





Enterprise System Controller Release Version: 5.4.8

User Guide

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# Chapter 1: Software Installation

# Introduction

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

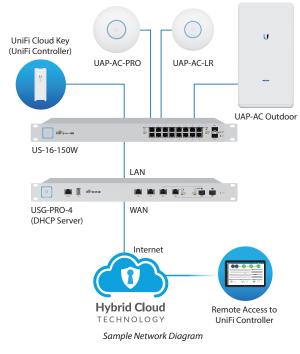
This User Guide is for use with version 5.4.8 or above of the UniFi Controller software.

# **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 11 (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<sup>™</sup> or iOS device located on the same Layer-2 network as the UniFi Controller and UniFi APs



\* 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 <u>"UniFi</u> <u>Cloud Key" on page 5</u> for more information.

# **UniFi Cloud Users**

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

### **Linux Users**

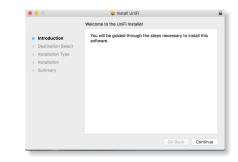
Please refer to the UniFi blog on our community site at: http://ubnt.link/UniFi-Blog

**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.

• • •		Applications	Q		_
FAVORITES Dropbox All My Files AirDrop	$\odot$	1	۲	0	
Applications	System Preferences	TextEdit	Time Machine	UniFi	
<ul> <li>Documents</li> <li>Downloads</li> <li>Movies</li> </ul>		×			
Music Pictures	UniFi-Discover	Utilities 27 items			

Proceed to <u>"Configuring the UniFi Controller Software"</u> on page 2. Chapter 1: Software Installation

### **PC Users**

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



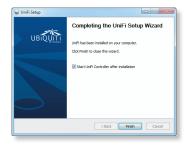
3. If your computer doesn't have Java 1.6 or above installed, you will be prompted to install it. Click Install to continue.



#### 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.

UniiFi
nc. All Rights Reserved.
Hide
Hide

- 阊
  - Note: The above applies to Windows and OS X only. On Linux, open a browser and go to the following URL: https://<IP\_address\_of\_controller>:8443
- 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.

<b>ប</b> ហើត		
	UniiFi Setup Wizard	
	Thank you for purchasing UniFi, Ubiquid's Enterprise WiFi Solution. You will be able to setup your controller in a few minutes.	
	Select your country Select your timezone	
	United States $\checkmark$ (UTC-08.00) Pacific Time (US & Canada) $\checkmark$	
	Enable Auto Backup CN	
	Alternatively you can restore from a previous backup.	
	NEXT	



Note: Enable Auto Back is on by default. Toggle off if you wish to disable.



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. You can click Refresh Now to have the UniFi Controller repeat its device discovery process.

Plane role	of the desires you	would like to configure.			
		MODIL	IP ADDRESS	OPTIME 1	
	118:06:c3:00:95	UniFi Phane-Executive	10.02.60	76d 20m 57s	
	18x6x3.03ac	UniFi Phone Executive	10.0.2.59	76d 21m 37s	
• •	15::6:03:95:39	UniFI Phone-Executive	10.0.2.129	43d 18h 54m 24s	
	18:26:c3:00:b7	UniFi Phone-Executive	10.0.2.145	9d 13h 22m 14s	
	118:06:83:95:58	UniFi Phone Executive	10.0.2.189	42d 2h 47m 30s	
	18x86x3.03x8e	UniFI Phone Executive	10.0.2.102	76d 20m 2%	
	18x6x3x0x0	UniFi Phone-Executive	10.0.2.104	15d 9h 56m 38s	
- •	118x66x3x03:97	UniFi Phone-Executive	10.0.2.57	9d 39h 56m 43s	
	18:06:83.14:08	UniFI Switch 48 POE-507W	10.0.2.150	63d 23h 53m 25s	
• •	18::6::3:03:86	UniFi Phone-Executive	10.0.2.154	13d 22h 58m 43s	
O REFRE	SH NOW			NEXT	



Note: 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.

4. The UniFi Setup Wizard will create a secure primary wireless network for your devices.

ป ปก็คา		
	Configure WiFi	
	You may skip this step if you are not setting up any UniFi access points.	
	Secure SSID Security Key	
	Optionally, you may create an open wireless network for your guests:	
	Cant SSD	
	MCK 509 850	

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. Create the super admin for your UniFi Controller.

Controller Access	
Please provide an administrator name and passwo	d for UniFi Controller access.
Admin Name	Admin Email
Password	Control Password
BACK	next.

Perform the following steps:

- a. Enter an admin name in the Admin Name field.
- b. Enter an email address in the Admin Email field.
- c. Enter a password in the *Password* field to use when accessing the management interface as a super admin.
- d. Confirm your password in the *Confirm Password* field.
- e. Click Next.

Note: Only the super admin – not any site admin – can view wired 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. Enter your Ubiquiti account email/username and password to enable to Cloud Access. Alternatively, you can click **register now**, to create a Ubiquiti account. Click **Next**.

Cloud Access		
Please enter your Ubiquiti account credentials	to enable Cloud Access.	
Email or Usemame	Password	
If you don't have Ubiquiti account register now		
BACK		SKIP NEXT

 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.

៨ ហើក	
	Confirm
	Please review the settings below. Once finished you will be redirected to the management interface.
	Guuntry United States Timezone America/Los, Angeles
	Securi SSD - Guest SSD - Administrate Colores
	SADK //MSH

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 <u>"Using the UniFi Controller Software" on</u> <u>page 17</u> 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
- <u>"UniFi Cloud Account" on page 12</u>

# **UniFi Cloud Key**

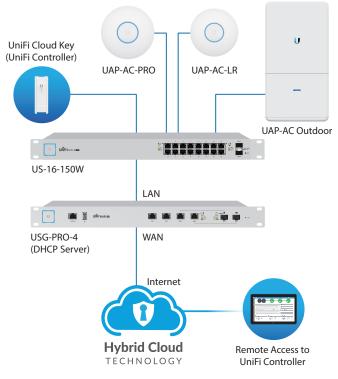
The UniFi Cloud Key includes the pre-installed UniFi Controller software.

### **System Requirement**

Web Browser: Google Chrome, Mozilla Firefox, Microsoft Edge, or Microsoft Internet Explorer 11 (or above)

## **Network Topology Requirement**

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



#### 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 <u>"Instructions for Other Web Browsers" on page 7</u>.

### **Chrome Instructions**

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

U	ปก็สา								Ø
=	ALL CLOUD KEY SOFTWARE INSTALL	ATION ALL ONLINE OF	FLINE					FIND CLOUD KEY Search	٩
	NAME	HOST	STATUS	ALERTS	910	ornes	CUENTS	VERSION	ACTIONS
		i No result There are no	5 controllers.						
Q									

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

5. If the Ubiquiti<sup>®</sup> 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.

a. Click Install.



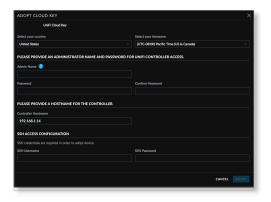
b. Click Add app to confirm.



7. The Ubiquiti Device Discovery Tool will search for the UniFi Cloud Key. Select it to continue.



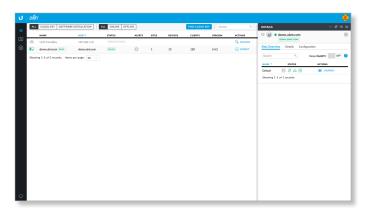
- 8. Configure the UniFi Controller:
  - a. Select the appropriate country.
  - b. Select the appropriate time zone.
  - c. Enter an admin name in the *Admin Name* field and a password in the *Password* field to use when accessing the management interface.
  - d. Confirm your password in the *Confirm 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.



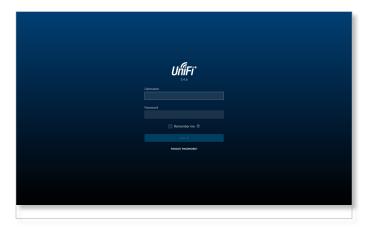
9. Wait for the UniFi Controller to be adopted, and then select it.

	ปก็ศา								
Image: Note Note Note Note Note Note Note Note	ALL CLOUD KEY SOFTWARE INSTALLATIO	ALL ONLINE OFFL	INE					FIND CLOUD KEY Se	arch
📭 demouber.com (mm) 🕕 1 13 120 5.4.2 🕞 rotat	NAME	HOST?	STATUS	ALERTS	SITES	DEVICES	CUENTS	VERSION	ACTIONS
	CuriFi CloudKey	192.168.1.10							Q. MAN
Shahig 1-2 d'2 month. Binn par age 📵 👘	demo.ubrit.com 🚥	demo.ubrt.com	(mum)	0	1	13	120	5.4.2	🕞 FORG

#### 10.Click Launch.



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 <u>"Using the UniFi Controller Software" on</u> **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*.

 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></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 <u>"UniFi</u><u>Cloud Key Configuration" on page 8</u> 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**.

ปก็สา	
UniFi Setup Wizard	
Thank you for purchasing UniFI, Ubiquiti's Enter controller in a few minutes.	nprise WIFI Solution. You will be able to setup your
Select your country	Select your timezone
United States 🗸	(UTC-08:00) Pacific Time (US & Canada) 🛛 🗸
Enable Auto Backup ON	
Alternatively you can restore from a previous back	up.
	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**.

Please	elect the devices yo	u would like to configure.		
	DEVICE NAME	MODEL	IP ADDRESS	OPTIME 2
	041846120255	UniFi Phone-Executive	10.0.2.60	76d 20m 57s
	0418d6x303ac	UniFi Phone-Executive	10.0.2.59	766 21m 37s
	04184683.95:37	UniFI Phone-Executive	10.0.2.129	43d 18h 54m 24s
	041846±30317	UniFi Phone-Executive	10.0.2.145	9d 13h 22m 14s
	04184683.95:58	UniFi Phone-Executive	10.0.2.189	42d 2h 47m 30s
	0418:65::303:de	UniFI Phone-Executive	10.0.2.102	76d 20m 29s
	041846120210	UniFi Phone-Executive	10.0.2.104	15d 9h 56m 38s
	0418d6x303.97	UniFi Phone-Executive	10.0.2.57	9d 19h 56m 43s
	04:18:66:83:14:ca	UniFi Switch 48 POE-500W	10.0.2.150	63d 23h 53m 25s
	041845130286	UniFi Phone-Executive	10.0.2.154	13d 22h 58m 43s
_	FRESH NOW	Hems per page: 10 V Page	¢t ( Prev <b>12 Nest</b> )	
BACK				NEXT

7. The UniFi Setup Wizard will create a secure primary wireless network for your devices.

Configure WiFi		
You may skip this step if you are not s	etting up any UniFi access points.	
Secure SSID	Security Key	
Optionally, you may create an open w	reless network for your guests:	
Enable Guest Access		
BACK		SOP NOT

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. Create the super admin for your UniFi Controller.



Perform the following steps:

- a. Enter an admin name in the Admin Name field.
- b. Enter an email address in the Admin Email field.
- c. Enter a password in the *Password* field to use when accessing the management interface as a super admin.
- d. Confirm your password in the *Confirm Password* field.
- e. 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. Enter your Ubiquiti account email/username and password to enable to Cloud Access. Alternatively, you can click **register now**, to create a Ubiquiti account. Click **Next**.

in .			
	Cloud Access		
	Please enter your Ubiquiti account credentials to ena	ble Cloud Access.	
	Email or Username	Passward	
	If you don't have Ubiquiti account register now.		
	BACK		SKIP NEXT

10. 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.

Confirm	
Please review the settings below. Once finished you will be redirected to the management interface.	
Admin Name NataTio	
Enable Cloud Access for natale.bautista@ubnt.com	
BACK FINISH	

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 <u>"Using the UniFi Controller Software" on</u> <u>page 17</u> for information on using the UniFi Controller software.

1	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 <u>"Using the UniFi Controller</u> <u>Software" on page 17</u> 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:

- Main (see next column)
- <u>"Configuration" on page 10</u>
- <u>"Maintenance" on page 11</u>

ป เพ็คาสอด					
SETTINGS					
Main	STATUS				
Configuration	Device Name	UniTI-CloudKey	MAC Address	44:09:x7:9ebc7b	
Maintenance		17h 30n 41s		12/20/2016 10:01 am	
	UNIFI				
				Running	
	DISK SPACE				
	87% NALARE	UND 8-20-23 FREE 13-54 TOTAL 1-4-54			

#### Username

At the top right of each screen, click the *Username* to display the *Change Password*, *Change Username*, and *Logout* options:

		username root 🗸
0-17	Change password	
R	Change username	
€	Logout	

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

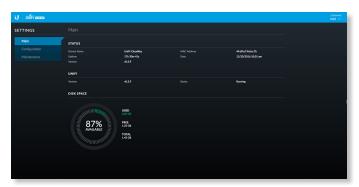


- **Old password** Enter the current password (the default is *ubnt*).
- New password Enter the new password.
- Confirm Password Enter the new password again.
- Submit Click Submit to apply changes.
- Cancel Click Cancel to discard changes.

**Logout** To manually sign out of the UniFi Cloud Key configuration, click  $\subseteq$  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.

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

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

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

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.

<b>ป</b> ปก็ค่าชระด			useruuve reat V
SETTINGS			
Main	BASIC SETTINGS		
Configuration	Device Name	Unifi CloudKey	
		US/Pacific ×	
	NETWORK SETTINGS		
		Static ⊂ DHCP	
		192.168.1.10	
		255.255.255.0	
		192.168.1.1	
		8585	
	APPLY CHANGES DISCAR		

#### **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.

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SETTINGS			
Main	BASIC SETTINGS		
Configuration		Uniff Cloudky	
Maintenance		USPacific V	
		av 🗾	
	NETWORK SETTINGS		
		State C CHCP	
		192.168.1.10	
		255.255.255.0	
		192.168.1.1	
		8.8.8.8	
	APRY CHANGES DISCARD		

- **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.

ป เก็ยาออล			uszawwe reat ~
SETTINGS			
Main	BASIC SETTINGS		
Configuration		Unli-Cloudkey	
Maintenance		US/Public ·	
	NETWORK SETTINGS		
		C State S DNCP	
		192.168.1.30	
		255.255.255.0	
	APPLY CHANGES DISCARD		

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.

J ปก็ศาสสล			vzcenne root v
ETTINGS			
	SECURITY		
Configuration		CHANGE PASSWORD	
Maintenance	Username	CHANGE USERNAME	
	Action		
	Actives	REBOOT POWER OFF RESET TO DEFAULTS	
	FIRMWARE		
		v0.1.9	
		CHECK FOR UPDATES	
		UPDATE MANUALLY	
	UNIFI		
		54.6-9114	
		CHECK FOR UPDATES	

#### Security

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

CHANGE PASSWORD	×
Old password	
New password	
Confirm password	
	CANCEL SUBMIT

- **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.

圁

Note: We recommend that you back up your UniFi Controller configuration (refer to <u>"Backup" on page</u> <u>43</u> 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.

PLEASE CO	PLEASE CONFIRM UPDATE		
Do you want t	o update device now?		
O Updati	ng the firmware will update th	e UniFi controller	
It is reversion	commended that you create a l	backup before installing a new	
	💿 upload file 🔵 ge	t file from URL	
	File name	SELECT FILE	
		CANCEL UPD.	

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

PLEASE CONFIRM UPDATE	$\times$
Do you want to update device now?	
Opdating the firmware will update the UniFi controller	
, It is recommended that you create a backup before installing a new version.	
🔵 upload file 💿 get file from URL	
CANCEL	

- 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 <u>"Backup" on page 43</u> 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 <u>"Backup" on page</u> <u>43</u> for more information) before upgrading the Unii Controller software.

# **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**

 Launch the Chrome web browser and type https:// followed by the appropriate Controller Hostname/IP address as specified in <u>"Settings ></u> <u>Controller" on page 41</u>. 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.



You can apply one of the following primary filters:

- All Displays all UniFi Controllers
- Cloud Key Only displays UniFi Cloud Keys.
- **Software Installation** Only displays instances of software installations.

A secondary filter is available:

- All Displays all UniFi Controllers.
- Online Only displays online UniFi Controllers.
- Offline Only displays offline UniFi Controllers.

**Find Cloud Key** Click to discover a UniFi Cloud Key on your local network.

**Search** Search Content Search Conte

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

Name 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 <u>"Additional Details" on page 14</u> for more information.)

**Host** Displays the IP address of the device running the UniFi Controller.

**Status** Displays the status of the UniFi Controller:

- Online ONLINE
- Manage By Other MANAGE BY OTHER

**Alerts** Displays the number of alerts for 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.

#### UniFi Controller User Guide

**Version** Displays the software version number of your UniFi Controller.

Actions Click a button to perform the desired action:

- Forget Click 
   FORGET to remove the UniFi Controller from your cloud account.
- Manage Click <sup>Q</sup>, MANAGE to manage the UniFi Controller or the UniFi cloud key. You have two options:
  - Manage Click Manage to access the UniFi Controller. Proceed to <u>"Using the UniFi Controller</u> <u>Software" on page 17</u> for more information.
  - Configure Click Configure to change the settings of the UniFi Cloud Key. Proceed to <u>"UniFi Cloud Key</u> Configuration" on page 8 for more information.

**Chat** At the lower left of the screen, click  $\bigcirc$  to open a window for online chat support.

#### Admin

At the top right of the screen, click the account icon (
 by default or the user-specified icon) to display the *Preferences, My Account* and *Sign Out* options:

	<b>Q</b>
<b>ubnt</b> UBNT-dev ubnt@ubnt.com	
🔍 Preferences	
Ø My Account	
→ Sign Out	

**Preferences** To change your account preferences, click Preferences. The *Preferences* screen will appear:

ON	Candensed view 💡	ON	Find Cloud Key automatically
ON	Dark settings 🕐	ON	Show Demo Controller
OFF	Wide panel		
ON	Show device adopt requirements		
ON	Confirm before device restart		
ON	Confirm before device reset		
ON	Confirm before device reset		

The available settings are:

- **Condensed view** Enabled by default. The table padding is condensed and the font size is minimized to fit as much data on the screen as possible.
- **Dark settings** Enabled by default. A dark theme is used on the *Settings* screens.
- **Wide panel** Disabled by default. If enabled, the *Details* panel is displayed with maximum width.
- Show device adopt requirements Enabled by default.
- Confirm before device restart Enabled by default.
- Confirm before device reset Enabled by default.
- Find Cloud Key automatically Enabled by default.
- Show Demo Controller Enabled by default.

**My Account** To change your account settings and/or password, click Organization My Account. The Account Settings screen will appear:

			⊠ 💱
Acc	ount Settings		
	Profile Security	Profile	
	Beta Program	First Name	
		Dev	
		Last Name	
		ubnt	
		Username	
		ubntroot	
		Email	
		dev@ubnt.com	
		Current Password	
		UPDATE SETTINGS	

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.
- **Current Password** Enter your current account password.
- 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.
  - Enter Current Password Enter your current account password.
  - Update Settings Click to apply your changes.

U store community Accou	nt Settings	
	Puble Becontry Beca Program	Security Prove a frame framework Prove a conserve if a framework Prove framework Provemonia Prove framework Prove Security Prove Barrow Prove Barrow Prove Security Prove Barrow Prove S
© 2016 Ubiquiti Net	works. All rights reserved.	Terms of Service Privacy Policy

• **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 <u>"Chrome Instructions" on page 5</u> 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.

							ŋ
м.	CLOUD KEY SOFTWARE INSTALLATION	ALL ONLINE OFFLINE				FIND CLOUD KEY Search	
	CONTROLLER ?	IP ADDRESS	SITES	DEVICES	CLIENTS	VERSION	ACTIO
٠	10.0.2.162	10.0.2.162	1	7	53	4.9.3	
٠	BLG_Broomfield_House	192.168.1.12	1	24	37	\$.0.0	
•	BLG BROOMFIELD HOUSE						
-	BLG BROOMFIELD.HOUSE	Gites		Default			
0,	BLG_BROOMPIELD_HOUSE review 192.168.1.12	Sites Search	Q	Default		force WebRTC	
04 19.4 19.0	erview NODRESS: 192.168.1.12 NICES: 24		Q,			force WebRTC	
DE ST	erview NODRESS: 192.168.1.12 NICES: 24	Search	٩		YIAN B Strategy	UN	

• (icon) Green indicates an active UniFi Controller. Gray indicates an inactive UniFi Controller.

**Overview** 

- (controller\_name) Displays the Controller Hostname/IP address as specified in <u>"Settings > Controller" on page</u> <u>41</u>.
- **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.
- **Software 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.

Sites

- Search Search Content in 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) <sup>66</sup> Displays the number of unread alerts.

(site\_name)

 Launch Site Click Launch Site to access the UniFi Controller. Proceed to <u>"Using the UniFi Controller</u> Software" on page 17 for more information.



Note: If you have an issue accessing the local Controller, then click **force WebRTC**.

- **Black** Black indicates that the Internet connection is active.
- **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.



- **Gray** Gray indicates that there is no Internet connection or 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.

www 🌐	
GATEWAY	67.174.180.1
DNS	75.75.75.75, 75.75.76.76
IP	67.174.180.142
UPTIME	3d 5h 34m 10s
LATENCY	28 ms
UP	183 B/s
DOWN	172 B/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.

H WAN	
LAN IP	192.168.1.1
CLIENTS	36
UP	190 B/s
DOWN	241 B/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.

ᡖ LAN	
GATEWAY	67.174.180.1
USERS	19
GUESTS	0
SWITCHES	4/5
DOWN	140 B/s
UP	141 B/s

- 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.
- **Down** Displays the download rate of the wired network(s).
- **Up** Displays the upload rate of the wired network(s).
- WLAN The basic details of the wireless network(s) are displayed.

🔶 WLAN	
USERS	17
GUESTS	0
APS	18
DOWN	7.64 KB/s
UP	287 KB/s

- **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).

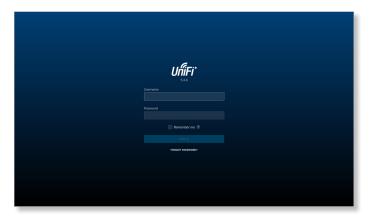
- **APs** Displays the number of APs in the primary wireless network(s) and the number of APs in the guest wireless network(s).
- **Down** Displays the download rate of the wireless network(s).
- **Up** Displays the upload rate of the wireless network(s).

# 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 47
- (1) <u>"Map" on page 53</u>
- O <u>"Devices" on page 59</u>
- AQ <u>"Clients" on page 67</u>
- -\/- <u>"Statistics" on page 71</u>
- **"Insights" on page 75**

# **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.



# **Current 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*.

Ŷ	CURRENT SITE Default  V
Default	
≅ Sites over	view
+ Add new s	site
⊥ Import site	e

**Current Site** To view available sites or create a new site, click the *arrow* view.

Sites overview To display a list of available sites, click
 Sites overview. The Sites Overview screen will appear.

ITES OV	/ERVIEW										Search	۵ 🖉
AME 1	ALERTS	WAN	LAN	ACTIVE	INACTIVE	PENDING	WLAN	ACTIVE	INACTIVE	PENDING	USERS	GUESTS
Default	0	Ø	ሐ	4	0	0	0	9	1	0	g 2 g 7	a` o 🚊 o

Each site is displayed with the following:

- Name Displays the name of the site.
- Alerts

- WAN The Ø icon is color-coded to display the WAN connection status. Green indicates active; red indicates inactive.
- LAN The 🚠 icon is color-coded to display the wired network connection status. Green indicates active; red indicates inactive.
- Active Displays the number of active wired devices.
- **Inactive** Displays the number of inactive wired devices.
- **Pending** Displays the number of wired devices pending adoption.
- WLAN The <sup>(©)</sup> icon is color-coded to display the sireless network connection status. Green indicates active; red indicates inactive.
- Active Displays the number of active wireless devices.
- **Inactive** Displays the number of inactive wireless devices.
- **Pending** Displays the number of wireless devices pen adoption.
- Users Displays the number of wireless users  $\mathbb{A}^{n}$  and wired users  $\mathbb{A}^{n}$ .
- **Guests** Displays the number of wireless guests and wired guests .
- Add new site To create a new site, click + Add new site, and the Add a New Site screen will appear:

ADD A NEW SITE		×
Site Name		
	CANCEL	SUBMIT

- **Site Name** Enter a name that describes the site. It will be used in the *Current Site* drop-down menu.
- Cancel Click to discard changes.
- Submit Click to save changes.
- **Import Site** To import a new site, click and the *Import Site* screen will appear.

IMPORT SITE		×
Site Name	ubnt	
	CANCEL	CHOOSE FILE

- **Site Name** Enter a name that describes the site. It will be used in the *Current Site* drop-down menu.
- Choose File
- Cancel Click to discard changes.

#### Username

At the top right of the screen, click the **Username** to display the *Preferences, Edit Account*, and *Logout* options:

~	current site Default $\checkmark$	$_{ m admin}$ $\sim$
00	Preferences	
0	Edit account	
€	Logout	

**Preferences** To change the UI settings, click Preferences.

10	Rows per panel 😮	ON Auto discover devices	
ON	Dark settings 🕐	OFF Remember all refresh rates ?	
ON	Condensed view 🕐	ON Enable WebSocket connection	
OF	FF Responsive tables ?	OFF Use 24-hour time	
ON	Inline property panel ?	MM/DD/YYYY Date format	
ON	Confirm before blocking client	English $\checkmark$ Language	
ON	Confirm before device upgrade	Top right $\sim$ Alerts position	
ON	Confirm before device restart	2 minutes $\sim$ Refresh rate	
		<ol> <li>Learn more about date and time formatting.</li> </ol>	

- Rows per panel
- **Dark settings** Enabled by default. A dark theme is used on the *Settings* screens.
- **Condensed view** Enabled by default. The table padding is condensed and the font size is minimized to fit as much data on the screen as possible.
- **Responsive tables** Disabled by default. If enabled, the *Responsive tables* option removes columns on smaller-sized browsers to prevent excessive scrolling when the table columns are not customized.
- **Inline property panel** Enabled by default. When the property panel is inline, it compresses the main content when it is open. When the property panel is not inline, it opens on top of the content, as a popup.
- Confirm before blocking client Enabled by default.
- Confirm before device upgrade Enabled by default.
- · Confirm before device restart Enabled by default.
- Auto discover devices Enabled by default.
- Remember all refresh rates Disabled by default.
- Enable WebSocket connection Enabled by default.
- Use 24-hour time Disabled by default.
- **Date format** Enter the format you want to use. The default is *MM/DD/YYYY*.
- Language Select the appropriate language.
- Alerts position Select the position you want alerts to appear: Top left, Top center, Top right, Bottom left, Bottom center, or Bottom right.

- Cancel Click to discard changes.
- **Reset to Defaults** Click to reset to factory defaults.

**Edit Account** To change the login name and/or password, click *Colored Edit account*. The *Edit Account* screen will appear:

EDIT ACCOUNT		×
Please enter your cur your account.	rent password to make any changes to	
Password		
Admin Name		
Email		
New Password		
Confirm Password		
Alerts	Enable alert emails	
	✓ Send similar alerts in one email	
Email Templates	Enable HTML email templates	
	CANCEL	

- Password Enter your current password.
- Admin Name Enter the admin name.
- Email Enter the email address of the admin account.
- New Password Enter the new password.
- Confirm Password Enter the new password again.
- Alerts
- Email Templates
- Submit Click to apply changes.
- Cancel Click to discard changes.

**Logout** To manually sign out of the UniFi Configuration Interface, click  $\leftarrow$  Logout.

#### **Properties**

The *Properties* panel is hidden by default. To display it, select a device.

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

- <u>"UniFi Security Gateway Details" on page 85</u>
- <u>"UniFi Switch Details" on page 93</u>
- <u>"UniFi Access Point Details" on page 103</u>
- <u>"UniFi VoIP Phone Details" on page 115</u>
- <u>"Client Details" on page 117</u>

### **Controls and Live Chat**

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

- *Events* (see the next column)
- 4 Alerts (see <u>"Alerts" on page 20</u>)
- Settings (see <u>"Settings" on page 20</u>)
- *Chat with Us* (see <u>"Chat with Us" on page 45</u>)

#### **Events**

The *Events*  $\bigcirc$  tab displays a list of recent events, along with the corresponding device icon, device name, message, date, and time.

SHO	W: LAST HOUR V ALL (34) ADMIN (13) LAN (15) WLAN (13)	1) Sea	rch Q
	EVENT	TIME	
Х;	US 48B was upgraded from "3.0.5" to "3.5.1.4088"	Today	03:13 pm
\$\$	US 48A was upgraded from "3.0.5" to "3.5.1.4088"	Today	03:13 pm
	US 48D was scheduled for upgrade by Admin admin	Today	03:13 pm
	UVP Exec D (104) was upgraded from "3.0.5" to "4.7.3.596"	Today	03:13 pm
$\bigcirc$	US 48A was scheduled for upgrade by Admin admin	Today	03:13 pm
	US 48B was scheduled for upgrade by Admin admin	Today	03:13 pm
	US 48C was scheduled for upgrade by Admin admin	Today	03:13 pm
	UVP Exec C (103) was upgraded from "3.0.5" to "4.7.3.596"	Today	03:13 pm
	UVP Exec F (106) was upgraded from "3.0.5" to "4.7.3.596"	Today	03:12 pm
$\bigcirc$	UAP AC Pro E was scheduled for upgrade by Admin admin	Today	03:12 pm

**Maximize/Minimize** Click  $\varkappa^{7}$  to maximize the screen size. Click again to minimize the screen size.

**Close** Click  $\times$  to close the screen.

**Show** Filter recent events based on the time period you specify. Select **Last hour**, **Last 8 hours**, **Last 24 hours**, **Last 48 hours**, **7 days**, **2 weeks**, or **30 days**.

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.

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

#### lcons

(III

The messages use the following icons (not all are shown here):

- Scheduled for upgrade
- UniFi Security Gateway
- 🛛 UniFi Switch
- UniFi Access Point
  - UniFi VoIP Phone

The messages have clickable links for client and UniFi devices:

- <u>"UniFi Security Gateway Details" on page 85</u>
- <u>"UniFi Switch Details" on page 93</u>
- <u>"UniFi Access Point Details" on page 103</u>
- <u>"UniFi VoIP Phone Details" on page 115</u>
- <u>"Client Details" on page 117</u>

### Alerts

When there is a new alert, an orange icon displaying the number of new alerts appears.



The Alerts  $\triangle$  tab displays a list of important events, along with the corresponding device icon, device name, message, date, and time.

Sh	ow archived alerts. ARCHIVE ALL		Search	٥
	EVENT	TIME		
	UniFi AP A was disconnected	last Thursday	02:04 pm	
	04:21:14:00:00:01 was disconnected	last Thursday	02:04 pm	
	UniFi Switch C was disconnected	last Thursday	02:04 pm	
	00:15:6d:00:00:02 was disconnected	last Thursday	02:04 pm	
	UniFi Security Gateway was disconnected	last Thursday	02:04 pm	
	04:21:14:00:00:03 was disconnected	last Thursday	02:04 pm	
	00:15:6d:00:00:03 was disconnected	last Thursday	02:04 pm	
	04:21:14:00:00:04 was disconnected	last Thursday	02:04 pm	

**Maximize/Minimize** Click  $\varkappa^{7}$  to maximize the screen size. Click again to minimize the screen size.

**Close** Click  $\times$  to close the screen.

**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 Search Q 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.

#### lcons

The messages use the following icons (not all are shown here):



- UniFi Switch
- UniFi Access Point
- UniFi VolP Phone

# **Clicking an Alert Device Link**

The messages have clickable links for client and UniFi devices:

- <u>"UniFi Security Gateway Details" on page 85</u>
- <u>"UniFi Switch Details" on page 93</u>
- <u>"UniFi Access Point Details" on page 103</u>
- <u>"UniFi VoIP Phone Details" on page 115</u>
- <u>"Client Details" on page 117</u>

### Settings

The Settings <sup>Q</sup>, tab displays a list of available sub-tabs:

- Site Site-related settings.
- Wireless Networks Wireless network and group setup, including Zero Handoff Roaming.
- Hotspot 2.0 Hotspot 2.0 settings.
- Networks Wired network setup.
- Routing & Firewall Routing and firewall settings.
- Guest Control Guest portal and policies.
- Profiles RADIUS authentication profiles.
- Admins Admin accounts and privileges.
- User Groups User group settings.
- DPI Deep Packet Inspection settings.
- Controller Identity, discovery, and email server settings.
- Cloud Access Cloud login credentials.
- Maintenance System configuration backup, system configuration restore, and support files.
- Auto Backup Auto-backup settings.

#### 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.

SETTINGS		
Site	SITE CONFIGURATION	
Wireless Networks	Site Name	Unifi_Lab
		United States
		(UTC-08:00) Pachtc Time (US & Canada) 🗸 🗸
	SERVICES	
Profiles	Automatic Upgrades	🛃 Automatically upgrade firmware
Admins		🗹 Enable status LED
User Groups DPI		🐷 Enable alert emails
Controller		Enable periodic speed test every 20 minutes 😢
Cloud Access		
Maintenance		Enable connectivity monitor and wineless uplink
Auto Backup		🗹 Enable automatic uplink fallover 🕜
		Default gateway     Custom IP     Uplink IP Address
		Usemane claudmin Password
	APPLY CHANGES RESET	

#### **Site Configuration**

Site Name Change the name of the site.

**Country** Select the appropriate country.

Time Zone Select the appropriate time zone.

#### Services

Advanced Features When enabled, airtime fairness, bandsteering, minimum RSSI, and load balancing features become available.

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

**LED** When enabled, the LEDs on the UniFi devices will light up. When disabled, the LEDs will turn off.

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

**Speed Test (Beta)** When enabled, you can run a periodic speed test.

**Port Remapping (Beta)** When enabled, the VOIP port on the UniFi Security Gateway, model USG, will be remapped as a WAN2 port.

**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.

- Enable Automatic Uplink Failover Enable this option to have the UniFi Controller automatically select a new wireless uplink if the original uplink fails. This allows the UniFi APs to switch to alternative uplinks/mesh configurations if a node fails.
- **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 Changes Click to save changes.

Reset Click to cancel 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.

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SETTINGS				op Detsuk		
Wireless Networks						
Hotspot 2.0						
Networks	+ CREATE NEW WIRELESS NET	WORK A massimum of 4 w				
Maintenance						

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

WLAN Group Default

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

U	Uท็เFi		
(1) (1)	SETTINGS	Wireless Networks	
0	Site	CREATE NEW WLAN GROUP	>
即	Wireless Networks	Name	
рq	Hotspot 2.0	Mobility	Enable seamless roaming (Zero-Handoff)
لسا	Networks	Load Balancing	Balance number of clients per radio 30
Ŷ	Routing & Firewall	Legacy Support	Enable legacy device support (i.e. 11b)
	Guest Control	Legacy Support	Ensible legacy device support (LE, 110)
	Profiles		
	Admins	SAVE CANCEL	
	User Groups		
	DPI		

• 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.

ĨFï			
TTINGS		Wireless Networks	
		CREATE NEW WLAN GROUP	
Wireless Networks		Name	
Hotspot 2.0		Mobility	Enable seamless roaming (Zero-Handoff)
Networks		Radio	2G (802.11n/g) ~
Routing & Firewall		Channel	1 ~
Guest Control			
Profiles			
Admins		SAVE CANCEL	
User Groups			
	TTINGS Site Wireless Networks Hotspot 2.0 Networks Routing & Firewall Guest Control Profiles Admins	TTINGS Site Wireless Networks Hotspot 2.0  To the	TTIRGS Wireless Networks Site CREATE NEW WLAN GROUP Wireless Networks Hotspot 2.0 Routing & Firewall ###################################

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 to apply changes.

Cancel Click to discard changes.

For each WLAN group, you have the following:

• **Remove a WLAN Group** To remove a WLAN group (except for the *Default*, which cannot be removed), select it from the drop-down menu, and then click the *delete* button.

WLAN Group 🛛 Office\_A (Zero-Handoff, radio ng, channel 1) 🛛 🗸 🖄 🕂

 Options To make changes, select the WLAN group from the drop-down menu, and then click the *edit ⊘* button. Go to <u>"Add or Edit a WLAN Group" on page 21</u>. Wireless Networks

Name/SSID 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:

- Delete Click Detter to remove the wireless network.

**Create Wireless Network** Click CREATE 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** 

U	ปก็โFT		
(1) (1)	SETTINGS	Wireless Networks	
0	Site	CREATE NEW WIRELESS NET	WORK
即	Wireless Networks	Name/SSID	
ЯR	Hotspot 2.0	Enabled	Enable this wireless network
لسا	Networks	Security	Open WEP WPA Personal WPA Enterprise
$\Diamond$	Routing & Firewall	Guest Policy	Apply guest policies (captive portal, guest authentication, access)
	Guest Control		
	Profiles	ADVANCED OPTIONS >	ويصحب المراجع والمراجع والمراجع المراجع
	Admins		
	User Groups	SAVE CANCEL	
	DPI		

- 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<sup>™</sup> 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:

Туре	Нех
64-bit	10 Hexadecimal Characters (0-9, A-F, or a-f) Example: <b>00112233AA</b> 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: <b>00112233445566778899AABBCC</b> 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.



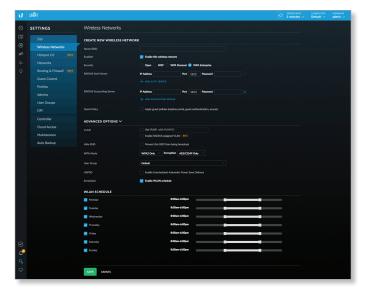
- Security Key Enter the passphrase that users will use to connect to the wireless network.
- WPA-Enterprise WPA Enterprise uses a RADIUS server to authenticate users on the wireless network.



- RADIUS Profile Specify a RADIUS profile:
  - Select a RADIUS profile from the drop-down list, or
  - Click CREATE NEW RADIUS PROFILE to create a new RADIUS profile. Refer to <u>"Create New RADIUS Profile" on</u> page 39 for detailed information.
- Hotspot 2.0 Select this option to enable Hotspot 2.0. Then select a Hotspot profile from the dropdown list.
- **Guest Policy** Select this option to enable guest access policies on this wireless network.

#### **Advanced Options**

Click to display options for advanced users.



• VLAN To use a VLAN, select **Use VLAN ID** and enter the VLAN ID number. If you enable *WPA Enterprise*, you have another option:

 Enable RADIUS assigned VLAN (beta) Select this option to allow the RADIUS server to dynamically assign a VLAN to a wireless client.

If you set a VLAN ID as a static value for another SSID on the same AP, then you cannot re-use the same VLAN ID for the RADIUS-assigned (dynamic) VLAN. For example, if you have a VLAN set to VLAN 10, then you cannot use VLAN ID 10 for RADIUS-controlled VLAN users as those users will not be assigned an IP address.

- 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 <u>"Settings > User Groups" on page 40</u>.
- **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 to apply changes.
- Cancel Click to discard changes.

#### Settings > Hotspot 2.0 (Beta)

Use this option to create Hotspot 2.0 profiles for each site.

U	UñiFi		0
	SETTINGS		
	Hotspot 2.0		
	Networks	+ ADD NEW HOTSPOT 2.0 PROFILE UAP-AC (square, Broadcou	

Hotspot 2.0 Profile Name Displays the name of the Hotspot 2.0 profile.

Actions Click a button to perform the desired action:

- Edit Click reader to make changes to the profile. Go to "Create or Edit a Hotspot 2.0 Profile" on page 24.
- **Delete** Click **Delete** to delete the profile.

Add New Hotspot 2.0 Profile Click + ADD NEW HOTSPOT 2.0 PROFILE to create a new Hotspot 2.0 profile. Go to <u>"Create or Edit</u> <u>a Hotspot 2.0 Profile" on page 24</u>.

### **Create or Edit a Hotspot 2.0 Profile**

J	ปที่เคา				
	SETTINGS				
		CREATE NEW HOTSPOT 2.0 PROF	ne		
		Hotspot 2.0 Profile Name			
	Hotspot 2.0 (mth)				
	Networks	INTERWORKING INFORMATIO	N		
	Routing & Finewall (BITA)		Phate network ~		
	Guest Control				
	Profiles		Additional step required for access Energency services machable		
	Admins				
	User Groups				
			Versus Group Unspectfed V Versus Type Unspectfed V		
			No versue names have been defined.		
	Auto Backup		Language Choose one V Name + ADD VENUE HAARE		
		1 NAI REALM LIST			
		DOMAIN NAME LIST			
		ROAMING CONSORTIUM LIST			
		3GPP CELLULAR NETWORK LIS			
		SAVE CANCEL			

Hotspot 2.0 Profile Name Enter a name for the Hotspot 2.0 profile.

The rest of this screen contains the following sections and options:

- Interworking Information (see below)
- <u>"NAI Realm List" on page 24</u>
- <u>"Domain Name List" on page 25</u>
- <u>"Roaming Consortium List" on page 25</u>
- <u>"3GPP Cellular Network List" on page 25</u>

Save Click to apply changes made to the profile.

**Cancel** Click to discard changes.

**Interworking Information** 

**Network Type** Select the network type: *Private network, Private network with guest access, Chargable public network, Free public network, Personal device network, Emergency services only network, Test or experimental,* or *Wildcard.* 

**Network Access** Configure these settings as required:

- Internet Disabled by default.
- Additional step required for access Disabled by default.
- Emergency services reachable Disabled by default.
- Unauthenticated emergency services accessible Disabled by default.

**HESSID** Specify the Homogeneous External Service Set Identifier (HESSID. This should be the MAC address of one of the APs in the network.

**Venue Info** Specify the *Venue Group* and *Venue Type*. The available venue types vary depending on which venue group is selected, as shown in the following table:

Venue Group	Available Venue Types
Unspecified	Unspecified
Assembly	Unspecified, Arena, Stadium, Passenger terminal, Amphitheater, Amusement Park, Place of worship, Convention center, Library, Museum, Restaurant, Theater, Bar, Coffee shop, Zoo or Aquarium, Emergency coordination center
Business	Unspecified, Doctor or Dentist office, Bank, Fire station, Police station, Post office, Professional office, Research and development facility, Attorney office
Educational	Unspecified, Primary school, Secondary school, University or College
Factory or Industrial	Unspecified, Factory
Institutional	Unspecified, Hospital, Long-Term Care Facility (e.g., nursing home, hospice, etc.), Alcohol and Drug Rehabilitation Center, Group home, Prison or jail
Mercantile	Unspecified, Retail store, Grocery market, Automotive service station, Shopping mall, Gas station
Residential	Unspecified, Private residence, Hotel or Motel, Dormitory, Boarding house
Storage	Unspecified
Utility and Miscellaneous	Unspecified
Vehicular	Unspecified, Automobile or Truck, Airplane, Bus, Ferry, Ship or Boat, Train, Motor Bike
Outdoor	Unspecified, Mini-mesh Network, City park, Rest area, Traffic control, Bus stop, Kiosk

**Venue Name** Displays a list of Hotspot 2.0 venues that have been created for the site:

- Language Displays the language used by the venue.
- Name Displays the name of the venue.
- Actions Click DELETE to delete the venue.

