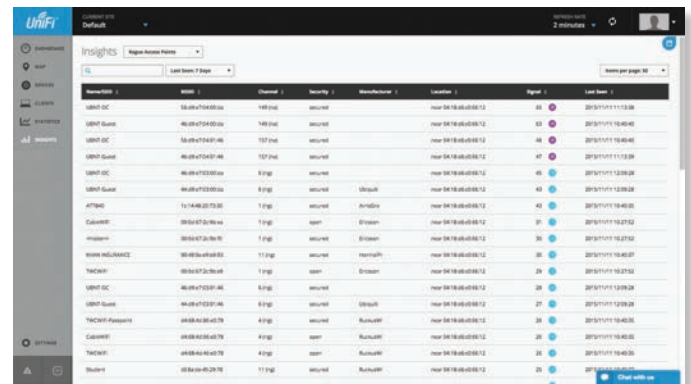
Last Seen Filter the results on the page based on the time the AP was last seen. Select **1 Day**, **3 Days**, **7 Days**, **2 Weeks**, **1 Month**, **2 Months**, or **1 Year**.

Name/SSID Displays the name of the wireless network.

BSSID Displays the MAC address of the AP's wireless interface.

Channel Displays the channel setting that the AP was detected on.

Security Displays the security status indicating whether encryption is used.

Manufacturer Displays the name of the AP manufacturer.

Location Displays the name of the closest AP managed by the UniFi Controller. You can click the name to get additional details on the AP.

Signal Displays the signal strength level and signal type:

Icon	Clients	Mode
ac	5 GHz (802.11ac)	Active
ac	5 GHz (802.11ac)	Power Save
n	5 GHz (802.11n)	Active
n	5 GHz (802.11n)	Power Save
n	2.4 GHz (802.11n)	Active
n	2.4 GHz (802.11n)	Power Save
g	2.4 GHz (802.11g)	Active
g	2.4 GHz (802.11g)	Power Save
b	2.4 GHz (802.11b)	Active
b	2.4 GHz (802.11b)	Power Save

Last Seen Displays the last date and time the AP was connected.

Past Connections

You can apply one of the following filters:

- **All** Display all users and guests.
- **User** Only display users.
- **Guest** Only display guests.

Time and Date You can filter by time and date period. You can also change the duration interval by toggling between *1 Hour*, *24 Hour,* and *7 Days*.

- **Update** Click ✓ UPDATE to apply the new filter.
- **Cancel** Click ✕ CANCEL to discard changes.

Name/MAC Address Displays the hostname, alias, or MAC address of the connected client. You can click the name to get additional details; see **"Client Details" on page 97** for more information.

User/Guest Indicates whether the client is/was connected to a primary or guest network.

Associated Displays the date and time the client first connected.

Duration Displays the length of time the client was connected.

Down Displays the total amount of data downloaded by the client.

Up Displays the total amount of data uploaded by the client.

IP Displays the last known IP address of the client.

Last AP/Port Displays the name or MAC address of the last AP used by the wireless client or the last port used by the wired client. You can click the device name for more information; refer to **"UniFi Access Point Details" on page 83** or **"UniFi Switch Details" on page 75** .

Past Guest Authorizations

Time and Date You can filter by time and date period. You can also change the duration interval by toggling between *1 Hour*, *24 Hour,* and *7 Days*.

- **Update** Click ✓ UPDATE to apply the new filter.
- **Cancel** Click ✕ CANCEL to discard changes.

Name/MAC Address Displays the hostname, alias, or MAC address of the previous guest.

Package Displays the name of the guest access package.

Amount Displays the amount paid by the guest.

Authorized By Displays the name of the authorizing body.

Start Displays the start date and time of the session.

Duration Displays the length of time the guest was connected.

Down Displays the total amount of data downloaded by the guest.

Up Displays the total amount of data uploaded by the guest.

IP Displays the last known IP address of the guest.

Last AP/Port Displays the name or MAC address of the last AP used by the wireless guest or the last port used by the wired guest. You can click the device name for more information; refer to **"UniFi Access Point Details" on page 83** or **"UniFi Switch Details" on page 75** .

Switch Stats

You can apply one of the following primary filters:

- **Switch** Displays the ports of all UniFi Switches or a specific Switch.
- **Link Status** Displays the ports of the specified status:
  - **All** Displays all ports.
  - **Connected** Displays all connected ports.
  - **Disconnected** Displays all disconnected ports.

Once you have applied the primary filters, then apply a secondary filter:

- **Overview** Displays the general status information of each port.
- **PoE** Displays the specific PoE configuration and status of each port.
- **Counters** Displays the specific TX and RX rates for each port.

Overview
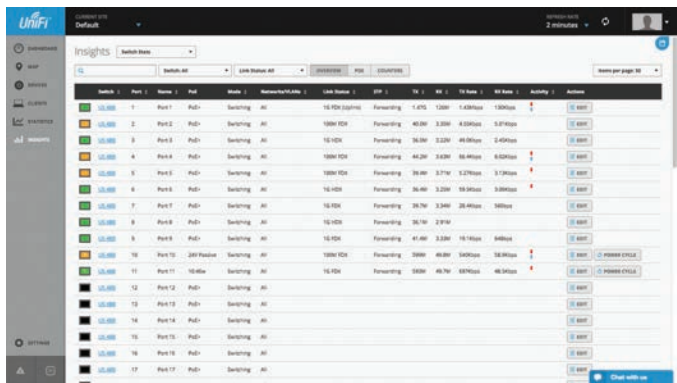
The ports display their status:

- Indicates a 10/100 Mbps connection.
- Indicates 10/100 Mbps connection with PoE.
- Indicates a 1000 Mbps connection.
- Indicates 1000 Mbps connection with PoE.
- Indicates the conection is disabled (no network or VLAN is enabled).
- Indicates no connection (the network or VLAN is enabled, but the port is not in use).

Switch If *Switch: All* is selected, then this displays the hostname, alias, or MAC address of the UniFi Switch. You can click the name to get additional details. For more information, see **"UniFi Switch Details" on page 75**.

Port Displays the port number.

Name Displays the name of the port.

PoE Displays the PoE setting:

- **Disabled** PoE is disabled.
- **24V Passive** 24V passive PoE is enabled.
- **PoE+** 802.3at/af devices can be plugged in and automatically receive PoE.

Mode Displays the operation mode:

- **Switching** The default mode.
- **Mirroring** The network traffic of this port will receive the mirrored traffic from the port selected in **"Port Configuration" on page 77**.
- **Aggregate** This port is part of an aggregate link. A port channel, also known as a Link Aggregation Group (LAG), combines multiple links into a single logical link (single IP address) for load balancing and/or redundancy.

Networks/VLANs Displays the networks/VLANs that the port belongs to.

Link Status Displays the connection speed and duplex mode.

STP Displays the STP (Spanning Tree Protocol) mode.

TX Displays the amount of data transmitted.

RX Displays the amount of data received.

TX Rate Displays the transmit rate.

RX Rate Displays the receive rate.

Activity Displays the level of activity. The different colors represent different types of packet activity.

Color	Packet Activity
	TX rate
	RX rate

You can place your mouse over the *Activity* icon to display the specific TX or RX rate.
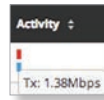
Actions Click a button to perform the desired action:

• **Edit** Click 📝 EDIT to make changes to the port settings. For more information, see **"UniFi Switch Details" on page 75**.

• **Power Cycle** If applicable, click ⟳ POWER CYCLE to power cycle the port.

PoE

You can apply the *PoE Mode* filter:

• **All** Displays all ports using any *PoE Mode* setting.

• **Enabled** Displays all ports set to *PoE+* or *24V Passive*.

• **Power On** Displays all ports with PoE detected.

• **Passive** Displays all ports set to *24V passive PoE*.

• **Disabled** Displays all ports with PoE disabled.
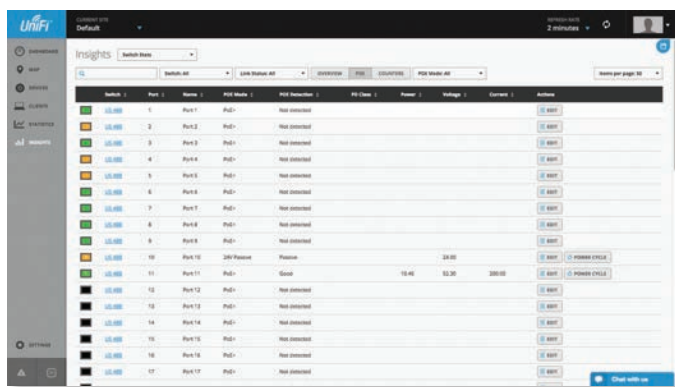
The ports display their status:

🟧 Indicates a 10/100 Mbps connection.

⚡ Indicates 10/100 Mbps connection with PoE.

🟩 Indicates a 1000 Mbps connection.

⚡ Indicates 1000 Mbps connection with PoE.

▬ Indicates the conection is disabled (no network or VLAN is enabled).

▬ Indicates no connection (the network or VLAN is enabled, but the port is not in use).

Switch If *Switch: All* is selected, then this displays the hostname, alias, or MAC address of the UniFi Switch. You can click the name to get additional details. For more information, see **"UniFi Switch Details" on page 75**.

Port Displays the port number.

Name Displays the name of the port.

PoE Mode Displays the PoE setting:

• **Disabled** PoE is disabled.

• **24V Passive** 24V passive PoE is enabled.

• **PoE+** 802.3at/af devices can be plugged in and automatically receive PoE.

PoE Detection Displays the PoE status:

• **Not detected** No 802.3at/af device is detected.

• **Passive** 24V passive PoE is enabled.

• **Good** An 802.3at/af device is plugged in and automatically receiving PoE.

PD Class Displays the PD (Powered Device) class of the detected device, if applicable; this indicates its power requirements.

Power Displays the power output in watts, if applicable.

Voltage Displays the voltage output, if applicable.

Current Displays the current output in amperes, if applicable.

Actions Click a button to perform the desired action:

• **Edit** Click 📝 EDIT to make changes to the port settings. For more information, see **"UniFi Switch Details" on page 75**.

• **Power Cycle** If applicable, click ⟳ POWER CYCLE to power cycle the port.

Counters
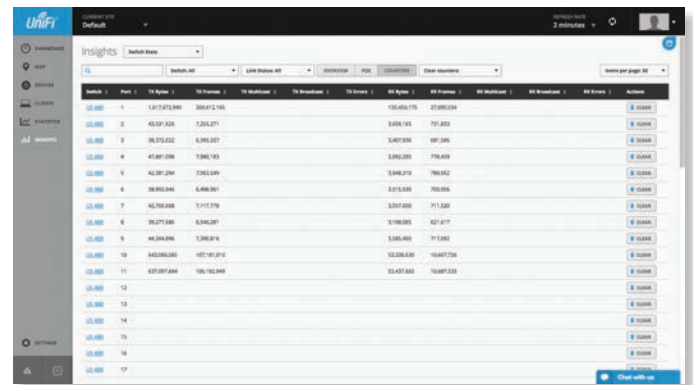
Clear counters Select one of the following:

• **All** Resets all counters to zero.

• **(switch_name)** Resets the counters of the selected UniFi Switch to zero.

Switch If *Switch: All* is selected, then this displays the hostname, alias, or MAC address of the UniFi Switch. You can click the name to get additional details. For more information, see **"UniFi Switch Details" on page 75**.

Port Displays the port number.

TX Bytes Displays the number of bytes transmitted.

TX Frames Displays the number of frames transmitted.

TX Multicast Displays the number of multicast packets transmitted.

TX Broadcast Displays the number of broadcast packets transmitted.

TX Errors Displays the number of error packets transmitted.

RX Bytes Displays the number of bytes received.

RX Frames Displays the number of frames received.

RX Multicast Displays the number of multicast packets received.
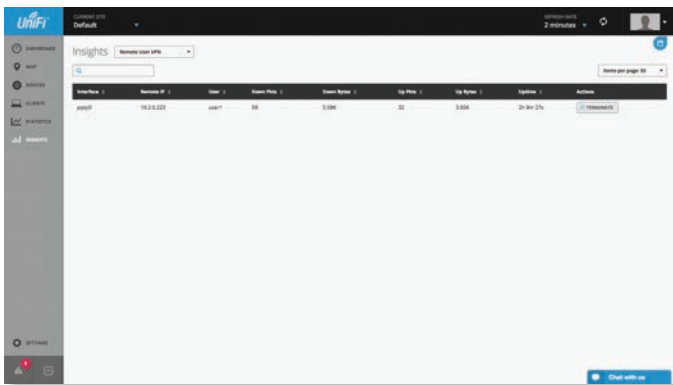
RX Broadcast Displays the number of broadcast packets received.

RX Errors Displays the number of error packets received.

Actions Click a button to perform the desired action:

- **Clear** Click 🗑 CLEAR to reset the port counters to zero.

Remote User VPN

Interface Displays the interface being used.

Remote IP Displays the IP address of the remote user.

User Displays the username of the remote user.

Down Pkts Displays the amount of data downloaded as packets.

Down Bytes Displays the amount of data downloaded as bytes.

Up Pkts Displays the amount of data uploaded as packets.
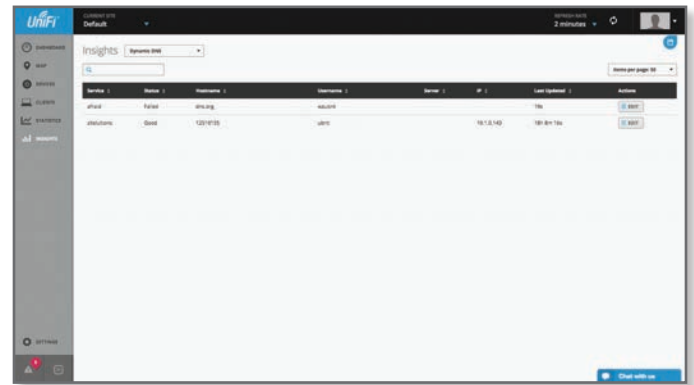
Up Bytes Displays the amount of data uploaded as bytes.

Uptime Displays the duration of time the VPN tunnel has been active without interruption.

Actions Click a button to perform the desired action:

- **Terminate** Click ⚡ TERMINATE to end the VPN tunnel.

Dynamic DNS

Service Displays the name of the DDNS service.

Status Displays the status of the latest DDNS update.

Hostname Displays the hostname registered with the DDNS service.

Username Displays the username of the DDNS account.

Server Displays the IP address or hostname of the DDNS server that should receive DDNS updates.

IP Displays the WAN (public) IP address of the hostname.

Last Updated Displays the duration of time since the hostname IP address was last updated.

Actions Click a button to perform the desired action:

- **Edit** Click 🖉 EDIT to make changes to the UniFi Security Gateway settings. For more information, see **"UniFi Security Gateway Details" on page 67**.

Port Forward Stats

You can apply one of the following primary filters:

- **All** Displays all port forwarding entries.
- **User-Defined** Displays the user-defined port forwarding entries.
- **UPnP** Displays the UPnP port forwarding entries.

All

Name Displays the name of the port forwarding entry.

Protocol Displays the protocol that will be forwarded.

Port Displays the port or ports that will be forwarded to the LAN. Also known as the external port(s).

Forward IP Displays the destination IP address that will receive the forwarded port traffic.

Forward Port Displays the destination port or ports that will receive the forwarded port traffic. Also known as the internal port(s).

Packets Displays the number of packets transferred.

Bytes Displays the number of bytes transferred.

Actions Click a button to perform the desired action:

- **Edit** Click ⧉ EDIT to make changes to the UnFi Security Gateway settings. For more information, see **"UniFi Security Gateway Details" on page 67**.

User-Defined
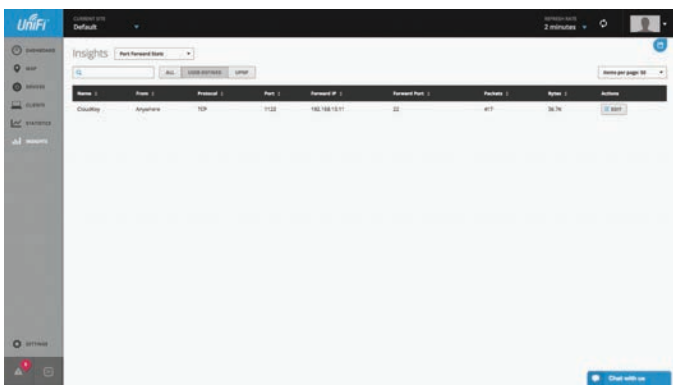
Name Displays the name of the port forwarding entry.

From Displays the source IP address, if specified.

Protocol Displays the protocol that will be forwarded.

Port Displays the port or ports that will be forwarded to the LAN. Also known as the external port(s).

Forward IP Displays the destination IP address that will receive the forwarded port traffic.

Forward Port Displays the destination port or ports that will receive the forwarded port traffic. Also known as the internal port(s).

Packets Displays the number of packets transferred.

Bytes Displays the number of bytes transferred.

Actions Click a button to perform the desired action:

- **Edit** Click ⧉ EDIT to make changes to the UnFi Security Gateway settings. For more information, see **"UniFi Security Gateway Details" on page 67**.

UPnP

Name Displays the name of the port forwarding entry.

Protocol Displays the protocol that will be forwarded.

Port Displays the port or ports that will be forwarded to the LAN. Also known as the external port(s).

Forward IP Displays the destination IP address that will receive the forwarded port traffic.

Forward Port Displays the destination port that will receive the forwarded port traffic. Also known as the internal port.

Packets Displays the number of packets transferred.

Bytes Displays the number of bytes transferred.

Lease Duration Displays the uptime of the port forwarding entry.

Chapter 10: UniFi Security Gateway Details

The UniFi Security Gateway hyperlink opens the UniFi Security Gateway's *Details* window either in the *Properties* tab or as a separate popup window. You can always dock this window in the *Properties* tab or detach it as a separate window.

The top of the window displays the device icon and name (or MAC address).

Properties

The *Properties* tab is hidden by default. To display it, click the *properties* 🔲 icon. The *Properties* tab appears on the right side of the screen.

Information about each selected device appears as a popup within this tab.

Close Click 🔳 to close the *Properties* tab and device popups.

Minimize Click 🔳 to close and re-open the device popups.

Each row displays the following:

- **(icon)** Displays the icon of the device (the icon will vary depending on the model).
- **Name/MAC Address** Displays the hostname, alias, or MAC address of the device.
- **Display** Click ▶ to display the device information.
- **Detach** Click 🔲 to display the same information in a separate popup screen that can be moved anywhere within the browser screen.
- **Close** Click ✕ to close the device popup.

Hide Click ➤➤ to hide the *Properties* tab but allow the device popups to remain accessible from this tab.

If you are using the USG-PRO-4 model, then the upper part of the detached popup screen has four icons:

- *LAN1*
- *LAN2*
- *WAN1*
- *WAN2*

If you are using the USG model, then the upper part of the detached popup screen has three icons:

- *WAN*
- *LAN*
- *VOIP* (enabled in **"Settings > VoIP" on page 29**)

A green icon indicates an active port, and a black icon indicates no activity. A gray icon indicates a disabled port (VoIP requires UniFi Controller v4.6 or higher).

There are four clickable tabs:

The bottom of the window has three buttons:

- **Locate** Click ![LOCATE] to flash the Status LED on the Gateway and the Gateway's icon on the *Map* tab so you can locate it. The LED will flash until the *Locate* button is clicked again. (The icon on the *Map* tab will flash three times and stop.)
- **Restart** Click ![RESTART] to restart the Gateway.
- **Upgrade** If a software upgrade is available for the Gateway, click ![UPGRADE] to install the latest UniFi firmware on the Gateway. The *Status* will appear as *Upgrading* until the process is complete and the Gateway reconnects to the UniFi Controller software.

UniFi Security Gateway – Details

Click **Details** to display the device specifics, LAN/WAN connection details, and uptime.
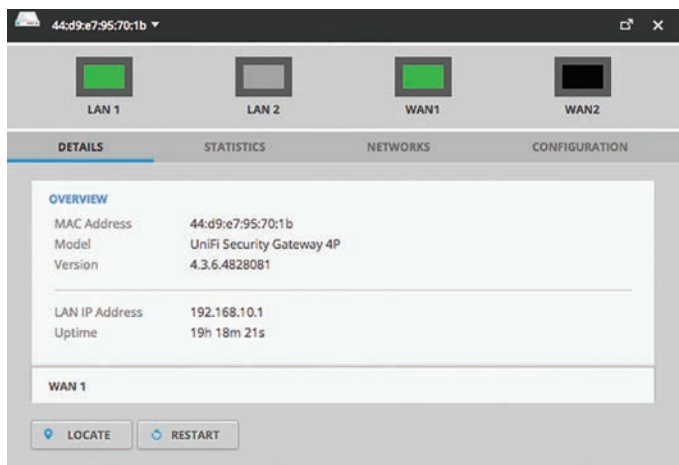
Overview

Overview

MAC Address Displays the MAC address or unique hardware identifier of the Gateway.

Model Displays the model name of the Gateway.

Version Displays the version number of the Gateway's firmware.

LAN IP Address Displays the local IP address of the Gateway.

Uptime Displays the duration of time the Gateway has been running without interruption.

WAN

The number of *WAN* sections will vary depending on the number of active WAN ports.
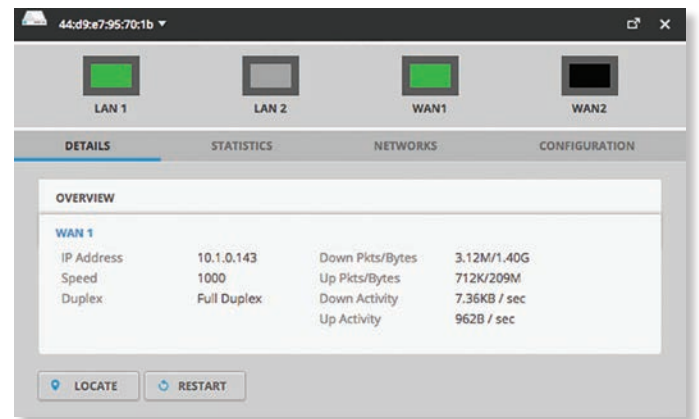
Overview

IP Address Displays the WAN (public) IP address of the WAN interface.

Speed Displays the connection speed in Mbps.

Duplex Displays the mode, *Full Duplex* or *Half Duplex*.

Down Pkts/Bytes Displays the amount of data downloaded as packets and bytes.

Up Pkts/Bytes Displays the amount of data uploaded as packets and bytes.

Down Activity Displays the level of download activity in Bytes per second.

Up Activity Displays the level of upload activity in Bytes per second.

UniFi Security Gateway – Statistics

Click **Statistics** to display the bandwidth usage information, which is available if the DPI feature is enabled (refer to **"Settings > Site" on page 18** for more information).
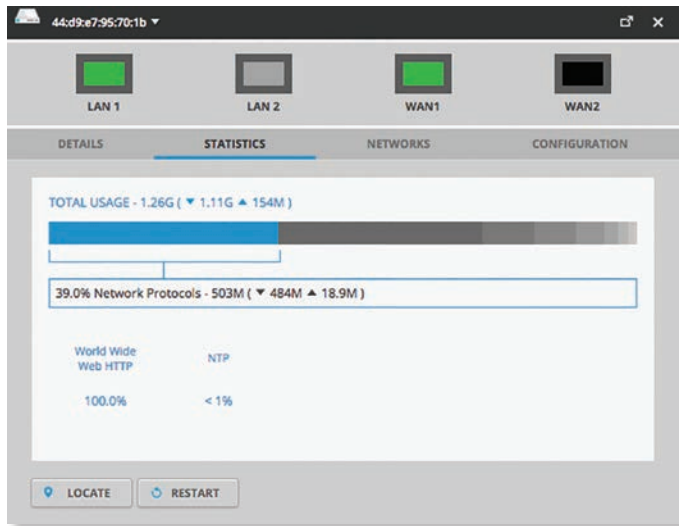
Total Usage Displays the following:

- Total bandwidth usage
- Total download bandwidth usage
- Total upload bandwidth usage

(DPI category) Displays the following:

- Percentage of total bandwidth used
- DPI category name
- Total bandwidth usage
- Download bandwidth usage
- Upload bandwidth usage

(DPI subcategory) Displays the following:

- DPI subcategory name
- Percentage of bandwidth used within the DPI category

You can click the DPI subcategory to view the DPI subcategory usage broken down by client:
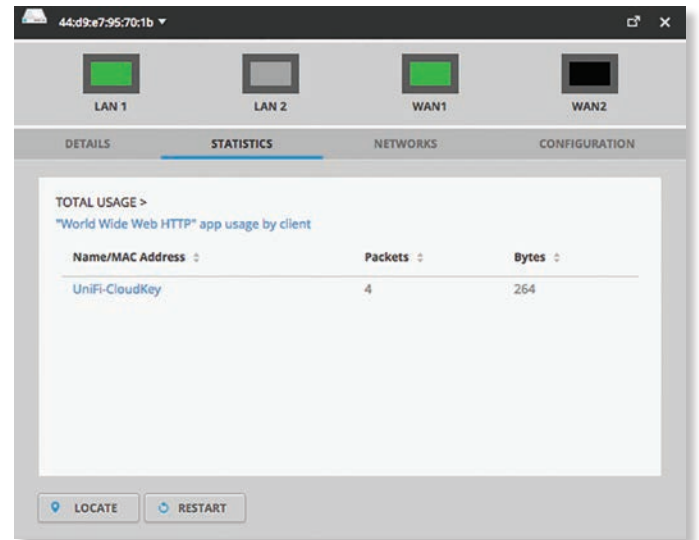
- **Name/MAC Address** Displays the hostname, alias, or MAC address of the connected client. You can click the name to get additional details; see **"Client Details" on page 97** for more information.
- **Packets** Displays the number of packets transferred.
- **Bytes** Displays the number of bytes transferred.

