Unleashed

Configuration – Basic

Configuration Guide

Firmware Version: 200.12

Configuring your Unleashed WLAN

The Unleashed WLAN solution uses access points with an embedded software-based controller. This solution was designed for smaller installations requiring a low number of access points but desiring greater stability and visibility into the WLAN environment than other low-cost solutions. Unleashed access points are configured by a simple Web GUI and utilize proprietary technologies without the need for a stand-alone wireless controller.

Initial Unleashed Setup

- Chapter 1 - Getting Started
- Chapter 2 - Using the Setup Wizard
- Chapter 3 - Final Initial Configuration Steps in GUI
- Chapter 4 - Backup and Firmware

Chapter 1 - Getting Started

- 200.12 Supported Access Points – Access Networks Brand
- 200.12 Supported Access Points – Ruckus Brand
- Unpack and Install the Unleashed Master AP
- Connect to the Unleashed “Configure.me” SSID

Chapter 1 - Getting started

200.12 Supported Access Points – Access Networks Brand

Indoor Access Points

Wi-Fi 6


AN A750

- A750 4x4:4 Access Point
- A650 2x2:2/4x4:4 Access Point


AN A650

- A550 2x2:2 Access Point


AN A550

- A350 2x2:2 Access Point


AN A350

Wi-Fi 5


AN A610

- A610 3x3:3 Access Point
- A510 2x2:2 Access Point


AN A510

- A320 2x2:2 Access Point


AN A320

Outdoor Access Points

Wi-Fi 6

- B350 2x2:2 Access Point


AN B350

Wi-Fi 5

- B310 2x2:2 Access Point


AN B310

Chapter 1 - Getting started

Unpack and Install the Unleashed Master AP

Choose which Unleashed AP will become the Unleashed Master AP (the AP that performs all of the control functions of your Unleashed network). Any hard-wired Unleashed AP can be the Master.

*** Do NOT connect multiple APs to power and the network all at once.** In the initial setup stage, you should choose one AP as the Master AP and connect it to the network and power, and then complete the initial setup steps on this Master AP before connecting any other APs. Once setup is complete, you can continue connecting other APs to power and the network.

Once powered on and connected to the local network, the Unleashed AP will boot up and begin broadcasting a temporary unencrypted WLAN named "ConfigureMe-[xxxxxx]" **([xxxxxx] is the last 6 digits of the MAC address of the AP)**.

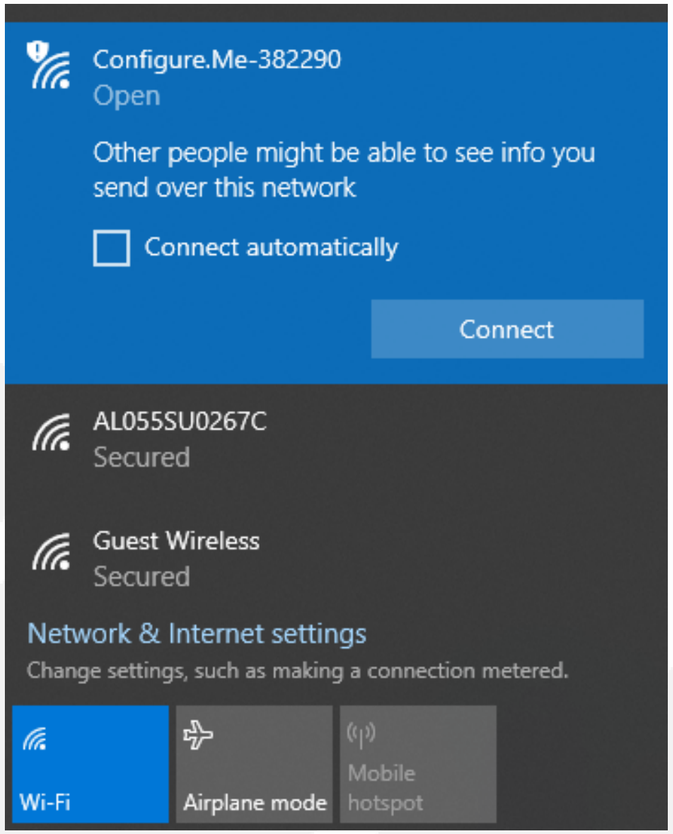
Chapter 1 - Getting started

Connect to the Unleashed “Configure.me” SSID

Using the Wi-Fi configuration settings on your client device (such as a laptop or mobile device), select and associate to the Configure.Me-[xxxxxx] WLAN, and launch a web browser

In your browser's URL bar, enter the following address and press Enter: **unleashed.ruckuswireless.com**

*Note – In Unleashed deployments, the initial “Configure.Me-[xxxxxx]” WLAN does not require a password.



Chapter 2 - Using the Setup Wizard

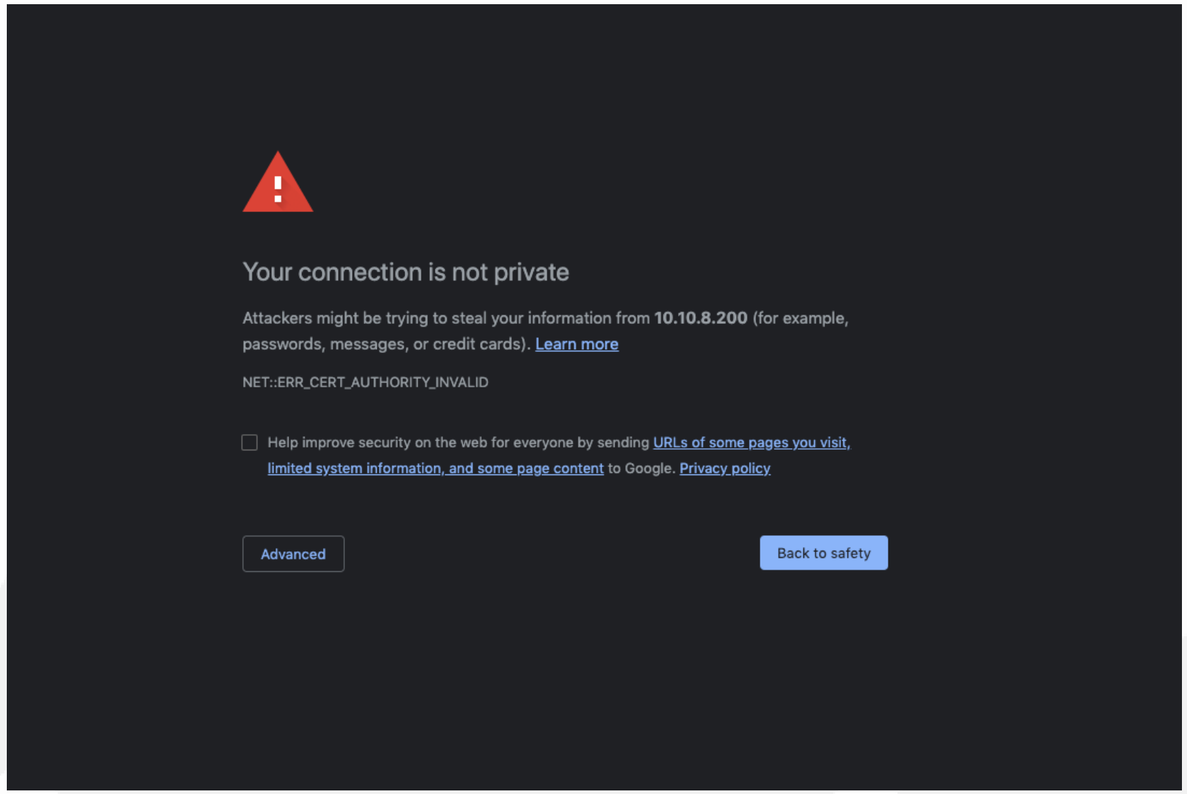
- Security Warning
- Basic Configuration Steps
- 5 Quick Steps for Setting Up the Unleashed System
- Complete the Setup Process
- System Settings & Rebooting

Chapter 2 - Using the Setup Wizard

Security warning

Depending on your browser, you may be presented with a security warning stating "This connection is not trusted" (Firefox) or "Your Connection is Not Private" (Chrome) or "There is a problem with this website's security certificate" (Internet Explorer). This is normal, as the Unleashed AP does not have an SSL certificate that is recognized by your browser.

Accept the exception as needed per browser and proceed.

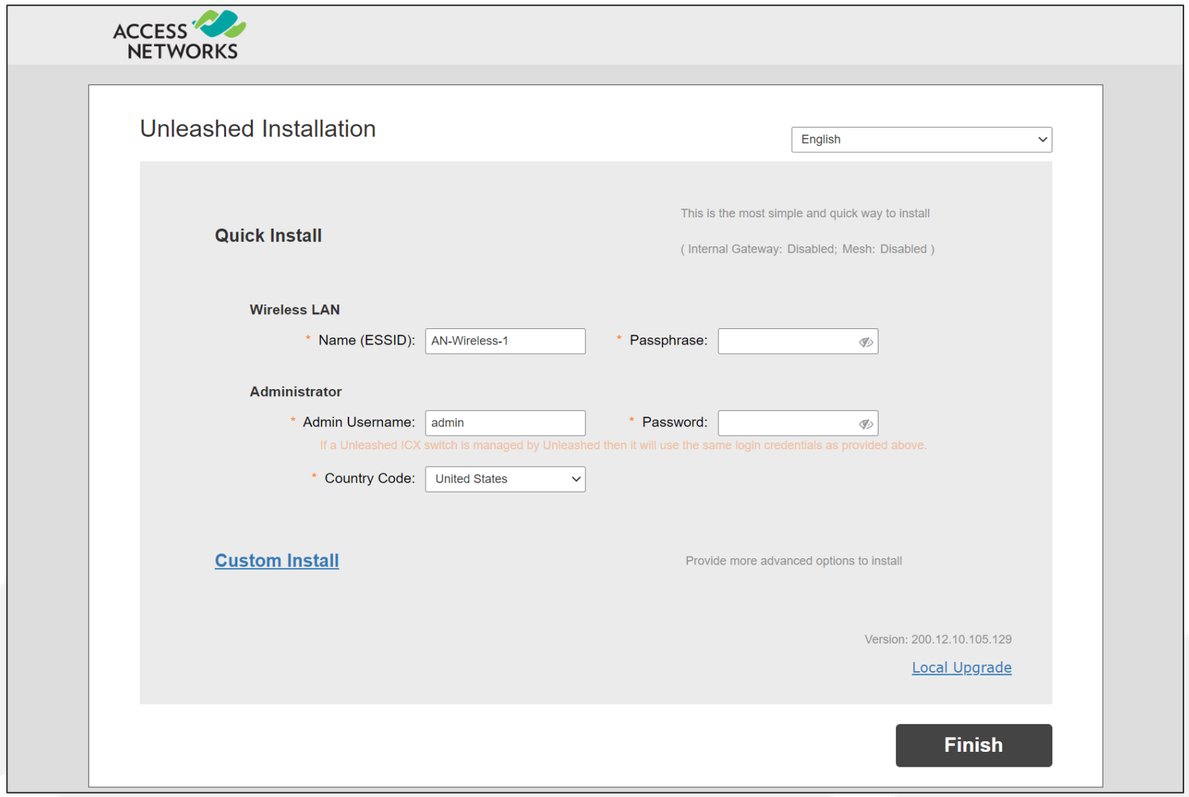


Chapter 2 - Using the Setup Wizard

Basic Configuration Steps

Once you have accepted the security exception, you will be redirected to the “Unleashed Installation” wizard.

The “Unleashed Installation” wizard will guide you through the process of setting up the Unleashed Master AP.



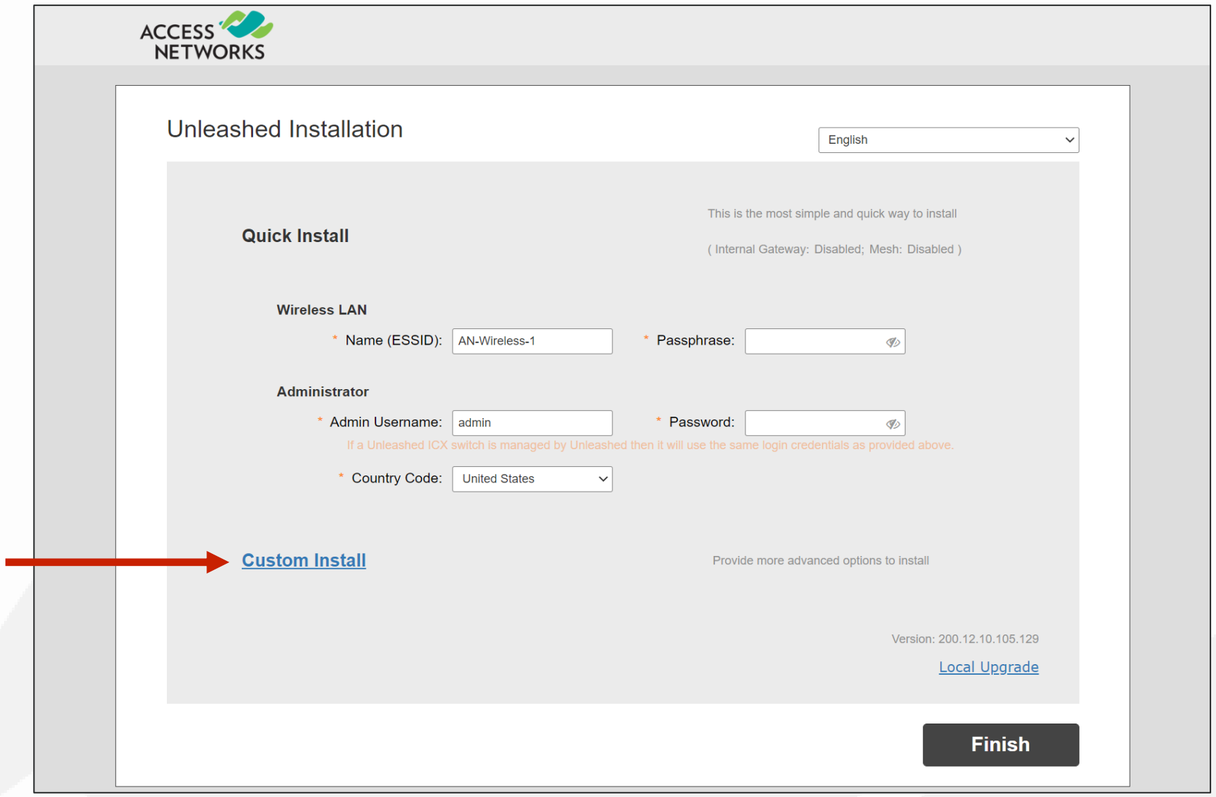
Chapter 2 - Using the Setup Wizard

Basic Configuration Steps

There are many ways of setting up an Unleashed Network by using the “Unleashed Installation” wizard.

This presentation will focus on the “Custom Install” process to setup the Unleashed Network.

Click on “Custom Install” to continue.

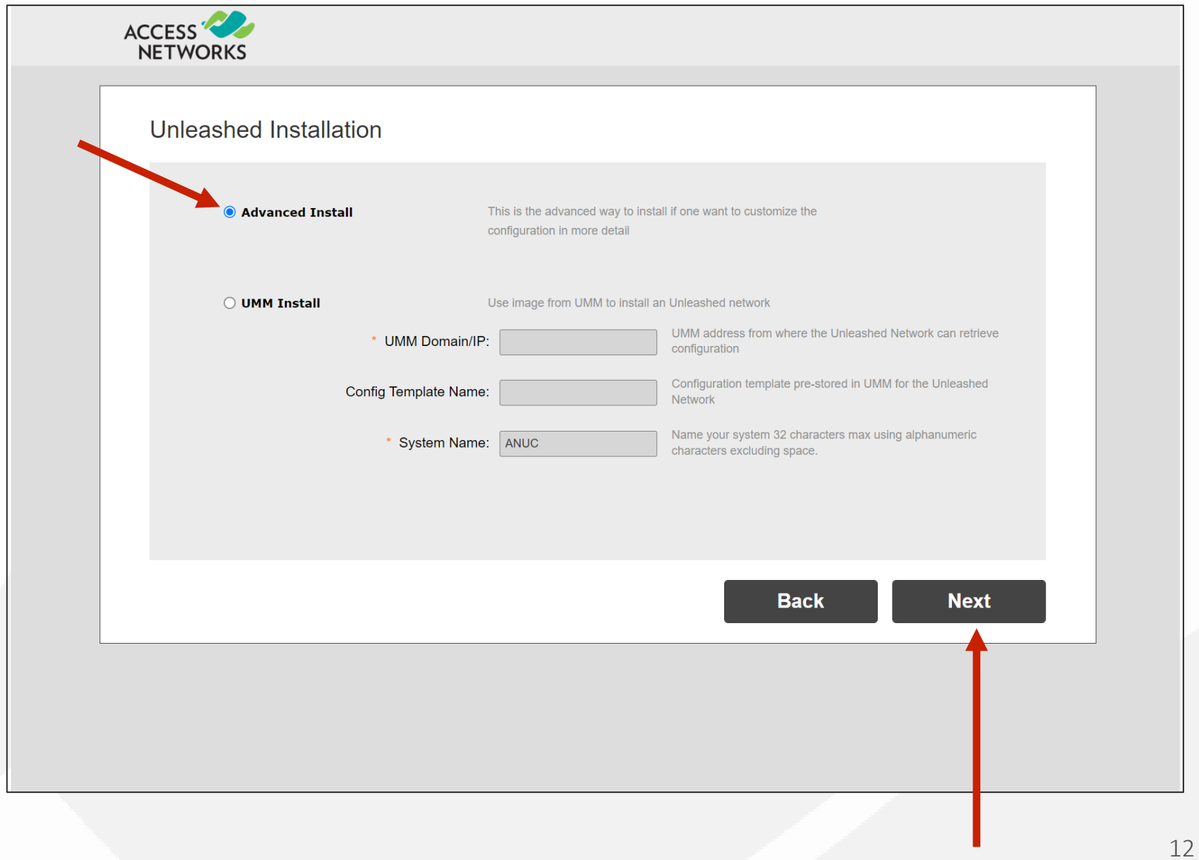


Chapter 2 - Using the Setup Wizard

Basic Configuration Steps

Ensure the “Advanced Install” option is selected from the list.