To add a venue to the list, fill in the Language and Name fields, and then click + ADD VENUE NAME.

NAI Realm List

	NAI REALM LIST					
	EAP METHOD					
(i) No NAI realms have be	ien defined					
+ ADD NAI REALM						

Name Displays the name of the NAI realm.

**EAP Method** Displays the name of the EAP method that is being used by the NAI realm.

**Realm Enabled** Displays *Yes* if the realm is enabled or *No* if the realm is not enabled.

Actions Click a button to perform the desired action:

- Edit Click even to make changes to the NAI realm. Go to <u>"Add or Edit a NAI Realm" on page 25</u>.
- **Delete** Click **Delete** to delete the NAI realm.

To add an NAI realm to the list, click + ADD NAI REALM. Go to **"Add or Edit a NAI Realm" on page 25**.

#### UniFi Controller User Guide

#### Add or Edit a NAI Realm



Name Enter the name of the NAI realm.

**Realm Enabled** Check the box to enable the NAI realm. This option is disabled by default.

**EAP Method** Select the Extensible Authentication Profile (EAP) method: *EAP-TLS, EAP-SIM, EAP-TTLS, EAP-AKA*, or *EAP-AKA*'.

(List of authentication types) Displays a list of authentication types that have been defined for this NAI realm list entry:

- Auth Type Displays the authentication type.
- Auth Subtype Displays the authentication subtype.
- Actions Click delete the authentication type from the list.

To add an authentication type to the list, fill out the *Auth Type* and *Auth Subtype* fields, and then click + ADD AUTH.

The available authentication subtypes vary depending on the value of *Auth Type*, as shown in the following table:

Auth Type	Auth Subtype
Non-EAP Inner Authentication	PAP, CHAP, MSCHAP, MSCHAPv2
Inner Authentication EAP Method	None
Credential	SM, USIM, NFC Secure Element, Hardware Token, Softoken, Certificate, Username/Password, Anonymous, Vendor Specific

**Cancel** Click to discard your changes.

**Submit** Click to save your changes to the NAI realm list entry.

**Domain Name List** 

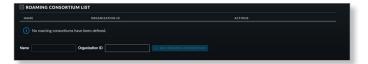


(List of domain names) Displays a list of domain names that have been defined for this NAI realm list entry:

- Name Displays the domain name.
- Actions Click relate to delete the domain name from the list.

To add a domain name to the list, fill out the *Name* field, and then click + ADD DOMAIN NAME.

#### **Roaming Consortium List**



(List of roaming consortiums) Displays a list of roaming consortiums that have been defined for this NAI realm list entry:

- Name Displays the name of the roaming consortium.
- **Organization ID** Displays the roaming consortium's IEEE-assigned organization ID.
- Actions Click out to delete the roaming consortium from the list.

To add a roaming consortium to the list, fill out the Name and Organization ID fields, and then click + ADD ROAMING CONSORTIUM].

**3GPP Cellular Network List** 

3GPP CELLULAR NETWORK LIST							
NAME	мсс	MNC	ACTIONS				
(i) No 3GPP cellular ne	tworks have been defined.						
Name	MCC 001	MNC 001					

(List of 3GPP cellular networks) Displays a list of 3GPP cellular networks that have been defined for this NAI realm list entry:

- Name Displays the name of the 3GPP cellular network.
- MCC Displays the Mobile Country Code (MCC).
- MNC Displays the Mobile Network Code (MNC).
- Actions Click delete the 3GPP cellular network from the list.

To add a 3GPP cellular network to the list, fill out the Name, MCC, and MNC fields, and then click + ADD 3GPP CELLULAR NETWORK.

Settings > Networks

Configure the networks for each site.

ปก็สา				
SETTINGS				
	+ CREATE NEW NETWORK			
Networks				
Routing & Firewall				

#### Networks

Name Displays the network name.

**Purpose** Displays the purpose of this network: Corporate, Guest, VLAN Only, Remote User VPN, Site-to-Site VPN, or VPN Client.

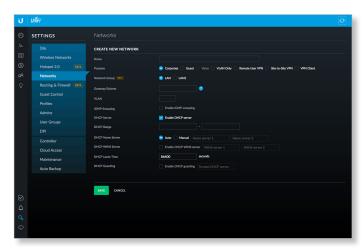
**Subnet** Displays the IP address and prefix size.

**VLAN** Displays the VLAN ID, if applicable.

- Edit Click content to make changes to the network settings. Go to <u>"Create or Edit a Network" on page 26</u>.
- Delete (Not available for the default network.) Click

**Create New Network** Click + CREATE NEW NETWORK to add a network. Go to <u>"Create or Edit a Network" on page 26</u>.

Create or Edit a Network



- Name Enter or edit the network name.
- Purpose Select the most appropriate description:
  - **Corporate** Corporate networks are appropriate for networks containing trusted systems. Corporate networks have no restrictions between them, or from them to the Internet, by default.
  - Guest Guest networks are often used in combination with the Guest Control feature (refer to <u>"Settings ></u> Guest Control" on page 32) for limiting access. The default Guest Control restrictions block authenticated guests from reaching any private IP subnet (RFC 1918).
  - VLAN Only Deploys the configured VLAN ID and associated configuration to USW.
  - Remote User VPN Allows configuring a UniFi Security Gateway as a remote access PPTP VPN server, to connect mobile VPN clients. Controller version 5.5 adds L2TP as a second Remote User VPN option.
  - **Site-to-Site VPN** Site-to-site VPNs connect different networks with an always-on connection and routing between. Auto, IPsec and OpenVPN options are available.
  - VPN Client Configures a VPN client on the UniFi Security Gateway to connect to a remote PPTP VPN server, acting like a mobile client would. Traffic leaving VPN client interfaces is source NATed to the IP assigned to the VPN client, so return routing from the server side isn't needed.





Note: The Corporate, Guest, Remote User VPN, Site-to-Site VPN, and VPN Client settings apply to the UniFi Security Gateway only. The VLAN Only setting applies only to UniFi Switch products.

After making your selection, follow the instructions for your selection:

**Corporate or Guest Network** 

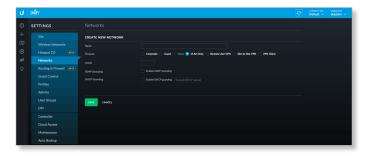
U	ปก็เคา			ð
0	SETTINGS			
-Ar-		CREATE NEW NETWORK		
Φ				
0			Corporate 💿 Guest Voice VLAN Only Remote User VPN Site-to-Site VPN VPN Client	
яR	Networks			
Q		Gateway/Subnet		
		VLAN		
		IGMP Snooping	Enable IGMP snoopleg	
		DHCP Server	Enskie DHCP server	
		DHCP Range		
	Controller		Auto     Manual Name server 1     Name server 2	
		DHCP WINS Server		
	Maintenance	DHCP Lease Time	86400 seconds	
	Auto Backup	DHCP Guarding		
		SAVE CANCEL		
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- Network Group (Beta) Select the physical interface of the USG that this network will be associated with: LAN or LAN2.
- Gateway/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. When this option is selected, all clients on the network are assigned the UniFi Security Gateway's IP address as their DNS server. The clients will then use the UniFi Security Gateway's caching DNS resolver as their DNS 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 Enter the DHCP lease time in seconds. The IP addresses assigned by the DHCP server are valid only for the duration specified by the lease time. Increasing the lease time will extend the time clients retain their IP address in absence of the DHCP server. However, any network changes will take just over half the lease length to apply to all clients. In networks with high rates of device churn, much shorter lease lengths should be used to prevent exhausting the DHCP IP address pool.
- **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 to apply changes.
- **Cancel** Click to discard changes.

#### **VLAN Only**

The UniFi Switch is required for this option.



- 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 to apply changes.
- Cancel Click to discard changes.

#### **Remote User VPN**

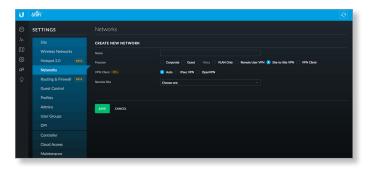
The UniFi Security Gateway is required for this option.

U	บก็เคา			æ
0	SETTINGS			
*		CREATE NEW NETWORK		
Ш				
0			Corporate Guest Vice VLAN Only 💿 Remote User VPN Site-to-Site VPN VPN Client	
βR	Networks	Gateway/Subnet		
0	Routing & Firewall	IP Pool		
			Auto Manual Name server 1 Name server 2	
	Admins			
		RADIUS		
	Controller	RADIUS Profile	Choose one V CREATE NEW RADIUS FROFILE	
	Maintenance			
	Auto Backup	SAVE CANCEL		

- 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. These are the IP addresses assigned to connected VPN clients.
- 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 to apply changes.
- **Cancel** Click to discard changes.

#### Site-to-Site VPN

#### The UniFi Security Gateway is required for this option.



- VPN Client (Beta) Select the type of VPN being configured:
  - Auto Auto is the default. This option lets you connect two sites on the same controller by simply picking the other site. No further configuration is necessary; UniFi automatically creates a secure IPsec VPN, and configures routing between the sites. Also, the created connection is bidirectional - creating an auto VPN from site A to site B also provides connectivity from site B to site A (nothing is configured on site B).
    - **Remote Site** Select the appropriate site from the drop-down list.
    - Note: You must have admin privileges for the local and remote sites to view and select sites.

U	UĥIFI			ð
	SETTINGS			
		CREATE NEW NETWORK		
	Hotspot 2.0		Corporate Guest Volce VLAN Only Remote User VPN 💿 Site-to-Site VPN VPN Client	
	Networks		Auto 😑 IPsec VPN 🔿 Open/VPN	
		Remote Subnets		
			Custoriand V	
	Maintenance	Key Exchange Version	K64 V	
	Auto Backup	Encryption	AES-128 V	
			SHA1 V	
			Enable perfect forward secrecy	
		Dynamic Routing	Inable dynamic routing	
		SAVE CANCEL		

- IPsec VPN Select this option create a VPN that uses IPsec (IP security protocol).
  - **Enabled** Select this option to create an IPsec VPN tunnel over the Internet between two peer routers. (The UniFi Security Gateway is the local peer router.)
  - **Remote Subnets** Click **Add Subnet** to add an address for a remote network.
    - Add Subnet If you have another remote subnet, click this option and enter its network address.
  - Peer IP Enter the IP address of the peer router.
  - Local WAN IP Enter the Internet IP address of the UniFi Security Gateway.

- Pre-Shared Key Enter the pre-shared secret key. Both peer routers must use the same pre-shared secret key for authentication.
- IPsec Profile Select the appropriate option:
  - Customized Select this option to customize your settings.
  - Azure dynamic routing Select this option if you are using Microsoft Azure with dynamic routing for a route-based VPN.
  - Azure static routing Select this option if you are using Microsoft Azure with static routing for a policy-based VPN.
- Advanced Options Click to access the advanced configuration.
  - Key Exchange Version Both peer routers must use the same Internet Key Exchange (IKE) version.
     Select the appropriate version: IKEv1 or IKEv2.
  - Encryption Both peer routers must use the same encryption method. Select the appropriate encryption method: AES-128, AES-256, or 3DES.
  - Hash Both peer routers must use the same hash algorithm. Select the appropriate hash algorithm: SHA1 or MD5.
  - DH Group The DH (Diffie-Hellman) group specifies the strength of the DH encryption key for the key exchange. Both peer routers must use the same DH group. Select the appropriate DH group: 2, 5, 14, 15, 16, 19, 20, 21, 25, or 26. The default is 14.
  - **PFS** Select this option to enable PFS (Perfect Forward Secrecy), which protects your past sessions from decryption should your key be compromised in the future.
  - Dynamic Routing Select this option to use VTIbased IPsec (otherwise tunnel mode will be used).
- Note: If you selected *Azure dynamic routing* or *Azure static routing*, then the defaults of the *Advanced Options* will also change accordingly.

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Ø 4 0	Cloud Access Maintenance Auto Backup	MIT CANCE	

- **OpenVPN** Select this option to create a VPN that uses the OpenSSL (Secure Sockets Layer) library and SSL/TLS (Transport Layer Security) protocols.
  - **Enabled** Select this option to create an OpenVPN tunnel over the Internet between two peer routers. (The UniFi Security Gateway is the local peer router.)
  - **Remote Subnets** Click **Add Subnet** to add an address for a remote network.
    - Add Subnet If you have another remote subnet, click this option and enter its network address.
  - **Remote Host** Enter the hostname of the remote router.
  - **Remote Address** Enter the Internet IP address and port number of the remote router.
  - Local Address Enter the Internet IP address and port number of the UniFi Security Gateway.
  - **Shared Secret Key** Enter the pre-shared secret key. Both peer routers must use the same pre-shared secret key for authentication.
- Save Click to apply changes.
- Cancel Click to discard changes.

#### **VPN** Client

The UniFi Security Gateway is required for this option.

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	SETTINGS			
		CREATE NEW NETWORK		
			Corporate Guest Voice VLAN Only Remote User VPN Site-to-Site VPN 💿 VPN Client	
	Networks		PPTP Client	
		Enabled		
		Remote Subnets		
	Controller			
	Maintenance			
	Auto Backup	SAVE CANCEL		

- VPN Client (Beta) PPTP Client is automatically selected.
- Enabled Select this option to enable the VPN client.
- **Remote Subnets** Enter the network address of the remote network. This VPN client will be used to reach the specified remote network(s).
  - Add Subnet If you have another remote subnet, click this option and enter its network address.
- Server IP Enter the IP address of the VPN server.
- Username Enter the VPN username.
- Password Enter the VPN password.
- **MPPE** Select this option to require MPPE (Microsoft Point-to-Point Encryption).
- Save Click to apply changes.
- Cancel Click to discard changes.

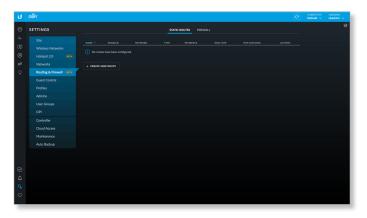
### Settings > Routing & Firewall

The Routing & Firewall screen displays the following tabs:

- Static Routes tab
- Firewall tab

Firewall rules are used to allow or block packets on an interface. There are predefined rules that cannot be edited or deleted, and you can create your own rules. When you create a rule, you specify matching criteria, such as the protocol (any, TCP, UDP, etc.) and whether the rule will be evaluated before or after the predefined rules. Rules are evaluated in order; as soon as one rule results in a match, that rule is applied, and rule evaluation stops.

**Static Routes Tab** 



The *Static Routes* tab displays a list of user-defined static routes:

Name Displays the name of the static route.

**Enabled** Displays a check mark if the static route is enabled; displays nothing if the static route is disabled.

**Network** Displays the IP subnet of the network in Classless Inter-Domain Routing (CIDR) or slash notation (example: 192.0.2.0/24).

**Type** Displays the static route's type: *Next Hop*, *Interface*, or *Black Hole*.

**Interface** Displays the interface associated with the static route.

**Next Hop** Displays the IP address of the next hop for the static route.

**Hop Distance** Displays the status route's administrative distance.

Actions Click a button to perform the desired action:

- Edit Click content to make changes to the static route entry. Go to <u>"Create or Edit a Static Route" on page</u> <u>31</u>.
- Delete Click DELETE to remove the static route.

To create a static route, click + create NEW ROUTE and go to <u>"Create or Edit a Static Route" on page 31</u>.

#### **Firewall Tab**

The *Firewall* tab displays user-defined firewall information, organized into two sub-tabs: *Rules* and *Groups*.

Firewall > Rules

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SETTINGS								
				Rules	Groups			
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	WAN IN WAN OUT	WAN LOCAL	DAN IN DAN OUT DA	N LOUAL GOE	ITIN GOEST OF			
Routing & Firewall (1998)	<ul> <li> <ul> <li></li></ul></li></ul>		allow established/velated		Accept All			
Guest Control								
	+ CREATE NEW RULE							

The *Rules* sub-tab displays existing firewall rules. There are three instances per network type: *In*, *Out*, and *Local*. The interfaces currently are defined as *WAN*, *LAN*, and *GUEST*.

WAN This is your Internet connection.

LAN This is in reference to all corporate networks.

**Guest** This is in reference to any guest subnets.

In Filters packets that enter the interface and traverse the router.

**Out** Filters packets that leave the interface. This applies to traffic that traverses the system or from the router itself.

Local Filters packets that are destined for the router.

Note: There are predefined firewall rules for most interfaces. For detailed information on these predefined rules, refer to <u>"Predefined Firewall</u> <u>Rules" on page 30</u>.

The following information is displayed for each rule:

**Rule Index** Displays an automatically generated index number associated with the rule.

**Enabled** Displays a check mark if the rule is enabled, or nothing if the rule is disabled.

Name Displays the name of the rule.

Action Displays the action to take if the rule criteria are satisfied: *Drop*, *Reject*, or *Accept*.

**Protocol** Displays the protocol(s) that apply to the rule. If *Except:* precedes the listed protocol(s), all protocols except those listed are applicable.

**Source** Displays the source to which the rule applies.

**Destination** Displays the destination to which the rule applies.

Actions Click a button to perform the desired action:

Edit Click and to make changes to the firewall rule. Go to <u>"Create or Edit a Firewall Rule" on page 31</u>.

• **Delete** Click **Delete** to remove the firewall rule.

To create a firewall rule, click + CREATE NEW RULE and go to <u>"Create or Edit a Firewall Rule" on page 31</u>. **Predefined Firewall Rules** 

The following firewall rules are predefined (cannot be edited or deleted):

Interface	Rule Name	Action	Protocol
WAN IN	Allow established/related sessions	Accept	All
	Drop invalid state	Drop	All
WAN OUT	None*	-	-
WAN	Allow established/related sessions	Accept	All
LOCAL	Drop invalid state	Drop	All
	Allow ICMP	Accept	ICMP
LAN IN	Packets from UniFi to VoIP	Accept	All
	Packets from Intranet to VoIP	Drop	All
	Accounting defined network 192.168.1.0/24	Accept	All
LAN OUT	Accounting defined network 192.168.1.0/24	Accept	All
LAN LOCAL	None	-	-
GUEST IN	Allow DNS packets to external name servers	Accept	UDP
	Allow packets to captive portal	Accept	ТСР
	Allow packets to allow subnets	Accept	All
	Drop packets to restricted subnets	Drop	All
	Drop packets to intranet	Drop	All
	Drop packets to voip	Drop	All
	Drop packets to remote user	Drop	All
	Authorized guests white list	Drop	All
GUEST OUT	None	-	-
GUEST	Allow DNS	Accept	UDP
LOCAL	Allow ICMP	Accept	ICMP

\* The WAN\_OUT ruleset is not deployed by default until controller version 5.5.2 and newer. To deploy WAN\_OUT in earlier versions, set config.ugw.deploy\_firewall\_wan\_out=true in config.properties.

#### Firewall > Groups



The *Groups* sub-tab displays the following information: Name Displays the name of the group.

Type Displays the group type: Address or Port.

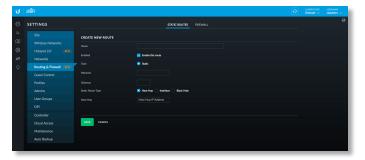
**Count** Displays the total addresses or ports in the group.

Actions Click a button to perform the desired action:

- Edit Click down to make changes to the group. Go to <u>"Create or Edit a Firewall Group" on page 32</u>.
- Delete Click DELETE to remove the group.

To create a group, click + CREATE NEW GROUP and go to \*Create or Edit a Firewall Group on page 32.

### **Create or Edit a Static Route**



#### Name Enter a name for the static route.

**Enabled** Check this box checked to enable the route. The route is enabled by default.

**Type** This read-only field displays the route type: *Static*.

**Network** Enter the IP address and subnet mask using CIDR or slash notation:

<network\_IP\_address>/<subnet\_mask\_number> (example: 192.0.2.0/24).

**Distance** Enter the static route's administrative distance. This is a number between 1 and 255. This number is often set to 1 (or a similarly low value) to create a route with a shorter distance than dynamic routes.

Static Route Type Select the static route's type:

- **Next Hop** The IP address of the next hop gateway for the desired routing path. This is the default.
- Interface Interface routes are used with point-to-point connections, where there need not be a gateway IP. They are most often used with VPNs.
- **Black Hole** This is used to forward unwanted traffic into a black hole, or to drop it.

**Next Hop** (Available if *Static Route Type* is *Next Hop*.) Enter the next hop IP address.

**Interface** (Available if *Static Route Type* is *Interface*.) Select the interface.

Save Click to apply changes.

**Cancel** Click to discard changes.

### **Create or Edit a Firewall Rule**

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	SETTINGS		STATIC ROUTES PREVAIL			
			Rules Groups			
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	Admins		0 A			
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	Cloud Access		Enter a protocol number 0			
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		SAVE CANCEL				

#### **Create New Rule**

Name Enter a name for the rule.

**Enabled** Enables or disables the rule (enabled by default). **Rule Applied** Specify when the rule will be applied:

before Predefined Rules (default) or after Predefined Rules.

Action Select the action to take if the rule criteria are satisfied:

- **Drop** Packets are blocked with no message. This is the default action.
- **Reject** Packets are blocked, and an ICMP (Internet Control Message Protocol) message is sent saying that the destination is unreachable.
- Accept Packets are allowed through the firewall.

**Protocol** Specify the protocol(s) to which the rule applies. Select one of the following:

- All Match packets of all protocols (default).
- TCP Match TCP packets.
- UDP Match UDP packets.
- TCP and UDP Match TCP and UDP packets.
- **Choose a protocol by name** Select a protocol from the drop-down list to match packets of that protocol.
- Enter a protocol number Enter the port number of the protocol to match packets of that protocol.
- Match all protocols except for this Match all protocols except for the selected protocol(s) (at least one protocol must be selected; All is not a valid selection with this option).

#### Advanced

**Logging** Check the box to enable logging (disabled by default).

**States** Select each state that will apply to the rule (none are selected by default): [Please verify this all descriptions below; they are based on info found online]

- New The packet is the first packet seen in a new connection.
- **Established** The packet is part of an existing connection which has seen packets in both directions.
- **Invalid** The packet cannot be identified or its state cannot be determined.
- **Related** The packet is part of a new connection that is related to an existing connection.

P2P Check the box to disable P2P (unchecked by default).

**IPsec** Select the criteria for IPsec packet filtering: Don't match on IPsec packets (default), Match inbound IPsec packets, or Match inbound non-IPsec packets.

#### Source

**Source Type** Select the type of source:

- Address/Port Group The source is an address/port group. Specify the following:
  - Address Group Select an address group from the drop-down list.

To create a new address group, click **Create Address Group**, and then fill in the *Name* and *Address* fields. To add another address to the group, click **Add**. When finished adding addresses, click **Save**.

- **Port Group** Select a port group from the drop-down list.

To create a new port group, click **Create Port Group**, and then fill in the *Name* and *Port* fields. To add another port to the group, click **Add**. When finished adding ports, click **Save**.

- Network The source is a network. Specify the following:
  - **Network** Select the network and the IP group (*ADDRv4*) or subnet (*NETv4*) from the drop-down lists.

MAC Address Enter the MAC address of the source.

# Destination

**Destination Type** Select the type of destination:

- Address/Port Group The destination is an address/port group. Specify the following:
  - Address Group Select an address group from the drop-down list.

To create a new address group, click **Create Address Group**, and then fill in the *Name* and *Address* fields. To add another address to the group, click **Add**. When finished adding addresses, click **Save**.

- **Port Group** Select a port group from the drop-down list.

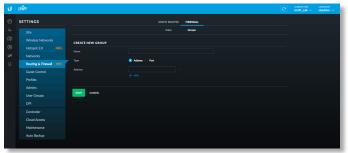
To create a new port group, click **Create Port Group**, and then fill in the *Name* and *Port* fields. To add another port to the group, click **Add**. When finished adding ports, click **Save**.

- **Network** The destination is a network. Specify the following:
  - **Network** Select the network and the IP group (*ADDRv4*) or subnet (*NETv4*) from the drop-down lists.

Save Click to apply changes.

Cancel Click to discard changes.

### **Create or Edit a Firewall Group**



Name Enter a name for the group.

**Type** Select the type of group to create: *Address* or *Port*. **Address** (Available if *Type* is set to *Address*.)

**Port** (Available if *Type* is set to *Port*.)

Add Click Add to add another address or port to the group.

Save Click to apply changes.

**Cancel** Click to discard changes.

Settings > Guest Control

The Guest Control screen displays the following sections:

- Guest Policies (see below)
- <u>"Access Control" on page 39</u>
- <u>"Hotspot" on page 36</u> (for Hotspot authentication)
- <u>"Access Control" on page 39</u>

	SETTINGS		
		GUEST POLICIES	
	Wireless Networks	Enable Guest Portal	
	Hotspot 2.0		📀 No authentication 🔿 Simple password 🔿 Hotspot 🔿 External portial server
A	Networks		
	Routing & Firewall	Landing Page	Redirect to the original URI, Promotional URI, http://
	Guest Control	Redirection	respective and and a province of the second se
	Profiles		Redirect using hostname http://
	Admins		🕜 Enable HTTPS Redirection 🕜
	User Groups	PORTAL CUSTOMIZATION	
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	Controller		Override templates with custom changes 📀
	Cloud Access		
	Maintenance	VOUCHER CUSTOMIZATION	
	Auto Backup	Template Engine	
		Override Default Templates	Override templates with custors changes 🔞
		ACCESS CONTROL	
		Pre-Authorization Access 📀	
		Post-Authorization Restrictions 🚷	192.168.0.0/16
			172.16.0.0/12
			ADD HOSTMAKE OF SUBJECT
		APPLY CHANGES RESET	

### **Guest Policies**

**Enable Guest Portal** Disabled by default. When disabled, guests can access the Internet without entering a password or accepting the terms of service. 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 (see below)
- <u>"Authentication > Simple Password" on page 33</u>
- <u>"Authentication > Hotspot" on page 34</u>
- <u>"Authentication > External Portal Server" on page 38</u>

Authentication > No Authentication

Select this option if guests are not required to log in (you can choose to require the terms of service).

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SETTINGS		
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Routing & Firewall	Landing Page	Redirect to the original URL     Promotional URL     http://
Guest Control	Redirection	Use Secure Portal
Profiles		Redirect using hostname http://
		Enable HTTPS Redirection (1)
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Maintenance	VOUCHER CUSTOMIZATION	<ul> <li>Inspire 159</li> </ul>
Auto Backup	Override Default Templates	🐷 usgut y Jor
	Overnoe Derault tempates	Overnoe tempolees with custom changes.
	ACCESS CONTROL	
	Pre-Authorization Access 🕜	+ ADD HOSTNAME ON SUBMET
	Post-Authorization Restrictions 😢	192.168.0.0/16
		172.160.0/12 × 100.0.0/8 ×
		+ ADD HOSTINAME OR SUBMET
	APPLY CHANGES RESET	
	APPLY CHANGES RESET	

**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 connecting, guests are redirected to the landing page. Select one of the following options:

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

**Use Secure Portal** When selected, unauthorized guests will be redirected to the HTTPS guest portal.

**Redirect Using 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 can click **Connect** for immediate access.

If you enable the terms of service, then guests will be required to accept the terms of use before gaining access to the Internet.

/elcome to the Hots	pot Portal!
I accept the term	s of use
Guest access	
	CONNECT

You can select **Enable terms of service** under *Settings* > *Guest Control* > *Portal Customization* to enforce selection of the terms of service by the guest. See <u>"Access Control" on</u> **page 39** for more information.

**Enable HTTPS Redirection** When selected, unauthorized guests will be redirected to the guest portal when they are HTTPS browsing.

Authentication > Simple Password

Select this option if guests are required to enter a simple password (you can choose to require the terms of service). See <u>"Guest Policy" on page 23</u> for more information.

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	SETTINGS		
		GUEST POLICIES	
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	Networks		
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	Auto Backup	Template Engine	Laguacy XP
		Override Default Templates	Coveride terglates with custom charges
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		ACCESS CONTROL	
		Pre-Authorization Access 😢	
		Post-Authorization Restrictions 🚷	192.1680.0/16
			172.160.0/12 × 10.0.0/18 ×
			+ ADD HOSTNAME OR SUBNIT
		APPLY CHANGES RESET	

**Guest Password** Enter a password that guests must enter before 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 connecting, guests are redirected to the landing page. Select one of the following options:

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

**Use Secure Portal** When selected, unauthorized guests will be redirected to the HTTPS guest portal.



**Redirect Using 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* before gaining access to the Internet.



If you enable the terms of service, then guests will be required to accept the terms of use before gaining access to the Internet.

come to the Hotspot Portal!	
I accept the terms of use	
Suest access	
Enter guest password	
	Guest access Enter guest password

You can select **Enable terms of service** under *Settings* > *Guest Control* > *Portal Customization* to enforce selection of the terms of service by the guest. See <u>"Access Control" on</u> **page 39** for more information.

**Enable HTTPS Redirection** When selected, unauthorized guests will be redirected to the guest portal when they are HTTPS browsing.

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 service by the guest. See <u>"Guest Policy" on page 23</u> for more information.

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SETTINGS		
	GUEST POLICIES	
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Controller	HOTSPOT	
		Enable Alls based authorization
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Auto Backup	Payments	Finable payment-based authorization
	ACCESS CONTROL	
	Pre-Authorization Access 🚷	
	Post-Authorization Restrictions 🚷	192.1460.0V16 ×
		172.16.0.0/12
	APPLY CHANGES RESET	

**Landing Page** After connecting, guests are redirected to the landing page. Select one of the following options:

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

**Use Secure Portal** When selected, unauthorized guests will be redirected to the HTTPS guest portal.

**Redirect Using 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

**Enable HTTPS Redirection** When selected, unauthorized guests will be redirected to the guest portal when they are HTTPS browsing.

**Portal Customization** 

Select this option to have customized portal pages appear in place of the default login pages. (This option is not available if you are using an external portal server.)

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		GUEST POLICIES	
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	Hotspot 2.0		🔿 No authentication 🔿 Simple password 🧧 Hotspot. 🔿 External portal server
			Reclinect to the original URL Promotional URL

**Template Engine** Select **AngularJS** for client-side rendering or **Legacy JSP** for server-side rendering. We recommend AngularJS unless you are using old templates.

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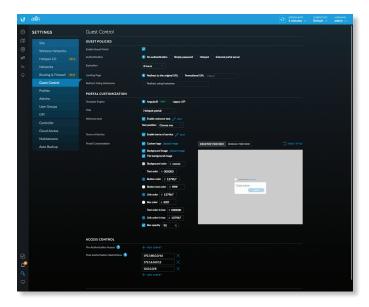
Note: AngularJS is not compatible with old templates because the old templates were designed to work with JSP (Java Server Pages).

The UniFi Controller offers a built-in editor to customize AngularJS; however, it is not fully customizable at this time.

AngularJS is a single-page app, so it should work more quickly. However, AngularJS uses JS (JavaScript), which may not work with some really old web browsers or newer browsers with JS support disabled.

AngularJS uses responsive design, so it will adapt to the size of a mobile device, such as a tablet or smartphone.

Legacy JSP is fully customizable and uses old HTML, so it should work with any web browser. You can customize Legacy JSP only by overriding files. Legacy JSP works more slowly and is not responsive by default.



- **Title** Enter the title of your portal. The default is *Hotspot portal*.
- Welcome Text Select Enable welcome text to add a welcome message.



After you have added your welcome text, click **Submit** to save your changes or click *Cancel*.

Once you have welcome text, then you can click dom't to make changes.

- **Text position** Select the appropriate location for the welcome text, **Under the logo** or **Above boxes**.
- Terms of Service Select Enable terms of service to add any terms of service you want hotspot users to accept.



Click Submit to save your changes or click Cancel.

Once you have the terms of service, then you can click for to make changes.

- **Portal Customization** You can make the following formatting changes:
  - **Customize logo** Click **Upload image** and select the logo you want to use. (We recommend the use of the .png format.) Then click **Open**.
  - **Background image** Click **Upload image** and select the image you want to use. (We recommend the use of the .jpg format.) Then click **Open**.
    - Tile background image Select this option if you want to repeat the background image in a tile pattern.
  - **Background color** Click **Button color** to select the appropriate color, or enter the hexadecimal HTML color value you want to use. The default is *#cccccc*.
  - **Text color** Click **Button color** to select the appropriate color, or enter the hexadecimal HTML color value you want to use. The default is #1379b7.
  - **Button color** Click **Button color** to select the appropriate color, or enter the hexadecimal HTML color value you want to use. The default is #1379b7.
  - **Button text color** Click **Button text color** to select the appropriate color, or enter the hexadecimal HTML color value you want to use. The default is *#ffffff*.
  - Link color Click Link color in box to select the appropriate color, or enter the hexadecimal HTML color value you want to use. The default is #1379b7.
  - **Box color** Click **Box color** to select the appropriate color, or enter the hexadecimal HTML color value you want to use. The default is *#ffffff*.
  - **Text color in box** Click **Link color in box** to select the appropriate color, or enter the hexadecimal HTML color value you want to use. The default is #000000.
  - Link color in box Click Link color in box to select the appropriate color, or enter the hexadecimal HTML color value you want to use. The default is #1379b7.
  - **Box opacity** You can change the opacity of the box background color. The default is *90*.
- **Desktop Preview** Enabled by default. The **Desktop Preview** previews the portal in the desktop view.
- Mobile Preview Click Mobile Preview to preview the portal in the mobile view.
- **Reset Style** Reset *Portal Customization* changes to the factory defaults.
  - Note: At this time AngularJS does not support voucher customization; however, you can customize vouchers using the voucher.html and voucher.css files. Refer to <u>"Customizable Default</u> <u>Files" on page 128</u> for more information.

#### Legacy JSP Server-side rendering is enabled by default.

U			
	SETTINGS		
		GUEST POLICIES	
	Wireless Networks		
	Hotspot 2.0		No authentication 💿 Single password 🔿 Hotopot 🖉 External portal server
	Networks		
	Routing & Firewall		8 hours V
	Guest Control	Landing Page	Redrect to the original URL Promotional URL http://
	Profiles	Redirection	Kozeros to se organa Les Promociona Les. Millour
	Admins	Registered	Redirect using hotpame http://
	User Groups		😸 Enable HTTPS Redirection 🥥
		PORTAL CUSTOMIZATION	
	Controller	Template Engine	Angulariti 🚥 📵 Lappoy diP
	Controller Cloud Access	Overvide Default Templates	Overvide templets with output draws
		Override Default Templates	Override templates with custom changes 🔮
		VOUCHER CUSTOMIZATION	
	Auto Backup		Engacy 159
		Overvice Default Templates	Override templates with custom changes 🌍
		ACCESS CONTROL	
		Pre-Authoritation Access 😲	+ ADD HOSTNAME OR SUBNET
		Past-Authorization Restrictions 😲	192.168.0.0/16
			1721660/12 ×
			+ 400 HOTINARE OF SHEAT
		APPLY CHANGES RESET	

 Override Default Templates Select this option if you want to manually edit templates. See <u>"Portal</u> <u>Customization with Legacy JSP" on page 125</u> for more information.

#### Hotspot

When *Hotspot* authentication is selected, the *Hotspot* section is displayed.

UNIFI		
SETTINGS		
	GUEST POLICIES	
Wireless Networks		
Hotspot 2.0 (MTA)		🔿 No authentication 🔿 Simple password 🙁 Hotapot 🔿 External portal server
		Redirect to the original URL     Promotional URL     http://
Routing & Firewall		🗌 Une Secure Portal 🌔
Guest Control		Redrect using hostname http://
Profiles		
	PORTAL CUSTOMIZATION	
		🔿 Angularită 🚥 🧕 Lagacy 152
		🗌 Override templates with custom changes 😍
	нотярот	
		Enable Ağl-based authorization
	Vouchers	Enable vision there have authorization
Auto Backup	Payments	Enable promet based autorization
	ACCESS CONTROL	
	Pre-Authorization Access 😮	
	Post-Authorization Restrictions 🕗	192.168.0.0/16
		172.16.00/12 × 100.00/8 ×
	_	
	APPLY CHANGES RESET	

Select the **Voucher** and/or **Payment** method of authorization:

- **Vouchers** Use Hotspot Manager to create vouchers (including distributable code, duration values, and use restrictions). See <u>"Hotspot Manager" on page 121</u>.
- · Payments Set up payment-based authentication.

PORTAL CUSTOMIZATION		
Template Engine	AngularJS 🔤 Legacy JSP	
Override Default Templates	Override templates with custom changes 💡	
нотѕрот		
	Enable API-based authorization	
Vouchers	Enable voucher-based authorization	
Payments	Enable payment-based authorization	
PAYMENTS		
Payment Gateway	Choose one	

- **Payment Packages** (Available only for payment-based authentication.) There are three packages by default: *Basic 8HR (\$5.99), Premium Daypass (\$8.99), and Free Trial.* 
  - Actions Click a button to perform the desired action:
  - Edit Click corr to make changes to the package settings. Go to the *Add or Edit a Package* section.
  - **Delete** Click Delete the package.
- Add Another Package Click + ADD ANOTHER PACKAGE to create a new package. Go to the Add or Edit a Package section.
   Add or Edit a Package

Name		
Payment	📄 Free package 🕜	
Price		
Charged As 😮		
Overwrite Limit 🕐	Enable overwriting limit	
Hours		
Limit Download		kbps
Limit Upload		kbps
Limit Quota		MBytes

- Name Enter or edit the name of the package.
- Payment Select Free package if appropriate. (Only one free package is allowed. There is a free package by default, so unless you delete it, then this option is not available.)
- **Price** Select the appropriate currency from the drop-down menu, and then enter the price.
- **Charged as** Enter the text that will be shown on the credit card statement.
- **Overwrite Limit** Select this option if you want to overwrite the user group policy per WLAN/user.
- Hours Enter the number of access hours the package allows.
- Limit Download Enter the maximum download bandwidth in Kbps.
- Limit Upload Enter the maximum upload bandwidth in Kbps.
- Limit Quota Enter the maximum amount (in megabytes) of data transfer allowed per session.
- Submit Click to apply changes.
- Cancel Click to discard changes.
- **Payment Field Options** (Available only for paymentbased authentication.)
  - **Enable first name field** Select this option to create a field for a first name.
    - **Required** Select this option if you want to make this field mandatory.
  - **Enable last name field** Select this option to create a field for a last name.

#### UniFi Controller User Guide

- **Required** Select this option if you want to make this field mandatory.
- **Enable address field** Select this option to create a field for an address.
  - **Required** Select this option if you want to make this field mandatory.
- **Enable city field** Select this option to create a field for a city.
  - **Required** Select this option if you want to make this field mandatory.
- **Enable state field** Select this option to create a field for a state.
  - **Required** Select this option if you want to make this field mandatory.
- **Enable zip field** Select this option to create a field for a zip code.
  - **Required** Select this option if you want to make this field mandatory.
- **Enable country field** Select this option to create a field for a country.
  - **Required** Select this option if you want to make this field mandatory.
  - **Default value** Select the appropriate default country from the drop-down menu.
- **Gateway** (Available only for payment-based authentication.) You have multiple options:
  - PayPal<sup>™</sup> Website Payment Pro (US, Canada, UK) Use your <u>PayPal Website Payments Pro</u> account. To manage payments and transactions, click
     COTO HOTSPOTMANAGER, and see <u>"Hotspot Manager" on page</u> 121.



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 sandbox account For PayPal testing purposes, select this option. Then click Apply Sandbox Account to set up or access your <u>PayPal Sandbox</u> <u>Test Environment</u>.
- Stripe (US, Canada) Use your <u>Stripe</u> account. To manage payments and transactions, click Go to Hotspot Manager, and see <u>"Hotspot Manager" on</u> page 121.

Chapter 3: Using the UniFi Controller Software

Payment Gateway	Stripe (US, Canada, UK) 🗸	
STRIPE (US, CANADA, UI	9	

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, click Go to Hotspot Manager, and see <u>"Hotspot Manager" on</u> page 121.



Enter the Quickpay account details:

- Merchant ID Enter the ID for your merchant account.
- MD5 Secret Enter the MD5 secret key.
- Authorize.Net<sup>®</sup> (US, Canada) Use your <u>Authorize.Net</u> account. To manage payments and transactions, click Go to Hotspot Manager, and see <u>"Hotspot Manager"</u> on page 121.

PAYMENTS					
Payment Gateway	Authorize. Net (US, Canada) 🗸				
AUTHORIZE.NET (US, CANADA)					
API Login ID					
Transaction Key					

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 <u>Authorize.Net</u> test account.
- Merchant Warrior (Australia, New Zealand) Use your <u>Merchant Warrior</u> account. To manage payments and transactions, click Go to Hotspot Manager, and see <u>"Hotspot Manager" on page</u> <u>121</u>.

Payment Gateway	Merchant Warrior (Australia, New Zealand) 🛛 🗸	
MERCHANT WARRIOR (#	USTRALIA, NEW ZEALAND)	
Merchant UUID		
API Passphrase		

#### Chapter 3: Using the UniFi Controller Software

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 <u>Merchant Warrior</u> test account.
- IPpay<sup>™</sup> (US, Canada) Use your IPpay account. To manage payments and transactions, click Go to Hotspot Manager, and see <u>"Hotspot Manager" on</u> page 121.



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 <u>IPpay test account</u>.
- Hotspot Operator Click Go to Hotspot Manager to manage Wireless Guests, Payments/Transactions, Vouchers, and Operator Accounts. See <u>"Hotspot</u> Manager" on page 121.

When logging in with voucher-based *Hotspot* authentication, guests will be required to enter the voucher number before gaining access to the Internet.



If you enable the terms of service, then guests will be required to accept the terms of use before gaining access to the Internet.

I have a	voucher
Enter your	voucher code

When logging in with payment-based *Hotspot* authentication, guests will be required to select the package type and click the payment choice before gaining access to the Internet.