UniFi Security Gateway – Networks

Click **Networks** to display the network name, IP address, TX and RX throughput, and number of clients.
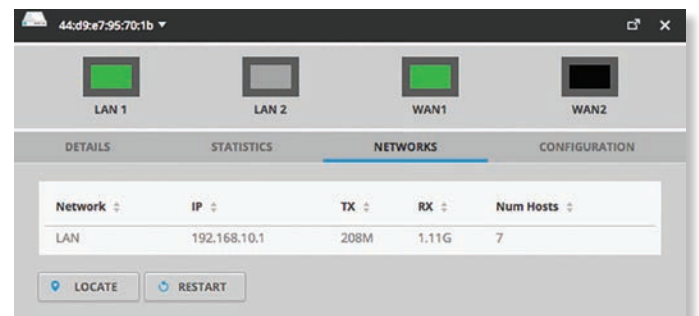
Network Displays the name of the network.

IP Displays the local IP address of the network.

TX Displays the outgoing (transmit) throughput.

RX Displays the incoming (receive) throughput.

Num Hosts Displays the number of clients on the network.

UniFi Security Gateway – Configuration

Click **Configuration** to configure the alias, WAN settings, and port forwarding entries. You can also move the Gateway to another site.

Config
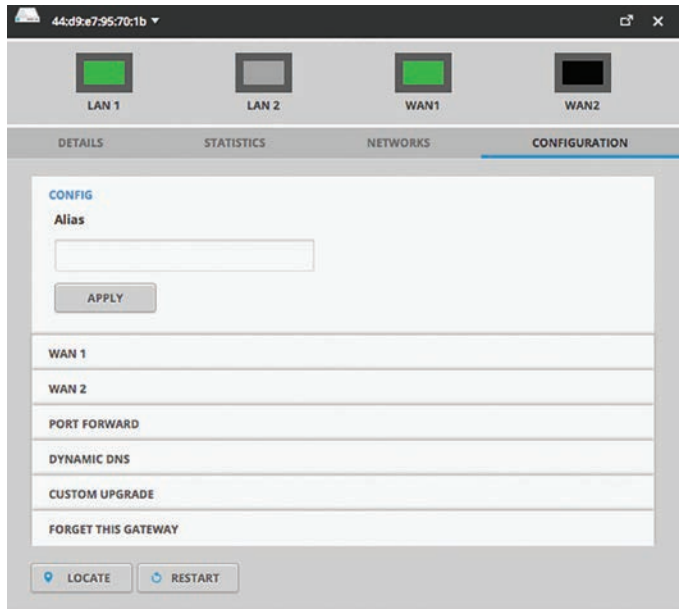
Alias Displays the customizable name or identifier of the Gateway. The *Alias* is also known as the host name.

Apply Click **Apply** to save the change.

WAN 1/2

Connection Type Select the Internet connection type for your service.
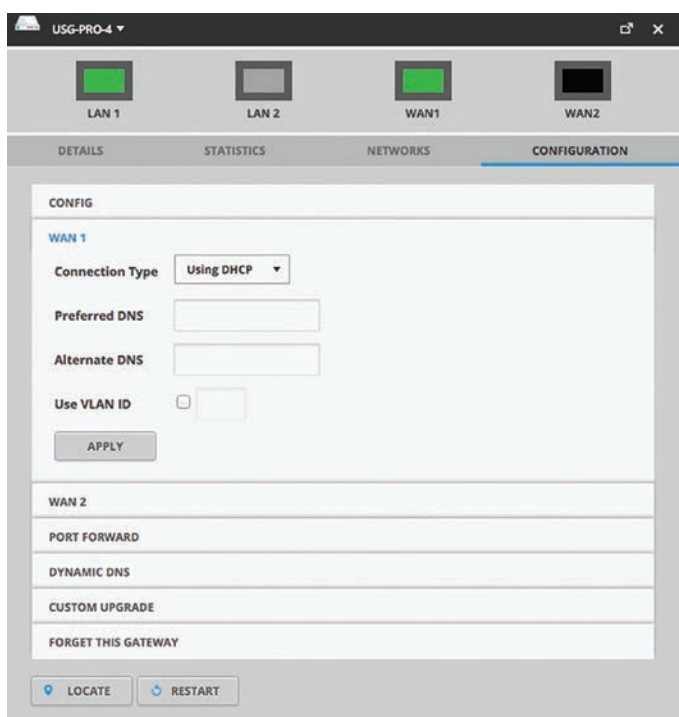
- **Using DHCP** The use of the Dynamic Host Configuration Protocol (DHCP) is the default. The Gateway automatically acquires network settings from the service provider's DHCP server.

  - **Preferred DNS** Enter the IP address of the service provider's primary DNS server.

  - **Alternate DNS** Enter the IP address of the service provider's secondary DNS server.

- **Use VLAN ID** To use a VLAN, select **Use VLAN ID** and enter the VLAN ID number.

- **Apply** Click **Apply** to save changes.
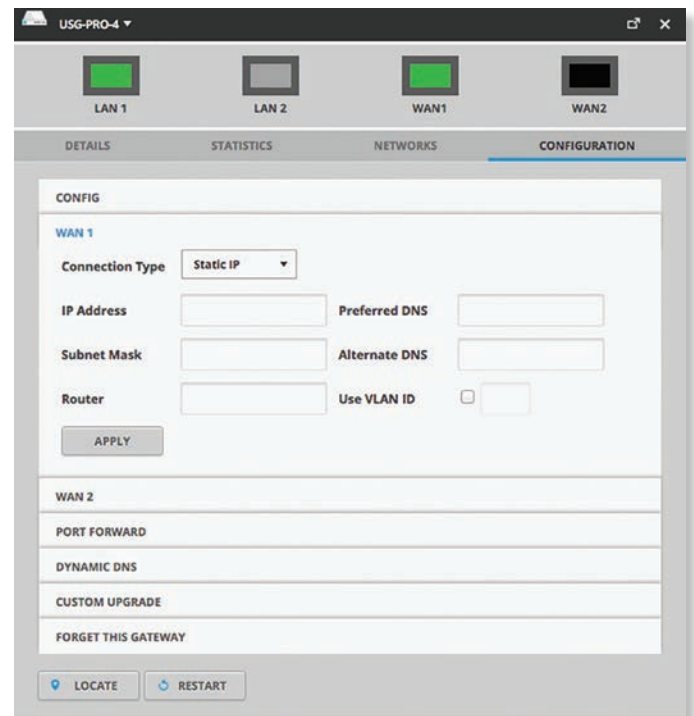
- **Static IP** The service provider assigns fixed network settings to your service for manual entry. Enter the following information:

  - **IP Address** Enter the Internet IP address of the Gateway.

  - **Subnet Mask** Enter the subnet mask of the Gateway.

  - **Router** Enter the IP address of the service provider's gateway router.

  - **Preferred DNS** Enter the IP address of the service provider's primary DNS server.

  - **Alternate DNS** Enter the IP address of the service provider's secondary DNS server.

- **Use VLAN ID** To use a VLAN, select **Use VLAN ID** and enter the VLAN ID number.

- **Apply** Click **Apply** to save changes.
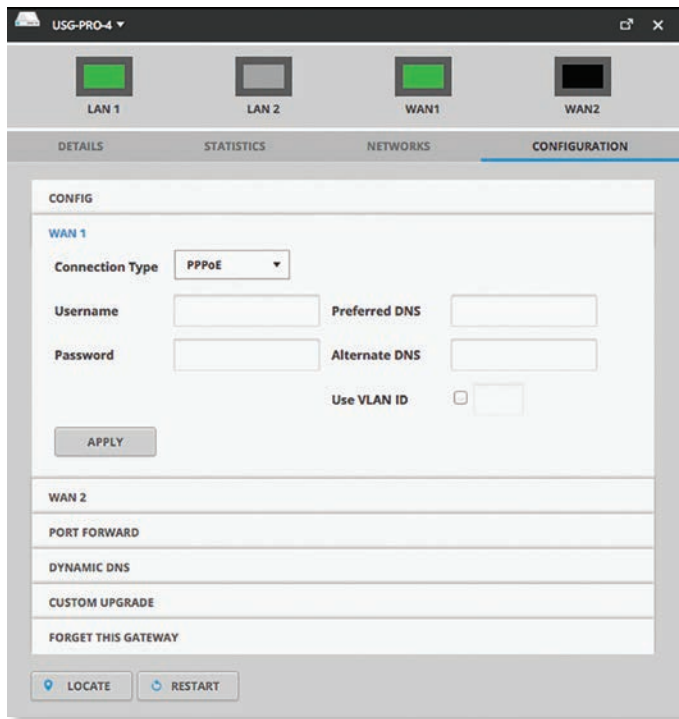
- **PPPoE** Point-to-Point Protocol over Ethernet (PPPoE) is a virtual private and secure connection between two systems that enables encapsulated data transport. Enter the following information:
  - **Username** Enter the username used to connect to the PPPoE server.
  - **Password** Enter the password used to connect to the PPPoE server.
  - **Preferred DNS** Enter the IP address of the service provider's primary DNS server.
  - **Alternate DNS** Enter the IP address of the service provider's secondary DNS server.
- **Use VLAN ID** To use a VLAN, select **Use VLAN ID** and enter the VLAN ID number.
- **Apply** Click **Apply** to save changes.
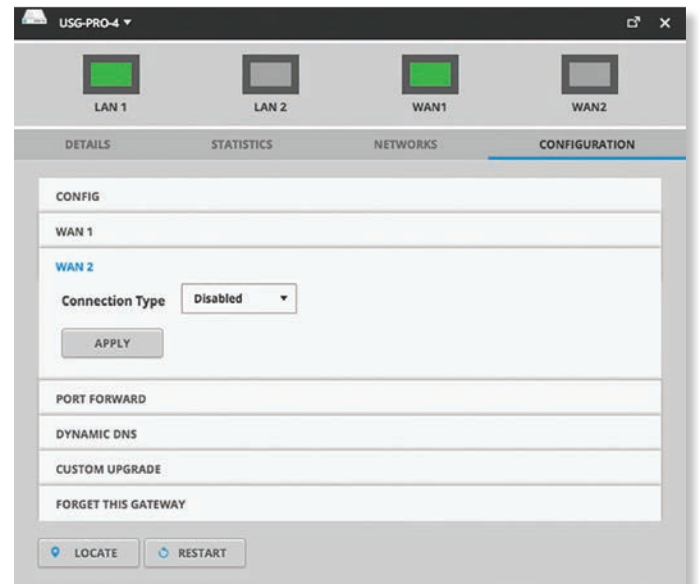
- **Disabled** If you are not using the *WAN 2* port, then select **Disabled**.
- **Apply** Click **Apply** to save your change.

Port Forward
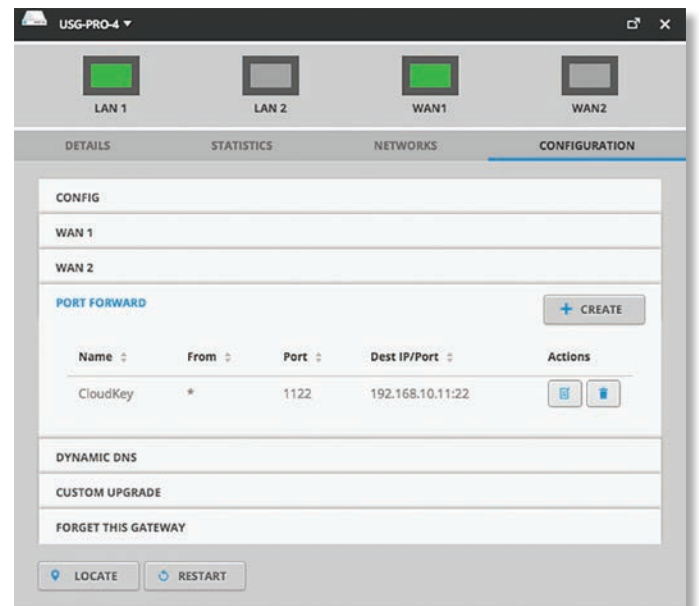
Create Click to add a new entry. Go to **"Create or Edit Port Forwarding Entry" on page 72**.

Name Displays the name of the port forwarding entry.

From Displays the source IP address, if specified.

Port Displays the port or ports that will be forwarded to the LAN. Also known as the external port(s).

Dest IP/Port Displays the destination IP address and port(s) that will receive the forwarded port traffic. Also known as the internal port(s).

Actions Click a button to perform the desired action:

- **Edit** Click to edit the port forwarding entry.
- **Delete** Click to delete the port forwarding entry.

Create or Edit Port Forwarding Entry

Name Enter a name to identify this port forwarding entry.

From The default is *Anywhere*, which accepts traffic from any source IP address. To specify a source IP address, select **Limited** and enter the source IP address in the field provided.

Port Enter the port or ports that will be forwarded to the LAN (also known as the external port or ports). You can identify the port or ports by name, number, and/or range. To specify multiple ports, use a comma-separated list (example: *20-23,554*).

Forward IP Enter the LAN IP address that will receive the forwarded port traffic.

Forward Port Enter the port or ports that will receive the forwarded port traffic (also known as the internal port). You can identify the port or ports by name, number, and/or range. If you do not specify this port, then the original destination port of the traffic will be used.

Advanced Options

Protocol Select the protocol that will be forwarded: **Both**, **TCP**, or **UDP**.

Apply Click **Apply** to save changes.

Cancel Click *Cancel* to discard changes.

Dynamic DNS

Create Click ＋ CREATE to add a new entry. Go to the *Create or Edit DDNS Entry* section on the next page.

Service Displays the name of your Dynamic DNS (DDNS) service provider.

Hostname Displays the host name of the device.

Username Displays the user name of the DDNS account.

Password Displays the password of the DDNS account.

Server Displays the address of your DDNS server.

Actions Click a button to perform the desired action:

• **Edit** Click 🖉 to edit the DDNS entry.

• **Delete** Click 🗑 to delete the DDNS entry.

Create or Edit DDNS Entry

Service If available, select your DDNS service provider from the drop-down list.

Hostname Enter the host name of the device, which has to be updated on the DDNS server. For example: *sample.ddns.com*

Username Enter the user name of the DDNS account.

Password Enter the password of the DDNS account.

Server Enter the address of your DDNS server.

Apply Click **Apply** to save changes.

Cancel Click *Cancel* to discard changes.

Custom Upgrade

For firmware upgrades, the UniFi devices retrieve the latest firmware from the Ubiquiti website. To specify firmware saved in a custom location, select this option.
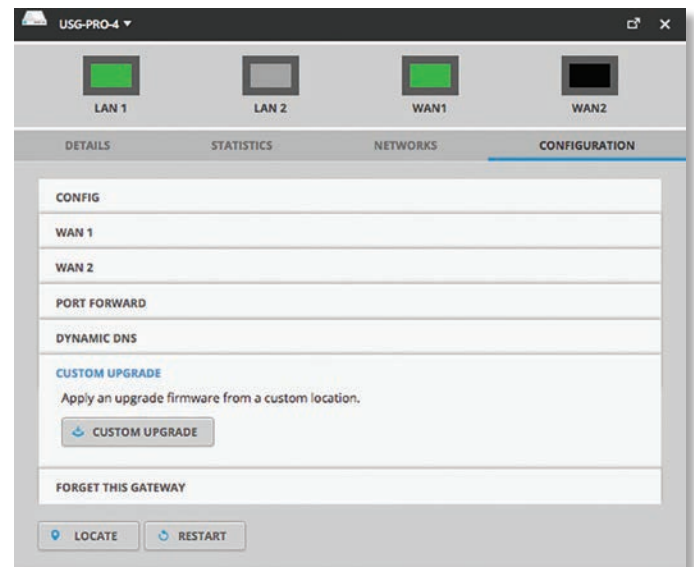
Custom Upgrade Click ⬇ CUSTOM UPGRADE to upgrade the firmware from a location you specify.

Forget This Gateway
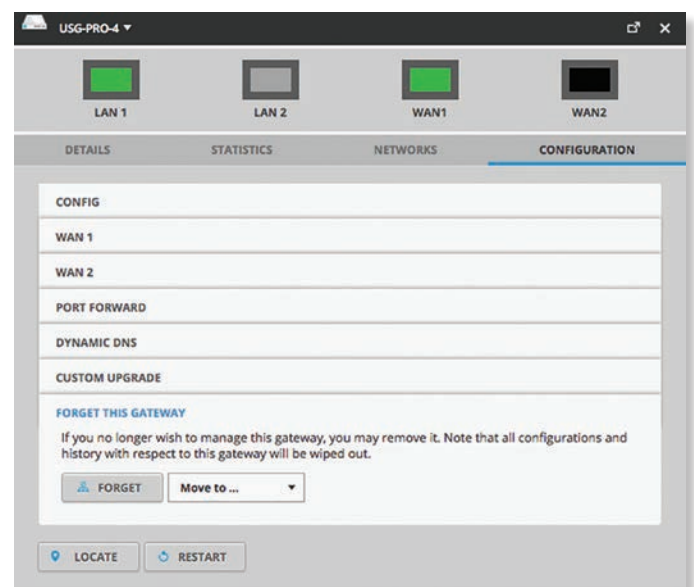
Forget Click ⬇ FORGET to remove the Gateway from management by the UniFi Controller software and reset it to factory default settings.

> Note: Use caution when clicking *Forget*. This will restore the Gateway to factory default settings while it is in a *Connected* state.

Move to To move the Gateway, select another site from the drop-down menu.

Chapter 11: UniFi Switch Details

A UniFi Switch hyperlink opens the UniFi Switch's *Details* window either in the *Properties* tab or as a separate popup window. You can always dock this window in the *Properties* tab or detach it as a separate window.

The top of the window displays the device icon and name (or MAC address).

Properties

The *Properties* tab is hidden by default. To display it, click the *properties* 🔲 icon. The *Properties* tab appears on the right side of the screen.

Information about each selected device appears as a popup within this tab.

Close Click 🔲 to close the *Properties* tab and device popups.

Minimize Click 🔲 to close and re-open the device popups.

Each row displays the following:

- **(icon)** Displays the icon of the device (the icon will vary depending on the model).

- **Name/MAC Address** Displays the hostname, alias, or MAC address of the device.

- **Display** Click ▶ to display the device information.

- **Detach** Click 🔲 to display the same information in a separate popup screen that can be moved anywhere within the browser screen.

- **Close** Click ✕ to close the device popup.

Hide Click ⏩ to hide the *Properties* tab but allow the device popups to remain accessible from this tab.

The top part of the window displays the connection status:

- **Pending Approval** Default state, available for adoption.

- **Connected** Indicates a managed connection.

- **Managed by Other** Not in the default state but not controlled by the current UniFi Controller.

- **Disconnected** Indicates no connection.

The ports display their status:

- 🟧 Indicates a 10/100 Mbps connection.

- ⚡ Indicates 10/100 Mbps connection with PoE.

- 🟩 Indicates a 1000 Mbps connection.

- ⚡ Indicates 1000 Mbps connection with PoE.

- ⬛ Indicates no connection.

Place your cursor over a port to view the following:

- **Port** Displays the port number.

- **Name** Displays the name of the port.

- **Status** Displays the connection speed and duplex mode.

- **TX** Displays the amount of data transmitted.

- **RX** Displays the amount of data received.

- **PoE** (Not applicable to the SFP ports.) Displays the PoE setting:

  - **Off** PoE is disabled.

  - **24V Passive** 24V passive PoE is enabled.

  - **__W** Power output is displayed in watts.

  - **PoE+** 802.3at/af devices can be plugged in and automatically receive PoE.

- **Networks/VLANs** Displays the networks/VLANs that the port belongs to.

There are three clickable tabs:

- **"UniFi Switch – Details" on page 76**
- **"UniFi Switch – Ports" on page 77**
- **"UniFi Switch – Configuration" on page 79**

The bottom of the window has three buttons:

- **Locate** Click ⦿ LOCATE to flash the System LED on the Switch and the Switch's icon on the *Map* tab so you can locate it. The LED will flash until the *Locate* button is clicked again. (The icon on the *Map* tab will flash three times and stop.)

- **Restart** Click ↻ RESTART to restart the Switch.

- **Upgrade** If a software upgrade is available for the Switch, click ⬇ UPGRADE to install the latest UniFi firmware on the Switch. The *Status* will appear as *Upgrading* until the process is complete and the Switch reconnects to the UniFi Controller software.

UniFi Switch – Details

Click **Overview** to display the device specifics, connection details, and uptime.

Overview
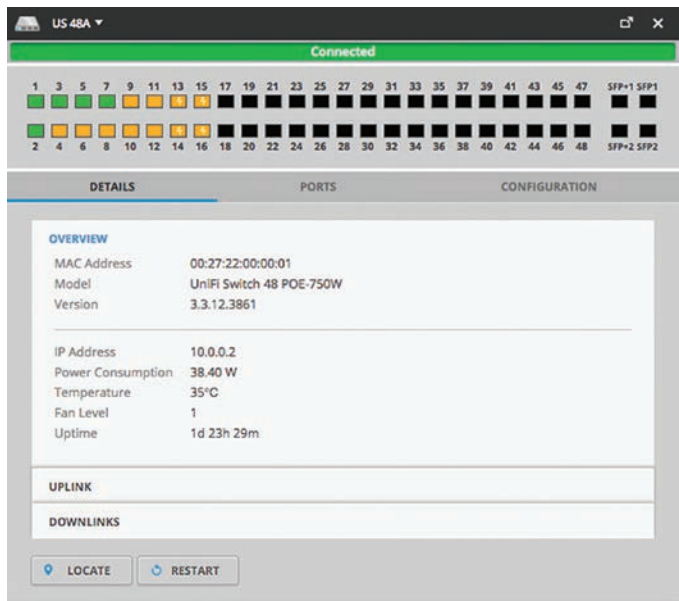
MAC Address Displays the MAC address or unique hardware identifier of the Switch.

Model Displays the model name of the Switch.

Version Displays the version number of the Switch's firmware.

IP Address Displays the IP address of the Switch.

Power Consumption Displays the amount of power used by the Switch.

Temperature Displays the general temperature of the Switch.

Fan Level If the Switch has a fan, then the *Fan Level*, from *1* to *3*, is displayed. If the Switch does not have a fan, then the *Fan Level* is not displayed.

Uptime Displays the duration of time the Switch has been running without interruption.

Uplink
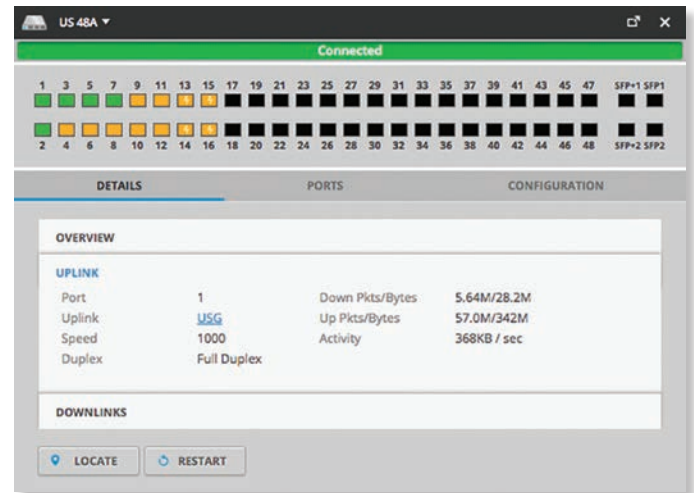
Port Displays the port number.

Uplink Displays the name or MAC address of the uplink device. You can click the name to get additional details.

Speed Displays the connection speed in Mbps.

Duplex Displays the mode, *Full Duplex* or *Half Duplex*.

Down Pkts/Bytes Displays the amount of data downloaded as packets and bytes.

Up Pkts/Bytes Displays the number of packets and total bytes uploaded by the device.

Activity Displays the level of activity in Bytes per second.

Downlinks
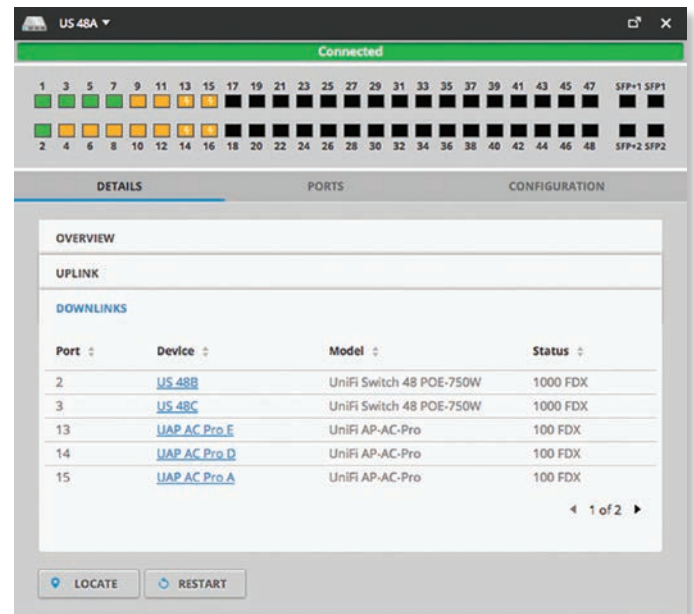
Port Displays the number of the connected port.

Device Displays the name or MAC address of the downlink device. You can click the name to get additional details.

Model Displays the model number of the downlink device.

Status Displays the connection speed and duplex mode.