Click on the “Next” button to continue.



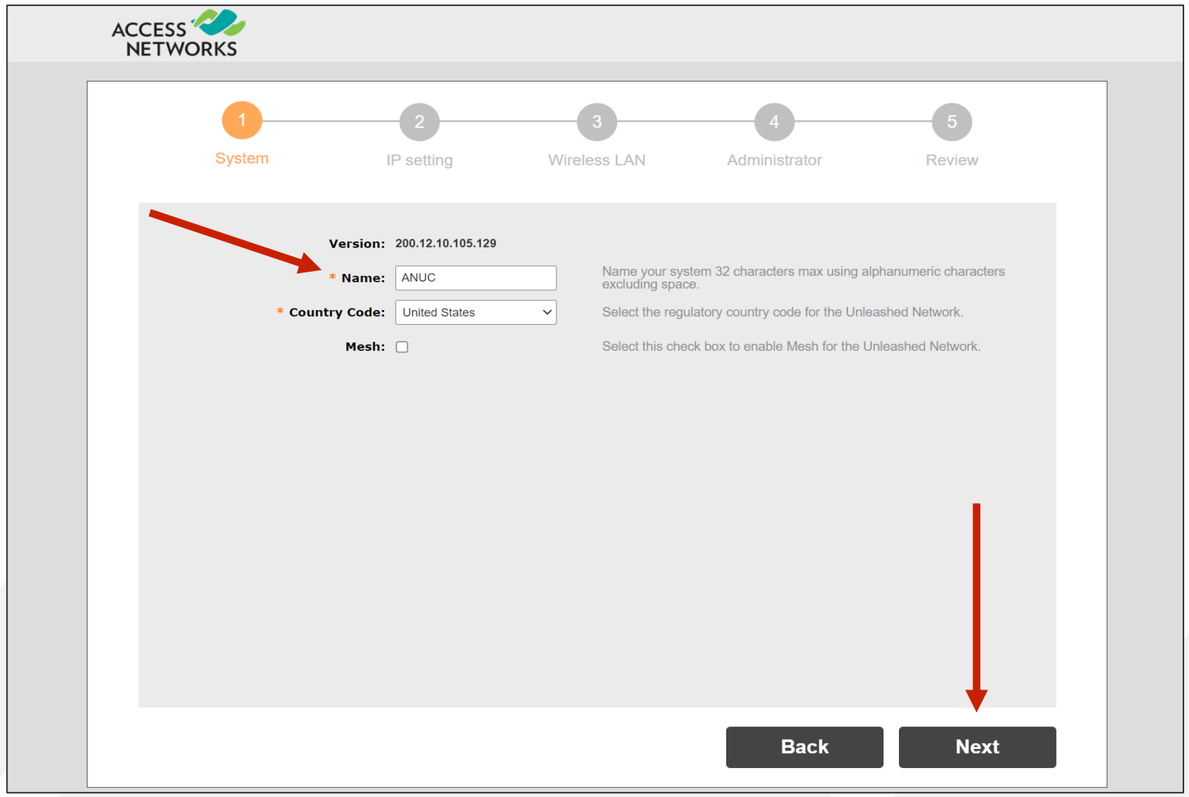
Chapter 2 - Using the Setup Wizard

Step 1 - Set the System Name

Enter a System Name for the Unleashed system.

Click “Next” to continue.

*Note - A good suggestion could be name of the jobsite like “Smith_Residence”. Remember to use best practices from your company for the naming convention.



Chapter 2 - Using the Setup Wizard

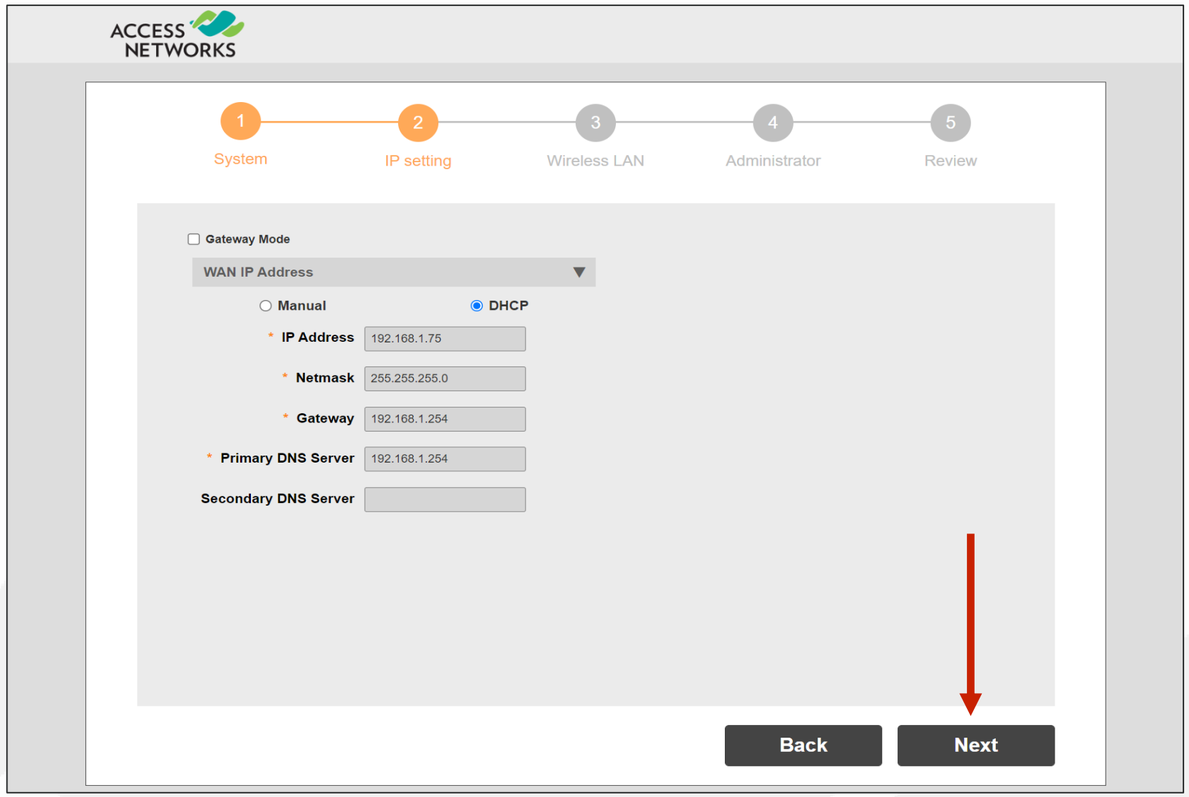
Step 2 - IP Address Settings

For most installations it is recommended to leave the “Gateway Mode” disabled.

It is also recommended to leave the Unleashed access points in “DHCP” mode.

A static “Management Interface” IP address should be established after the Setup Wizard is complete.

Click “Next” to continue.



Chapter 2 - Using the Setup Wizard

Step 3 - Wireless LAN

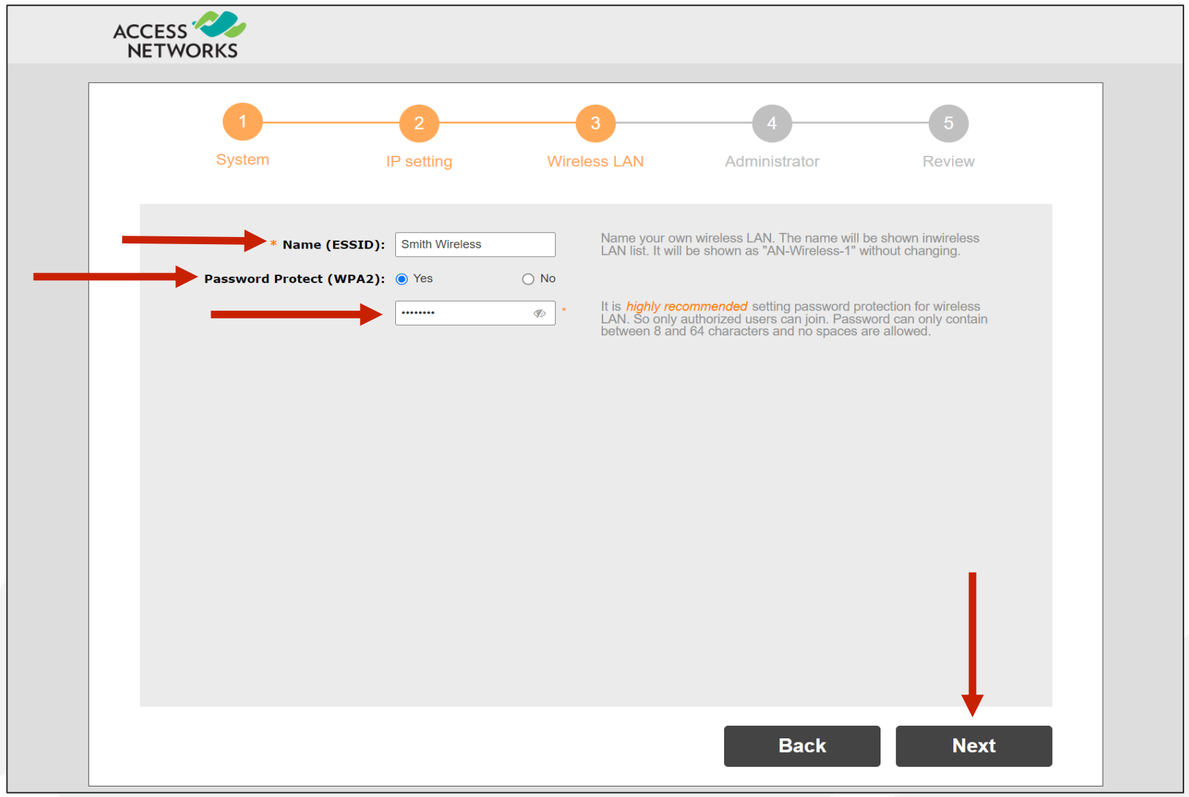
Enter a Name for your first wireless LAN.

Ensure “Yes” for “Password Protect (WPA2)” for this WLAN has been selected.

Enter a password for the WLAN.

Click “Next” to continue.

*Note - Best practice suggest the password must be no less than **12 characters** and should also contain a combination of **Uppercase, Lowercase, Number, and Special Character Symbols**. An example of this is ”E@syP@$$w0rd!”.



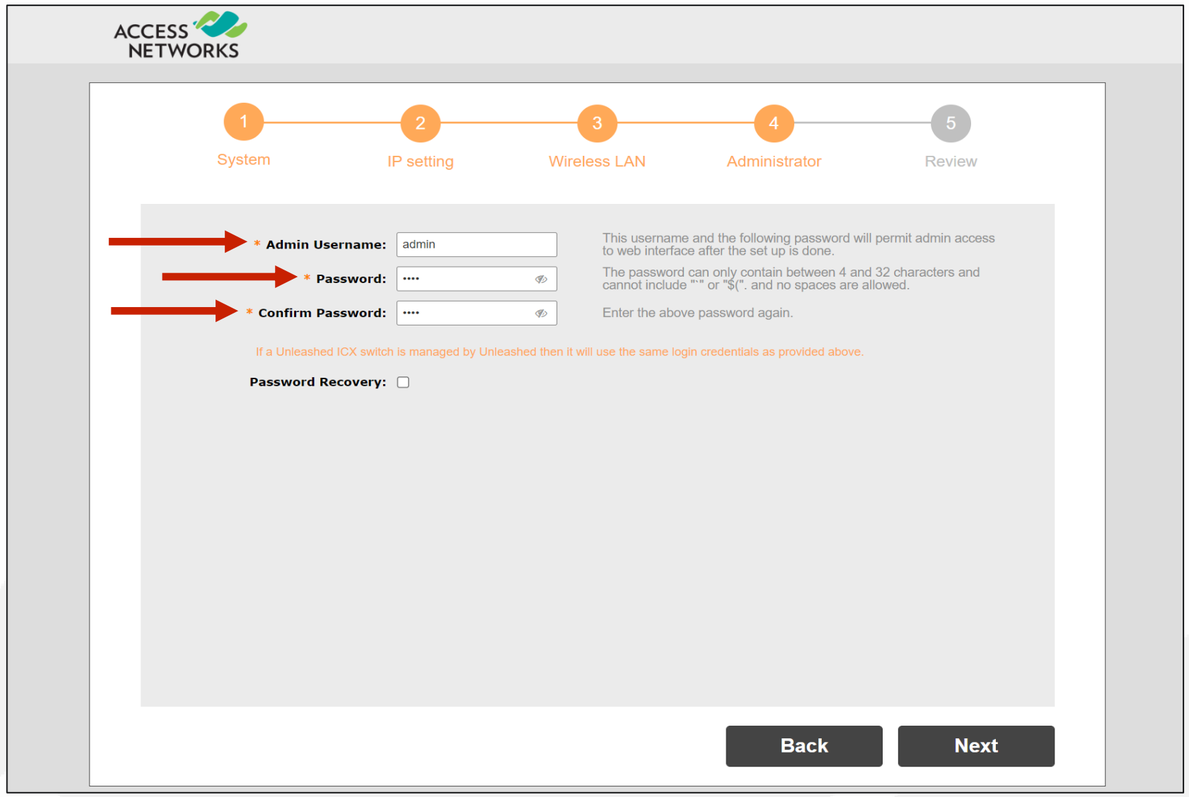
Chapter 2 - Using the Setup Wizard

Step 4 - Admin access

Enter a system “Admin Username:”.

Enter a system “Password:” and re-enter the password in “Confirm Password:”.

*Note – Follow the previously described guidelines when creating passwords.



Chapter 2 - Using the Setup Wizard

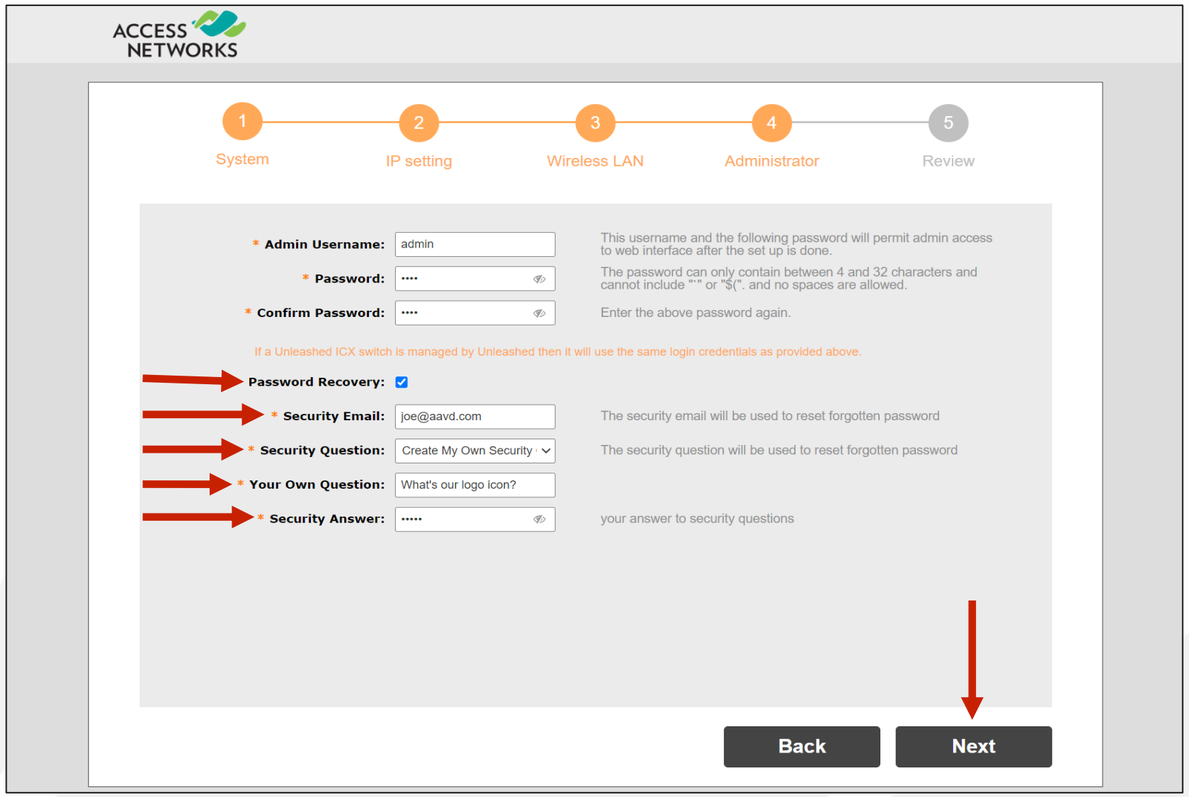
Step 4 - Password Recovery

It is recommended to configure the password recovery option. The password recovery option will allow your company to reset the password in the event of your original username or password are lost or forgotten.

To do so, select “Password Recovery”.

