Initial Configuration of the WAP150, WAP351, WAP361, and WAP371 Wireless Access Points Using the Setup Wizard

Objective

The Setup Wizard is a built-in feature that is used to help with the initial configuration of the Wireless Access Points (WAPs). It makes the configuration of basic settings easy. The step-by-step process of the Setup Wizard guides you through the initial setup of the WAP device, and provides a quick way to get the basic features of the WAP functional.

The objective of this document is to show you how to configure the WAP150, WAP351, WAP361, and WAP371 Wireless Access Points using the Setup Wizard.

Applicable Devices

- WAP150
- WAP351
- WAP361
- WAP371

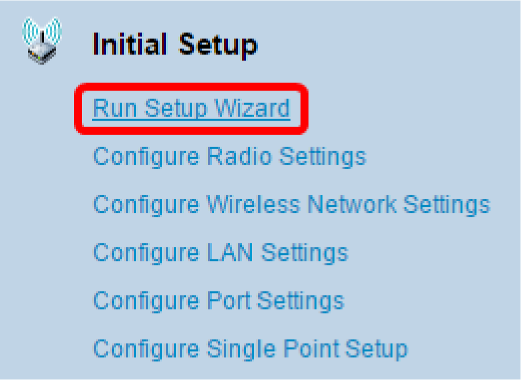
Software Version

- 1.0.1.7 – WAP150, WAP361
- 1.0.2.8 – WAP351
- 1.3.0.3 – WAP371

Configuration

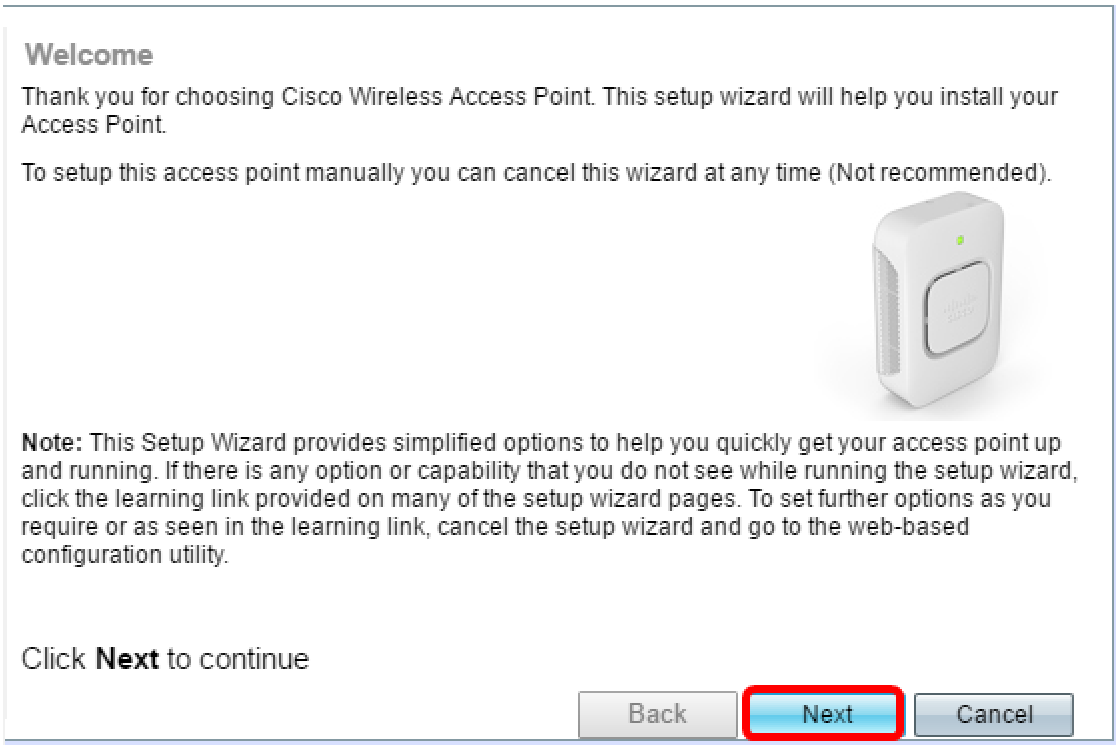
Note: The images used below are taken from WAP361.

Step 1. Log in to the access point web-based utility. Under the Getting Started menu page, click **Run Setup Wizard**.



Note: If this is the first time you have logged in to the WAP, the Setup Wizard will open automatically.

Step 2. Click **Next** on the Welcome page of the Access Point Setup Wizard to continue.



Welcome

Thank you for choosing Cisco Wireless Access Point. This setup wizard will help you install your Access Point.

To setup this access point manually you can cancel this wizard at any time (Not recommended).

Note: This Setup Wizard provides simplified options to help you quickly get your access point up and running. If there is any option or capability that you do not see while running the setup wizard, click the learning link provided on many of the setup wizard pages. To set further options as you require or as seen in the learning link, cancel the setup wizard and go to the web-based configuration utility.

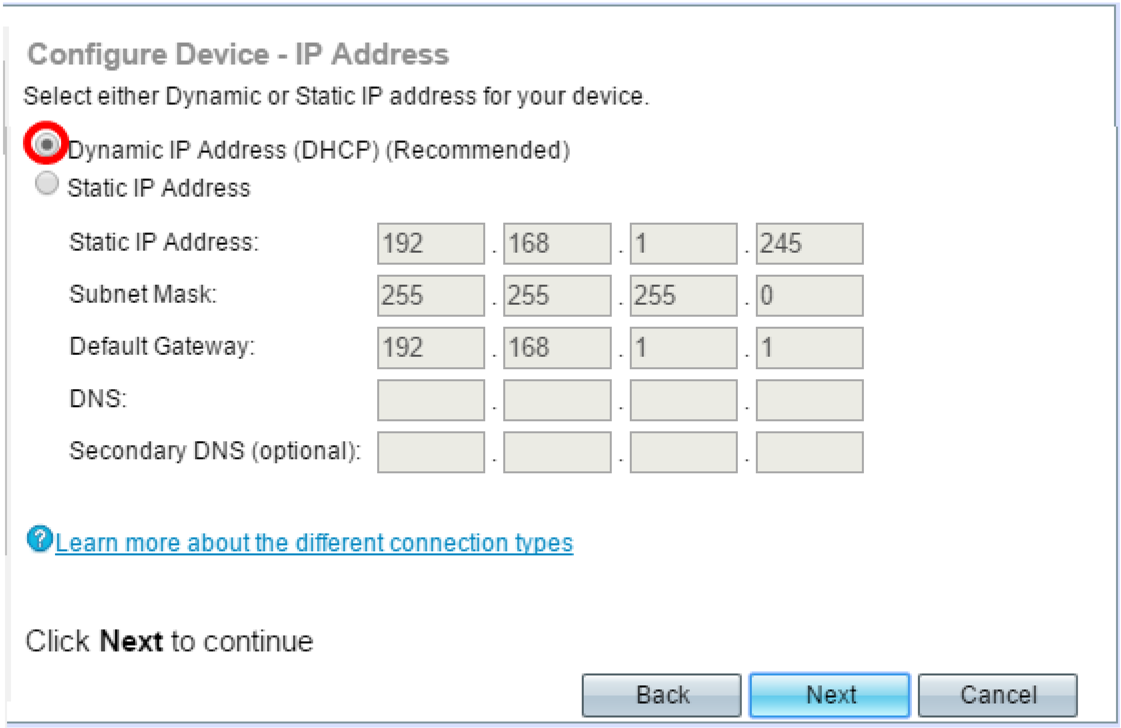
Click **Next** to continue

Step 3. Click the radio button that corresponds to the method you want to use to determine the IP address of the WAP.

The options are defined as follows:

- Dynamic IP Address (DHCP) (Recommended) — Allows the DHCP server to assign a dynamic IP address for the WAP. If you choose this, click **Next** then skip to Step 9.
- Static IP Address — Allows you to create a fixed (static) IP address for the WAP. A static IP address does not change.

Note: In this example, Dynamic IP Address (DHCP) is chosen.



Configure Device - IP Address

Select either Dynamic or Static IP address for your device.

● Dynamic IP Address (DHCP) (Recommended)

○ Static IP Address

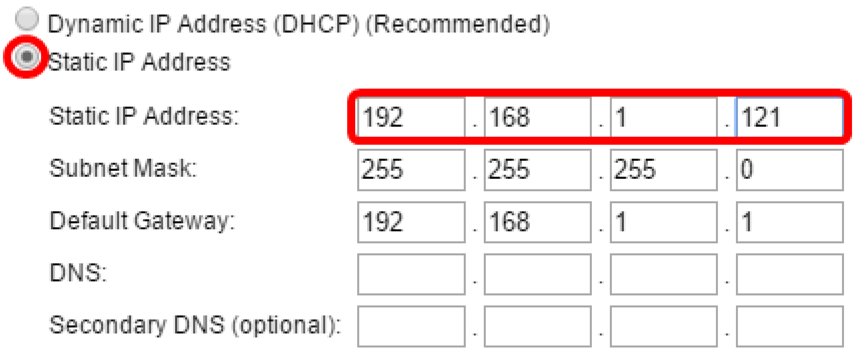
Static IP Address:	192	168	1	245
Subnet Mask:	255	255	255	0
Default Gateway:	192	168	1	1
DNS:				
Secondary DNS (optional):				

Learn more about the different connection types

Click **Next** to continue

Step 4. If Static IP Address was chosen in the previous step, enter the IP address of the

WAP in the *Static IP Address* field. This IP address is unique to the WAP and should not be used by another device in the network.

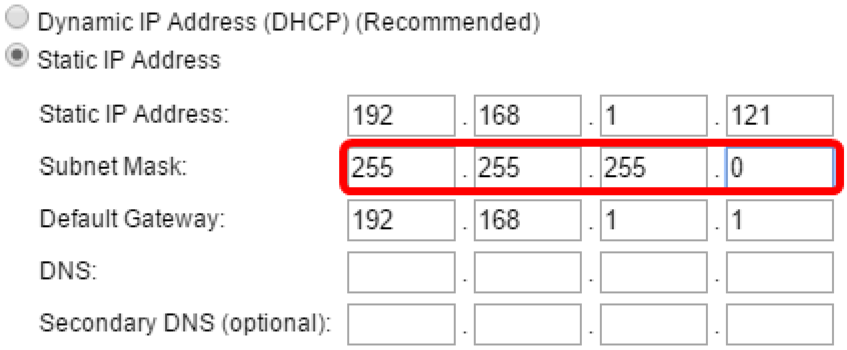


○ Dynamic IP Address (DHCP) (Recommended)
● Static IP Address

Static IP Address:	192	168	1	121
Subnet Mask:	255	255	255	0
Default Gateway:	192	168	1	1
DNS:				
Secondary DNS (optional):				

Note: In this example, 192.168.1.121 is used as the Static IP Address.