UniFi Switch – Ports

Click **Ports** to display the port name, status, TX and RX throughput, PoE setting, and networks/VLANs.
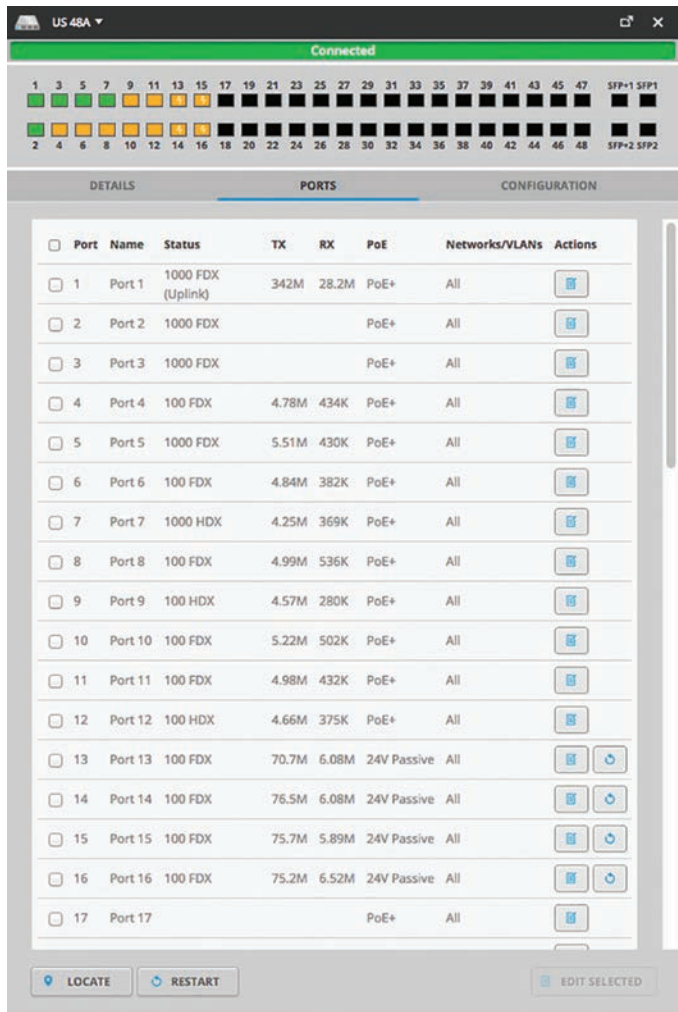
Port Displays the port number.

Name Displays the name of the port.

Status Displays the connection speed and duplex mode.

TX Displays the amount of data transmitted.

RX Displays the amount of data received.

PoE Displays the PoE setting:

- **Off** PoE is disabled.

- **24V Passive** 24V passive PoE is enabled.

- **__W** Power output is displayed in watts.

- **PoE+** 802.3at/af devices can be plugged in and automatically receive PoE.

Networks/VLANs Displays the networks/VLANs that the port belongs to.

Actions Click a button to perform the desired action:

- **Edit** Click ⊡ to change the port configuration. Proceed to the following section, *Port Configuration*.

- **Powercycle** (Available only if the connected devices uses PoE.) Click ↻ to restart the connected device.

Port Configuration
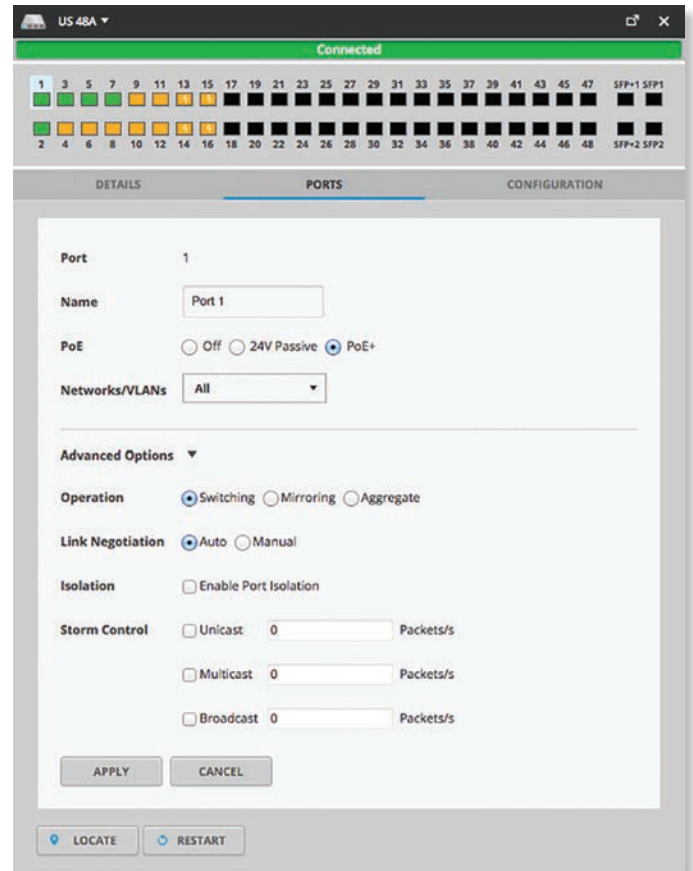
- **Port** Displays the number of the port.

- **Name** Displays the customizable name or identifier of the port.

- **PoE** All ports are set to auto-sensing *PoE+* by default.

  - **Off** Disable PoE.

  - **24V Passive** Select this option to power devices that support 24V passive PoE.

    Note: Before activating 24V passive PoE, ensure that the connected device supports PoE and the supplied voltage.

  - **PoE+** 802.3at/af devices can be plugged in and automatically receive PoE.

- **Networks/VLANs** Select the appropriate network or VLAN, or select *Disabled* to disable this port. The default is *All*.

- **Advanced Options** Click the icon to display the following:

- **Operation** Select the operation mode for this port.

  - **Switching** The default mode.

    - **Link Negotiation** Keep the default, *Auto*, or select **Manual** to specify the duplex and speed:

      - **Full Duplex** (Available for RJ45 ports only.) Full-duplex transmission is enabled by default.

      - **Link Speed** For RJ45 ports, select the appropriate speed: **1000 Mbps**, **100 Mbps**, or **10 Mbps**. For SFP+ ports, select the appropriate speed: **10 Gbps** or **1000 Mbps**. For SFP ports, select **1000 Mbps**.

  - **Isolation** Select this option to create a Private VLAN (Virtual Local Area Network). Isolated ports cannot communicate directly with each other.

  - **Storm Control** Monitor the unicast, multicast, and/or broadcast traffic for this port. If the specified type of traffic on this port exceeds the threshold rate you specify, then the UniFi Switch drops the excess traffic.

    - **Unicast** Select this option to monitor unicast traffic. Enter the threshold value in packets per second.

    - **Multicast** Select this option to monitor multicast traffic. Enter the threshold in packets per second.

    - **Broadcast** Select this option to monitor broadcast traffic. Enter the threshold in packets per second.

- **Mirroring** The network traffic of this port will receive the mirrored traffic from the port listed below for analysis:

  - **Mirroring Port** Enter the number of the port that will be mirrored.

  - **Link Negotiation** Keep the default, *Auto*, or select **Manual** to specify the duplex and speed:

    - **Full Duplex** (Available for RJ45 ports only.) Full-duplex transmission is enabled by default.

    - **Link Speed** For RJ45 ports, select the appropriate speed: **1000 Mbps**, **100 Mbps**, or **10 Mbps**. For SFP+ ports, select the appropriate speed: **10 Gbps** or **1000 Mbps**. For SFP ports, select **1000 Mbps**.
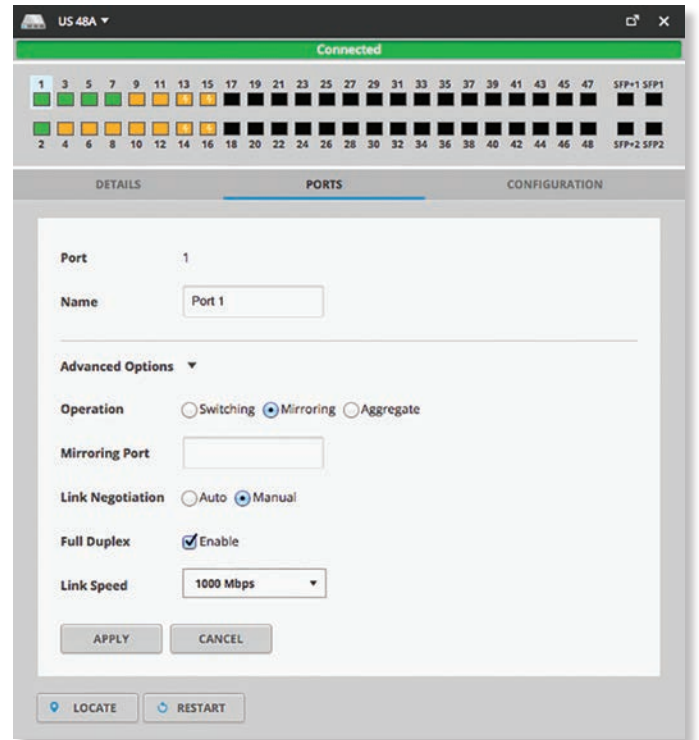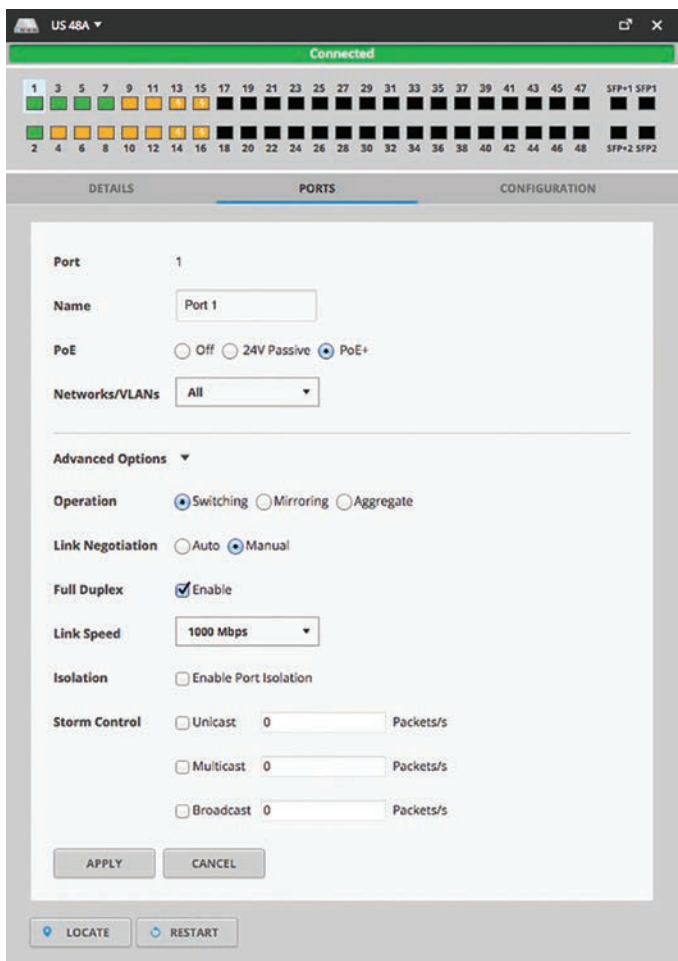
- **Aggregate** A port channel, also known as a Link Aggregation Group (LAG), combines multiple links into a single logical link (single IP address) for load balancing and/or redundancy. If you select this option, then this port becomes the start port of the aggregate link.

  - **Aggregate Ports** Enter the end port number of the LAG. (Two to four ports are permitted per LAG.)

  - **Link Negotiation** Keep the default, *Auto*, or select **Manual** to specify the duplex and speed:

    - **Full Duplex** (Available for RJ45 ports only.) Full-duplex transmission is enabled by default.

    - **Link Speed** For RJ45 ports, select the appropriate speed: **1000 Mbps**, **100 Mbps**, or **10 Mbps**. For SFP+ ports, select the appropriate speed: **10 Gbps** or **1000 Mbps**. For SFP ports, select **1000 Mbps**.
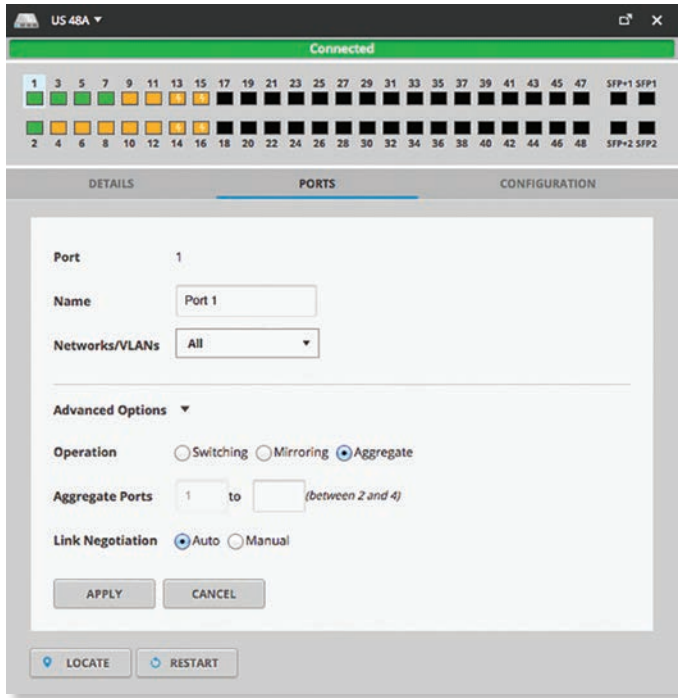
- **Apply** Click **Apply** to save changes.
- **Cancel** Click *Cancel* to discard changes.

UniFi Switch – Configuration

Click **Configuration** to configure the alias, network/VLANs, services, and network settings. You can also move the Switch to another site.

Alias
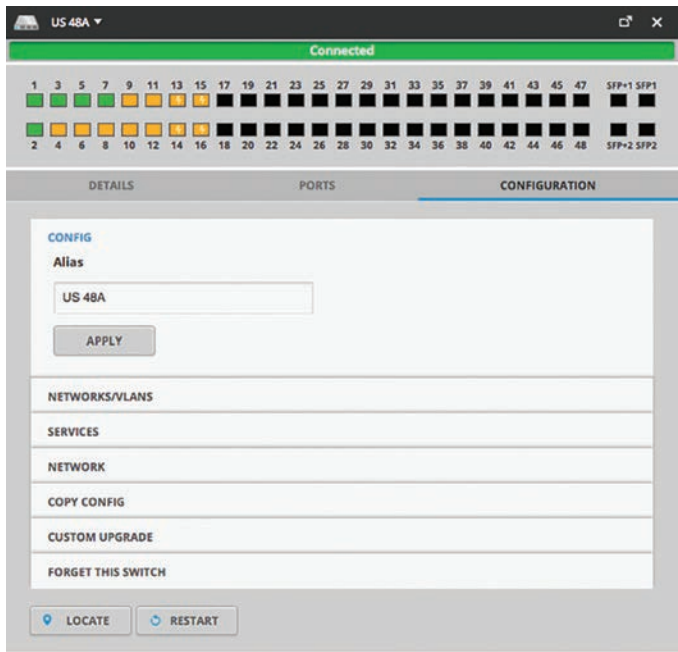
Alias Displays the customizable name or identifier of the Switch. The *Alias* is also known as the host name.

Apply Click **Apply** to save changes.
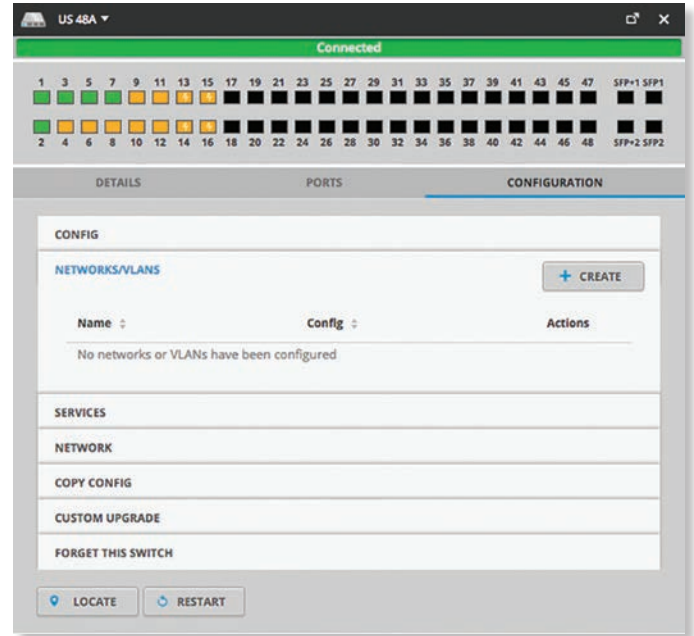
Networks/VLANs

Create Click ![+ CREATE] to add a new entry. Go to **"Create New Network/VLAN" on page 80**.

Name Displays the name of the network/VLAN.

Config Displays the configuration: *Native (____)* or *Customized*. (Networks may be created in **"Settings > Networks" on page 21**.)

Actions Click a button to perform the desired action:

- **Edit** Click ![edit] to edit the network/VLAN entry.
- **Delete** Click ![delete] to delete the network/VLAN entry.

Create New Network/VLAN
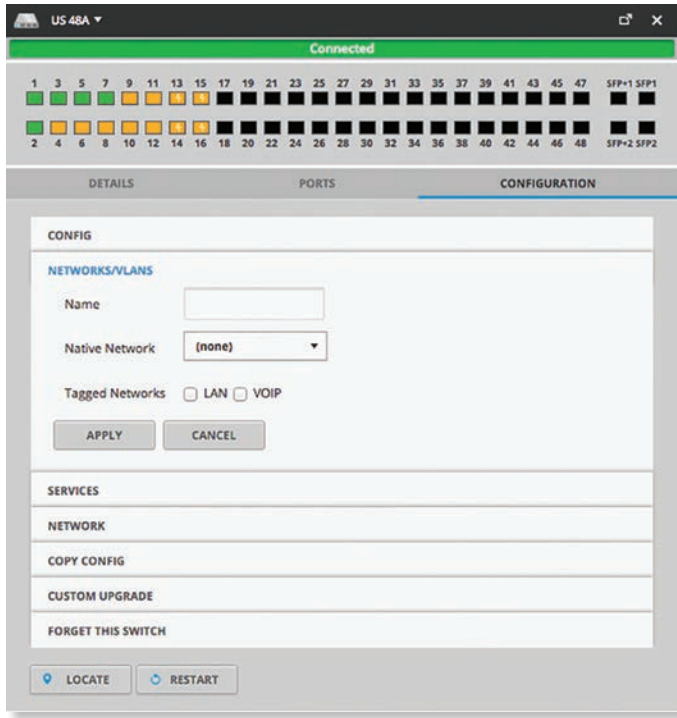
- **Name** Enter a name to identify this network/VLAN.
- **Native Network** A native network has a Port VLAN Identifier (PVID), which identifies the default VLAN. A switch assigned to a native network participates in the VLAN of that native network.

  The Switch accepts tagged and untagged packets in the ingress direction, and the untagged packets are assigned to the VLAN of the native network. For example, if the PVID is *VLAN 30*, then all untagged packets are assigned to *VLAN 30*. In the egress direction, the native network packets are stripped of the VLAN 30 header and exit as untagged packets.

  This table lists how the packets are handled:

Packet Type	Ingress	Action	Egress
Tagged	Accepted	Remains tagged	Sent out as tagged
Untagged	Accepted	Assigned to VLAN of native network	VLAN header removed and sent out as untagged

  Each physical port can have multiple networks attached; however, only one of them can be native (untagged). Select the appropriate native network. (Additional networks may be created in **"Settings > Networks" on page 21**.)

- **Tagged Networks** For a Switch belonging to a tagged network, the packets will be tagged in both ingress and egress directions. For example, the native network is *LAN* with *VLAN 1* as the PVID. The switch is connected to an AP with two tagged networks:
  - VLAN 20: corporate
  - VLAN 30: guest

This table lists how the packets are handled:

Packet Type	Ingress	Action	Egress
Untagged	Accepted	Assigned to VLAN 1	VLAN header removed and sent out as untagged
Tagged as VLAN 20	Accepted	Remains tagged	Sent out tagged as VLAN 20
Tagged as VLAN 30	Accepted	Remains tagged	Sent out tagged as VLAN 30

The proper use of VLANs isolates the traffic of each VLAN. The guest traffic on VLAN 30 will be kept separate from the traffic on the corporate network.

Select the appropriate tagged network. (Use **"Settings > Networks" on page 21** to create more networks.)

- **Apply** Click **Apply** to save changes.
- **Cancel** Click *Cancel* to discard changes.

Services
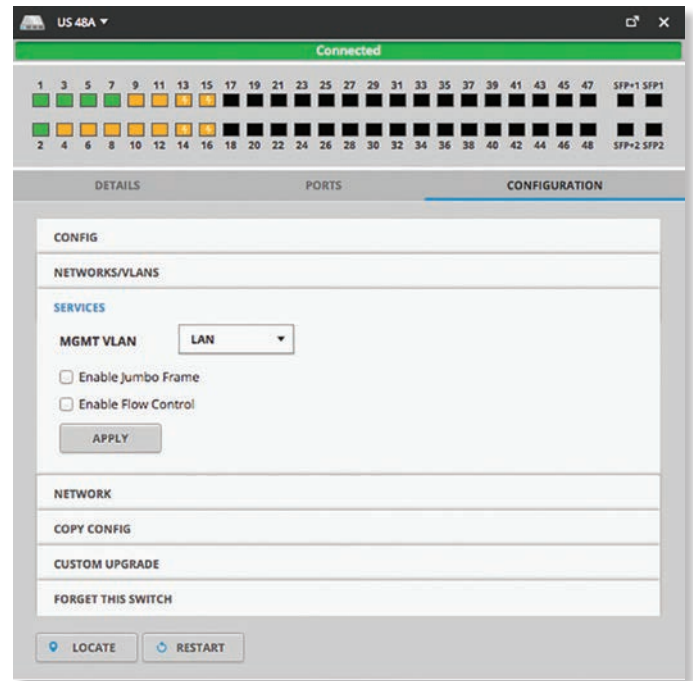
MGMT VLAN A network group defines the management VLAN for the Switch. Select the appropriate network group.

Enable Jumbo Frame Disabled by default. The Maximum Transmission Unit (MTU) is the maximum packet size (in bytes) that a network interface can transmit. A jumbo frame is larger than the standard Ethernet frame with an MTU of 1500. Jumbo frames are typically used for Gigabit Ethernet connections. If you enable this option, then this port handles jumbo frames and forwards them.

Enable Flow Control Disabled by default. *Flow Control* allows the port to manage data rates in case the sending and receiving devices use different data transmission rates.

Apply Click **Apply** to save changes.

Network

Configure IP Select the Internet connection type for your service.
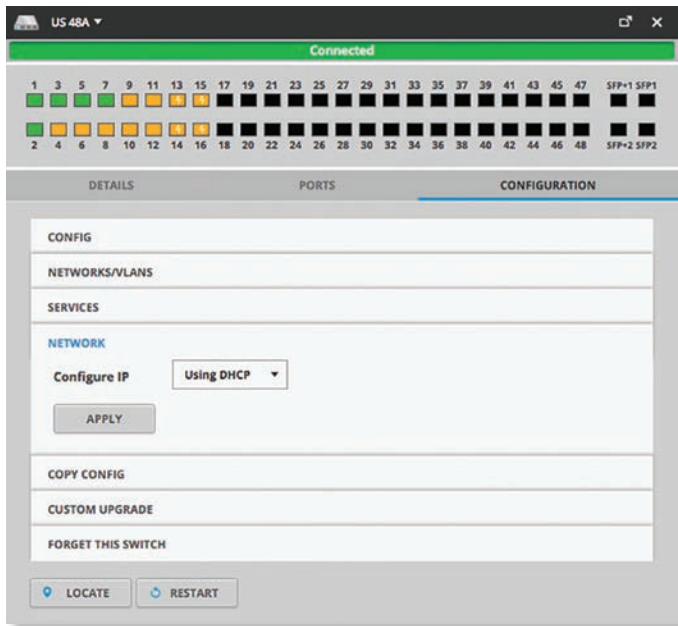
- **Using DHCP** The use of the Dynamic Host Configuration Protocol (DHCP) is the default. The Switch automatically acquires network settings from the network's DHCP server.
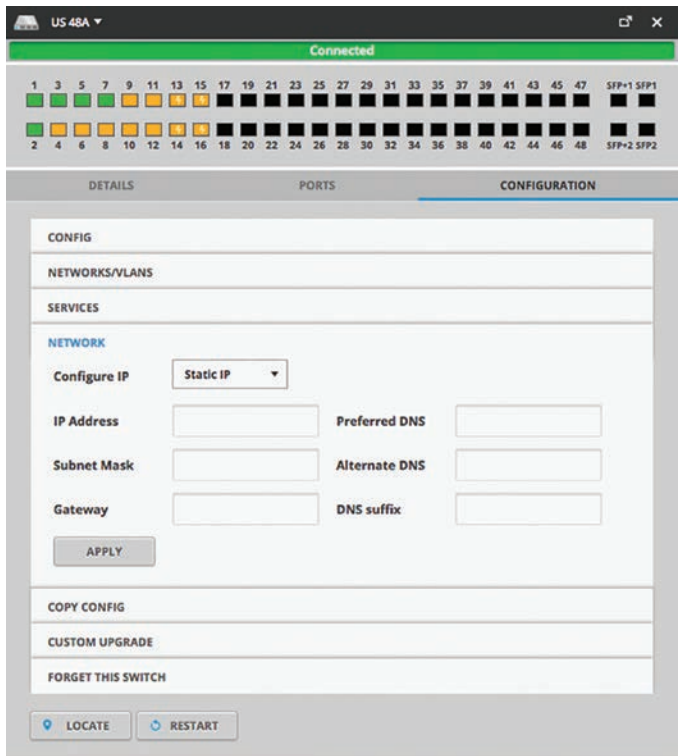
- **Static IP** Assign fixed network settings to the Switch. Enter the following information:
   - **IP Address** Enter the IP address for the Switch.
   - **Subnet Mask** Enter the subnet mask of the Switch.
   - **Gateway** Enter the IP address of the gateway (for example, the UniFi Security Gateway).
   - **Preferred DNS** Enter the IP address of the primary DNS server.
   - **Alternate DNS** Enter the IP address of the secondary DNS server.
   - **DNS Suffix** Enter the Fully Qualified Domain Name (FQDN) without the hostname.
- **Apply** Click **Apply** to save changes.