If you enable the terms of service, then guests will be required to accept the terms of use before gaining access to the Internet.

	accept the terms of use
Se	lect a package
8	Basic 8HR - \$5.99 Premium Daypass - \$8.99
Or	try it out for free

You can select **Enable terms of service** under *Settings* > *Guest Control* > *Portal Customization* to enforce selection of the terms of service by the guest. See <u>"Portal</u> <u>Customization with Legacy JSP" on page 125</u> for more information.

Authentication > External Portal Server

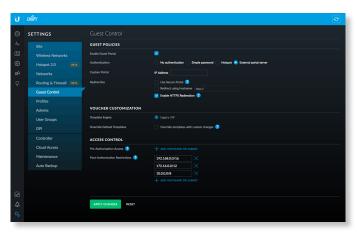
Select this option if you are using an external server to host a custom guest portal.

	UĥIFI		0
	SETTINGS		
		GUEST POLICIES	
			8
			No autherbication Simple password Hotspot 💿 External portal server
			IP Address
	Routing & Firewall		Use Secure Portal 🥥
	Guest Control		Padirect using hostname http:// Enuble HTTPS Redirection (2)
	Profiles		Sector HTTPS Redirection
	Admins	VOUCHER CUSTOMIZATION	
			e Legacy JSP
			Override templates with custom changes 🕐
		ACCESS CONTROL	
		Pre-Authorization Access	+ ADD HOSTNAME OR SUBNET
	Maintenance	Post-Authorization Restrictions 😯	192.168.0.0/16 🗙
	Auto Backup		172.16.0.0/12 ×
			10.0.0.0/8
			+ ADD HOSTNAME OR SUBNET
4		APPLY CHANGES RESET	
o,			
~6			

**Custom Portal** Enter the IP address in the IP Address field.

**Redirect Using 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**



**Pre-Authorization Access** Enter any subnets that you want guests to be able to access, even if they have not been authenticated. Click the *delete* icon to remove a subnet from this list.

Add Subnet Click Add Subnet to add more allowed subnets.

**Post-Authorization Restrictions** 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 Subnet Click Add Subnet to add more restricted subnets.

Apply Changes Click to save changes.

**Reset** Click to cancel changes.

#### **Settings > Profiles**

You can use this option to create profiles for RADIUS authentication. RADIUS is a networking protocol providing centralized Authentication, Authorization, and Accounting (AAA) management for computer to connect to and use a network service.

U	ปก็ศา		<i>ि</i> :
6	SETTINGS	Profiles	
-∿-		RADIUS PROFILES	
即			
۲			
яR			
0	Routing & Firewall	+ CREATE NEW RADIUS PROFILE	
	Profiles		
	Admins		

**Name** Displays the name of the RADIUS authentication profile.

**# Servers** Displays the number of servers associated with this profile.

Accounting Enabled Displays a check mark if RADIUS accounting is enabled or nothing if RADIUS accounting is not enabled.

Actions Click a button to perform the desired action:

- Edit Click **Content** to make changes.
- **Delete** Click **Delete** to delete the profile.

Add New RADIUS Profile Click + CREATE NEW RADIUS PROFILE to create a new RADIUS profile. The *Create New Radius Profile* screen appears.

### **Create New RADIUS Profile**

Profile Name			
VLAN Support	Enable RADIUS assi	gned VLAN for Wired Network	
	Enable RADIUS assi	gned VLAN for Wireless Network	
RADIUS Auth Server	IP Address	Port 1812 Password/Shared Secre	
Accounting	Enable Accounting		

Profile Name Enter a name for the RADIUS profile.

**VLAN Support** Use these options to configure VLAN support:

- Enable RADIUS assigned VLAN for Wired Network Disabled by default.
- Enable RADIUS assigned VLAN for Wireless Network Disabled by default.

**RADIUS Auth Server** Enter information used to identify the RADIUS server(s):

- IP Address Enter the IP address of the RADIUS authentication server.
- **Port** Enter the port number of the RADIUS authentication server. The default is *1812*.
- Password/Shared Secret Enter the password or shared secret (a case-sensitive text string) that will be used to validate communication with the RADIUS authentication server.
- Add Auth Server Click to add another RADIUS authentication server to the profile.

**Accounting** This option is disabled by default. If you are using an accounting server, click **Enable Accounting** and then configure the *RADIUS Accounting Server* settings:

- IP Address Enter the IP address of the RADIUS accounting server.
- **Port** Enter the port number of the RADIUS accounting server. The default is *1813*.
- Password/Shared Secret Enter the password or shared secret (a case-sensitive text string) that will be used to validate communication with the RADIUS accounting server.
- Add Accounting Server Click to add another RADIUS authentication server to the profile.

**Cancel** Click to cancel your changes.

Save Click to save the profile.

## 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 wired 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 wired devices.

To create operator accounts for the Hotspot Manager, see **"Operator Accounts" on page 123**.

U	UĥFr			
	SETTINGS			
	Wireless Networks			
		+ ADD NEW ADMIN		
	Admins			

**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*.

**Verified** Displays a checkmark to indicate that an admin is verified after he or she responds to an email invitation.

Actions Click a button to perform the desired action:

- Edit Click dent to make changes.
- **Delete** Click **Delete** to delete the user group. (The *Default* user group cannot be deleted.)

Add 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 123**.

Create or Edit an Admin

U	ปก็เFi		
69	SETTINGS		
-M-		INVITE NEW ADMIN	
Φ	Wireless Networks		
0	Hotspot 2.0	Invite to Controller	Send an invitation via email
дR	Networks		Manually set and share the password
Ŷ	Routing & Firewall	Email	
	Guest Control		Z Enable Cloud Access 😮
	Profiles		Read Only
	Admins		
	User Groups		
		INVITE CANCEL	
	Controller		

- Email Enter the email address of the new administrator.
- 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 to send an email invitation.
- Cancel Click to discard changes.

### Settings > User Groups

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

U	UĥiFi			ð
0	SETTINGS			
Λ				ACTIONS
ш				Ø son
۲		+ CREATE NEW USER	GROUP	
яR				
$\diamond$				
	User Groups			
	Controller			

### **User Group Settings**

Name Displays the name of the user group.

**Bandwidth Limit (Download)** Displays the download limit.

Bandwidth Limit (Upload) Displays the upload limit.

Actions Click a button to perform the desired action:

- Edit Click of tor to make changes to the user group settings. Go to the <u>"Create or Edit a User Group" on</u> page 40 section below.
- **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** 

U	Uก็เFT	l de la companya de l	ð
	SETTINGS		
		CREATE NEW USER GROUP	
		Bandwidth Linit (Download) Linit download bandwidth to Klops	
		SAVE CANCEL	
		UNITE CHILER	
	User Groups		
	DPI		
	Cloud Access		

- Name Enter or edit the name of the user group.
- Bandwidth Limit (Download) Select to limit the download bandwidth. Enter the maximum in Kbps.

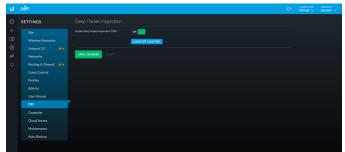
- **Bandwidth Limit (Upload)** Select to limit the upload bandwidth. Enter the maximum in Kbps.
- Save Click to apply changes.
- Cancel Click to discard changes.

## See <u>"Wireless Client – Configuration" on page 119</u> or <u>"Wired Client – Configuration" on page 120</u>

for information on how to assign a user or guest to a user group.

### Settings > DPI

Configure the Deep Packet Inspection (DPI) settings of the UniFi Controller.



**Enable Deep Packet Inspection** When enabled, this option turns on the DPI feature of the USG. The data will accumulate until you either click **Clear DPI Counters** (described below) or reboot or upgrade the USG. This feature will not work for any WAN connection when .Smart Queue is enabled on it.

**Clear DPI Counters** Click this button to clear the DPI counters.

Apply Changes Click to save changes.

**Reset** Click to cancel changes.

#### **Settings > Controller**

(Available for the superadmin only.) Configure the system settings of the UniFi Controller.

UĥIFI			
SETTINGS	CONTROLLER VERSION		
		5460	
		atag_5.4.6_9114	
	CONTROLLER SETTINGS		
		UniFi_Lab	
		unifi, yourdomain.com	
		Make controller discoverable on L2 Network	
		Enable Live Support for the Super Admin only $\sim$	
	MAPS SETTINGS		
Controller			
		In order to use Google Maps locally a valid API key is required. For details on obtaining a key please see this guide.	
Maintenance		The key should be assigned to the domain or IP address of	
Auto Backup		your UniFi Controller.	
		Use Google Maps engine for Image maps	
	MAIL SERVER		
	SMTP Server	Enable mail server Hostname Port 25 Enable 551.	
	APPLY CHANGES RESET		

#### **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 on the Layer-2 network. This option is disabled by default.

#### **Support Messaging** Select the appropriate option: Enable Live Chat for the Super Admin only, Enable Live Chat for all users, or Disable Live Chat for all users.

#### **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 <u>"Settings > Admins" on page 40</u>.

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

- Hostname 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 Changes Click to save changes.

Reset Click to cancel changes.

# Settings > Cloud Access

Set up the login for cloud access.



**Enable Cloud Access** Click to configure the login. The *Cloud Login Credentials* screen will appear.

### **Cloud Login Credentials**

CLOUD LOGIN CREDENTIALS						
	BNT.com account credentials. account that you used to sign into this					
Email or Username						
Password	No Account? Register now.					
	CANCEL ENABLE CLOUD ACCE	ss				

- Email or Username Enter the email address or username of your UBNT account.
- Password Enter the password of your UBNT account.
- No account? Register now. If you do not have a UBNT account, click here to visit this link: <u>https://account.ubnt.com/register</u>

Follow the on-screen instructions to set up an account.

- Enable Cloud Access Click to save changes.
- Cancel Click to discard changes.

## **Cloud Access**

If the login for cloud access is configured, then the *Cloud Access screen* will appear:

SETTINGS		Cloud Access		
Site				
		Configured for	u	bnt@ubnt.com
				DISABLE USER CLOUD ACC
Routing				
Profiles				
Controlk				

**Enable Cloud Access** Click to enable or disable cloud access.

**Status** Displays "Connected" if cloud access is active.

**Configured for** Displays the username or email address of your UBNT account.

**Disable User Cloud Access** (Available if you are a site admin.) Click to disable cloud access and remove the cloud login credentials.

Uก็โFI		
SETTINGS	Cloud Access	
	Configured for	ubnt@ubnt.com
		DISABLE USER CLOUD ACCES
Profiles		
User Groups		
Controller		
Cloud Access		

**Disable and Remove Cloud Access** (Available if you are a super-admin.) Click 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.

U	ปที่เFi						
69	SETTINGS	Cloud Access					
0		Enable Cloud Access	ON				
Ø	Wireless Networks	Status	CONNECTED				
яR		Configured for	UBNT				
لسا	Networks		DISABLE AND REMOVE CLOUD ACCESS				
Ŷ	Routing & Firewall						
	Guest Control						
	Profiles	APPLY CHANGES RESET					
	Admins						
	User Groups						
	Controller						
	Cloud Access						

Apply Changes Click to save changes. Reset Click to cancel changes.

# Settings > Maintenance

(Available for the superadmin only.) 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.

SETTINGS		
	SERVER INFORMATION	
		5.4.6 (Bulld: atag_5.4.6_9114)
	SERVICES	
		Device Normal V Mgmt Normal V System Normal V Cloud Access Normal V APPLY
	Historical Data Retention	30 days V APRX
		COMPACT DATABASE
Profiles	Device Firmware Update	CHECK FIRMWARE UPDATE
Admins		
User Groups DPI	BACKUP	
Controller	Backup Data Retention	7 days 🗸 DOWNLOAD BACKUP
Cloud Access	RESTORE	
Maintenance		CHOOSE FILE
Auto Backup	SUPPORT INFO	
	Download	DOWNLOAD SUPPORT INFO
	System Config	SHOW SYSTEM CONFIG
	CLOUD KEY FIRMWARE	UCK.mk/7623.v0.5.9.6794855.161129.1409 CHECK FOR UPDATE
	Status	UP TO DATE
	318103	
	CLOUD KEY CONTROLLER	
	Current Version	54.6-9114 CHECK FOR UPDATE
	Status	
	CLOUD KEY OPERATIONS	
	Actions	RESTART CLOUD KEY SHUTDOWN CLOUD KEY RESET CLOUD KEY

# **Server Information**

Current 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*.

Historical Data Retention Select the time duration of the historical data retention: 7 days, 30 days, 60 days, 90 days, 180 days, 365 days, or Disabled. The default is *Disabled*. Then click Apply.

• **Compact Database** Click to optimize disk usage by freeing up pre-allocated disk space. There may be service interruptions during the process. Click **Confirm** to continue.

J	ปก็โFi"		
	SETTINGS		
		SERVER INFORMATION	
			5.4.6 (Build: atag_5.4.6_9114)
		SERVICES	
qR			Device Normal V Mgmt Normal V System Normal V Cloud Access Normal V APPLY
		Historical Data Retention	30 days V APPLY
	Profiles	Device Firmware Update	CHECK FIRMWARE UPDATE
	Admins		
	User Groups	BACKUP	
			7 days V DOWNLOAD BACKUP
	Controller	RESTORE	
	Cloud Access Maintenance	Browse	CHOOSE FILE
	Auto Backup	SUPPORT INFO	
		Download	DOWNLOAD SUPPORT INFO
		System Config	SHOW SYSTEM CONFIG
		CLOUD KEY FIRMWARE	
		Current Version	UCK/m8/7623x0.5.9.6794855.161129.1409
		Status	
		CLOUD KEY CONTROLLER	
		Current Version	5.4.6-9114 CHECK FOR UPDATE
		CLOUD KEY OPERATIONS	
		Actions	RESTART CLOUD KEY SHUTDOWN CLOUD KEY RESET CLOUD KEY

### Backup

**Backup Data Retention** Select the time duration of the backup data retention: **7 days**, **30 days**, **60 days**, **90 days**, **180 days**, **365 days**, or **All time**. The default is *7 days*.

**Download Backup** Click this option to download a file that contains all of your settings and data retained for the duration you specify, 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.

**System Config** Click **Show System Config** to view configuration settings. The *System Config* screen appears.

### **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.

### System Config

	APs UAP-In Wal UAP-AC-M UAP-AC-Pr UAP-AC-Pr UAP-AC-M UAP-AC-M UAP-AC-ED UAP-Outdo	esh (1) o (2) D (1) esh-Pro (6) DU (1)			-	Version 5- DPI Er ann Mositar Er Courtent Site Dr Networks L7 ss Networks UI UI	ublec ublec ublec efault N	Feat		٩	Guest Porta Authenticatio Expiratio Landing Pag ertal Customizatio	a none a 8h e original		
AME/MAC ADDR.	MODEL	VERSION		NNEL SG	POWER 2G	sa		INTS SG	BAND STR. AT	L MIN. RSSI 2G SG	UPLINK STATE	IP ADDR.	UPTIME	UPLINK
JAP-IW-Lab	UAP-In Wall	3.7.29.5446	1		19 dBm (EIRP)		0	0	011		wire, 100 FDX	192.168.1.222	10d 15h 42m 45s	US8-60W #8
KC-Mesh	UAP-AC-Mesh	3.7.29.5446	6	153	23 dBm (E1RP)	26 dBm (EIRP)	0	0	0#		wire, 1,000 FDX	192.168.1.230	10d 15h 42m 32s	US08-150W #6
JAP-AC-Pro-Lab	UAP-AC-Pro	3.7.29.5446	6	157	22 dBm (EIRP)	22 dBm (EIRP)	1	0	01		wire, 1,000 FDX	192.168.1.226	10d 15h 42m 59s	US8-60W #7
JAP-AC-HD	UAP-AC-HD	feature- ipq806x.5938	1	36	25 dBm (EIRP)	17 dBm (DRP)	0	0	011		wire, 1,000 FDX	192.168.1.228	10d 15h 42m	US8-60W #5
Aesh Pro (Circle)	UAP-AC-Mesh- Pro	3.7.29.5446	1	157	22 dBm (E1RP)	22 dBm (EIRP)	0	0	Off		wire, 1,000 FDX	192.168.1.236	9d 5m 46s	U524-250W #13
IP AC EDU	UAP-AC-EDU	3.7.29.5446	6	157	22 dBm (EIRP)	22 dBm (EIRP)	0	1	01		wire, 1,000 FDX	192.168.1.229	8d 33m 27s	US16-150W #9
MP-Outdoor-Local	UAP-Outdoor+	3.7.29.5446	1		34 dBm (EIRP)		0	0	Off		wire, 100 FDX	192.168.1.220	9d 4h 9m 6s	US16-150W #15
JAP-AC-Pro-Lab	UAP-AC-Pro	3.7.29.5446	11	153	22 dBm (EIRP)	22 dBm (EIRP)	0	0	01		wine, 1,000 FDX	192.168.1.225	10d 15h 42m 40s	US8-60W #6
Aesh Pro (S. Glassell)	UAP-AC-Mesh- Pro	3.7.29.5446	6	48	22 dBm (EIRP)	22 dBm (EIRP)	0	0	011		wireless, HDX	192.168.1.239	8d 23h 45m 41s	Mesh Pro (Front Balco
Aesh Pro (Front Balcony)	UAP-AC-Mesh- Pro	3.7.29.5446	6	48	22 dBm (E1RP)	22 dBm (EIRP)	0	0	011		wire, 1,000 FDX	192.168.1.235	9d 59m 53s	U524-250W #2
desh Pro (N. Glassell)	UAP-AC-Mesh- Pro	3.7.29.5446	1	48	22 dBm (EIRP)	22 dBm (EIRP)	0	1	011		wireless, HDX	192.168.1.240	8d 22h 46m 34s	Mesh Pro (Front Balco
Aesh Pro (E. Chapman)	UAP-AC-Mesh- Pro	3.7.29.5446	1	48	22 dBm (E1RP)	22 dBm (EIRP)	0	2	011		wireless, HDX	192.168.1.237	8d 22h 22m 51s	Mesh Pro (Front Balco
Aesh Pro (W. Chapman)	UAP-AC-Mesh- Pro	3.7.29.5446	6	48	22 dBm (EIRP)	22 dBm (EIRP)	0	1	011		wireless, HDX	192.168.1.238	8d 23h 25m 56s	Mesh Pro (Front Balco

 Network Config Click Network Config to view the network configuration settings.

- Version Displays the software version.
- DPI Displays the status of the DPI (Deep Packet Inspection) feature, which is configured in <u>"Settings ></u> <u>Site" on page 20</u>.
- Conn Monitor Displays the status of the Uplink Connectivity Monitor feature, which is configured in <u>"Settings > Site" on page 20</u>.
- **Cloud Access** Displays the status of the *Cloud Access* feature.
- Current Site Displays the name of the current site.
- **Networks** Displays the name(s) of the current network(s).
- Wireless Networks Displays the name(s) of the current wireless networks.
- Guest Portal Displays the status of the Guest Portal feature, which configured in <u>"Settings > Guest Control"</u> on page 32.
- Authentication Displays the type of authentication required for guest access, which configured in <u>"Settings</u> > Guest Control" on page 32.
- Expiration Displays the period of time before a guest login expires, which configured in <u>"Settings > Guest</u> Control" on page 32.
- Landing Page Displays the type of landing page for guest access, which configured in <u>"Settings > Guest</u> Control" on page 32.
- Portal Customization Displays the status of the Portal Customization feature, which configured in <u>"Portal</u> <u>Customization" on page 34</u>.
- Close Click Close to exit this screen.
- **Download** Click **Download** to download a screenshot in .png format.

**Network Config** 

				SYSTEM CONFIC	NETWORK CONFIG			
NAME	PURPOSE	SUBNET	DHCP SERVER	DHCP RANGE	DHCP NAME SERVER	DHCP WINS SERVER	DHCP LEASE TIME	IGMP SNOOPING
LAN	Corporate	192.168.1.1/24	~	192.168.1.6 - 192.168.1.254				
								CLOSE DOWNLOAD

- Name Displays the name of the local wired network.
- Purpose Displays a description of this network.
- Subnet Displays the IP address and prefix size.
- **DHCP Server** Displays the status of the DHCP server feature.
- DHCP Range Displays the range of available IP addresses.
- DHCP Name Server Displays the IP address of the DNS server.
- DHCP WINS Server Displays the IP address of the WINS server.
- DHCP Lease Time Displays the lease time for any assigned IP address.

- **IGMP Snooping** Displays the status of the *IGMP Snooping* feature.
- Close Click Close to exit this screen.
- **Download** Click **Download** to download a screenshot in .png format.

**Cloud Key Firmware** 

The *Cloud Key Firmware* section is available if you are using a UniFi Cloud Key.

U	ปก็เFi		
0	SETTINGS		
J.,.		SERVER INFORMATION	
W			5.4.6 (Build: atag_5.4.6_9114)
0		SERVICES	
<sub>ρ</sub> ρ			Device Normal V Mgmt Normal V System Normal V Cloud Access Normal V APPLY
Q		Historical Data Retention	30 days V APPLY
			COMPACT DATABASE
	Profiles	Device Firmware Update	CHECK FIRMWARE UPDATE
	Admins		
	User Groups DPI	BACKUP	
	Controller	Backup Data Retention	7 dzys V DOWNLOAD BACKUP
	Cloud Access	RESTORE	
	Maintenance		CHOOSE FILE
	Auto Backup	SUPPORT INFO	
		Download	DOWNLOAD SUPPORT INFO
			SHOW SYSTEM CONFIG
		CLOUD KEY FIRMWARE	
		Current Version	UCK.mtk7623.v0.5.9.6794855.161129.1409 CHECK FOR UPDATE
			UP TO DATE
		CLOUD KEY CONTROLLER	546-9114 CHECK FOR UPDATE
		Status	
		ourus	(ar resource)
		CLOUD KEY OPERATIONS	
			RESTART CLOUD KEY SHUTDOWN CLOUD KEY RESET CLOUD KEY

**Current Version** Displays the version number of the UniFi Cloud Key firmware. Click **Check for Update** 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 <u>**"Backup" on page</u>** <u>43</u> for more information) before upgrading.</u>

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

**Status** Displays the current status, *Up to Date* or *Update Available*.

**Cloud Key Controller** 

The *Cloud Key Controller* section is available if you are using a UniFi Cloud Key.

**Current Version** Displays the version number of the UniFi Controller software. Click **Check for Update** 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 <u>"Backup" on page</u> <u>43</u> for more information) before upgrading.

**Available Update** If there is an available update, then the available software version number is displayed. Click **Apply Update** to upgrade the software. **Status** Displays the current status, *Up to Date* or *Update Available*.

**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.



Ē

Note: We recommend that you back up your UniFi Controller configuration (refer to <u>"Backup" on page</u> <u>43</u> for more information) before resetting the UniFi Cloud Key to its defaults.

### Settings > Auto Backup

Configure the automatic backup settings for the UniFi Controller.



Note: If you are using a UniFi Cloud Key, make sure to insert an SD memory card before enabling this feature.

**Enable Auto Backup** Enable this option to turn on the automatic backup feature. Then, configure the following options:

- Occurrence Select how often to perform auto backup: (every) *Hour, Day, Week, Month*, or *Year*.
- Occurrence Timezone Select your time zone from the drop-down list.
- Maximum Number of Files Specify the maximum number of backup files to save. The default is 7.
- Data Retention Days Specify the length of time in days that data will be retained: *Settings only*, 7 days, 30 days, 60 days, 90 days, 180 days, 365 days, or Disabled.

Apply Changes Click to save changes.

Reset Click to cancel changes.

### **Chat with Us**

Click  $\bigcirc$  to open a window for online chat suport.



# **Chapter 4: Dashboard**

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

- Latency
- Throughput
- <u>"WAN" on page 48</u>
- <u>"LAN" on page 48</u>
- <u>"WLAN" on page 49</u>

# Latency

The latency value from the latest Speed Test is displayed. The monitor is color-coded to indicate status:

**Black** A UniFi Security Gateway is active, and the Speed Test is available.

**Red** The Speed Test is not available because it requires an active UniFi Security Gateway.

# Throughput

The throughput value from the latest Speed Test is displayed. The monitor is color-coded to indicate status:

**Black** A UniFi Security Gateway is active, and the Speed Test is available.

**Red** The Speed Test is not available because it requires an active UniFi Security Gateway.

**Status information** Place your mouse over the *Latency* or *Throughput* monitor to display the following:

WWW

Current status information is displayed.

- **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.

### **Speed Test**

Results from the latest Speed Test are displayed.

- Last Run Displays the duration of time since the last Speed Test.
- 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 speed.
- Down Displays the download speed.

### Chapter 4: Dashboard



**Speed Test** Click the monitor to run the Speed Test.



After the Speed Test is complete, the following will be displayed:

- Latency, duration of the average Ping round-trip time
- Download speed
- Upload speed



- Run Speed Test Click to run the test again.
- Close Click to exit the Speed Test.

# WAN

The basic details of the UniFi Security Gateway are displayed.



The monitor is color-coded to indicate status:

Green The WAN connection is active.

**Red** The WAN connection is inactive.

Active Devices Displays the number of Gateway devices adopted and active.

**Inactive** Displays the number of Gateway devices adopted but not active.

**Pending** Displays the number of Gateway devices pending adoption.

**Status information** Place your mouse over the monitor to display the following:

- WAN IP Displays the IP address of the WAN interface.
- **Subnet Mask** Displays the subnet mask of the WAN interface.
- Gateway Displays the Internet IP address of the UniFi Security Gateway.
- **DNS** Displays the IP addresses of the Domain Name System (DNS) servers.
- Clients Displays the total number of local clients.
- Up Displays the upload rate of your Internet connection.
- **Down** Displays the download rate of your Internet connection.

🧭 WAN	
WAN IP	10.0.2.106
SUBNET MASK	255.255.255.0
GATEWAY	10.0.2.1
DNS	10.0.2.1, 8.8.8.8
CLIENTS	9
UP	1.73 KB/s
DOWN	1.26 KB/s

# LAN

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



The monitor is color-coded to indicate status:

Green The wired network is active.

**Red** The wired network is inactive.

**Active Devices** Displays the number of wired devices adopted and active.

**Inactive** Displays the number of wired devices adopted but not active.

**Pending** Displays the number of wired devices pending adoption.

**Status information** Place your mouse over the monitor to display the following:

- LAN IP Displays the local IP address of the UniFi Security Gateway.
- Users Displays the number of clients connected to the wired network.

UniFi Controller User Guide

- Guests Displays the number of clients connected to the guest wired network.
- Switches Displays the number of UniFi Switches managed on this site.
- **Down** Displays the download rate of the wired network(s).
- Up Displays the upload rate of the wired network(s).

HAN LAN	
LAN IP	192.168.1.1
JSERS	7
GUESTS	0
SWITCHES	4
DOWN	1.14 KB/s
JP	858 B/s

# WLAN

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



The monitor is color-coded to indicate status:

Green The wireless network is active.

**Red** The wireless network is inactive.

**Active Devices** Displays the number of APs adopted and active.

**Inactive** Displays the number of APs adopted but not active.

**Pending** Displays the number of APs pending adoption.

**Status information** Place your mouse over the monitor to display the following:

- 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 managed on this site.
- **Down** Displays the download rate of the wireless network(s).
- Up Displays the upload rate of the wireless network(s).

🔶 WLAN	
USERS	17
GUESTS	0
APS	18
DOWN	28.9 KB/s
UP	1.12 MB/s

# Download Throughput & Latency

The historical chart displays the download traffic in terms of throughput and latency over a 24-hour period.



Note: A UniFi Security Gateway must be active to enable this chart.

flops flops	April, 7	at 11:00am	60 ms 50 ms
Mopa Mopa Mopa Mopa		r Throughput ps / 8.19 Kbps ec	40 ms 30 ms 20 ma 10 ms
Mops 24 HRS	12 HRS		NOW 0 mse

**Avg/Max Throughput** Average throughput is displayed as a dark gray bar. Maximum throughput is displayed as a light gray bar.

Latency Latency is displayed as a blue line.

**Status information** Place your mouse over a specific point to display the following about a date and time:

- Avg/Max Throughput Displays the average and maximum throughput values.
- Latency Displays the latency value.

# **Upload Throughput & Latency**

The historical chart displays the upload traffic in terms of throughput and latency over a 24-hour period.



Note: A UniFi Security Gateway must be active to enable this chart.

PLOAD THROUGHPUT & LATENCY	ax Throughput	Latency	
20 Mops		April, 7 at 12:00pm	60 msec
10 Mope		Avg/Max Throughput 2.09 Kbps / 9.15 Kbps	40 msec 30 msec 20 mae
5 Mbps 0 Mbps		30.1 msec	20 msec 10 msec
U MODE 24 HRS	12 HBS		NOW

**Avg/Max Throughput** Average throughput is displayed as a dark gray bar. Maximum throughput is displayed as a light gray bar.

Latency Latency is displayed as a blue line.

**Status information** Place your mouse over a specific point to display the following about a date and time:

- Avg/Max Throughput Displays the average and maximum throughput values.
- Latency Displays the latency value.

# **Devices on 2.4 GHz Channel**

The 2.4 GHz Channel Occupancy Chart displays the channel use of the 2.4 GHz devices.



Note: At least one 2.4 GHz UniFi AP must be active to enable this chart.

DEVI	CES ON	2.4 GH2	CHAN	NEL						
					3					
					~					
1	2	3	4	5	6	7	8	9	10	11

**1-11** Each device is displayed as a blue square in its channel.

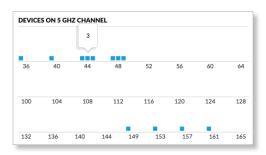
**Status information** Place your mouse over a specific channel to display the number of devices using that channel.

# **Devices on 5 GHz Channel**

The 5 GHz Channel Occupancy Chart displays the channel use of the 5 GHz devices.



Note: At least one 5 GHz UniFi AP must be active to enable this chart.

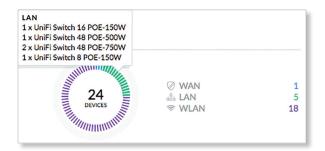


(Channels) Each device is displayed as a blue square in its channel.

**Status information** Place your mouse over a specific channel to display the number of devices using that channel.

# Devices

UniFi devices are displayed.



**Traffic** Displays the total number devices and a color-coded breakdown of the device types.

WLAN Displays the number of wireless devices.

LAN Displays the number of wired devices.

**WAN** Displays the number of gateway devices.

**Status information** Place your mouse over a specific device category to display the device models and their quantities.

# Clients

Network clients are displayed.



Note: The DPI feature must be enabled to display client information.

CLIENTS		
	<ul> <li>Ubiquiti</li> </ul>	23
A REAL PROPERTY OF THE REAL PR	NestLabs	4
38 🧯	Google	2
38 CLIENTS	Desktop/Laptop	2
	NAS	2
	Other	5

**Traffic** Displays the total number devices and a color-coded breakdown of the device types.

**Ubiquiti** Displays the number of Ubiquiti clients.

(Various) Displays the number of clients that belong in each of the remaining client categories.

**Other** Displays the number of clients that don't belong in the aforementioned categories.

**Status information** Place your mouse over a specific client category to display the client category name.

# **Deep Packet Inspection**

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.

The DPI feature requires the following:

- A UniFi Security Gateway must be active to enable this feature.
- DPI must enabled on the Settings > Site screen. See <u>"Settings > Site" on page 20</u> for more information.

EP PACKET INSPECTION		
STREAMING MEDIA	Streaming Media	6.49 GB
6.49 GB	Network Protocols	3.44 GB
13.2 GB	Web / Web 2.0	921 MB
	Security Update	813 MB
TRAFFIC	Unknown	1.25 GB
	Other	379 MB

**Traffic** Displays the total amount of traffic and a color-coded breakdown of the traffic types.

**Streaming Media** Displays the amount of data that is identified as streaming media.

**Network Protocols** Displays the amount of data that is identified as network protocol traffic.

**Web / Web 2.0** Displays the amount of data that is identified as web-related traffic.

**Security Update** Displays the amount of data that is identified as part of a security update.

**Unknown** Displays the amount of data that is unidentified.

**Other** Displays the amount of data that doesn't belong in the aforementioned categories.

**Status information** Place your mouse over a specific traffic category to display the traffic category name and amount of data.

Chapter 4: Dashboard



# Chapter 5: Map

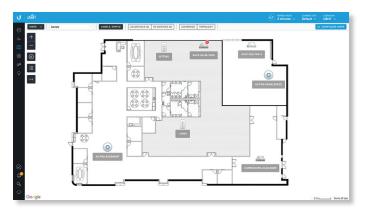
The *Map* screen allows you to upload custom map images of your location(s) or use Google Maps<sup>™</sup> for a visual representation of your UniFi network. You can also view the system topology. When you initially launch the UniFi Controller application, a default map is displayed. The map scale is shown in the legend at the bottom 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:

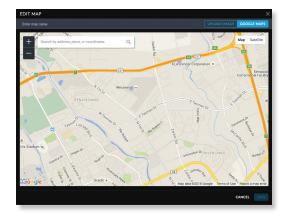
1. Click CONFIGURE MAPS.



### 2. Click Add a Map.



3. The default is Google Maps. Click Upload Image.



4. Click Choose map image.



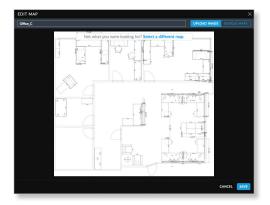
5. Locate the file to use as a map (valid file formats are .jpg, .gif, and .png) and then click **Open**. If you do not want to upload a file, click *Cancel*.

ORITES	Name	Date Modified	Size Kind	Date Added	
Ubiquiti Networks					
Final					
Resources					
Review					
Working					
Logos					
guides					
guides					
Desktop					
Applications					
Pictures					
Documents					
) Deseniende ] ee					

6. Enter a map name in the field provided and click **Save**.



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

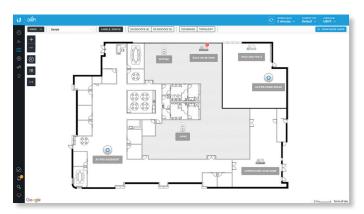


7. Click Done.

# Adding a Google Map

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

1. Click CONFIGURE MAPS



2. Click Add a Map.



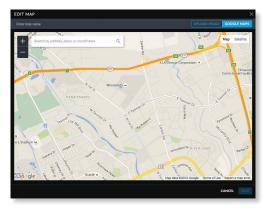
3. Enable this feature by following the provided guide on how to obtain a valid Google Maps API key.



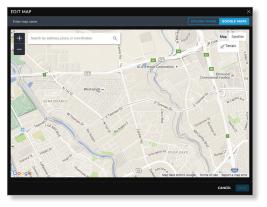
 Go to the Settings > Controller section and enter the API key. Check the box to enable Use Google Maps engine for Image maps. Click Apply Changes.



5. The default view is *Map* view, which looks like a street map. Click **Terrain** to display enhanced geographical details.



Map View

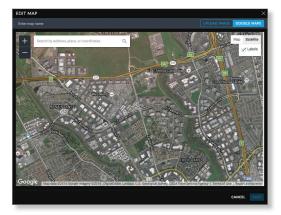


Terrain View

Use the tools to navigate the map or adjust the zoom using the *zoom*  $\stackrel{\text{\tiny{le}}}{=}$  control.

In the field provided, enter an address or the latitude and longitude of a specific location. Then press **Enter** or **Return**.

You can also click *Satellite* for a bird's-eye view. Click **Labels** to display street and location names.

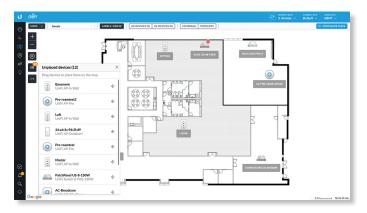


Enter a map name in the field provided and click Save.

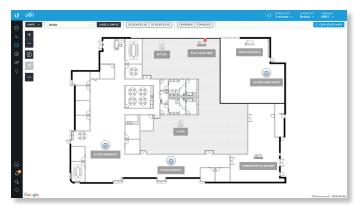
6. Click Done.

# **Placing Devices on the Map**

- 1. Click 🔳 at the lower left.
- 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.



Once all devices have been placed the 🔳 icon changes from black to gray.

### Status

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

- UniFi AP Pro, UniFi AP AC Lite/LR/Pro
- UniFi AP AC EDU
- UniFi AP In-Wall
- OuniFi AP/AP LR
- UniFi AP AC
- UniFi AP AC Outdoor
- UniFi AP Outdoor+
- UniFi AP Outdoor5
- 🚨 UniFi Security Gateway
- IniFi Security Gateway Pro
- UniFi 24-Port Switch
- UniFi 48-Port Switch
- L 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* <sup>(2)</sup> icon also marks the device icon.

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

- information, go to the appropriate chapter:
  - <u>"UniFi Security Gateway Details" on page 85</u>
  - "UniFi Switch Details" on page 93
  - <u>"UniFi Access Point Details" on page 103</u>
  - <u>"UniFi VoIP Phone Details" on page 115</u>
- 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 106.
- **Remove** Remove the device icon from its location.

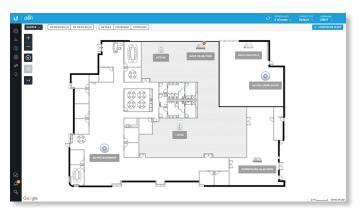
# **Map Display Options**

(Map) If multiple maps have been uploaded, you can select which map you want to by using the Search box. There is no need to press Enter, simply start typing.



You can apply one of the following filters:

- 2G Devices Displays the 2.4 GHz devices.
- 5G Devices Displays the 5 GHz devices.



Each device is displayed with its name. 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:

- <u>"UniFi Security Gateway Configuration" on page</u> 87
- <u>"UniFi Switch Configuration" on page 98</u>
- "UniFi Access Point Configuration" on page 108

You can apply one of the following display options:

- Labels (None/Simple/Detailed)
- Coverage
- Topology

Labels Click this button to cycle between the following options for label display:

- None Do not display device labels.
- Simple Display simple device labels containing the device name only.
- Detailed Display detailed device labels containing the following information: device name, MAC address, transmit/receive channel(s), number of users connected, and number of guests connected.



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

You can apply one of the following filters:

- 2G Coverage Displays the coverage by 2.4 GHz devices.
- 5G Coverage Displays the coverage by 5 GHz devices.
  - **dBm** You can change the receiver sensitivity value for more accurate coverage results. The default is -90 dBm.



**Topology** Displays a visual representation of the network configuration and connections between any APs. A dashed line will indicate the wirelessly connected AP and its uplink to a wired AP, even if the wirelessly connected AP is isolated.

UniFi Controller User Guide



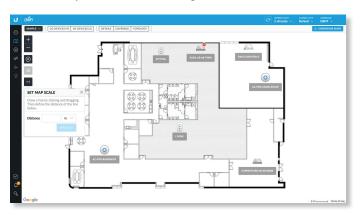
**Configure Maps** Click CONFIGURE MAPS to add maps or edit the current map(s).

The left side of the map offers the following options:

- **Zoom Slider** Use to zoom the map detail in and out.
- Devices Click to toggle the size of devices and their labels between normal (default) and large.
- **Unplaced Devices** Drag each device icon from the *Unplaced Devices* list to the appropriate location on the map.
- 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* <sup>□</sup> 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**.

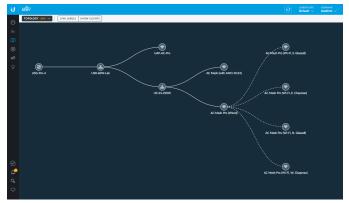


The legend at the bottom of the map shows the new scale of the map.

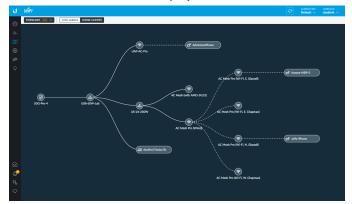
# System Topology

- 1. Click MAPS ✓, and then select **Topology** from the drop-down menu.
- 2. The UniFi Controller displays a topology diagram of your UniFi system.

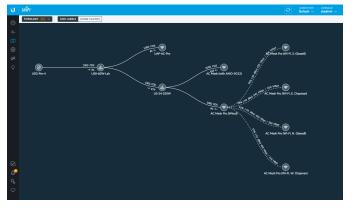
The default view shows the entire topology tree, except for client devices. Click any node to collapse the branches below (to the right of) that node. Clicking the root node collapses the entire tree.