Step 5. Enter the subnet mask in the *Subnet Mask* field.

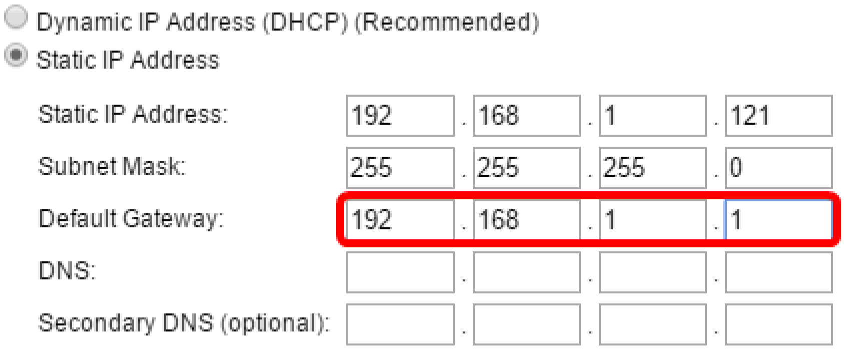


○ Dynamic IP Address (DHCP) (Recommended)
● Static IP Address

Static IP Address:	192	168	1	121
Subnet Mask:	255	255	255	0
Default Gateway:	192	168	1	1
DNS:				
Secondary DNS (optional):				

Note: In this example, 255.255.255.0 is used as the Subnet Mask.

Step 6. Enter the default gateway for the WAP in the *Default Gateway* field. This is the private IP address of your router.

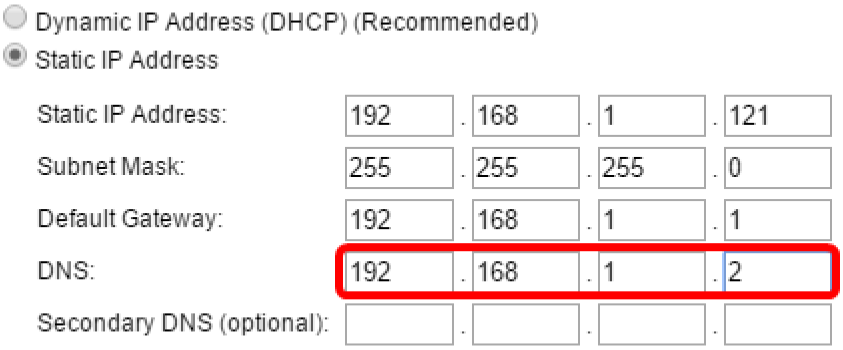


○ Dynamic IP Address (DHCP) (Recommended)
● Static IP Address

Static IP Address:	192	168	1	121
Subnet Mask:	255	255	255	0
Default Gateway:	192	168	1	1
DNS:				
Secondary DNS (optional):				

Note: In this example, 192.168.1.1 is used as the Default Gateway.

Step 7. (Optional) If you want to access the web-based utility outside of your network, enter primary Domain Name System (DNS) address in the *DNS* field. Your Internet Service Provider (ISP) should provide the DNS server address to you.

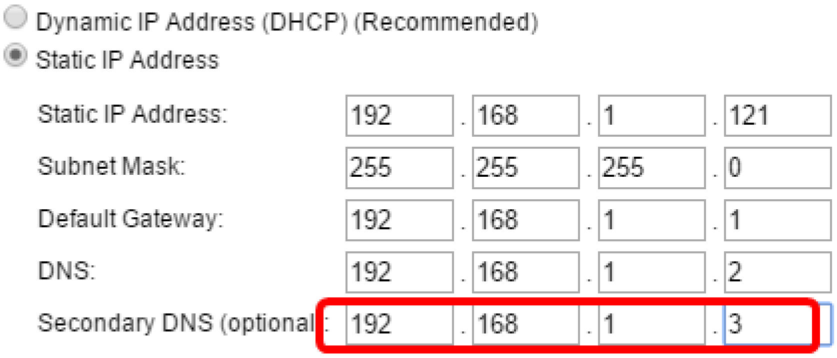


○ Dynamic IP Address (DHCP) (Recommended)
● Static IP Address

Static IP Address: 192 . 168 . 1 . 121
Subnet Mask: 255 . 255 . 255 . 0
Default Gateway: 192 . 168 . 1 . 1
DNS: 192 . 168 . 1 . 2
Secondary DNS (optional): . . .

Note: In this example, 192.168.1.2 is used as the DNS address.

Step 8. (Optional) Enter a secondary DNS address in the *Secondary DNS* fields then click **Next**.



○ Dynamic IP Address (DHCP) (Recommended)
● Static IP Address

Static IP Address: 192 . 168 . 1 . 121
Subnet Mask: 255 . 255 . 255 . 0
Default Gateway: 192 . 168 . 1 . 1
DNS: 192 . 168 . 1 . 2
Secondary DNS (optional): 192 . 168 . 1 . 3

Note: In this example, 192.168.1.3 is used as the Secondary DNS address.

Single Point Setup

Step 9. In the Single Point Setup – Set A Cluster screen, select a radio button that corresponds to how you want to configure the cluster settings of the WAP. Clustering allows you to manage multiple access points from a single point, instead of going to each device and changing the settings individually.

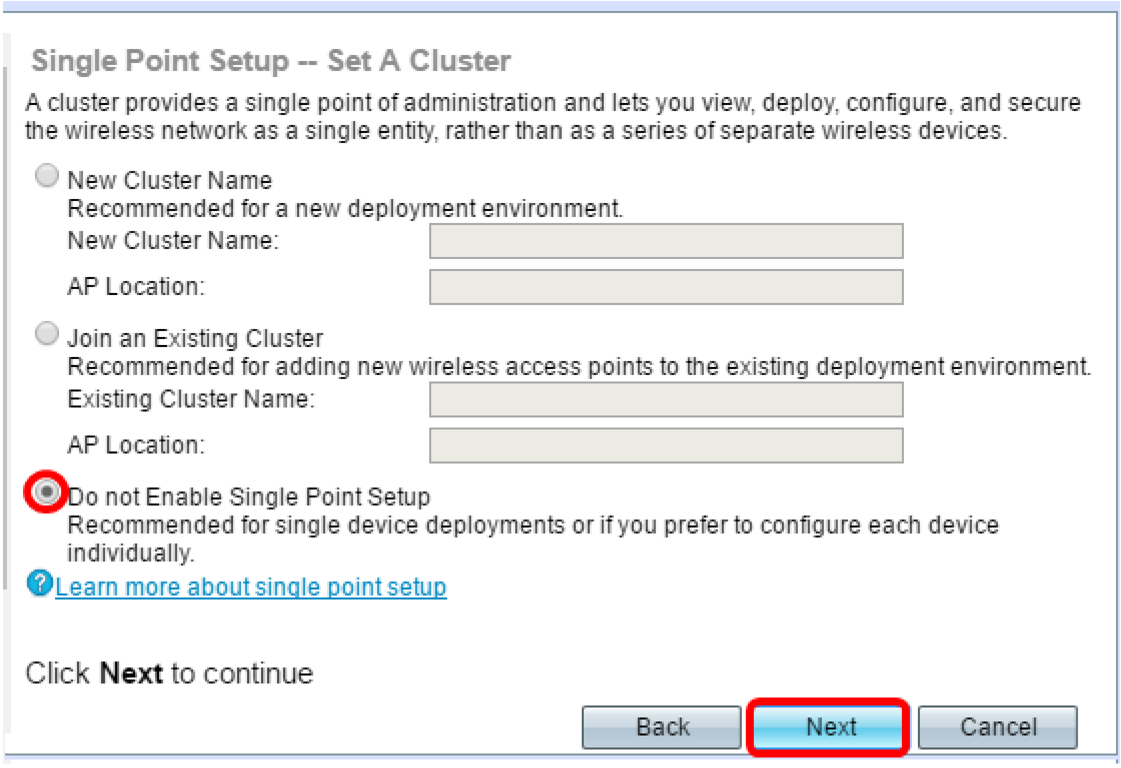
The options are defined as follows:

- New Cluster Name — Select this option if you want to create a new cluster.

  Note: For WAP351 and WAP371, the option is Create a New Cluster.

- Join an Existing Cluster — Select this option if you want the WAP to join an existing cluster. If you choose this option, skip to Step 11.
- Do not Enable Single Point Setup — Choose this option if you do not want the WAP to be part of a cluster. If you choose this option, click **Next** then skip to Step 13.

Note: In this example, Do not Enable Single Point Setup is chosen.



Single Point Setup -- Set A Cluster

A cluster provides a single point of administration and lets you view, deploy, configure, and secure the wireless network as a single entity, rather than as a series of separate wireless devices.

○ New Cluster Name
Recommended for a new deployment environment.
New Cluster Name:
AP Location:

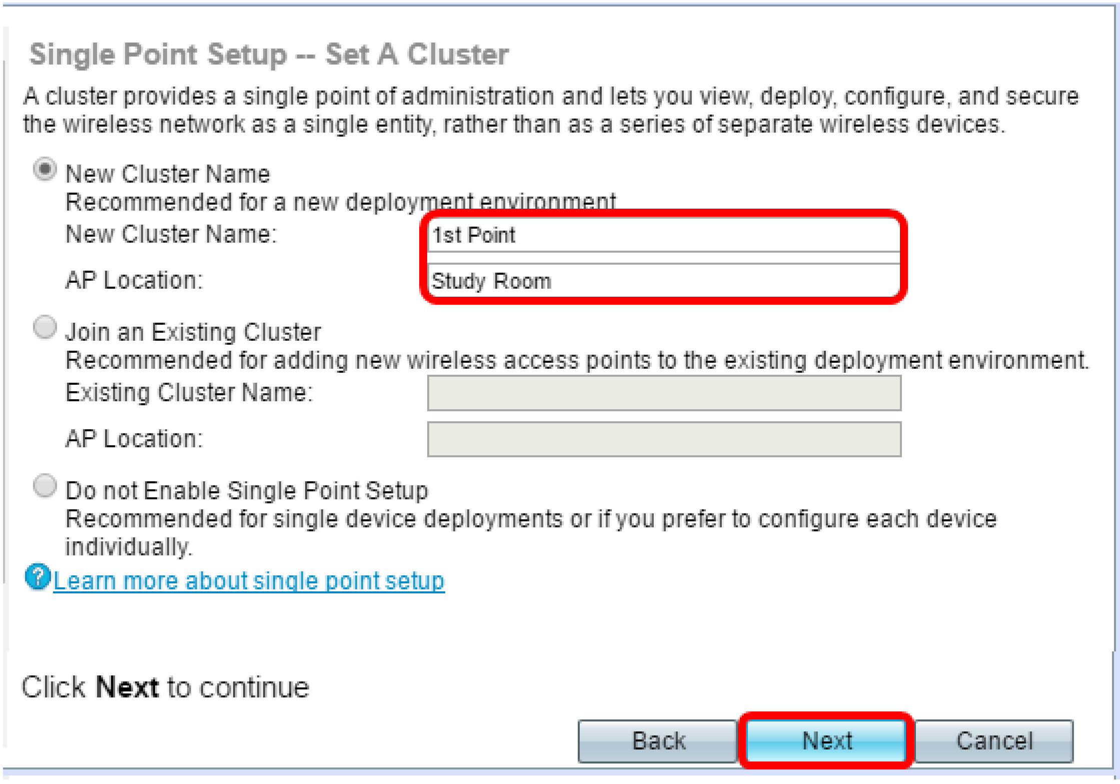
○ Join an Existing Cluster
Recommended for adding new wireless access points to the existing deployment environment.
Existing Cluster Name:
AP Location:

● Do not Enable Single Point Setup
Recommended for single device deployments or if you prefer to configure each device individually.