Copy Config

If you have settings that you want to apply to multiple Switches, use this option to copy the configuration.
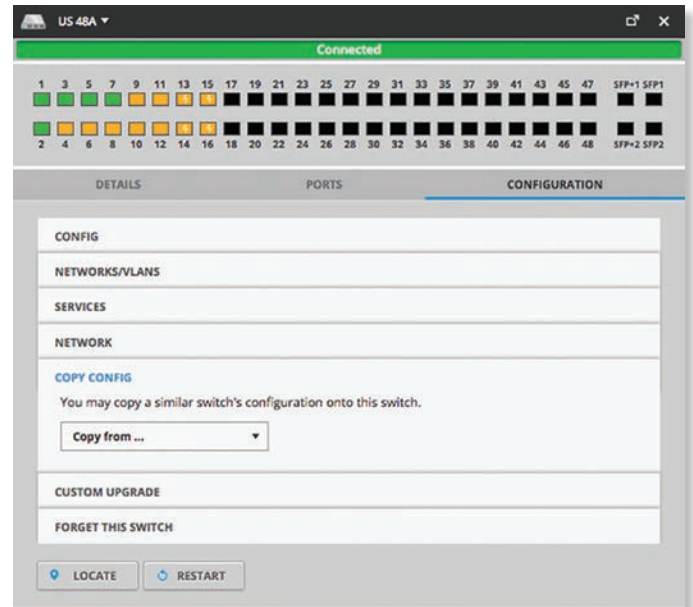
Copy from Select the appropriate Switch whose configuration will be copied to this Switch. Then click **Confirm** to overwrite its current configuration with the configuration of the selected Switch.

Custom Upgrade

For firmware upgrades, the UniFi devices retrieve the latest firmware from the Ubiquiti website. To specify firmware saved in a custom location, select this option.
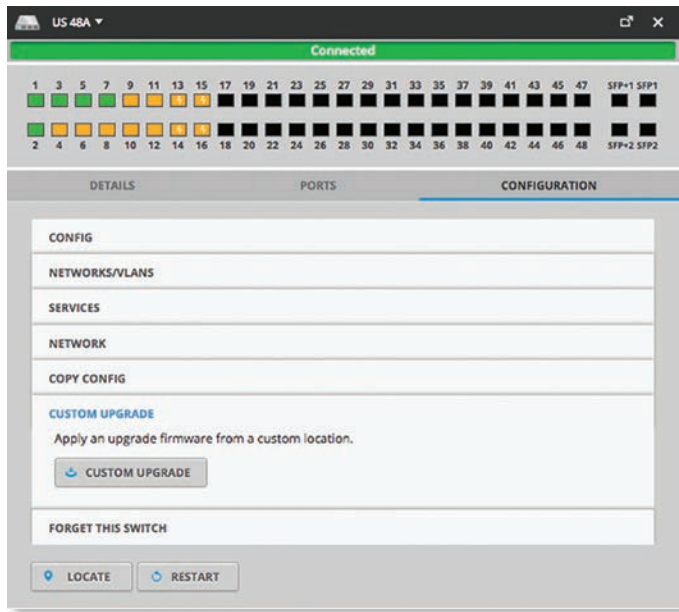
Custom Upgrade Click ⬧ CUSTOM UPGRADE to upgrade the firmware from a location you specify.

Forget This Switch
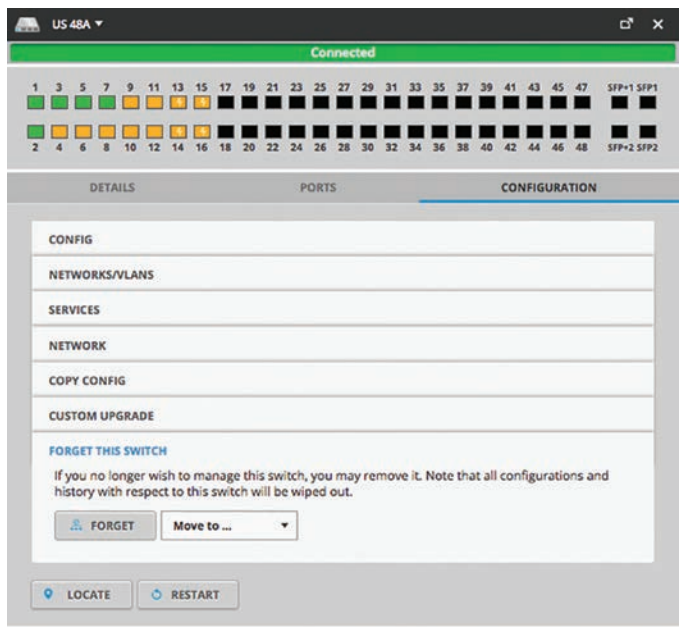
Forget Click ⬧ FORGET to remove the Switch from management by the UniFi Controller software and reset it to factory default settings.

> **Note:** Use caution when clicking *Forget*. This will restore the Switch to factory default settings when it is in a *Connected* state.

Move to To move the Switch, select another site from the drop-down menu.

Chapter 12: UniFi Access Point Details

A UniFi AP hyperlink opens the UniFi AP's *Details* window either in the *Properties* tab or as a separate popup window. You can always dock this window in the *Properties* tab or detach it as a separate window.

The top of the window displays the device icon and name (or MAC address).

Properties

The *Properties* tab is hidden by default. To display it, click the *properties* ⊞ icon. The *Properties* tab appears on the right side of the screen.

Information about each selected device appears as a popup within this tab.

Close Click ☰ to close the *Properties* tab and device popups.

Minimize Click ☰ to close and re-open the device popups.

Each row displays the following:

- **(icon)** Displays the icon of the device (the icon will vary depending on the model).

- **Name/MAC Address** Displays the hostname, alias, or MAC address of the device.

- **Display** Click ▶ to display the device information.

- **Detach** Click ⇱ to display the same information in a separate popup screen that can be moved anywhere within the browser screen.

- **Close** Click ✕ to close the device popup.

Hide Click ⇥ to hide the *Properties* tab but allow the device popups to remain accessible from this tab.

The upper part of the window displays the connection status:

- **Pending Approval** Default state, available for adoption.

- **Connected** Indicates a wired connection.

- **Connected (wireless)** Indicates a wireless connection.

- **Managed by Other** Not in the default state but not controlled by the current UniFi Controller.

- **Isolated** To establish a connection to the UniFi Controller, perform one of the following actions:
  - Reconnect the AP to the gateway or router.
  - Connect an Ethernet cable from the *Secondary Ethernet Port* (if available) of the isolated AP to the *Secondary Ethernet Port* (if available) of another UniFi AP that is connected to the gateway or router.
  - Establish a wireless uplink to a wired AP.

- **Disconnected** To establish a connection to the UniFi Controller, perform one of the following actions:
  - Reconnect the AP to the gateway or router.
  - Connect an Ethernet cable from the *Secondary Ethernet Port* (if available) of the isolated AP to the *Secondary Ethernet Port* (if available) of another UniFi AP that is connected to the gateway or router.
  - Establish a wireless uplink to a wired AP.
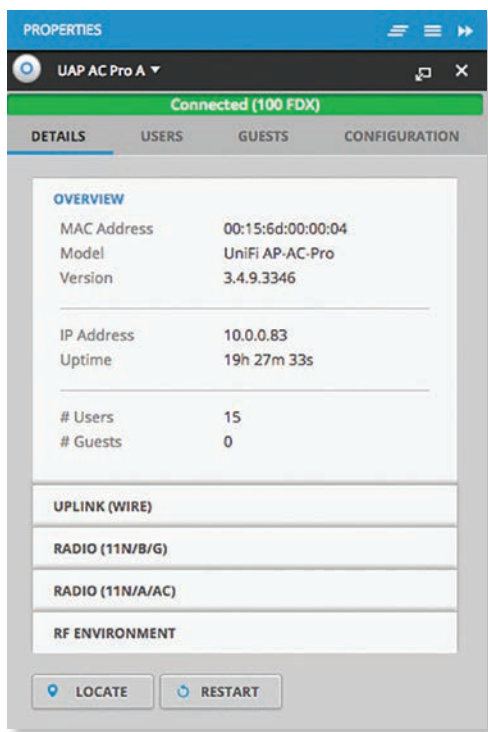
There are four clickable tabs:

- **"UniFi Access Point – Details" on page 84**
- **"UniFi Access Point – Users" on page 87**
- **"UniFi Access Point – Guests" on page 88**
- **"UniFi Access Point – Configuration" on page 88**

The bottom of the window has three buttons:

- **Locate** Click ⦿ LOCATE to flash the LED on the AP and the AP's icon on the *Map* tab so you can locate it. The LED will flash until the *Locate* button is clicked again. (The icon on the *Map* tab will flash three times and stop.)

- **Restart** Click ↻ RESTART to restart the AP.

- **Upgrade** If a software upgrade is available for the AP, click ⬆ UPGRADE to install the latest UniFi firmware on the AP. The *Status* will appear as *Upgrading* until the process is complete and the AP reconnects to the UniFi Controller software.

UniFi Access Point – Details

Click **Overview** to display the device specifics, connection details, uptime, and user statistics.

Overview
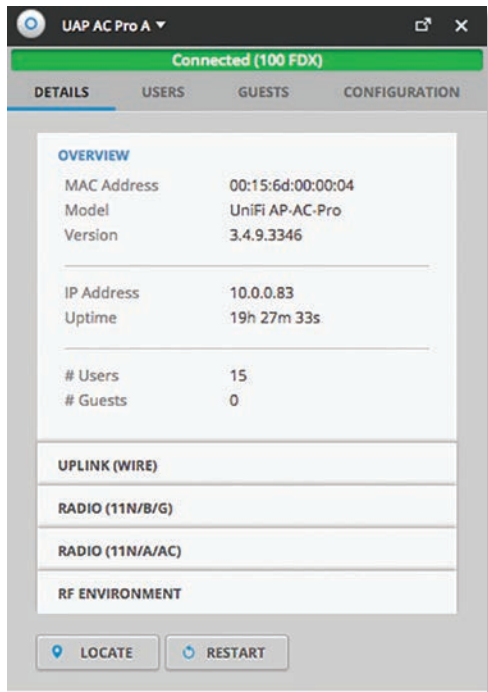
MAC Address Displays the MAC address or unique hardware identifier of the AP.

Model Displays the model name of the AP.

Version Displays the version number of the AP's firmware.

IP Address Displays the IP address of the AP.

Uptime Displays the duration of time the AP has been running without interruption.

 # Users Displays the number of users connected to the primary network.

 # Guests Displays the number of users connected to the guest network.

Uplink (Wire)

If your AP has a wired uplink connection, click **Uplink (Wire)** to display details about the wired uplink.
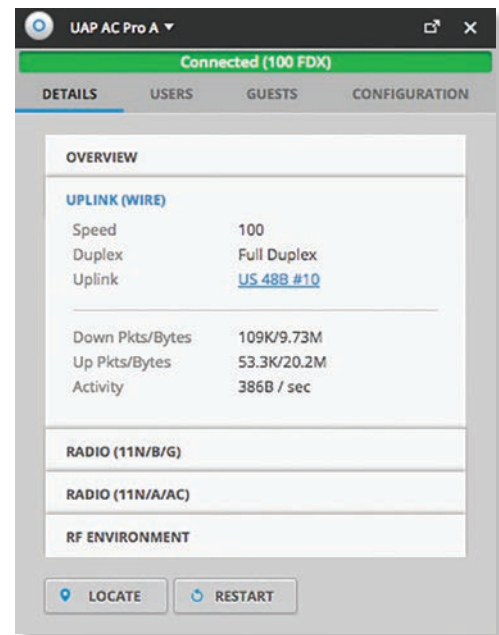
Speed Displays the connection speed in Mbps.

Duplex Displays the mode, *Full Duplex* or *Half Duplex*.

Uplink Displays the name, alias, or MAC address of the switch or other uplink device being used by the AP. You can click the name to get additional details on the device.

Down Pkts/Bytes Displays the amount of data downloaded as packets and bytes.

Up Pkts/Bytes Displays the amount of data uploaded as packets and bytes.

Activity Displays the level of activity in Bytes per second.

Uplink (Wireless)

If your AP has a wireless uplink connection, click **Uplink (Wireless)** to display details about the wireless uplink.

Downlink

The wireless APs currently connected to the wired AP are displayed.

Uplink AP Displays the name, alias, or MAC address of the uplink AP. You can click the name to get additional details on the uplink AP.

Signal Displays the percentage of signal strength between the two APs.

TX Rate Displays the transmit rate.

RX Rate Displays the receive rate.

Down Pkts/Bytes Displays the amount of data downloaded as packets and bytes.

Up Pkts/Bytes Displays the amount of data uploaded as packets and bytes.

Activity Displays the level of activity in Bytes per second.

Note: *Downlinks* will only be visible under the *Details* tab when a wireless AP is connected.

AP Displays the name, alias, or MAC address of the downlink AP. You can click the name to get additional details on the device.

Signal Displays the percentage of signal strength between the two APs.

Actions Click a button to perform the desired action:

• **Remove** Remove the wireless AP from the wired AP.

Radio (11N/B/G) or Radio (11N/A/AC)

Click **Radio (11N/B/G)** or **Radio (11N/A/AC)** to display the channel and transmit/receive statistics.
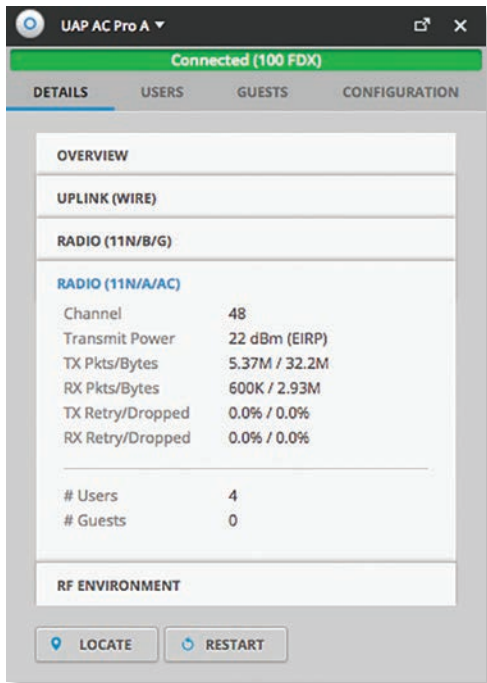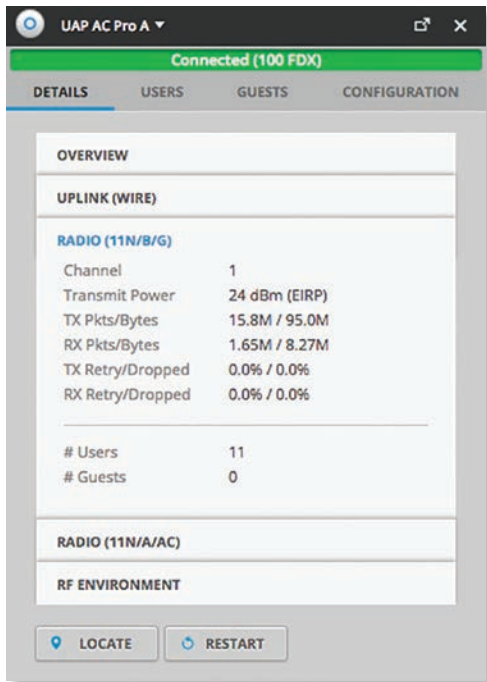
Channel Displays the channel being used.
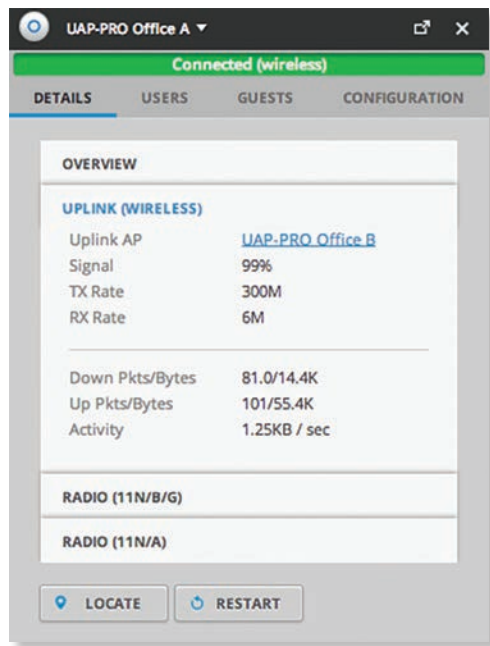
Transmit Power Displays the EIRP in dBm.

TX Pkts/Bytes Displays the amount of data transmitted as packets and bytes.

RX Pkts/Bytes Displays the amount of data received as packets and bytes.

TX Retry/Dropped Displays the percentage of transmit packets that needed to be re-sent and the percentage of packets that were dropped.

RX Retry/Dropped Displays the percentage of receive packets that needed to be re-sent and the percentage of packets that were dropped.

 # Users Displays the number of users connected to the primary network.

 # Guests Displays the number of guests connected to the guest network.

RF Environment

Note: Only the UAP-AC-LITE, UAP-AC-LR, UAP-AC-PRO, and UAP-AC-EDU support spectral analysis.

Click **RF Environment** for spectral analysis to help in channel selection and planning.
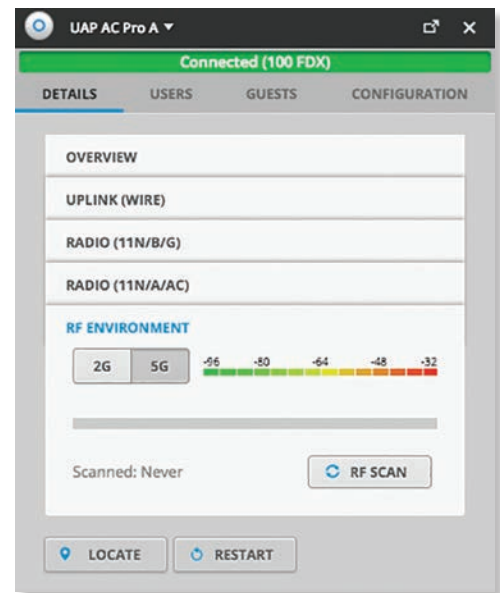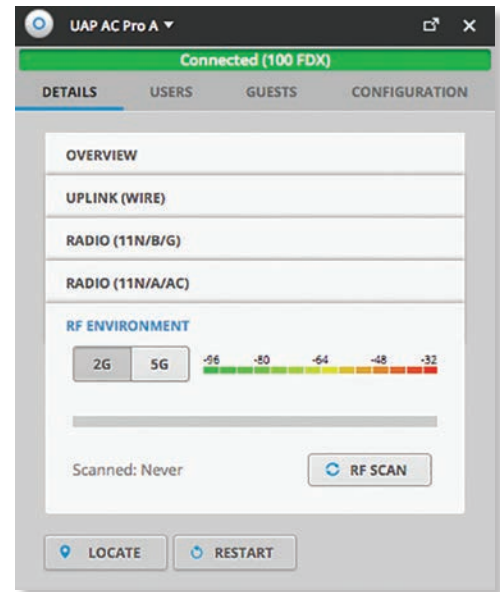
2G/5G Select the frequency band you want to analyze.

RF Scan Click ⟳ RF SCAN to scan the RF environment and then click **Confirm** to continue.

> 📋 Note: The RF scan may take more than five minutes. All clients using this AP will be disconnected, and the AP will be offline for the duration of the scan.
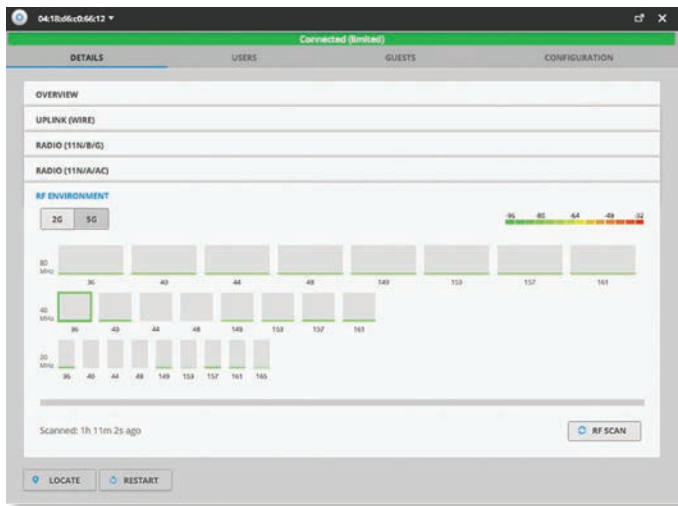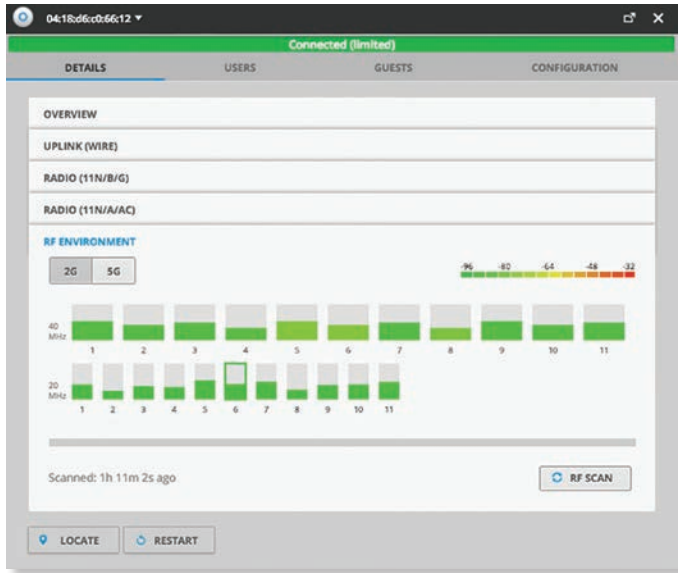
Each bar graph represent a channel option and its color-coded level of interference (from green at -96 dBm to red at -32 dBm).

___ MHz The 2.4 GHz results are displayed in channel widths of 20 and 40 MHz. The 5 GHz results are displayed in channel widths of 20, 40, and 80 MHz.

___ Displays the corresponding channel number for each channel width option.

(outlined) The current channel is outlined.

Place your cursor over a channel option to view the following:

• **Channel _** Displays the channel number and frequency range.

• **Utilization** Displays the percentage of the frequency range already in use.

• **Interference** Displays the level of interference.

• **Interference Types** Displays the type of interference being detected.
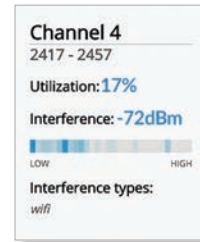
Scanned Displays the duration of time since the last scan.

UniFi Access Point – Users
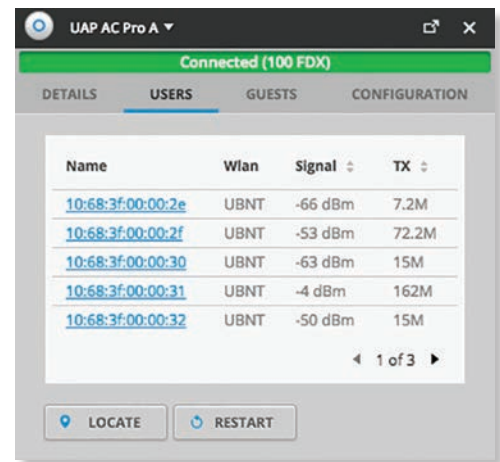
Name Displays the hostname, alias, or MAC address of the connected client. You can click the name to get additional details; see **"Client Details" on page 97** for more information.

WLAN Displays the name or SSID of the wireless network in use.

Signal Displays the percentage of signal strength between the user and AP.

TX Displays the transmit rate.

UniFi Access Point – Guests
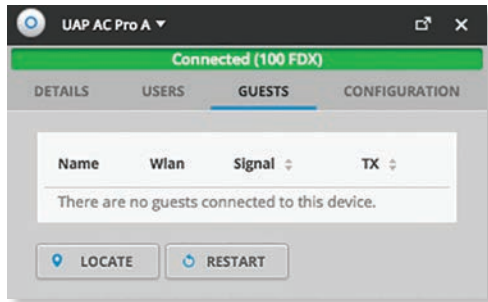
Name Displays the hostname, alias, or MAC address of the connected guest. You can click the name to get additional details; see **"Client Details" on page 97** for more information.

WLAN Displays the name or SSID of the wireless network in use.

Signal Displays the percentage of signal strength between the guest and AP.

TX Displays the transmit rate.

UniFi Access Point – Configuration

Change device configuration settings.