Enter a Security Email, Security Question and Security Answer. Again, by filling this information out, it will allow you to reset your password in the event of your username or password are forgotten.

Click “Next” to continue.



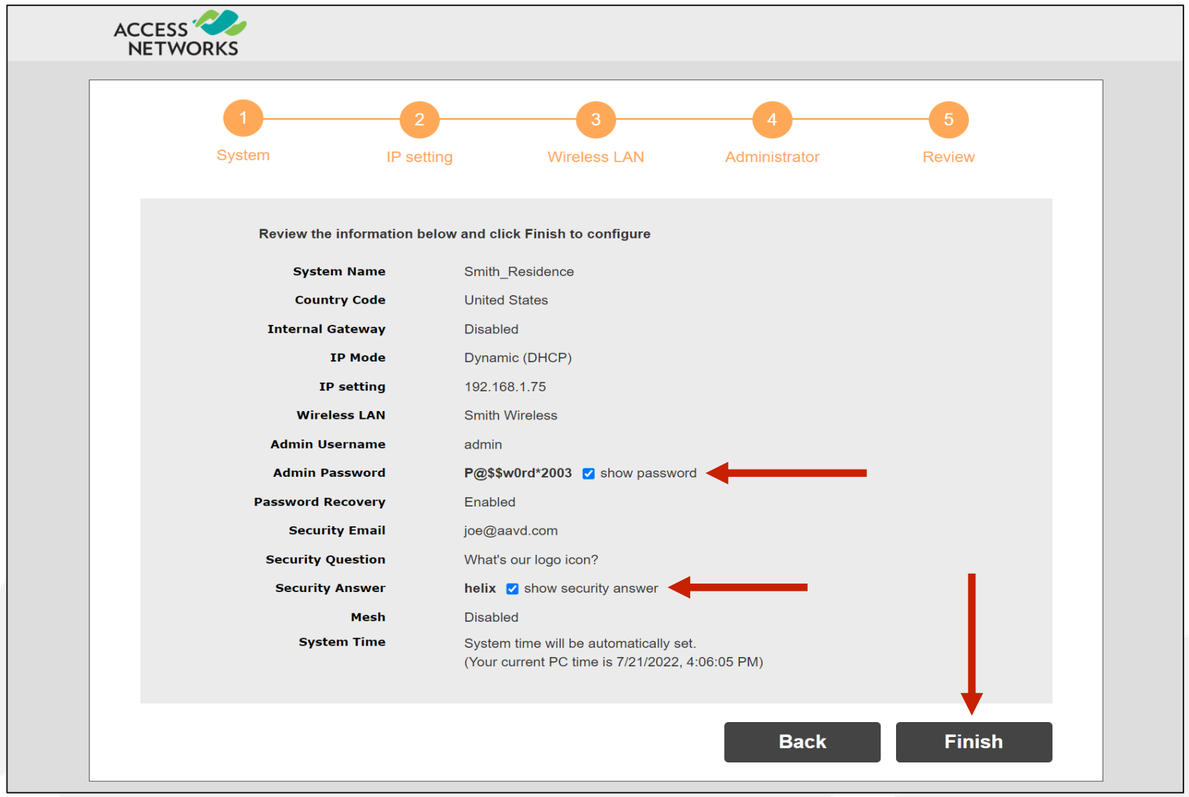
Chapter 2 - Using the Setup Wizard

Step 5 - Review

Review the information shown.

If you need to reveal the hidden password and the security answer, you can do so by clicking on the associated check box.

If everything is correct, select “Finish”.

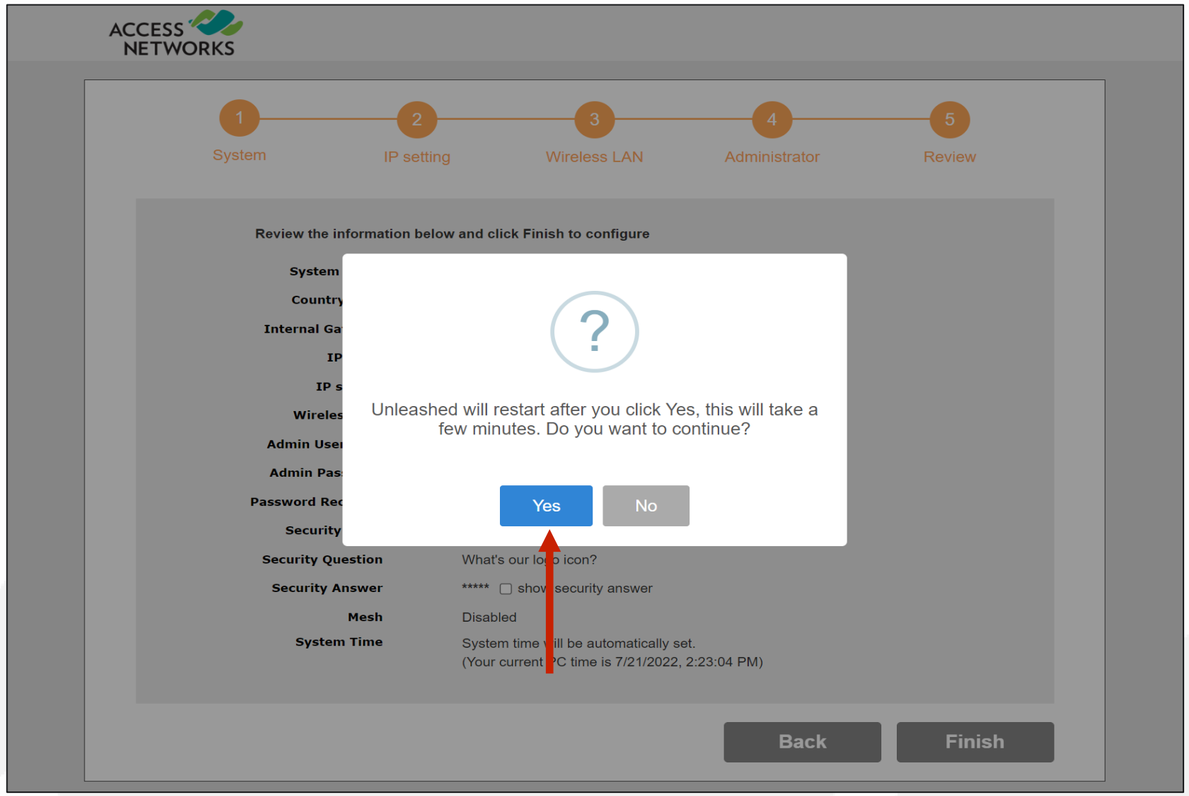


Chapter 2 - Using the Setup Wizard

Complete the setup process

A new pop-up will display verifying that you are aware that the Unleashed AP will reboot once you continue and that the process will take a few minutes.

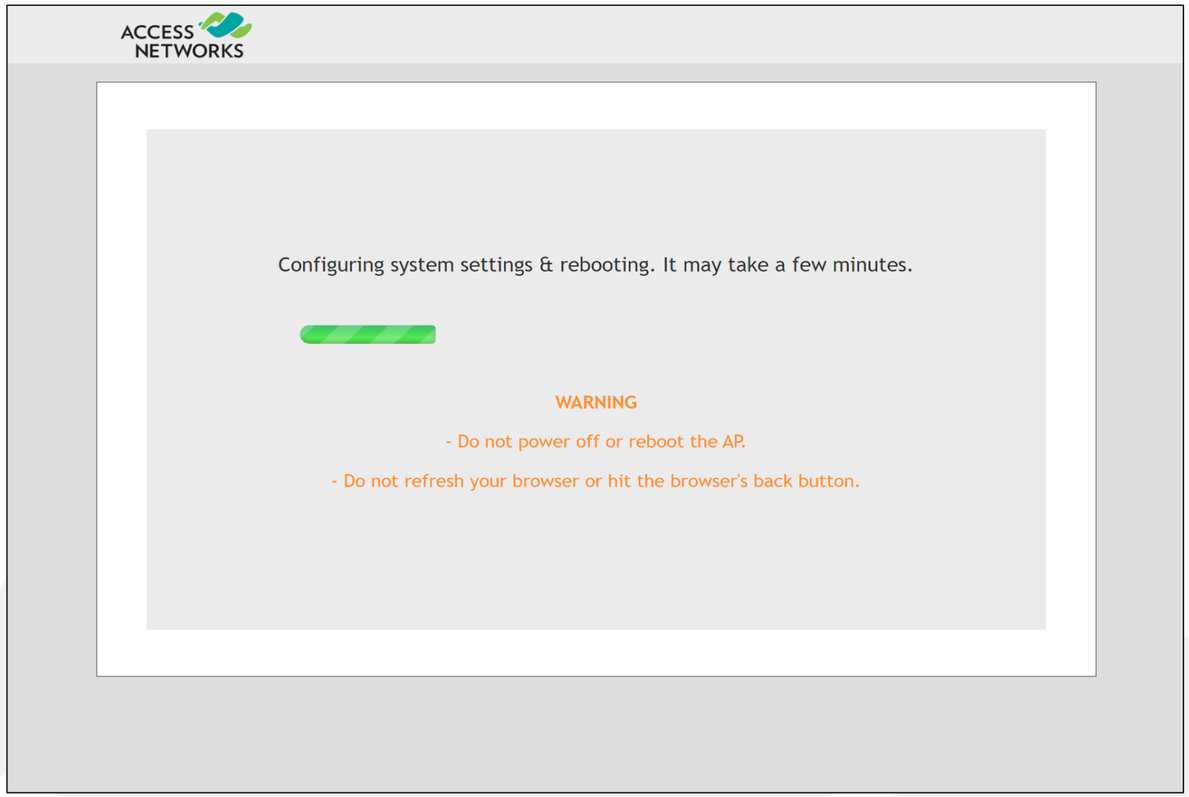
Click on “Yes” to complete the setup.



System Settings & Rebooting

After clicking the Finish button, the Unleashed Master AP will apply all of the setting you have configured and then reboot. A "Configuring system settings & rebooting" page is displayed during this process.

Wait for the progress screen to complete before proceeding.



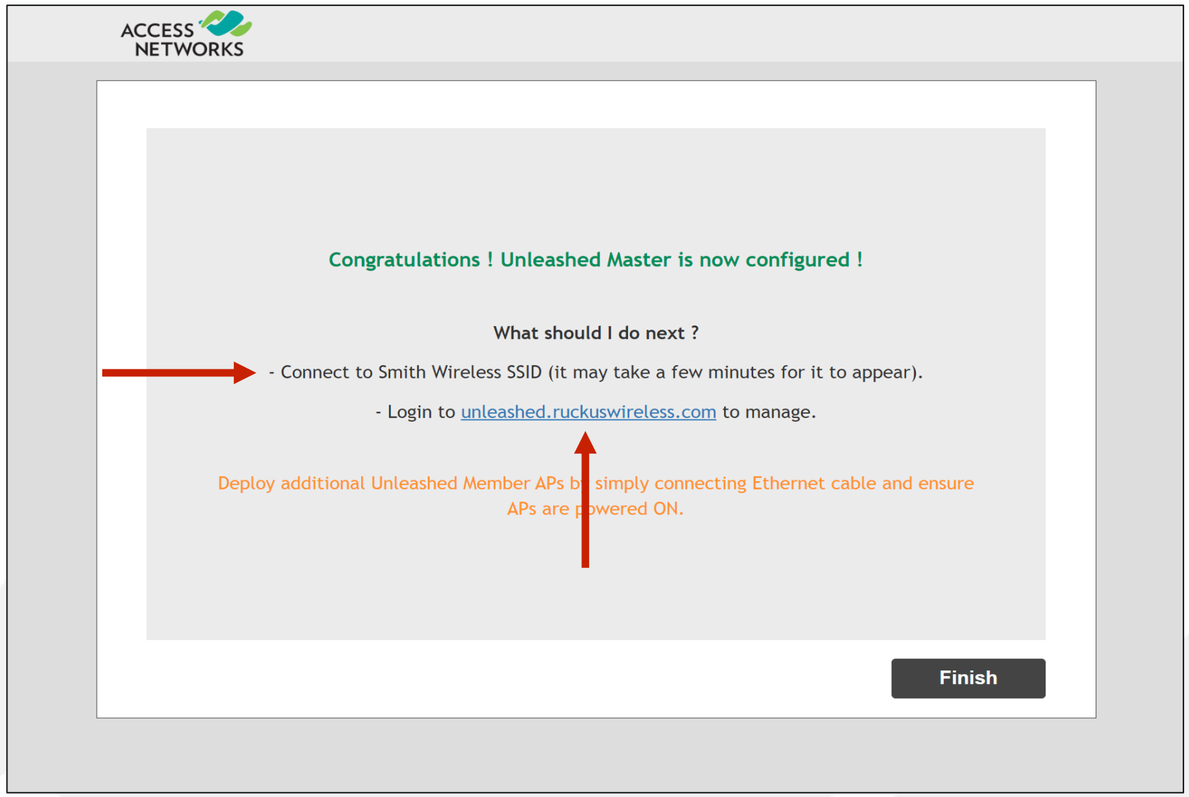
Chapter 2 - Using the Setup Wizard

System Settings & Rebooting

Once the setup is complete, the "Congratulations!" screen appears.

After the access point has rebooted you will need to connect to the new WLAN you created. Our example is “Smith Wireless”.

Click on “unleashed.ruckuswireless.com” after you have connected to your new WLAN. You will then be redirected to the login page.



Chapter 3 - Final Initial Configuration Steps in the GUI

- Reconnecting to the Master Access Point
- Unleashed Dashboard
- Configuring a Management Interface
- Creating a Guest Network
- Advanced Guest Network Isolation
- Adjusting Access Points for Best Channels/Performance Mode
- Automatic Channel Selection
- Adding Additional Unleashed Access Points
- Assigning Location Names to Access Points
- Assigning an Access Point as the Preferred Master

Chapter 3 - Final Initial Configuration Steps in the GUI

Reconnecting to the Unleashed Master Access Point

This is the login page for the new Unleashed Network.

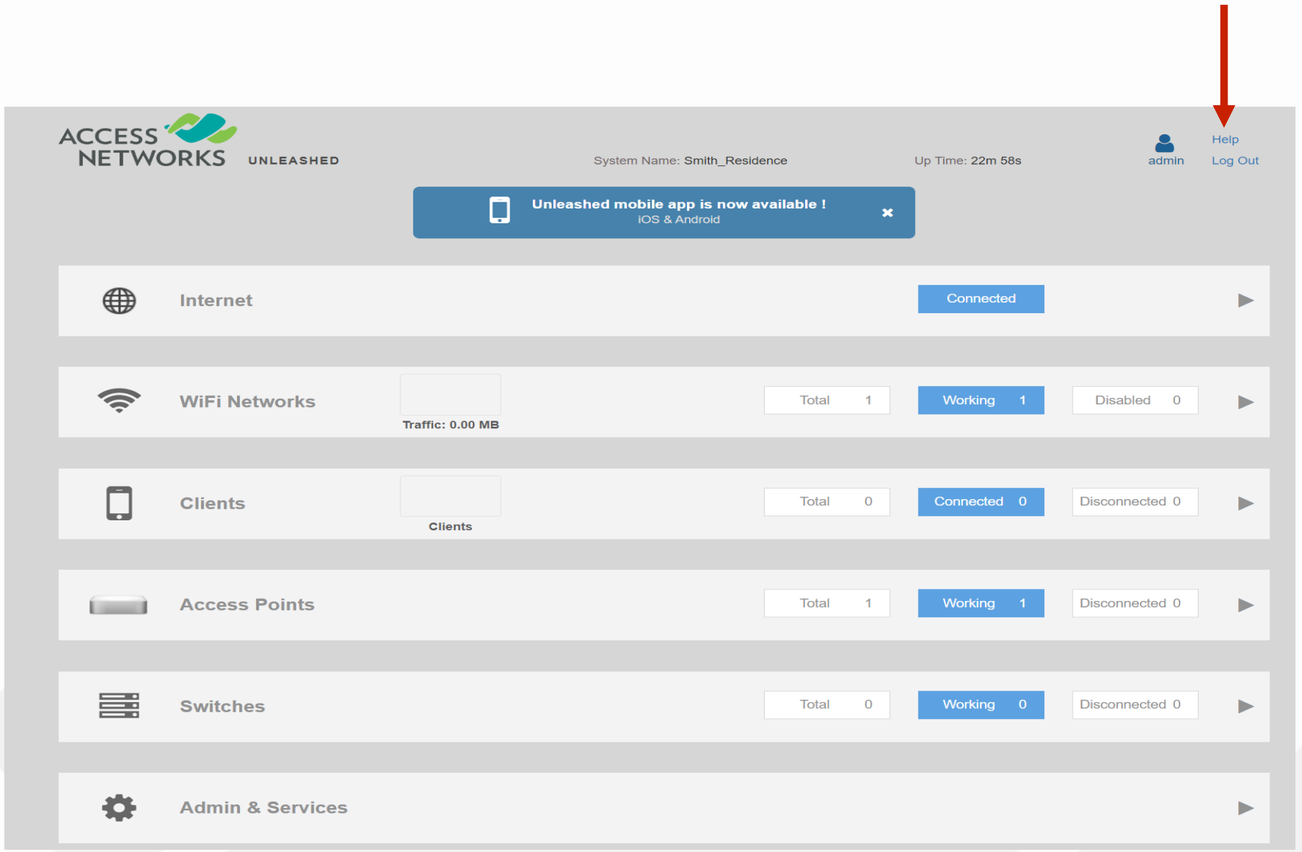
Enter the created “Username”, “Password”, and click “Unleash” to login.