Learn more about single point setup

Click **Next** to continue

Step 10. If you chose New Cluster Name in the previous step, enter the name of the new cluster and its location in the *New Cluster Name* and *AP Location* fields, respectively then click **Next**. The AP Location is the physical location of the access point defined by the user (e.g. Office). Go to Step 13.



Single Point Setup -- Set A Cluster

A cluster provides a single point of administration and lets you view, deploy, configure, and secure the wireless network as a single entity, rather than as a series of separate wireless devices.

● New Cluster Name
Recommended for a new deployment environment.
New Cluster Name: 1st Point
AP Location: Study Room

○ Join an Existing Cluster
Recommended for adding new wireless access points to the existing deployment environment.
Existing Cluster Name:
AP Location:

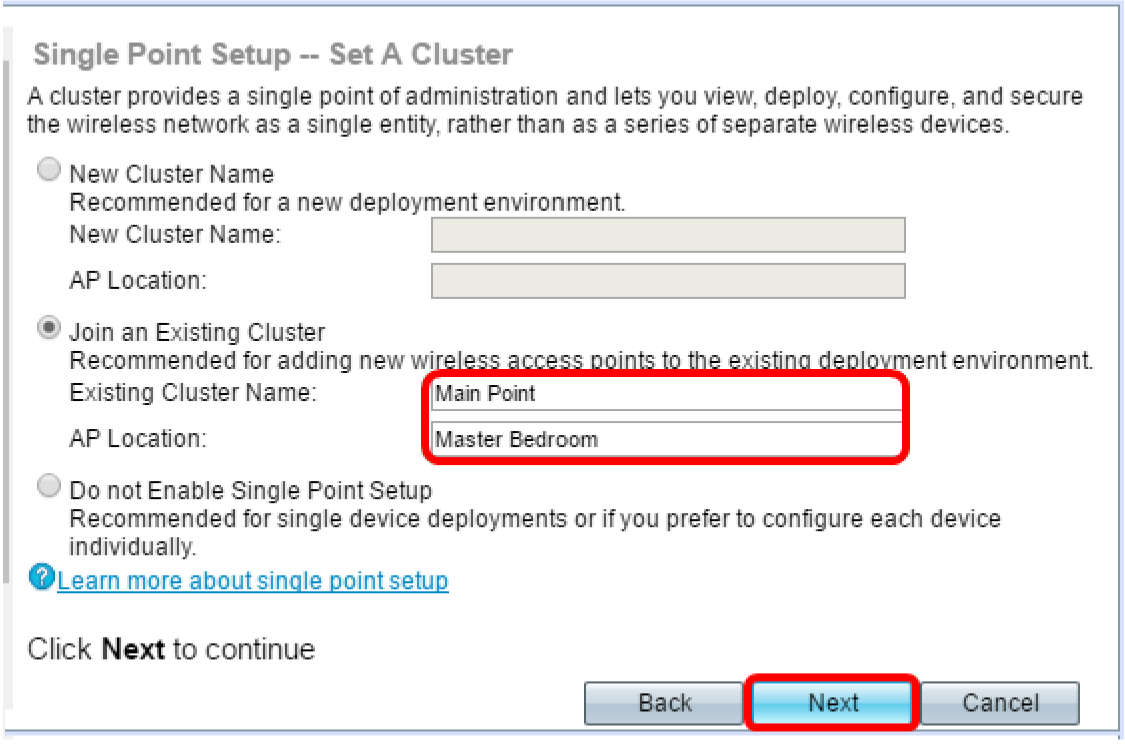
○ Do not Enable Single Point Setup
Recommended for single device deployments or if you prefer to configure each device individually.

Learn more about single point setup

Click **Next** to continue

Step 11. If you chose **Join an Existing Cluster** in Step 9, enter the name of the cluster and its location in the *Existing Cluster Name* and *AP Location* fields, respectively then click **Next**.

Note: This option is ideal if there is already an existing wireless network and all settings have already been configured.



Single Point Setup -- Set A Cluster

A cluster provides a single point of administration and lets you view, deploy, configure, and secure the wireless network as a single entity, rather than as a series of separate wireless devices.

○ New Cluster Name
Recommended for a new deployment environment.
New Cluster Name:
AP Location:

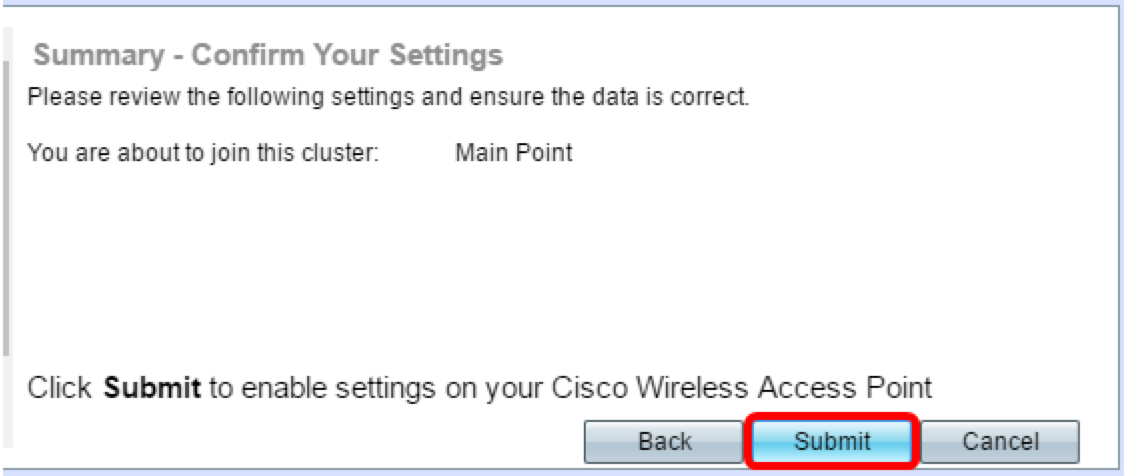
● Join an Existing Cluster
Recommended for adding new wireless access points to the existing deployment environment.
Existing Cluster Name: Main Point
AP Location: Master Bedroom

○ Do not Enable Single Point Setup
Recommended for single device deployments or if you prefer to configure each device individually.

Learn more about single point setup

Click **Next** to continue

Step 12. Review your settings to make sure the data is correct then click **Submit**.



Summary - Confirm Your Settings

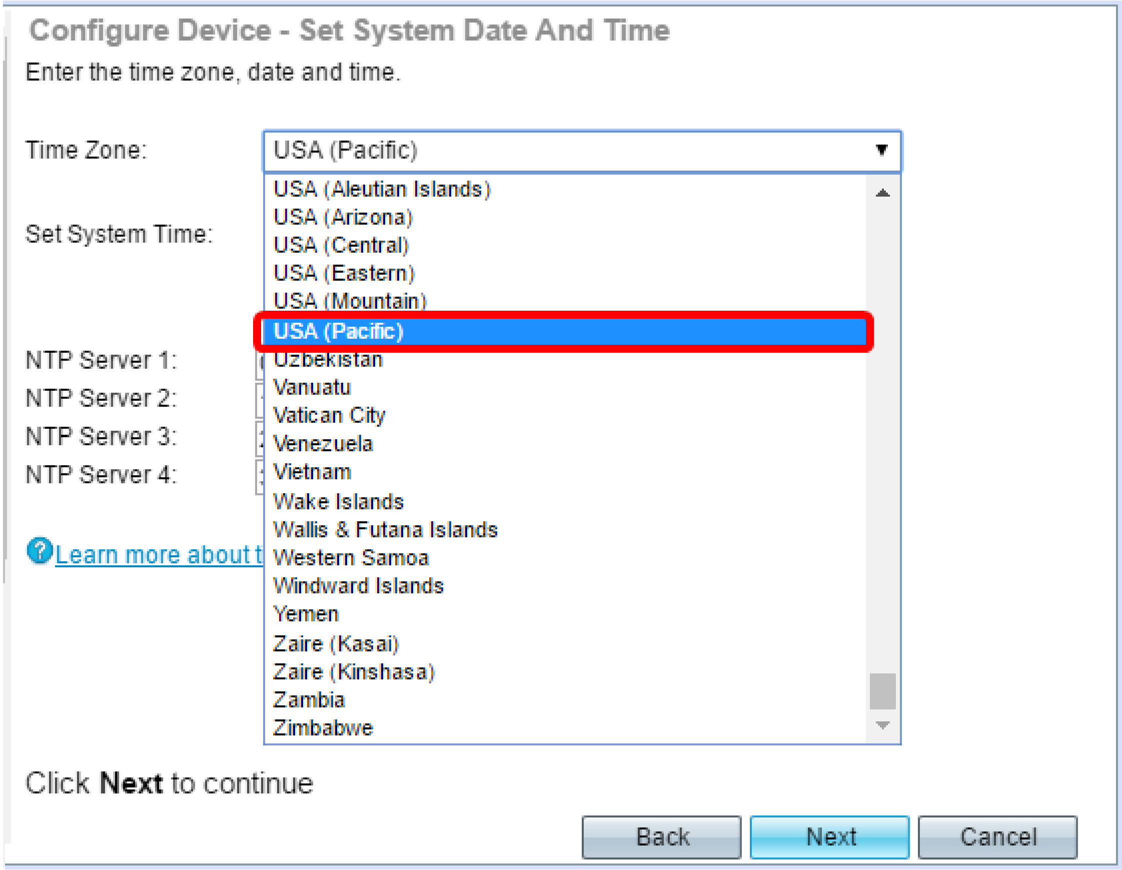
Please review the following settings and ensure the data is correct.