Alias
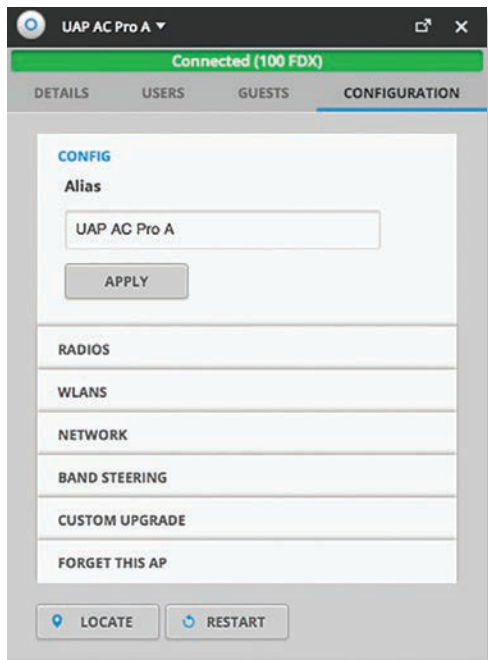
Alias Enter or edit the customizable name or identifier of the AP. The *Alias* is also known as the host name.

Apply Click **Apply** to save the change.

Radios
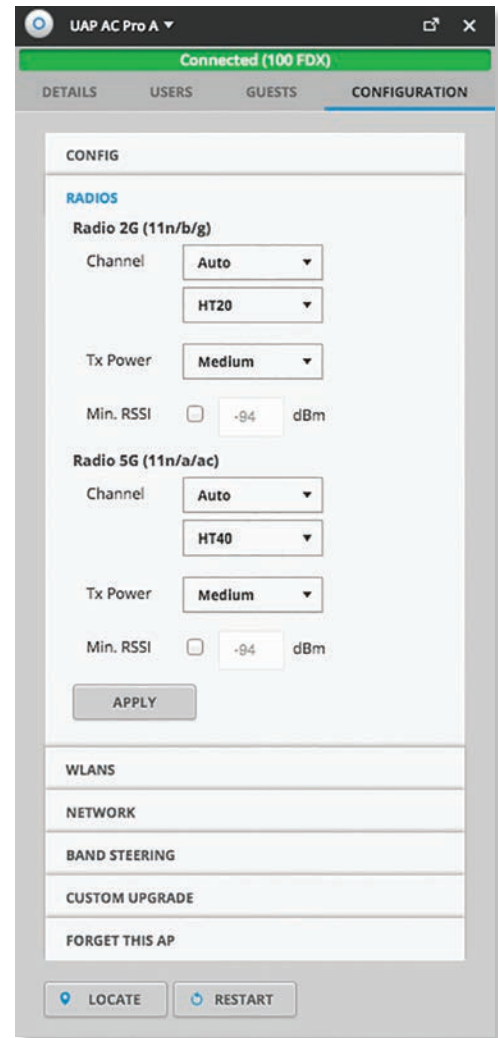
Channel Select the appropriate settings:

- **Auto/(channel number)** Select a channel number or keep the default, *Auto*.

- **HT20/HT40/HT80** Select **HT20** for 20 MHz operation, **HT40** for 40 MHz operation, or **HT80** for 80 MHz operation in the 5 GHz band.

  Note: If the AP is part of a Zero Handoff WLAN Group, then the *Channel* settings cannot be changed.

TX Power By default the transmit power is set to *Auto*. You can also manually select the following:

- **High** The highest TX power available.

- **Medium** Halfway between *High* and *Low*.

- **Low** The lowest TX power available.

- **Custom** Custom setting that you specify in the field provided.

- **Antenna Gain** (Only available for Outdoor models) Specify the antenna gain.

- **Min. RSSI** (Not available for Zero Handoff.) Disabled by default. Select this option and enter a minimum threshold. For UniFi, RSSI is synonymous with SNR. If the client signal falls below the specified threshold, then the AP kicks out the client, allowing it to reconnect with a more suitable AP.

> Note: If the AP is part of a Zero Handoff WLAN Group, the *Min. RSSI* setting cannot be changed.

Apply Click **Apply** to save your changes.

WLANs

You can deploy multiple wireless networks organized into WLAN groups on different APs.

WLAN Group Select the appropriate group.

Name Displays the network name or SSID of the available wireless network.

Overrides Displays the SSID override information applied to the wireless network.

Actions Click a button to perform the desired action:

- **Override** Click **Override** to enable a VLAN (Virtual Local Area Network), set the VLAN ID, and enter the SSID override name to apply to the wireless network.

> Note: The *Override* option is not available for a Zero Handoff WLAN Group.

Override
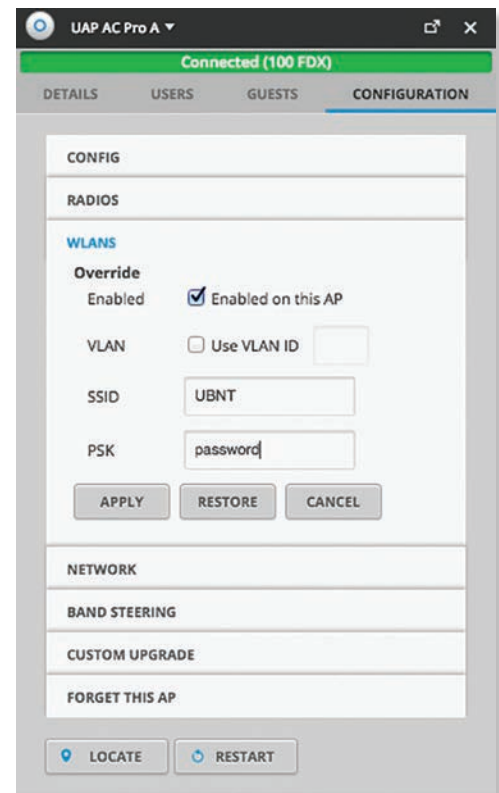
Enabled Select the checkbox to enable the WLAN for use.

VLAN Select the checkbox to enable the VLAN.

- **Use VLAN ID** The VLAN ID is a unique value assigned to each VLAN on a single device. Enter a value between 2 and 4095. For example, in a large deployment where there are multiple buildings, you can use a different VLAN ID for each building while all of the VLANs remain on the same corporate network.

SSID Enter the SSID override name to apply to the wireless network.

PSK If the WPA-Personal security option has been applied to the WLAN under *Settings > Wireless Networks*, then the Pre-Shared Key (PSK) for the SSID specified will automatically appear in this field.

Actions Click a button to perform the desired action:

- **Apply** Click **Apply** to save changes.
- **Restore** Click **Restore** to remove any overrides that were applied to the selected wireless network.
- **Cancel** Click *Cancel* to discard changes.

Network

Configure IP Select the Internet connection type for your service.
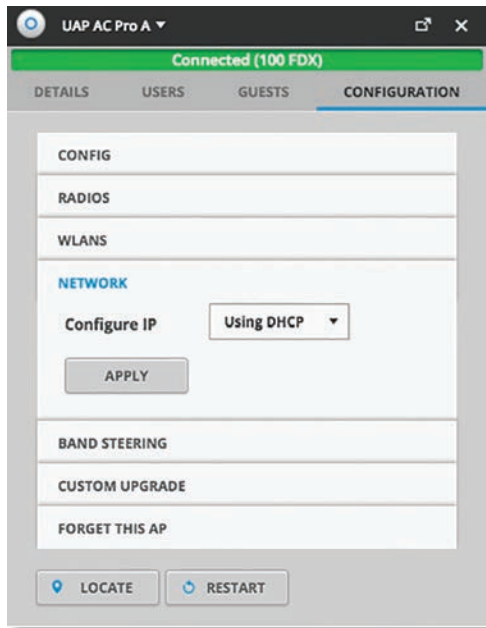
- **Using DHCP** Enabled by default. The AP automatically acquires network settings from the network's Dynamic Host Configuration Protocol (DHCP) server.

- **Static IP** Assign fixed network settings to the AP. Enter the following information:

  - **IP Address** Enter the IP address for the AP.

  - **Subnet Mask** Enter the subnet mask of the AP.

  - **Gateway** Enter the IP address of the gateway (for example, the UniFi Security Gateway).

  - **Preferred DNS** Enter the IP address of the primary DNS server.

  - **Alternate DNS** Enter the IP address of the secondary DNS server.

  - **DNS Suffix** Enter the Fully Qualified Domain Name (FQDN) without the hostname.
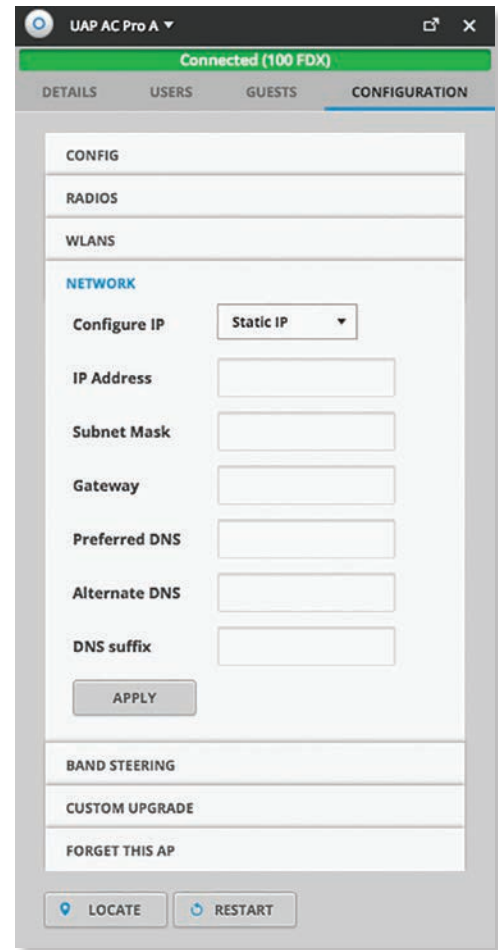
- **Apply** Click **Apply** to save changes.

Band Steering

2.4 GHz networks are typically more congested due to support of legacy clients and multiple sources of 2.4 GHz interference, including Bluetooth devices. Band steering can help distribute the load on 2.4 GHz and 5 GHz networks by steering dual-band clients to the 5 GHz band when appropriate.

Some dual-band clients are band-steering unfriendly for various reasons and are marked as such by the AP. Such clients are not steered to any band even when conditions would justify it.

> Note: Only the UAP-PRO, UAP-AC-LITE, UAP-AC-LR, UAP-AC-PRO, and UAP-AC-EDU models support band steering.

If enabled, the UniFi band steering policy takes two criteria into account:

- channel utilization metrics

- signal quality measurements, including RSSI

The AP steers the client to the optimal band during association (not after association). If both bands or neither band is overloaded, the AP does not perform band steering; instead, the client chooses a band.

If the 2.4 GHz band is overloaded, and the RSSI of the client is above the threshold for association on the 5 GHz band, then the AP will steer the client to the 5 GHz band by withholding probe responses.

If the client still attempts to associate on the 2.4 GHz band, the AP will send auth failure frames in response to auth requests from the client.

If the 5 GHz band is overloaded and the 2.4 GHz band is not, then clients are steered to the 2.4 GHz band (RSSI is not a factor). The RSSI thresholds are 30 dBm or better for the 5 GHz band. For example, if the 2.4 GHz network has low utilization, then the *Steer to 5G* option does not steer all clients to 5 GHz.

All APs must use the same SSID for the 2.4 GHz and 5 GHz bands. For example, if you have multiple WLANs in your default WLAN group, you cannot override the 5 GHz SSID name in one of the WLANs and still use band steering on the other two WLANs. All APs must use band steering – or none of them do.

- **Steer to 5G** Select this option to steer clients to the 5 GHz band at a lower channel utilization threshold than the *Balanced* option. The threshold is not a single value; instead it is a function of two values: the 2.4 GHz channel utilization and 5 GHz channel utilization.

- **Balanced** (Not available for the UAP-PRO.) Select this option to steer clients to the 5 GHz band channel at a higher channel utilization threshold than the *Steer to 5G* option.

- **Off** Keep the default, *Off*, if you do not want to use band steering.

Wireless Uplinks

When an AP is not connected by a wire, the *Wireless Uplinks* section lists potential uplink APs that can be selected to establish a wireless connection.
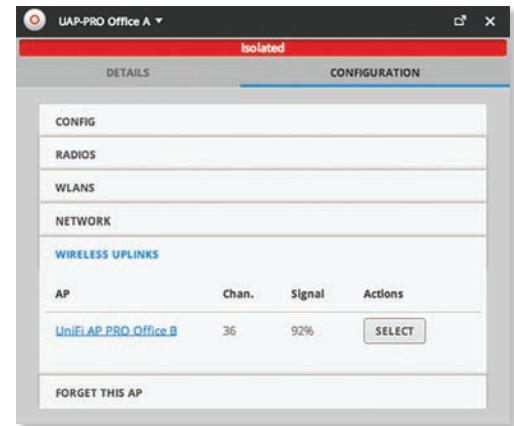
AP Displays the hostname, alias, or MAC address of the potential Uplink AP. You can click the name to get additional details.

Channel Displays the channel in use for wireless communication.

Signal Displays the percentage of signal strength.

Actions Click a button to perform the desired action:

- **Select** Click **Select** to connect the wireless AP to the wired AP.

- **Remove** Click **Remove** to disconnect the wireless AP from the wired AP.

  Note: An AP can only uplink to another AP using the same radio band. For example, the UAP-Outdoor 5G can only uplink to another UniFi AP using the 5 GHz radio band.

Custom Upgrade

For firmware upgrades, the UniFi devices retrieve the latest firmware from the Ubiquiti website. To specify firmware saved in a custom location, select this option.

Custom Upgrade Click CUSTOM UPGRADE to upgrade the firmware from a location you specify.

Forget This AP

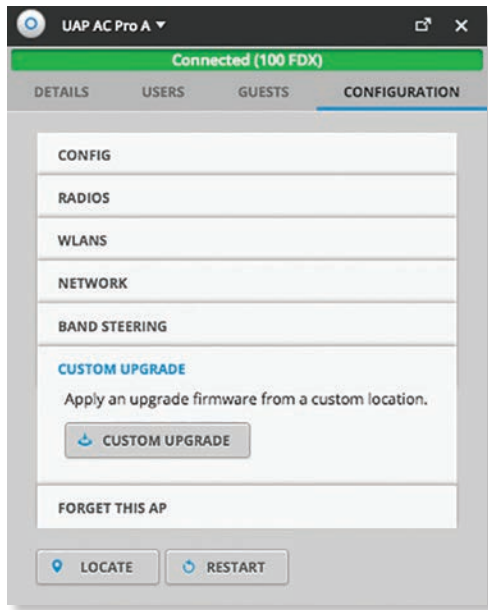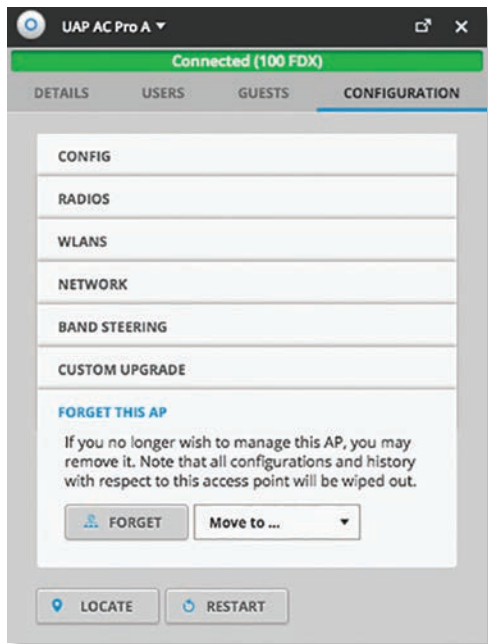**Forget** Click FORGET to remove the AP from management by the UniFi Controller software and reset it to factory default settings.

Note: Use caution when clicking *Forget*. This will restore the AP to factory default settings when it is in a *Connected* state. Do not use the *Forget* option when the AP is in an *Isolated* or *Disconnected* state. If you do, the only way to make the AP accessible from the UniFi Controller is to take it down and connect by wire.

Move to To move the AP, select another site from the drop-down menu.

Access Point - Isolated/Disconnected

When an AP is in an *Isolated* or *Disconnected* state, you can re-establish a connection to the UniFi Controller software using one of three methods:

• Reconnect the AP to the gateway/router.

• Connect an Ethernet cable from the *Secondary Ethernet Port* (if available) of the isolated AP to the *Secondary Ethernet Port* (if available) of another UniFi AP that is connected to the gateway/router.

• Establish a wireless uplink to a wired AP. See the *Wireless Uplinks* section to find, select, and connect to a wired AP.

In an *Isolated* or *Disconnected* state, the *Map* tab displays the AP icon with a red/orange LED and *disconnected* ❌ icon.

The LED on the actual device will be steady green or blue with occasional flashing. This AP doesn't provide any wireless service.

Note: Do not use the *Forget this AP* option when the AP is in an *Isolated* or *Disconnected* state. If you do, then the only way to make the AP accessible from the UniFi Controller is to take it down and connect it by wire.

Access Point - Managed by Other

The *Managed by Other* state indicates that the AP is not in the default state but it is not controlled by the UniFi Controller.

Overview
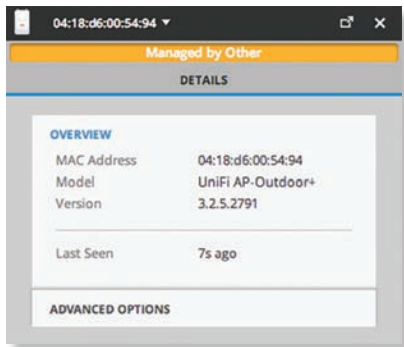
MAC Address Displays the MAC address of the AP.

Model Displays the model number.

Version Displays the version of software used on the AP.

Last Seen Displays the amount of time that has passed since the Access Point was last seen.

Advanced Options
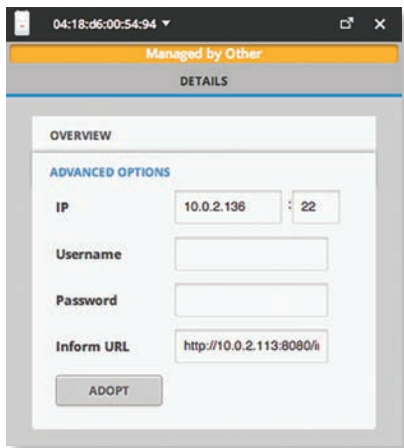
IP Displays the IP address and SSH port of the AP.

Username Enter the SSH Username for management access. This is the *Device Username* you configured in **"Settings > Site" on page 18**.

Password Enter the SSH Password for management access. This is the *Device Password* you configured in **"Settings > Site" on page 18**.

Inform URL This tells the AP where to look for the UniFi Controller. The URL will be automatically displayed but you may need to verify its accuracy as the system may have multiple interfaces.

Adopt Click **Adopt** to adopt the AP so you can manage it using the UniFi Controller software.

Access Point - Pending Approval

The *Pending Approval* state indicates that the Access Point is in the default state and is available for adoption.
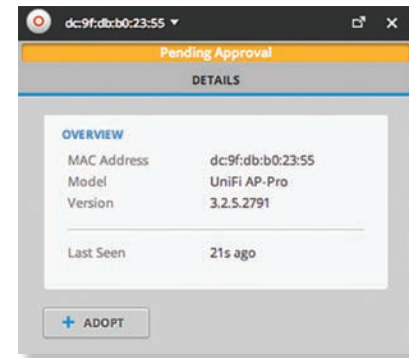
MAC Address Displays the MAC address of the AP.

Model Displays the model number.

Version Displays the version of software used on the AP.

Last Seen Displays the amount of time that has passed since the AP was last seen.

Adopt Click **Adopt** to adopt the AP so you can manage it using the UniFi Controller software.

Chapter 13: UniFi VoIP Phone Details

A UniFi VoIP Phone hyperlink opens the UniFi VoIP Phone's *Details* window either in the *Properties* tab or as a separate popup window. You can always dock this window in the *Properties* tab or detach it as a separate window.

The top of the window displays the device icon and name (or MAC address).

Properties

The *Properties* tab is hidden by default. To display it, click the *properties* ⊟ icon. The *Properties* tab appears on the right side of the screen.

Information about each selected device appears as a popup within this tab.

Close Click ≡ to close the *Properties* tab and device popups.

Minimize Click ≡ to close and re-open the device popups.

Each row displays the following:

- **(icon)** Displays the icon of the device (the icon will vary depending on the model).
- **Name/MAC Address** Displays the MAC address of the device or the extension name and number.
- **Display** Click ▶ to display the device information.

- **Detach** Click ⧉ to display the same information in a separate popup screen that can be moved anywhere within the browser screen.
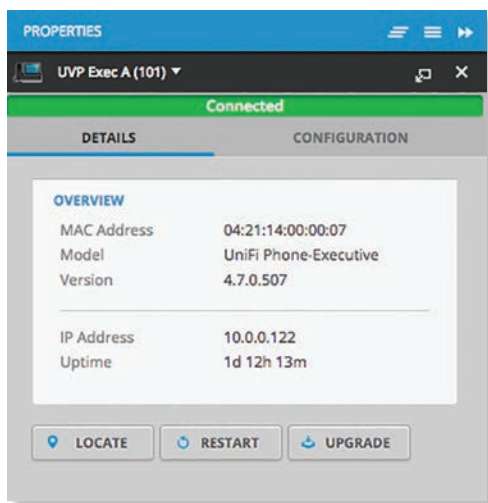- **Close** Click ✕ to close the device popup.

Hide Click ⏭ to hide the *Properties* tab but allow the device popups to remain accessible from this tab.

The top part of the window displays the connection status:

- **Pending Approval** Default state, available for adoption.
- **Connected** Indicates a managed connection.
- **Disconnected** Indicates no connection.

There are two clickable tabs:

- *Details*
- **"UniFi VoIP Phone – Configuration" on page 96**

The bottom of the window has three buttons:

- **Locate** Click ⊙ LOCATE to ring the Phone and flash the Phone's icon on the *Map* tab so you can locate it. The Phone will ring until you click *Locate* again. (The icon on the *Map* tab will flash three times and stop.)
- **Restart** Click ↻ RESTART to restart the Phone.
- **Upgrade** If a software upgrade is available for the Phone, click ⬇ UPGRADE to install the latest UniFi firmware on the Phone. The *Status* will appear as *Upgrading* until the process is complete and the Phone reconnects to the UniFi Controller software.

UniFi VoIP Phone – Details

The *Overview* displays the device specifics and uptime.

Overview
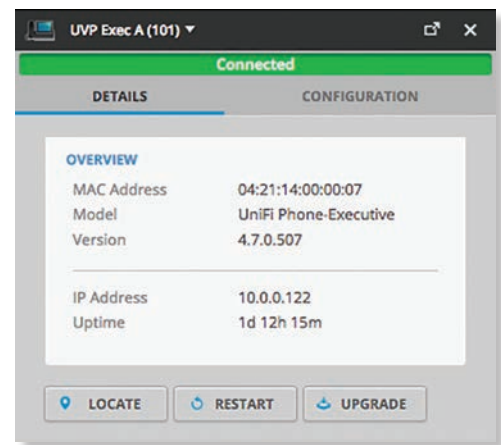
MAC Address Displays the MAC address or unique hardware identifier of the Phone.

Model Displays the model name of the Phone.

Version Displays the version number of the Phone's firmware.

IP Address Displays the IP address of the Phone.

Uptime Displays the duration of time the Phone has been running without interruption.

UniFi VoIP Phone – Configuration

Click **Configuration** to reset the Phone to its factory default settings. To make other changes, go to **"Create or Edit an Extension" on page 29** for more information.

Forget This Phone
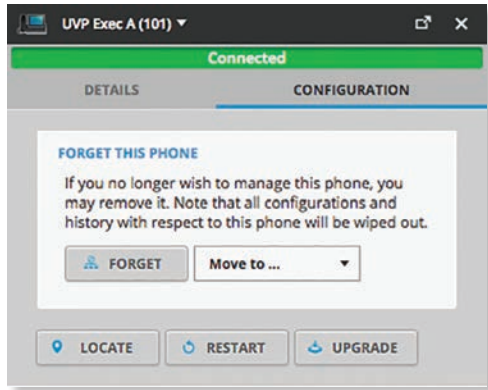
Forget Click 🔧 FORGET to remove the Phone from management by the UniFi Controller software and reset it to factory default settings.

> Note: Use caution when clicking *Forget*. This will restore the Phone to factory default settings when it is in a *Connected* state.

Chapter 14: Client Details

A client hyperlink opens the client's *Details* window either in the *Properties* tab or as a separate popup window. You can always dock this window in the *Properties* tab or detach it as a separate window.

The top of the window displays the client icon and name (or MAC address).

Properties

The *Properties* tab is hidden by default. To display it, click the *properties* 🔲 icon. The *Properties* tab appears on the right side of the screen.

Information about each selected client appears as a popup within this tab. The information varies depending on whether the client is wired or wireless:

• *Wireless Client – Details*
• **"Wired Client – Details" on page 100**
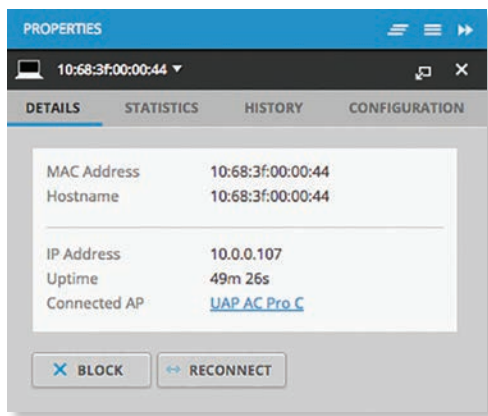
Close Click 🔲 to close the *Properties* tab and client popups.