Chapter 3 - Final Initial Configuration Steps in the GUI

Unleashed Dashboard

After successful login, you will be presented with the Unleashed Dashboard, which displays an overview of your Access Networks Unleashed network.

*Note - At any point during the setup process, you can access the complete Unleashed User Guide by clicking on “Help” in the upper right corner of the Unleashed web interface.

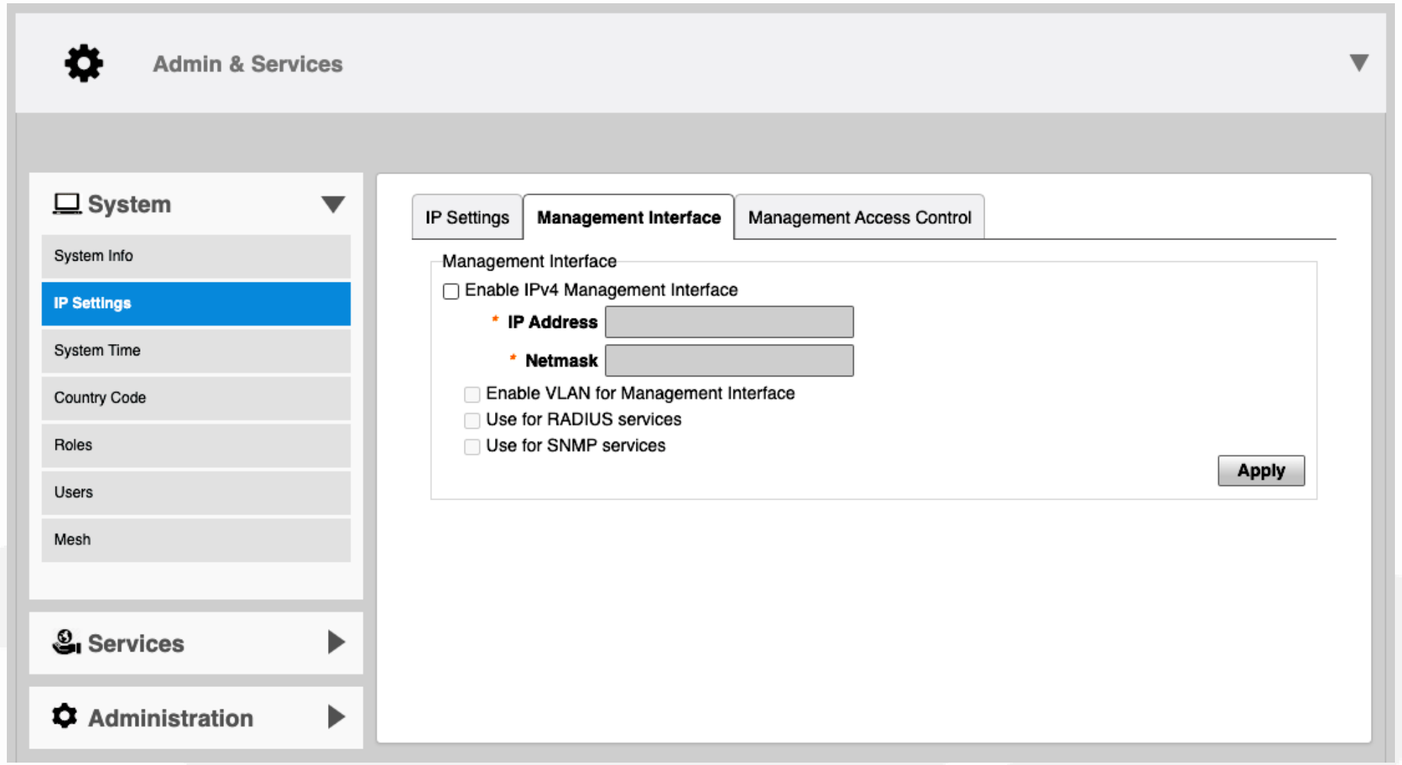


Chapter 3 - Final Initial Configuration Steps in the GUI

Configuring a Management Interface

A **static** Management IP address can be configured to allow the administrator to manage the Unleashed network from a single IP address.

This Management IP address will navigate to Unleashed management console, regardless of which access point is currently the Master AP.



Chapter 3 - Final Initial Configuration Steps in the GUI

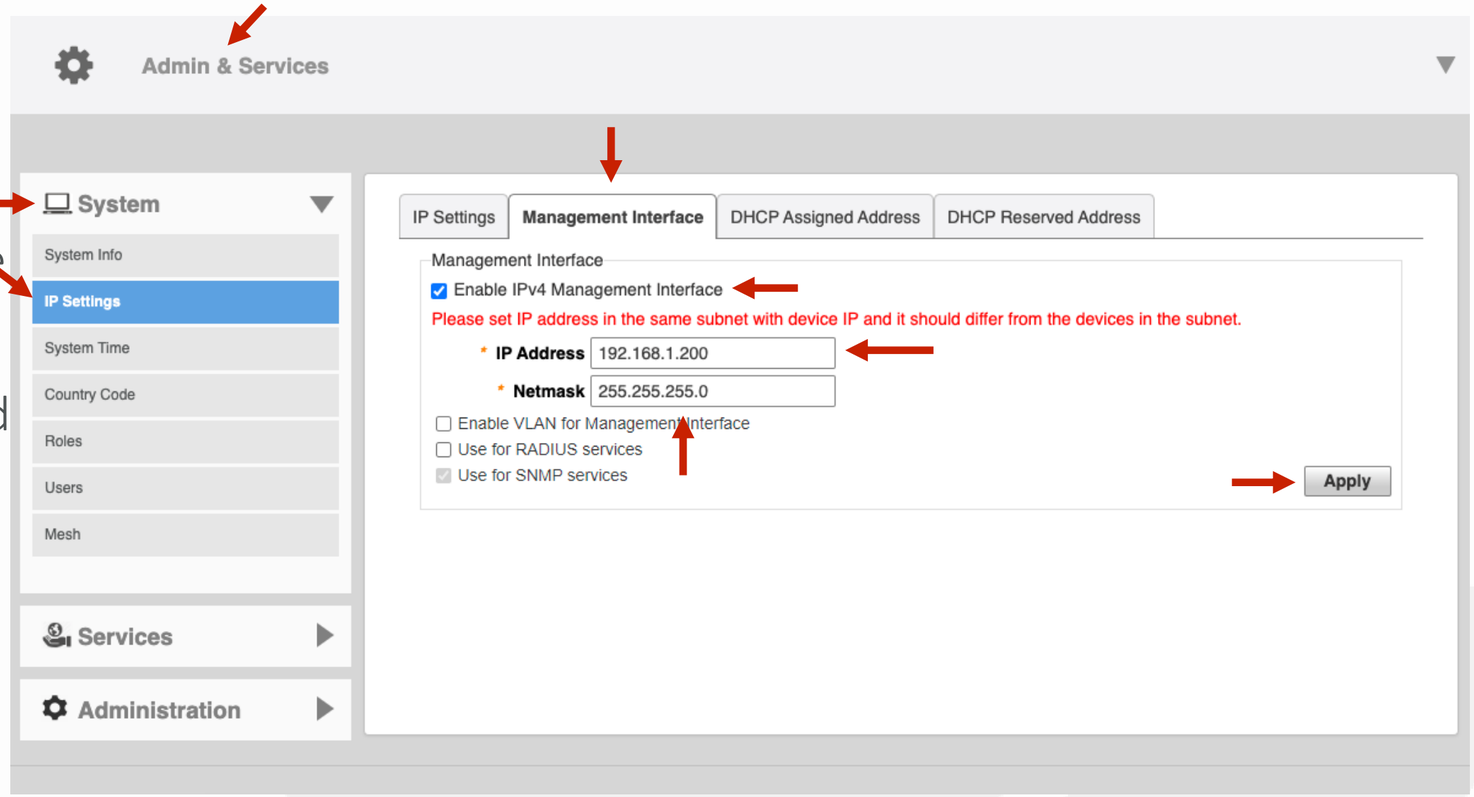
Configuring a Management Interface

Go to “Admin & Services”. Select “System” on the left menu bar to reveal “IP Settings” and choose it. Now click the “Management Interface” tab.

Select the check box next to “Enable IPv4” in the “Management Interface”.

Enter an IP Address and Netmask (Your standard Netmask is 255.255.255.0) and click “Apply”.

*Note - It’s required the IP address of the “Management Interface” be on the same subnet of the AP(s) IP and it should differ from other devices in the subnet.

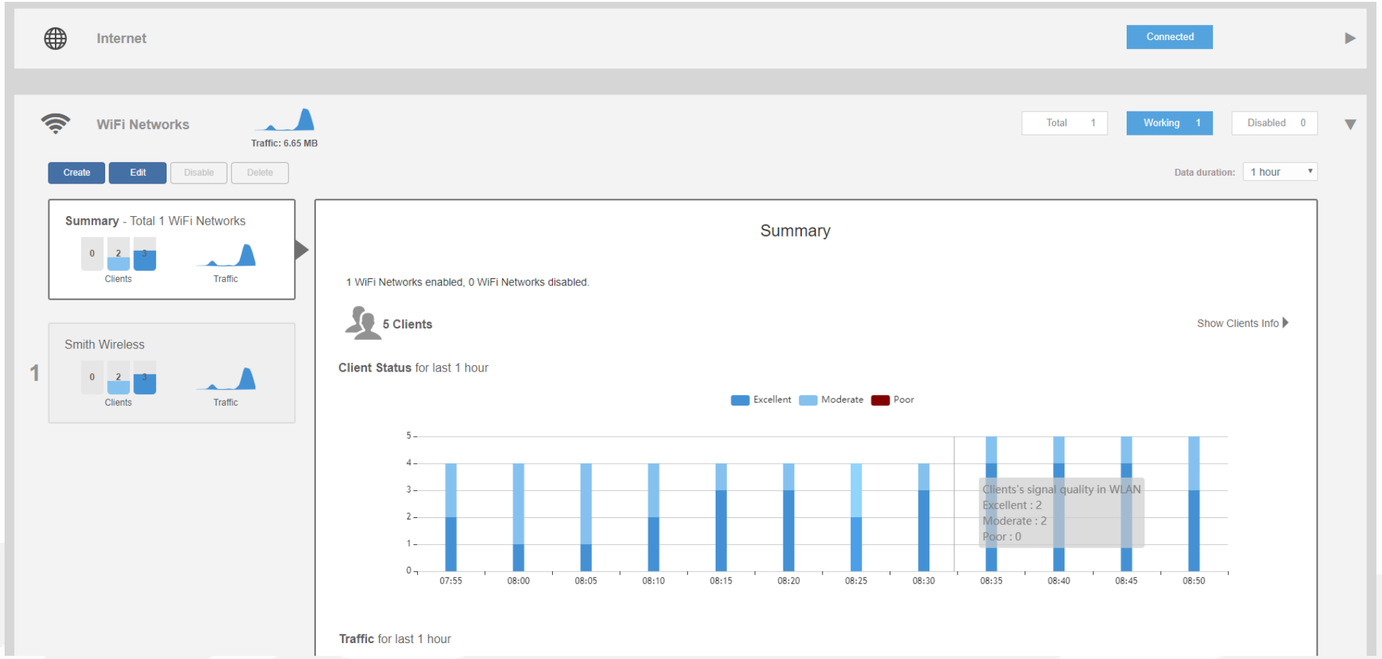


Chapter 3 - Final Initial Configuration Steps in the GUI

Create a Guest Network

Every network deployment should have a “Guest SSID” to allow guests to have internet access but isolate them from the rest of the network devices.

To fully isolate Guest Wireless Clients we need to isolate them other devices connected to the same AP as well as all hosts on the same VLAN/Subnet.



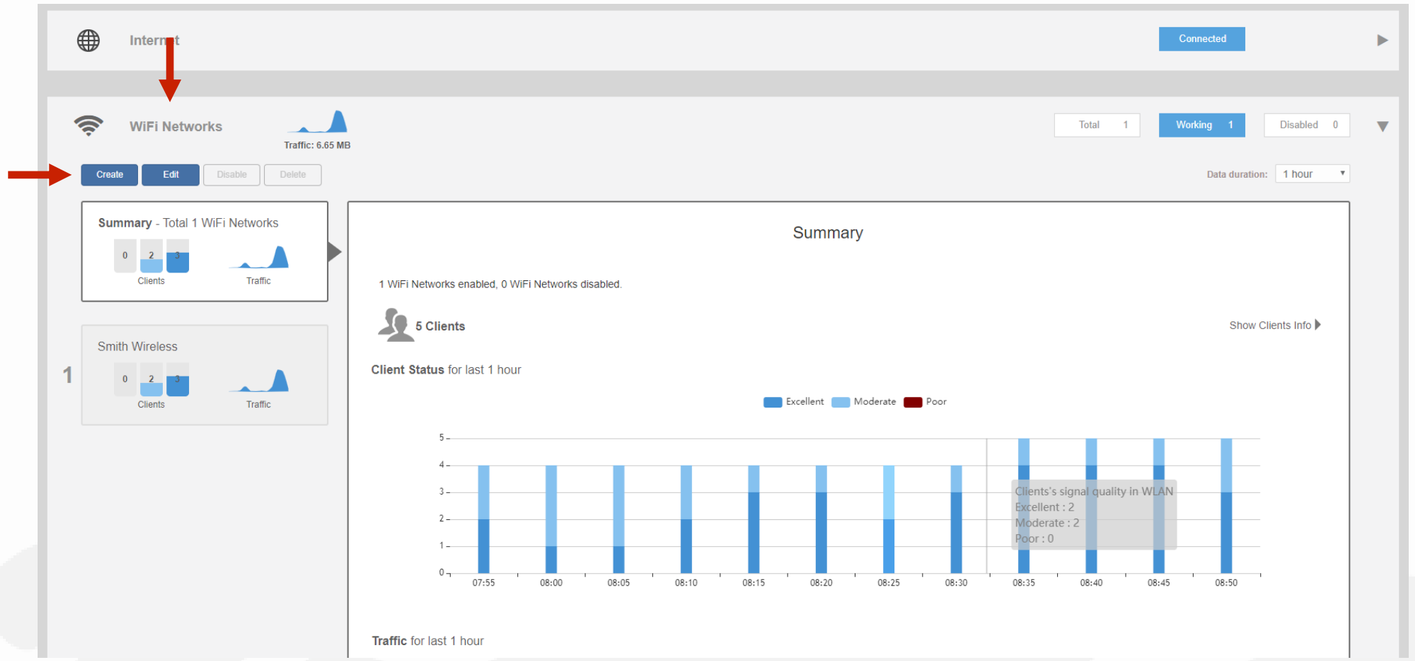
Chapter 3 - Final Initial Configuration Steps in the GUI

Create a Guest Network

First make a new WLAN.

Click anywhere in the “Wi-Fi Networks” section to expand the display of your deployed WLANs.

Now click on “Create” to open the “Create WLAN” pop-up page.



Chapter 3 - Final Initial Configuration Steps in the GUI

Create a Guest Network

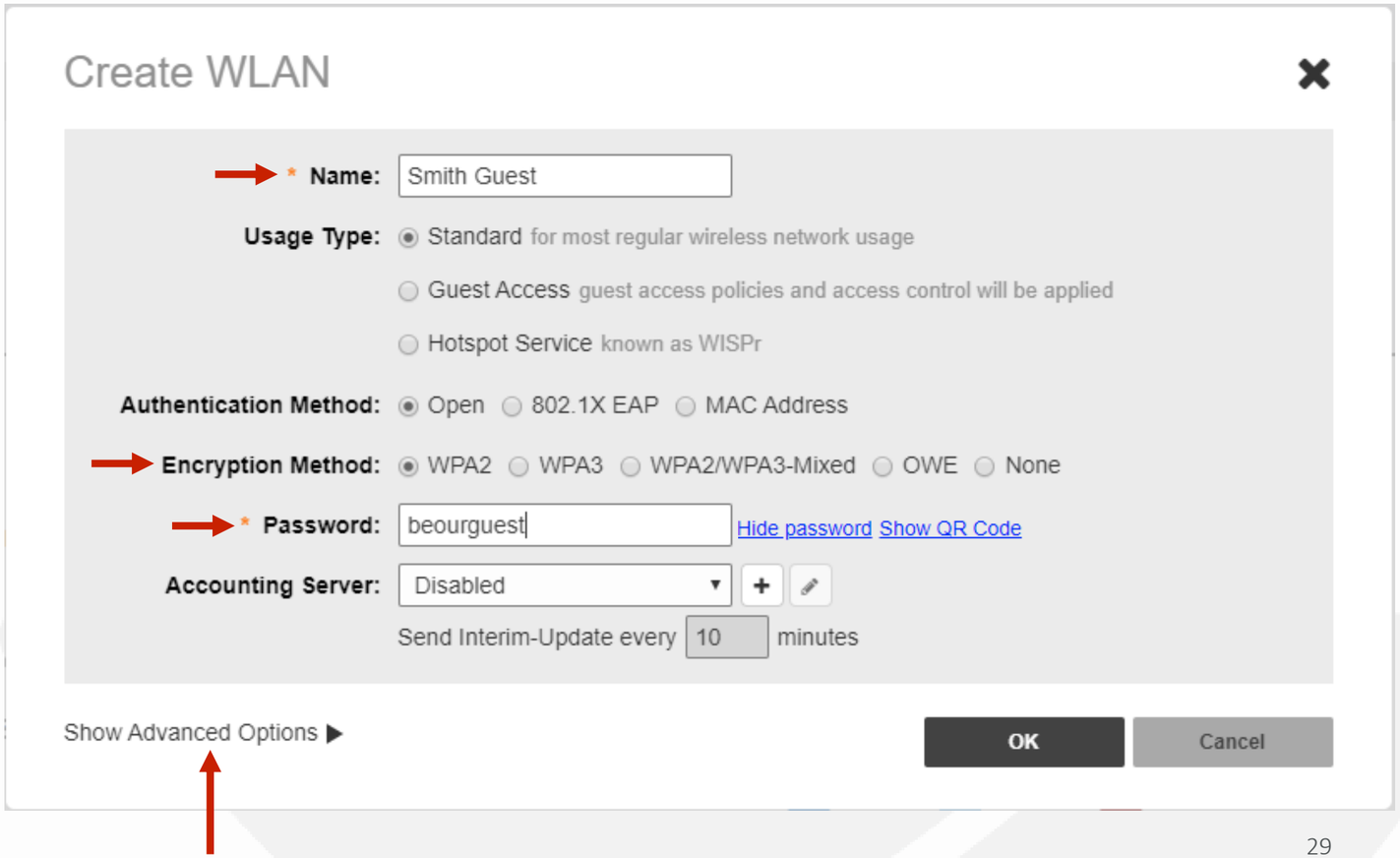
In the new dialog box, enter the SSID under “Name”.