You are about to join this cluster: Main Point

Click **Submit** to enable settings on your Cisco Wireless Access Point

Time Settings

Step 13. Choose your time zone from the Time Zone drop-down list.



Configure Device - Set System Date And Time

Enter the time zone, date and time.

Time Zone: USA (Pacific)

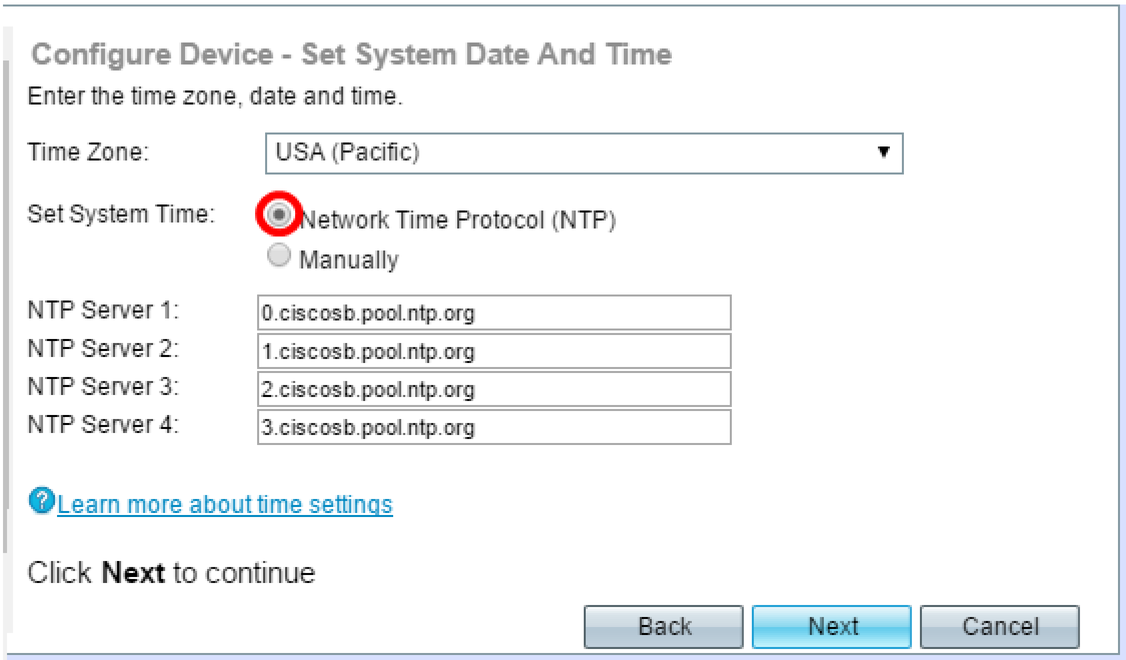
Click **Next** to continue

Note: In this example, USA (Pacific) is chosen.

Step 14. Click the radio button that corresponds to the method you wish to use to set the time of the WAP.

The options are as follows:

- Network Time Protocol (NTP) — The WAP gets the time from an NTP server.
- Manually — The time is manually entered into the WAP. If this option is chosen, skip to Step 16.



Configure Device - Set System Date And Time

Enter the time zone, date and time.

Time Zone: USA (Pacific)

Set System Time: ● Network Time Protocol (NTP) ○ Manually

NTP Server 1: 0.ciscosb.pool.ntp.org

NTP Server 2: 1.ciscosb.pool.ntp.org

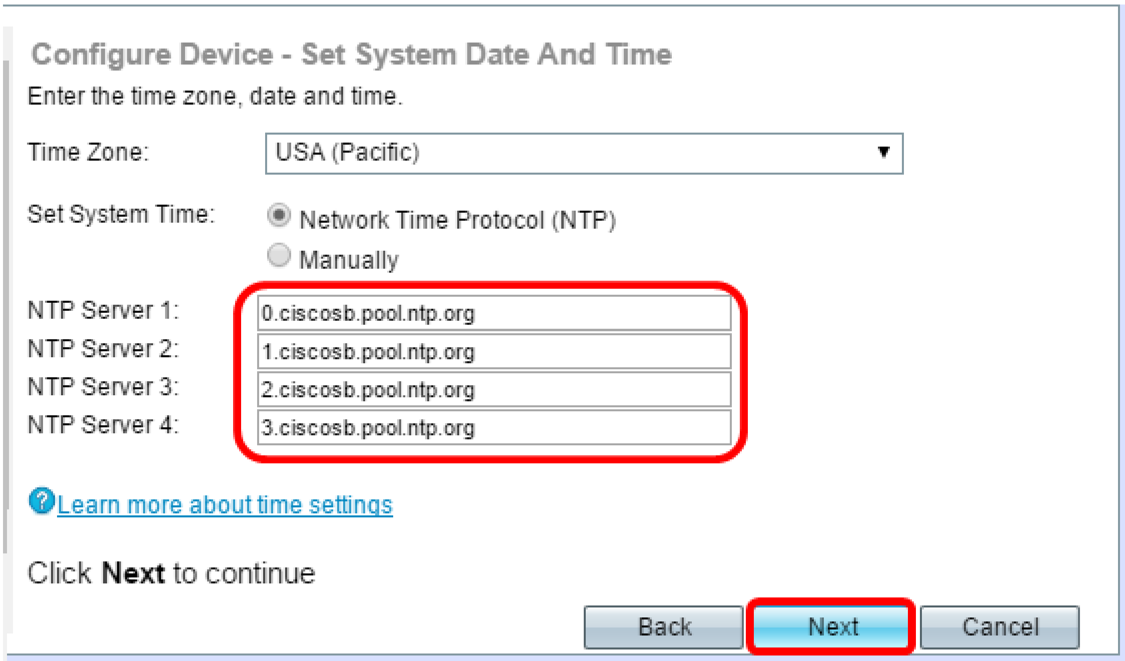
NTP Server 3: 2.ciscosb.pool.ntp.org

NTP Server 4: 3.ciscosb.pool.ntp.org

Click **Next** to continue

Note: In this example, Network Time Protocol (NTP) is used.

Step 15. Enter the domain name of the NTP server that provides the date and time in the *NTP Server 1* field. You can add up to four different NTP servers by entering them in their respective fields and then click **Next**. Then, skip to Step 17.



Configure Device - Set System Date And Time

Enter the time zone, date and time.

Time Zone: USA (Pacific)

Set System Time: ● Network Time Protocol (NTP) ○ Manually

NTP Server 1: 0.ciscosb.pool.ntp.org

NTP Server 2: 1.ciscosb.pool.ntp.org

NTP Server 3: 2.ciscosb.pool.ntp.org

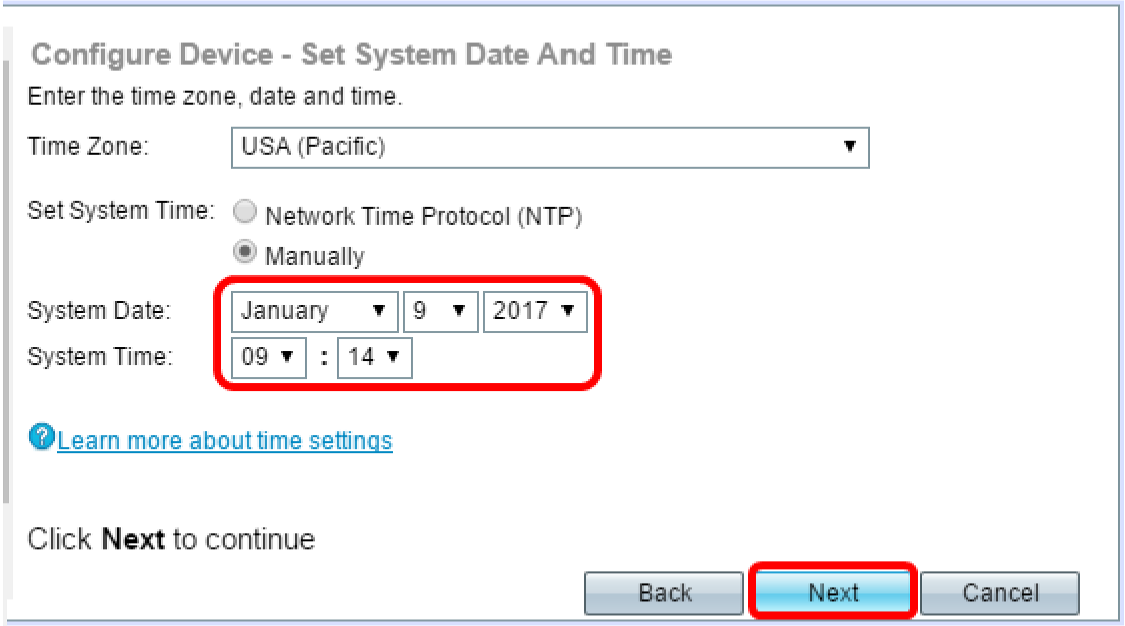
NTP Server 4: 3.ciscosb.pool.ntp.org

Learn more about time settings

Click **Next** to continue

Note: In this example, there are four NTP Servers entered.

Step 16. (Optional) If you chose Manually in Step 14, select the date in the System Date drop-down lists to choose the month, day, and year respectively. Select the hour and minutes from the System Time drop-down lists then click **Next**.



Configure Device - Set System Date And Time

Enter the time zone, date and time.

Time Zone: USA (Pacific)

Set System Time: ○ Network Time Protocol (NTP) ● Manually

System Date: January 9 2017

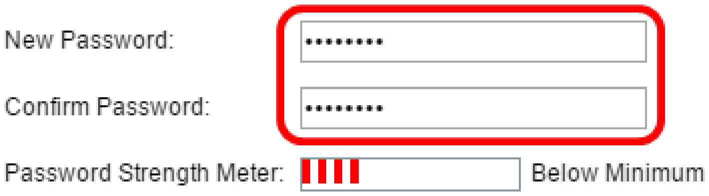
System Time: 09 : 14

Learn more about time settings

Click **Next** to continue

Device Password

Step 17.In the Configure Device - Set Password screen, enter a new password for the WAP in the *New Password* field and confirm it. This password is used to gain administrative access to the web-based utility of the WAP itself and not for connecting to the wireless network.