3. Click Show Clients to display client devices.



### 4. Click Link Labels to display labels on each link:



The labels provide the following information: Wired links

- Data rate in Mbps
- Duplex type: FDX for full duplex, HDX for half duplex
- Port number to which the device is physically connected
- Wireless links
  - RSSI expressed as a percentage
  - RSSI displayed in dBm
  - Note: The displayed RSSI value is from the AP side of the link; i.e., it is how the AP hears the client.
  - Negotiation Rate (n Mbps / n Mbps)

U	UĥiFi						2 minutes V	CURRENT SITE	USERNAME UBNT V
<b>(</b> )	ALL (2	24) GATEWAY/SWITCHES (6) APS (18)	PHONES (0)					Search	٩
	Ť	DEVICE NAME	IP ADDRESS	STATUS	MODEL	VERSION	UPTIME	ACTIONS	0,
Ē		Rack USG-Pro-4	192.168.1.1	CONNECTED	UniFi Security Gateway 4P	4.3.11.4852827	3d 55m 45s	COCATE	
$\odot$		Attic- US-16-150W	192.168.1.233	CONNECTED	UniFi Switch 16 POE-150W	3.5.1.4088	10d 18h 45m 7s		
ЯA		DownStairs US-48-500W	192.168.1.191	CONNECTED	UniFi Switch 48 POE-500W	3.5.1.4088	4d 21h 55m 15s		
		Workshop US-48-750W	192.168.1.246	CONNECTED	UniFi Switch 48 POE-750W	3.5.1.4088	3d 21h 12m 13s		
Q		Rack US-48-750W	192.168.1.6	CONNECTED	UniFi Switch 48 POE-750W	3.5.1.4088	4d 21h 55m 29s		
		PatchPanel US-8-150W	192.168.1.204	CONNECTED	UniFi Switch 8 POE-150W	3.5.1.4088	1d 8h 10m 17s		C RESTART
		AC	192.168.1.231	CONNECTED	UniFi AP-AC v2	3.5.1.4088	4d 21h 53m 4s		C RESTART
	0	AC-LITE	192.168.1.162	CONNECTED	UniFi AP-AC-Lite	3.6.1.3553	3d 21h 17m 32s	COCATE	
	0	AC-LR-Basement	192.168.1.137	CONNECTED	UniFi AP-AC-LR	3.6.1.3553	4d 21h 54m 6s		
	0	44:d9:e7:02:04:33	192.168.1.197	CONNECTED	UniFi AP-AC-Lite	3.6.1.3553	3d 21h 1m 32s		
	0	44:d9:e7:02:04:44	192.168.1.198	CONNECTED	UniFi AP-AC-LR	3.6.1.3553	3d 19h 26m 8s		
	0	AC-Pro-Basement	192.168.1.7	CONNECTED	UniFi AP-AC-Pro Gen2	3.6.1.3553	4d 21h 53m 31s		
	0	44:d9:e7:f9:d2:89	192.168.1.200	CONNECTED	UniFi AP-AC-Pro Gen2	3.6.1.3553	9d 17h 59m 46s	COCATE	
	0	Prototype1 UAP-AC-Pro	192.168.1.182	CONNECTED (100 FDX)	UniFi AP-AC-Pro Gen2	3.6.1.3553	1d 8h 9m 12s	COCATE	
	0	AC-Pro-Crawlspace	192.168.1.134	CONNECTED	UniFi AP-AC-Pro Gen2	3.6.1.3553	3d 21h 19m 14s		
	:	Timeout	192.168.1.235	CONNECTED	UniFi AP-In Wall	3.5.1.4088	1d 8h 9m 14s		
	:	Living	192.168.1.136	CONNECTED	UniFi AP-In Wall	3.5.1.4088	1d 8h 8m 36s		
	:	Sitting	192.168.1.124	CONNECTED	UniFi AP-In Wall	3.5.1.4088	1d 8h 8m 16s		
	:	Master	192.168.1.158	CONNECTED	UniFi AP-In Wall	3.5.1.4088	1d 8h 8m 18s		
	:	Loft	192.168.1.139	CONNECTED	UniFi AP-In Wall	3.5.1.4088	1d 8h 8m 32s		
$\bigtriangledown$		Basement	192.168.1.140	CONNECTED	UniFi AP-In Wall	3.5.1.4088	1d 8h 8m 25s		
		24:a4:3c:94:2f:d9	192.168.1.122	CONNECTED	UniFi AP-Outdoor+	3.5.1.4088	3d 17h 22m 54s		
Q,	0	Pro-roamtest2	192.168.1.164	CONNECTED	UniFi AP-Pro	3.5.1.4088	1d 8h 20m 25s		C RESTART
- <del>1</del>	0	Pro-roamtest	192.168.1.141	CONNECTED	UniFi AP-Pro	3.5.1.4088	3d 21h 16m 49s		C RESTART

# **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.

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.

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

**Items per page** Select how many results are displayed per page: **10**, **25**, **50**, or **100**.

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.

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

(sort) You can click any column to sort the displayed list. The selected column displays  $\uparrow$  or  $\downarrow$  to indicate ascending or descending order.

The icon column sorts by state, and for connected devices it also sorts by device type. This is the order:

- Connected Gateway
- Connected Switch
- Connected AP
- Connected Phone
- Any device that is being upgraded or provisioned
- Any device that is being adopted or is restarting
- · Any device that is pending
- Any device that is disconnected or in an error state

After this sorting is applied, the sort order uses alphabetical order according to the device name.

**Customize Columns** Each primary filter: *All*, *Gateway/Switches*, *APs*, or *Phones* applies a default set of columns to display. If you enable the *Customize Columns* <sup>(3)</sup> option, then the primary filter no longer changes the columns. The very first time you enable the *Customize Columns* option, the UniFi Controller software will detect which columns are currently visible and remember your selection. For example:

- 1. Enable the *Customize Columns* option on the *APs* > *Performance* screen.
- 2. Disable customization.
- 3. Apply the *Gateway/Switches* filter.
- 4. Enable the Customize Columns option again.
- 5. The columns of the *APs* > *Performance* screen will be displayed.



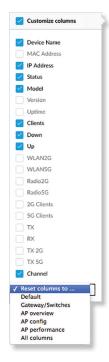
### Select Customize columns.

~	Customize columns
~	Device Name
	MAC Address
$\leq$	IP Address
_	Status
_	Model
$\sim$	Version
$\leq$	Uptime
	Clients
	Down
	Up
	WLAN2G
	WLAN5G
	Radio2G
	Radio5G
	2G Clients
	5G Clients
	TX
	RX
	TX 2G
	TX 5G
	Channel
De	efault $ imes$
_	

You can select additional columns for display.

- Reset columns to Click the drop-down at the bottom of the *Customize columns* screen to display the *Reset columns to* ... options. The option you select will apply no matter which primary filter: *All, Gateway/Switches, APs,* or *Phones* you select. This resets the columns but the UniFi Controller software will not remember your selection.
  - **Default** The Device Name, IP Address, Status, Model, Version, Uptime, and Actions columns are displayed.
  - Gateway/Switches The Device Name, IP Address, Status, Model, Down, Up, and Actions columns are displayed.
  - **AP Overview** The Device Name, IP Address, Status, Model, Clients, Down, Up, Channel and Actions columns are displayed.

- **AP Performance** The Device Name, IP Address, Status, 2G Clients, 5G Clients, TX, RX, TX 2G, TX 5G, Channel, and Actions columns are displayed.
- **AP Config** The Device Name, Status, Version, WLAN2G, WLAN5G, Radio2G, Radio5G and Actions columns are displayed.
- All columns The Device Name, MAC Address, IP Address, Status, Model, Version, Uptime, Clients, Down, Up, WLAN2G, WLAN5G, Radio2G, Radio5G, 2G Clients, 5G Clients, TX, RX, TX 2G, TX 5G, Channel, Ch. Util. 2G, Ch. Util. 5G, and Actions columns are displayed.



### **Enable Group Config**

# All

All UniFi device types are displayed.

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

- UniFi AP Pro, UniFi AP AC Lite/LR/Pro
- OniFi AP AC EDU
- UniFi AP In-Wall
- OuniFi AP/AP LR
- UniFi AP AC
- UniFi AP AC Outdoor
- UniFi AP Outdoor+
- UniFi AP Outdoor5
- UniFi Security Gateway
- IniFi Security Gateway Pro

- LniFi 24-Port Switch
- UniFi 48-Port Switch
- L UniFi VoIP Phone/Pro
- LoiFi VolP Phone Executive

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

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

**Device Name** 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:

- <u>"UniFi Security Gateway Details" on page 85</u>
- <u>"UniFi Switch Details" on page 93</u>
- <u>"UniFi Access Point Details" on page 103</u>
- <u>"UniFi VoIP Phone Details" on page 115</u>

**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  $\bigcirc$  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  $\bigcirc$  RESTART to restart the selected device.
- Upgrade If a software upgrade is available for the device, click durgerade 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.

ALL	IN GATEWAY/SWITCHES	41 APS (12) PHONES (0)					Search	9
	DEVICE NAME 1	IP ADDRESS	STATUS	MODEL	VERSION	UPTINE	ACTIONS	
444	0418x6u01630	192.168.1.11	CONNECTED	UniFi Switch 8 POE-150W	37.29.5446	5d 15h 53m 26s	0 LOCATE	Q HED
455	0418x8x04c86	192.168.1.8	CONNECTED	UniFi Switch 8 POE-60W	feature-brom53342.5195	1d 15h 53m 25s	0 LOCATE	O nero
45	04:18:x6:x0:53:3e	192.168.1.9	CONNECTED	UniFi Switch 8	feature-brom53342.5195	1d 15h 52m 38s	() LOCATE	() 1850
-	44:09:x7:41:97:4c	192.168.1.1	CONNECTED	UniFI Security Gateway 4P	4.3.33.4936086	23h 53m 20s	0 LOCATE	Q and
65	44.d9x7.ftcf.8e	192.168.1.6	CONNECTED	UniFI Switch 16 POE-150W	3.7.29.5446	5d 15h 53m 13s	() LOCATE	O and
65	80:2xx8:1e:94:5b	192.168.1.23	CONNECTED	UniFI Switch 24 POE-250W	3.7.29.5446	5h 30m 5s	0 LOCATE	() H31

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

UniFi Security Gateway

IniFi Security Gateway Pro

- UniFi 24-Port Switch
- UniFi 48-Port Switch

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

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

**Device Name** 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:

- <u>"UniFi Security Gateway Details" on page 85</u>
- <u>"UniFi Switch Details" on page 93</u>

**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 <u>"Configuring the UniFi Controller Software" on</u> 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  $\bigcirc$  RESTART to restart the selected device.
- **Upgrade** If a software upgrade is available for the device, click durate 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.
- **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.
- **Config** Displays the WLAN and radio settings for the 2.4 GHz and 5 GHz radio bands.

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

**Start Rolling Upgrade** (Available if any AP has an upgrade available.) Click <u>d. START ROLLING UPGRADE</u> to begin automatically upgrading APs, one by one, except for wirelessly uplinked APs, which are intentionally excluded from upgrading.

### **Overview**

(a) 44.89%219921362. 19221368.112 (assessme) Ux887.40-40-9to 0 7.26.948 24.8.948 6/mgl, 48/μc) ♥ (construction)	
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● 4467/02734 119(14)227 (1980) (1474/4C(D) 2 156/03 114/02 119(1574) 0 000 ■ 4467/02754 (1991/14) (1991/14) (1991/14) 0 000 ■ 4467/02/14) (1991/14) (1991/14) (1991/14) 0 000 ● 4467/02/14) (1991/14) (1991/14) (1991/14) 0 000	O RESTA
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📙 Mesh Pho (E. Chapmar) 192168.1227 (@@@@@) Unit AP-AC-Mesh Pho 0 08 08 11 (ng) 157 (nc) 💎 (0.04)	O RESTA
📙 Meeh Pro (Front Balcony) 292.164.1225 (@@@000) Unitf AP-AC-Meeh-Pro 1 60.5 MB 79.1 MB 6 (rgt, 117 (ad) 💎 (0.04)	O RESTA
📙 Meeh Pro (5. Gaussil) 192.164.1.229 ((1999) Unit AP-AC-Meah-Pro 0 2.237 MB 198 KB 6 (rgt, 133 (ad) 💎 (1024)	O RESTA
📓 Maih Pro (M. Chapmar) 192.168.1.238 (anaccon) Unill AP-AC-Maih Pro 0 3.44 MB 2.96 MB 1 (ngl, 157 (nc) 💎 10541	O RESTA
(a) UAPAC-RD 192368.1214 (00000) UNIT APAC-HD 0 6.57 MB 2.86 MB 1 (ng).26 (µc) ♀ (0000)	O RESTA

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

- UniFi AP Pro, UniFi AP AC Lite/LR/Pro
- UniFi AP AC EDU
- UniFi AP In-Wall
- OuniFi AP/AP LR
- UniFi AP AC
- 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.
- Gray Indicates the device is pending approval.
- **Red/Orange** Indicates the device is disconnected or not managed by this site (*Pending Approval* or *Managed by Other*).

**Device Name** Displays the hostname, alias, or MAC address of the AP. You can click the name to get additional details; see <u>"UniFi Access Point Details" on page 103</u> 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 <u>"Configuring the UniFi</u> <u>Controller Software" on page 2</u>.

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 O 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  $\bigcirc$  restart to restart the selected device.
- **Upgrade** If a software upgrade is available for the device, click device, click device, click device, 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

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AC-Mesh 192.168.1.320 (member) 0 0 08 08 6/m/, 553.00 🖓 L	OCATE ()	) RESTART

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

- OniFi AP Pro, UniFi AP AC Lite/LR/Pro
- OniFi AP AC EDU
- UniFi AP In-Wall
- OniFi 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.
- Gray Indicates the device is pending approval.
- **Red/Orange** Indicates the device is disconnected or not managed by this site (*Pending Approval* or *Managed by Other*).

**Device Name** Displays the hostname, alias, or MAC address of the AP. You can click the name to get additional details; see <u>"UniFi Access Point Details" on page 103</u> 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.

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

**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 O 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 *C* RESTART to restart the selected device.
- **Upgrade** If a software upgrade is available for the device, click device, click device, click device, 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

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C AC-Nesh (1997) 37.29.5446 Default Default Auto 18/ Auto 123 (Bin) Auto 133.11 (Auto (26 dBm) 6 LOC	t Ó RESAR

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

- UniFi AP Pro, UniFi AP AC Lite/LR/Pro
- OniFi AP AC EDU
- UniFi AP In-Wall
- OniFi AP/AP LR
- UniFi AP AC
- 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.
- Gray Indicates the device is pending approval.
- **Red/Orange** Indicates the device is disconnected or not managed by this site (*Pending Approval* or *Managed by Other*).

**Device Name** Displays the hostname, alias, or MAC address of the AP. You can click the name to get additional details; see <u>"UniFi Access Point Details" on page 103</u> 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 <u>"Configuring the UniFi</u> <u>Controller Software" on page 2</u>.

**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 O 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 *C* RESTART to restart the selected device.
- **Upgrade** If a software upgrade is available for the device, click durate 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

Important: For management of the UniFi VolP Phones, please download the UniFi VolP Controller here: downloads.ubnt.com/unifi

Intermediation         Arise         Month	UhiF								
International status         Internati	ALL	(19) GATEWAY/SWITCHES (5) APS	(S) PHONES (P)					Search	٩
u Verber, 1000         1000000         1000000         1000000         1000000         1000000         1000000         1000000         1000000         1000000         1000000         1000000         1000000         1000000         10000000         10000000         10000000         100000000         100000000         1000000000         1000000000         1000000000000000000000000000         1000000000000000000000000000000000000	+	DEVICE NAME	IP ADDRESS	starus	MODEL	VERSION	UPTIME	ACTIONS	9
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0075xx43000         1001132         (minima)         0x111xxx5xxx1xx         313         13115x3x         0         0x10xx1x           0075xx43000         3000120         (minima)         0x111xxx5xx1xx         323         12513x3x         0         0x10x1x         0           0075xx1xx1xx1xx1xx1xx1x1x1x1x1x1x1x1x1x1x1	186	UVP Exec A (101)	10.0.0.122	(CONNECTOR)	UniFI Phone-Executive	3.0.5	1d 1h 27m 17s	0 LOCATE	O RESTART
W7-0xx-C025         32.63.23         (immedia)         W7 Mare Security         33.5         22x3.5x3/b         % Monto         %           W V7-0xx-C025         33.0117         (immedia)         W7 Mare Security         33.5         Life 56         % sociol           W V7-0xx-1026         33.0117         (immedia)         W7 Mare Security         33.5         Life 56         % sociol           W V7-0xx100         33.0117         (immedia)         W7 Mare Security         33.5         Life 56-0xh         © sociol         %           M V3-0xx1013         33.2220         (immediane)         W7 Mare Security         4.53.00         33.5.254-05         ∰ soci	18	UVP Exec C (103)	10.0.0.116	(CONNECTOR)	UniFI Phone-Executive	3.0.5	18h 27m	0 LOCATE	O RESTART
B         Def Dec/Told         SISSIT         General         SIS         Life Monitor         O         Direction         O         Direction         O         Direction         O         Direction         O         Direction         O         Direction         Dire	186	UVP Exec 8 (102)	10.0.0.123	(CONNECTOD)	UniFI Phone-Executive	3.0.5	13h 17m 34s	0 LOCATE	O RESTART
Unification         1000111         Immedia         Unification         35.5         32.94 dire         Ill unification           Immediated Statut         500.020         Team remain         Unification         45.550         363 (3:55 etc.)         36.6         It unification	186	UVP Exec G (107)	10.0.0.120	C04482700	Unif'l Phone-Executive	3.0.5	21h 13m 58s	0 LOCATE	O RESTART
La 0412866426043 1002.189 (more service). Unif Prove Decutive 465.560 366 17 26# 456 ⊕ 46001		UVP Exec F (204)	10.0.0.119	(004040700)	Unifi Phone Executive	3.0.5	1d 9m 58s	0 LOCATE	O RESTART
		UVP Exec H (108)	10.0.0.121	(00408C700)	Unifi Phone Executive	3.0.5	1d 5h 43m 6s	0 LOCATE	O RESTART
Bowing 19 of Prozents. Intern pare page: 10	186	0418x6x303x5	10.0.2.183	PERCENT APPROVAL	Unif'l Phone Executive	4.6.5.360	36d th 26m 45s	ADOPT	

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

- LoiFi VolP Phone/Pro
- UniFi VoIP Phone Executive

**Device Name** Displays the hostname, alias, or MAC address of the Phone. You can click the name to get additional details; see <u>"UniFi VolP Phone Details" on</u> **page 115** 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 <u>"Configuring the UniFi Controller Software" on</u> page 2.

**Model** Displays the model name of the Phone.

**Version** Displays the version number of the Phone's firmware.

**Uptime** Displays the duration of time the Phone has been running.

Actions Click a button to perform the desired action:

- Locate Click I 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 *C* RESTART to restart the selected device.

- **Upgrade** If a software upgrade is available for the device, click duperate 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.

UniFi Controller User Guide

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U	UĥiFi								2 minutes V	CURRENT SITE Default ~	USERNAME UBNT-June V
( <sup>1</sup> )	ALL (	36) WIRELESS (17) WIRED (19)	ALL (36) USERS (3	6) GUESTS (0)						Searc	h Q
	î	NAME	IP ADDRESS	CONNECTION	AP/PORT	ΑCTIVITY	DOWN	UP	UPTIME	ACTIONS	0 <sub>0</sub>
₩ ©	8	Amazon Echo	192.168.1.177	z	44:d9:e7:02:04:44		6.4 MB	98.7 MB	5d 10h 29m 16s		
@ &8	8°	ChromecastAudioBasement	192.168.1.195	z	AC-LITE		74.8 MB	406 MB	4d 10h 33m 1s		
×~	8, B	ChromecastAudioGarage	192.168.1.128	Z	44:d9:e7:02:04:33		22.2 MB	391 MB	4d 9h 29m 23s		
-%- Q	8, B	MyQ-C21	192.168.1.34	Z	44:d9:e7:02:04:33		488 KB	1.78 MB	5d 10h 41m 17s		
	8, Ø	G3	192.168.1.192	test	44:d9:e7:f9:d2:89		4.05 MB	14.7 MB	5d 10h 35m 35s		
	8°	MasterBedroom	192.168.1.13	test	44:d9:e7:02:04:44		1.53 MB	8.05 MB	5d 10h 35m 59s		
	8°	Office	192.168.1.15	test	44:d9:e7:f9:d2:89		1.54 MB	7.98 MB	5d 10h 37m 39s		
	8°	Upstairs	192.168.1.193	test	Prototype1 UAP-AC-Pro		1.53 MB	7.96 MB	5d 10h 35m 29s		
	8°	UVCGarageEast	192.168.1.208	z	AC-Pro-Crawlspace		745 MB	24 GB	5d 10h 30m 38s		
	8°	UVCu1	192.168.1.41	test	44:d9:e7:02:04:33		880 MB	33.3 GB	5d 10h 38m 28s		
	8°	UVCu2	192.168.1.149	test	44:d9:e7:f9:d2:89		889 MB	33.4 GB	5d 10h 30m 33s		
	8°	UVCu3	192.168.1.147	test	44:d9:e7:f9:d2:89		871 MB	51.7 GB	5d 10h 30m 33s		
	8°	UVCu4	192.168.1.125	test	AC-Pro-Crawlspace		900 MB	29.4 GB	5d 10h 30m 38s		
	8, B	UVCu5	192.168.1.199	test	44:d9:e7:f9:d2:89		783 MB	23.6 GB	5d 10h 30m 33s		
	8°	UVCu6	192.168.1.250	test	44:d9:e7:f9:d2:89		948 MB	34.2 GB	5d 10h 30m 33s		
$\bigtriangledown$	8, B	UVCu7	192.168.1.244	test	44:d9:e7:f9:d2:89		971 MB	34.4 GB	5d 10h 30m 33s		
$\Diamond$	8, B	UVCu8	192.168.1.253	test	AC-Pro-Crawlspace		912 MB	34.4 GB	5d 10h 30m 38s		
୍ଚ	æ	04:18:d6:a0:17:71	192.168.1.241	LAN	DownStairs US-48-500W #49		222 KB	2.1 MB	17d 1h 13m 3s		
	0									-	

# **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.

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**, **25**, **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.

**Search** Search Content Search Conte

(sort) You can click any column to sort the displayed list. The selected column displays  $\uparrow$  or  $\downarrow$  to indicate ascending or descending order.

The icon column sorts by state, and for connected devices it also sorts by device type. This is the order:

- Connected wireless user
- Connected wireless guest
- Connected wired user
- Connected wired guest

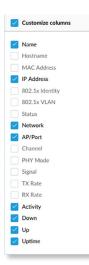
After this sorting is applied, the sort order uses alphabetical order according to the client name.

**Customize Columns** Each primary filter: *All, Wireless*, or *Wired* applies a default set of columns to display. If you enable the *Customize Columns* option, then the primary filter no longer changes the columns.

Click  $^{\bigcirc}$  to customize the columns used for display.

Customize columns

Select Customize columns.



You can select additional columns for display. Options include the following:

- Name Displays the hostname, alias, or MAC address of the connected client. You can click the name to get additional details; refer to <u>"Chapter 7: Clients" on page</u> <u>67</u> for more information.
- Hostname Displays the hostname of the connected client.
- MAC Address Displays the MAC address of the connected client.
- IP Address Displays the IP address used by the client.
- **802.1x Identity** Displays the identity used for 802.1x authentication.
- **802.1x VLAN** Displays the VLAN (Virtual Local Area Network) used for 802.1x authentication.
- **Status** Displays *Authorized* for all authorized guests or *Pending* for guests pending authorization.
- Network Indicates which local network is used.
- AP/Port For wireless clients, displays the name of the connected AP or port. You can click the name to get additional details; refer to <u>"UniFi Access Point Details"</u> on page 103 for more information.

For wired clients, 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 <u>"UniFi</u><u>Switch Details" on page 93</u> for more information.

- Channel Displays the channel used.
- **PHY Mode** Displays the wireless standard and frequency band used by the signal. Displays a leaf *(b)* icon if the device uses power save mode.
  - 11na (5 GHz)
  - 11ac (5 GHz)
  - 11ng (2.4 GHz)
  - 11b (2.4 GHz)

- **Signal** Displays the signal strength level and signal type.
- **TX Rate** Displays the overall TX (transmit) rate.
- RX Rate Displays the overall RX (receive) rate.
- Activity Displays the relative level of activity for each client.
- **Down** Displays the total amount of data downloaded by the client.
- **Up** Displays the total amount of data uploaded by the client.
- **Uptime** Displays the amount of time the client has been connected for this session.

## All

(icon) Displays the icon corresponding to a wireless or wired client:

- A wireless user
- 실 wired user
- ivired guest

**Name** Displays the hostname, alias, or MAC address of the connected client. You can click the name to get additional details; refer to <u>"Client Details" on page 117</u> 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.

**Activity** Displays the relative level of activity for each client.

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

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

**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. Click ⊙ UNBLOCK to unblock this client.
- **Reconnect** Click C RECONNECT to reconnect a wireless client. You can click P 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 O UNAUTHORIZE to remove authorization of guest access and disconnect the guest, or click O AUTHORIZE for guests pending authorization.

# Wireless

Unif	r.										ð	CURRENT STE Default ~	ustrawit ckadmin ~
ALL	(V) WIRELESS (4)	WIRED (S) ALL	(4) 2G(0)	SG (4) ALL (4) USERS	(4) GUESTS (0)	$\rm AP(A) = -$						Search	9
+	NAME	IP ADDRESS	WLAN	AP/PORT	CHANNEL	PHY MODE	SIGNAL	ACTIVITY	DOWN	up.	UPTIME	ACTIONS	0
g,	maj13-MBP	192.168.1.13	UBNT_Test	44d9x70273xa	157	11ac (5 GHz)	74% (+60 dBm)	_	2.8 68	1.13 68	2h 2m 53s		O RECONNECT
g,	OCI-Mac	192.168.1.17	UBNT_Test	44xd9xe7:02:73xea	157	11ac (5 GHz)	99% (-49 dBm)		1.54 GB	432 MB	1h 4m 28s	Ø ROCK	C RECONSECT
g,	pr1x10dsPhone	192.168.1.24	UBNT_Test	Mash Pro (Front Balcony)	48	11ac (5 GHz) 🦪	72% (-61 dBm)		1.39 MB	1.84 MB	50m 34s		C RECONVECT
g,	UBNT-MBP	192.168.1.212	UBNT_Test	44xd9xe7/02/73xea	157	11ac (5 GHz)	77% (-59 dBm)	-	6.38 MB	35.3 MB	1h 4m 13s	Ø ROCK	C RECONSECT

**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.

(icon) Displays the icon corresponding to a wireless client:

- A wireless user
- i wireless guest

**Name** Displays the hostname, alias, or MAC address of the connected client. You can click the name to get additional details; refer to <u>"Client Details" on page 117</u> for more information.

**IP Address** Displays the IP address used by the client.

**WLAN** Displays the name of the wireless network.

**AP/Port** Displays the name of the connected AP. You can click the name to get additional details; refer to <u>"UniFi Access Point Details" on page 103</u> for more information.

**Activity** Displays the relative level of activity for each client.

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

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

**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. Click ⊘ UNBLOCK to unblock this client.
- **Reconnect** Click C 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 ③ AUTHORIZE for guests pending authorization.

### Wired

Unif										
ALL	(9) WIRELESS (4) WIRED (5)	ALL (S) USERS (S)	GUESTS (0) NETWO	RCAI V					Search	
+	NAME	IP ADDRESS	NETWORK	APIPORT	ACTIVITY	DOWN	UP	UPTIME		ACTIONS
ß	0418:66:00:56:66	192.168.1.211	LAN	80/2418/16/94/56 #13		39.1 KB	26.3 KB	1h 26m	466	
<u>8</u> 1	04:18:45:00:bd:89	192.168.1.230	LAN	802x383x945b#13		84.9 KB	64.2 KB	1h 26m	495	Ø 8.00X
<u>8</u> 1	04:18:d5:01.bd:89		LAN	802x383x945b#13				1h 26m	235	Ø 8.00X
<u>8</u> 1	80.2aa8.04.05.c9		LAN	80.2xx8.5x94.5b #2		08	160 8	19m 36	is.	Ø 8.00X
21	UnFI-GoudKey	192.568.1.10	LAN	44x89x87#x18x #7		5.96 MB	7.77 MB	Sh-41m	50s	Ø 8.00X

**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.
- (icon) Displays the icon corresponding to a wired client:
- *∆*! wired user
- i wired guest

**Name** Displays the hostname, alias, or MAC address of the connected client. You can click the name to get additional details; refer to <u>"Client Details" on page 117</u> for more information.

**IP Address** Displays the IP address used by the client.

Network Indicates which local network is used.

**AP/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 <u>"UniFi Switch Details" on</u> **page 93** for more information.

**Activity** Displays the relative level of activity for each client.

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

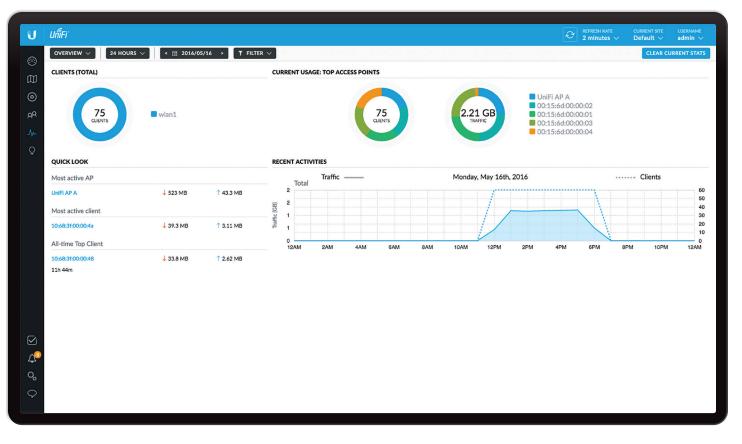
**Up** Displays the total amount of data uploaded by the client.

**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. Click ⊘ UNBLOCK to unblock this client.
- Unauthorize/Authorize (Available for *Guests* only.) Click ○ UNAUTHORIZE to remove authorization of guest access and disconnect the guest, or click ③ AUTHORIZE for guests pending authorization.

Chapter 7: Clients



# **Chapter 8: Statistics**

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

There are two views available:

- **Overview** The default view describes the wireless clients and network traffic. Please refer to the next column for more information.
- **Traffic Stats** (Available if you have a UniFi Security Gateway with the *DPI* feature enabled.) The *Traffic Stats* screen describes the network traffic by application usage. Go to <u>"**Traffic Stats**</u>" on page 73</u> for more information.
- Switch Stats

# **Overview**

The *Overview* screen describes the usage by wireless clients and UniFi Access Points.



**24 Hours** The default view. Select **Week** or **Month** to change the duration interval.

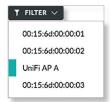
**Date** Click either arrow to change the date in one-day increments.

< https://doi.org/11 >

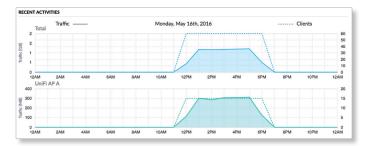
• **Calendar** Click a specific date to display its statistics. Click either arrow to change the calendar in one-month increments.

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

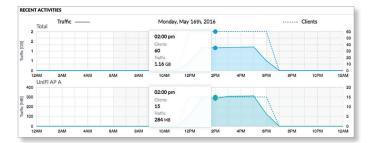
Click  $\intercal$  FILTER  $\checkmark$  to view the drop-down list. Then click the appropriate AP.



A second graph that is color-coded to the selected AP appears.

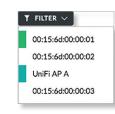


You can place your mouse over an hour or day to display the number of clients and amount of data.

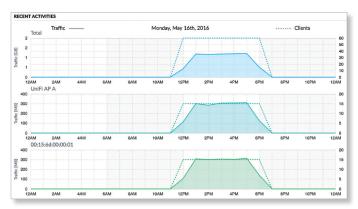


UniFi Controller User Guide

You can select multiple APs for filtering. For example, if you select a second AP:



# A third graph that is color-coded to the additional AP appears.



# **Clear Current Stats** Reset the current statistics to start over.

# **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**

QUICK LOOK		
Most active AP		
00:15:6d:00:00:03	↓ 255 MB	1 21.3 ME
Most active client		
10:68:3f:00:00:4a	↓ 19.7 MB	1.46 ME
All-time Top Client		
10:68:3f:00:00:48	↓ 17.9 MB	1.28 ME
10h 46m		

#### **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 <u>"UniFi Access Point Details" on</u> page 103 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 <u>"Client Details" on page 117</u> 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 <u>"Client Details" on page 117</u> 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** In the graph, a dashed line 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** In the graph, a solid line 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.

# **Traffic Stats**

(Available if you have a UniFi Security Gateway with the *DPI* feature enabled. Go to <u>"Settings > Site" on page</u> <u>20</u> for more information.) The *Traffic Stats* screen describes the network traffic by application usage.

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.



# **Overall Traffic**

Applications are organized by category, such as Streaming Media, Web / Web 2.0, and Network Protocols. The total amount of traffic is broken down by category.

Amount of Traffic A pie chart represents the traffic distribution by the most popular categories. Place the mouse cursor over the chart for the amount of traffic per category.

#### **Chapter 8: Statistics**

A list displays a comprehensive breakdown of the traffic by category. You can click any category to have it displayed with a detailed breakdown of the application usage within that category.



# (Category)

The most popular categories are displayed with the amount of traffic broken down further by application.

Amount of Traffic A pie chart represents the traffic distribution by the most popular applications. Place the mouse cursor over the chart for the amount of traffic per application.

A list displays a comprehensive breakdown of the traffic by application.

You can click imes to remove a category from display.



## **Add Category**

To add a new category for display, follow these steps:

1. Click **Add Category** or the + sign.



2. Select a category. You can also enter a keyword in the *Filter* field; simply begin typing; there is no need to press *Enter*.

Filter	
Select category(les)	
Business	
Bypass Proxies and Tunnels	
Database	
Games	
Instant messaging	
Mail and Collaboration	
Mobile	
Network Management	
P2P	
Private Protocol	

3. Click Save.



UĥiFi					REFRESH RATE         CURRENT SITE         USERNAL           2 minutes         Default         admin
KNOWN CLIENTS $\vee$	SHOW: LAST 24 HOURS $ \smallsetminus $	ALL (30) WIRELESS (30) WIRED (0)	ALL (30) USERS (30) GUESTS (0)	BLOCKED (0) NOTED (0) STATIC IP (0)	Search
NAME 1	MANUFACTURER	USER/GUEST	DOWN	UP LAST SEEN	ACTIONS
10:68:3f:00:00:01	LgElectr	User		05/25/2016 12:45 pm	Ø BLOCK
10:68:3f:00:00:02	LgElectr	User		05/25/2016 12:45 pm	Ø BLOCK
10:68:3f:00:00:03	LgElectr	User		05/25/2016 12:45 pm	Ø BLOCK
10:68:3f:00:00:04	LgElectr	User		05/25/2016 12:45 pm	Ø BLOCK
10:68:3f:00:00:05	LgElectr	User		05/25/2016 12:45 pm	Ø BLOCK
10:68:3f:00:00:06	LgElectr	User		05/25/2016 12:45 pm	Ø BLOCK
10:68:3f:00:00:07	LgElectr	User		05/25/2016 12:45 pm	Ø BLOCK
10:68:3f:00:00:08	LgElectr	User		05/25/2016 12:45 pm	Ø BLOCK
10:68:3f:00:00:09	LgElectr	User		05/25/2016 12:45 pm	Ø BLOCK
10:68:3f:00:00:0a	LgElectr	User		05/25/2016 12:45 pm	Ø BLOCK
10:68:3f:00:00:0b	LgElectr	User		05/25/2016 12:45 pm	Ø BLOCK
10:68:3f:00:00:0c	LgElectr	User		05/25/2016 12:45 pm	Ø BLOCK
10:68:3f:00:00:0d	LgElectr	User		05/25/2016 12:45 pm	Ø BLOCK
10:68:3f:00:00:0e	LgElectr	User		05/25/2016 12:45 pm	Ø BLOCK
10:68:3f:00:00:0f	LgElectr	User		05/25/2016 12:45 pm	Ø BLOCK
10:68:3f:00:00:1f	LgElectr	User		05/25/2016 10:14 am	Ø BLOCK
10:68:3f:00:00:20	LgElectr	User		05/25/2016 10:14 am	Ø BLOCK
10:68:3f:00:00:21	LgElectr	User		05/25/2016 10:14 am	BLOCK
10:68:3f:00:00:22	LgElectr	User		05/25/2016 10:14 am	Ø BLOCK
10:68:3f:00:00:23	LgElectr	User		05/25/2016 10:14 am	Ø BLOCK
10:68:3f:00:00:24	LgElectr	User		05/25/2016 10:14 am	Ø BLOCK
10:68:3f:00:00:25	LgElectr	User		05/25/2016 10:14 am	Ø BLOCK
10:68:3f:00:00:26	LgElectr	User		05/25/2016 10:14 am	Ø BLOCK
10:68:3f:00:00:27	LgElectr	User		05/25/2016 10:14 am	Ø BLOCK
10:68:3f:00:00:28	LgElectr	User		05/25/2016 10:14 am	Ø BLOCK
10:68:3f:00:00:29	LgElectr	User		05/25/2016 10:14 am	

# **Chapter 9: Insights**

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

- Known Clients Displays information about detected clients.
- Neighboring 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.
- Port Forward Stats Displays information about the port forwarding entries used by the UniFi Security Gateway.
- **Dynamic DNS** Displays information about the use of DDNS services.
- **Remote User VPN** Displays information about the remote user VPN connections.
- AC-EDU Streams Displays information about the streaming by the UniFi AC EDU Access Points.

These sub-tabs share common options:

**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.

**Search** Search Content Search Content Search Content Search Content Search Search Search Content Search Search Content Search

(sort) You can click any column to sort the displayed list. The selected column displays  $\uparrow$  or  $\downarrow$  to indicate ascending or descending order.

**Customize Columns** Each of these filters: *Switch Stats, Port Forward Stats, Dynamic DNS, Remote User VPN,* and *AC-EDU Streams,* applies a default set of columns to display. If you enable the *Customize Columns* option, then the selected columns are displayed.

Click <sup>Q</sup>, to customize the columns used for display.

Cust	omize coli	Imr	15

#### Select Customize columns.

The column options will vary depending on the filter. They are described further in the following sections:

- <u>"Switch Stats" on page 78</u>
- <u>"Port Forward Stats" on page 81</u>
- <u>"Dynamic DNS" on page 82</u>
- <u>"Remote User VPN" on page 83</u>
- <u>"AC-EDU Streams" on page 83</u>

# **Known Clients**

	UniFi								
,	KNOWN CLIENTS $\lor$	SHOW: LAST 24 HOURS $\lor$	ALL (20) WIRELESS (20) WIRED (0)	ALL (\$0) USERS (30) GUESTS (0)	BLOCKED (	0) NOTED (0) STATIC IP (0)		Search	
	NAME T	MANUFACTURES	USER/CUEST	GOWN	UP.	LAST SEEN	,	CTIONS	
٥	10.683100.00:01	LgElectr	User			05/25/2016 12:45 pm	4	arock	
)	10.68.3100.00.02	LgElecty	User			05/25/2016 12:45 pm		BLOCK	
2	10.683100.00.03	LgElectr	User			05/25/2056 12:45 pm		D BLOCK	
	10.68/3100:00:04	LgElectr	User			05/25/2016 12:45 pm		BLOCK	
	10.69.3100.00.05	LgElecty	User			05/25/2016 12:45 pm		arock	
	10.683100.00.06	LgElectr	User			05/25/2016 12:45 pm		BLOCK	
	10.68.3100.00.07	LgElectr	User			05/25/2016 12:45 pm		BLOCK	
	10.69.3100.00.09	LgElectr	User			05/25/2016 12:45 pm		акоск	
	10.68/3100:00:09	LgElectr	User			05/25/2016 12:45 pm		BLOCK	
	10.68.3100.00.0a	LgElecty	User			05/25/2016 12:45 pm		BLOCK	
	10.68.3100.00.06	LgElectr	User			05/25/2056 12:45 pm		D BLOCK	
	10.68/3100:00:0c	LgElectr	User			05/25/2016 12:45 pm		BLOCK	
	10.69.3100.00.03	LgElecty	User			05/25/2016 12:45 pm		arock	
	10.68.3100.00.0e	LgElectr	User			05/25/2016 12:45 pm		BLOCK	
	10.68/3100:00:07	LgElectr	User			05/25/2016 12:45 pm		BLOCK	
	10.69.3100.00.1/	LgElectr	User			05/25/2016 10:14 am		алоск	
	10.68/3100:00:20	LgElectr	User			05/25/2016 10:14 am		BLOCK	
	10.683100.00.21	LgElectr	User			05/25/2016 10:14 am		BLOCK	
	10.69.3100.00.22	LgElectr	User			05/25/2056 10:14 am		a and a stock	
	10.68/3100:00:23	LgElectr	User			05/25/2016 10:14 am		BLOCK	
j	10.683100.00.24	LgElectr	User			05/25/2016 10:14 am		anoce (	
	10.683100:00:25	LgElectr	User			05/25/2016 10:14 am		BLOCK	
,	10.68/3100:00:26	LgElectr	User			05/25/2016 10:14 am		BLOCK	
2	10.69.3100.00.27	LgElectr	User			05/25/2016 10:14 am		anock	
2	10.683100.0028	LgElectr	User			05/25/2016 10:14 am		O BLOCK	
	10.683100.00.29	Liffletty	User			05/25/2016 10:14 am		BLOCK	

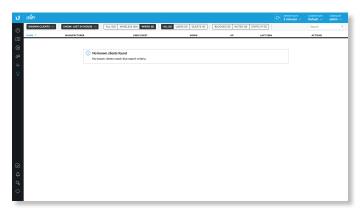
Show Filter the results on the page based on the date the client was last seen. Select last 24 hours, 3 days, 7 days, 2 weeks, 30 days, 120 days, or All.

You can apply one of the following filters:

- All Display all clients, regardless of connection type.
- Wireless Display all wireless clients.

	កែ								
E	INOWN CLIENTS $\vee$	SHOW: LAST 24 HOURS $\vee$	ALL (20) WIREESS (20) WIRED (0)	ALL (30) USERS (30) GUESTS (0)	BEOCKED (0	0 NOTED (0) STATIC IP (0)		Search	
н	ME T	MANUFACTURES	USER/ CUEST	BOWN	UP	LAST SEEN	~	TIONS	
10	68:3100:00:01	LgElectr	User			05/25/2016 12:45 pm	4	) slock	
10	68.3100.00.02	LgElectv	User			05/25/2016 12:45 pm	6	BLOCK	
10	69.3100.00.03	LgElectr	User			05/25/2056 12:45 pm	4	) BLOCK	
10	58.3100:00:04	LgElectr	User			05/25/2016 12:45 pm	6	BLOCK	
10	68.3100.00.05	LgElectv	User			05/25/2056 12:45 pm	6	) BLOCK	
10	68.3100:00:05	LgElectr	Liser			05/25/2016 12:45 pm	6	BLOCK	
10	68.3100.00.07	LgElectr	User			05/25/2016 12:45 pm	9	BLOCK	
10	69.3100.00.09	LgElectr	User			05/25/2056 12:45 pm	6	) BLOCK	
10	58:3100:00:07	LgElectr	User			05/25/2016 12:45 pm	4	arock	
10	68.3100.00.0a	LgElectr	User			05/25/2016 12:45 pm	6	BLOCK	
10	68.3100.00.06	LgElectr	User			05/25/2056 12:45 pm	4	BLOCK	
10	58:3100:00:0c	LgElectr	User			05/25/2016 12:45 pm	6	BLOCK	
10	69.3100.00.04	LgElectv	User			05/25/2016 12:45 pm	6	arock	
10	58:3100:00:0e	LgElectr	User			05/25/2056 12:45 pm	4	BLOCK	
10	68 3100 00:01	LgElectr	User			05/25/2016 12:45 pm	9	BLOCK	
10	69.3100.00.1f	LgElectr	User			05/25/2016 10:14 am	6	) BLOCK	
10	68:3100:00:20	LgElectr	User			05/25/2016 10:14 am	4	arock	
10	68 31:00:00:21	LgElectr	User			05/25/2016 10:14 am	6	BLOCK	
10	69.3100.00.22	LgElectr	User			05/25/2056 10:14 am	4	BLOCK	
10	683100:00:23	LgElectr	User			05/25/2016 10:14 am	9	BLOCK	
10	68.3100.00.24	LgElectv	User			05/25/2016 10:14 am	6	BLOCK	
10	683100.00.25	LgElectr	User			05/25/2056 10:14 am	4	BLOCK	
10	58.3100.00.26	LgElectr	User			05/25/2016 10:14 am	0	BLOCK	
10	69.3100.00.27	LgElectr	User			05/25/2016 10:14 am	6	) BLOCK	
10	68:3100:00:28	LgElectr	User			05/25/2016 10:14 am	4	BLOCK	
10	68 31:00:00:29	Lidberty	User			05/25/2016 10:14 am	9	BLOCK	

• Wired Display all wired clients.