Minimize Click 🔲 to close and re-open the client popups.

Each row displays the following:

• **(icon)** Displays the icon of the device.
• **Name/MAC Address** Displays the hostname, alias, or MAC address of the device.
• **Display** Click ▶ to display the client information.
• **Detach** Click 🔲 to display the same information in a separate popup screen that can be moved anywhere within the browser screen.
• **Close** Click ✕ to close the client popup.

Hide Click ➡ to hide the *Properties* tab but allow the client popups to remain accessible from this tab.

There are four clickable tabs:

• *Details*
• *Statistics*
• *History*
• *Configuration*

The bottom of the window has three buttons:

• **Block** Click ✕ BLOCK to block this client from accessing the network.
• **Reconnect** Click ↔ RECONNECT to reconnect a wireless client. You can click ↔ RECONNECT to kick out a client, which usually reconnects back quickly; this is useful for troubleshooting or resolving a problematic wireless connection.
• **Unauthorize/Authorize** (Available for *Guests* only.) Click ✕ UNAUTHORIZE to remove authorization of guest access and disconnect the guest, or click + AUTHORIZE for guests pending authorization.

Wireless Client – Details

MAC Address Displays the MAC address or unique hardware identifier of the client.

Hostname Displays the customizable name or identifier of the client.

IP Address Displays the IP address of the client.

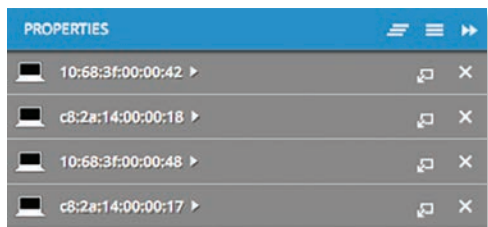**Uptime** Displays the duration of time the client has been connected.

Connected AP Displays the hostname, alias, or MAC address of the UniFi AP. You can click the name to get additional details; see **"UniFi Access Point Details" on page 83** for more information.

Wireless Client – Statistics

Overview

ESSID Displays the name of the wireless network.

Connected AP Displays the name or MAC address of the AP being used by the client. You can click the name to get additional details on the AP.

Channel Displays the channel being used.

Signal Displays the percentage of signal strength between the AP and client.

TX Rate Displays the transmit rate.

RX Rate Displays the receive rate.

Power Save Displays the status of the power save mode.

Activity Displays the level of activity in Bytes per second.
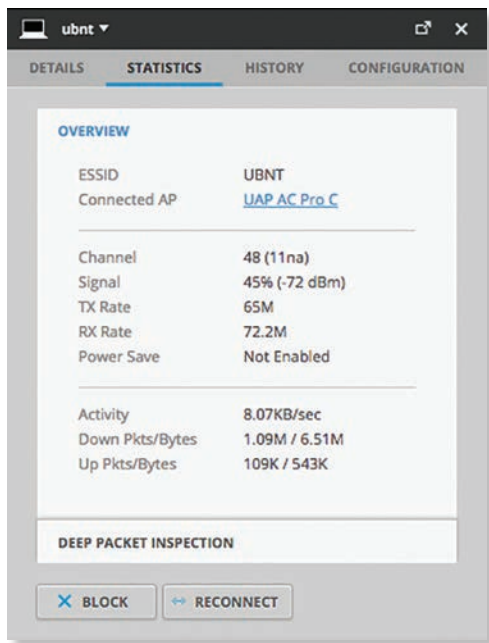
Down Pkts/Bytes Displays the amount of data downloaded as packets and bytes.

Up Pkts/Bytes Displays the amount of data uploaded as packets and bytes.

Deep Packet Inspection

The *Deep Packet Inspection* information is available if the DPI feature is enabled (refer to **"Settings > Site" on page 18** for more information).
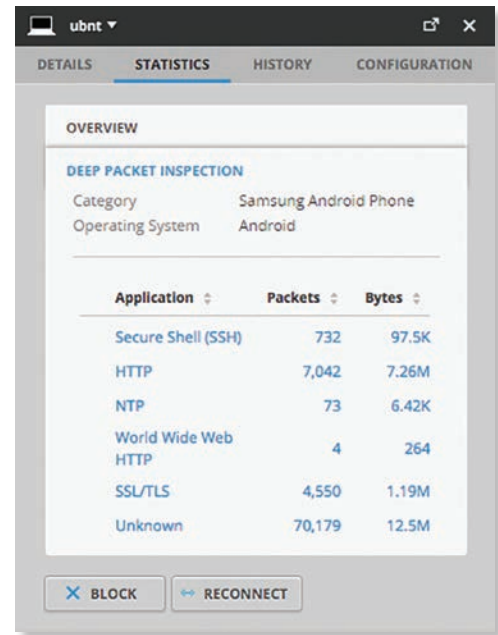
Category Displays the type of device.

Operating System Displays the name of the operating system.

Application Displays the name of the application.

Packets Displays the amount of data uploaded and downloaded as packets.

Bytes Displays the amount of data uploaded and downloaded as bytes.

Wireless Client – History
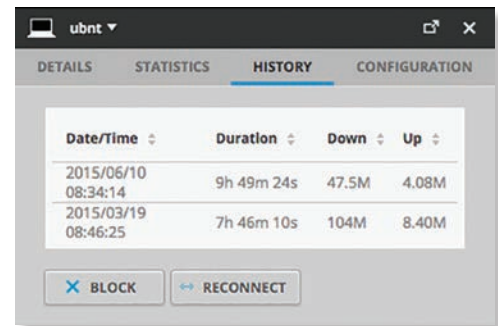
Date/Time Displays the date and time of the connection.

Duration Displays the duration of the connection.

Down Displays the total amount of data downloaded by the client.

Up Displays the total amount of data uploaded by the client.

Wireless Client – Configuration

Config

Alias Allows you to change the hostname of the client.

Note Allows you to enter comments about the client. Once saved, the client will be designated as a "Noted" client on the *Insights* > *Known Clients* tab.

User Group Allows you to assign the client to a User Group. User Groups are set up under the *Settings* tab > *User Groups* option (see **"Settings > User Groups" on page 28** for more information). The default *User Group* is *Automatic*.

Apply Click **Apply** to save changes.

IP Config

Fixed IP Select this option to assign a static IP address to the client, and configure the settings below. If you want the local DHCP server to assign an IP address to the client, remove the checkmark.

- **Network** Select the appropriate network from the drop-down list.
- **IP** Enter the local IP address.

Apply Click **Apply** to save changes.

Debug

Device Type Displays the type of device.

Wired Client – Details
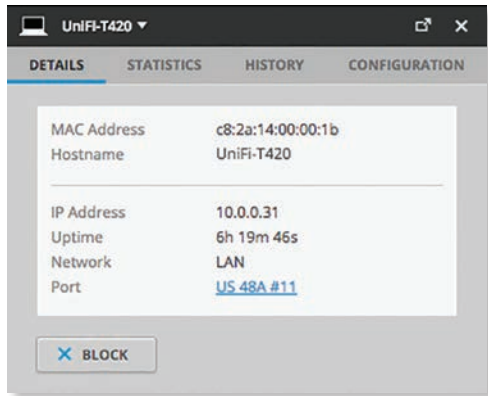
MAC Address Displays the MAC address or unique hardware identifier of the client.

Hostname Displays the customizable name or identifier of the client.

IP Address Displays the local IP address of the client.

Uptime Displays the duration of time the client has been connected.

Network Displays the network used by the client.

Port Displays the name and port of the UniFi device being used by the client. You can click the name to get additional details on the UniFi device.

Wired Client – Statistics
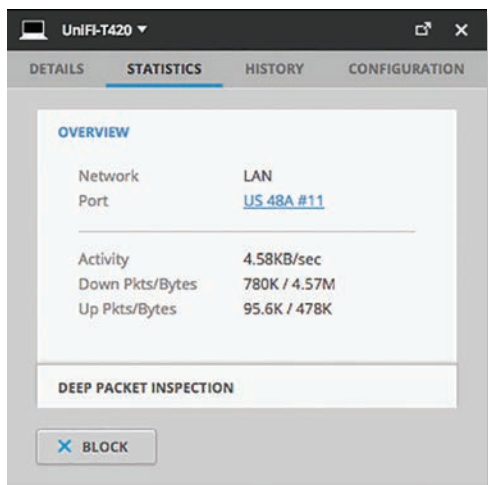
Overview

Network Displays the network used by the client.

Port Displays the name and port of the UniFi device being used by the client. You can click the name to get additional details on the UniFi device.

Activity Displays the level of activity in Bytes per second.

Down Pkts/Bytes Displays the amount of data downloaded as packets and bytes.

Up Pkts/Bytes Displays the amount of data uploaded as packets and bytes.

Deep Packet Inspection

The *Deep Packet Inspection* information is available if the DPI feature is enabled (refer to **"Settings > Site" on page 18** for more information).
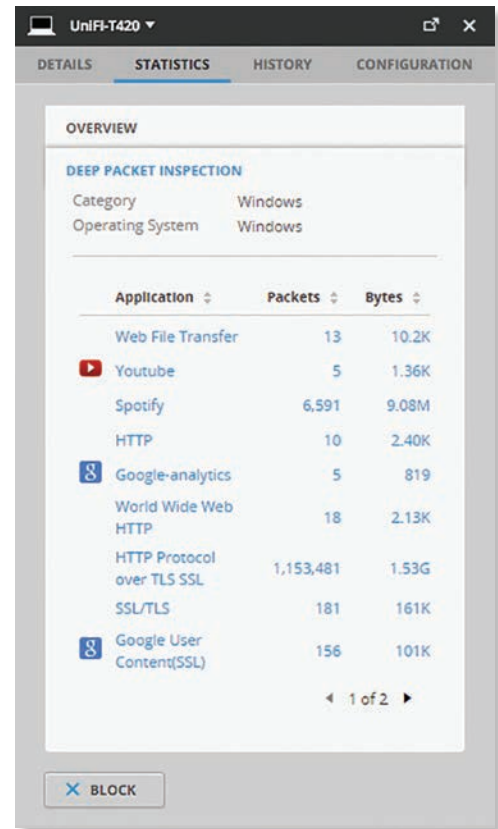

Category Displays the type of device (one example is Windows).

Operating System If available, displays the name of the operating system (examples include Windows 10, Windows 8, Windows 7).

Application Displays the name of the application.

Packets Displays the amount of data uploaded and downloaded as packets.

Bytes Displays the amount of data uploaded and downloaded as bytes.

Wired Client – History

Date/Time Displays the date and time of the connection.

Duration Displays the duration of the connection.

Down Displays the total amount of data downloaded by the client.

Up Displays the total amount of data uploaded by the client.

Wired Client – Configuration

Config

Alias Allows you to change the hostname of the client.

Note Allows you to enter comments about the client. Once saved, the client will be designated as a "Noted" client on the *Insights > Known Clients* tab.

User Group Allows you to assign the client to a User Group. User Groups are set up under the *Settings* tab > *User Groups* option (see **"Settings > User Groups" on page 28** for more information). The default *User Group* is *Automatic*.

Apply Click **Apply** to save changes.

IP Config

Fixed IP Select this option to assign a static IP address to the client, and configure the settings below. If you want the local DHCP server to assign an IP address to the client, remove the checkmark.
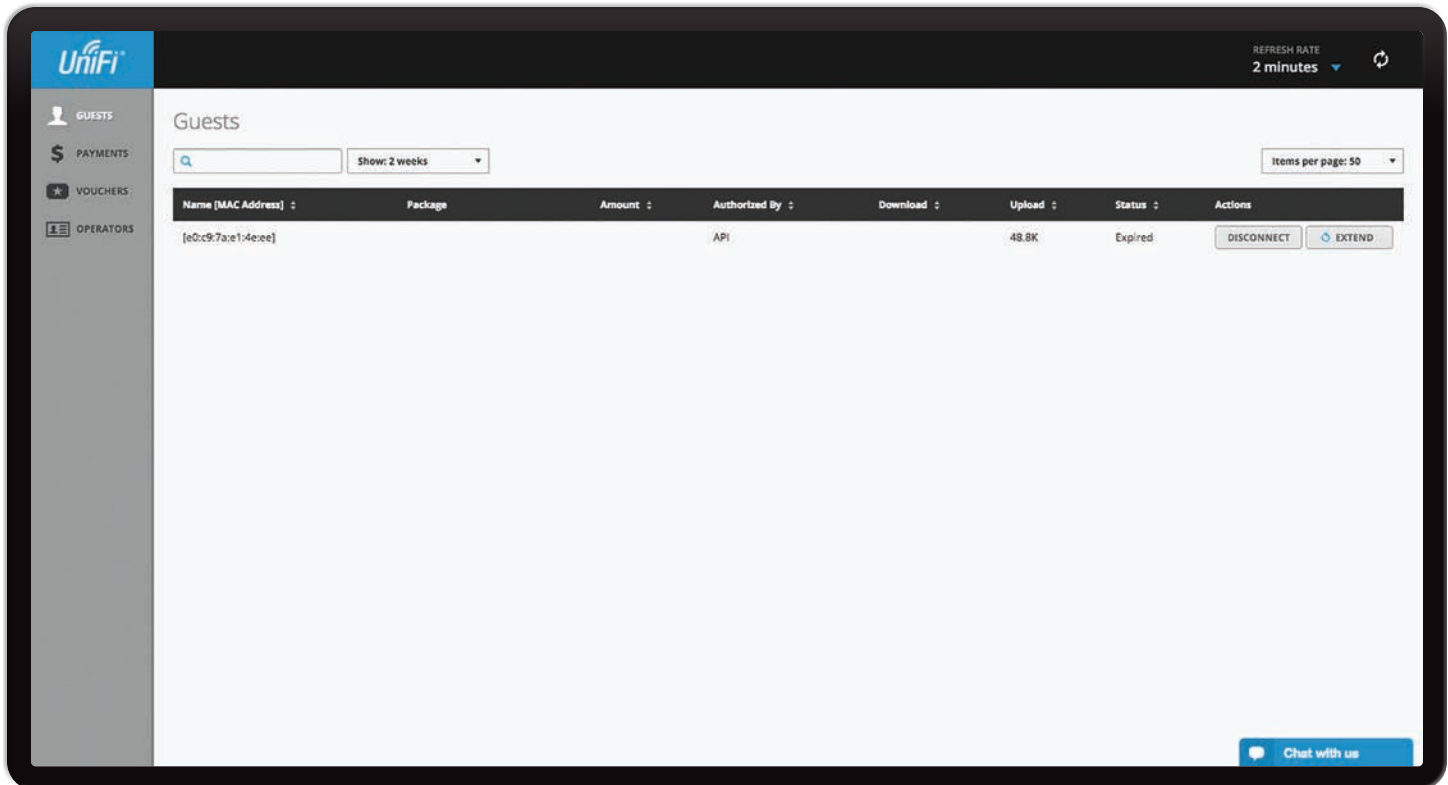
- **Network** Select the appropriate network from the drop-down list.

- **IP** Enter the local IP address.

Click **Apply** to save changes.

Debug

Device Type Displays the type of device.

Chapter 15: Hotspot Manager

The Hotspot Manager includes four main tabs when accessed by the UniFi Controller super admin account. For details on a specific tab, refer to the appropriate section.

| GUESTS | *Guests* |

| PAYMENTS | **"Payments and Transactions" on page 104** |

| VOUCHERS | **"Vouchers" on page 104** |

| OPERATORS | **"Operator Accounts" on page 105** |

Only admins with read/write access to the UniFi Controller can create operator accounts for the Hotspot Manager. Operator accounts are designed for use by hotels or other businesses to service guests and have no access to other UniFi administrative features. Operator accounts will have access to three tabs after login: *Guests*, *Payments*, and *Vouchers*.

Items per page Select how many results are displayed per page: **10**, **50**, **100**, or **200**.

On any sub-tab, you can click any of the column headers to change the list order.

If there is more than one page of entries to display, click the navigation controls or page numbers at the bottom right of the screen to display different pages.

To access the Hotspot Manager, go to **Settings** > **Guest Control**, and click **Go to Hotspot Manager**. See **"Hotspot" on page 25** for more information.

If you create a bookmark for the Hotspot Manager, ensure that you include the site name in the URL, which should be in this format:
https://*unifi.yourdomain.com*:8443/hotspot/s/*site_name*

Guests

The Hotspot's active guests are displayed.

Search Enter keywords in the *Search* field to find a specific guest based on *Name/MAC Address, Package*, *Amount*, *Authorized By*, or *Status* value.

Show Filter by time duration: **last 24 hours**, **3 days**, **7 days**, **2 weeks**, **30 days**, and **120 days**.

Name [MAC Address] Displays the guest's device name or MAC address.

Package Displays the description of the package that was purchased (if applicable).

Amount Displays the amount paid for access (if applicable).

Authorized By Displays the authorization method. If there is no authorization, then *None* is displayed.

Download Displays the total amount of data downloaded.

**Upload** Displays the total amount of data uploaded.

Status Displays the remaining session time for the guest. Displays *Expired* if there is no remaining session time.

Actions Click a button to perform the desired action:

- **Disconnect** Immediately disconnect the selected guest.

- **Extend** Click ⟳ EXTEND to extend a guest's session for an additional 24 hours. For example, if you click it three times, you will extend guest access for three more days.

Payments and Transactions

The Hotspot's payments and transactions are displayed.
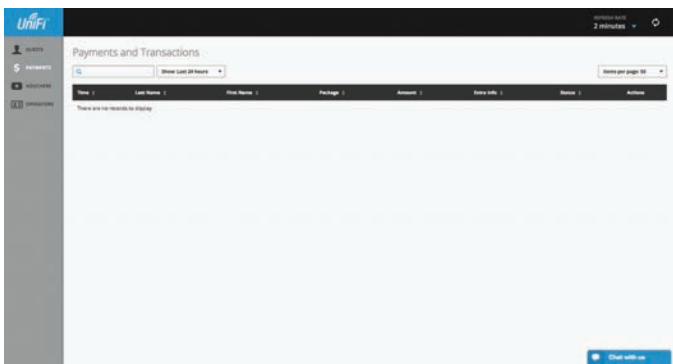
Search 🔍 Enter keywords in the *Search* field to find a specific voucher based on *Time*, *Name*, *Package*, *Amount*, *Extra Info*, or *Status* value.

Show Filter by time duration: **last 24 hours**, **3 days**, **7 days**, **2 weeks**, **30 days**, and **120 days**.

Time Displays the date and time of the transaction.

Last Name Displays the user's last name.

First Name Displays the user's first name.

Package Displays the description of the package.

Amount Displays the amount of the transaction.

Extra Info If the user paid by credit card, the *Extra Info* field will display the type of credit card and the last four digits of the credit card used. If the user paid by an alternative method such as PayPal, the *Extra Info* field may display information such as the email address associated with the PayPal account.
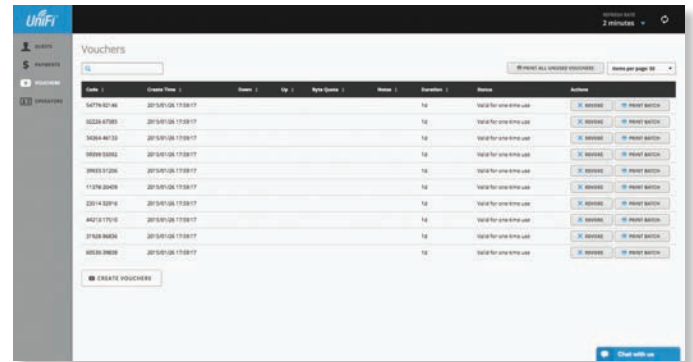
Status Displays the status of the transaction.

Actions Click a button to perform the desired action:

- **Refund** Click the **Refund** button to refund the selected customer if necessary.

Vouchers

Create vouchers that include distributable codes, duration values, and use restrictions.

Search 🔍 Enter keywords in the *Search* box to find a specific voucher based on *Code*, *Create Time*, *Note*, *Duration*, or *Status* value.

Print all Unused Vouchers Click 🖨 PRINT ALL UNUSED VOUCHERS to send a page to your printer with the codes and durations of unused vouchers.

Code Displays each active voucher code.

Create Time Displays the date and time a voucher was created.

Down Displays the maximum download bandwidth allowed.

Up Displays the maximum upload bandwidth allowed.

Byte Quota Displays the maximum amount of data transfer allowed per session.

Note Displays any notes that were added using the *Notes* option during voucher creation.

Duration Displays the duration of minutes, hours, or days that the voucher enables the user to access the Internet.

Status Indicates whether the voucher is valid for a single use or multiple uses. Displays *Expired* if the voucher is no longer valid. Displays the number of times used and time until expiration for multi-use vouchers.
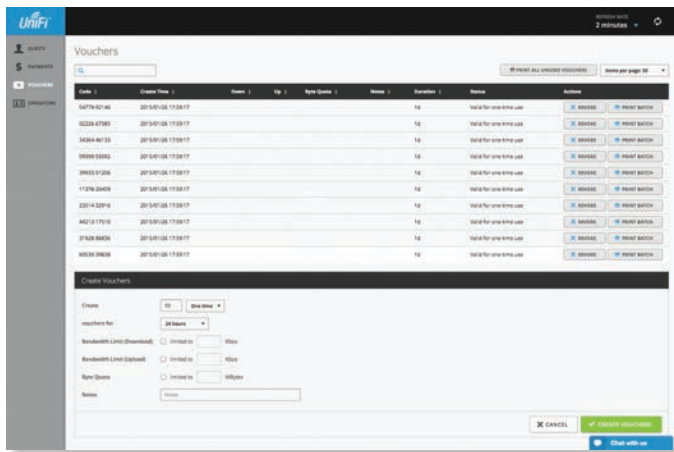
Actions Click a button to perform the desired action:

- **Revoke** Click ✕ REVOKE to immediately deactivate the selected voucher.

- **Print Batch** Click 🖨 PRINT BATCH to print the batch of vouchers created at the same time.

Create Vouchers To create a batch of vouchers, click ⊡ CREATE VOUCHERS and complete the following:

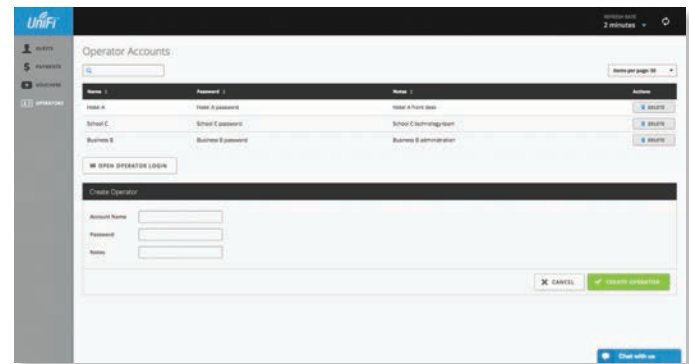- **Create __** Enter the number of vouchers to create.

- **One time/Multi-use** Select how often the voucher can be used: **One time** or for **Multi-use**.

- **vouchers for __** Select how long the voucher is valid: **8 hours**, **24 hours**, **2 days**, **3 days**, **4 days**, **7 days**, or **User-defined**. If you select *User-defined*, enter a number and specify **day**, **minute**, or **hour**.

- **Bandwidth Limit (Download)** Select to limit the download bandwidth. Enter the maximum in Kbps.

- **Bandwidth Limit (Upload)** Select to limit the upload bandwidth. Enter the maximum in Kbps.

- **Byte Quota** Select to limit the amount of data transfer allowed per session. Enter the maximum in megabytes.

- **Notes** Enter any notes specific to this batch of vouchers.

- **Create Vouchers** Click ✓ CREATE VOUCHERS to create the vouchers as specified.

- **Cancel** Click ✕ CANCEL to discard changes.

Operator Accounts

(Only available for admins with read/write access to the UniFi Controller). Create *Operator Accounts* that can log in to *Hotspot Manager* to manage guests, payments or transactions, and vouchers.

Search 🔍 Enter keywords in the *Search* field to find a specific operator account based on *Name*, *Password*, or *Notes* value.

Name Displays the name of the operator.

Password Displays the password.

Notes Displays any descriptive notes.

Actions Click a button to perform the desired action:

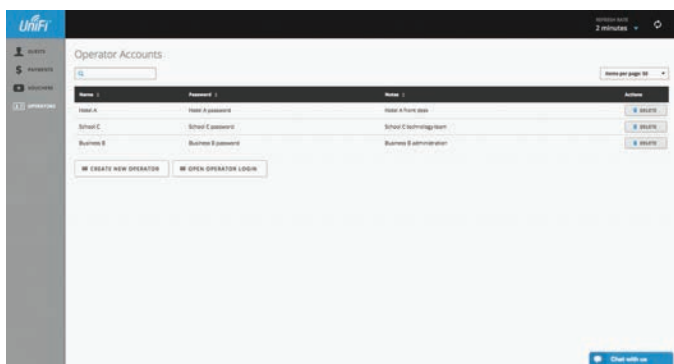- **Delete** Click 🗑 DELETE to remove an operator account.

Create New Operator To create a new operator account, click ⊞ CREATE NEW OPERATOR and complete the following:

- **Account Name** Enter a name for the operator. The *Account Name* should use A-Z, a-z, or 0-9. Spaces and symbols are allowed but not recommended.

- **Password** Enter a password for the operator. The *Password* has to start with A-Z, a-z, or 0-9. The other characters can only be printable ASCII characters.

- **Notes** (Optional) Enter a note to identify or describe the operator.

- **Create Operator** Click ✓ CREATE OPERATOR to create the new operator account.

- **Cancel** Click ✕ CANCEL to discard changes.

Open Operator Login Click ⊞ OPEN OPERATOR LOGIN to test the operator credentials.