New Password: •••••••••

Confirm Password: •••••••••

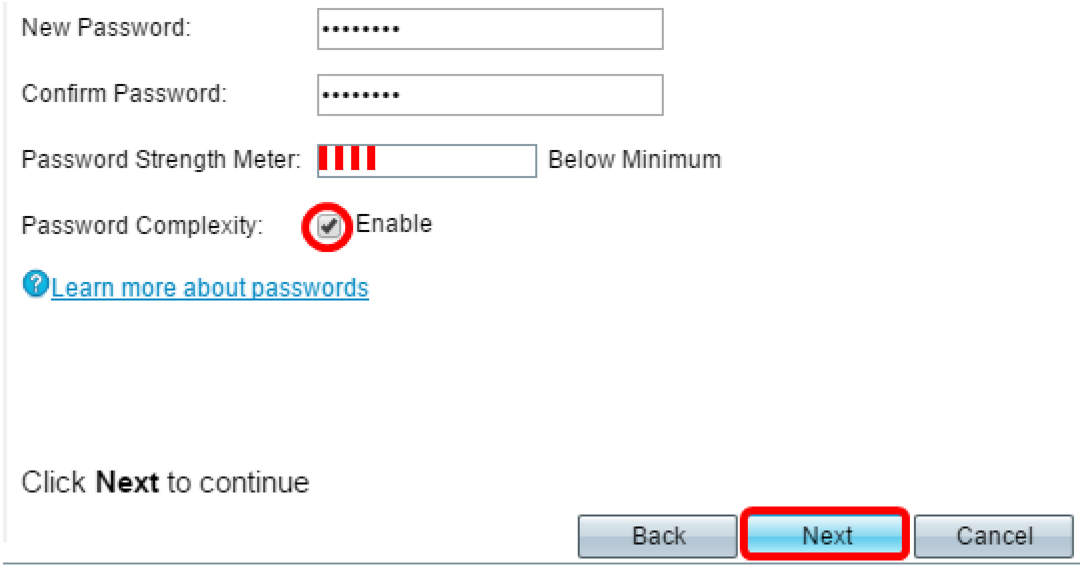
Password Strength Meter: Below Minimum

Note: The *Password Strength Meter* field displays vertical bars that change as you enter the password.

The Password Strength Meter colors are defined as follows:

- Red — The minimum password complexity requirement is not met.
- Orange — The minimum password complexity requirement is met, but the strength of password is weak.
- Green — The minimum password complexity requirement is met, and the strength of password is strong.

Step 18. (Optional) Enable password complexity by checking the **Enable** Password Complexity check box. This requires that the password is at least 8 characters long and composed of lower and upper case letters and numbers or symbols. Password Complexity is enabled by default.



New Password: •••••••••

Confirm Password: •••••••••

Password Strength Meter: Below Minimum

Password Complexity: ☑ Enable

Learn more about passwords

Click **Next** to continue

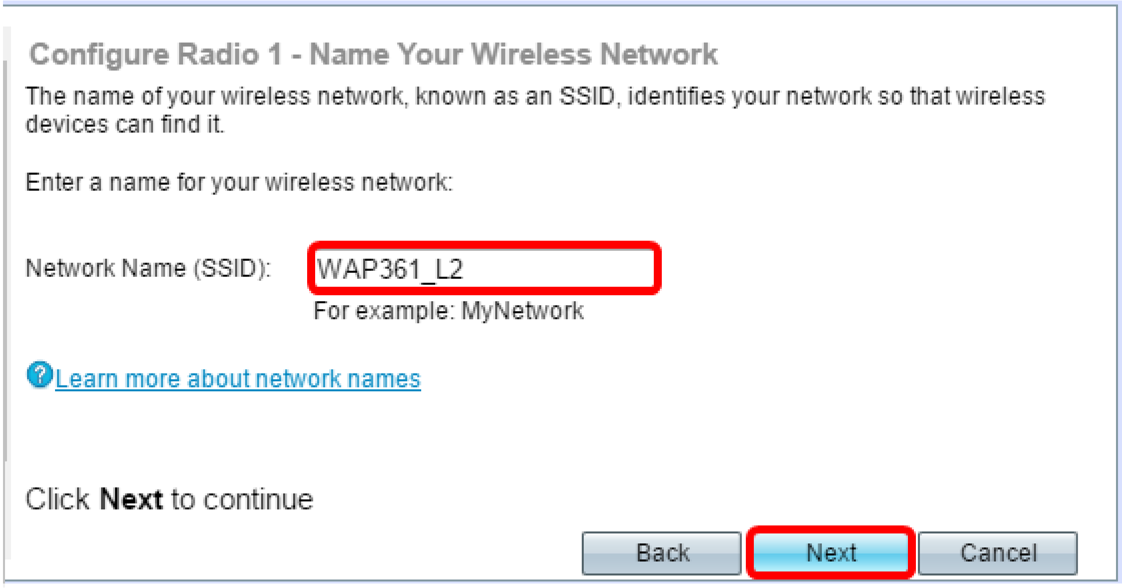
Step 19. Click **Next** to continue.

Configuring Radios 1 and 2 (2.4 and 5 GHz)

The Wireless network settings must be configured individually for each radio channel. The process for setting up the wireless network is the same for each channel.

Note: For the WAP371, Radio 1 is for the 5 GHz band and Radio 2 is for the 2.4 GHz band.

Step 20. In the Configure Radio 1 - Name Your Wireless Network area, enter a name for the wireless network in the *Network Name (SSID)* field then click **Next**.



Configure Radio 1 - Name Your Wireless Network

The name of your wireless network, known as an SSID, identifies your network so that wireless devices can find it.

Enter a name for your wireless network:

Network Name (SSID): WAP361_L2

For example: MyNetwork

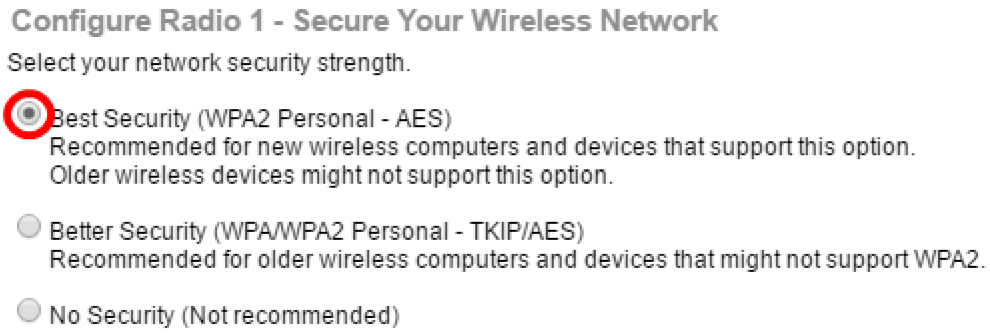
Click **Next** to continue

Note: In this example, WAP361_L2 is used as the Network Name.

Step 21. In the Configure Radio 1 - Secure Your Wireless Network area, click the radio button that corresponds with the network security you would like to apply to your wireless network.

The options are defined as follows:

- Best Security (WPA2 Personal - AES) — Provides the best security and is recommended if your wireless devices support this option. WPA2 Personal uses Advanced Encryption Standard (AES) and a Pre-Shared Key (PSK) between the clients and the access point. It uses a new encryption key for each session, which makes it difficult to compromise.
- Better Security (WPA/WPA2 Personal - TKIP/AES) — Provides security when there are older wireless devices that do not support WPA2. WPA Personal uses AES and Temporal Key Integrity Protocol (TKIP). It uses IEEE 802.11i Wi-Fi Standard.
- No Security (Not recommended) — The wireless network does not require a password and can be accessed by anyone. If chosen, a pop-up window will appear asking if you want to disable security; click **Yes** to continue. If this option is chosen, skip to [Step 24](#).



Configure Radio 1 - Secure Your Wireless Network

Select your network security strength.

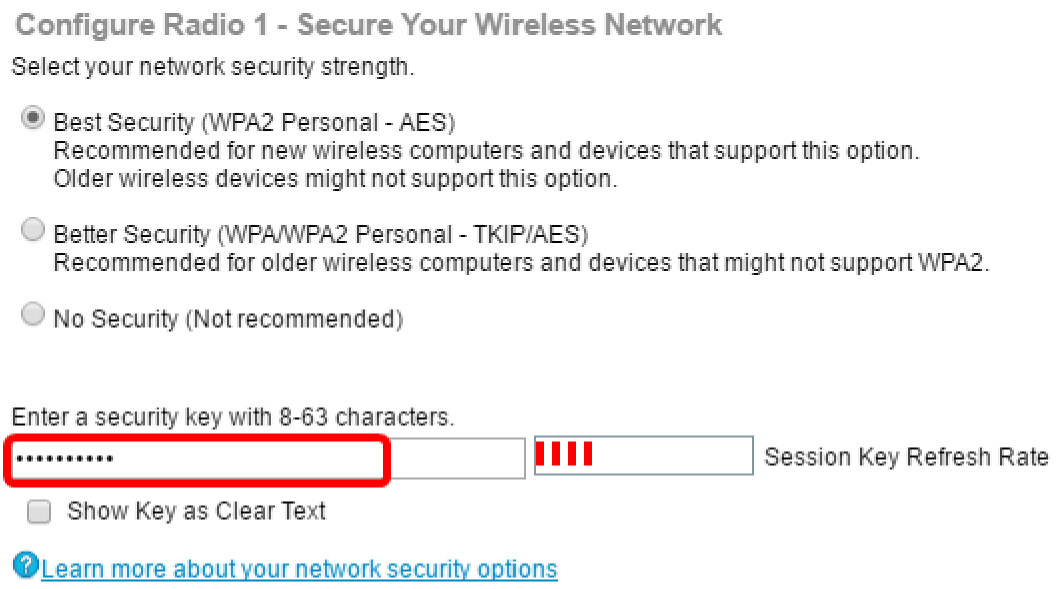
● Best Security (WPA2 Personal - AES)
Recommended for new wireless computers and devices that support this option.
Older wireless devices might not support this option.

○ Better Security (WPA/WPA2 Personal - TKIP/AES)
Recommended for older wireless computers and devices that might not support WPA2.

○ No Security (Not recommended)

Note: In this example, Best Security (WPA2 Personal -AES) is chosen.

Step 22. Enter the password for your network in the *Security Key* field. The colored bar to the right of this field shows the complexity of the entered password.



Configure Radio 1 - Secure Your Wireless Network

Select your network security strength.

● Best Security (WPA2 Personal - AES)
Recommended for new wireless computers and devices that support this option.
Older wireless devices might not support this option.

○ Better Security (WPA/WPA2 Personal - TKIP/AES)
Recommended for older wireless computers and devices that might not support WPA2.

○ No Security (Not recommended)

Enter a security key with 8-63 characters.