You can also apply one of the following filters:

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

An additional filter is available:

- Blocked Only display blocked clients.
- Noted Only display clients whose configurations include notes. (See <u>"Wireless Client – Configuration"</u> <u>on page 119</u> or <u>"Wired Client – Configuration" on</u> <u>page 120</u> for more information.)
- Static IP Only display clients using static IP addresses.

**Name** Displays the hostname, alias, or MAC address of the connected client. You can click the name for more details; see <u>"Client Details" on page 117</u> 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. Click ⊘ UNBLOCK to unblock this client.
- **Reconnect** Click C 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 ③ AUTHORIZE for guests pending authorization.

# **Neighboring Access Points**

ปที่คา							
NEIGHBORING ACCESS POINTS $\lor$	Show: LAST 24 hours $ arsia $	ALL (126) 2G (	121) SG (5)				Search
NAME/SSID	85510	CHANNEL	SECURITY	MANUFACTURES	LOCATION	SIGNAL	LAST SEEN -1
nFi C4CA8F	06:18:66:5:ca.6f	11(mg)	open	Ubiquiti	Near Timeout	99% (32 dBm)	05/17/2016 05:55 pm
GEAR	(0/1/04/22/42/22	6 (ng)	secured	Netgear	Near Timeout	99% (-15 cBm)	05/17/2016 05:55 pm
HOME	c0/ft.d4.c6/e8.56	11 (ng)	secured	Netgear	Near AC-LITE	12% (-85 cBn)	05/17/2016 05:55 pm
series	10.92.1cd3c3bf	1 (ng)	open	HewlettP	Near 44:d9:e7:02:04:33	40% (-74 cBm)	05/17/2016 05:55 pm
Gear	c4:3dx7:48:11:16	1 (ng)	secured	Netgear	Near 44:d7:e7:02:04:33	50% (-70 cBm)	05/17/2016 05:55 pm
z	44:d9:e7:17:2e:4d	1 (ng)	secured	Ubiquiti	Near 44:d7:e7:02:04:33	99% (-34 cBm)	05/17/2016 05:55 pm
<hidden></hidden>	faithficar/H4 ebuae	44 (na)	open		Near 44/d9/e7/02/04/33	87% (-55 cBm)	05/17/2016 05:55 pm
HOME	cc/03.fx/758b/8c	1.(ng)	secured	Technico	Near 44/d9/e7/02/04/33	47% (-71 dBn)	05/17/2016 05:55 pm
<hidden></hidden>	ce:03/fa/718b.8d	1 (ng)	secured		Near 64/d9/e7/02/04/64	45% (-72 cBn)	05/17/2016 05:55 pm
mFi FA992A	0618d6/b/992a	1 (ng)	open	Ubiquiti	Near 44:d9:e7:02:04:33	99% (-47 cBm)	05/17/2016 05:55 pm
with	05:ac:e0:73:42:e0	11 (ng)	open		Near AC-LITE	0% (-91 dBm)	05/17/2016 05:55 pm
Guest	Oe:18:66:ad:decd	1 (ng)	secured	Ubiquiti	Near 44xd9;e7:02:04:44	17% (-83 dBm)	05/17/2016 05:55 pm
sys26	48/93/03/42/4e/2d	1.(ng)	secured	Cisco-Li	Near 44/d9/e7/02/04/44	15% (-84 dBm)	05/17/2016 05:55 pm
with	ce:03/a/718b/8e	1 (ng)	open		Near 64/d9/e7/02/04/64	45% (-72 cBm)	05/17/2016 05:55 pm
Net	40.5d82x0.8d.5c	1 (ng)	secured	Netgear	Near 64/d9/e7/02/04/64	7.4% (-87 dBn)	05/17/2016 05:55 pm
HOME	00ac#07342x0	11 (ng)	secured	ArrisGro	Near AC-LITE	5.0% (-60 dBm)	05/17/2016 05:55 pm
*hidden*	02acie0:73:42ie0	11 (ng)	secured		Near AC-LITE	2.5% (-89 dBm)	05/17/2016 05:55 pm
co7	20aa:4b:a4:d5:b4	1 (ng)	open	Cisco-U	Near 44:d7:e7:02:04:33	7.4% (-87 dBm)	05/17/2016 05:55 pm
LR.	Oa:18:d6:ad:de:cd	1 (ng)	secured	Ubiquiti	Near 44/37/02/04/44	15% (-84 c8m)	05/17/2016 05:55 pm
z	46/07/e7/18/2e/40	161 (na)	secured	Ubiquiti	Near AC-Pro-Crawlspace	82% (-57 cBm)	05/17/2016 05:55 pm
<hidden></hidden>	0071x2xbb1/99	6 (ng)	secured	Pegatron	Near 64/d9/e7/19/d2/89	12% (-85 cBn)	05/17/2016 05:55 pm
<hidden></hidden>	9e:34:26:10:1a:de	6 (ng)	secured		Near Timeout	42% (-73 cBm)	05/17/2016 05:55 pm
with	ae:34/26:10:1a:dc	6 (ng)	open		Near Timeout	74% (-60 cBm)	05/17/2016 05:55 pm
Tim	9c:3426:00:1a:dc	6 (ng)	secured	AntaGro	Near 44kd?xt717.d2.87	37% (-75 dBm)	05/17/2016 05:55 pm
Link	28:28:56/2e/c01	6 (ng)	secured	ZyvelCore	Near Timeout	69% (-62 dBm)	05/17/2016 05:55 pm
Link	20.76:00:84:02:35	6 (ng)	secured	Actionte	Near 44/d9/e7/19/d2/89	12% (-85 dBn)	05/17/2016 05:55 pm
2.4	0071x2xbb1/58	6 (ng)	secured	Pegatron	Near 64/d9/e7/19/d2/89	12% (-85 cBn)	05/17/2016 05:55 pm
uit	0071x2cbb1:5a	6 (ng)	open	Pegatron	Near Timeout	20% (-82 cBm)	05/17/2016 05:54 pm
ja .	6cb0cebb.47bd	1 (ng)	secured	Netgear	Near 44:d7:s7:02:04:44	9.9% (-86 dBm)	05/17/2016 05:54 pm
MP	e4/3dc7/48/1/:15	36 (na)	secured	Netgear	Near Prototype1 UAP-AC-Pro	25% (-80 dBm)	05/17/2016 05:54 pm
with	10868c92:2172	1.(ng)	secured	AnisGro	Near 44/d9/e7/02/04/44	17% (-83 dBm)	05/17/2016 05:54 pm
<hidden></hidden>	12868c922172	1 (ng)	secured		Near 64/d9/e7/02/04/64	9.9% (+86 dBird)	05/17/2016 05:54 pm
with	22.86.8c.92.21.72	1.(ng)	9900		Near 65:02+7:02:04:66	9.9% (-84 (9m)	05/17/2016 05:54 pm

Show Filter the results on the page based on the time the AP was last seen. Select last 24 hours, 3 days, 7 days, 2 weeks, 30 days, 120 days, or All.

You can apply one of the following filters:

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

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:

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

# **Past Connections**

NAME/MAC ADDRESS	USER/GUEST	ASSOCIATED	DURATION	DOWNLOAD	UPLOAD	IP ADDRESS	LAST AP/PORT
Phone	User	05/25/2016 7:52 am	1h 15m 53s	179.88	753 KB	5002.121	Svite A EDU
MBP	User	05/25/2016 7.54 am	8h 6m 13s	4.69 GB	4 68	10.0.2.63	Conference Room
cc:95:06.8c.06.8c	User	05/24/2016 4:06 pm	Sm 13s	14 KB	6.79 KB	50.0.2.77	Conference Room
Phone	User	05/24/2016 4:16 pm	óm 46s	0.5	252 8		Suite A EDU
MD7	User	05/25/2016 7:56 am	8h 3m 35a	4.37 GS	3.33 G8	1002.50	Suite A EDU
MBP	User	05/24/2016 5:14 pm	2h 20m 59s	206 KB	889 83	50.0.2.79	Suite A EOU
Phone	User	05/25/2016 50:17 am	2h 53m 56s	1.9 MB	29.5 MB	10.0.2.68	Conference Room
Phone	User	05/24/2016 4:31 pm	43s	946.8	3.72 KB	10.0.2.68	Suite B EDU
Phone	User	05/24/2016 5:18 pm	1h 22m 19s	23.2 MB	0.42 MD	10.0.2.68	Suite A EDU
Phone	User	05/24/2016 4:46 pm	14	05	0.5	1002.68	Conference Room
My-Phone	User	05/24/2016 6:59 pm	44m 12s	61.4 KB	83.4 KB	100.2.81	Suite A EDU
My-iPhone	User	05/25/2016 12:26 pm	185	24.4 KB	31.2 KB	50.0.2.81	Conference Room
My-iPhone	User	05/25/2016 12:00 pm	S1s	282.8	194 B	50.0.2.81	Conference Room
My-iPhone	User	05/25/2016 2:54 pm	6m 20s	519 KB	145 KB	10.0.2.81	Suite A EDU
My-Phone	User	05/25/2016 2:43 pm	144	5.95 KD	8.74 KB	1002.01	Suite A EDU
My-IPhone	User	05/25/2016 1:44 pm	11m 3%	5.13 MB	1.02 MB	1002.81	Suite A EDU
My-iPhone	User	05/24/2016 6:47 pm	165	91.1 83	33.2 KB	100.2.81	Suite A EDU
My-iPhone	User	05/24/2016 6:40 pm	136	08	0.8	50.0.2.81	Suite A EDU
My-iPhone	User	05/24/2016 6:08 pm	305	137.8	0.8	10.0.2.81	Rob's Office
My-Phone	User	05/25/2016 50:27 am	104	2.26 KB	9.21 KB	10.0.2.01	Rob's Office
My-Phone	User	05/25/2016 3:12 pm	5m 40s	196 KB	97.5 KB	1002.01	Suite A EDU
My-Phone	User	05/24/2016 5:10 pm	35s	05	0.5	100.2.81	Suite A EDU
My-iPhone	User	05/24/2016 4:25 pm	7m 39s	9.79.548	2.76 MB	50.0.2.81	Conference Room
MB	User	05/25/2016 9:45 am	11/1/255	304 KB	608 KB	50.0.2.76	Rob's Office
UBNT	User	05/25/2016 5:41 pm	1h 46m 32s	42.9 MB	91.3 MB	\$0.0.2.76	Suite 8 EDU
MEP	User	05/25/2016 9:50 am	Sh 30m 56s	5.36 GB	4.22 GB	10.0.2.78	Rob's Office
UDINT-MOP	User	05/25/2016 2:04 pm	1h 10m 49s	200 MB	141 M5	1002.125	Suite A EDU
Showing 1-27 of 27 records.	berns per page: 50 $\vee$						

**24 Hours** The default view. Select **Week** or **Month** to change the duration interval.

**Date** Click either arrow to change the date in one-day increments.

< 🗄 2016/05/11 >

Click the date to display the calendar.

←		Ma	y 20	016		)
S	М	Т	W	Т	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

• **Calendar** Click a specific date to display its statistics. Click either arrow to change the calendar in one-month increments.

You can apply one of the following filters:

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

Name/MAC Address Displays the hostname, alias, or MAC address of the connected client. You can click the name to get additional details; see <u>"Client Details" on</u> page 117 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.

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

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

**IP Address** 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 <u>"UniFi Access Point Details" on</u> page 103 or <u>"UniFi Switch Details" on page 93</u>.

# **Past Guest Authorizations**



# **24 Hours** The default view. Select **Week** or **Month** to change the duration interval.

**Date** Click either arrow to change the date in one-day increments.

< 🛱 2016/05/11 >

Click the date to display the calendar.

←		Ma	y 20	016		-
S	М	Т	W	Т	F	S
1	2	3	4	5	6	7
8	9	10	11	12	13	14
15	16	17	18	19	20	21
22	23	24	25	26	27	28
29	30	31				

• **Calendar** Click a specific date to display its statistics. Click either arrow to change the calendar in one-month increments.

#### Chapter 9: Insights

**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.

**Download** Displays the total amount of data downloaded by the guest.

**Upload** 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 <u>"UniFi Access Point Details" on</u> page 103 or <u>"UniFi Switch Details" on page 93</u>.

# **Switch Stats**

You can apply one of the following filters:

- **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.

You have additional filters:

- All 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.

**Clear Counters** Click CLEAR COUNTERS and select one of the following:

- All Resets all counters to zero.
- (switch\_name) Resets the counters of the selected UniFi Switch to zero.

**Customize Columns** Click <sup>C</sup> to customize the columns used for display.

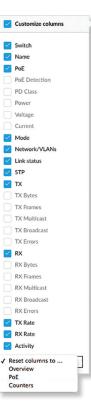


#### Select Customize columns.

Customize columns
Switch
Vame
PoE
PoE Detection
PD Class
Power
Voltage
Current
Mode
Network/VLANs
Link status
STP
🗹 TX
TX Bytes
TX Frames
TX Multicast
TX Broadcast
TX Errors
🗹 RX
RX Bytes
RX Frames
RX Multicast
RX Broadcast
RX Errors
🗹 TX Rate
RX Rate
Activity
Reset columns to $\vee$

You can add or remove columns for display. The *Customize columns* option will apply, and the filter options: *Overview*, *PoE*, and *Counters* will disappear.

- **Reset columns to** Click the drop-down at the bottom of the *Customize columns* screen to display the *Reset columns to* ... options.
  - **Overview** The Switch, Name, PoE, Mode, Network/VLANs, Link Status, STP, TX, RX, TX Rate, RX Rate, and Activity columns are displayed.
  - **PoE** The Switch, Name, PoE, PoE Detection, PD Class, Power, Voltage, and Current columns are displayed.
  - Counters The Switch, TX Bytes, TX Frames, TX Multicast, TX Broadcast, TX Errors, RX Bytes, RX Frames, RX Multicast, RX Broadcast, and RX Errors columns are displayed.



## **Overview**

50	ATCH STAT		couv		SWITCHES ~	UNK STATUS: A	L X							( and		with .
-	PORT 1	SWITCH	NAME	P26	MORE	NUTRY INCOME.	LINE STATUS	579			TX 8475	** ****	ACTIVITY	4/1005		
_	1	Workshop US-48-750W	Part 1	PoC+	Switching	Al	1.000 FOK JUBINKI	Forwarding	715 MB	3.94 68	195 0.5	202.0/1		// 100		
	1	Developing US-48-500W	Pat 1	5.12W	Switching	AL.	1.000 FOX	Fervertine	23.5 (3)	471 GR	8.96 KB.5	180 KB/s	-	/ 1017		CY POWER CHO
	1	Reck US-48-750W	Part 1	PoD+	Switching	AL								/ eter		C? POWER CHO.
	1	PatchPanel US-8-150W	Part 1		Aggregate	All	1,000 FOX (Upline)	Fervariang	93.9 68	2.43 19	27.8 KB/S	743 X8/5	-	0 1011		
53	1	Atto- US-16-150W	Part 1	24V Passivo	Switching	AL.	100 FDK	Forwarding	26.4 GB	813 GB	5.25 103/5	200 H3/1	-	1 100		CY POWER CHO.
	2	PatchParel US-8-150W	Part 2		Aggregate	Aggregating port 1	1,000 FOX	Fervarding	71.1 68	2.2.18	21.3 KB/S	784 X8/3	-	0 100		
	2	Rack US-48-750W	Pat 2	PoE+	Switching	AL								0 100		C' POWER CHO
51	2	DeverStairs US-48-500W	Pet2	24V Passive	Switching	Al	1,000 FOX	Fervariang	3.94 08	715 MB	84.8.5	126 8/5	-	0 100		O POWER CHO
н.	2	Workshop US-48-750W	Part 2	PoC+	Switching	AL			0.0	0.0	0.0.0	0 B/s		1 000		
62	2	Attic- US-16-190W	Pert 2	24V Passive	Switching	Al	100 FDK	Fervariang	26.6 03	820 08	6.2 ×8/5	201 KB/S	-	0 100		O POWER CHO
	3	Rack US-48-750W	Part 3	PoE+	Switching	Al								Ø 1007		C' FOWER CHO
61	3	Patched US-8-150W	Pet3	1.19W	Switching	All	100 FDK	Fervarding	507 148	174 M8	111.8/5	418/5	-	Ø 1007		O POWER CHO
51	3	OpenStains US-48-500W	Part 3	24V Passivo	Switching	AL	100 FDK	Forwarding	147 68	328 GB	3.45 KD/s	68 KE/S	-	Ø 1007		C POWER CHO
	3	Weeshop US-48-750W	Part 3	PoE-	Switching	AL			08	0.8	0.8/5	0.8/5		Ø 100		
51	3	Attic- US-16-190W	Part 3	24V Passivo	Switching	Al	100 FDK	Forwarding	24.8 GB	748 GB	6.07 KB/s	190 HB/s	-	Ø 1007		C' POWER CHO
52	4	Deversules US-48-500W	Part 4	24V Pessive	Switching	Al	1.000 FOK	Pervarding	3.9 G8	438 MB	70 8.5	25 8/5	-	Ø 100		O POWER CHO
	4	Rack US-40-750W	Part 4	PoE+	Switching	AL								Ø 1007		C POWER CHO
52	4	Nohford US-8-150W	Part 4	4.24W	Switching	Al	100 FDK	Forwarding	1.16 03	527 MB	103 B/S	67.8/5	-	Ø 100		O POWER CHO
	4	Workshop US-48-750W	Part 4	PoE+	Switching	Al			0.0	0.0	0.84	O B/N		Ø 1007		
52	4	Atte- U5-16-157W	Part 4	4.50W	Switching	Al	1,000 FOK	Porvarding	74.8 03	1.23 18	15.3 93/5	427 105/5	-	Ø 1007	© CLEAR COLORTERS	O POWER CHO
	5	Rack US-48-750W	Part 5	24V Passivo	Switching	Al								Ø 1007		C POWER CHO
52	5	Atte: US-16-157W	Pert 5	2.98W	Switching	All	1,000 FOK	<b>Forwarding</b>	8.65 GB	761 08	159 8/5	276 8/s	:	Ø 1007	© CLEAR COLONTERS	Or POWER CHILD
53	\$	DeverStaire US-48-SODW	Part S	34V Passivo	Switching	All			0.0	0.0	0.8.4	O B/N		Ø 1007		C' POWER CHO
52	5	PetchPanel US-8-150W	Part 5	4.92W	Switching	Al	100 FDK	Forwarding	8.22 68	172 GB	126 8/5	78.80	:	Ø 100	© CLEAR COLINTERS	Or POWER CHILD
		Workshop US-48-750W	Part S	Po£+	Switching	A1			0.9	0.8	0.84	OBA		/ 1017		

Port The ports display their status and port number:

- Indicates a 10/100 Mbps connection.
  - Indicates a 1 Gbps (1000 Mbps) connection.
  - Indicates a 10 Gbps connection.
  - ✤ Indicates 1 Gbps (1000 Mbps) connection with PoE.
  - Indicates the connection 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 *All Switches* 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 <u>"UniFi Switch Details" on page 93</u>.

Name Displays the name of the port.

**PoE** Displays the PoE setting:

- (blank) PoE is disabled.
- 24V Passive 24V passive PoE is enabled.
- **PoE+** 802.3at/af devices can be plugged in and automatically receive PoE.
- \_\_\_\_ Power output is displayed in watts.

**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 <u>"Port</u> <u>Configuration" on page 95</u>.
- 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. If the *Mode* is *Aggregate*, then it displays the aggregation detail.

**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.

Q

**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.

ACTIVITY	
~	_
TX: 0.1%	

Actions Click a button to perform the desired action:

- Edit Click and to make changes to the port settings.
   For more information, see <u>"UniFi Switch Details" on</u> page 93.
- **Clear Counters** Click CLEAR COUNTERS to clear the port statistics.
- **Power Cycle** If applicable, click POWER CYCLE to power cycle the port.

## ΡοΕ

SWITCH STAT	S V OVERVIEW POR COU	NTERS ALL S	WITCHES 🗸 🛛 LI	NK STATUS: ALL 🗸					CLEAR	couvitas 🗸 🛸	inch
PORT 1	SWITCH	NAME	POL	POLOETICTION	PD CLASS	POWER	VOLTASE	CURRENT	ACTIONS		
1	Workshop US-48-750W	Port 1	Pat+	Not detected					Ø 100	CLEAR COUNTERS	
<b>53</b> 1	DownStairs US-48-S00W	Fort 5	5.12W	Good	Class 0	5.12W	\$2.49V	97.65mA	Ø 100		Or POWER CITCLE
<b>I</b> 1	Rack US-48-750W	Port 1	PBE+	Not detected					Ø 1007		C' POWER CHILD
<b>1</b>	PatchPanel US-8-150W	Fort 5							Ø 1007		
<b>53</b> 1	Artic- US-16-150W	Port 1	24V Passive	Passivo			24.00V		Ø 1007		C' POWER CHILD
2	Patch Panel US-8-150W	Fort 2							Ø 1007		
<b>2</b>	Rack US-48-750W	Port 2	PgE+	Not detected					Ø 1007		C' POWER CHILE
C2 2	DownStairs US-48-S00W	Fort 2	24V Passive	Passive			24.00V		0 000		O POWER CICLE
<b>II</b> 2	Workshop US-48-750W	Port 2	Pat+	Not detected					Ø 1007		
<b>[2</b> 2	Attic- US-16-150W	Fort 2	24V Passive	Passive			24.00V		Ø 100		O POWER CHOI
<b>I</b> 3	Rack US-48-750W	Port 3	PuE+	Not detected					Ø 1007		C* POWER CHEL
<b>52</b> 3	PatchPanel US-8-150W	Port 3	1.19W	Good	Class 4	1.15w	\$3.65V	21.36mA	Ø 100		O POWER CITCL
<b>53</b> a	DownStains US-48-S00W	Port 3	24V Passiva	Passivo			24.00V		Ø 1007		C' POWER CHEL
<b>I</b> •	Warkshop US-48-750W	Port 3	Pet-	Not detected					Ø 100		
<b>53</b> a	Artic- US-16-150W	Port 3	24V Passive	Passivo			24.00V		Ø 1007		C* POWER CHEL
E2 4	DownStains US-48-500W	Port 4	24V Pissive	Pessive			24.007		Ø 100		O POWER CHOI
<b>H</b> 4	Rack US-48-750W	Port 4	PuE+	Not detected					Ø 1007		C' POWER CHEL
<b>52</b> 4	PatchParel US-0-150W	Port 4	4.2411	Good	Class 4	4.26W	53.46V	79.34nA	Ø 100		O POWER CHOI
<b>H</b> 4	Workshop US-40-750W	Port 4	PuE+	Not detected					0 000		
E2 4	Atto- U5-16-150W	Port 4	4.67W	Good	Class 0	4.60W	53.65V	85.80mA	Ø 100		O POWER CHOI
<b>I</b> 5	Rack US-48-750W	Port S	24V Passive	Passion					Ø 1017		C' POWER CHEL
E2 -s	Atto- U5-16-150W	Port 5	2.5111	Good	Class 0	2.58%	53.53V	55.66mA	Ø 100		O POWER CHOI
E2 s	DownStairs US-48-S00W	Port 5	24Y Passive	Passivo			24.00V		Ø 1017		C POWER CHEL
<b>52</b> s	PatchParel US-6-150W	Port 5	4.5211	Good	Class 4	4.92W	53.72V	91.55mA	Ø 100		O POWER CHOI
<b>a</b> s	Workshop US-49-750W	Port 5	PuE+	Not detected					Ø 1017		
E2 4	Patch Panel US & 150W	Port 6	1.02W	Goed	Cim 4	1.02W	53.72V	19.04mA	/ 100		Or POWER CHILD

**Port** The ports display their status and port number:



Indicates a 10/100 Mbps connection.

Indicates a 1 Gbps (1000 Mbps) connection.

- Indicates a 10 Gbps connection.
- ✤ Indicates 1 Gbps (1000 Mbps) connection with PoE.

Indicates the connection 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 *All Switches* 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 <u>"UniFi Switch Details" on page 93</u>.

Name Displays the name of the port.

**PoE** Displays the PoE setting:

- (blank) PoE is disabled.
- 24V Passive 24V passive PoE is enabled.
- **PoE+** 802.3at/af devices can be plugged in and automatically receive PoE.
- \_\_\_\_ Power output is displayed in watts.

**PoE Detection** Displays the PoE status:

- (blank) PoE is disabled.
- 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 end to make changes to the port settings. For more information, see <u>"UniFi Switch Details" on</u> page 93.
- **Clear Counters** Click **CLEAR COUNTERS** to clear the port statistics.
- **Power Cycle** If applicable, click POWER CYCLE to power cycle the port.

#### Counters

SWITCH STA	IS V OVERVIEW PI	OE COUNTERS	ALL SWITCH	S V LINK ST	ATUS: ALL 🗸							CLEAR .	COUNTERS V Sea	rth
PORT 1	SWITCH		TX FRAMES	TX MULTICAST	TX BREADCAST	TE ERRORS	-	RX FRAMES	RX MULTICAST	EX BREADCAST	RX CRIMONS	ACTIONS		
1	Workshop US-49-750W	749824579	\$766450	2024529	124124	0	4220540277	52923721	1247225	47870965	0	Ø 100		
E2 1	Develation US-48-500W	25246422884	207268756	1250276	42994268	0	505483464314	\$22134479	4903	1295	0	Ø 100		-
III 1	Rock US-40-750W											0 100		C POWER CHELE
<b>I</b> 1	PatchPanel US-8-150W	100790691723	1342133554	2580799	663422	0	2676136424296	2368787914	487865	336772	0	0 100		
<b>52</b> s	Adic-US-16-150W	28367653489	389386634	3480681	7792222	0	873095674369	729150629	4	5030	0	0 100		C POWER CHELE
2	PatchPanel US-8-150W	76375609558	2000941495	237274	659767	0	2423540805120	2195763595	237274	152738	0	0 100		
III 2	Ruck US-49-750W											0 100		O POWER CHELE
<b>E1</b> 2	DeverStairs US-48-500W	4228545258	\$2823771	1247228	47870989	0	745943745	\$756500	2024570	124136	0	0 100		C POWER CHEL
III 2	Workshop US-48-750W	0	0	0	0	0	•	0	0	0	0	Ø 100		
<b>11</b> 2	Artic- US-16-150W	28530687775	210007043	3480681	7792056	0	600243445715	742970005	4	5112	0	0 100	-	O POWER CHELE
	Red US-45-750W											Ø 100		O POWER CHELE
<b>[]</b> 3	PutchPanel US-8-150W	531648484	5438192	2711933	2212136	0	582132782	506784	194	223	0	0 100		O NOWER CHILE
<b>53</b> 3	DownStairs US-48-500W	15817660975	211749260	1238302	7270665	0	352542554005	374158919		195	0	0 100		O POWER CHELE
III 3	Workshop US-48-790W	0	•	0	0	0	•	0	0	•	0	Ø 100		
£1 a	Attic-US-18-150W	26617732512	364013710	3480682	7792726	0	803679295176	692429889	4	\$124		1 100	-	O POWER CHELE
E2 +	DeverStairs US-48-500W	4190488873	\$2458522	1292976	48129239	0	459705925	3075408	78	280	0	Ø 100		O POWER CHELE
	Ruck US-49-750W											0 100		-
E2 4	PatchPanel US-8-150W	1246527896	6442462	2711541	1766297	0	554560662	4293317	452	445877	577	Ø 100		C POWER CHEL
	Workshop US-48-750W	0	0	0	0	0	0	0	0	0	0	0 100	-	
E2 +	Attic- US-16-150W	00290505045	754993095	3233955	48305483	0	1004479209541	1352592801	212100	44829	0	Ø 100		C POWER CHEL
	Ruck US-40-750W											0 100	-	C POWER CHELE
E1 s	Attic-US-16-150W	9286709611	205091949	2952390	47930818	0	41754993372	95857729	5574	1485	0	0 100		
E1 :	Deveduars US-48-500W	0	•	•	0	0		0	0	0	0	1 100		
<b>[1</b> s	PatchPanel US-8-150W	8829934351	116587650	2711876	2232796	0	584456999974	187278975	374	1707	0	0 100		O POWER CHILD
	Workshop US-48-750W	0			0	0		0	0	0		0 100		
E2 6	PathParelUS-8-150W	725820027	7704763	2712035	2211014	0	329738754	2770407	0	644		1 100		Cr man cars

**Port** The ports display their status and port number:

Indicates a 10/100 Mbps connection.

- Indicates a 1 Gbps (1000 Mbps) connection.
- Indicates a 10 Gbps connection.
- ✤ Indicates 1 Gbps (1000 Mbps) connection with PoE.



Indicates the connection 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 *All Switches* 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 <u>"UniFi Switch Details" on page 93</u>.

**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 Counters** Click **CLEAR COUNTERS** to clear the port statistics.
- **Power Cycle** If applicable, click POWER CYCLE to power cycle the port.

# **Port Forward Stats**

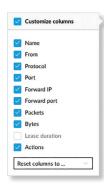
You can apply one of the following primary filters:

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

**Customize Columns** Click <sup>O</sup><sub>6</sub> to customize the columns used for display.

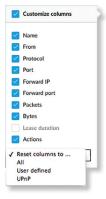


#### Select Customize columns.

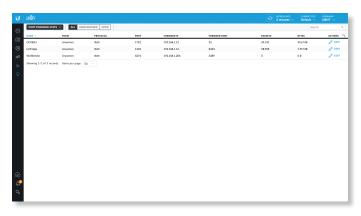


You can add or remove columns for display.

- **Reset columns to** Click the drop-down at the bottom of the *Customize columns* screen to display the *Reset columns to* ... options.
  - All The Name, From, Protocol, Port, Forward IP, Forward Port, Packets, Bytes, and Actions columns are displayed.
  - User Defined The Name, From, Protocol, Port, Forward IP, Forward Port, Packets, Bytes, and Actions columns are displayed.
  - **UPnP** The Name, Protocol, Port, Forward IP, Forward Port, Packets, Bytes, and Lease Duration columns are displayed.



All



**Name** Displays the name of the port forwarding entry. **From** Displays the source IP address, if specified, or *Anywhere*.

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 
 <sup>m</sup> to make changes to the UniFi Security Gateway settings. For more information, see <u>"UniFi</u> <u>Security Gateway Details" on page 85</u>.

## **User-Defined**

U	UNIFI						∂ arrese we 2 minutes ∨	CUMENT STE Default ~	usennine UBNT V
9	PORT FORWARD STATS	ALL USER DEFI	NED UPNP					Search	٩
- C	NAME T	FROM	PROTOCOL	PORT	FORMARD IP	FORMARD PORT	PACKETS	OVTES	ACTIONS 9
	UCKSSH	Anywhere	Both	1722	192.568.1.12	22	29,545	39.6 MB	🖉 кол
۵	UniFiApp	Anywhere	Doth.	1443	192.368.1.12	8443	58,958	7.55 MB	🖉 вонт
R	WinRemote	Anywhere	Both	4274	192.568.1.206	3389	0	0.8	Ø 1007
rt to	Stowing 3-3 of 3 records.	item ser age: 50							

Name Displays the name of the port forwarding entry.

**From** Displays the source IP address, if specified, or *Anywhere*.

**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.

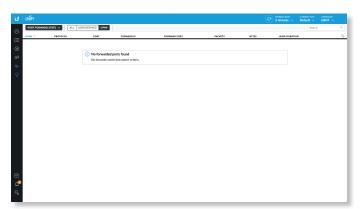
**Forward Port** Displays the destination port or ports that will receive the forwarded port traffic. Also known as the internal port(s).

Packets Displays the number of packets transferred.

Bytes Displays the number of bytes transferred.

Actions Click a button to perform the desired action:

#### 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.

# **Dynamic DNS**

U								
0	DYNAMIC DNS $\vee$						Search	۹.
ŵ	SERVICE	status †	HOSTNAME	USERNAME	serven	LAST UPDATED	ACTIONS	9,
0								
89			No Dynamic DNS services found No Dynamic DNS services have been disc					
4			No Dynamic DNo services have been disc	overed yet.				
0								
<b>~</b>								
19 13 14 10								
Ľ								

<b>Customize Columns</b>	Click <sup>C</sup> <sub>6</sub> to customize the columns
used for display.	

Customize	e columns
Customize	columns

Select Customize columns.

Customize columns
Service
Status
Hostname
Username
Username
Iserver
IP
Last updated

You can add or remove columns for display.

**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.

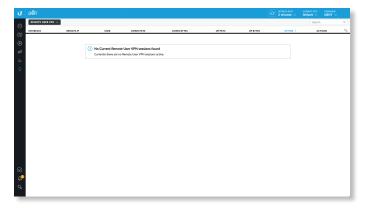
**Server** Displays the IP address or hostname of the DDNS server that should receive DDNS updates.

**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:

# **Remote User VPN**



**Customize Columns** Click <sup>O</sup><sub>5</sub> to customize the columns used for display.



#### Select Customize columns.



You can add or remove columns for display.

**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  $\bigotimes$  TERMINATE to end the VPN tunnel.

# **AC-EDU Streams**

0	AC-EDU STREAMS $\lor$	$\vartheta$ -terminate stream $\sim$				Search	٩	1
ω.	DEVICE	STREAM ?	READY	STREAMING	CONNE	110	9	
	Sulse C EDU	e14180e4-0d17-4e21-bi9e-0e7bb0862961	-		(100			
0	Showing 1-1 of 1 records.	Items per page: 50 V						
яR								
4~								
0								
ً								
æ								
о,								
								4

**Customize Columns** Click <sup>(2)</sup>, to customize the columns used for display.

Customize columns

Select Customize columns.

~	Customize columns
~	Device
~	Stream
$\leq$	Ready
~	Streaming
$\leq$	Connected
Re	eset columns to

You can add or remove columns for display.

- **Reset columns to** Click the drop-down at the bottom of the *Customize columns* screen to display the *Reset columns to* ... options.
  - All The Device, Stream, Ready, Streaming, and Connected columns are displayed.

$\sim$	Customize columns
$\leq$	Device
~	Stream
$\leq$	Ready
~	Streaming
$\leq$	Connected
√ R A	eset columns to

**Terminate Stream** Click **CICK** and then click the live stream you want to terminate.

**Device** Displays the hostname, alias, or MAC address of the UniFi AC EDU AP. You can click the name to get additional details. For more information, see <u>"UniFi</u> Access Point Details" on page 103.

**Stream** Displays the unique identifier for this live stream.

**Ready** Displays the status of the UniFi AC EDU AP, *Yes* or *No*.

**Streaming** Displays the duration of the live streaming, *Yes* or *No*.

**Connected** Displays the status of the connection, *Yes* or *No*.

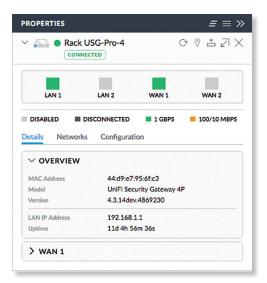
Chapter 9: Insights

# Chapter 10: UniFi Security Gateway Details

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

# **Properties**

The *Properties* panel appears on the right side of the screen. Information about each selected device appears as a popup within this panel.



**Remove All** Click to close the *Properties* panel. **Collapse All** Click to collapse all of the popups to rows.

PROPERTIES	$\equiv$ = »
> 🧿 🛛 00:15:6d:00:00:05	© ₽ Z ×
> 📇 🔵 00:27:22:00:00:03	७ ७ ≛ ℤ ×
> 🔜 • dc:9f:db:00:00:01	ତ ୭ ଯ ×

The top of the popup remains and displays the following:

- **Display** Click > to display the device information.
- (icon) Displays the icon of the device (the icon will vary depending on the model).
- (status) Displays to indicate the device status.
  - **Pending Approval** A solid orange circle indicates the default state, available for adoption.
  - **Connected** A solid green circle indicates a managed connection.
  - Managed by Other A solid gray circle indicates that the device is not in the default state but not controlled by the current UniFi Controller.
  - **Disconnected** A red warning icon **A** indicates no connection.

- Name/MAC Address Displays the device name or MAC address of the device.
- **Restart** Click <sup>C</sup> to restart the selected device.
- Locate Click <sup>(2)</sup> to flash the LED on the device and the device 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.)
- Upgrade Click to upgrade the device. (This icon does not appear if an upgrade is not available or there are pending changes.)
- Undock from Properties Panel Click C to display the same information in a separate popup screen that can be moved anywhere within the browser screen.
- Close Properties Click imes to close the device popup.

The upper part of the detached popup screen has an icon for each port.

- Indicates a 10/100 Mbps connection.
- Indicates a 1 Gbps (1000 Mbps) connection.

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

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

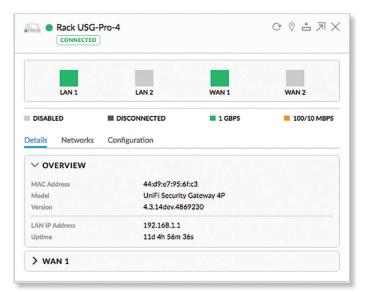
There are three clickable tabs:

- <u>"UniFi Security Gateway Details" on page 86</u>
- <u>"UniFi Security Gateway Networks" on page 86</u>
- <u>"UniFi Security Gateway Configuration" on page</u>
   <u>87</u>

# **UniFi Security Gateway – Details**

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

#### **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 1**

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

			C () 書 ))
LAN 1	LAN 2	WAN 1	WAN 2
DISABLED		1 GBPS	100/10 MBPS
etails Networks	Configuration		
> OVERVIEW			
$\sim$ WAN 1			
IP Address	67.174.180.14	2	
Speed	1000		
Duplex	Full duplex		
Down Pkts/Bytes	20.6 MB / 17 0	B	
Up Pkts/Bytes	19.2 MB / 14.5	GB	
Down Activity			

**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.

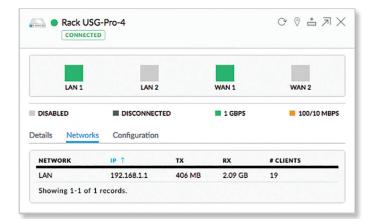
**Up Pkts/Bytes** Displays the amount of data uploaded as packets and bytes.

**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 – Networks**

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



(sort) You can click any column to sort the displayed list. The selected column displays  $\uparrow$  or  $\downarrow$  to indicate ascending or descending order.

**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.

# Clients Displays the number of clients on the network.

# UniFi Security Gateway – Configuration

Click **Configuration** to configure the alias, WAN settings, port forwarding, Dynamic DNS, and custom upgrade entries. You can also remove the Gateway from management by this UniFi Controller.

## General

Rack USG-Pro     CONNECTED	-4		C ( ▲ ) >
LAN 1	LAN 2	WAN 1	WAN 2
DISABLED	DISCONNECTED	1 GBPS	100/10 MBPS
Details Networks	Configuration		
$\vee$ general			
Alias			
Rack USG-Pro-4			
SAVE CANCEL			
> WAN 1			
> WAN 2			
> PORT FORWARD			
> DYNAMIC DNS			
> CUSTOM UPGRAD	DE		
> FORGET THIS DEV			

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

Save Click Save to apply 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.

Connection Type	
Using DHCP	~
Preferred DNS	Alternate DNS
Use VLAN ID	
Smart Queues C Enable Smart Queues	PRE-POPULAT
Up Rate	Down Rate
kbit	kbit

- 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.

Static IP	$\sim$
IP Address	Preferred DNS
Subnet Mask	Alternate DNS
Router	
Use VLAN ID	
Smart Queues	
Enable Smart Queues	PRE-POPULATE
Up Rate	Down Rate
kbit	kbit

- **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.

Connection Type		
PPPoE		$\sim$
Username	Password	
Preferred DNS	Alternate DNS	
Use VLAN ID		
Smart Queues		
<ul> <li>Enable Smart Queues</li> </ul>		PRE-POPULATE
Up Rate	Down Rate	
	kbit	kbit

• **Disabled** If you are not using the WAN 2 port, then select **Disabled**.

V WAN 2	
Connection Type	
Disabled	~

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

**Load Balancing** (Available for *WAN 2* if *Using DHCP*, *Static IP*, or *PPPoE* is enabled.) Set up basic load balancing with two Internet connections from different Internet Service Providers (ISPs).

• **Failover only** Select this option if you want to use *WAN* 2 only if *WAN* 1 fails.

• Weighted LB Select this option if you want the load balanced between the two WAN ports. Then enter a weight in the field provided; the default is *50*.

Load Balancing	Weight	
Weighted LB	~ 50	%

**Smart Queues** The Smart Queue feature provides FQ-CODEL (Fair Queuing with Controlled Delay) + HTB (Hierarchical Token Bucket) function and supports dynamic interfaces, even if the dynamic interfaces do not exist yet (the policy will be applied later when the interface comes up).

The HTB rate limiting is computation-intensive, so the rate limiting will not work well (cannot achieve the specified rate) above a certain threshold rate. The actual threshold (applied to the sum of the upload and download rates) depends on the specific Gateway model and conditions of the actual environment.

It may require some testing to find the actual threshold in a specific environment, depending on the actual setup, traffic patterns, and other conditions. You can use the *Pre-Populate* option as a starting point for the *Up* and *Down Rates*. The actual rate limits will be set to 95% of the specified value, so you can experiment with different values if necessary.

The smart queue policy applies to a single interface. If you are using more than one WAN interface, then you would configure a separate smart queue policy for the *WAN 2* port in the *WAN 2* section.

- **Pre-Populate** Click **Pre-Populate** to set the *Up* and *Down Rates* to 80% of the last speed test results.
- Up Rate Enter the bandwidth limit in Kbits/sec.
- **Down Rate** Enter the bandwidth limit in Kbits/sec.
- **Pre-Populate** Click **Pre-Populate** to set the *Up* and *Down Rates* to 80% of the last speed test results.