If you create a bookmark for the Hotspot Manager, ensure that you include the site name in the URL, which should be in this format:
https://*unifi.yourdomain.com*:8443/hotspot/s/*site_name*

The UniFi Hotspot Manager login screen will appear. Enter the username and password in the appropriate fields and click **LOG IN**.
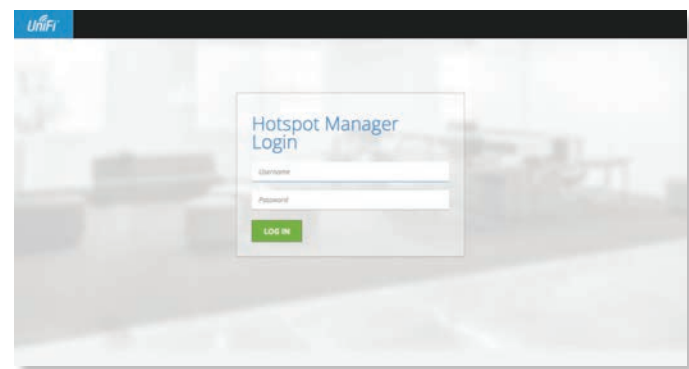
Only the *Guests*, *Payments*, and *Vouchers* tabs will appear.

Appendix A: Portal Customization

Overview

With *Portal Customization*, the UniFi Controller software allows complete branding of a portal implementation, allowing you to "white label" your wireless Internet service as if you had developed it yourself.

In order to provide the maximum flexibility in your branding effort, the UniFi Controller software provides total access to the portal directory on the system in which it is installed.

This open architecture allows you to include unlimited content while keeping development simple through the use of plain .html (hand code or use any editor of your choice). Testing is simple and immediate; simply reload changes from any browser.
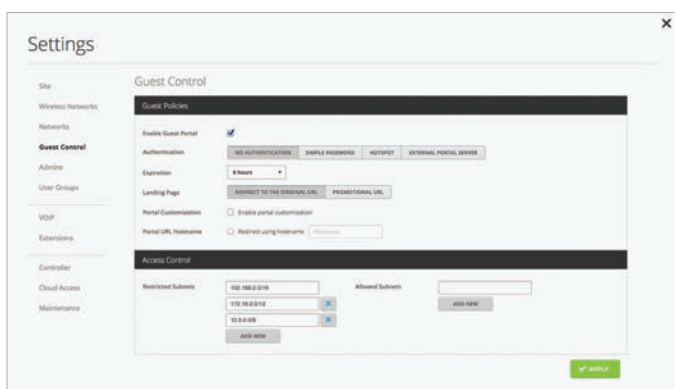
Enabling Portal Customization

By default, *Portal Customization* is disabled in all *Guest Portal* implementations. See **"Settings > Guest Control" on page 24** for more information on enabling the *Guest Portal* for the following authentication and landing page options: *No authentication*, *Simple Password*, and *Hotspot*.

To enable *Portal Customization*, perform the following steps:

1. Go to **Settings** and click **Guest Control**.
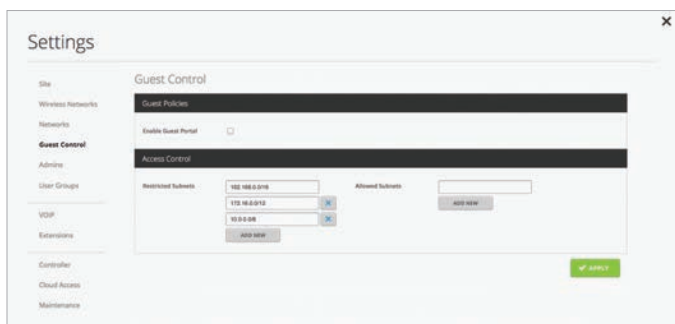
2. Select **Guest Portal** to enable it, and then select an authentication method.

3. Select **Portal Customization** to enable it, and then click ✓ APPLY .

Viewing the Default Portal

Once *Guest Portal* and *Portal Customization* are enabled, connect to the *Guest Network SSID* as shown below, depending on your platform.

Windows

1. Go to **Connect to Network**.

    - **Windows 8** Go to the *Settings* menu and click the *Network* icon.
    - **Windows 10/7** Right-click the *Network* icon.

2. Select the *Guest Network* SSID and click **Connect**.

3. Depending on the security type applied to the network, enter the security key or password. Click **OK** or **Connect**.

4. Launch your web browser and you will be directed to the default portal page for the authentication type configured on the *Guest Portal* (see **"Settings > Guest Control" on page 24** for screenshots of default portal pages by authentication method).

Mac

1. Click the *AirPort* icon in the menu bar (top right side of the screen).

2. Select the *Guest Network* SSID and click **Connect**.

3. Depending on the security type applied to the network, enter the security key or password. Click **OK**.

4. Once connected, the *AirPort* icon will change from gray to solid black. The number of black lines indicates the signal strength.

5. Launch your web browser and you will be directed to the default portal page for the authentication type configured on the *Guest Portal* (see **"Settings > Guest Control" on page 24** for screenshots of default portal pages by authentication method).

Setup

The html and css files are located on the system that the UniFi Controller software has been installed on. The files are in the following locations:

UniFi Cloud Key

/srv/unifi/data/sites/<site_name>/portal

Mac

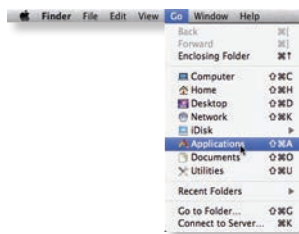/Applications/UniFi.app/Contents/Resources/data/sites/<site_name>/portal

Windows

<Drive_Letter>:\Users\<Username>\Ubiquiti UniFi\data\sites\<site_name>\portal

For specific instructions on accessing the files, refer to the specific operating system:

- *Mac*
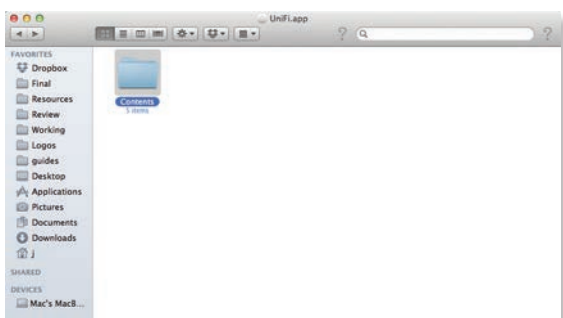- **"Windows" on page 109**

Mac
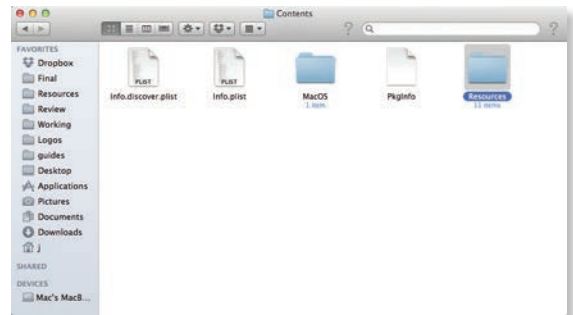
1. Navigate to **Go** > **Applications**.

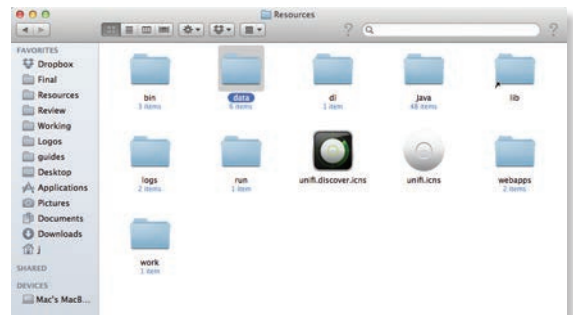2. Control-click the **UniFi** application and then click **Show Package Contents**.

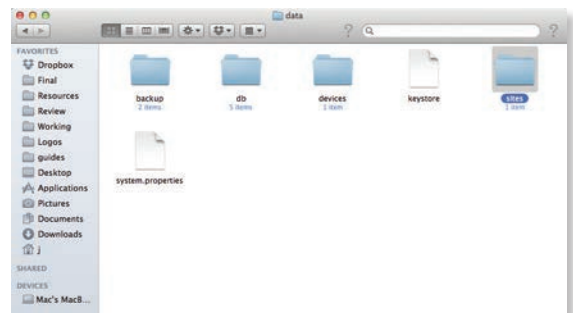3. Double-click the **Contents** folder to open it.

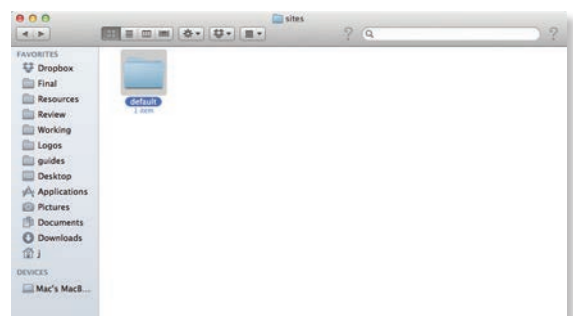4. Double-click the **Resources** folder to open it.

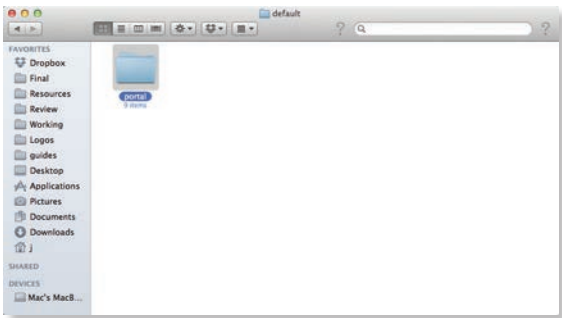5. Double-click the **data** folder to open it.

6. Double-click the **sites** folder to open it.
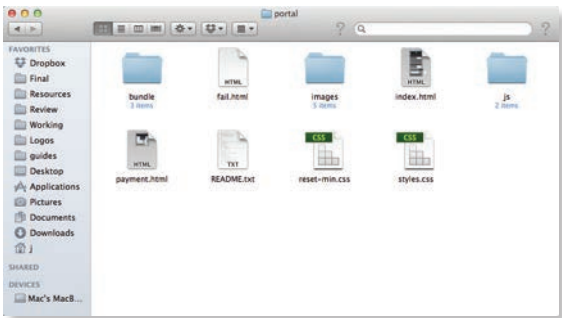

7. Double-click the folder whose name matches the site ID (for example: */manage/s/<site_ID>/dashboard*).
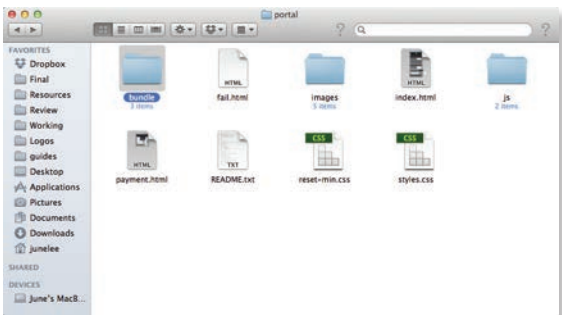
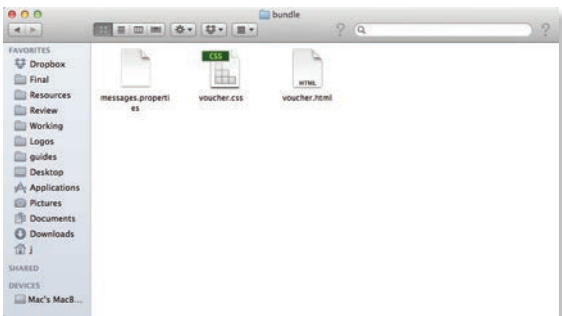8. Double-click the **portal** folder to open it.

9. You have several files that you can customize in the portal folder (these are described in the *Customizable Default Files* section).

10. To customize the voucher, double-click the **bundle** folder to open it.

11. You can customize voucher.css and voucher.html to fit your needs.

Windows

The Windows files are located in the following location: **<Drive_Letter>:\Users\<Username>\Ubiquiti UniFi\ data\sites\<site_name>\portal**

Customizable Default Files

The following default customizable html and css files are located in the *portal* folder:

• **index.html** Main landing page that displays pricing to the guest.

• **payment.html** Used to submit credit card information. It requires https and also serves as an example of an additional .html page.

• **fail.html** Displayed when there is an error handling a guest login.

• **reset-min.css** Standardizes the rendering of HTML elements across browsers.

• **styles.css** Controls the style of HTML elements.

The following default files are located in the *bundle* folder:

• **voucher.html** Page for vouchers.

• **voucher.css** Standardizes the rendering of HTML elements across browsers.

• **messages.properties** You can edit this file using a text editor such as TextEdit. This file defines package costs, duration of access, duration of a free trial period, package titles, and how the charge will appear on a customer's credit card account. Error messages are also defined by this file.
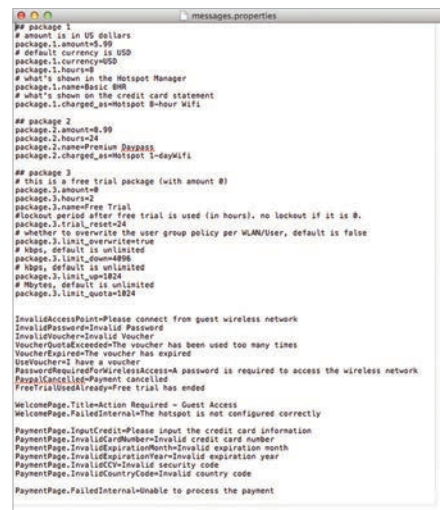
Additional details on portal customization can be found in our community site at:
http://ubnt.link/UniFi-Portal-Customization

Appendix B: UniFi Discovery Utility

Overview

The Ubiquiti UniFi Discovery Utility includes tools that allow the discovery and management of UniFi APs. It is installed automatically as part of the UniFi Controller software installation process. See **"Software Installation" on page 1** for more information.

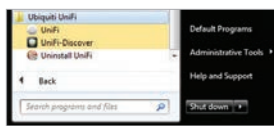## Launching the UniFi Discovery Utility

Mac Users

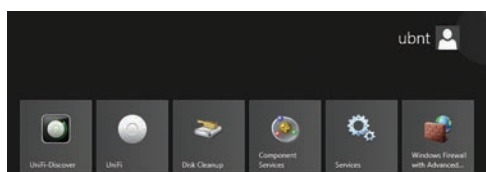From the Finder, click **Go** > **Applications** and double-click the *UniFi-Discover.app* icon.

PC Users

For most versions of Windows, go to **Start** > **All Programs** > **Ubiquiti UniFi** and double-click the *UniFi-Discover* icon.

For Windows 8, go to the *Start* menu and double-click the *UniFi-Discover* icon.

UniFi Discovery Utility Interface

Upon launch, the UniFi Discovery Utility listens to Layer-2 broadcast/multicast beacons from UniFi APs in both a factory default state and an unmanaged state (adopted but unable to contact the UniFi Controller software).

MAC Address Displays the MAC address and alias of the AP. The alias is displayed in parentheses if it has been specified; see **"UniFi Access Point – Configuration" on page 88** for details.

IP Address Displays the IP address of the AP and the method used by the AP to obtain an IP address. The method is displayed as *DHCP* or *Static* in parentheses.

Model Displays the model name of the AP.

Version Displays the firmware version installed on the AP.

Status Displays the current status of the AP: *Pending*, *Managed/Adopted*, *Login Failed*, or *IP Unreachable*.

There are three buttons available:

- **"Locate" on page 112**
- **"Manage" on page 112**
- **"Reset" on page 113**

> Note: To reboot the AP, click one of the buttons listed above and proceed to **"Reboot" on page 113**.

Locate

Locate the AP. The following window will appear:

Actions If you clicked the *Locate* button, then *Locate* is automatically selected.

Username If required, enter the device username.

Password If required, enter the device password.

Apply Click **Apply** to locate the AP. The LED on the AP will flash so that it can be differentiated from the other APs.

Manage

Set the inform URL, allowing the AP to be managed by the UniFi Controller software running in a NOC or in the cloud. (See **"Network Topology Requirements" on page 1** for a visual representation of this configuration.) The following window will appear:

Actions If you clicked the *Manage* button, then *Manage* is automatically selected.

Set Inform URL Enter the URL, port, and path to the UniFi Controller software.

Username If required, enter the device username.

Password If required, enter the device password.

Apply Click **Apply** to save the inform URL.

Reset

Reset the AP to factory default settings. The following window will appear:

Actions If you clicked the *Reset* button, then *Restore to factory default* is automatically selected.

Username If required, enter the device username.

Password If required, enter the device password.

Apply Click **Apply** to reset the AP to factory default settings.

Reboot

To reboot the AP, click any of the buttons (*Locate*, *Manage*, or *Reset*) on the *UniFi Discovery Utility* screen. The following window will appear:

Actions Select **Reboot** from the drop-down menu.

Username If required, enter the device username.

Password If required, enter the device password.

Apply Click **Apply** to reboot the AP.

Appendix C: Mobile Apps

Overview

Ubiquiti Networks offers two UniFi mobile apps:

- **UniFi EasySetup App** You can use a mobile device to provision a UniFi AP for basic functionality without configuring a UniFi Controller.
- **UniFi EDU App** You can use the UAP-AC-EDU to broadcast announcements with clarity from your mobile device. Refer to **"UniFi EDU App" on page 117** for more information.

UniFi EasySetup App

The Android version can set up any UniFi AP. The iOS version can set up the UAP-AC-LITE, UAP-AC-LR, UAP-AC-PRO, or UAP-AC-EDU. A future upgrade will enable the iOS version to set up any UniFi AP.

Requirements

- An Ethernet connection from the UniFi AP to the LAN with DHCP
- Firmware version 3.4.4.3231 or higher
- A compatible Android or iOS device

The following instructions describe the Android version of the app; however, the iOS version is similar.

1. Download the UniFi AC EasySetup App from the App Store (iOS) or the UniFi EasySetup App from Google Play™ (Android).

2. Launch the app, and use one of the following options:
   - **Log In** Enter the Username and Password of your Ubiquiti Single Sign-On (SSO) account. Tap **Log In**.
   - **Register** To register for an SSO account, tap **Register**.
   - **Continue** If you do not want to back up or restore configurations, you can skip the login and tap **Continue**.
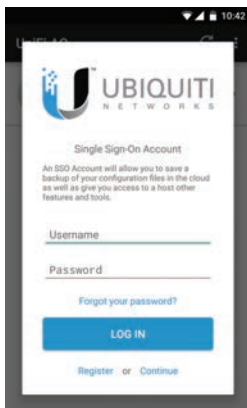
3. The app will search for new devices. Tap the UniFi AP on the device list and go to step 5.

If a new device is not detected, you have two options:
- **Scan QR Code** Tap **Scan QR Code** and go to step 4.
- **Wi-Fi Settings** Tap **Wi-Fi Settings** and connect to your Wi-Fi network. Then the app will run a search again.

4. Scan the QR code on the back of the UniFi AP, or tap **You can enter your ID manually** to type the case-sensitive MAC address.

   Note: For Android, the mobile device automatically connects to the helper SSID. For iOS, manually copy and paste the helper SSID and password.

5. Create a device login using the *Username* and *Password* fields. Select the appropriate *Country Code* and tap **OK**.

6. On the *Config* screen, you can change *UBNT* (the default device name) to a descriptive name.

   Configure the following settings for each radio:

   • **Channel**

     - Select a channel number or keep the default, *Auto*.

     - Select the appropriate channel width.

   • **TX Power** The default is *Auto*. Select **High**, **Medium**, or **Low**.

   • **Name/SSID** Enter the name of the wireless network.

   • **Enabled** Enable or disable wireless functionality.

   • **Security** Select the security method you want to use.

   • **Security Key** Enter the passphrase.

   Tap **Apply Settings**.

7. Tap **Continue**.
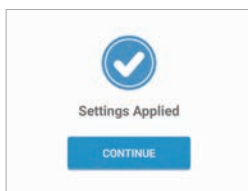
8. Scroll down the *Config* screen to access the following:

   • **Firmware Upgrade** Install the latest firmware on the UniFi AP. (Not available if the latest firmware is already installed.)

   • **Forget This AP** Remove the UniFi AP from management by the UniFi EasySetup App and reset it to factory default settings. All configurations and history associated with this UniFi AP will be deleted.

   • **Restart** Power cycle the UniFi AP.

   • **Locate** Flash the LED indicator on the UniFi AP.
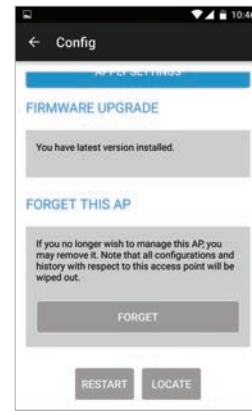
9. Return to the *UniFi AC* screen. Tap the *overflow* icon in the upper-right corner, and then tap **Settings**. (The *Scan QR code* option adds another UniFi AP.)

10. The *Settings* screen offers the following options:

- **Secure Shell (SSH) Login Username** Change the username of the device login.
- **SSH Login Password** Change the password of the device login.
- **Country Code** Change the country selection.
- **Single Sign-On (SSO) Username** Change the username of the SSO account.
- **SSO Password** Change the password of the SSO account.
- **Automatic Configuration Backup** Enable or disable automatic backup of the current configuration.
- **Back Up Now** Back up the current configuration.
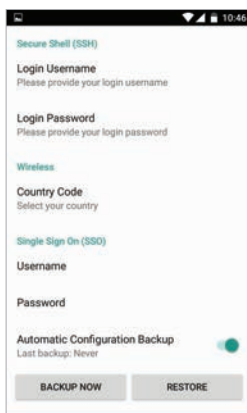- **Restore** Restore the previously saved configuration.

Scroll down further to view the *UniFi Controller* settings:

- **Controller mode** Enable or disable use of the UniFi EasySetup App with a UniFi Controller.
- **Address** Enter the IP address of the UniFi Controller.
- **Port** Enter the port number of the UniFi Controller.

> Note: The *Controller* settings are not available in the iOS version; however, they will be available in a future upgrade.
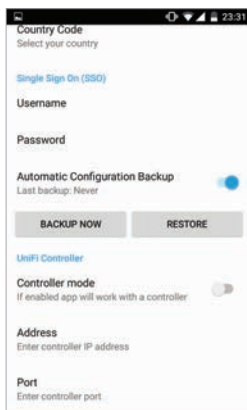
The UniFi EasySetup App configures basic features accessed via a mobile device. Advanced features require the UniFi Controller software.

UniFi EDU App

Use the UniFi EDU app to broadcast announcements from the UAP-AC-EDU.

Requirements

- UniFi Controller software v4.8.7 or higher
- A compatible Android or iOS device located on the same Layer-2 network as the UniFi Controller and UniFi APs

The following instructions describe the Android version of the app; however, the iOS version is similar.

1. Download the UniFi EDU app from the App Store (iOS) or Google Play (Android).

2. Launch the app.
3. Tap **Discover Controller**.

> Note: Tap **Advanced** to manually enter the IP address instead. Then tap **Connect** and go to step 5.
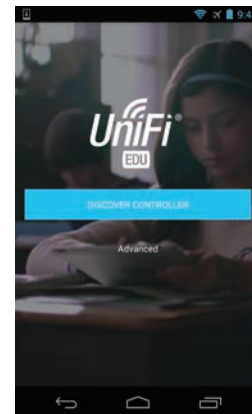
4. Tap the UniFi Controller you want to use.
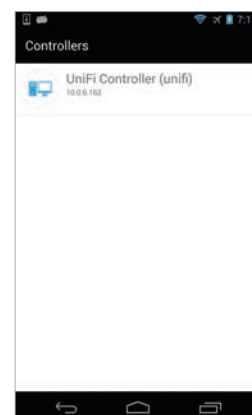
5. Enter the Username and Password, and then tap **Log In**.

6. Tap the site of your UniFi AP AC EDU devices.

7. After the app checks the status of the speakers, select the ones you want to use, and tap **Broadcast**.

> Note: Use the slider control to adjust the volume for each speaker.
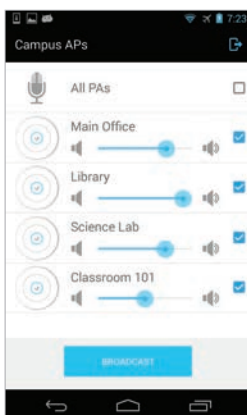
8. After the speakers initialize, begin the announcement. Tap **Stop Broadcasting** to end the announcement.
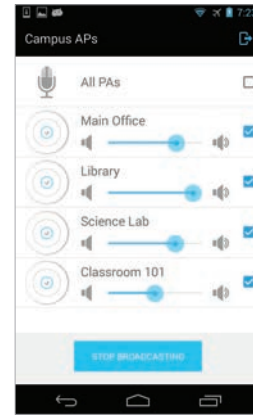
The speakers will automatically shut down when you stop broadcasting.

Appendix D: Controller Scenarios

Overview

The UniFi Controller is a software program that sets up, manages, and monitors UniFi devices, which do not have individual configuration interfaces (except for the UniFi Cloud Key); instead, you use the UniFi Controller as a network management system to configure settings.

For very small installation that don't require a guest portal or advanced features, you can set up UniFi APs in stand-alone mode. Refer to **"UniFi EasySetup App" on page 115** for details.

Hosting Controller Software

The UniFi Controller can be hosted on any of the following:

- a local UniFi Cloud Key (a low-power dedicated network device)
- a local server running Linux, Mac OS X, or Microsoft Windows 7/8/10
- a remote server running Linux, Mac OS X, or Microsoft Windows 7/8/10

> Note: The remote controller option requires Layer-3 adoption and management.