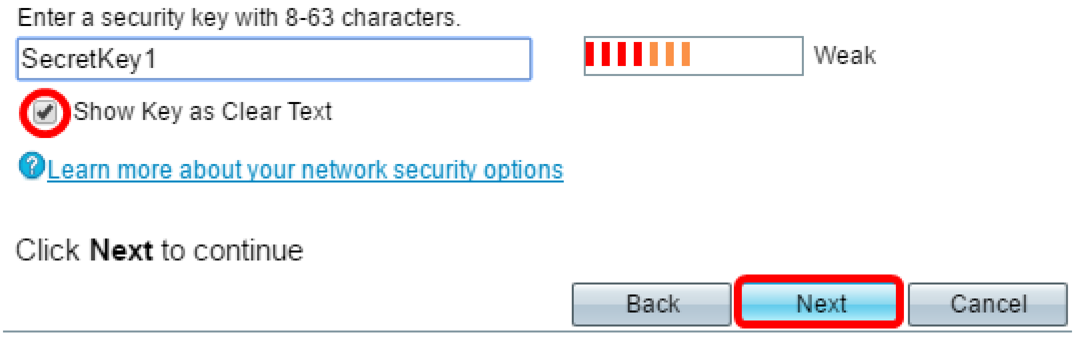
•••••••••••

Session Key Refresh Rate

□ Show Key as Clear Text

Learn more about your network security options

Step 23. (Optional) To see the password as you type, check the **Show Key as Clear Text** check box then click **Next**.



Enter a security key with 8-63 characters.

SecretKey1

Weak

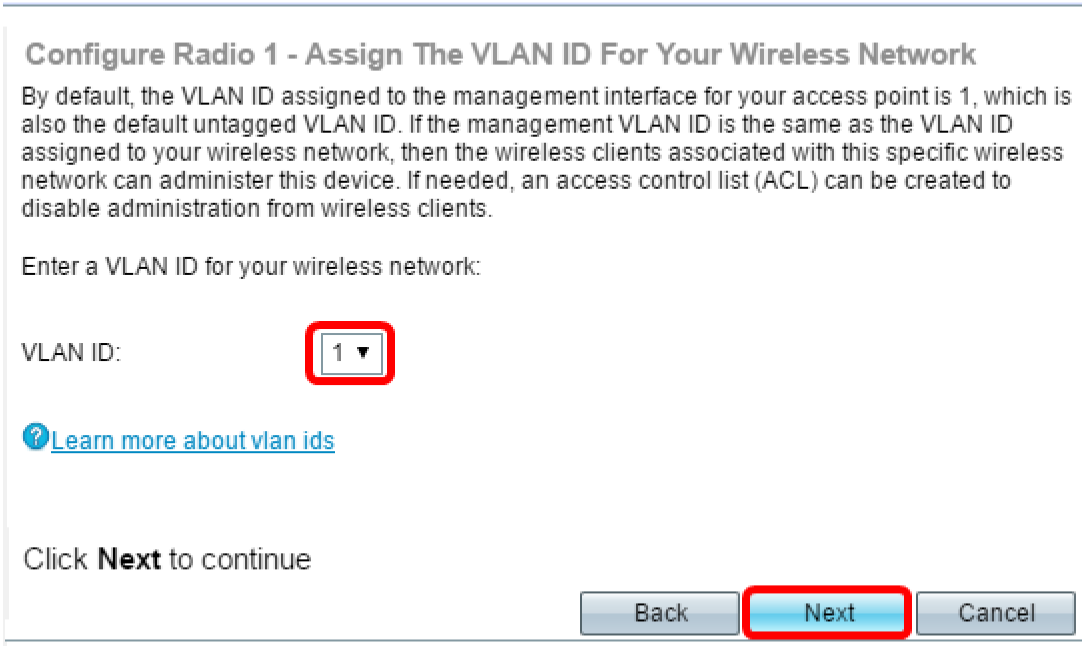
☑ Show Key as Clear Text

Learn more about your network security options

Click **Next** to continue

Step 24. In the Configure Radio 1 - Assign The VLAN ID For Your Wireless Network area, choose an ID for the network from the VLAN ID drop-down list. If the management VLAN is the same as the VLAN assigned to the wireless network, wireless clients on the network can administer the device. You can also use Access Control Lists (ACL) to disable the administration from wireless clients.

Note: For WAP371 and WAP150, you need to type in the ID in the *VLAN ID* field provided. The VLAN ID range is from 1-4094.



Configure Radio 1 - Assign The VLAN ID For Your Wireless Network

By default, the VLAN ID assigned to the management interface for your access point is 1, which is also the default untagged VLAN ID. If the management VLAN ID is the same as the VLAN ID assigned to your wireless network, then the wireless clients associated with this specific wireless network can administer this device. If needed, an access control list (ACL) can be created to disable administration from wireless clients.

Enter a VLAN ID for your wireless network:

VLAN ID: 1 ▾

Learn more about vlan ids

Click **Next** to continue

Note: In this example, VLAN ID 1 is used.

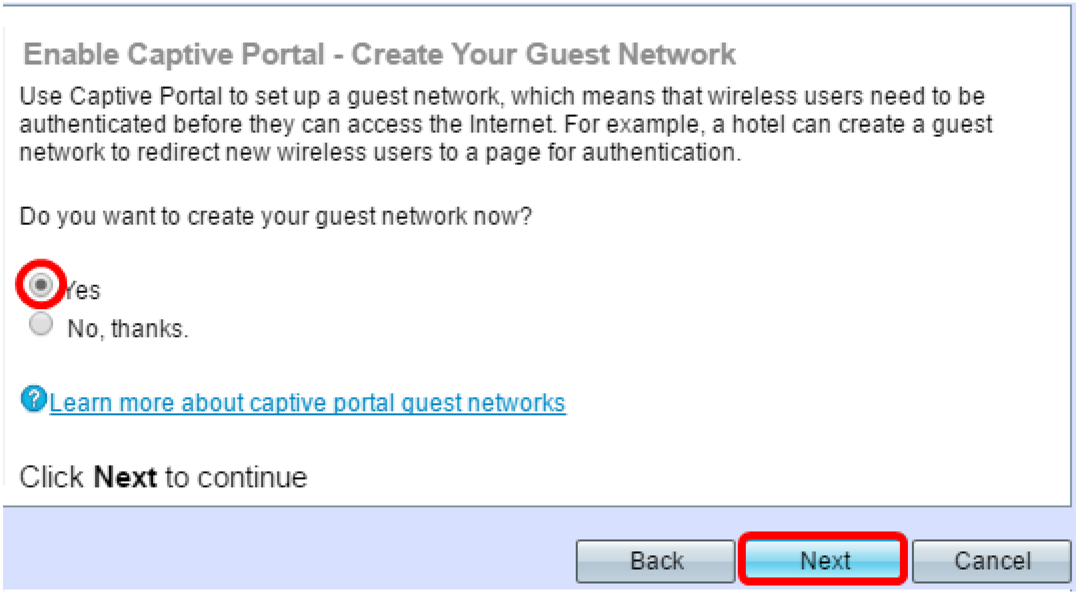
Step 25. Click **Next** to continue with the Setup Wizard to configure Radio 2.

Note: The process for configuring wireless network settings for Radio 2 is the same as that of Radio 1.

Captive Portal

Captive Portal allows you to set up a guest network where wireless users need to be authenticated first before they can have access to the Internet. Follow the steps below to configure Captive Portal.

Step 26. In the Enable Captive Portal - Create Your Guest Network area, choose the **Yes** radio button then click **Next**.



Enable Captive Portal - Create Your Guest Network

Use Captive Portal to set up a guest network, which means that wireless users need to be authenticated before they can access the Internet. For example, a hotel can create a guest network to redirect new wireless users to a page for authentication.

Do you want to create your guest network now?

● Yes

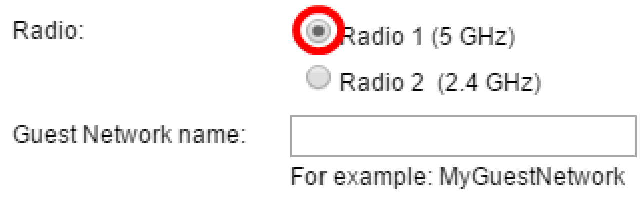
○ No, thanks.

Learn more about captive portal guest networks

Click **Next** to continue

Note: If you prefer not to enable Captive Portal, click **No** and the Setup wizard will take you to the Summary page. Then, skip to Step 35.

Step 27. Select the desired radio frequency for the guest network. The 2.4 GHz band offers support for legacy devices and can propagate a broader wireless signal across multiple walls. The 5 GHz band, on the other hand, is less crowded and can provide more throughput by taking up a 40 MHz frequency of the band instead of the standard 20 MHz in the 2.4 GHz band. In addition to the shorter range, there are also fewer devices that support the 5 GHz band compared to 2.4 GHz.



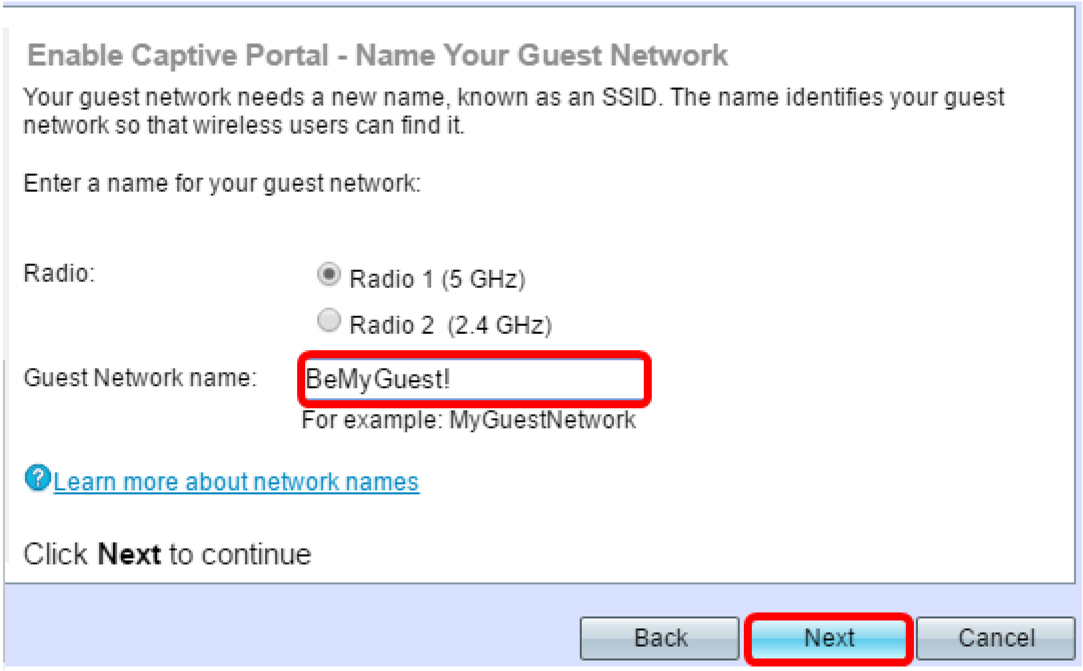
Radio: ● Radio 1 (5 GHz) ○ Radio 2 (2.4 GHz)

Guest Network name:

For example: MyGuestNetwork

Note: In this example, Radio 1 (5 GHz) is chosen.