Select the “WPA2” for the “Encryption Method”.

Enter in the passcode under “Password”.

Click on ”Show Advanced Options”.

*Note – Passphrases that are simple to remember will be used more often by your client. A good suggestion for a **SIMPLE** Guest WLAN passphrase is “beourguest”.



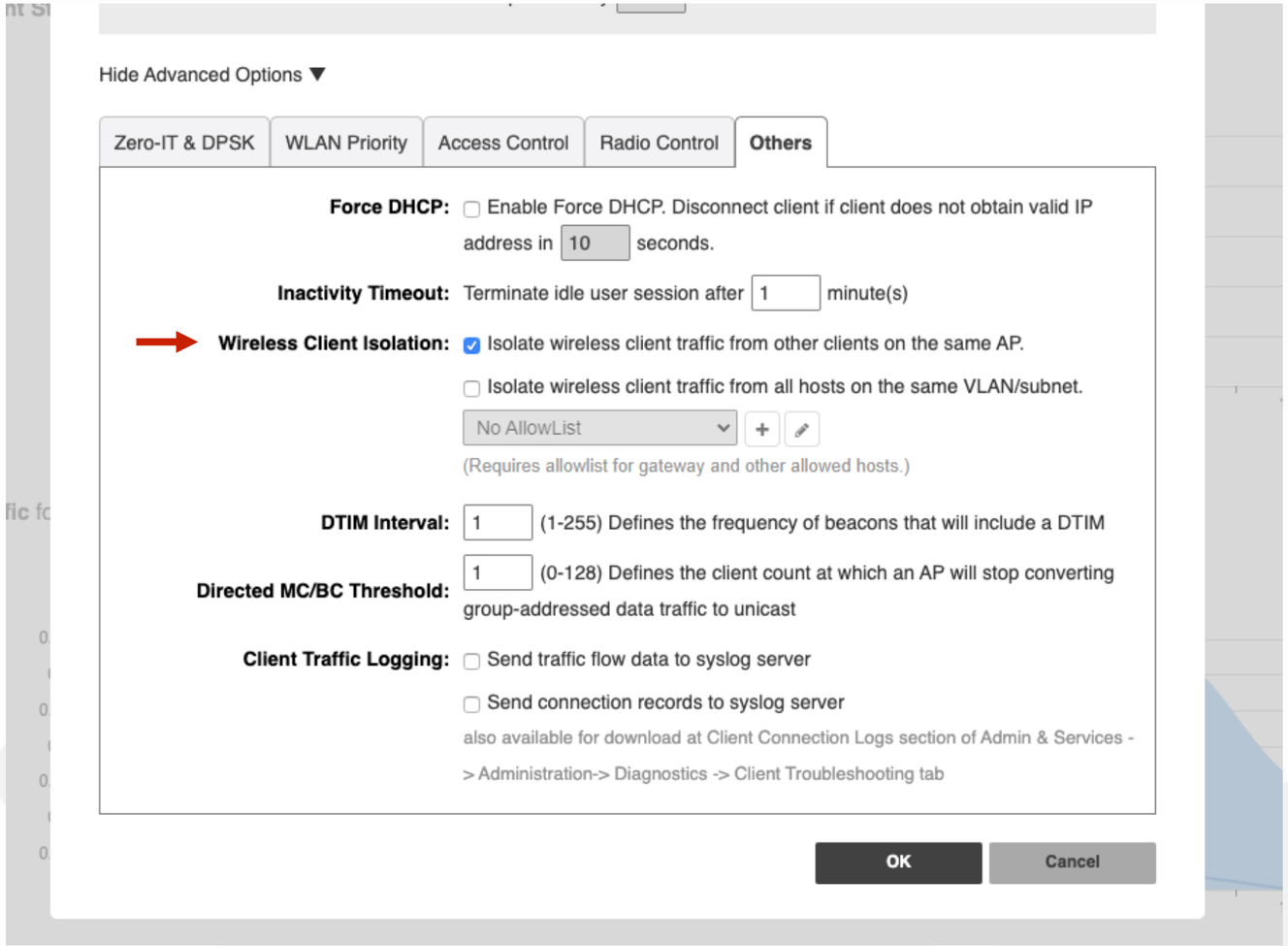
Chapter 3 - Final Initial Configuration Steps in the GUI

Create a Guest Network

Select the check box for “Wireless Client Isolation”.

This will ensure that guest network client devices are isolated from other wireless clients on the same AP.

The next step will be to isolate guest network client devices from all hosts on the same VLAN/Subnet.



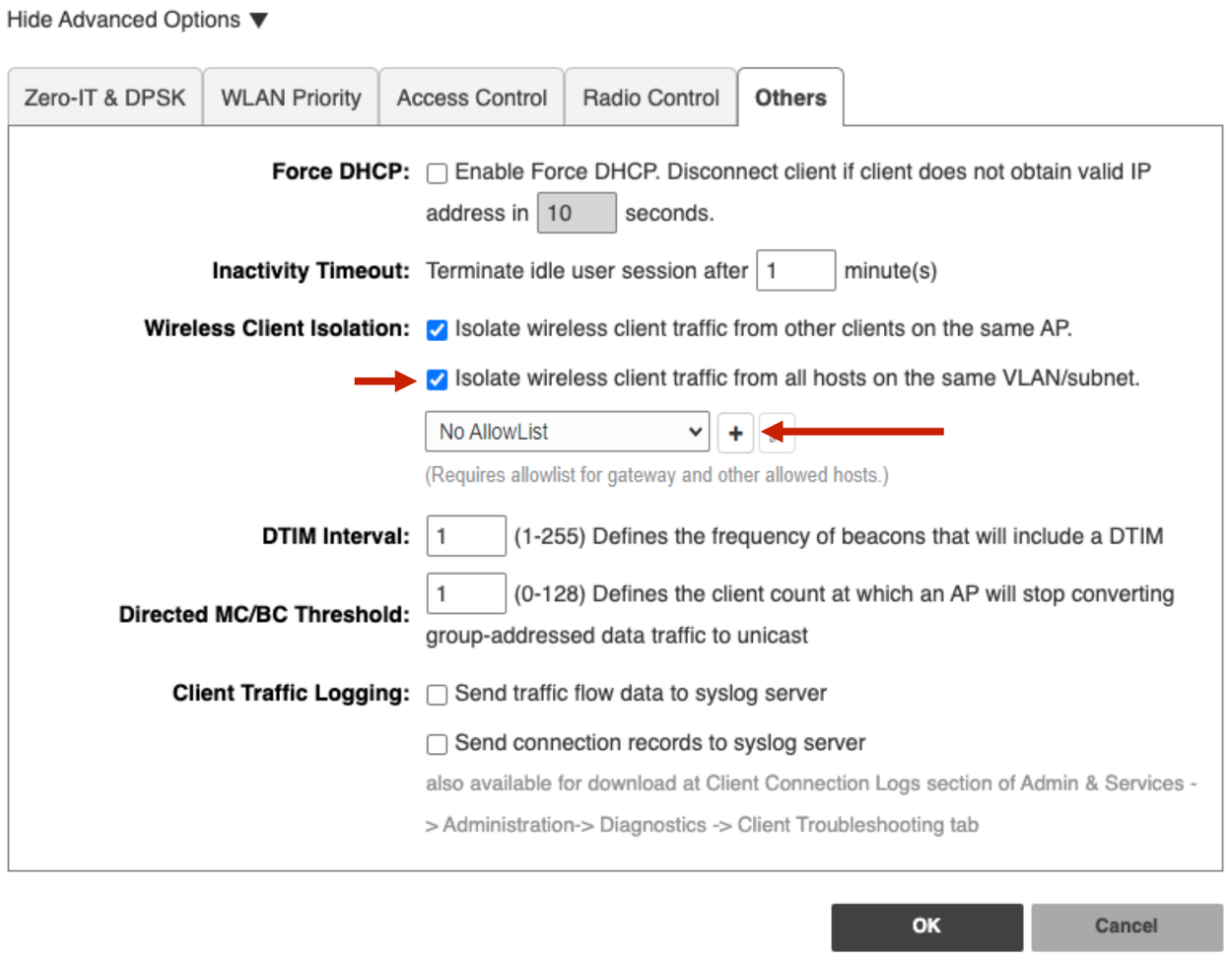
Chapter 3 - Final Initial Configuration Steps in the GUI

Create a Guest Network

Select the check box for “Isolate wireless client traffic from all hosts on the same VLAN/subnet.”

Now select the “+” symbol. This will allow you to create a ”Allowlist” rule.

*Note - An “Allowlist” is used to identify the **router** as the only device that guest network client devices can communicate with. This will allow internet access while maintaining isolation from other devices.



Chapter 3 - Final Initial Configuration Steps in the GUI

Create a Guest Network

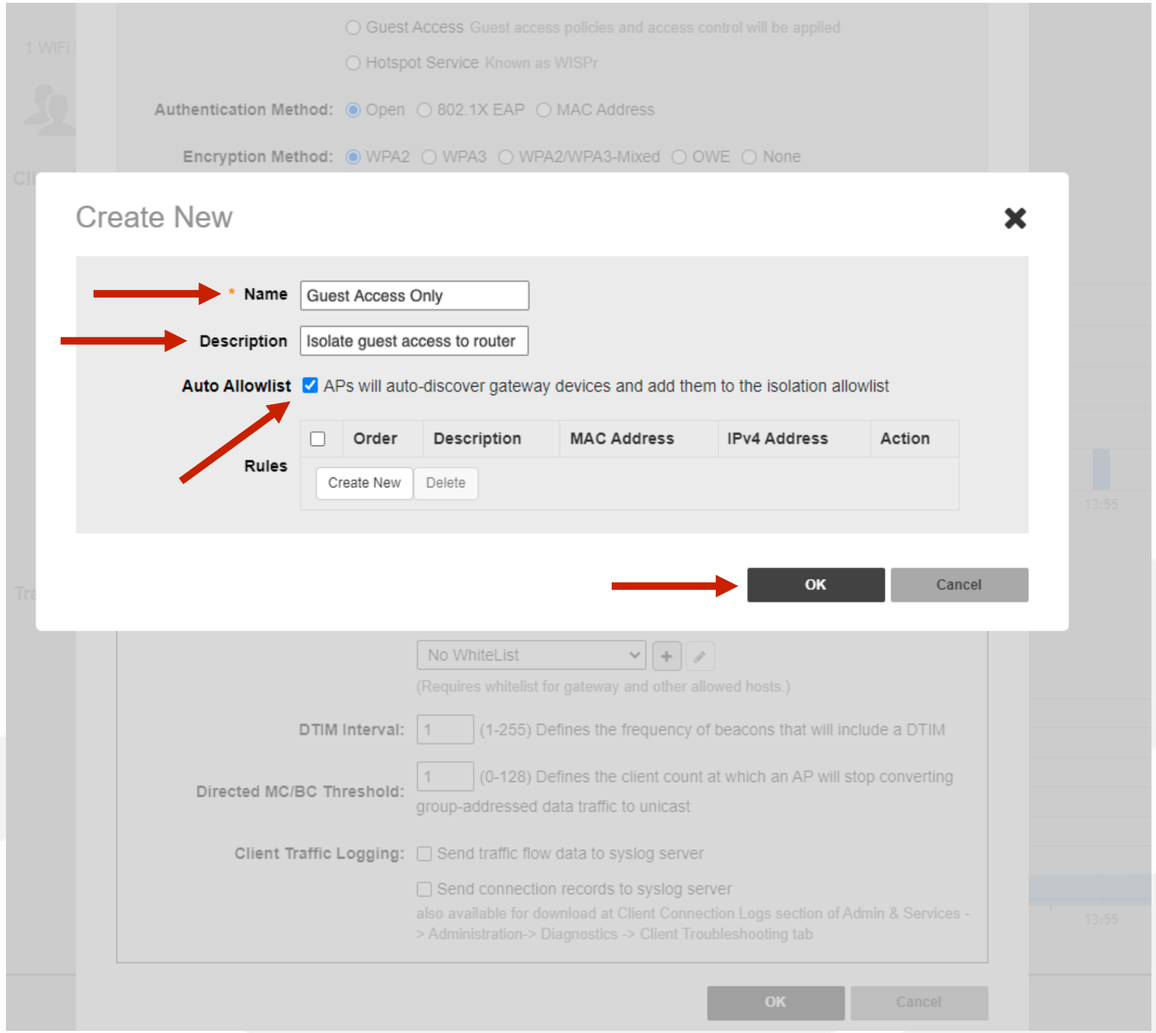
First select a “Name” for your “AllowList”.

Add a “Description” of your ”AllowList”.

Ensure the “Auto Allowlist” check box is enabled.

Enabling this feature allows the Unleashed Master AP to identify the MAC address of the Gateway and automatically add it to the “Allowlist”

Click on “OK” to continue.



Chapter 3 - Final Initial Configuration Steps in the GUI

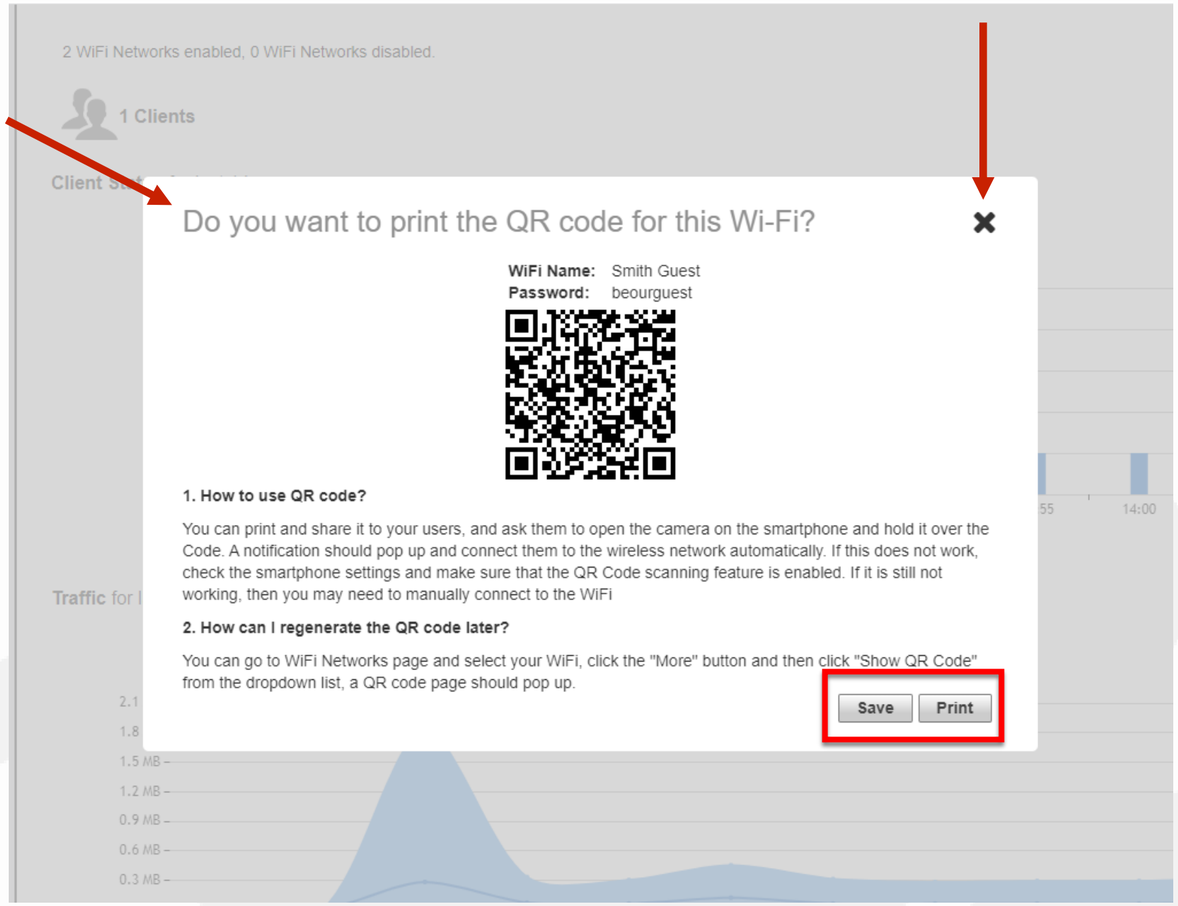
Create a Guest Network

The Guest WLAN is now active and all traffic from guest network client devices will be isolated, from all other client devices on the network, but will still have internet connectivity.

A new QR code window will now pop up.