Note: If you enable the *Smart Queues* option, then you will not be able to use the *DPI* feature as traffic will not be offloaded.

#### UniFi Controller User Guide

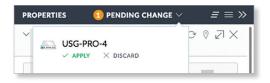
Queue Changes Click Queue Changes to line up the changes to take effect. This allows you to make multiple changes to the device and then apply them all at once so that the device doesn't have to re-provision over and over again when you change different sections of the configuration. Each section with pending changes is highlighted by an ellipsis.

When you are done with your changes, click **Apply Changes** at the bottom of the screen. (You can cancel the changes of any section by clicking *X* of the appropriate section.)

**Cancel** Click *Cancel* to discard changes.

CONNECTED			C () 本 J X
LAN 1	LAN 2	WAN 1	WAN 2
DISABLED		1 GBPS	100/10 MBPS
Details Networks	Configuration		
> GENERAL			
✓ WAN 1 Connection Type			
Using DHCP			~
Preferred DNS		Alternate DNS	
Use VLAN ID 20 Smart Queues Enable Smart Que QUEUE CHANGES	ues		
> WAN 2			
> PORT FORWAR	2D		
> DYNAMIC DNS			
> CUSTOM UPG	RADE		
> FORGET THIS	SELUCE.		

**Pending Changes** If you want queue changes for multiple devices and then apply them later, the *Pending Changes* option appears in the *Properties* panel. Click V to display the devices.



Apply Click < APPLY to save changes. Discard Click < DISCARD to cancel changes.

### **Port Forward**

	JSG-Pro-4			C° ♥ ≛	, J X
LAN 1		LAN 2	WAN 1	WAN 2	
DISABLED	DISC	CONNECTED	1 GBPS	<b>100/</b>	10 MBPS
Details Netwo	orks Config	uration			
> GENERAL					
> WAN 1					
> WAN 2					
$\sim$ PORT FOR	WARD			0	CREATE
NAME 1	FROM	PORT	DEST IP/PORT	ACTI	ONS
UCKSSH	•	1722	192.168.1.12:22	0	1
UniFiApp	•	1443	192.168.1.12:8443	0	1
WinRemote		4274	192.168.1.206:3389	0	1
Showing 1-3 c	of 3 records.				
> DYNAMIC	DNS				
> CUSTOM	UPGRADE				

#### **Create** Click center to add a new entry. Go to <u>"Create or</u> Edit Port Forwarding Entry" on page 90.

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		
From		
• Anywhere Limited		
Port		
		0
Forward IP	Forward Port	
Protocol		
Both TCP UDP		
APPLY CANCEL		

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.

**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**

Domain Name System (DNS) translates domain names to IP addresses; Each DNS server on the Internet holds these mappings in its respective DNS database. Dynamic Domain Name System (DDNS) is a network service that notifies the DNS server in real time of any changes in the device's IP settings. Even if the device's IP address changes, you can still access the device through its domain name.

SERVICE 1	HOSTNAME	SERVER	ACTIONS
-----------	----------	--------	---------

**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** 

V DYNAMIC DNS	
Service	
afraid	$\sim$
Hostname	
Username	
Password	
Server	
APPLY CANCEL	

**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.



(URL) Enter the location URL of the firmware.

**Custom Upgrade** Click CUSTOM UPGRADE to upgrade the firmware from the location you entered.

## **Forget This Device**



**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.

# Chapter 11: UniFi Switch Details

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

# **Properties**

The *Properties* panel appears on the right side of the screen. Information about each selected device appears as a popup within this panel.

ROPERTIES         Ξ ⇒ >           ✓         ● Workshop US-48-750W         ○          ○								
DISABL	ED INECTED	<ul> <li>1 GBPS</li> <li>100/10 MBPS</li> </ul>		STP BLOCKING				
etails	Ports	Configuration						
~ ov	ERVIEW							
MAC Ad	dress	04:18:d6:	f0:d1:68					
Model		UniFi Swi	tch 48 POE-75	50W				
Version		3.5.1.408	8					
IP Addre	\$\$	192.168.	1.246					
	onsumption	2.39W						
Power Co		31d 21h	31d 21h 14m 21s					
Power Co Uptime								
	LINK							

**Remove All** Click to close the *Properties* panel. **Collapse All** Click to collapse all of the popups to rows.

PROPERTIES	$\Xi \equiv \gg$
> 🔜 <ul> <li>PatchPanel US-8-150W</li> </ul>	७०≛⊿×
> 📇 🔵 DownStairs US-48-500W	C®⊿×
> 🔝 🔵 Workshop US-48-750W	C®⊿X

The top of the popup remains and displays the following:

- **Display** Click > to display the device information.
- (icon) Displays the icon of the device (the icon will vary depending on the model).
- (status) Displays to indicate the device status.
  - **Pending Approval** A solid orange circle indicates the default state, available for adoption.
  - **Connected** A solid green circle Indicates a managed connection.
  - Managed by Other A solid gray circle indicates that the device is not in the default state but not controlled by the current UniFi Controller.

- **Disconnected** A red warning icon **A** indicates no connection.
- Name/MAC Address Displays the device name or MAC address of the device.
- Restart Click  $\bigcirc$  to restart the selected device.
- Locate Click O to flash the LED on the device and the device 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.)
- Upgrade Click to upgrade the device. (This icon does not appear if an upgrade is not available or there are pending changes.)
- Undock from Properties Panel Click ∠<sup>¬</sup> to display the same information in a separate popup screen that can be moved anywhere within the browser screen.
- Close Properties Click imes to close the device popup.

**Hide Property Panel** Click  $\gg$  to hide the *Properties* panel but allow the device popups to remain accessible from this panel. Click the *properties*  $\textcircled{\bullet}$  icon to re-open it.

The upper part of the detached popup screen has an icon for each port.

- Indicates a 10/100 Mbps connection.
- Indicates a 1 Gbps (1000 Mbps) connection.
- Indicates a 10 Gbps connection.
- Indicates 1 Gbps (1000 Mbps) connection with PoE.
- Indicates the connection is disabled (no network or VLAN is enabled).
- Indicates no connection (the network or VLAN is enabled, but the port is not in use).
- Indicates STP blocking.
- Indicates mirroring mode.

Place your cursor over a port to view details.

Port	11	
Name	Port 11	
Status	1,000 FDX	
Tx	22.2 MB	
Rx	11.1 MB	
PoE	PoE+	
NWs/VLANs	All	
Downlink	Lab UAP-AC-LR	

- 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.
  - \_\_\_\_ 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.
- **Uplink/Downlink** Displays the name of the uplink or downlink device.

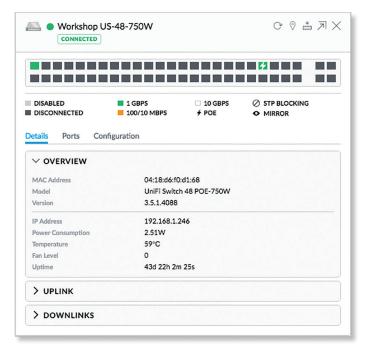
There are three clickable tabs:

- <u>"UniFi Switch Details" on page 94</u>
- <u>"UniFi Switch Ports" on page 95</u>
- <u>"UniFi Switch Configuration" on page 98</u>

# 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 *0* 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.

#### UniFi Controller User Guide

## Uplink

			52			
DISABLED DISCONNECTED	1 GBPS 100/10 MBPS	10 GBPS 4 POE	STP BLOCKING MIRROR			
etails Ports Co	onfiguration					
> OVERVIEW						
Port	1					
Uplink	DownStairs	US-48-500W				
opinik	1000					
Speed		Full duplex				
	Full duplex		48.7 MB / 3.76 GB			
Speed		3.76 GB				
Speed Duplex						

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**

	TED US-48-750W		C () 🏝 🏹
DISABLED DISCONNECTED	<ul> <li>1 GBPS</li> <li>100/10 MBPS</li> </ul>	□ 10 GBPS ≠ POE	STP BLOCKING MIRROR
tails Ports	Configuration		
> OVERVIEW	1		
> UPLINK			
	ĸs		
PORT 1	DEVICE	MODEL	STATUS
41	Pro-roamtest2	UniFi AP-Pro	1,000 FDX
Showing 1-1 of	f 1 records.		

(sort) You can click any column to sort the displayed list. The selected column displays  $\uparrow$  or  $\downarrow$  to indicate ascending or descending order.

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.

<u> </u>		Orkshop		-750W			(	3 ® 舎 习 ×
							52	
		CTED		1 GBPS 100/10 M	IBBC	- 10 4 P		BLOCKING
Detai			Configura					NOK .
	PORT	NAME	STATUS	тх	RX	POE	NETWORKS/VLANS	ACTIONS
	1	Port 1	1,000 FDX (Uplink)	511 MB	3.76 GB	PoE+	All	0
	2	Port 2		0 B	0 B	PoE+	All	0
	3	Port 3		0 B	0 B	PoE+	All	0
	4	Port 4		0 B	0 B	PoE+	All	0
	5	Port 5		0 B	0 B	PoE+	All	0
	6	Port 6		0 B	0 B	PoE+	All	0
	7	Port 7		0 B	0 B	PoE+	All	0
	8	Port 8		0 B	0 B	PoE+	All	0
	9	Port 9		0 B	0 B	PoE+	All	0
	10	Port 10		0 B	0 B	PoE+	All	0
	11	Port 11		0 B	0 B	PoE+	All	0
	12	Port 12		0 B	0 B	PoE+	All	0
	13	Port 13		0 B	0 B	PoE+	All	0
	14	Port 14		0 B	0 B	PoE+	All	0
	15	Port 15		0 B	0 B	PoE+	All	0
	16	Port 16		0 B	0 B	PoE+	All	0
	17	Port 17		0 B	0 B	PoE+	All	0
	18	Port 18		0 B	0 B	PoE+	All	0
	19	Port 19		0 B	0 B	PoE+	All	0
	20	Port 20		0 B	0 B	PoE+	All	0
	21	Port 21		0 B	0 B	PoE+	All	0
	22	Port 22		0 B	0 B	PoE+	All	0
	23	Port 23		0 B	0 B	PoE+	All	0
	24	Port 24		08	0 B	PoE+	All	0

**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  $\bigcirc$  to restart the connected device.

## **Port Configuration**

			の (1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
DISABLED DISCONNECTED	<ul> <li>1 GBPS</li> <li>100/10 MBPS</li> </ul>	□ 10 GBPS	STP BLOCKING MIRROR
etails Ports C	onfiguration		
PORT 5			
Name			
Port 5			
PoE Off 24V Pas Networks/VLANs	sive 💿 PoE+		
All			$\sim$
ADVANCED OPTI Operation Switching N Link Negotiation Auto Manua	firroring Aggregate		
Isolation			
Enable port isolat	ion		
Storm Control			
Unicast	pkts/s		
Multicast	pkts/s		
APPLY CANCEL	pkts/s		
CANCEL			

- 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 additional options.
- Operation Select the operation mode for this port.
   Switching, Mirroring, or Aggregate. Proceed to the appropriate section.

#### Switching

DISABLED DISCONNECTED	1 GBPS 100/10 MBPS	□ 10 GBPS ≠ POE	STP BLOCKING
etails Ports C	Configuration		
PORT 5			
Name			
Port 5			
PoE			
Off 24V Pa	ssive 🗿 PoE+		
Networks/VLANs			
rections, rents			
All ADVANCED OPTI Operation	IONS 🏏 Arroring 🔷 Aggregate		~
All ADVANCED OPTI Operation	Arroring Aggregate		~
All ADVANCED OPTI Operation Switching N Link Negotiation Auto Manua	Airroring Aggregate		~
All ADVANCED OPTI Operation Switching N Link Negotiation Auto Manua Full Duplex	Airroring Aggregate		~
All ADVANCED OPTI Operation Switching N Link Negotiation Auto Manua Full Duplex Enable full duples	Airroring Aggregate		~
All ADVANCED OPTI Operation Switching N Link Negotiation Auto Manus Full Duplex Enable full duples Link Speed	Airroring Aggregate		~
All ADVANCED OPTI Operation Switching N Link Negotiation Auto Manus Full Duplex Enable full duples Link Speed 1000 Mbps	Airroring Aggregate al		~
All ADVANCED OPTI Operation Switching N Link Negotiation Auto Manus Full Duplex Enable full duples Link Speed 1000 Mbps Isolation	Airroring Aggregate al		~
All ADVANCED OPTI Operation Switching N Link Negotiation Auto Manue Full Duplex Enable full duples Link Speed 1000 Mbps Isolation Enable port isolat	Airroring Aggregate al		~
All ADVANCED OPTI Operation Switching N Link Negotiation Auto Manua Full Duplex Enable full duples Link Speed 1000 Mbps Isolation Enable port isolat Storm Control	Airroring Aggregate al x		~
All ADVANCED OPTI Operation Switching N Link Negotiation Auto Manua Full Duplex Enable full duples Link Speed 1000 Mbps Isolation Enable port Isolat Storm Control Unicast Unicast	Airroring Aggregate al x tion		~

- Switching The default mode.
  - Link Negotiation The default is Auto, enabling Ethernet autonegotiation. This is the appropriate configuration for almost all circumstances. Never use Manual unless the device being connected to the port has also been set manually; if so, then switch to Manual to disable autonegotiation and enable manual configuration of duplex and speed:
    - Full Duplex (Available for RJ45 ports only.) If this option is enabled, the port will be set to full duplex. If disabled, it will be set to half duplex. Full-duplex transmission is enabled by default.
    - Link Speed Set the link speed of the interface as needed to match the device plugged into the port. For RJ45 ports, select 1000 Mbps, 100 Mbps, or 10 Mbps. For SFP+ ports, select 10 Gbps or 1000 Mbps. SFP ports must be set to 1000 Mbps.
- **Isolation** Select this option to mark this port as an isolated port. Isolated ports cannot communicate directly with any other isolated port.
- **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 control unicast traffic destined to unknown MAC addresses. Enter the threshold in packets per second.
    - Note: Unlike Broadcast and Multicast storm control, the Unicast storm control does not apply to all unicast traffic. It applies only to traffic destined to a MAC address not found in the switch's MAC address table. Most devices should have a very low rate of such traffic. High rates of such traffic are indicative of malicious activity, or a broken device. Blocking excessive rates of such traffic may prevent problems on other devices on the network.
  - **Broadcast** Select this option to monitor broadcast traffic. Enter the threshold in packets per second.
- Apply Click Apply to save changes.
- Cancel Click Cancel to discard changes.

## Mirroring

Workshop U CONNECTED	JS-48-750W		७ ѷ ≛ Ϡ Ҳ
DISABLED DISCONNECTED	<ul> <li>1 GBPS</li> <li>100/10 MBPS</li> </ul>	□ 10 GBPS <del>/</del> POE	STP BLOCKING MIRROR
Details Ports Co	nfiguration		
PORT 5			
Name			
Port 5			
Mirroring Port Link Negotiation Auto Manual Full Duplex Enable full duplex Link Speed	rroring 🔿 Aggregate		
1000 Mbps			•
Enable port isolation	'n		
APPLY CANCEL			

- **Mirroring** This port's network traffic 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 The default is Auto, enabling Ethernet autonegotiation. This is the appropriate configuration for almost all circumstances. Never use Manual unless the device being connected to the port has also been set manually; if so, then switch to Manual to disable autonegotiation and enable manual configuration of duplex and speed:
    - Full Duplex (Available for RJ45 ports only.) If this option is enabled, the port will be set to full duplex. If disabled, it will be set to half duplex. Full-duplex transmission is enabled by default.
    - Link Speed Set the link speed of the interface as needed to match the device plugged into the port. For RJ45 ports, select 1000 Mbps, 100 Mbps, or 10 Mbps. For SFP+ ports, select 10 Gbps or 1000 Mbps. SFP ports must be set to 1000 Mbps.
- Isolation Select this option to mark this port as an isolated port. Isolated ports cannot communicate directly with any other isolated port.
- Apply Click Apply to save changes.
- Cancel Click Cancel to discard changes.

#### Aggregate

			5	
DISABLED DISCONNECTED	1 GBPS 100/10 MBPS	□ 10 GBPS ≠ POE	STP BLOCKING	
Details Ports C	onfiguration			
PORT 5				
Name				
Port 5				
Networks/VLANs				
All				~
ADVANCED OPTI Operation Switching M	ONS ✓ Iirroring <b>○</b> Aggregate			
Aggregate Ports				
5 -	Between 6 and 8	3		
Link Negotiation	al			
Auto V Manua				
Full Duplex				
Full Duplex Full Duplex Finable full duplex	¢			
Full Duplex	¢			

- 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 The default is Auto, enabling Ethernet autonegotiation. This is the appropriate configuration for almost all circumstances. Never use Manual unless the device being connected to the port has also been set manually; if so, then switch to Manual to disable autonegotiation and enable manual configuration of duplex and speed:
    - Full Duplex (Available for RJ45 ports only.) If this option is enabled, the port will be set to full duplex. If disabled, it will be set to half duplex. Full-duplex transmission is enabled by default.
    - Link Speed Set the link speed of the interface as need to match the device plugged into the port.
       For RJ45 ports, select 1000 Mbps, 100 Mbps, or 10 Mbps. For SFP+ ports, select 10 Gbps or 1000 Mbps. SFP ports must be set to 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 use this tab to copy another switch's configuration to this Switch, perform a custom upgrade, gain terminal access to the Switch, or remove the Switch from management.

### General

Workshop	US-48-750W		C () 杰 키 X
DISABLED DISCONNECTED	1 GBPS 100/10 MBPS	□ 10 GBPS	STP BLOCKING MIRROR
Details Ports Co	onfiguration		
✓ GENERAL Alias			
Workshop US-48-7	'50W		
SAVE CANCEL			
> NETWORKS/V	LANS		
> SERVICES			
> NETWORK			
> COPY CONFIG			
> CUSTOM UPGE	RADE		
> DEBUG TERMI	NAL		
> FORGET THIS	DEVICE		

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

Save Click Save to apply your change.

**Cancel** Click *Cancel* to discard changes.

#### **Networks/VLANs**

The Networks/VLANs section displays the available VLANs for configuration on this switch, as defined under Settings > Networks. It also displays VLAN groupings that can be managed here, which apply site-wide. VLAN groupings allow creating a combination of native networks (untagged) and tagged networks (tagged VLANs) for switch ports. The groupings configured here are then available for assignment to switch ports on the switch's *Port* configuration tab.

V NETWORKS/\	LANS	CREATI
NAME 1	CONFIG	ACTIONS
BLGVLAN	Native (BLGVLAN)	۵ 🗊
LAN	Native (LAN)	۲
Showing 1-2 of 2	ecords.	

# **Create** Click cutter to add a new entry. Go to the <u>"Create</u> <u>New Network/VLAN" on page 98</u> section below.

Name Displays the name of the network/VLAN.

**Config** Displays the configuration: *Native* (\_\_\_\_\_) or *Customized*. (Networks may be created in <u>"Settings ></u> Controller" on page 41.)

Actions Click a button to perform the desired action:

- View Click to view the default network.
- Edit Click *⊘* to edit the network/VLAN entry. (Not available for the default network.)
- **Delete** Click in to delete the network/VLAN entry. (Not available for the default network.)

#### Create New Network/VLAN

Native Network None Tagged Networks	✓ NETWORKS/VLANS Name	
	Native Network	
		*
	APPLY CANCEL	

- Name Enter a name to identify this network/VLAN.
- Native Network The Native Network specifies the default VLAN, or Port VLAN Identifier (PVID), for the switch port. This determines the VLAN to be used for untagged traffic on that port. Most client devices do not VLAN-tag traffic; they will therefore only use the Native Network on their port.

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 <u>"Settings > Controller" on</u> page 41.) • Tagged Networks The VLANs chosen here will be permitted as tagged on switch ports configured with this grouping. This permits ingress and egress traffic with the applicable VLAN tag. Any VLAN tags other than those chosen here will be dropped.

As an example, the following illustrates how an access point's switch port functions with one native network and two tagged VLANs used for additional wireless SSIDs. The AP's switch port uses a VLAN grouping with LAN (VLAN 1) as the native network, and has VLANs 20 and 30 defined as 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 <u>"Settings ></u> <u>Controller" on page 41</u> to create more networks.)

- Apply Click Apply to save changes.
- **Cancel** Click *Cancel* to discard changes.

#### Services

Management VLAN		
LAN		~
Enable jumbo frame		
Enable flow control		
Spanning Tree		
STP STP Disabled		
Priority		
32768	$\sim$	
Enable 802.1x control		

**Management VLAN** The Management VLAN specifies the VLAN ID that will be used for the management IP address of the switch. The IP configuration configured under the switch's *Network* panel will be applied to this VLAN ID.

**Enable Jumbo Frame** Disabled by default. The Maximum Transmission Unit (MTU) is the maximum packet size (in bytes) that a network interface can transmit or receive. The standard Ethernet MTU is 1500 bytes. Enable jumbo frames to allow usage of MTUs up to 9216 bytes on all ports of this switch.

**Spanning Tree** Ethernet networks cannot have multiple active paths between switches (absent aggregation such as LAG), as this causes a switching loop, where broadcast and multicast traffic are amplified and repeated in a neverending loop, melting down the entire network. Spanning Tree prevents switching loops, and allows for redundant interconnections between switches. Interfaces with redundant paths are put into STP blocking mode, leaving the port down unless the current best active path fails.

Select the appropriate option: **RSTP** (Rapid Spanning Tree Protocol), **STP** (Spanning Tree Protocol), or **Disabled**. RSTP is the default and is recommended because topology changes apply much more quickly (usually within 6 seconds, rather than the 30-50 seconds of STP). STP will enable the older 802.1D STP on this switch instead of RSTP. Disabled will disable all versions of spanning tree; however, this is not recommended, as it can leave the network susceptible to being taken down by an inadvertently created switching loop.

**Priority** STP uses the priority value as part of the calculation in electing a root bridge of the spanning tree. It is best to configure a lower priority number (higher preference in root bridge elections) on one or two of the switches you consider the "core" of your network. For instance, if you have two 10 Gb switches, and several gigabit switches, configure a lower priority on the two 10 Gb switches to ensure that they are preferred as the STP root bridge. The default is *32768*.

**Enable 802.1x control** Select this option to use a RADIUS server for user authentication on the switch's ports. The following options appear.

Management VLAN				
LAN				~
Enable jumbo frame     Enable flow control				
Spanning Tree				
• RSTP • STP • Disabled	с. <sup>1</sup>			
Priority				
32768		$\sim$		
Enable 802.1x control				
Enable RADIUS VLAN				
RADIUS Auth Server				
IP Address	Port	1812	Password	X
+ ADD AUTH SERVER				
RADIUS Accounting Server				
IP Address	Port	1813	Password	×
I HOUNDOUTING SERVER				

- Enable RADIUS VLAN Allows the RADIUS server to dynamically assign a VLAN to a wired client.
- **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 accounting 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 Accounting Server If you have another accounting server, click this option and complete the *IP Address, Port,* and *Password* fields.

Queue Changes Click Queue Changes to line up the changes to take effect. This allows you to make multiple changes to the device and then apply them all at once so that the device doesn't have to re-provision over and over again when you change different sections of the configuration. Each section with pending changes is highlighted by an ellipsis.

When you are done with your changes, click **Apply Changes** at the bottom of the screen. (You can cancel the changes of any section by clicking *X* of the appropriate section.)

Cancel Click Cancel to discard changes.

4			
DISABLED DISCONNECTED	1 GBPS 100/10 MBPS	10 GBPS <i>†</i> POE	STP BLOCKING     MIRROR
V SERVICES	figuration		
LAN			~
Enable jumbo frame     Enable flow control			
Spanning Tree RSTP STP	Disabled		
Priority			
32768 Enable 802.1x contr	ol		
QUEUE CHANGES	ANCEL		
> NETWORK			
> COPY CONFIG			
Services × APPLY C	HANGES		

**Pending Changes** If you want queue changes for multiple devices and then apply them later, the *Pending Changes* option appears in the *Properties* panel. Click V to display the devices.

PROPERTIE	S 2 PENDING	CHANGES $\checkmark$	$\equiv = \gg$
~	Lab US-16-150W		® ⊿ X
	USG-PRO-4	,	-

- Apply Click < APPLY to save changes.
- Discard Click  $\,\times\,$   $_{\text{DISCARD}}$  to cancel changes.

#### Network

**Configure IP** Select the management IP configuration of the switch, **Using DHCP** or **Static IP**.

• 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.

✓ NETWORK	
Configure IP	
Using DHCP	~
QUEUE CHANGES CANCEL	

- **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.

Static IP		$\sim$
IP Address	Preferred DNS	
192.168.1.246		
Subnet Mask	Alternate DNS	
Gateway	DNS Suffix	

Queue Changes Click Queue Changes to line up the changes to take effect. This allows you to make multiple changes to the device and then apply them all at once so that the device doesn't have to re-provision over and over again when you change different sections of the configuration. Each section with pending changes is highlighted by an ellipsis.

When you are done with your changes, click **Apply Changes** at the bottom of the screen, or click *Cancel* to discard changes. (You can cancel the changes of any section by clicking X of the appropriate section.)

Cancel Click Cancel to discard changes.

**Pending Changes** If you want queue changes for multiple devices and then apply them later, the *Pending* 

*Changes* option appears in the **Properties** panel. Click V to display the devices.

- Apply Click < APPLY to save changes.
- **Discard** Click × DISCARD to cancel changes.

## **Copy Config**

If you have settings that you want to apply to multiple Switches, use this option to copy the configuration.

✓ COPY CONFIG					
You may copy a sim	nilar switch's d	configuration	n onto this s	witch.	
Copy from	$\sim$				

**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.

	STOM UPGRADE	
		firmware update. This URL must be
eacha	able by the device.	
ftp://p	oath.to/update.bin or http://path.to/u	update.bin
🛃 CL	ISTOM UPGRADE	

#### (location URL) Enter the UL of the firmware's location.

**Custom Upgrade** Click CUSTOM UPGRADE to upgrade the firmware from the location you entered.

### **Debug Terminal**

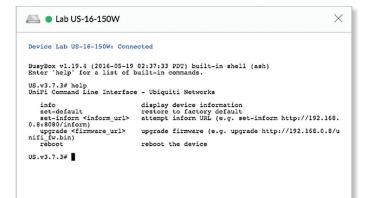
This option uses a WebRTC connection as transport layer. To use a command-line interface, click **Open Terminal**.

✓ DEBUG TERMINAL

Open a terminal to connect directly to this device.

OPEN TERMINAL

**Open Terminal** Click **Open Terminal** to connect directly to this Switch. A new window will appear.



• **help** Enter **help** at the command line for a list of built-in commands.

## **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.

# Chapter 12: UniFi Access Point Details

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

# **Properties**

The *Properties* panel appears on the right side of the screen. Information about each selected device appears as a popup within this panel.

		◎≛☑×
etails Users C	Guests Configuration	
∨ OVERVIEW		
MAC Address	44:d9:e7:f2:0e:00	
Model	UniFi AP-AC-Pro Gen2	
Version	3.6.1.3553	
IP Address	192.168.1.134	
Uptime	31d 22h 46m 31s	
# Users	4	
# Guests	0	
> UPLINK (WIRE	D)	
> RADIO (11N/B	:/G)	
> RADIO (11N/A	.)	
> RF ENVIRONM	IENT	

**Remove All** Click to close the *Properties* panel. **Collapse All** Click to collapse all of the popups to rows.

PROPERTIES	$\equiv$ $\Rightarrow$
> (o) • AC-LR-Basement	© ⊘ Z ×
> (o) • AC-Pro-Crawlspace	$\circ \circ \textcircled{=} \square \times$
> 🧿 🛛 AC-LITE	© ⊘⊿×

The top of the popup remains and displays the following:

- **Display** Click > to display the device information.
- (icon) Displays the icon of the device (the icon will vary depending on the model).
- (status) Displays to indicate the device status.
  - **Pending Approval** A solid orange circle indicates the default state, available for adoption.
  - **Connected** A solid green circle **•** indicates a managed connection.
  - Managed by Other A solid gray circle indicates that the device is not in the default state but not controlled by the current UniFi Controller.

- **Disconnected or Isolated** A red warning icon A indicates no connection. 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.
- Name/MAC Address Displays the device name or MAC address of the device.
- Restart Click  $\bigcirc$  to restart the selected device.
- Locate Click <sup>(?)</sup> to flash the LED on the device and the device 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.)
- Upgrade Click to upgrade the device. (This icon does not appear if an upgrade is not available or there are pending changes.)
- Undock from Properties Panel Click C to display the same information in a separate popup screen that can be moved anywhere within the browser screen.
- Close Properties Click imes to close the device popup.

**Hide Property Panel** Click  $\gg$  to hide the *Properties* panel but allow the device popups to remain accessible from this panel. Click the *properties*  $\textcircled{\bullet}$  icon to re-open it.

There are four clickable tabs:

- <u>"UniFi Access Point Details" on page 104</u>
- <u>"UniFi Access Point Users" on page 107</u>
- <u>"UniFi Access Point Guests" on page 108</u>
- <u>"UniFi Access Point Configuration" on page 108</u>

# UniFi Access Point – Details

Click **Overview** to display the device specifics, connection details, uptime, and user statistics.

# Overview

AC-Pro-Crawlspace     CONNECTED		৫ ৩ ≛ র >
etails Users Guests	Configuration	
V OVERVIEW		
MAC Address	44:d9:e7:f2:0e:00	
Model	UniFi AP-AC-Pro Gen2	
Version	3.6.1.3553	
IP Address	192.168.1.134	
Uptime	31d 22h 48m 32s	
# Users	4	
# Guests	0	
> UPLINK (WIRED)		
> RADIO (11N/B/G)		
> RADIO (11N/A)		
> RF ENVIRONMENT		

**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 (Wired)

If your AP has a wired uplink connection, click **Uplink** (Wired) to display details about the wired uplink.

etails Users Guests	Configuration	
> OVERVIEW		
imes UPLINK (WIRED)		
Uplink	DownStairs US-48-500W #1	
Speed	1000	
Duplex	Full duplex	
Down Pkts/Bytes	124 MB / 2.58 GB	
Up Pkts/Bytes	246 MB / 1.05 GB	
Activity	304 KB/s	
> RADIO (11N/B/G)		
> RADIO (11N/A)		

**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.

**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.

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.

0 A 04:18:d6:c0:7c	db	」)
etails Configuration		
> OVERVIEW		
$\vee$ UPLINK (WIRELESS	)	
Uplink AP	Suite A EDU	
Signal		
Tx Rate		
Rx Rate		
Down Pkts/Bytes	0.00 / 0.00	
Up Pkts/Bytes	0.00 / 0.00	
Activity	0 B/s	

**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.

## **Downlink**

The wireless APs currently connected to the wired AP are displayed.

	C @ 키 X
SIGNAL	ACTIONS
	Ŵ
	SIGNAL

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** Click in to 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.

∨ RADIO (11N/B/G)		
Channel	6	
Transmit Power	14 dBm (EIRP)	
Tx Pkts/Bytes	171 KB / 24.2 MB	
Rx Pkts/Bytes	14.3 KB / 3.18 MB	
Tx Retry/Dropped	0.0% / 82.9%	
Rx Retry/Dropped	0.0% / 0.0%	
Ch. Util. (Busy/Rx/Tx)	34% / 24% / 3%	
# Users	0	
# Guests	0	
> RADIO (11N/A)		
> RF ENVIRONMENT		

∨ RADIO (11N/A)		
Channel	161,-1	
Transmit Power	22 dBm (EIRP)	
Tx Pkts/Bytes	76.8 MB / 5.35 GB	
Rx Pkts/Bytes	161 MB / 203 GB	
Tx Retry/Dropped	0.0% / 0.4%	
Rx Retry/Dropped	0.0% / 6.9%	
Ch. Util. (Busy/Rx/Tx)	5% / 4% / 0%	
# Users	4	
# Guests	0	

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.

**Ch. Util. (Busy/Rx/Tx)** Displays channel utilization statistics:

- **Busy** This number indicates how busy the channel is. This represents the sum of Tx, Rx, and also non-WiFi interference.
- **Rx** This number indicates how often the radio is in active receive mode (calculated for all traffic received on the channel, whether for this AP or not).
- **Tx** This number indicates how often the radio is in active transmit mode.

**# Users** Displays the number of users connected to the primary network.

**# Guests** Displays the number of guests connected to the guest network.

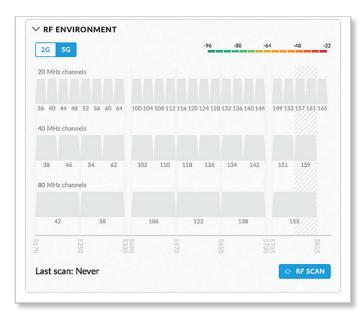
#### **RF Environment**



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.

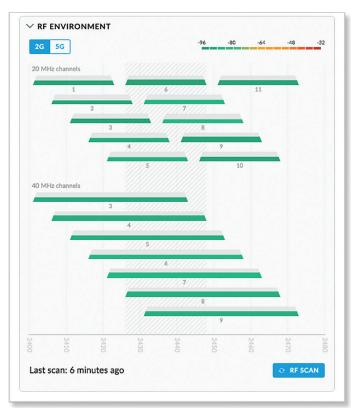
2G 5G					-96	-80	)	-64	-48	-32
20 MHz channels										
1				6////				11		
	2			7						
	4			y parties a						
		3			8					
			4//////			9				
			////5/				10			
40 MHz channels										
		3								
			4/////							
			/////5//							
				6						
				/////7/						
					1.8					
					///					
						9				
2410	2420	5	2430	2440		2450	2400		2470	-
		,								
Last scan: Nev									⊖ RF S	



**2G/5G** Select the frequency band you want to analyze. **RF Scan** Click **CRESCAN** 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.



2G 5G		-96	-80	-64 -48	-3
20 MHz channels				1	
36 40 44 48 52 56 60 64 40 MHz channels	100 104 108 11	2 116 120 124 128	132 136 140 14	14 149 153 157	7 161 165
38 46 54 62 80 MHz channels	102 110	118 126	134 142	151 1	59
42 58	106	122	138	155	
5250	5490	5570	5650	5735	5815
Last scan: 6 minutes ag	'n			⊖ RF	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).

<u>MHz</u> 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:

**Overview** 

- Radio Displays the radio being used.
- Channel Width Displays the width of the channel.
- Frequency Range Displays the range of frequencies.

**RF Scan Details** 

- **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.

OVERVIEW	
Radio	2G (11n/b/g)
Channel Width	20 MHz
Frequency Range	2426 - 2448 MHz
RF SCAN DETAILS	5
Utilization	53%
Interference	-95 dBm

**Last scan** Displays the duration of time since the last scan.

# **UniFi Access Point – Users**

tails Users Guests	Configuration	
NAME/WLAN ↑	SIGNAL	TX RATE
Amazon Echo Z	-55 dBm	243 Mbps
UVCu1 test	-72 dBm	81.5 Mbps
UVCu3 test	-68 dBm	108 Mbps
UVCu7 test	-67 dBm	150 Mbps

(sort) You can click any column to sort the displayed list. The selected column displays  $\uparrow$  or  $\downarrow$  to indicate ascending or descending order.

**Name** Displays the hostname, alias, or MAC address of the connected client and the name or SSID of the wireless network in use. You can click the name to get additional details; see <u>"Client Details" on page 117</u> for more information.

**Signal** Displays the signal strength between the user and AP.

**TX Rate** Displays the transmit rate.

# **UniFi Access Point – Guests**

Details	Users	Guests	Configuration		
NAME	WLAN 1		SIGNAL	TX RATE	

(sort) You can click any column to sort the displayed list. The selected column displays  $\uparrow$  or  $\downarrow$  to indicate ascending or descending order.

Name/WLAN Displays the hostname, alias, or MAC address of the connected guest and the name or SSID of the wireless network in use. You can click the guest name to get additional details; see <u>"Client Details" on page</u> <u>117</u> for more information.

**Signal** Displays the signal strength between the guest and AP.

TX Rate Displays the transmit rate.

# **UniFi Access Point – Configuration**

Change device configuration settings.

## General

AC-Pro-Crawlspace     CONNECTED	C (° ≛ ⊼ X
Details Users Guests Configuration	
✓ GENERAL Alias	
AC-Pro-Crawlspace	
SAVE CANCEL	
> radios	
> WLANS	
> NETWORK	
> BAND STEERING	
> AIRTIME FAIRNESS	
> CUSTOM UPGRADE	
> FORGET THIS DEVICE	

Alias Enter or edit the customizable name or identifier of the AP. The *Alias* is also known as the host name.

Save Click Save to apply the change.

Cancel Click Cancel to discard changes.

## Radios

Channel				
6		$\sim$	HT20	$\sim$
Transmit Power				
Medium		$\sim$		
Minimum RSSI				
-94	dBm			
Channel 161		~	VHT40	
Transmit Power				
High		$\sim$		
Minimum RSSI				

**Channel** Select the appropriate settings:

- Auto/(channel number) Select a channel number or keep the default, Auto.
- HT20/HT40/HT80 (Available for 2.4 GHz only.) 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.
- VHT20/VHT40/VHT80 (Available for 5 GHz only.) Select VHT20 for 20 MHz operation, VHT40 for 40 MHz operation, or VHT80 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.

**Transmit 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.

Minimum RSSI Disabled by default. Select this option and enter a minimum threshold (we recommend a value in this range: -70 to -90 dBm). 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 *Minimum RSSI* setting cannot be changed.

Queue Changes Click Queue Changes to line up the changes to take effect. This allows you to make multiple changes to the device and then apply them all at once so that the device doesn't have to re-provision over and over again when you change different sections of the configuration. Each section with pending changes is highlighted by an ellipsis.

When you are done with your changes, click **Apply Changes** at the bottom of the screen. (You can cancel the changes of any section by clicking *X* of the appropriate section.)

**Cancel** Click *Cancel* to discard changes.

etails Users Guests Configuration          > GENERAL            RADIO S          RADIO ZG (11N/B/G)         Channel         Auto         Auto         Transmit Power         Auto         Auto         Iminimum RSSI         Iminimit Power <t< th=""><th>Lab UAP-AC-LR     CONNECTED</th><th>C (</th></t<>	Lab UAP-AC-LR     CONNECTED	C (
RADIOS RADIO 2G (11N/B/G) Channel Auto ITransmit Power Auto 94 dBm RADIO 5G (11N/A/AC) Channel Auto VHT40 Transmit Power Auto VHT40 VHT40 VHT40 VHT40 VHT40 Auto Minimum RSSI -94 dBm QUEUE CHANGES CANCEL > WLANS > NETWORK > BAND STEERING > AIRTIME FAIRNESS > CUSTOM UPGRADE > DEBUG TERMINAL	Details Users Guests Configuration	
RADIO 2G (11N/B/G) Channel Auto Transmit Power Auto Minimum RSSI  -94 dBm  RADIO 5G (11N/A/AC) Channel Auto VHT40 VHT40 VTansmit Power Auto Minimum RSSI -94 dBm  QUEUE CHANGES CANCEL  > WLANS > NETWORK  > BAND STEERING  > AIRTIME FAIRNESS > CUSTOM UPGRADE  > DEBUG TERMINAL	> GENERAL	
Transmit Power   Auto   Minimum RSSI <ul> <li>-94</li> <li>dBm</li> </ul> RADIO 5G (11N/A/AC)   Channel   Auto   VHT40   Transmit Power   Auto   VHT40   Transmit Power   Auto   VHT40	RADIO 2G (11N/B/G)	
Auto   Minimum RSSI   -94   dBm     RADIO 5G (11N/A/AC)   Channel   Auto   Auto   VHT40   Transmit Power   Auto   Auto   VHT40   VHT40     VHT40     VHT40     VHT40     VHT40     VHT40     Auto     VHT40	Auto	HT20 ~
Minimum RSSI	Transmit Power	
✓ -94 dBm RADIO 5G (11N/A/AC) Channel Auto ∨ VHT40 ∨ Transmit Power Auto ✓ Minimum RSSI -94 dBm QUEUE CHANGES CANCEL > WLANS > NETWORK > BAND STEERING > AIRTIME FAIRNESS > CUSTOM UPGRADE > DEBUG TERMINAL	Auto	
RADIO SG (11N/A/AC) Channel Auto VHT40 V Transmit Power Auto Minimum RSSI - 94 dBm QUEUE CHANGES CANCEL > WLANS > NETWORK > BAND STEERING > AIRTIME FAIRNESS > CUSTOM UPGRADE > DEBUG TERMINAL	Minimum RSSI	
Channel   Auto VHT40   Transmit Power   Auto   Auto   Minimum RSSI   -94   GUEUE CHANGES   cANCEL     > WLANS   > WLANS   > NETWORK   > BAND STEERING   > AIRTIME FAIRNESS   > CUSTOM UPGRADE   > DEBUG TERMINAL	✓ -94 dBm	
Auto VHT40   Transmit Power   Auto   Auto   Auto   Minimum RSSI   -94   dBm   QUEUE CHANGES CANCEL   > WLANS   > WLANS   > WLANS   > NETWORK   > BAND STEERING   > AIRTIME FAIRNESS   > CUSTOM UPGRADE   > DEBUG TERMINAL	RADIO 5G (11N/A/AC)	
Transmit Power          Auto         Auto         Minimum RSSI         -94         0         -94         dBm         QUEUE CHANGES         CANCEL         > WLANS         > NETWORK         > BAND STEERING         > AIRTIME FAIRNESS         > CUSTOM UPGRADE         > DEBUG TERMINAL	Channel	
Auto   Minimum RSSI   -94   GUEUE CHANGES   CANCEL   > WLANS   > NETWORK   > BAND STEERING   > AIRTIME FAIRNESS   > CUSTOM UPGRADE   > DEBUG TERMINAL	Auto	VHT40 $\lor$
Minimum RSSI -94 dBm QUEUE CHANGES CANCEL > WLANS > NETWORK > BAND STEERING > AIRTIME FAIRNESS > CUSTOM UPGRADE > DEBUG TERMINAL	Transmit Power	
-94 dBm   QUEUE CHANGES CANCEL   > WLANS   > NETWORK   > BAND STEERING   > AIRTIME FAIRNESS   > CUSTOM UPGRADE   > DEBUG TERMINAL	Auto	
QUEUE CHANGES   > WLANS   > NETWORK   > BAND STEERING   > AIRTIME FAIRNESS   > CUSTOM UPGRADE   > DEBUG TERMINAL	Minimum RSSI	
<ul> <li>&gt; WLANS</li> <li>&gt; NETWORK</li> <li>&gt; BAND STEERING</li> <li>&gt; AIRTIME FAIRNESS</li> <li>&gt; CUSTOM UPGRADE</li> <li>&gt; DEBUG TERMINAL</li> </ul>	-94 dBm	
<ul> <li>&gt; NETWORK</li> <li>&gt; BAND STEERING</li> <li>&gt; AIRTIME FAIRNESS</li> <li>&gt; CUSTOM UPGRADE</li> <li>&gt; DEBUG TERMINAL</li> </ul>	QUEUE CHANGES CANCEL	
<ul> <li>&gt; BAND STEERING</li> <li>&gt; AIRTIME FAIRNESS</li> <li>&gt; CUSTOM UPGRADE</li> <li>&gt; DEBUG TERMINAL</li> </ul>	> WLANS	
<ul> <li>&gt; AIRTIME FAIRNESS</li> <li>&gt; CUSTOM UPGRADE</li> <li>&gt; DEBUG TERMINAL</li> </ul>	> NETWORK	
> CUSTOM UPGRADE > DEBUG TERMINAL	> BAND STEERING	
> DEBUG TERMINAL	> AIRTIME FAIRNESS	
	> CUSTOM UPGRADE	
> FORGET THIS DEVICE	> DEBUG TERMINAL	
	> FORGET THIS DEVICE	

**Pending Changes** If you want queue changes for multiple devices and then apply them later, the *Pending Changes* option appears in the *Properties* panel. Click V to display the devices.