Step 28. Enter the name of the guest SSID in the *Guest Network name* field then click **Next**.



Enable Captive Portal - Name Your Guest Network

Your guest network needs a new name, known as an SSID. The name identifies your guest network so that wireless users can find it.

Enter a name for your guest network:

Radio: ● Radio 1 (5 GHz) ○ Radio 2 (2.4 GHz)

Guest Network name: BeMyGuest!

For example: MyGuestNetwork

Learn more about network names

Click **Next** to continue

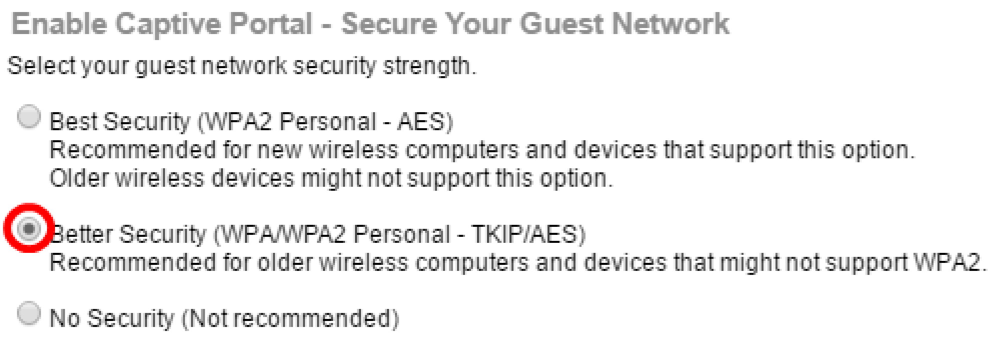
Note: In this example, BeMyGuest! is used as the Guest Network name.

Step 29. Click the radio button that corresponds to the network security you would like to apply to your guest wireless network.

The options are defined as follows:

- Best Security (WPA2 Personal - AES) — Provides the best security and is recommended if your wireless devices support this option. WPA2 Personal uses AES and a Pre-Shared Key (PSK) between the clients and the access point. It uses a new encryption key for each session that makes it difficult to compromise.
- Better Security (WPA Personal - TKIP/AES) — Provides security when there are older wireless devices that do not support WPA2. WPA Personal uses AES and TKIP. It uses IEEE 802.11i Wi-Fi Standard.
- No Security (Not recommended) — The wireless network does not require a password and can be accessed by anyone. If chosen, a pop-up window will appear asking if you want to disable security; click **Yes** to continue. If this option is chosen, click **Next** then skip to Step 35.

Note: In this example, Better Security (WPA Personal - TKIP/AES) is chosen.



Enable Captive Portal - Secure Your Guest Network

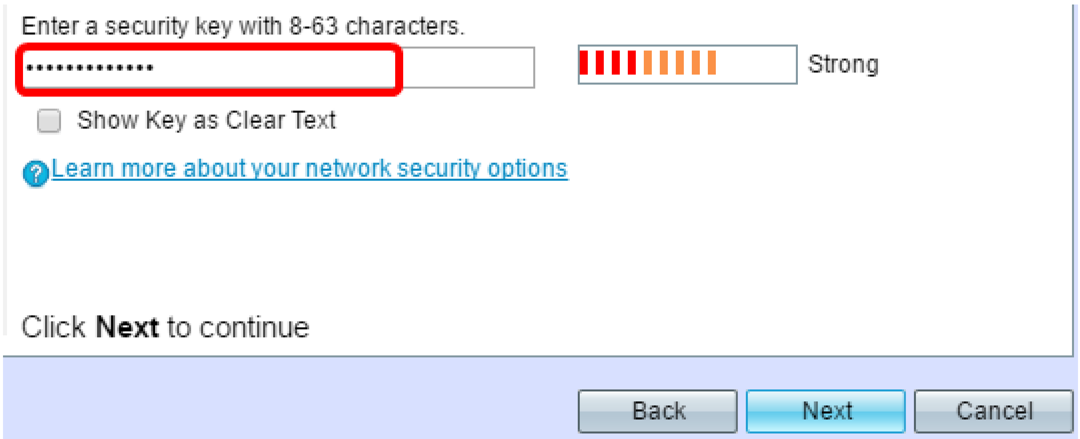
Select your guest network security strength.

○ Best Security (WPA2 Personal - AES)
Recommended for new wireless computers and devices that support this option.
Older wireless devices might not support this option.

● Better Security (WPA/WPA2 Personal - TKIP/AES)
Recommended for older wireless computers and devices that might not support WPA2.

○ No Security (Not recommended)

Step 30. Enter the password for your network in the *Security Key* field. The colored bar to the right of this field shows the complexity of the entered password.



Enter a security key with 8-63 characters.

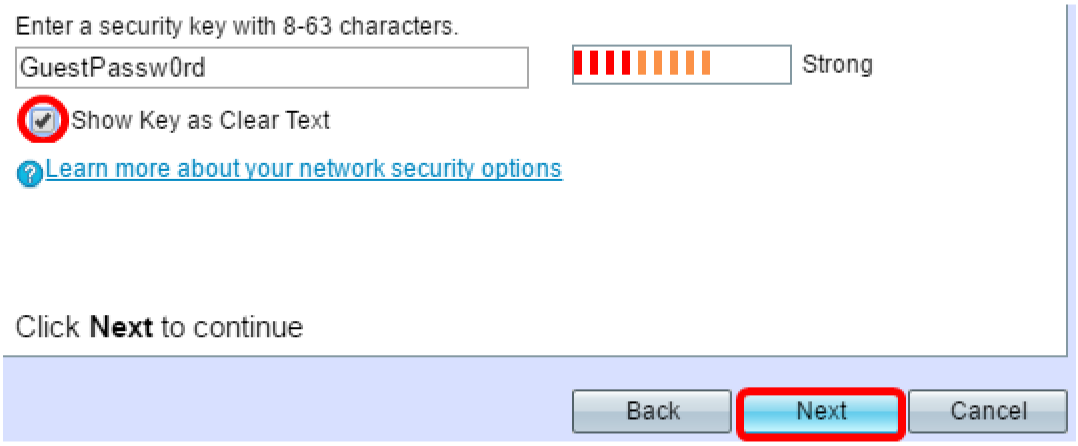
••••••••••••• Strong

□ Show Key as Clear Text

Learn more about your network security options

Click **Next** to continue

Step 31. (Optional) To see the password as you type, check the **Show Key as Clear Text** check box then click **Next**.



Enter a security key with 8-63 characters.

GuestPassw0rd Strong

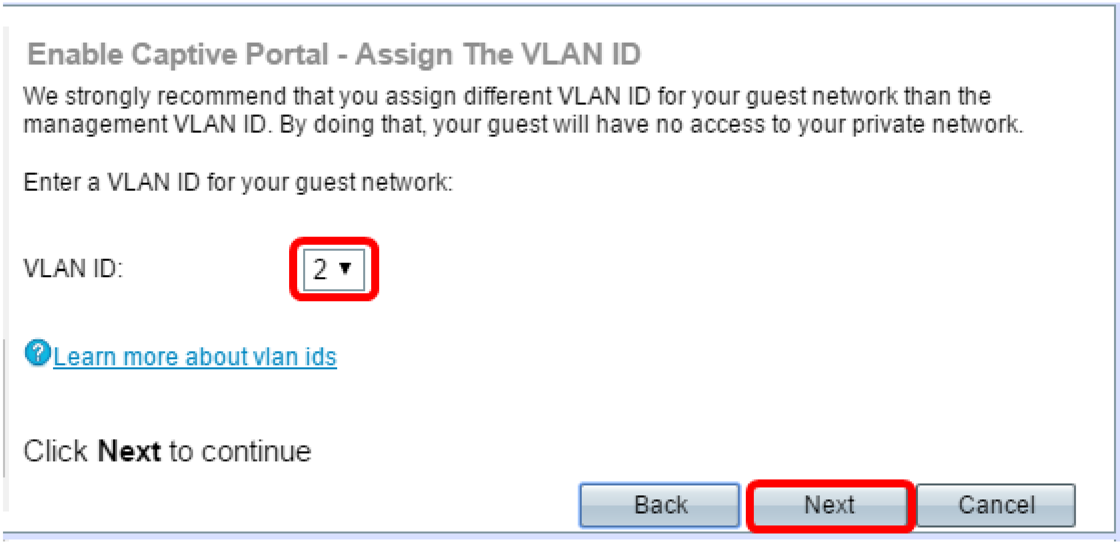
☑ Show Key as Clear Text

Learn more about your network security options

Click **Next** to continue

Step 32. In theEnable Captive Portal – Assign the VLAN ID area, choose an ID for the guest network from the VLAN ID drop-down list then click **Next**.

Note: For WAP371 and WAP150, you need to type in the ID in the *VLAN ID* field provided. The VLAN ID range is from 1-4094.



Enable Captive Portal - Assign The VLAN ID

We strongly recommend that you assign different VLAN ID for your guest network than the management VLAN ID. By doing that, your guest will have no access to your private network.

Enter a VLAN ID for your guest network:

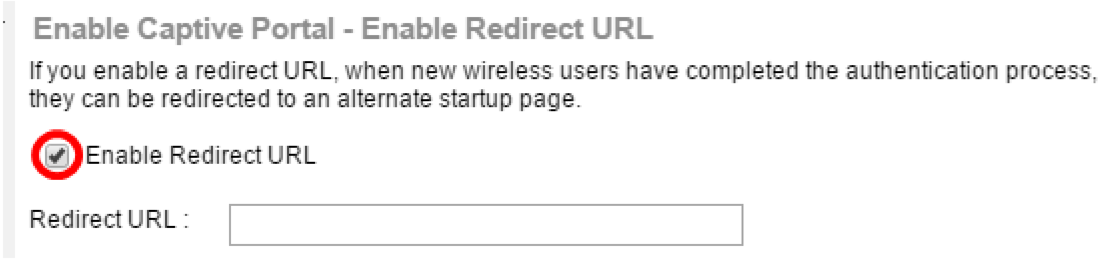
VLAN ID: 2

Learn more about vlan ids

Click **Next** to continue

Note: In this example, VLAN ID 2 is chosen.

Step 33. (Optional) If you want new users to be redirected to an alternative startup page, check the **Enable Redirect URL** check box in the Enable Captive Portal – Enable Redirect URL screen.