The QR code is used to provide access for Guest client devices and can be printed or saved for later use.

Click on the “x” to continue.



Chapter 3 - Final Initial Configuration Steps in the GUI

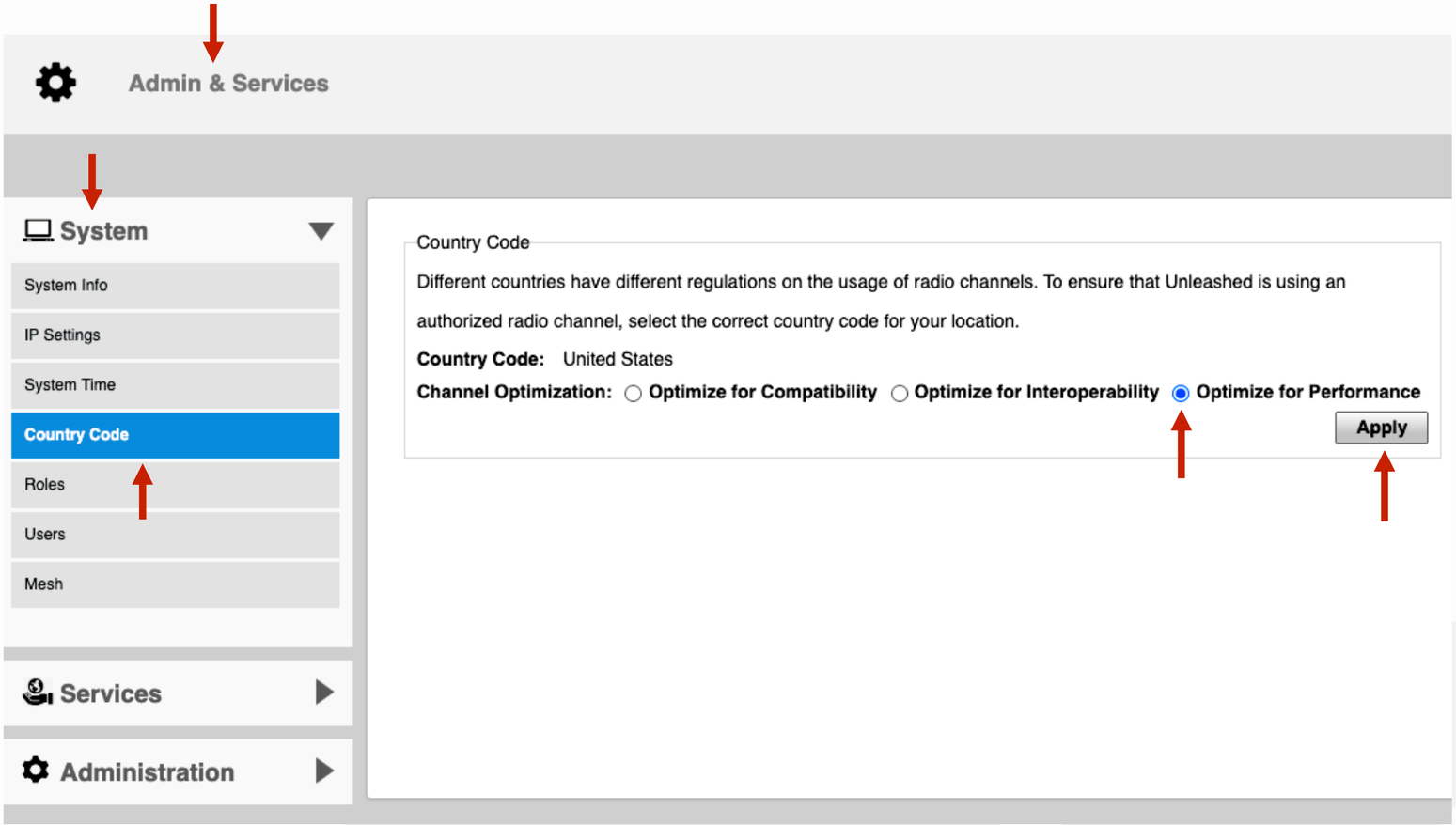
Adjusting Access Points for Best Channels/Performance Mode

Under “Admin & Services”, select “System”.

From the sub menu select “Country Code”.

Select the option “Optimize for Performance”. This will enable all available 5GHz channels.

Click on “Apply” to continue.



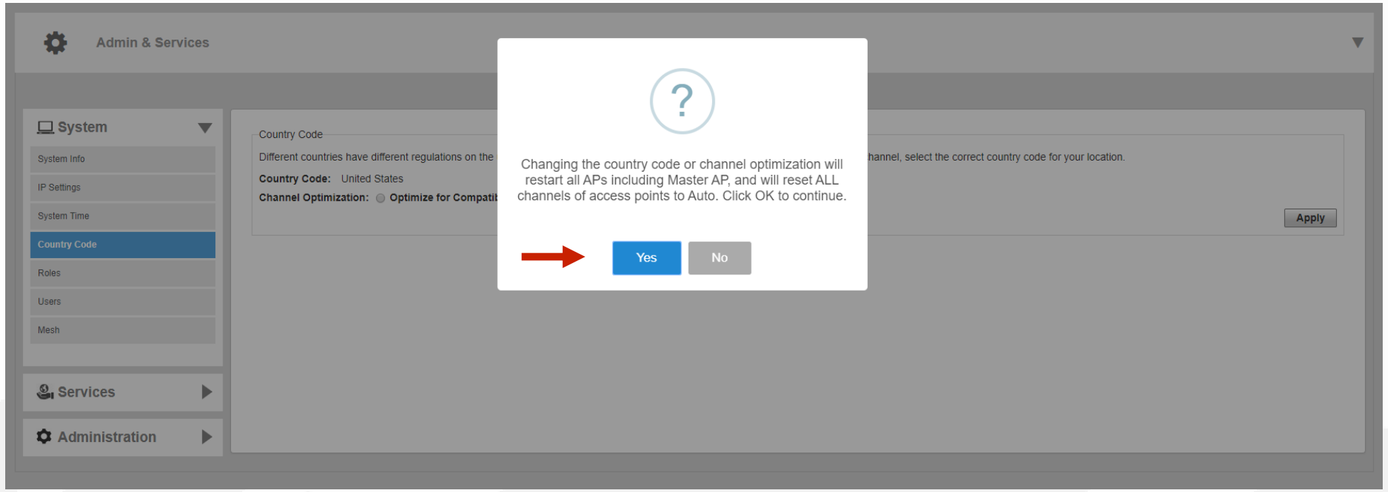
Chapter 3 - Final Initial Configuration Steps in the GUI

Adjusting Access Points for Best Channels/Performance Mode

A new dialog box will appear to verify that you indeed want to optimize all APs including the Master AP.

Click “Yes” to continue.

*Note: After changing to performance mode all access points will reboot, it will then be necessary to review the channels available for automatic channel selection.



Chapter 3 - Final Initial Configuration Steps in the GUI

Adjusting Access Points for Best Channels/Performance Mode

After the system has completed the rebooting process, you will need to re-login.

Enter the created “Username”, “Password”, and click “Unleash” to login.

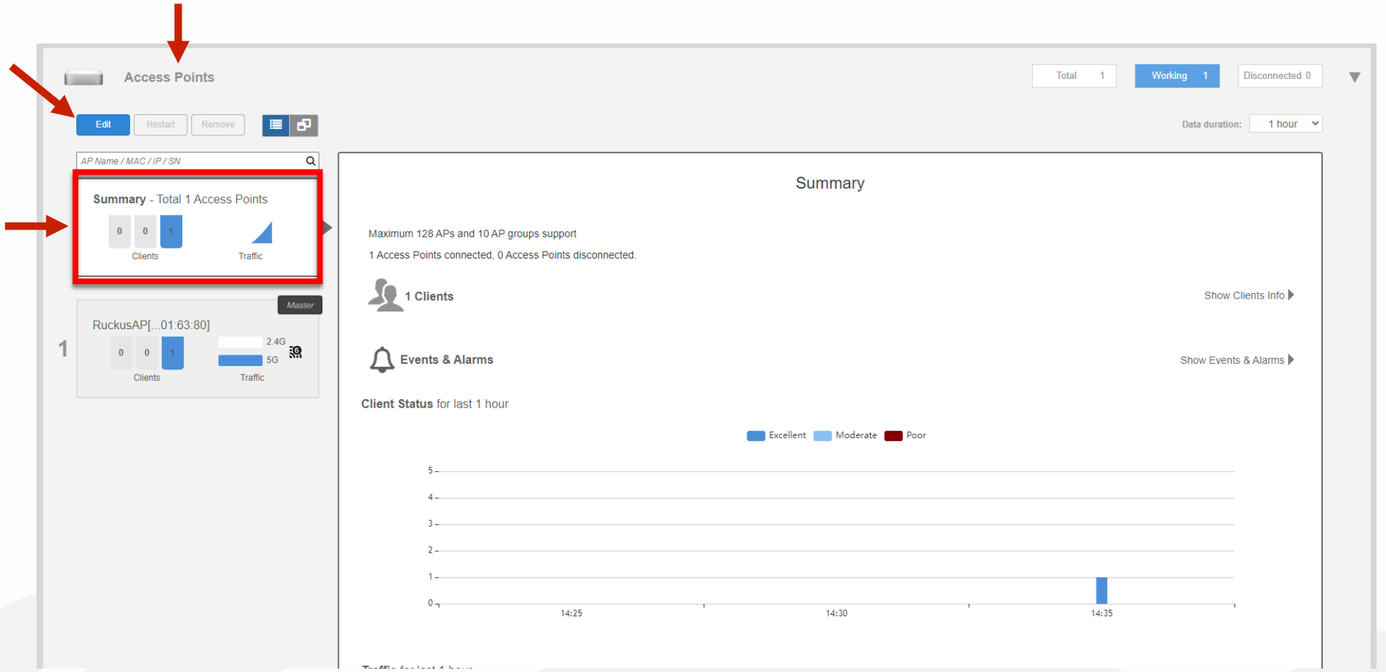
Chapter 3 - Final Initial Configuration Steps in the GUI

Adjusting Access Points for Best Channels/Performance Mode

Navigate back to “Access Points” and click anywhere in the “Access Points” section to expand the display of your deployed AP’s.

The “Summary” area is where you can make global changes for all connected Unleashed access points.

Click on “Summary” and select “Edit”.



Chapter 3 - Final Initial Configuration Steps in the GUI

Adjusting Access Points for Best Channels/Performance Mode

Click on the tab labeled “Radio 2.4 GHz”.

Deselect the following channels “2, 3, 4, 5, 7, 8, 9 and 10”. This will limit automatic channel selection to channels 1,6,11 on 2.4GHz

Chapter 3 - Final Initial Configuration Steps in the GUI

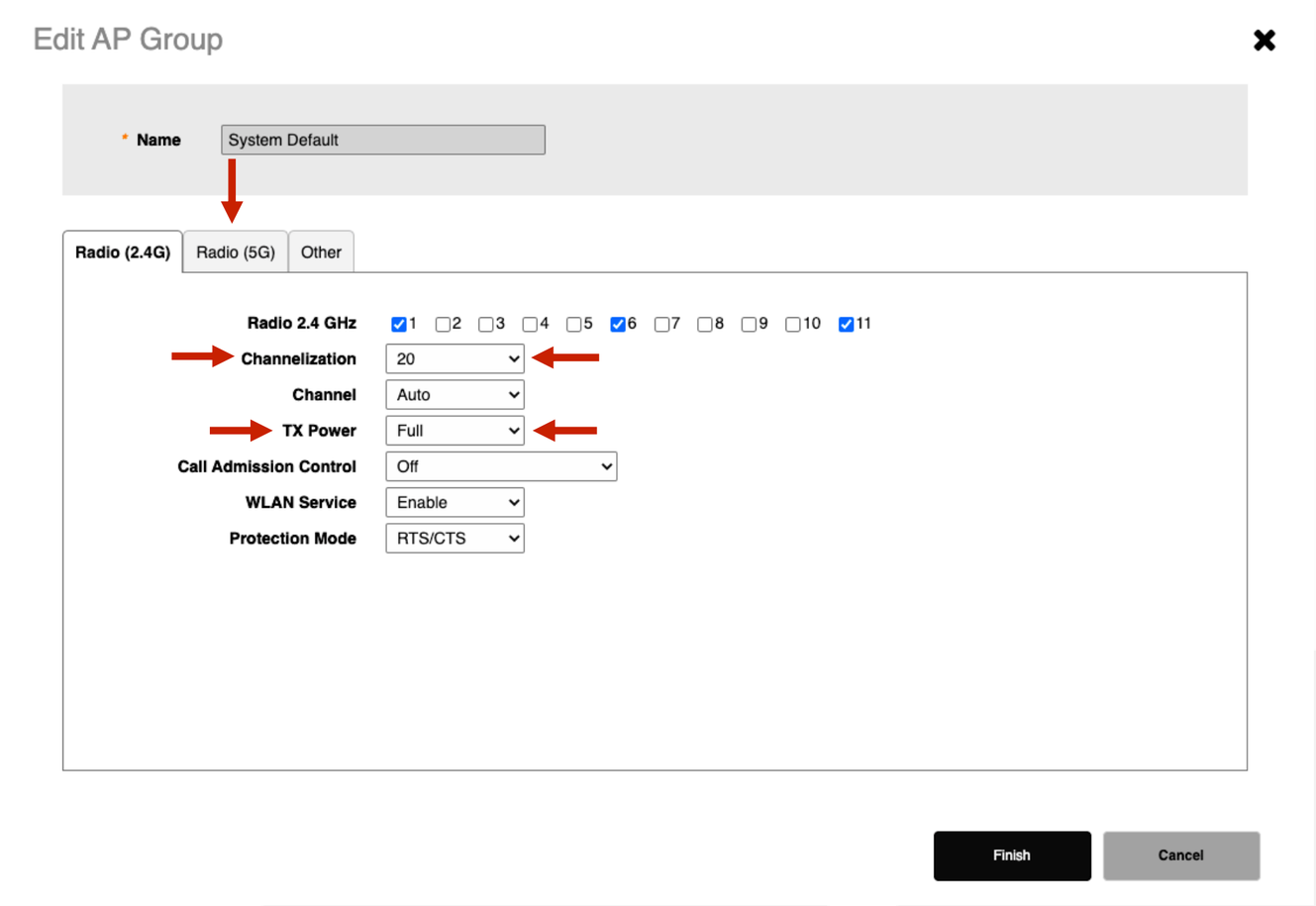
Adjusting Access Points for Best Channels/Performance Mode

Let’s change the “Auto” settings for “Channelization” and “TX Power” for the 2.4 GHz Radio.

Under “Channelization”, lets select “20” MHz wide channel instead of “Auto”.

Now let’s switch the “TX Power” from “Auto” to “Full” power.

Click on the tab labeled “Radio (5G)”.



Chapter 3 - Final Initial Configuration Steps in the GUI

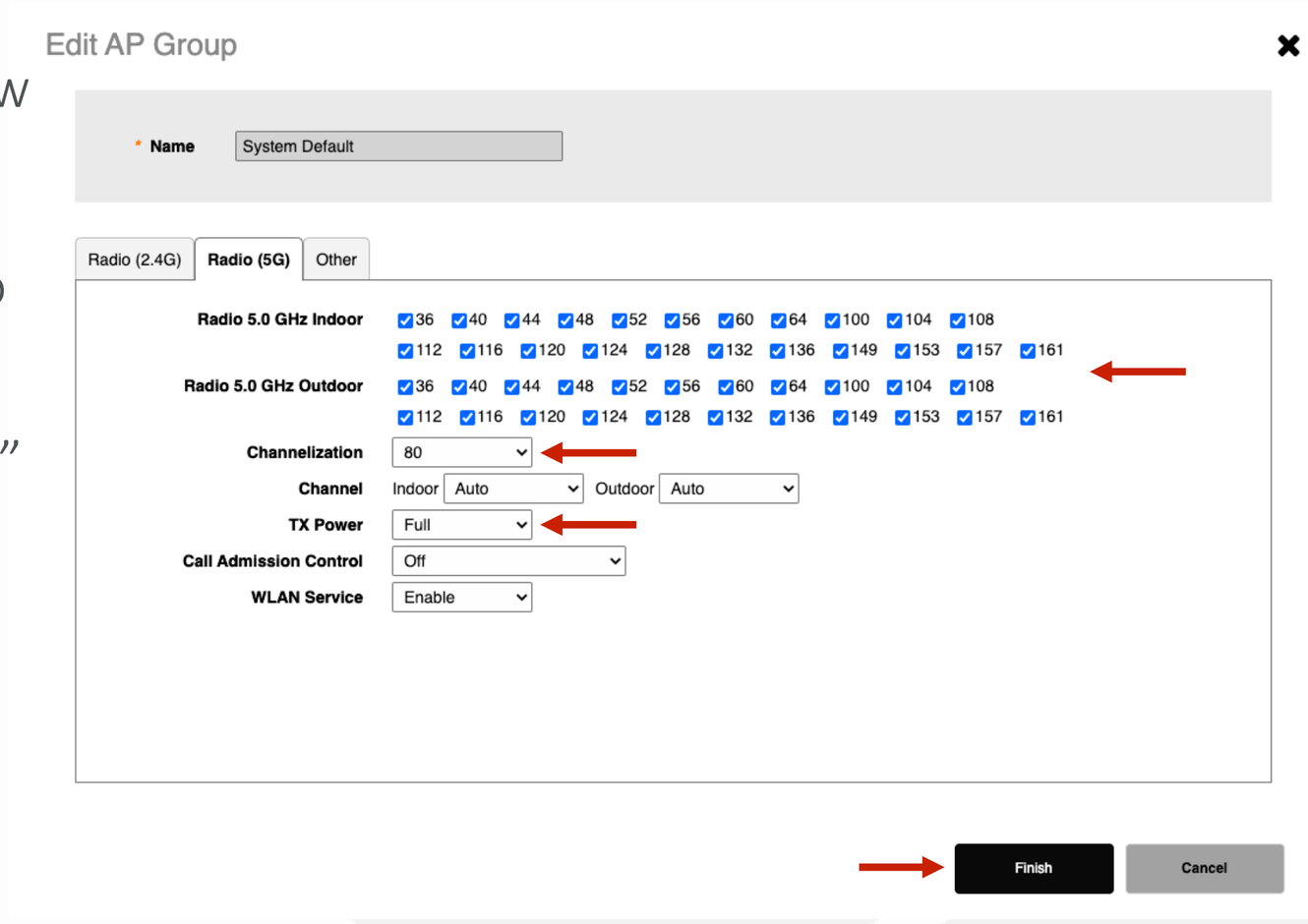
Adjusting Access Points for Best Channels/Performance Mode

Review all the new channels that are now available for ”ChannelFly”.