PROPER	TIES 2 PENDING CHANG	$ses \sim = \equiv \gg$
∼ (	Lab UAP-AC-LR	> © ⊿ ×
- /	USG-PRO-4	

- Apply Click < APPLY to save changes.
- **Discard** Click  $\times$  DISCARD to cancel changes.

#### WLANs

You can deploy multiple wireless networks organized into WLAN groups on different APs.

VLAN 2G (11N/B/	'G)	
WLAN Group		
Default		$\sim$
NAME	OVERRIDES	ACTIONS
test		Ø
Z		Ø
guest		Ø
WLAN Group		~
Default	OVERRIDES	ACTIONS
NAME		
NAME		-
	VLAN: Disabled	1
test	VLAN: Disabled	0

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:

 Edit Click 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.

Queue Changes Click Queue Changes to save changes. Cancel Click Cancel to discard changes.

## Override

WLAN 2G (11N/B/G) - OVER	RRIDE TEST
Enabled on this AP	
Use VLAN with VLAN ID	
SSID	
test	
Security Key	
Security Key	

**Enabled on this AP** Select the checkbox to enable the WLAN for use.

Use VLAN Select the checkbox to enable the VLAN.

• with 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.

**Security Key** 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:

- Save Click Save to apply changes.
- Reset to Defaults Click Reset to Defaults 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** or **Static IP**. Proceed to the appropriate instructions.

Using DHCP

 Using DHCP The use of the Dynamic Host Configuration Protocol (DHCP) is the default. The AP automatically acquires network settings from the network's DHCP server.

NETWORK	
Configure IP	
Using DHCP	$\vee$
QUEUE CHANGES CANCEL	

 Queue Changes Click Queue Changes to line up the changes to take effect. This allows you to make multiple changes to the device and then apply them all at once so that the device doesn't have to re-provision over and over again when you change different sections of the configuration. Each section with pending changes is highlighted by an ellipsis.

When you are done with your changes, click **Apply Changes** at the bottom of the screen. (You can cancel the changes of any section by clicking *X* of the appropriate section.)

- Cancel Click Cancel to discard changes.
- Pending Changes If you want queue changes for multiple devices and then apply them later, the *Pending Changes* option appears in the *Properties* panel. Click V to display the devices.
  - Apply Click < APPLY to save changes.
  - **Discard** Click × DISCARD to cancel changes.

#### **Static IP**

- **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.
- Queue Changes Click Queue Changes to save changes.
- Cancel Click Cancel to discard changes.

Static IP		$\sim$
IP Address	Preferred DNS	
192.168.1.134		
Subnet Mask	Alternate DNS	
Gateway	DNS Suffix	

- **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.
- Queue Changes Click Queue Changes to line up the changes to take effect. This allows you to make multiple changes to the device and then apply them all at once so that the device doesn't have to re-provision over and over again when you change different sections of the configuration. Each section with pending changes is highlighted by an ellipsis.

When you are done with your changes, click **Apply Changes** at the bottom of the screen. (You can cancel the changes of any section by clicking *X* of the appropriate section.)

- Cancel Click Cancel to discard changes.
- Pending Changes If you want queue changes for multiple devices and then apply them later, the Pending Changes option appears in the Properties panel. Click V to display the devices.
  - Apply Click < APPLY to save changes.
  - **Discard** Click  $\times$   ${}^{\mbox{\tiny DISCARD}}$  to cancel 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.

AC-Pro-Crawlspace     CONNECTED	C ( ) 키 ×
Details Users Guests Configuration	
> GENERAL	
> RADIOS	
> WLANS	
> NETWORK	
$\vee$ band steering	
BAND STEERING     Prefer 5G Balanced Off     QUEUE CHANGES CANCEL	
Prefer 5G Balanced Off	
Prefer 5G Balanced Off QUEUE CHANGES CANCEL	
Prefer 5G Balanced Off QUEUE CHANGES CANCEL AIRTIME FAIRNESS	

**Prefer 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.

Queue Changes Click Queue Changes to line up the changes to take effect. This allows you to make multiple changes to the device and then apply them all at once so that the device doesn't have to re-provision over and over again when you change different sections of the configuration. Each section with pending changes is highlighted by an ellipsis.

When you are done with your changes, click **Apply Changes** at the bottom of the screen. (You can cancel the changes of any section by clicking *X* of the appropriate section.) Cancel Click Cancel to discard changes.

**Pending Changes** If you want queue changes for multiple devices and then apply them later, the *Pending Changes* option appears in the *Properties* panel. Click V to display the devices.

- Apply Click < APPLY to save changes.
- **Discard** Click × DISCARD to cancel changes.

#### **Airtime Fairness**

Note: Only the UAP-AC-LITE, UAP-AC-LR, UAP-AC-PRO, and UAP-AC-EDU models support airtime fairness.

The *Airtime Fairness* option helps multiple users to share the bandwidth of a single AP.

8:d6:10:60:d6 ro-Crawlspace	C © 키 X
Details Users Guests Configuration	
> GENERAL	
> RADIOS	
> WLANS	
> NETWORK	
> BAND STEERING	
✓ AIRTIME FAIRNESS	
On <b>O</b> Off	
QUEUE CHANGES CANCEL	
> CUSTOM UPGRADE	
> DEBUG TERMINAL	
> FORGET THIS DEVICE	

**On/Off** Disabled by default. Select **On** to enable this option.

Queue Changes Click Queue Changes to line up the changes to take effect. This allows you to make multiple changes to the device and then apply them all at once so that the device doesn't have to re-provision over and over again when you change different sections of the configuration. Each section with pending changes is highlighted by an ellipsis.

When you are done with your changes, click **Apply Changes** at the bottom of the screen. (You can cancel the changes of any section by clicking *X* of the appropriate section.)

Cancel Click Cancel to discard changes.

**Pending Changes** If you want queue changes for multiple devices and then apply them later, the *Pending Changes* option appears in the *Properties* panel. Click V to display the devices.

- Apply Click < APPLY to save changes.
- **Discard** Click  $\times$  DISCARD to cancel 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.

Details       Users       Guests       Configuration         > GENERAL	
<ul> <li>&gt; RADIOS</li> <li>&gt; WLANS</li> <li>&gt; NETWORK</li> <li>&gt; BAND STEERING</li> <li>&gt; AIRTIME FAIRNESS</li> </ul>	
<ul> <li>&gt; WLANS</li> <li>&gt; NETWORK</li> <li>&gt; BAND STEERING</li> <li>&gt; AIRTIME FAIRNESS</li> </ul>	
<ul> <li>&gt; NETWORK</li> <li>&gt; BAND STEERING</li> <li>&gt; AIRTIME FAIRNESS</li> </ul>	
BAND STEERING     AIRTIME FAIRNESS	
> AIRTIME FAIRNESS	
✓ CUSTOM UPGRADE	
Please enter the location URL for the firmware update. This URL reachable by the device.	must be
ftp://path.to/update.bin or http://path.to/update.bin	
L CUSTOM UPGRADE	
> FORGET THIS DEVICE	

## (location URL) Enter the UL of the firmware's location.

**Custom Upgrade** Click CUSTOM UPGRADE to upgrade the firmware from the location you entered.

## **Forget This AP**

AC-Pro-Crawlspace     CONNECTED	
Details Users Guests Configuration	
> GENERAL	
> RADIOS	
> WLANS	
> NETWORK	
> BAND STEERING	
> AIRTIME FAIRNESS	
> CUSTOM UPGRADE	
✓ FORGET THIS DEVICE	
If you no longer wish to manage this device, you configuration and history with respect to this dev	

**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.

#### **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.

etails Configuration			
SENERAL			
> RADIOS			
> WLANS			
> NETWORK			
> AIRTIME FAIRNESS			
V WIRELESS UPLINKS	5		
✓ WIRELESS UPLINKS	CHANNEL	SIGNAL	ACTION
		SIGNAL	
AP		signal 67%	
AP Suite A EDU	CHANNEL		Ŵ
AP Suite A EDU Suite B EDU	CHANNEL 40	67%	1 10 10
AP Suite A EDU Suite B EDU Conference Room	CHANNEL 40 44	67% 99%	111 111 111
AP Suite A EDU Suite B EDU Conference Room Suite C EDU	CHANNEL 40 44 153 157	67% 99% 99%	6) 6) 6)

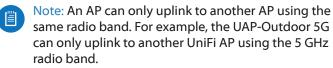
**AP** Displays the hostname, alias, or MAC address of the potential Uplink AP. You can click the name to get additional details.

**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 to connect the wireless AP to the wired AP.
- **Remove** Click in to disconnect the wireless AP from the wired AP.



### **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.

0 <b>A</b> 04:18:d6:c0:7c:db		$\exists X$
etails Configuration		
✓ OVERVIEW		
MAC Address	04:18:d6:c0:7c:db	
Model	UniFi AP-AC-Lite	
Version	N/A	
Last Seen	29 minutes ago	

In an *Isolated* or *Disconnected* state, the *Map* tab displays the AP icon with a red/orange LED and *disconnected* sicon.

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.

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.

### **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

<ul> <li>04:18:d6:00:</li> <li>MANAGED BY O</li> </ul>	THER	
etails Adopt		
✓ OVERVIEW		
MAC Address	04:18:d6:00:54:94	
Model	UniFi AP-Outdoor+	
Version	3.3.15.3976	
Last Seen	a minute ago	

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.

#### Adopt

tails Adopt	
ADVANCED ADOPT	
P Address	Port
10.0.2.212	
Username	Password
nform URL	

IP Address Displays the IP address of the AP.

Port Displays 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 20**.

**Password** Enter the SSH Password for management access. This is the *Device Password* you configured in **"Settings > Site" on page 20**.

**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.

Cancel Click Cancel to discard changes.

## **Access Point - Pending Approval**

The *Pending Approval* state indicates that the Access Point is in the default state and is available for adoption.

44:d9:e7:d8: PENDING APPR		
etails		
∨ OVERVIEW		
MAC Address	44:d9:e7:d8:1e:ba	
Model	UniFi AP-In Wall	
Version	develop.4423	
Last Seen	a few seconds ago	

#### 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.

If you want to manage this AP using the UniFi Controller software, then click **Adopt** on the *Devices* screen.

# Chapter 13: UniFi VoIP Phone Details

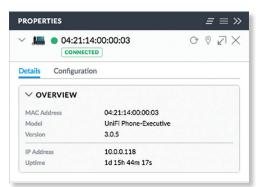
A UniFi VolP Phone hyperlink opens the UniFi VolP Phone's *Details* window either in the *Properties* panel or as a separate popup window. You can always dock this window in the *Properties* panel or detach it as a separate window.



Important: For management of the UniFi VoIP Phones, please download the UniFi VoIP Controller here: **downloads.ubnt.com/unifi** 

# **Properties**

The *Properties* panel appears on the right side of the screen. Information about each selected device appears as a popup within this panel.



# Remove All Click to close the *Properties* panel. Collapse All Click to collapse all of the popups to rows.

PROPERTIES	$\equiv$ $\Rightarrow$ »
> 📕 🖲 04:21:14:00:00:02	${\tt C} \mathbin{\scriptstyle \oslash} {\tt Z} \times$
> 📕 🖲 04:21:14:00:00:03	° ₽ X
> 📕 🛯 04:21:14:00:00:01	œ ଡ଼ ₂X
> 📕 🛯 04:21:14:00:00:04	C®Z×

The top of the popup remains and displays the following:

- **Display** Click > to display the device information.
- (icon) Displays the icon of the device (the icon will vary depending on the model).
- (status) Displays to indicate the device status.
  - **Pending Approval** A solid orange circle indicates the default state, available for adoption.
  - **Connected** A solid green circle **I** indicates a managed connection.
  - Managed by Other A solid gray circle indicates that the device is not in the default state but not controlled by the current UniFi Controller.
  - **Disconnected** A red warning icon **A** indicates no connection.

- Name/MAC Address Displays the device name or MAC address of the device.
- Restart Click  $\bigcirc$  to restart the selected device.
- Locate Click <sup>(\*)</sup> 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.)
- Upgrade Click to upgrade the device. (This icon does not appear if an upgrade is not available or there are pending changes.)
- Undock from Properties Panel Click C to display the same information in a separate popup screen that can be moved anywhere within the browser screen.
- Close Properties Click imes to close the device popup.

**Hide Property Panel** Click  $\gg$  to hide the *Properties* panel but allow the device popups to remain accessible from this panel. Click the *properties*  $\blacksquare$  icon to re-open it.

There are two clickable tabs:

- Details
- <u>"UniFi VoIP Phone Configuration" on page 116</u>

# **UniFi VoIP Phone – Details**

The Overview displays the device specifics and uptime.

### **Overview**

04:21:14:00:00:03 CONNECTED		৫ ৩ সা×
etails Configuration		
✓ OVERVIEW		
MAC Address	04:21:14:00:00:03	
Model	UniFi Phone-Executive	
Version	3.0.5	
ID Address	10.0.0.118	
IP Address		

**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.

## **Forget This Phone**

etails	Configuration	
	RGET THIS DEVICE	
	no longer wish to manage this device,	you may remove it. Note that all
	guration and history with respect to this	

**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**

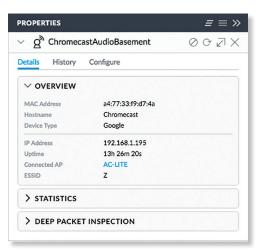
A client hyperlink opens the client's *Details* window either in the *Properties* panel or as a separate popup window. You can always dock this window in the *Properties* panel or detach it as a separate window.

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

# **Properties**

The *Properties* panel appears on the right side of the screen. Information about each selected device appears as a popup within this panel. The information varies depending on whether the client is wired or wireless:

- Wireless Client Details
- <u>"Wired Client Details" on page 119</u>



**Remove All** Click to close the *Properties* panel. **Collapse All** Click to collapse all of the popups to rows.

PROPERTIES	$\Xi \equiv \gg$
> <u>_</u> DiskStation	$\oslash \oslash \times$
> g ChromecastAudioBasement	002×
> g Amazon Echo	$\bigcirc \bigcirc \bigcirc \bigcirc \land \times$

The top of the popup remains and displays the following:

- **Display** Click > to display the device information.
- (icon) Displays the icon of a wireless or wired device.
- Name/MAC Address Displays the hostname, alias, or MAC address of the device.
- Block Click O to block this client from accessing the network.
- Reconnect Click C to reconnect a wireless client. You can click C o 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 ⊖ to remove authorization of guest access and disconnect the guest, or click ⊕ for guests pending authorization.
- Undock from Properties Panel Click ∠<sup>¬</sup> to display the same information in a separate popup screen that can be moved anywhere within the browser screen.
- Close Properties Click imes to close the device popup.

**Hide Property Panel** Click  $\gg$  to hide the *Properties* panel but allow the device popups to remain accessible from this panel. Click the *properties*  $\textcircled{\bullet}$  icon to re-open it.

There are four clickable tabs:

- Details
- Statistics
- History
- Configuration

# **Wireless Client – Details**

etails	History	Configure		
~ ov	ERVIEW			
MAC Ad	idress		a4:77:33:f9:d7:4a	
Hostnan	ne		Chromecast	
Device 1	Туре		Google	
IP Addre	ess		192.168.1.195	
Uptime			13h 26m 20s	
Connect	ted AP		AC-LITE	
ESSID			Z	
> sta	ATISTICS			

**MAC Address** Displays the MAC address or unique hardware identifier of the client.

**Hostname** Displays the customizable name or identifier of the client.

Device Type Displays the type of device.

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 <u>"UniFi Access Point Details" on</u> **page 103** for more information.

**ESSID** Displays the name of the wireless network.

# Wireless Client – Statistics

## Overview

etails History Cor	figure	
> OVERVIEW		
✓ STATISTICS		
Channel	149 (11ac)	
Signal	64% (-64 dBm)	
TX Rate	200 Mbps	
RX Rate	433 Mbps	
Power Save	Not enabled	
Activity	1.42 KB/s	
Down Pkts/Bytes	32.2 KB / 2.25 MB	
Up Pkts/Bytes	34.4 KB / 40.1 MB	

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 <u>"Settings > Site" on page</u> <u>20</u> for more information).

tails History Configure		
> OVERVIEW		
> STATISTICS		
✓ DEEP PACKET INSPECTION	BYTES ↓	PACKETS
	<b>BYTES ↓</b> 26.4 MB	PACKETS 118090
APPLICATION		
APPLICATION HTTP Protocol over TLS SSL	26.4 MB	118090
APPLICATION HTTP Protocol over TLS SSL Google(SSL)	26.4 MB 11 MB	118090 27944

(sort) You can click any column to sort the displayed list. The selected column displays  $\uparrow$  or  $\downarrow$  to indicate ascending or descending order.

**Application** Displays the name of the application.

**Bytes** Displays the amount of data uploaded and downloaded as bytes.

**Packets** Displays the amount of data uploaded and downloaded as packets.

# Wireless Client – History

etails History Configu	ire		
DATE/TIME	DURATION	DOWN	UP
04/21/2016 03:22 am	3d 7h 32m 43s	18.4 MB	328 MB
04/02/2016 05:37 pm	1d 21h 16m 35s	17.8 MB	277 MB
03/13/2016 04:07 pm	7m 44s	62.4 KB	1.4 MB
02/22/2016 03:18 pm	12d 10h 49m 31s	151 MB	1.66 GB
02/11/2016 04:31 pm	10d 22h 41m 39s	898 MB	1.89 GB

**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

$g^{\mathfrak{d}}$ ChromecastAudioBasement	$\bigcirc \bigcirc $ $\square \times$
etails History Configure	
✓ GENERAL	
Alias	
ChromecastAudioBasement	
Note	
User Group	
Automatic	$\sim$
SAVE CANCEL	
> NETWORK	

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 <u>"Settings > User Groups" on</u> **page 40** for more information). The default *User Group* is *Automatic*.

Save Click Save to apply changes.

## **IP Config**

$g^{\mathfrak{h}}$ ChromecastAudioBasement	$\bigcirc \bigcirc \neg $
Details History Configure	
> GENERAL	
✓ NETWORK	
Use fixed IP address	
Network	
LAN	$\sim$
IP Address	
192.168.1.195	
APPLY CANCEL	

**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 Address Enter the local IP address.

Apply Click Apply to save changes.

# Wired Client – Details

Details History	Configure		
$\sim$ overview			
MAC Address		00:11:32:55:05:a1	
Hostname		DiskStation	
Device Type		Synology	
IP Address		192.168.1.40	
Uptime		30d 18h 21m 7s	
Network		LAN	
Port		DownStairs US-48-500W #15	
> STATISTICS			

**MAC Address** Displays the MAC address or unique hardware identifier of the client.

**Hostname** Displays the customizable name or identifier of the client.

**Device Type** Displays the type of device.

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**

etails History Cont	figure	
> OVERVIEW		
∨ STATISTICS		
Activity	17 B/s	
Down Pkts/Bytes	3.22 KB / 329 KB	
Up Pkts/Bytes	13.1 KB / 1.64 MB	

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 <u>"Settings > Site" on page</u> <u>20</u> for more information).

tails History Configure		
> OVERVIEW		
> STATISTICS		
> STATISTICS <ul> <li>DEEP PACKET INSPECTION</li> </ul>		
	BYTES ↓	PACKETS
V DEEP PACKET INSPECTION	BYTES ↓ 7.46 KB	PACKETS 15
V DEEP PACKET INSPECTION		

(sort) You can click any column to sort the displayed list. The selected column displays  $\uparrow$  or  $\downarrow$  to indicate ascending or descending order.

**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

etails	listory Configu	ire		
DATE/TIM	E	DURATION	DOWN	UP
03/20/20	16 08:36 pm	2d 11h 54m 31s	974 KB	9.49 MB
03/12/20	16 08:04 pm	15m 17s	2.59 KB	2.91 KB
03/12/20	16 06:44 pm	5m 16s	1.25 KB	1.42 KB
03/12/20	16 12:13 pm	1h 35m 21s	13 KB	14.6 KB
03/11/20	16 09:03 pm	9h 15m 47s	72.7 KB	82 KB

**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

$g^{\rambda}$ ChromecastAudioBasement	$\bigcirc \bigcirc $ $\checkmark \times$
Details History Configure	
✓ GENERAL	
Alias	
ChromecastAudioBasement	
Note	
	1.
User Group	
Automatic	$\sim$
SAVE CANCEL	
> NETWORK	

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 <u>"Settings > User Groups" on</u> **page 40** for more information). The default *User Group* is *Automatic*.

Save Click Save to apply changes.

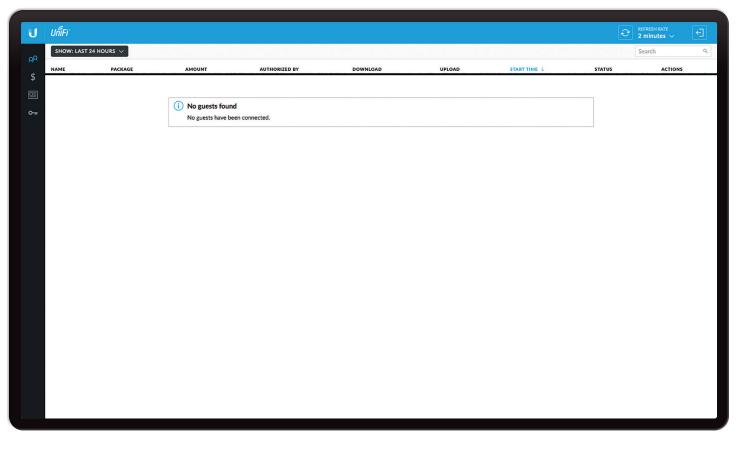
## **IP Config**

~

**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 Address Enter the local IP address.

Apply Click Apply to save changes.



# **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.

- QQ Guests
- \$ <u>"Payments and Transactions" on page 122</u>

"Vouchers" on page 122

OT <u>"Operator Accounts" on page 123</u>

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 <u>"Hotspot" on page 36</u> 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.

UNIFI							ð	acraese acre 2 minutes 🗸	e
SHOW: LAST	st Hours 🗸							Search	9
NAME	PACKAGE	AMOUNT	AUTHORIZED BY	DOWN, DAD	UPLOAD	START TIME 4	STATUS	ACTIONS	
		<ol> <li>No guests found</li> </ol>							
		No guests have bee	n connected.						
									_

# Show Filter by time duration: last 24 hours, 3 days,7 days, 2 weeks, 30 days, and 120 days.

**Search** Search Enter keywords in the Search field to find a specific guest based on Name/MAC Address, Package, Amount, Authorized By, or Status value.

(sort) You can click any column to sort the displayed list. The selected column displays  $\uparrow$  or  $\downarrow$  to indicate ascending or descending order.

Name 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.

**Start Time** Displays the start time of the guest access.

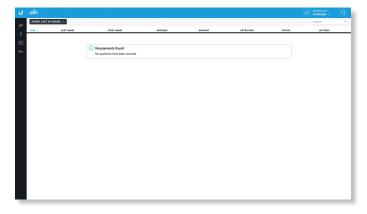
**Status** Displays the remaining session time for the guest. Displays *Expired* if there is no remaining session time.

Actions Click a button to perform the desired action:

- **Disconnect** Immediately disconnect the selected guest.
- **Extend** 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.



Show Filter by time duration: last 24 hours, 3 days, 7 days, 2 weeks, 30 days, and 120 days.

**Search** Search Control Enter keywords in the Search field to find a specific voucher based on *Time*, *Name*, *Package*, *Amount*, *Extra Info*, or *Status* value.

(sort) You can click any column to sort the displayed list. The selected column displays  $\uparrow$  or  $\downarrow$  to indicate ascending or descending order.

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 Refund the selected customer if necessary.

## Vouchers

Create vouchers that include distributable codes, duration values, and use restrictions.

UhiFi								2 minutes	
+ CREATE VOUCH	IERS 😐 PRINT ALL UNUSED VOUCHERS	😑 PRINT BATCI	• • ·					Search	
C001	CREATE TIME 4	DOWN	UP	BYTE QUOTA	NOTES	OURATION	STATUS	ACTIONS	
13779-68927	05/13/2016 04:18 pm					14	Valid for one-time use	🖶 PRINT	REVO
26898-19909	05/13/2016 04:18 pm					td	Valid for one-time use	🖶 PRINT	B REVOR
03240-94100	05/13/2016 04:18 pm					Id	Valid for one-time use	📅 PRINT	🔒 atvor
10433-02195	05/13/2016 04:18 pm					14	Valid for one-time use	🖶 PRINT	REVOR
11246-01255	05/13/2016 04:18 pm					1.0	Valid for one-time use	🖶 PRINT	B 85V08
63046-35930	05/13/2016 04:18 pm					td	Valid for one-time use		B atvos
16268-76490	05/13/2016 04:18 pm					1d	Valid for one-time use		atvos 🕄
77731-53502	05/13/2016 04:18 pm					14	Valid for one-time use	😁 PRINT	REVOR
81050-56790	05/13/2016 04:18 pm					14	Valid for one-time use	🖶 PRINT	B 85V08
						1d	Valid for one-time use	🖶 PRINT	R REVOR
28472-28971 Showing 1-10 of 10	03/13/2016 Ok18 pm records. Items per page: 50 ~					10		and here	fi mo
						10			6 area
						200			E acce
									8
									8
								Trans 2	8
						.00			

**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**.
- Expiration Time 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.
- Save Click Save to create the vouchers as specified.
- **Cancel** Click *Cancel* to discard changes.

Create	10	One time $\ \lor$			
Expiration Time	24 hours				
Bandwidth Limit (Download)	limited to		Kbps		
Bandwidth Limit (Upload)	limited to		Kbps		
Byte Quota	limited to		MBytes		
Notes					
				CANCEL	SAV

**Search** Search Council Enter keywords in the Search box to find a specific voucher based on *Code*, *Create Time*, *Notes*, *Duration*, or *Status* value.

(sort) You can click any column to sort the displayed list. The selected column displays  $\uparrow$  or  $\downarrow$  to indicate ascending or descending order.

**Print all Unused Vouchers** Click **PRINT ALL UNUSED VOUCHERS** to send a page to your printer with the codes and durations of unused vouchers.

**Print Batch** A batch is a group of vouchers created at the same time. Click **PRINT BATCH** to display a list of dates with times. Select the date with time of the batch you want to retrieve. A tab will open with the vouchers ready for printing.

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.

**Notes** 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.

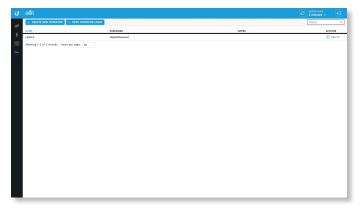
**Status** Indicates whether the voucher is valid for a single use or multiple uses. Displays *Expired* if the voucher is no longer valid. Displays the number of times used and time until expiration for multi-use vouchers.

Actions Click a button to perform the desired action:

- **Print** Click **PRINT** to print an individual voucher.
- **Revoke** Click REVOKE to immediately deactivate the selected voucher.

# **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.



**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.
- Save Click Save to create the new operator account.
- Cancel Click Cancel to discard changes.

CREATE NEW OPER	ATOR	×
Account Name		
Password		
Notes		
	CANCEL	SAVE

**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 **Sign In**.

Ubersate Honora Manager 4.0.1 Densate Passood		
		a fear
		UniiFi* Hotspot Manager v5.0.1

Only the Guests, Payments, and Vouchers tabs will appear.

**Search** Search Control Enter keywords in the Search field to find a specific operator account based on Name, Password, or Notes value.

(sort) You can click any column to sort the displayed list. The selected column displays  $\uparrow$  or  $\downarrow$  to indicate ascending or descending order.

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.

# Appendix A: Portal Customization with Legacy JSP

# **Before You Begin**

Starting with UniFi v5, you have two options for portal customization: AngularJS and Legacy JSP.

# AngularJS

AngularJS is the new option for client-side rendering. We recommend AngularJS unless you are using old templates.

Note: AngularJS is not compatible with old templates because the old templates were designed to work with JSP (Java Server Pages).

The UniFi Controller offers a built-in editor to customize AngularJS; however, it is not fully customizable at this time.

AngularJS is a single-page app, so it should work more quickly. However, AngularJS uses JS (JavaScript), which may not work with some really old web browsers or newer browsers with JS support disabled.

AngularJS uses responsive design, so it will adapt to the size of a mobile device, such as a tablet or smartphone.

Appendix A: Portal Customization with Legacy JSP is for Legacy JSP implementation only. See <u>"Settings > Guest</u> <u>Control" on page 32</u> for more information about the built-in editor for AngularJS.

# Legacy JSP

Legacy JSP is the pre-existing option for server-side rendering. Legacy JSP is fully customizable and uses old HTML, so it should work with any web browser. You can customize Legacy JSP only by overriding files. Legacy JSP works more slowly and is not responsive by default.

# Overview

With Legacy JSP, 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.

# **Configuring Portal Customization**

To enable the guest portal with custom Legacy JSP branding, perform the following steps:

1. Go to **Settings** and click **Guest Control**.

U	UNIFI			C Intrastate ~	Default V	admin ~
	SETTINGS	Guest Control				
	Site	GUEST POLICIES				
		ACCESS CONTROL				
		Pre-Authorization Access				
	Guest Control	Post-Authorization Restrictions 🕜	192.168.0.0/16			
			172.16.0.0/12			
			10.0.00/8 + A00 SUBNET			
		APPLY CHANGES RESET				
	Auto Backup					

2. Select **Enable Guest Portal** to enable it, and then select an authentication method.

Ν
<u>3</u>
G

Note: See <u>"Settings > Guest Control" on page</u> <u>32</u> for more information on enabling the *Guest Portal* for the following authentication and landing page options: *No authentication, Simple Password*, and *Hotspot*.

	ปก็สา			
	SETTINGS	Guest Control		
	Site	GUEST POLICIES		
			🔿 No authentikation 🕓 Simple password 😨 Hotspet 🖉 External portal server	
			Redirect to the original URL Promotional URL http://	
	Guest Control	PORTAL CUSTOMIZATION		
		Template Engine	🔿 Angsbetti 👓 📵 Legery JDP	
			🗌 Override templetes with cantom changes 🔮	
		нотярот		
		Vashera	En conto more autorization	
		Payments	Frable payment haved authorization	
		Papentia	A FRANK DATE WHITE CAMPAGE AND AN A CORRACT	
		ACCESS CONTROL		
	Auto Backup	Pre-Authorization Access 💮		
		Post-Authorization Restrictions 😨	192.168/0.0/16	
			172.160.0/12 × 10.00.0/8 ×	
de Le			+ 400 SUIMET	
q,				
		APPLY CHANGES RESET		

- 3. For the *Template Engine* setting, keep the default, *Legacy JSP*.
- 4. For the Override Default Templates setting, select **Override templates with custom changes**.

U	ปก็สา			2 minutes ~	Default ~	admin ~
	SETTINGS	Guest Control				
	Site	GUEST POLICIES				
			🕐 No authentication 🔿 Simple password 📀 Hotopot 🕓 External portal server			
			Redirect to the original URL      Promotional URL      http://			
	Guest Control	PORTAL CUSTOMIZATION				
			🗌 Angularită 🚥 📵 Legacy JSP			
			🗹 Override templates with custom changes 👔			
		нотѕрот				
			Stable voucher-based authorization			
			Enable payment-based authoritation			
		ACCESS CONTROL				
	Auto Backup	Pre-Authorization Access 📀				
		Post-Authorization Restrictions 📀	192.168.0.0/16			
			172.16.0.0/12			
			50.0.0/8 ×			
P						
		APPLY CHANGES RESET				

5. Click Apply Changes.

# **Viewing the Default Portal**

Once *Guest Portal* and *Override Default Templates* 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**.
- Depending on the security type applied to the network, enter the security key or password. Click OK or Connect.
- Launch your web browser and you will be directed to the default portal page for the authentication type configured on the *Guest Portal* (see <u>"Settings > Guest</u> <u>Control" on page 32</u> for screenshots of default portal pages by authentication method).

#### Mac

- 1. Click the *AirPort*  $\widehat{\frown}$  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*  $\widehat{\neg}$  icon will change from gray to solid black. The number of black lines indicates the signal strength.
- Launch your web browser and you will be directed to the default portal page for the authentication type configured on the *Guest Portal* (see <u>"Settings > Guest</u> <u>Control" on page 32</u> 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

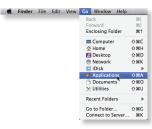
<Drive\_Letter>:\Users\<Username>\Ubiquiti UniFi\data\ sites\<site\_name>\portal

For specific instructions on accessing the files, refer to the specific operating system:

- Mac
- <u>"Windows" on page 128</u>

## Mac

1. Navigate to **Go** > **Applications**.



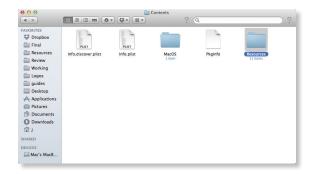
2. Control-click the **UniFi** application and then click **Show Package Contents**.

G	Open
Unif	Show Package Contents Move to Trash
	Get Info Compress "UniFi" Burn "UniFi" to Disc Duplicate Make Alias Quick Look "UniFi"
	Copy "UniFi"
	Clean Up Selection Show View Options
	Label:

3. Double-click the **Contents** folder to open it.

000	<ul> <li>UniFi.app</li> </ul>
• •	■■■ <b>* * * </b>
FAVORITES	
👽 Dropbox	
Einal Final	
Resources	Contents
Review	5 items
Working	
Logos	
🚞 guides	
Desktop	
Applications	
Pictures	
Documents	
O Downloads	
畲」	
SHARED	
DEVICES	
Mac's MacB	

4. Double-click the Resources folder to open it.



UniFi Controller User Guide

5. Double-click the **data** folder to open it.

● O O ■ ►			esources		?
FAVORITES Dropbox Final Resources Review	bin 3 items	data 6 items	di 1 item	Java 48 items	П
Working Logos guides Desktop A Applications Pictures	logs 2 items	run 1 item	unifi.discover.icns	unifi.icns	webapps 2 items
Documents Downloads	work 1 item				
Mac's MacB					

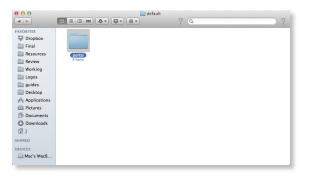
6. Double-click the **sites** folder to open it.

•••			data ? Q		?
FANONITS ↓ Dropbox ↓ Final ■ Resources ■ Review ₩ Working ↓ Logos ■ guides ■ guides ■ guides ■ becktop ▲ Applications ● Documents ♥ Documents ♥ Distances ■ SHARED DEVICES	backup 2 Rems System properties	db 5 items	devices Titem	keystore	<b>C</b>

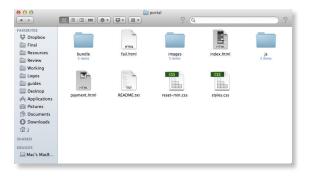
7. Double-click the folder whose name matches the site ID (for example: */manage/s/<site\_ID>/dashboard*).

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FAVORTIS Topbox Final Resources Review Working Logos Logos Destop Applications Pointores Downloads J Downloads J J Devects Mac's MacB	CECCO 1 Into

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.

000			portal		
		• *	? @		?
FAVORITES Dropbox Final Resources Review Working	bundle 3 items	HTML fail.html	images S items	HTML index.html	js 2 riems
Logos guides Desktop Applications Pictures Documents	payment.html	README.txt	reset-min.css	styles.css	
innelee SHARED DEVICES June's MacB					

11. You can customize voucher.css and voucher.html to fit your needs.

● O O ■ ►			bundle ? Q	?
FANONTTS ↓ Dropbox ↓ Final ■ Resources ■ Review ₩ Working ■ Logos ■ guides ■ guides ■ guides ■ pesktop ↑ Applications ♥ Documents ♥ Documents ♥ Documents ♥ J SIARED DEVVICES ■ Mac's MacB	messages.properti es	voucher.css	voucher.html	

### 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 <u>"Software Installation"</u> <u>on page 1</u> 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	IP Address	Model	Version	Status			
d6:18:d6:00:54:94 (Rooftop)	10.0.0.136 (dhcp)	UniFi AP-Outdoor+	3.2.7.2816	Managed/Adopted	locate	manage	reset
db:9f:db:b0:55:9f (UBNT)	10.0.0.104 (dhcp)	UniFi AP-Pro	3.2.5.2791	Managed/Adopted	locate	manage	reset
db:a4:3c:10:72:5e (ACLAB)	10.0.0.149 (dhcp)	UniFi AP-AC	3.2.5.2791	Managed/Adopted	locate	manage	reset
db:9f:db:1a:be:22 (MainAPPRO)	10.0.0.148 (dhcp)	UniFi AP-Pro	3.2.5.2791	Managed/Adopted	locate	manage	reset
db:9f:db:b0:55:96 (UBNT)	10.0.0.132 (dhcp)	UniFi AP-Pro	3.2.5.2791	Managed/Adopted	locate	manage	reset

**MAC Address** Displays the MAC address and alias of the AP. The alias is displayed in parentheses if it has been specified; see <u>"UniFi Access Point – Configuration" on</u> **page 108** 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:

- <u>"Locate" on page 130</u>
- <u>"Manage" on page 130</u>
- <u>"Reset" on page 131</u>



Note: To reboot the AP, click one of the buttons listed above and proceed to <u>**"Reboot" on page 131**</u>.

## Locate

Locate the AP. The following window will appear:

00	10.0.2.104 - Apply
Device Information	
Status:	Managed/Adopted
	This device is managed by other controller. You need to provide the username/password in order to perform any actions against this device.
Model:	UniFi AP-Pro (3.2.5.2791)
IP Address:	10.0.0.104 (dhcp)
MAC Address:	55:9f:db:b0:55:9f (UBNT)
Actions:	Locate ‡
Username:	ubnt
Password:	ubnt
	Apply Cancel

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 <u>"Network Topology Requirements" on page</u> <u>1</u> for a visual representation of this configuration.) The following window will appear:

Status:	Managed/Adopted
	This device is managed by other controller. You need to provide the username/password in order to perform any actions against this device.
Model:	UniFi AP-Pro (3.2.5.2791)
IP Address:	10.0.0.104 (dhcp)
MAC Address:	55:9f:db:b0:55:9f (UBNT)
Actions:	Set Inform \$
Set Inform URL:	http://unifi:8080/inform
Username:	ubnt
Password:	ubnt

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:

0 0	10.0.2.104 - Apply	
Device Information		
Status:	Managed/Adopted	
	This device is managed by other controller. You need to provide the username/password in order to perform any actions against this device.	
Model:	UniFi AP-Pro (3.2.5.2791)	
IP Address:	10.0.0.104 (dhcp)	
MAC Address:	55:9f:db:b0:55:9f (UBNT)	
Actions:	Restore to factory default \$	
Username:	ubnt	
Password:	ubnt	
	Apply Cancel	

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:

Device Information	
Status:	Managed/Adopted
	This device is managed by other controller. You need to provide the username/password in order to perform any actions against this device.
Model:	UniFi AP-Pro (3.2.5.2791)
IP Address:	10.0.0.104 (dhcp)
MAC Address:	55:9f:db:b0:55:9f (UBNT)
Actions:	Reboot ÷
Username:	ubnt
Password:	ubnt
	Apply Cancel

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: UniFi Mobile App

# Overview

The UniFi app has two general functions:

- You can use a mobile device to provision a UniFi AP for basic functionality without configuring a UniFi Controller. Go to the *Basic Setup* section below.
- You can use a mobile device to access the UniFi Controller. Go to <u>"Controller Mode" on page 136</u>.

# **Basic Setup**

You can 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 iOS version of the app; however, the Android version is similar.

 Download the UniFi App from the App Store (iOS) or Google Play<sup>™</sup> (Android).



- 2. Select the functionality you want to use:
  - Controller mode Use the app to access the UniFi Controller. Go to <u>"Controller Mode" on page 136</u>.
  - I don't have a controller Use the app to manually provision a UniFi device for basic functionality without configuring a UniFi Controller. Go to step 3.



3.	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**.

Single Sign-On Account
An SSO Account will allow you to save a backup of your configuration files in the cloud as well as give you access to a host other features and tools.
Username
Password
Forgot your password?
LOG IN
Register or Continue

4. The app will search for new devices. Tap the UniFi AP on the device list and go to step 8.

•••• T-Mobile		76%
	Devices	+
U	AP AC Pro 192.168.2.10	>
iiinna i	Switch 8 POE 150W 192.168.2.8	>
(		.@

- 5. If a new device is not detected, tap +.
- 6. Tap **Scan QR Code**.

	Scanning Instruc	tions
lf you de	on't have a Wi-Fi net	work vet
start the	installation of you scanning QR code	r first access
side.		
Require	ements:	
• UniFi d	evice with 2 GHz into	erface
	evice must be conne with DHCP server	cted to a
• Only la feature	test firmware versio	ns support this
	Scan QR co	de

- 7. Scan the QR code on the back of the UniFi AP, or tap **Enter 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.



8. You may be prompted to upgrade the UniFi AP to the latest firmware. Please proceed with the upgrade.

Go to the Device section below to set up the UniFi AP.