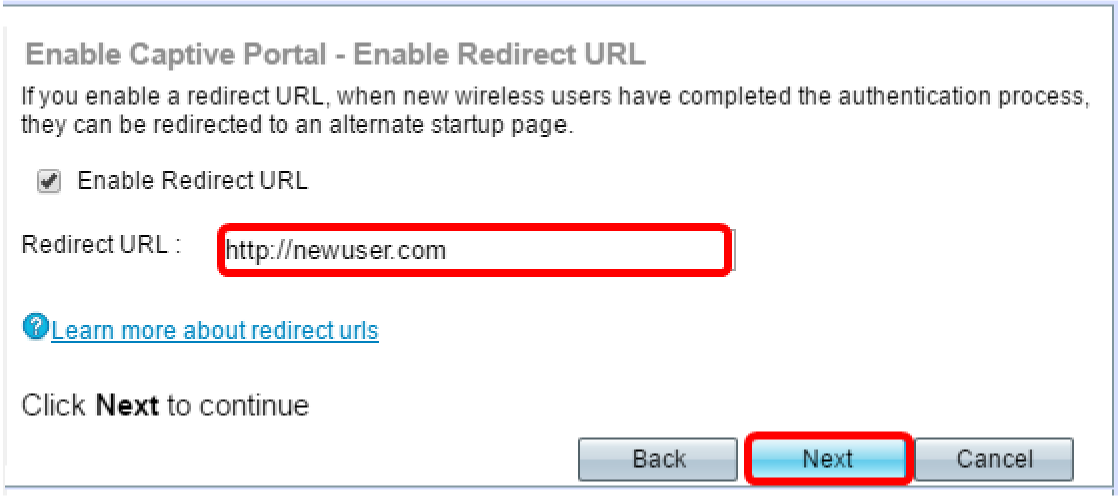
Enable Captive Portal - Enable Redirect URL

If you enable a redirect URL, when new wireless users have completed the authentication process, they can be redirected to an alternate startup page.

☑ Enable Redirect URL

Redirect URL :

Step 34. (Optional) Enter the URL for your redirect URL in the *Redirect URL* field then click **Next**.



Enable Captive Portal - Enable Redirect URL

If you enable a redirect URL, when new wireless users have completed the authentication process, they can be redirected to an alternate startup page.

☑ Enable Redirect URL

Redirect URL : http://newuser.com

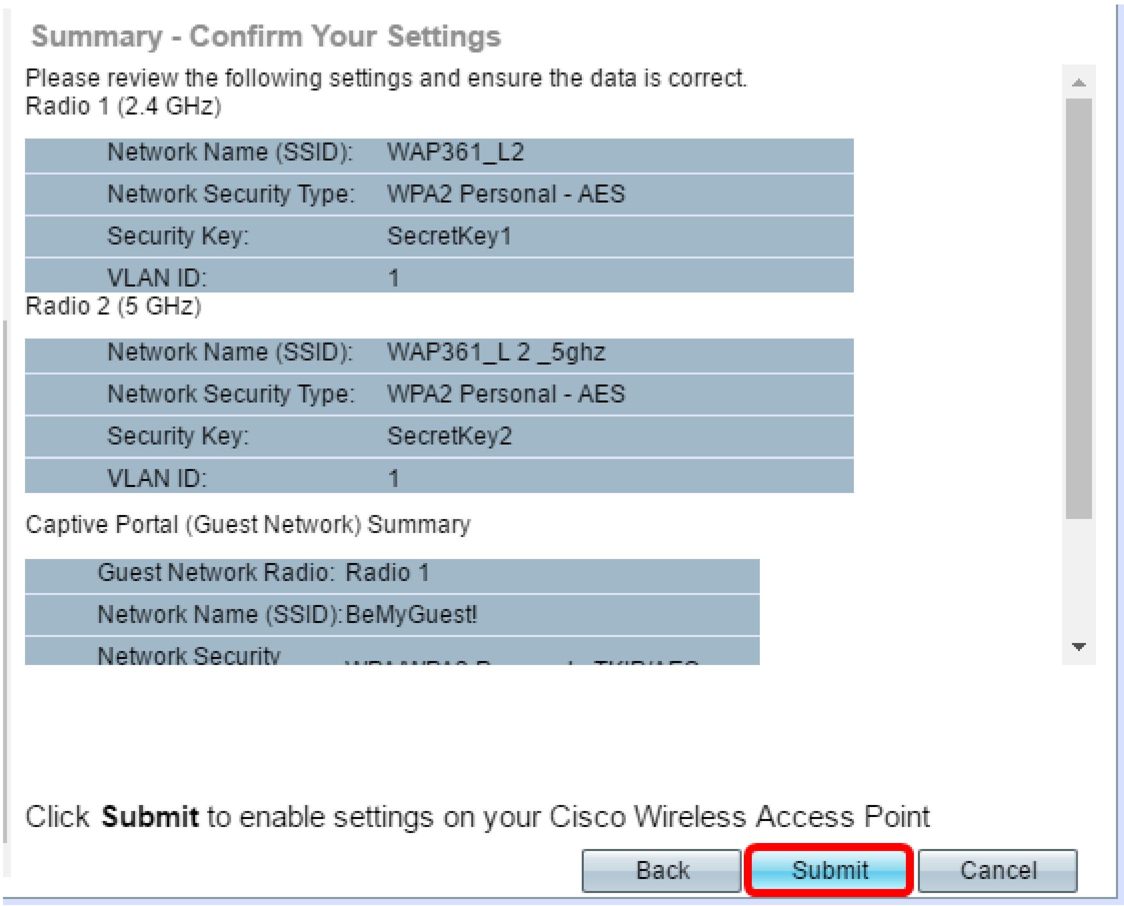
Learn more about redirect urls

Click **Next** to continue

Note: In this example, http://newuser.com is used as the Redirect URL.

Summary

Step 35. Review the settings shown and ensure that the information is correct. If you would like to change a setting, click the **Back** button until the desired page is reached. Otherwise, click **Submit** to enable your settings on the WAP.



Summary - Confirm Your Settings

Please review the following settings and ensure the data is correct.

Radio 1 (2.4 GHz)

Network Name (SSID):	WAP361_L2
Network Security Type:	WPA2 Personal - AES
Security Key:	SecretKey1
VLAN ID:	1

Radio 2 (5 GHz)

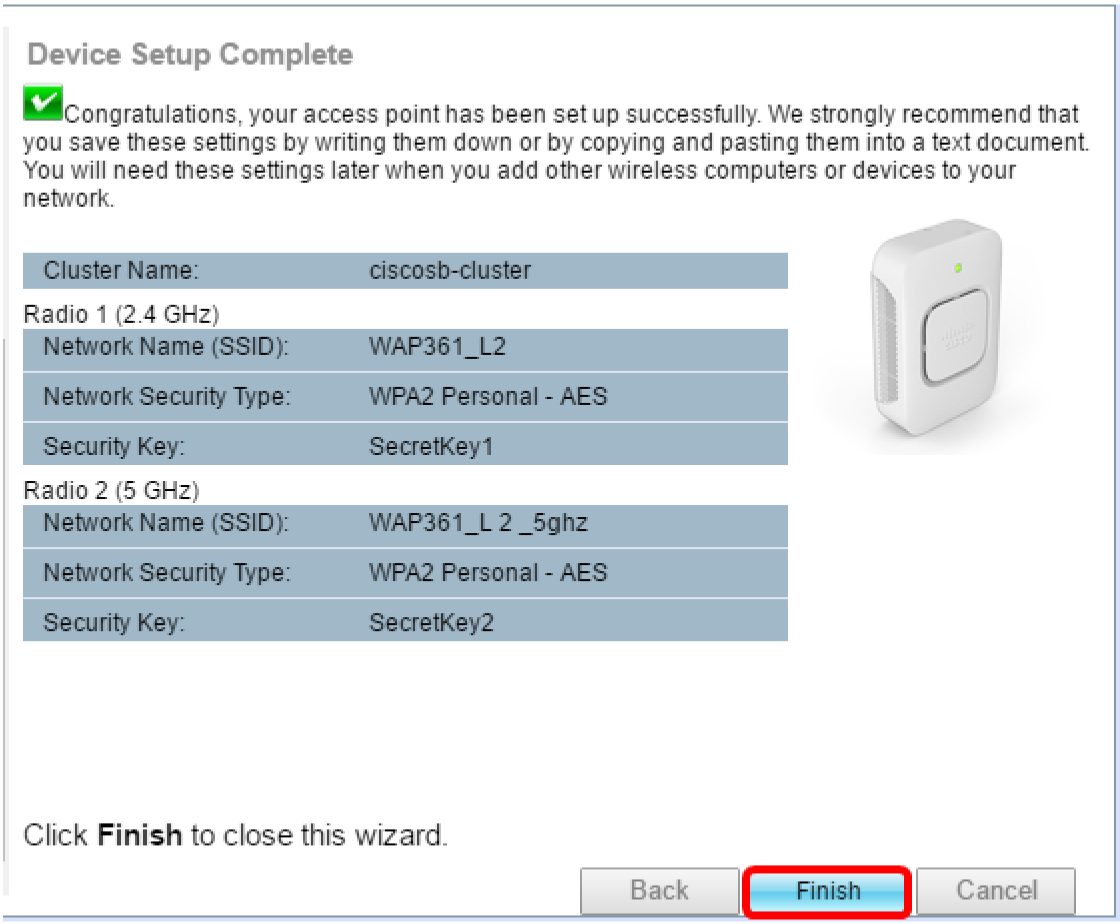
Network Name (SSID):	WAP361_L 2 _5ghz
Network Security Type:	WPA2 Personal - AES
Security Key:	SecretKey2
VLAN ID:	1

Captive Portal (Guest Network) Summary

Guest Network Radio:	Radio 1
Network Name (SSID):	BeMyGuest!
Network Security	

Click **Submit** to enable settings on your Cisco Wireless Access Point

Step 36. The Device Setup Complete screen will then appear to confirm that your device has been successfully set up. Click **Finish**.



Device Setup Complete

✓Congratulations, your access point has been set up successfully. We strongly recommend that you save these settings by writing them down or by copying and pasting them into a text document. You will need these settings later when you add other wireless computers or devices to your network.

Cluster Name:	ciscosb-cluster

Radio 1 (2.4 GHz)

Network Name (SSID):	WAP361_L2
Network Security Type:	WPA2 Personal - AES
Security Key:	SecretKey1

Radio 2 (5 GHz)

Network Name (SSID):	WAP361_L 2 _5ghz
Network Security Type:	WPA2 Personal - AES
Security Key:	SecretKey2

Click **Finish** to close this wizard.

You should now have successfully configured your Wireless Access Point using the Setup

Wizard.