Change ”Channelization” from “Auto” to ”80”Mhz.

Change “TX Power” from “Auto” to “Full” power.

Select “Finish” to continue.



Chapter 3 - Final Initial Configuration Steps in the GUI

Automatic Channel Selection (Self Healing)

Unleashed access point use two different techniques for “Self Healing” a wireless deployment by identifying interference and measuring performance, then automatically changing the channels each access point uses, to improve the client device experience.

“Background scanning” is used on the 2.4GHz spectrum as it keeps a historical record of how many other devices are broadcasting a specific channel and will then direct each AP to use the 2.4GHz channel that has the lowest number of direct interferers.

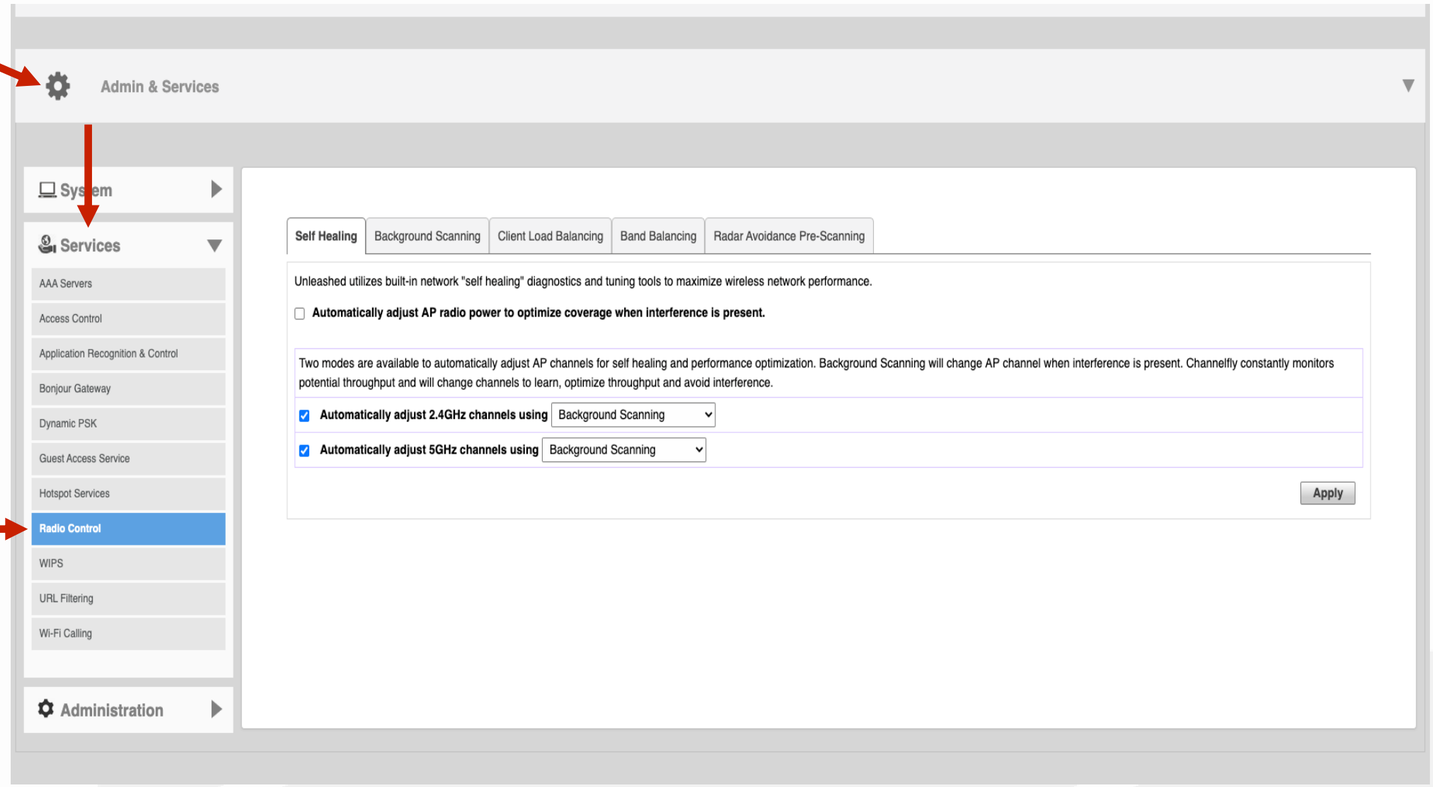
“Channel Fly” is used on the 5GHz spectrum as it not only records the number of direct interferers, but it also records the performance of authenticated devices and directs each AP to use the 5GHz channel that provides the best throughput for connected devices.

Chapter 3 - Final Initial Configuration Steps in the GUI

Automatic Channel Selection

Click anywhere on ”Admin & Services” to reveal the sub menus.

Now select “Services” to reveal the sub menus. Select “Radio Control” from the left menu.



Chapter 3 - Final Initial Configuration Steps in the GUI

Automatic Channel Selection

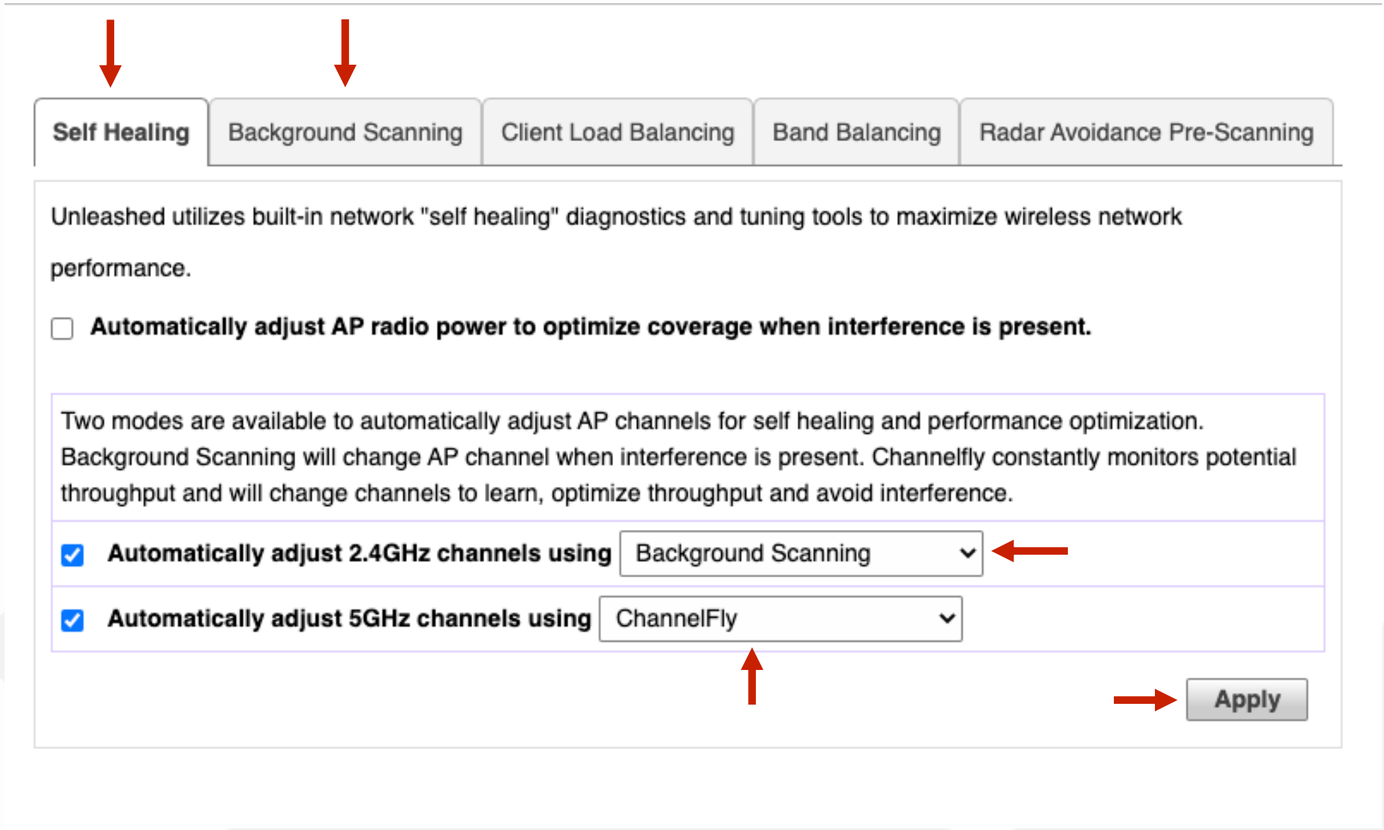
”Self Healing” will be the first tab that adjustments will be made.

Make sure 2.4GHz channels are using “Background Scanning”.

Make sure 5GHz channels are using “ChannelFly”.

Click on “Apply” to continue.

Then select the Tab labeled “Background Scanning”.



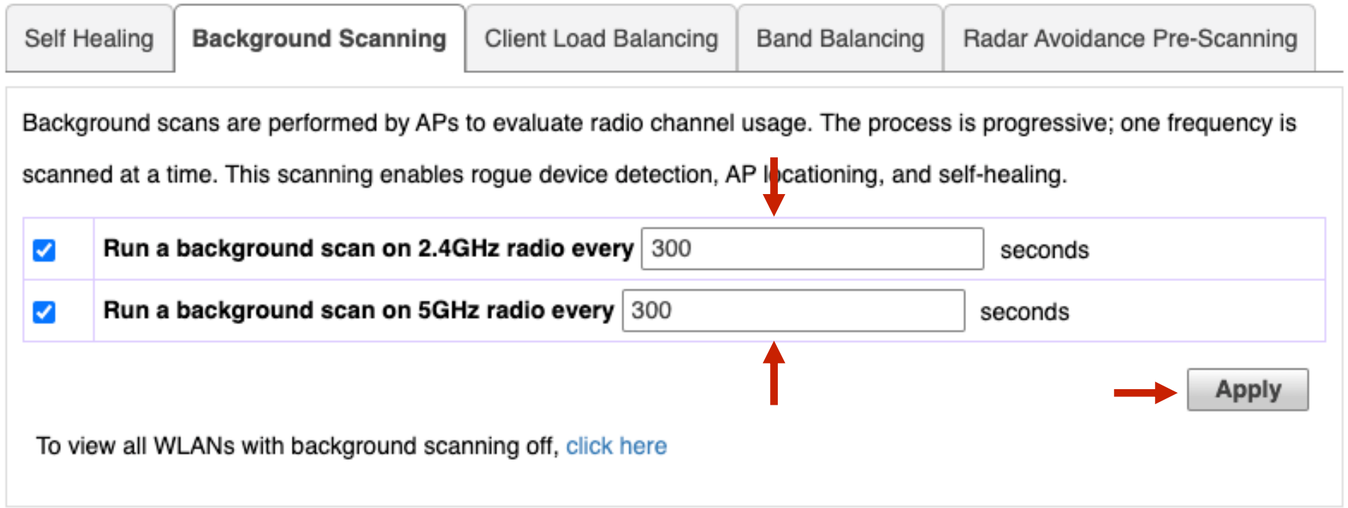
Chapter 3 - Final Initial Configuration Steps in the GUI

Automatic Channel Selection

Background scan on 2.4GHz radio should be set to every “300” seconds.

Background scan on 5GHz radio should be set to every “300” seconds.

After these changes have been made from the default settings, click on “Apply” to continue.



Chapter 3 - Final Initial Configuration Steps in the GUI

Adding Additional Unleashed Access Points

Deploying additional Unleashed member APs is simply a matter of connecting them via Ethernet to the same Layer 2 network switch and providing power. They will discover the Unleashed Master and join automatically. No additional steps are necessary.

The second and any additional APs that join an Unleashed network will automatically assume the role of Unleashed member AP. Thereafter, if the Master AP goes offline, one of the member APs will become the new Master and assume control of the Unleashed network.

*Note - Any **(non-mesh)** AP can become the Master if the preferred Master is offline, but when the Preferred Master comes back online, it will assume the Master role again.

Chapter 3 - Final Initial Configuration Steps in the GUI

Adding Additional Unleashed Access Points

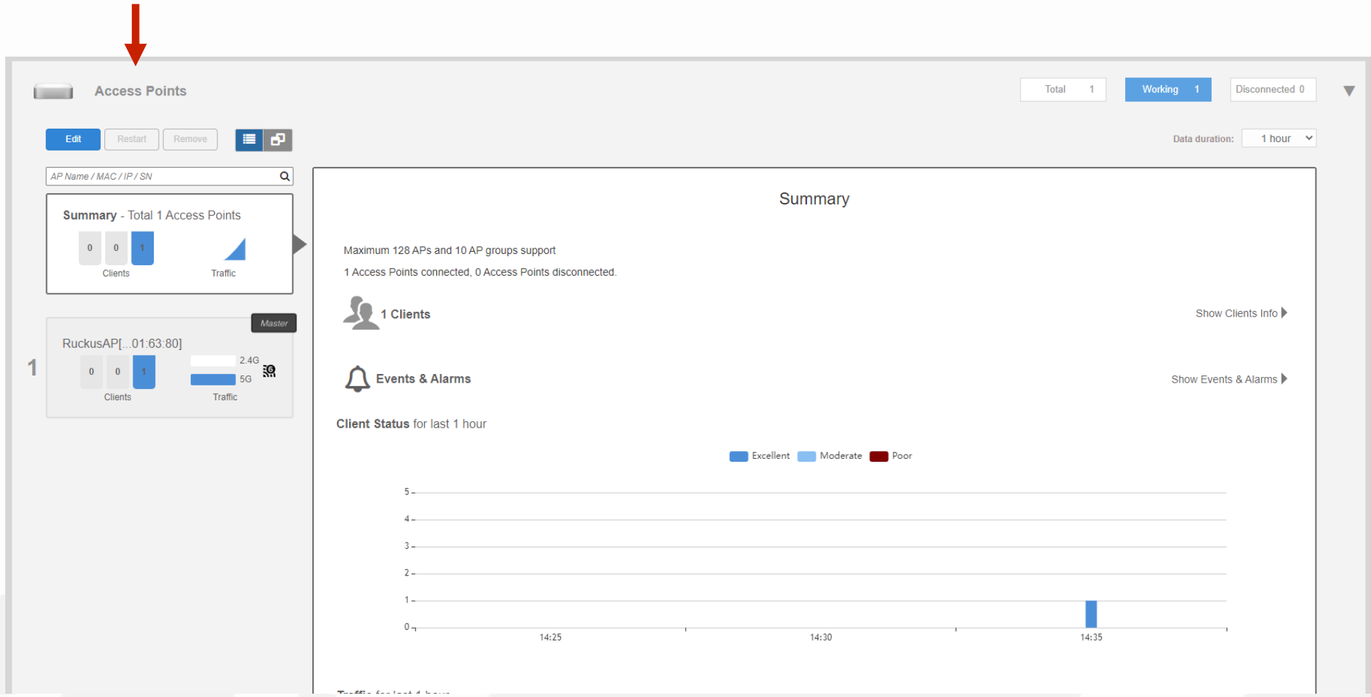
Note: When a member AP joins the Master for the first time, if the member AP is running a different firmware version than the Master, it will automatically download and upgrade (or downgrade) itself to the correct firmware version to match that of the Master, reboot, and then rejoin the Unleashed network once the proper firmware is running.

Chapter 3 - Final Initial Configuration Steps in the GUI

Assign Location Names to Access Points

As a part of your installation procedures, it is highly recommended that you label each access point with a description of where it was installed.

To make these changes proceed by clicking anywhere in the “Access Points” section to expand the display of your deployed AP’s.



Chapter 3 - Final Initial Configuration Steps in the GUI

Assign Location Names to Access Points

Click on the AP you want to configure.

Then click “Edit”.