### Device

The Device screen displays basic status information:

		76% 💶
<	Device	Configure
(U) AP	AC Pro	01.K
OVERVIEW		
IP Address		192.168.2.10
MAC Address		10107710101
Firmware Versio	n	3.4.14.3413
RADIO 2G		
Channel		11
Transmit power		22 dBm
Connected clien	ts	1
SSID		44D9E7F9D13C
0		a <sup>®</sup>

**Configure** To manage the device, go to the *Configure* section in the next column.

**Overview** 

IP Address Displays the IP address of the device.

**MAC Address** Displays the MAC address or unique hardware identifier of the device.

**Firmware Version** Displays the version number of the device's firmware.

Radio 2G

**Channel** Displays the channel used.

Transmit Power Displays the level of transmit power.

**Connected Clients** Displays the number of clients connected to this UniFi AP.

**SSID** Displays the wireless network name.

**Encryption** Displays Encrypted.

**Traffic In/Out** Displays the amount of upload and download traffic.

#### Clients

🚥 T-Mobile 🗢		76%
<	Device	
Firmware Version	ו	3.4.14.3413
RADIO 2G		
RADIO 2G		
Channel		11
Transmit power		22 dBm
Connected client	s	1
SSID		44D9E7F9D13C
Encryption		Encrypted
Traffic in/out		30 kB/62 kB
CLIENTS		
Connected client	s (1)	>
Blocked clients		>
0		d <sup>®</sup>
Devices		Settings

**Connected Clients** Displays the number of clients connected to this UniFi AP. Tap to display additional details:

- **Uptime** Displays the duration of time the device has been running without interruption.
- **Traffic** Displays the total amount of data downloaded and uploaded by the client.
- **RSSI** Displays the SNR of the connection.
- **Block this client** Tap to block this client from accessing the network.

•••• T-Mobile 🗢	1:42 PM	76%
<	Client	
My-iPhone		
b4:8b:19:e0:3c:95 192.168.2.11		
CLIENT INFO		
Uptime		1m 16s
Traffic		304 kB
RSSI		-60 dBm
Block this client		
0		æ
Devices		Settings

**Blocked Clients** Displays the number of blocked clients. Tap to display a list of blocked clients.

Unblock this client Tap to allow this client access to the network.

## Configure

• **Select your country** Select the appropriate country from the list.



Configure the following settings for each radio:

Radio 2G (11n/b/g)

**Radio Settings** 

- **Channel** Select a channel number or keep the default, *Auto*.
- (channel width) Select the appropriate channel width.
- **TX Power** The default is *Auto*. Select **High**, **Medium**, or **Low**.



**WLAN Settings** 

- 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.

	1:43 PM	75%
<b>&lt;</b> (	Configuration	
WLAN Setting	s	
Name/SSID	ubnt	
Enabled		C
Security	WPA-Personal	;
Security Key		
RADIO 5G (11n/ac)		
Radio Settings	6	
Channel	Auto	;
	40 MHz	;
0	đ	\$

# Radio 5G (11n/ac)

Radio Settings

- **Channel** Select a channel number or keep the default, *Auto*.
- (channel width) Select the appropriate channel width.
- **TX Power** The default is *Auto*. Select **High**, **Medium**, or **Low**.



- Same as 2G? Tap to use the same settings as the 2.4 GHz configuration.
- 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.
- Apply Settings Tap to save your changes.



# Settings

The Settings screen offers the following options:

Back to App Store	1:14 PM	80% 💶 )
	Settings	
SECURE SHE	LL (SSH)	
Login Userna Please provide yo		ame
Login Passwo Please provide yo		ord
WIRELESS		
Country Code Select your count		
SINGLE SIGN	ON (SSO)	
Username		
Password		
Automatic Co Last Backup: nev		Ba 🚺
Backup Nov	v R	estore
CI	hange mode	
0		d° .
Devices		Settings

- 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.
- **Change mode** Select this option if you want to change to *Controller mode*. Go to the *Controller Mode* section in the next column.



Note: For advanced configuration, switch to *Controller mode*.

# **Controller Mode**

You can access the UniFi Controller through the UniFi mobile app.

#### Requirements

- An Ethernet connection from the UniFi device to the LAN with DHCP
- Firmware version 3.4.4.3231 or higher
- A compatible Android or iOS device
- 1. Download the UniFi App from the App Store (iOS) or Google Play (Android).



- 2. Select the functionality you want to use:
  - **Controller mode** Use the app to access the UniFi Controller. Go to step 3.
  - I don't have a controller Use the app to manually provision a UniFi AP for basic functionality without configuring a UniFi Controller. Go to <u>"Basic Setup"</u> on page 133.



#### 3. Enter the following information:

- (IP address) Enter the IP address of the UniFi Controller.
- (port) Enter the appropriate port number, which is typically 8443.



Note: If you do not know the IP address, you can tap *Find* to detect a UniFi Controller and then select it.

- (username) Enter your username for the UniFi Controller.
- (password) Enter your password for the UniFi Controller.
- Remember username and password Tap this option if you want the app to remember your username and password.

#### Tap Connect.



4. You may be prompted to enter a descriptive name for the Controller if it is currently using an IP address. You can change it now and then tap **OK**, or you can tap *Not Now* to skip this step.



The UniFi app includes four tabs:

- <u>"Dashboard" on page 137</u>
- <u>"Devices" on page 138</u>
- <u>"Clients" on page 143</u>
- <u>"Settings" on page 145</u>

#### Dashboard

The *Dashboard* screen provides an overview of your network's status.



#### WAN

(status) Displays one of the following:

- **OK** The node is active.
- Unknown There is no UniFi Security Gateway.
- Warning There is a warning; please investigate further.
- Error There is an error; please investigate further.

**Inactive** Displays the number of Gateway devices adopted but not active.

**Pending** Displays the number of Gateway devices pending adoption.

#### LAN

(status) Displays one of the following:

- **OK** The node is active.
- Unknown There is no UniFi Switch.
- Warning There is a warning; please investigate further.
- Error There is an error; please investigate further.

**Inactive** Displays the number of wired devices adopted but not active.

**Pending** Displays the number of wired devices pending adoption.

#### WLAN

(status) Displays one of the following:

- **OK** The node is active.
- Unknown There is no UniFi AP.
- Warning There is a warning; please investigate further.
- Error There is an error; please investigate further.

**Inactive** Displays the number of APs adopted but not active.

**Pending** Displays the number of APs pending adoption.

Devices

**Devices** Displays the total number of devices.

WLAN Displays the number of wireless devices.

WAN Displays the number of Gateway devices.

LAN Displays the number of wired devices.

Scroll down the *Dashboard* screen to view additional status information.

### Clients

Clients Displays the total number of clients.

**Users** Displays the number of connected users.

**Guests** Displays the number of connected guests.

#### Latency and Throughput



Note: The *Latency* and *Throughput* values require a UniFi Security Gateway.

**Latency** Displays the amount of time it takes a packet to travel from the UniFi Security Gateway to the service provider's gateway. *Unknown* is displayed if there is no UniFi Security Gateway.

**Throughput Down** Displays the amount of current download traffic. *Unknown* is displayed if there is no UniFi Security Gateway.

**Throughput Up** Displays the amount of current upload traffic. *Unknown* is displayed if there is no UniFi Security Gateway.



### Devices

The *Devices* screen displays a list of UniFi devices discovered by the UniFi Controller. Details include the model number, hostname, status, and connection duration. Tap a device for configuration or details.

All Displays all device types.

GW/Switch Displays Gateway and Switch devices only.

APs Displays UniFi APs only.

Phones Displays UniFi VoIP Phones only.

	lle ≈ 1:25 P Devic		78%
	Q. Sea	ch	
All	GW/Switches	APs	Phones
$\odot$	AP AC EDU Suite B EDU CONNECTED 24c	l 0h 30m	>
$\odot$	AP AC EDU Suite A EDU CONNECTED 2h	48m	>
•	AP AC Pro Rob's Office	20h	>
•	AP AC Pro Conference R CONNECTED 6d		>
$\odot$	AP AC EDU Suite C EDU CONNECTED 2d	20h	>
() Dashhoard	Oevices	<b>G</b>	Settings

#### **Overview**

- Configure To manage the device, go to <u>"Configure" on</u> page 141.
- IP Address Displays the IP address of the device.
- MAC Address Displays the MAC address or unique hardware identifier of the device.
- Firmware Version Displays the version number of the device's firmware.
- **Uptime** Displays the duration of time the device has been running without interruption.



UniFi Controller User Guide

• **RF Environment** (Available only for UAP-AC-LITE, UAP-AC-LR, UAP-AC-PRO, and UAP-AC-EDU.) Tap this option for spectral analysis to help in channel selection and planning.

••• T-Mobile रू		PM 78%	
\$	Device	Configure	
Firmware Versio	n	3.7.3.4925	
Uptime		2d 20h	
RF Environment		>	
CONNECTED C	LIENTS		
Users (4)		>	
Guests (0)		>	
ACTIONS			
Locate			
Restart			
3 (	) R	e e	

- **2G/5G** Select the frequency band you want to analyze.
- Scan Tap Scan to trigger an RF scan and then tap Scan again 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.

<	RF Envi	ronment	
	2G	5G	
20 MHZ			
No data a	vailable.		
40.1417			
40 MHZ			
No data a	vailable.		
	96 -80 -1	64 -48 -32	
A	0	63	_B
6.03			

### **Connected Clients**

• **Users** Displays a list of connected users, including SSID (wireless network name), *Activity* level, and connection duration. Tap a user for details; go to the *Overview* section below for more information.

	1:26 PM		78%
<	Users		
SUITE C EDU			
Mark 3cout 54.8		UBNT-OC (49	
Activity:		2d	2h
MBP		UBNT-OC (99	
Activity:		6m 1	.1s
MBP-2		UBNT-OC (54	
Activity:		3h 59	7m
My-iPhone		UBNT-OC (94	
Activity:		3h 43	7m
0 0	9	63	đ
Dashboard Des	rices	Clients 5	Settings

• **Guests** Displays a list of connected guests, including SSID (wireless network name), *Activity* level, and connection duration. Tap a guest for details; go to the *Overview* section below for more information.

•••• T-Mobile रू		м	77%
<	Gues		
	30.0		
SUITE C EDU			
No connected	clients.		
A (	ລ	63	

- IP Address Displays the IP address of the client.
- MAC Address Displays the MAC address or unique hardware identifier of the client.
- **Connection** Displays the hostname, alias, or MAC address of the UniFi device the client is connected to.
- **Uptime** Displays the duration of time the client has been connected without interruption.

🚥 T-Mobile 🗢 🔅	1:26 PM	78%
\$	Client	
My-iPhone		
b4:8b:19:e0:3c:95 10.0.2.144		
OVERVIEW		
IP address		10.0.2.144
MAC address	b4	:8b:19:e0:3c:95
Connection		Suite C EDU
Uptime		3h 47m
Statistics		>
History		>
ACTIONS		
0		
Dashboard Dev	ces Clien	ts Settings

• Statistics Displays additional client information:

	1:26 PM	78% 💷 🗈
<	Client Statisti	
	1.2.2.4.4.1	
MY-IPHONE		
ESSID		UBNT-OC
Connection		Suite C EDU
Channel		153
Signal		-63 dBm (96%)
TX rate		300.0 M
RX rate		400.0 M
Power save		Not enabled
Activity		11 kB / sec
Packets down		19.7 k
	0	
Dashboard	Devices Ci	ents Settings

- **ESSID** (Available for wireless clients.) Displays the name of the wireless network.
- **Connection** Displays the hostname, alias, or MAC address of the UniFi device the client is connected to.
- **Channel** (Available for wireless clients.) Displays the channel being used.
- **Signal** (Available for wireless clients.) 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.

- **Packets Down** Displays the amount of data downloaded as packets.
- **Packets Up** Displays the amount of data uploaded as packets.
- **Bytes Down** Displays the amount of data downloaded as bytes.
- **Bytes Up** Displays the amount of data uploaded as bytes.

🚥 T-Mobile 🗢	1:26 PM	77%
<b>&lt;</b>	Client Statistics	
Channel		153
Signal	-	63 dBm (96%
TX rate		300.0 M
RX rate		400.0 M
Power save		Not enabled
Activity		11 kB / sec
Packets down		19.7
Packets up		15.5 k
Bytes down		19.0 ME
Bytes up		14.8 ME
0	o 6	e <sup>p</sup>

• History Displays the historical usage of a client.

	1:26 PM 77%
<b>〈</b> Clie	ent History
MY-IPHONE	
Jun 16, 2016, 4:41	PM 1h 31m 12
	347 kB down / 1.1 MB u
Jun 16, 2016, 1:58	PM 2h 34m 39
	1.2 MB down / 1.9 MB u
Jun 16, 2016, 9:43	AM 3h 10m 35
	2.4 MB down / 2.1 MB u
Jun 15, 2016, 10:1:	LAM 8h 20m 8
	3.3 MB down / 7.3 MB u
Jun 14, 2016, 1:15	PM 5h 11m 39
	5.6 MB down / 4.6 MB u
Jun 14, 2016, 9:31	AM 3h 25m 8
	9.0 MB down / 11.0 MB u
Jun 13. 2016. 3:41	PM 3h 51m 7
	2.9 MB down / 6.7 MB u
Jun 13. 2016. 12:40	5 PM 2h 32m 43
	1.1 MB down / 5.0 MB u
<b>A</b>	
I I I I I I I I I I I I I I I I I I I	<b>D4</b> @"

- (date/time) Displays the date and time of the connection.
- (duration) Displays the duration of the connection.
- (down/up) Displays the total amount of data downloaded and uploaded by the client.

### UniFi Controller User Guide

### Actions

You can locate or restart the device.

•••ः T-Mobile रू		78% 💻
<	Device	Configure
Firmware Versio	n	3.7.3.4925
Uptime		2d 20h
RF Environment		>
CONNECTED C	LIENTS	
Users (4)		>
Guests (0)		>
ACTIONS		
Locate		
Restart		
0	<u>م</u>	

- Locate Tap to flash the LED on the device. The LED will flash until *Locate* is tapped again.
- **Restart** Tap to restart the selected device.

### Configure

	1:28 PM 77	% 🗖
	Configuration	
Alias	Suite C EDU	>
Radios		>
WLANs		>
Network	Using DHCP	>
Band Steering	Off	>
Airtime Fairne	ss	
Forget		
device, you n configuration	er wish to manage this hay remove it. Note that all and history with respect to ill be wiped out.	0

- Alias Also known as the host name. Enter or edit the customizable name or identifier of the device.
- Radios These settings are available only for APs.

🚥 T-Mobile 🗢	1:28 PM		
\$	Radios		
RADIO 2G			
Channel		Auto, HT	20
Tx Power		Auto	>
Min. RSSI		Disabled	>
RADIO 5G			
Channel		Auto, VHT:	20
Tx Power		Auto	>
Min. RSSI		Disabled	>

- **Channel** Select the appropriate channel number and channel width.



Note: If the AP is part of a Zero Handoff WLAN Group, then the *Channel* setting cannot be changed.

- **TX Power** Select the appropriate transmit power value. The default is *Auto*.

•••• T-Mobile 🗢		77%
<	Tx Power	
Auto		-
High		
Medium		
Low		
Custom		

- Min. RSSI Disabled by default. Select this option and enter a minimum threshold (we recommend a value in this range: -70 to -90 dBm). 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.

🚥 T-Mobile 🗢	1:28 PM	77% 📖
<	Min. RSSI	
Disabled		~
Enabled		

1	, m,	
	≣	

Note: If the AP is part of a Zero Handoff WLAN Group, the *Minimum RSSI* setting cannot be changed.



- WLAN Group Select the appropriate group.
- (SSID) Tap to override settings. The WLAN Override screen appears.

	1:29 PM	77% 💶
( v	/LAN Override	
Enabled on This /	AP	
Use VLAN		$\bigcirc$
SSID		UBNT-OC
Security Key		•••••

- Enabled on This AP Tap to enable the WLAN for use.
- Use VLAN Tap to enable the VLAN. Then enter the 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.
- Security Key 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.

- Network Select the appropriate option:
  - Using DHCP The use of the Dynamic Host Configuration Protocol (DHCP) is the default. The AP automatically acquires network settings from the network's 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.

<	1:30 PM Network	77%
CONFIGURE IP		
Using DHCP		
Static IP		
IP Address		
Subnet Mask		
Gateway		
Preferred DNS		8.8.8.
Alternate DNS		8.8.4.
DNS Suffix		
		are required.

• Band Steering (This setting is available only for the UAP-PRO, UAP-AC-LITE, UAP-AC-LR, UAP-AC-PRO, and UAP-AC-EDU.) 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.

		77%
<	Band Steering	
Off		~
Balanced		
Steer to 5G		

- **Off** Keep the default, *Off*, if you do not want to use band steering.
- **Prefer 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.
- Airtime Fairness (This setting is available only for the UAP-AC-LITE, UAP-AC-LR, UAP-AC-PRO, and UAP-AC-EDU.) This helps multiple users to share the bandwidth of a single AP. Tap to enable this option.

Cancel		%
	Configuration	
Alias	Suite C EDU	>
Radios		>
WLANs		>
Network	Using DHCF	>
Band Steering	Of	f >
Airtime Fairnes	ss (	D
Forget		
device, you m	er wish to manage this ay remove it. Note that all and history with respect t Il be wiped out.	0

- Forget Tap Forget to remove the AP from management by the UniFi Controller software and reset it to factory default settings.
- Note: Use caution when tapping *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.

### Clients

The *Clients* screen displays a list of network clients. Details include the hostname, SSID (wireless network name), *Activity* level, and connection duration. Tap a client for details.

You can filter by connection type:

All Displays all connection types.

**Wireless** Displays wireless clients only. **Wired** Displays wired clients only.

	1:26 PM		
	Clients		
	Q, Search	1	
All	Wireless	Wired	
android-d81d Activity:	74f479e4b	UBNT-OC (44%) 2d 0h 45m	>
02AA01AC41 Activity:	140EKB	UBNT-OC (89%) 2d 2h	>
02AA01AC42 Activity:	140BA1	UBNT-OC (86%) 2d 2h	>
iPhone Activity:		UBNT-OC (84%) 2h 47m	>
WallDimmer		UBNT-OC (84%) 24d 4h	>
SignOutlet		UBNT-OC (79%) 24d 4h	>
Activity: -	4.92	UBNT-OC (49%) 2d 2h	>
Activity: -	847	UBNT-OC (79%) 2d 2h	>
0	0	<b>63</b> d	1
Dashboard	Devices	Clients Setting	

### Overview

- IP Address Displays the IP address of the client.
- MAC Address Displays the MAC address or unique hardware identifier of the client.
- **Connection** Displays the hostname, alias, or MAC address of the UniFi device the client is connected to.
- **Uptime** Displays the duration of time the client has been connected without interruption.

•••• T-Mobile 🗟	3:57 PM Client	70%
My-iPhone 64:86:19:e0:3c:95 10.0.2.144		
OVERVIEW		
IP address		10.0.2.144
MAC address	b4:8t	o:19:e0:3c:95
Connection		Suite A EDU
Uptime		1h 25m
Statistics		
History		
ACTIONS		
0	a 🗗	

• Statistics Displays additional client information:

🚥 T-Mobile 🗢	1:26 PM	78% 💷 )
<	Client Statistic	
MY-IPHONE		
ESSID		UBNT-OC
Connection		Suite C EDU
Channel		153
Signal		-63 dBm (96%)
TX rate		300.0 M
RX rate		400.0 M
Power save		Not enabled
Activity		11 kB / sec
Packets down		19.7 k
0	0 5	2 8
Dashboard	Devices Clie	nts Settings

- **ESSID** (Available for wireless clients.) Displays the name of the wireless network.
- **Connection** Displays the hostname, alias, or MAC address of the UniFi device the client is connected to.
- **Channel** (Available for wireless clients.) Displays the channel being used.
- **Signal** (Available for wireless clients.) Displays the percentage of signal strength between the AP and client.
- **TX Rate** Displays the transmit rate.
- **RX Rate** Displays the receive rate.
- Activity Displays the level of activity in Bytes per second.
- **Packets Down** Displays the amount of data downloaded as packets.
- **Packets Up** Displays the amount of data uploaded as packets.
- **Bytes Down** Displays the amount of data downloaded as bytes.
- **Bytes Up** Displays the amount of data uploaded as bytes.

	1:26 PN		77%
٢	Client Stat	istics	
Channel			153
Signal		-63	dBm (96%)
TX rate			300.0 M
RX rate			400.0 M
Power save		N	ot enabled
Activity		1	1 kB / sec
Packets down			19.7 k
Packets up			15.5 k
Bytes down			19.0 MB
Bytes up			14.8 MB
0	0	64	a <sup>p</sup>

History	Displays the historical usage of a clier	nt.
I II Story	pippings the mistorical asage of a cher	

Jun 16, 2016, 4:41 PM Jun 16, 2016, 1:58 PM Jun 16, 2016, 9:43 AM Jun 15, 2016, 10:11 AM	4h 1m 55; .8 MB down / 20.8 MB u 1h 31m 12; 347 kB down / 1.1 MB u 2h 34m 39;
Jun 17, 2016, 9:38 AM 19 Jun 16, 2016, 4:41 PM Jun 16, 2016, 1:58 PM Jun 16, 2016, 9:43 AM Jun 15, 2016, 10:11 AM	.8 MB down / 20.8 MB up 1h 31m 12: 347 kB down / 1.1 MB up
19 Jun 16, 2016, 4:41 PM Jun 16, 2016, 1:58 PM Jun 16, 2016, 9:43 AM Jun 15, 2016, 10:11 AM	.8 MB down / 20.8 MB up 1h 31m 12: 347 kB down / 1.1 MB up
Jun 16, 2016, 1:58 PM Jun 16, 2016, 9:43 AM Jun 15, 2016, 10:11 AM	347 kB down / 1.1 MB up
Jun 16, 2016, 9:43 AM Jun 15, 2016, 10:11 AM	2h 34m 39
Jun 15, 2016, 10:11 AM	1.2 MB down / 1.9 MB up
	3h 10m 35 2.4 MB down / 2.1 MB up
	8h 20m 8 3.3 MB down / 7.3 MB up
Jun 14, 2016, 1:15 PM	5.6 MB down / 4.6 MB up
Jun 14, 2016, 9:31 AM	3h 25m 8 .0 MB down / 11.0 MB up
Jun 13, 2016, 3:41 PM	3h 51m 7 2.9 MB down / 6.7 MB up
0 0	<b>5</b> d

- (date/time) Displays the date and time of the connection.
- (duration) Displays the duration of the connection.
- (down/up) Displays the total amount of data downloaded and uploaded by the client.

#### Actions

You can block or unblock a client device.

		69%
<	Client	
OVERVIEW		
IP address		10.0.2.144
MAC address	b4:8	3b:19:e0:3c:95
Connection		Suite A EDU
Uptime		1h 25m
Statistics		
History		
ACTIONS		
Block		
Unblock		
0 (	0 🖬	đ

- Block Tap to block this client from accessing the network.
- **Unblock** Tap to reconnect a blocked client.
  - Note: Use caution if you block a client and then exit the *Client* screen. The blocked client will disappear from the client list and then you cannot unblock the client from the UniFi mobile app. Instead, you must access the browser-based UniFi Controller and then unblock the client on the *Insights* screen.

UniFi Controller User Guide

### Settings

The current site is displayed on this screen.



**Site** To change a site, tap the current site and then select a different site.

🚥 T-Mobile 🗢			77% 💷
<	Site		
UBNT_OC_O	ffice		~
3	$\odot$	63	e e
Dashboard	Devices	Clients	Settings

**Log Out** To exit the UniFi app or change its mode, tap **Log out**.

## Appendix D: UniFi EDU Mobile App

### Overview

You can use the UAP-AC-EDU to broadcast announcements with clarity from your mobile device.

Use the UniFi EDU app to broadcast announcements from the UAP-AC-EDU.

### Requirements

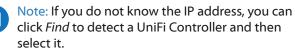
- UniFi Controller software v4.9.5 or higher
- UAP-AC-EDU firmware v3.4.18 or higher
- A compatible Android or iOS device located on the same Layer-2 network as the UniFi Controller and UniFi APs

The following instructions describe the iOS version of the app; however, the Android version is similar.

1. Download the UniFi EDU app from the App Store (iOS) or Google Play (Android).



- 2. Launch the app.
- 3. Enter the following information:
  - (IP address) Enter the IP address of the UniFi Controller.
  - (port) Enter the appropriate port number, which is typically 8443.



- (username) Enter your username for the UniFi Controller.
- (password) Enter your password for the UniFi Controller.
- Remember username and password Tap this option if you want the app to remember your username and password.

### Tap Connect.

c	Controller Login	
	ia 🔳	
10.0.2.16	2 : 8443	Find
	Remember username and password	

Appendix D: UniFi EDU Mobile App

The UniFi EDU app includes five tabs:

- Broadcast (see below)
- <u>"Schedule" on page 137</u>
- <u>"Recordings" on page 150</u>
- <u>"Volume" on page 151</u>
- <u>"Settings" on page 151</u>

### Broadcast

You can organize the UniFi AC EDU APs into multiple broadcast groups.



To create a broadcast group, follow these instructions:

- 1. Click+.
- 2. Enter a descriptive name in the Group Name field.



3. Tap the appropriate UniFi AC EDU APs.

••••ः T-Mobile 훅	1:30 PM	95%
Cancel	Add Group	Save
GROUP NAME		
Name		
SELECT DEVIC	CES	
	te B EDU 9:e7:02:73:a5	
	re A EDU 9:e7:02:73:c7	
	te C EDU 1:28:50:19:7f	

- To begin a broadcast, follow these instructions:
- 1. Tap the broadcast group you want to use.

•••• T-Mobile		:28 PM			
	Br	oadcast			+
BROADCAS	ST GROU	IPS			
A				1	>
All				3	>
Suite_B				1	>
Suite_C				1	>
((•))	÷===	R	<b>(</b> )	10	ø
Broadcast Sc	hedule R	ecordings	Volume	Setti	nes

2. Tap **Start Broadcast** to start the announcement.



3. Tap Stop Broadcasting to end the announcement.



The speakers will automatically be muted when you stop broadcasting.

To edit a broadcast group, follow these instructions:

1. Tap **Edit**.



2. To change the name or members of the group, tap the broadcast group.

•••• T-Mobile		
	Edit Group	s -
BROADCAS	ST GROUPS	
Α 😑		
All		
Suite_E	3	
Suite_C	5	
((•))	iii D	ഡ്) ക്

3. Make your changes.

Cancel         Edit Group         Save           GROUP NAME         A           A         SELECT DEVICES           Image: Suite B EDU 44/08/27325         Image: Suite A EDU 44/08/27325           Image: Suite A EDU 44/08/27325         Image: Suite A EDU 44/08/27325           Image: Suite A EDU 44/08/273253         Image: Suite A EDU 44/08/27325           Image: Suite A EDU 44/08/27325         Image: Suite A EDU 44/08/27325           Image: Suite A EDU 44/08/273253         Image: Suite A EDU 44/08/27325           Image: Suite A EDU 44/08/273253         Image: Suite A EDU 44/08/27325	🚥 T-Mobile 😤	1:32 PM	95%
A SELECT DEVICES Suite B EDU 4-69-87027345 Suite A EDU Suite A EDU Suite C EDU		Edit Group	
A SELECT DEVICES Suite B EDU 4-69-87027345 Suite A EDU Suite A EDU Suite C EDU			
SELECT DEVICES       Suite B EDU       4+dtpt7027345       Suite A EDU       4+dtpt7027347       Suite C EDU       Suite C EDU	GROUP NAME		
Suite B EDU           4x49x70273x5           Suite A EDU           4x49x70273x7           Suite C EDU           Suite C EDU	A		
Suite B EDU           4x49x70273x5           Suite A EDU           4x49x70273x7           Suite C EDU           Suite C EDU			
	SELECT DEVIC	CES	
44:69:e7:02:73:c7			
			~

To delete a broadcast group, follow these instructions:

### 1. Tap **Edit**.



2. To remove a broadcast group, tap =.

•••• T-M	obile 🗢	1:32 PM		95%
		Edit Groups		
BROAD	CAST G	ROUPS		
Θ Α				>
All				
😑 Su	iite_B			>
😑 Su	iite_C			
((•))	i	5	d)))	¢.
Broadcast	Schedule	Recordings	Volume	Settings

### 3. Tap **Done**.

## Schedule

You can schedule an announcement.

🚥 T-Mobile 🗢	1:32 PM		95%
Edit	Schedule		+
11:15 AM Lunch Announceme	ent, May 24	Suite	_c >

- To schedule an announcement, follow these instructions:
- 1. Tap +.

•••• T-Mobile Edit	হ 1:32 PM Schedule		4
Eur	Schedule		
11:15 AN	4		
	ricement, May 24	Suite_C	
((0))	<b>iii</b> 🖪	45	55

- 2. Configure the following:
  - (Date and time) Select the appropriate date and time.
  - Repeat Select this option to specify how often the announcement should recur. Then select Never, Every Day, Every Weekday, or Custom.

If you selected *Custom*, select the *Frequency*, **Weekly** or **Monthly**, and then select the appropriate weekday or date.

- **Recording/Sample** Select the appropriate recording or sample.
- Broadcast Group Select the appropriate group.



- To delete an announcement, follow these instructions:
- 1. Click Edit.



2. To remove an announcement, tap



### 3. Tap **Done**.

## Recordings

You can create a recording.

•••• T-Mobile			90% 💷)
	Recordings		
Lunch Anno 5/24/16	uncement	C	.05 🕨
((0))		10	

To create a recording, follow these instructions:

1. Tap +.



2. Tap • to start recording. Tap • to stop recording. Tap
to play back the recording.



Cancel	Record	Save
	•	-
	00:09	
	00.07	

To delete a recording, follow these instructions:

### 1. Click Edit.



2. To remove a recording, tap  $\bigcirc$ .



3. Tap **Done**.

### Volume

You can select a test sound or adjust the volume of any speaker.

••○ T-Mobile 🗢	1:34 PM		-
	Volume		
Test Sound		(None)	>
Suite B E 44:d9:e7:02:		TES	т
¢	-0-		40
Suite A E		TES	T
¢			40
Suite C E 80:2a:a8:50:		TES	т
¢	-0-		40
	_		

## **Test Sound** Tap **Test Sound** to select a specific sound for testing. Then tap any sound to select it.

Volume Test Sound UnlFi_EDU_Announcement1.ogg JnlFi_EDU_Announcement2.ogg JnlFi_EDU_Announcement3.ogg adel_1.ogg adel_1.ogg bell_3.ogg music_sample.ogg notification_1.ogg notification_3.ogg notification_4.ogg (w)	••• T-Mob	ile 🗢	1:34 PM		94%
UnIFLEDU_Announcement2.ogg JnIFLEDU_Announcement3.ogg bell_1.ogg bell_2.ogg music_sample.ogg music_sample.ogg notification_1.ogg botification_2.ogg notification_3.ogg notification_4.ogg	Volume		Test Sound		
UnIFLEDU_Announcement2.ogg JnIFLEDU_Announcement3.ogg bell_1.ogg bell_2.ogg music_sample.ogg music_sample.ogg notification_1.ogg botification_2.ogg notification_3.ogg notification_4.ogg					
UniFi_EDU_Announcement3.ogg bell_1.ogg bell_2.ogg music_sample.ogg notification_1.ogg notification_2.ogg notification_3.ogg notification_4.ogg	UniFi_EC	U_Ann	ouncement1	.ogg	
bell_1.ogg bell_2.ogg bell_3.ogg music_sample.ogg notification_1.ogg notification_2.ogg notification_3.ogg notification_4.ogg	UniFi_EC	U_Ann	ouncement2	l.ogg	
bell_2.ogg bell_3.ogg music_sample.ogg notification_1.ogg notification_2.ogg notification_3.ogg notification_4.ogg	UniFi_EC	U_Ann	ouncement3	8.ogg	
bell_3.ogg music_sample.ogg notification_1.ogg notification_2.ogg notification_3.ogg notification_4.ogg	bell_1.og	g			
music_sample.ogg notification_1.ogg notification_2.ogg notification_3.ogg notification_4.ogg	bell_2.og	g			
notification_1.ogg notification_2.ogg notification_3.ogg notification_4.ogg	bell_3.og	g			
notification_2.ogg notification_3.ogg notification_4.ogg	music_sa	mple.og	g		
notification_3.ogg	notificati	on_1.og	g		
notification_4.ogg	notificati	on_2.og	g		
	notificati	on_3.og	g		
(o) 🖬 🗗 📢	notificati	on_4.og	g		
(0) 🛗 🗗 📢					
roadcast Schedule Recordines Volume Set	((0))	÷.	F		đ

(slider) Use the slider control to adjust the volume for each speaker.

Test To test the sound of any speaker, tap Test.

### **Settings**

The current site is displayed on this screen.

		94%
	Settings	
Site	UBNT_C	C_Office
Log out		
Version 1.1 (1111	)	
((0))	Da o	10 📌
Broadcast Schedule	<u> </u>	JP Setting:

**Site** To change a site, tap the current site and then select a different site.

•••• T-Mobile 🗢	1:35 PM	94%
Settings		
UBNT_OC_Office	e	~
((o))		

# **Log Out** To exit the UniFi app or change its mode, tap **Log out**.



## Appendix E: Controller Scenarios

## Overview

Ë

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 <u>"UniFi Mobile App" on page</u> <u>133</u> 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)
- <u>"Layer-3 Deployment" on page 154</u>
- <u>"Hybrid Deployment" on page 155</u>

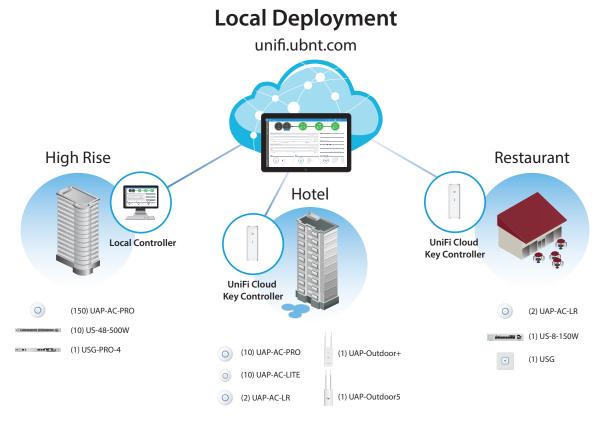
### **Local Deployment**

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.



### **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).

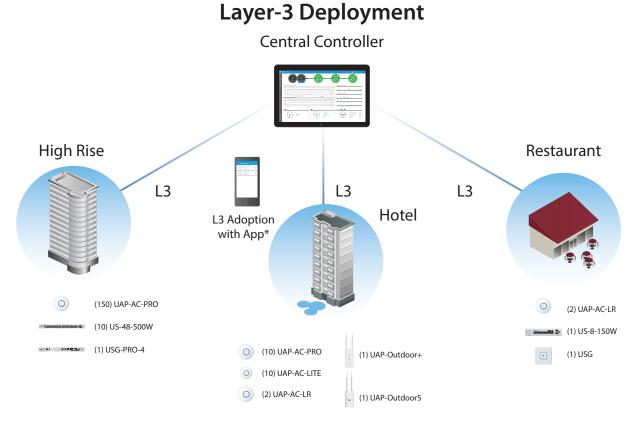
- **High rise** The UniFi Controller is off-site. Use Layer-3 adoption to manage this site.
- Hotel The UniFi Controller is off-site. Use Layer-3 adoption to manage this site.
- **Restaurant** The UniFi Controller is off-site. Use Layer-3 adoption to manage this site.

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:
  - <u>"UniFi Mobile App" on page 133</u>
  - <u>"DNS" on page 157</u>
  - <u>"DHCP Option 43" on page 157</u>
  - <u>"SSH" on page 158</u>

For details about Layer-3 adoption, go to <u>"Layer-3</u> <u>Adoption" on page 156</u>.



\* Refer to "Layer-3 Adoption" on page 156 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 156.

- Hotel The UniFi Controller is running on a UniFi Cloud Key.
- **Restaurant** The UniFi Controller is running on a UniFi Cloud Key.

### **Remote Access**

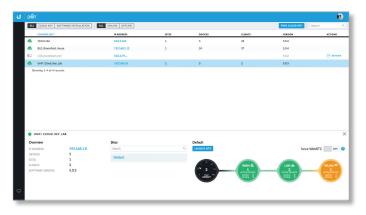
Cloud access is enabled on the UniFi Controllers, so you can use **unifi.ubnt.com** to remotely monitor and access multiple controllers. Each controller, in turn, can manage multiple sites.

For example, in the application diagram below, you can use **<u>unifi.ubnt.com</u>** to access three controllers:

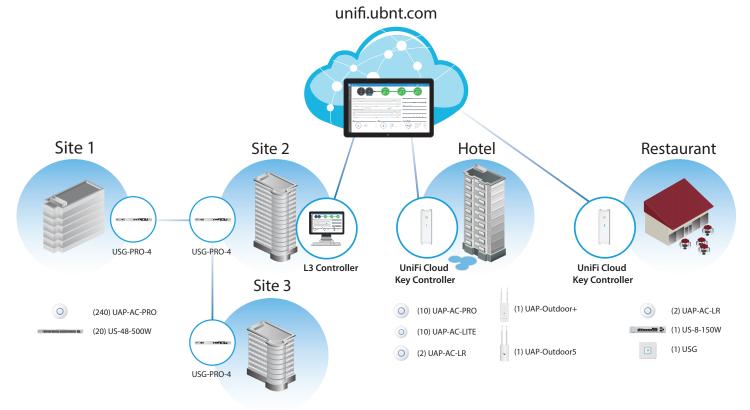
- remote controller
- UniFi Cloud Key controller for the hotel
- UniFi Cloud Key controller for the restaurant

In turn, the remote controller manages three sites:

- Site 1
- Site 2
- Site 3







## 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)
- <u>"DNS" on page 157</u>
- <u>"DHCP Option 43" on page 157</u>
- <u>"SSH" on page 158</u>

### **UniFi EasySetup App**

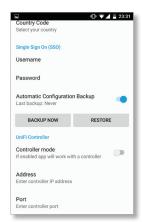
1. Launch the UniFi EasySetup App from your mobile device.



2. Tap **Settings**. If *Settings* is not displayed, then tap the *overflow* **B** 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 <u>"UniFi Mobile App" on page 133</u>.

### **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.

Ubegant UnFi
 Ubegant UnFi
 Ubegant UnFi
 Ubegant UnFi
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 Eack
 Search programs and files
 Stud down
 Definition

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.

900	Ubiquiti UniFi - Disco						
Discovering UniFi devices							
MAC Address	IP Address	Model	Version	Status			
d6:18:d6:00:54:94 (Rooftop)	10.0.0.136 (dhcp)	UniFi AP-Outdoor+	3.2.7.2816	Managed/Adopted	locate	manage	reset
db:9f:db:b0:55:9f (UBNT)	10.0.0.104 (dhcp)	UniFi AP-Pro	3.2.5.2791	Managed/Adopted	locate	manage	reset
db:a4:3c:10:72:5e (ACLAB)	10.0.0.149 (dhcp)	UniFi AP-AC	3.2.5.2791	Managed/Adopted	locate	manage	reset
db:9f:db:1a:be:22 (MainAPPRO)	10.0.0.148 (dhcp)	UniFi AP-Pro	3.2.5.2791	Managed/Adopted	locate	manage	reset
db:9f:db:b0:55:96 (UBNT)	10.0.0.132 (dhcp)	UniFi AP-Pro	3.2.5.2791	Managed/Adopted	locate	manage	reset
db:9f:db:b0:55:96 (UBNT)	10.0.0.132 (dhcp)	UniFi AP-Pro	3.2.5.2791	Managed/Adopted	locate	manage	re

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**.

O O	10.0.2.104 - Apply
Status:	Managed/Adopted
	This device is managed by other controller. You need to provide the username/password in order to perform any actions against this device.
Model:	UniFi AP-Pro (3.2.5.2791)
IP Address:	10.0.0.104 (dhcp)
MAC Address:	55:9f:db:b0:55:9f (UBNT)
Actions:	Restore to factory default \$
Username:	ubnt
Password:	ubnt
	Apply Cancel

#### 3. Click manage.

4. Change the inform URL. The SSH username and password should be *ubnt/ubnt*. Click **Apply**.

00	10.0.2.104 - Apply
Device Information	
Status:	Managed/Adopted
	This device is managed by other controller. You need to provide the username/password in order to perform any actions against this device.
Model:	UniFi AP-Pro (3.2.5.2791)
IP Address:	10.0.0.104 (dhcp)
MAC Address:	55:9f:db:b0:55:9f (UBNT)
Actions:	Set Inform \$
Set Inform URL:	http://unifi:8080/inform
Username:	ubnt
Password:	ubnt
	Apply Cancel

- 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 <u>"UniFi Discovery Utility" on page 129</u>.

### 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<sup>®</sup> EdgeMAX<sup>®</sup> or EdgePoint<sup>™</sup> router, then follow these instructions:

- 1. Access the user interface of the EdgeMAX router.
- 2. Click the **Services** tab.
- Go to Actions > View Details for the appropriate DHCP server.



Appendix E: Controller Scenarios

4. In the *UniFi Controller* field, enter the IP address of the UniFi Controller. Then click **Save**.

HCP Name         Internal         DNS 1         10.02.1           ubnet         10.02.0/24         DNS 2	Pool Size: 97	Leased: Available: Static: 87 10 4	Range Start: 10.0 Range End: 10.0. Unifi Controller:		DNS: 10.0.2.1 Status: Enabled	
UNS 2	OHCP Name	Internal	DNS 1	10.0.2.1		
Domain	ubnet	10.0.2.0/24	DNS 2			-
	ange Start	10.0.2.100	Demain			-
ange Stop 10.0.2.200	ange Stop	10.0.2.200				
Lease Time 86400 secon	outer		Lease Time	86400		seconds
10.0.2.1 Enable		10.0.2.1	Enable	2		
Inifi Controller	Inifi Controller					

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

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If you can SSH into the UniFi AP, then you can perform the layer-3 adoption via CLI command:

- 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: <u>http://ubnt.link/UniFi-SSH-Firmware-Upgrade</u>
- 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 F: 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. 685 Third Avenue, 27th Floor New York, New York 10017 www.ubnt.com

**Online Resources** 

Support: <u>ubnt.link/UniFi-Support</u> Community: <u>community.ubnt.com/unifi</u> Downloads: <u>downloads.ubnt.com/unifi</u>





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