Only one instance of the UniFi Controller is required. For example, use either the UniFi Cloud Key or a local server, not both.

A UniFi Cloud Key can be used as a remote controller. For example, if you have a campus-wide UniFi network and each building has its own router, then Layer-3 adoption is required.

Deployment Options

There are different scenarios for the deployment of the UniFi Controller. This chapter describes three examples of typical deployments:

- Local (see below)
- **"Layer-3 Deployment" on page 120**
- **"Hybrid Deployment" on page 121**

Local Deployment

The application diagram below shows an example of a deployment using local controllers. Each site has a local instance of the UniFi Controller:

- **High rise** The UniFi Controller is running on a computer.
- **Hotel** The UniFi Controller is running on a UniFi Cloud Key.
- **Restaurant** The UniFi Controller is running on a UniFi Cloud Key.

Remote Access

Cloud access is enabled on the UniFi Controllers, so you can use **unifi.ubnt.com** to remotely monitor and access multiple controllers. Each controller, in turn, can manage multiple sites.

Local Deployment

unifi.ubnt.com

High Rise

Local Controller

(150) UAP-AC-PRO

(10) US-48-500W

(1) USG-PRO-4

Hotel

UniFi Cloud Key Controller

(10) UAP-AC-PRO

(10) UAP-AC-LITE

(2) UAP-AC-LR

(1) UAP-Outdoor+

(1) UAP-Outdoor5

Restaurant

UniFi Cloud Key Controller

(2) UAP-AC-LR

(1) US-8-150W

(1) USG
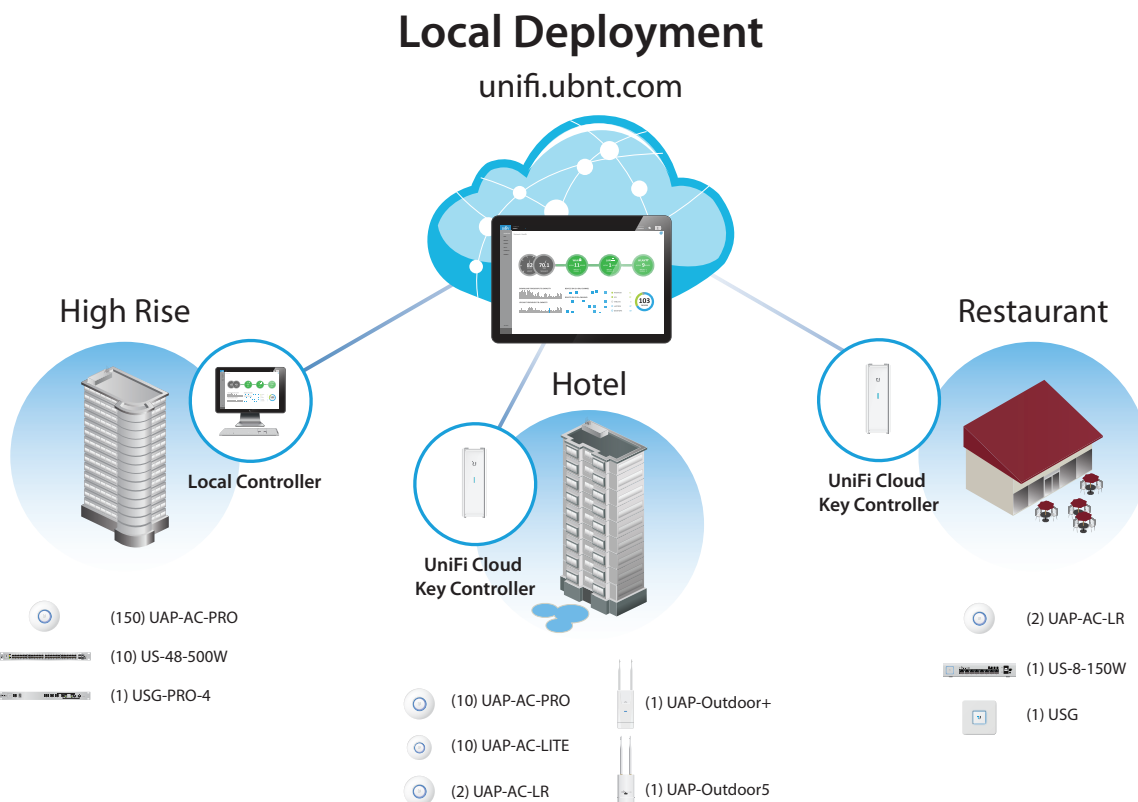
Layer-3 Deployment

The application diagram below shows an example of a deployment using a remote controller.

The UniFi Controller is running in the cloud or your NOC (Network Operating Center).
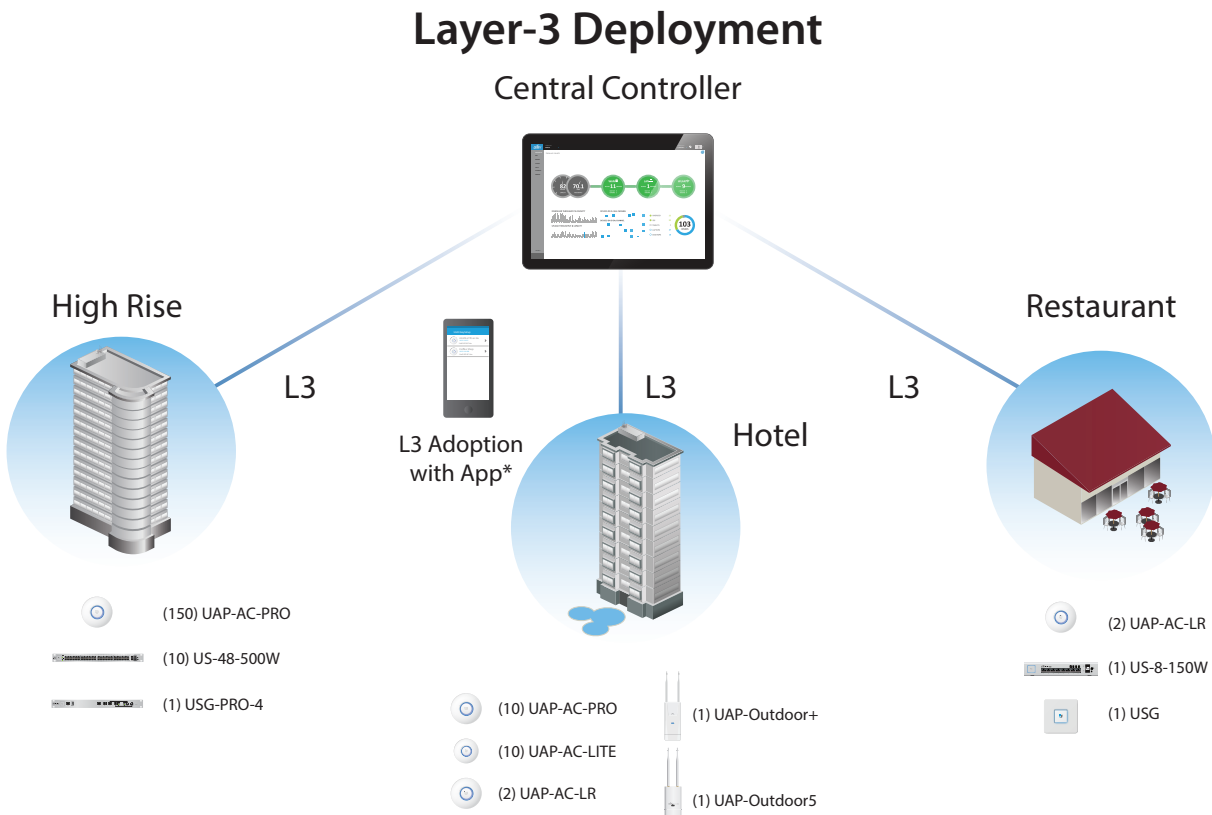
- **High rise** The UniFi Controller is off-site. Use Layer-3 adoption to manage this site.
- **Hotel** The UniFi Controller is off-site. Use Layer-3 adoption to manage this site.
- **Restaurant** The UniFi Controller is off-site. Use Layer-3 adoption to manage this site.

There are multiple methods to carry out Layer-3 adoption.

Here is an overview of a typical example:

1. Create a remote controller.
2. At the customer site, open a browser to the remote controller.
3. Use one of the following methods to configure all local APs so they inform back to the UniFi Controller:
   - **"UniFi EasySetup App" on page 122**
   - **"DNS" on page 123**
   - **"DHCP Option 43" on page 123**
   - **"SSH" on page 124**

For details about Layer-3 adoption, go to **"Layer-3 Adoption" on page 122**.

Layer-3 Deployment

Central Controller

High Rise

L3

(150) UAP-AC-PRO

(10) US-48-500W

(1) USG-PRO-4

L3 Adoption with App*

Hotel

L3

(10) UAP-AC-PRO

(10) UAP-AC-LITE

(2) UAP-AC-LR

(1) UAP-Outdoor+

(1) UAP-Outdoor5

Restaurant

L3

(2) UAP-AC-LR

(1) US-8-150W

(1) USG

* Refer to **"Layer-3 Adoption" on page 122** for other methods that can be used.

Hybrid Deployment

The application diagram below shows an example of a deployment using local and remote controllers.

Your sites use a mixture of controller types. Some sites have local instances of the UniFi Controller, while other sites have a remote UniFi Controller.

- **Sites 1, 2, and 3** The UniFi Controller is off-site. Use Layer-3 adoption to manage these sites.

  > Note: For details about Layer-3 adoption, go to **"Layer-3 Adoption" on page 122**.

- **Hotel** The UniFi Controller is running on a UniFi Cloud Key.

- **Restaurant** The UniFi Controller is running on a UniFi Cloud Key.
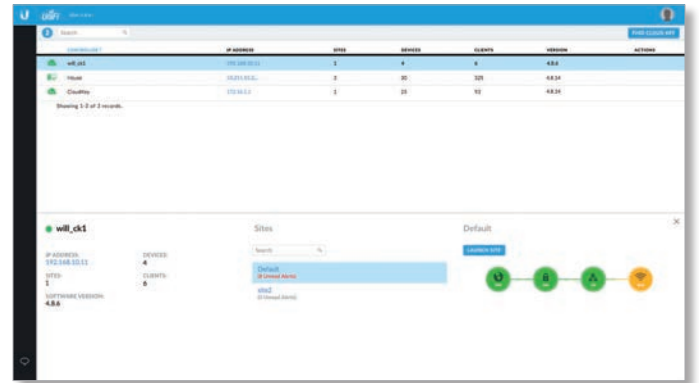
Remote Access

Cloud access is enabled on the UniFi Controllers, so you can use **unifi.ubnt.com** to remotely monitor and access multiple controllers. Each controller, in turn, can manage multiple sites.

For example, in the application diagram below, you can use **unifi.ubnt.com** to access three controllers:

- remote controller
- UniFi Cloud Key controller for the hotel
- UniFi Cloud Key controller for the restaurant

In turn, the remote controller manages three sites:

- Site 1
- Site 2
- Site 3

Hybrid Deployment
unifi.ubnt.com

| Site 1 | Site 2 | Hotel | Restaurant |

USG-PRO-4 USG-PRO-4 **L3 Controller**

UniFi Cloud Key Controller **UniFi Cloud Key Controller**

Site 3

USG-PRO-4

(240) UAP-AC-PRO
(20) US-48-500W

(10) UAP-AC-PRO
(10) UAP-AC-LITE
(2) UAP-AC-LR

(1) UAP-Outdoor+
(1) UAP-Outdoor5

(2) UAP-AC-LR
(1) US-8-150W
(1) USG
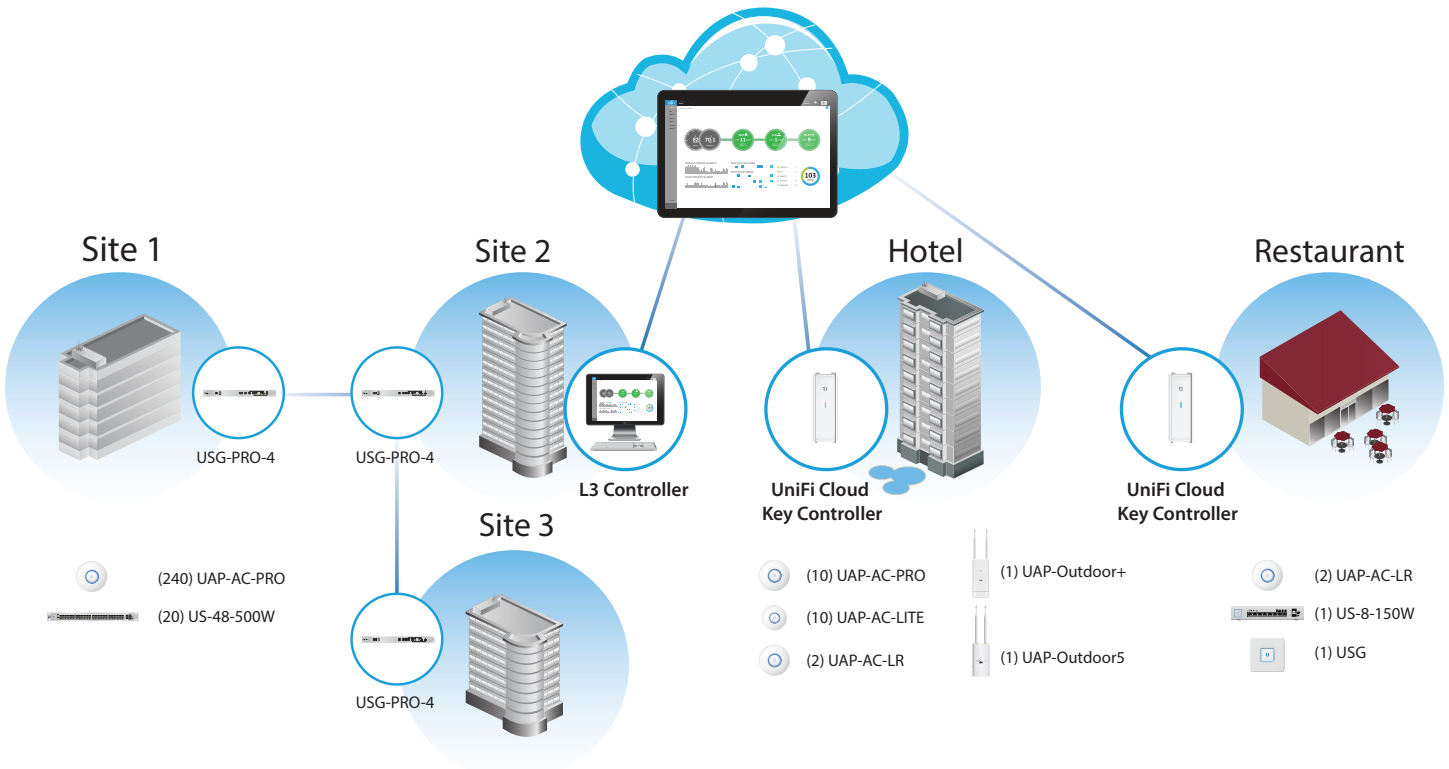
Layer-3 Adoption

Here is an overview of a typical example:

1. Create your controller.

2. At the customer site, open a browser to the UniFi Controller.

3. Every UniFi AP has a default inform URL: *http://unifi:8080/inform*

   Use one of the following methods to configure all local APs so they inform back to the UniFi Controller:
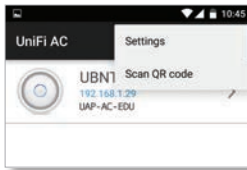
   • UniFi EasySetup App (see below)

   • UniFi Discovery Utility (see the next column)

   • **"DNS" on page 123**

   • **"DHCP Option 43" on page 123**

   • **"SSH" on page 124**

UniFi EasySetup App

1. Launch the UniFi EasySetup App from your mobile device.

2. Tap **Settings**. If *Settings* is not displayed, then tap the *overflow* ⋮ icon in the upper-right corner, and then tap **Settings**.

3. Scroll down the *Setting* screen to view the *UniFi Controller* settings:

   • **Controller mode** Enable use of the UniFi EasySetup App with a UniFi Controller.

   • **Address** Enter the IP address of the UniFi Controller.

   • **Port** Enter the port number of the UniFi Controller.
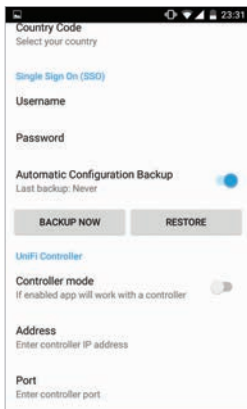
For more information about the UniFi EasySetup App, refer to **"UniFi EasySetup App" on page 115**.
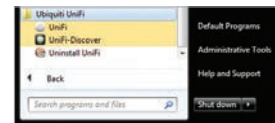
UniFi Discovery Utility

The UniFi Discovery Utility listens to the multicast and broadcast packets from UniFi APs and allows you to tell the UniFi AP to inform any URL you want. (Only APs in the default state or not in contact with any controller will be displayed).

The UniFi Discovery Utility is installed alongside your UniFi Controller. Follow the instructions for the operating system you are using:
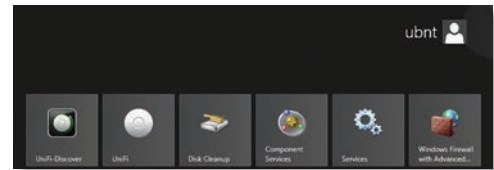
Mac Users From the Finder, click **Go** > **Applications** and double-click the *UniFi-Discover.app* icon.

PC Users For most versions of Windows, go to **Start** > **All Programs** > **Ubiquiti UniFi** and double-click the *UniFi-Discover* icon.

For other versions, including Windows 8, go to the *Start* menu and double-click the *UniFi-Discover* icon.
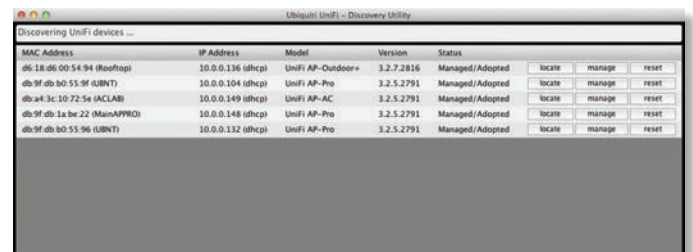

Linux Users Run the following command:

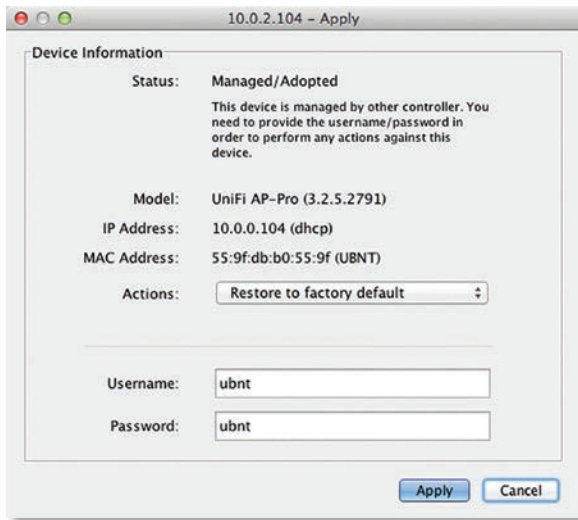```
java –jar <unifi_base>/lib/ace.jar discover
```

To perform Layer-3 adoption with the UniFi Discovery Utility:

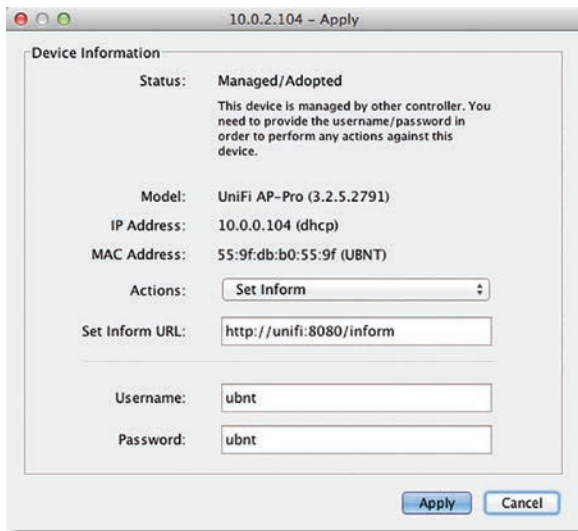1. Wait for the UniFi AP to be displayed.

2. If the UniFi AP is not in the factory default state, then click **reset**. Enter the SSH username and password, and then click **Apply**.



3. Click **manage**.

4. Change the inform URL. The SSH username and password should be *ubnt/ubnt*. Click **Apply**.



5. Open a browser to the remote UniFi Controller. The UniFi AP should be displayed as *Pending Approval*.

6. Click **approve**. The UniFi AP will change to an *Adopting* state. Eventually it will change to an *Adoption Failed* or *Disconnected* state.

7. Perform step 3 again.

The UniFi AP is now managed by the UniFi Controller. Once adopted, the UniFi Controller will upgrade these APs automatically.

For more information about the UniFi Discovery Utility, refer to **"UniFi Discovery Utility" on page 111**.

## DNS

You have a couple of options:

**DNS resolution**  Configure your DNS server to resolve *unifi* to the IP address of the UniFi Controller.

Ensure that the UniFi AP can resolve the domain name of the UniFi Controller. For example, if you have configured *http://<XYZ>:8080/inform*, then ping the UniFi Controller from the UniFi AP to determine if *<XYZ>* can be resolved or reached.

**FQDN**  Use FQDN for the inform URL of the UniFi Controller: *http://FQDN:8080/inform*

If the UniFi AP (using a static IP address) fails to connect to the remote UniFi Controller, then ensure that you have properly configured the IP address of the DNS server when you changed the UniFi AP from DHCP to static in the UniFi Controller UI. If not properly configured, then the UniFi AP cannot contact the DNS server to resolve the domain name of the UniFi Controller.

If the UniFi AP has been reset to its factory defaults, then ensure that you have informed the UniFi AP twice (using the UniFi Discovery Utility) about the location of the UniFi Controller.

## DHCP Option 43

Instructions vary depending on the router you are using.

**EdgeMAX**  If you are using a Ubiquiti® EdgeMAX® or EdgePoint™ router, then follow these instructions:

1. Access the user interface of the EdgeMAX router.

2. Click the **Services** tab.

3. Go to **Actions > View Details** for the appropriate DHCP server.
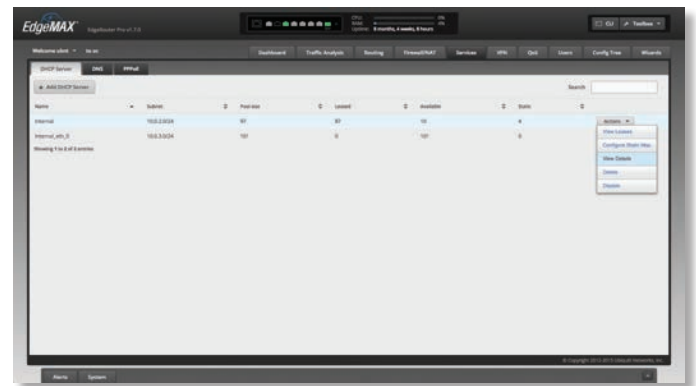
4. In the *UniFi Controller* field, enter the IP address of the UniFi Controller. Then click **Save**.



The DHCP server will return the IP address of the UniFi Controller to its DHCP clients, so if a client is a UniFi AP, it will know how to contact the UniFi Controller.

**Linux ISC DHCP Server**  Configure the dhcpd.conf file:

```
# ...
option space ubnt;
option ubnt.unifi-address code 1 = ip-address;
class "ubnt" {
    match if substring (option vendor-class-identifier,
    0, 4) = "ubnt";
    option vendor-class-identifier "ubnt";
    vendor-option-space ubnt;
}
subnet 10.10.10.0 netmask 255.255.255.0 {
    range 10.10.10.100 10.10.10.160;
    option ubnt.unifi-address 201.10.7.31;   ### UniFi
    Controller IP ###
    option routers 10.10.10.2;
    option broadcast-address 10.10.10.255;
    option domain-name-servers 168.95.1.1, 8.8.8.8;
    # ...
}
```

> Note: You can also use the IP address of the UniFi Controller instead of the domain name in the inform URL.

Instructions for other DHCP servers are available at: **http://ubnt.link/UniFi-Layer3-Adoption**

SSH

If you can SSH into the UniFi AP, then you can perform the layer-3 adoption via CLI command:

1. Use the UniFi Discovery Utility to ensure that the UniFi AP is running the same firmware as the UniFi Controller. If it is not, then follow the instructions at: **http://ubnt.link/UniFi-SSH-Firmware-Upgrade**

2. Use the UniFi Discovery Utility to ensure that the UniFi AP is in the factory default state. If it is not, then SSH into the UniFi AP and run:

   ```
   syswrapper.sh restore-default
   ```

3. SSH into the UniFi AP and enter:

   ```
   mca-cli
   set-inform http://<ip-of-controller>:8080/inform
   ```

Appendix E: Contact Information

Ubiquiti Networks Support

Ubiquiti Support Engineers are located around the world and are dedicated to helping customers resolve software, hardware compatibility, or field issues as quickly as possible. We strive to respond to support inquiries within a 24-hour period.

Ubiquiti Networks, Inc.
2580 Orchard Parkway
San Jose, CA 95131
www.ubnt.com

Online Resources

Support: **ubnt.link/UniFi-Support**

Community: **community.ubnt.com/unifi**

Downloads: **downloads.ubnt.com/unifi**

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