Chapter 3 - Final Initial Configuration Steps in the GUI

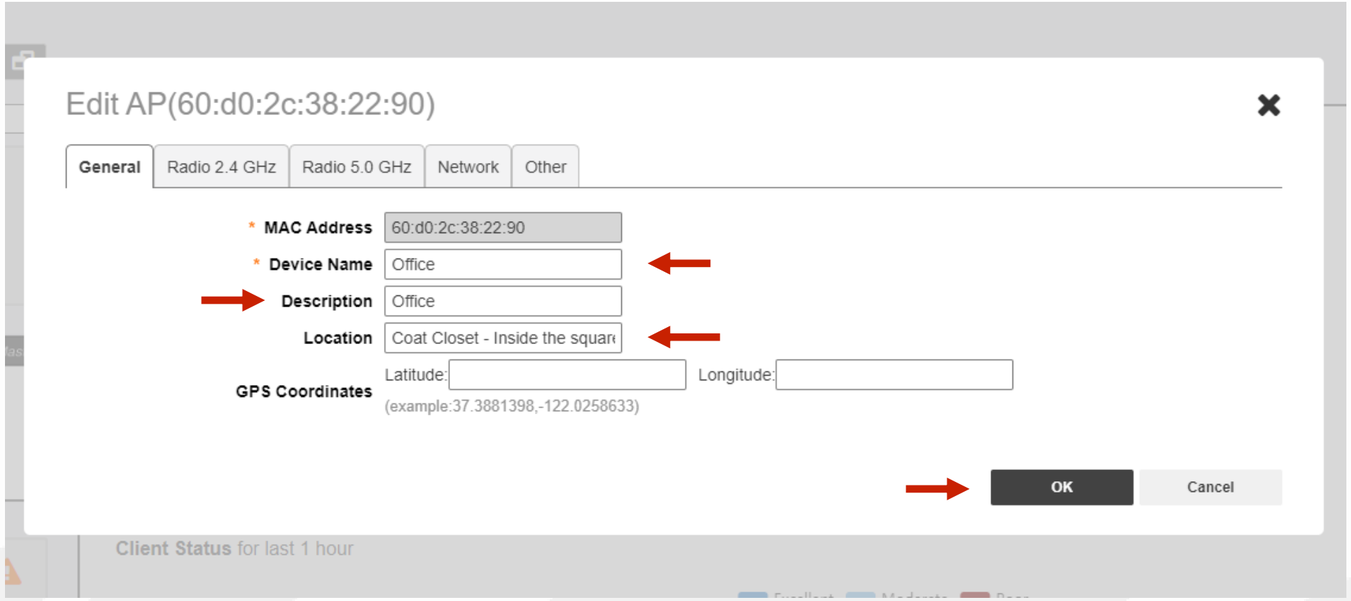
Assign Location Names to Access Points

Enter the access point's "Device Name".

Enter the "Description" of the access point. It should be the same as the "Device Name".

Now add a good detailed location of the access point in the "Location" field. This description will allow anyone that services the Unleashed Network to quickly find the location of the access point.

Then select OK.



Chapter 3 - Final Initial Configuration Steps in the GUI

Assign an Access Point as the Preferred Master

By default, there is no preference as to which AP should become the Master AP; the first AP that is deployed automatically becomes the Master AP.

Using the Preferred Master setting, users can configure one AP to have priority. Any (non-mesh) AP can become the Master if the preferred Master is offline, but when the Preferred Master comes back online, it will assume the Preferred Master role again.

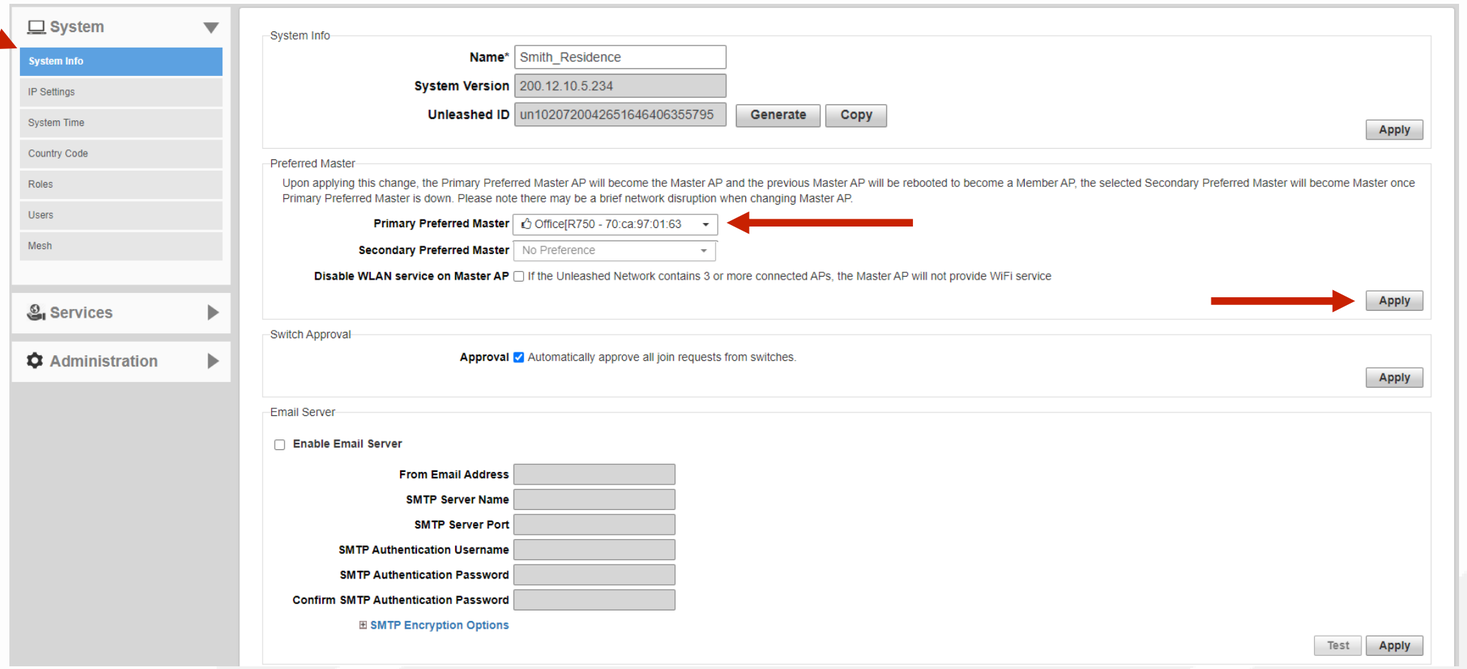
Chapter 3 - Final Initial Configuration Steps in the GUI

Assign an Access Point as the Primary Preferred Master

Click anywhere on ”Admin & Services” to reveal the sub menus.

Now select “System Info”. Under “Preferred Master”, click on the drop-down arrow to reveal which AP you would like to make the ”Primary Preferred Master”.

Click on “Apply” to continue.



Chapter 4 - Backup and Firmware

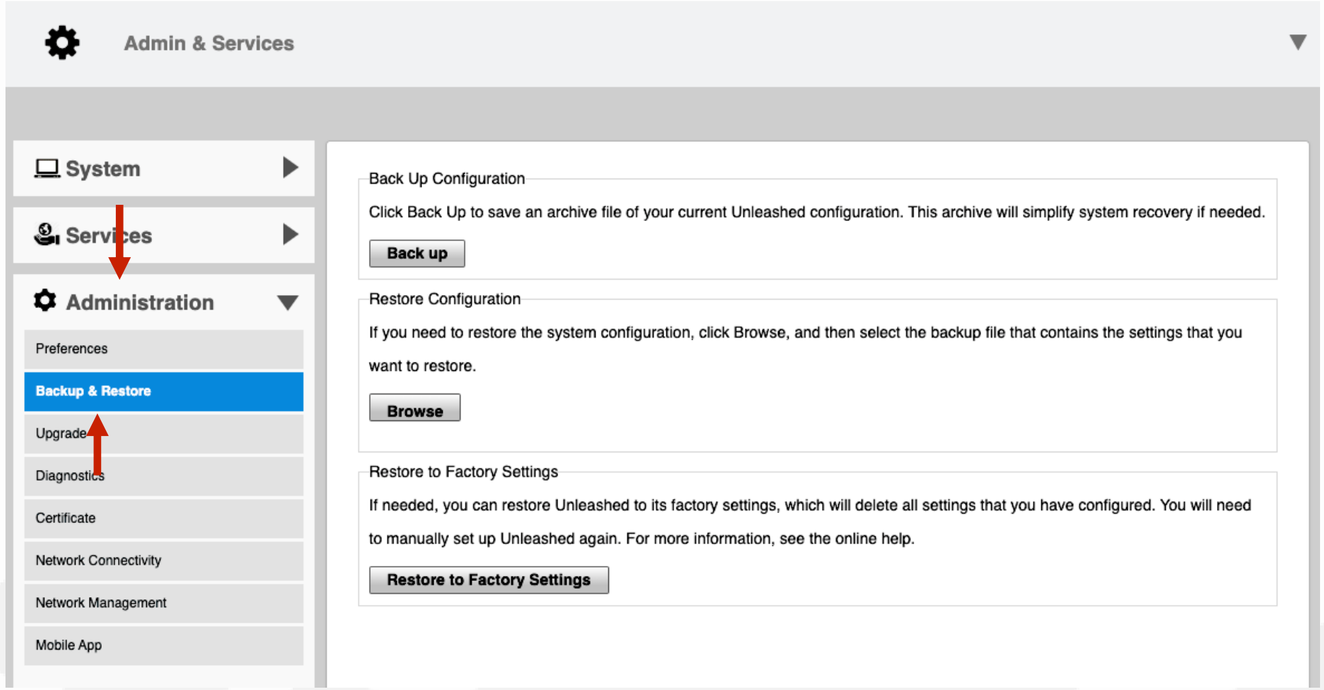
- Backup Configuration
- How to do a Firmware Upgrade

Chapter 4 - Backup and Firmware

Backup Configuration

After configuring the Management Interface, creating a Guest Network with Advanced Guest Network Isolation, ensuring the best possible performance settings, adding APs, and claiming the Preferred Master. Its now time to save your work by creating a backup.

Click on the “Administration” tab to reveal ”Backup and Restore”.



Chapter 4 - Backup and Firmware

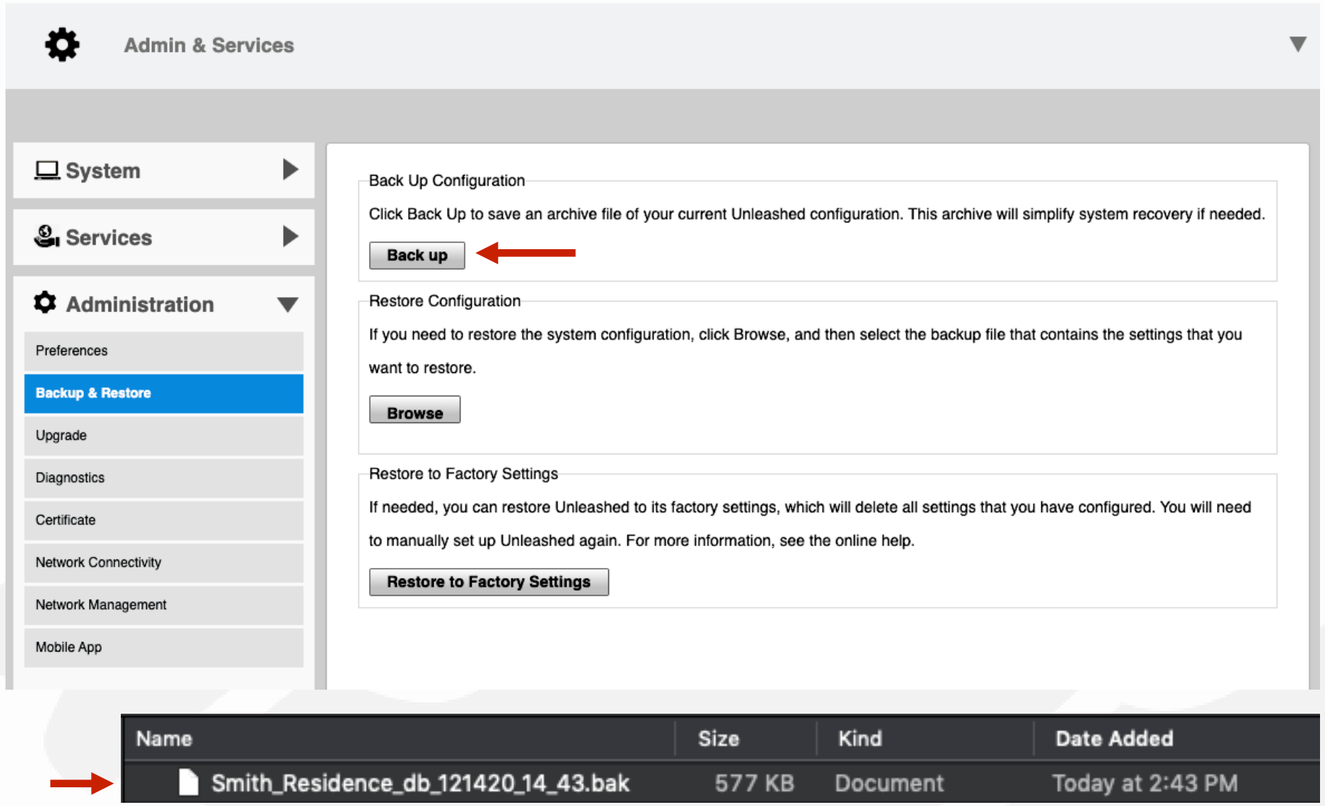
Backup Configuration

Select the ”Backup” button.

This will create a back up file in your computer’s “Downloads” folder with the following naming convention - ”Project_Name_db_**date_time**.bak”.

Move the backup file to an easy to find location for future use.

*Note - It’s best practice to always backup any changes to the system. That way you can revert or restore as needed.



Chapter 4 - Backup and Firmware

Firmware Upgrade

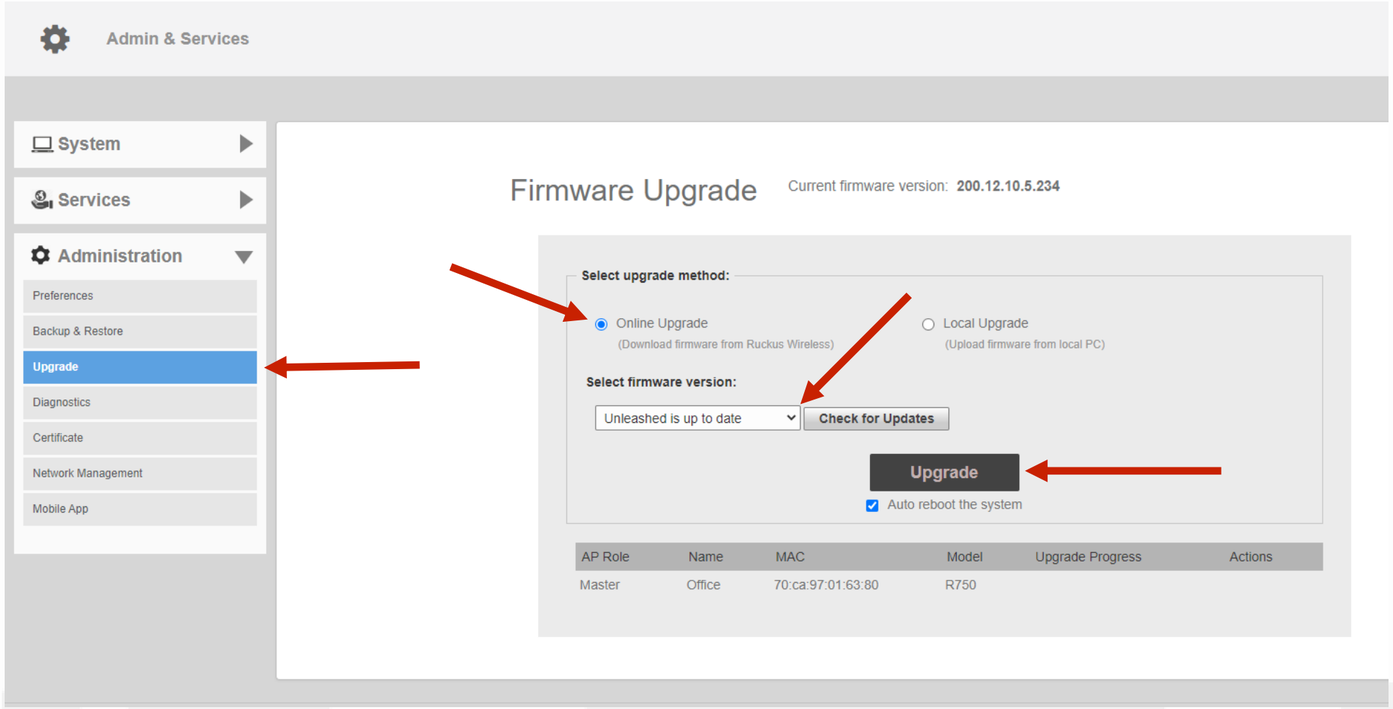
The last step in the configuration process is to verify that the firmware is current.

Select ”Upgrade” on the left menu.

Click on “Online Upgrade” to continue.

Select the drop-down arrow to display the list of available upgrade options for your installation and choose the best version for your deployment.

Click on “Upgrade” if there’s a new firmware available. After upgrading to a new version of firmware it is always recommended to immediately perform a new backup.



For more information on the different methods of performing upgrades for an Unleashed deployment, please refer to the File Management Guide that can be found here - https://my.accessnetworks.com/kb/unleashed-standard-configuration-guides/.

BASIC CONFIGURATION GUIDE Guide Firmware Version 200.12

- Access Networks Technical Services engineers are always available to assist you in the troubleshooting process.
- If you have any questions about the steps to follow on setting up your Unleashed Network or have an issue than what has been detailed in this presentation, please contact the Access Networks Technical Services department for assistance.
- For telephone, visit snp1.com/techsupport
- Email: support-case@accessnetworks.com
- Existing Access Networks partner can visit https://my.accessnetworks.com/partners/ and either open a case or start a chat session by selecting the “Support” tab.

THANK YOU

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