Getting Started

This chapter contains the following sections:

Prerequisite for Setting up and Accessing Cisco Business Wireless AP

The following requirements must be met before setting up the CBW Wi-Fi 6 and Mesh Extender.

- For both setup and daily operation of a CBW Wi-Fi 6 network, there cannot be any other Primary AP running in the network.

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Important   The Cisco Primary AP cannot inter-operate or co-exist with other Primary APs in the same network.

- Decide on the AP that will be set up as the Primary AP, and the other APs can then connect to it as Subordinate APs. This ensures that the pre-defined *CiscoBusiness-Setup* Service Set Identifier (SSID) is broadcast only by the Primary AP and not by other APs.

- Ensure that the AP is installed as per the instructions in the *Quick Start Guide* for this model as found on Cisco.com.

- The initial setup of the CBW AP can be performed using one of the following methods:

  - Through the Primary AP Setup Wizard and over Wi-Fi.

  - Use the Cisco Business Mobile app.

  - Use *Network Plug n Play* via **Cisco Business Dashboard** application. For details, see section, *Network Plug and Play* in the Cisco Business Dashboard Administration Guide.

- If you are not using the Cisco Business Mobile App, you will need a wireless device to connect to the pre-defined *CiscoBusiness-Setup* SSID broadcast by the Primary AP. You cannot access this SSID through a wired network.

Note Only one client is allowed to connect to the *Ciscobusiness-Setup* SSID for security purposes. If the connection is refused it means another device may have joined automatically. In this case, you should reboot the AP.

- Your wireless device should have a compatible browser. For a list of browsers compatible with the CBW AP Web UI see Supported Browsers.

AP Deployment Models

The following deployment models are supported in the Cisco Business Wireless AP network.

- **Non-Mesh deployment (wired deployment only)** — All the APs in the CBW AP network have a Wired Uplink. The supported APs in the network are Primary Capable. One is the Primary AP and the others operate as Subordinate APs in the CBW network.

Supported AP (Primary AP) — CBW150AX.

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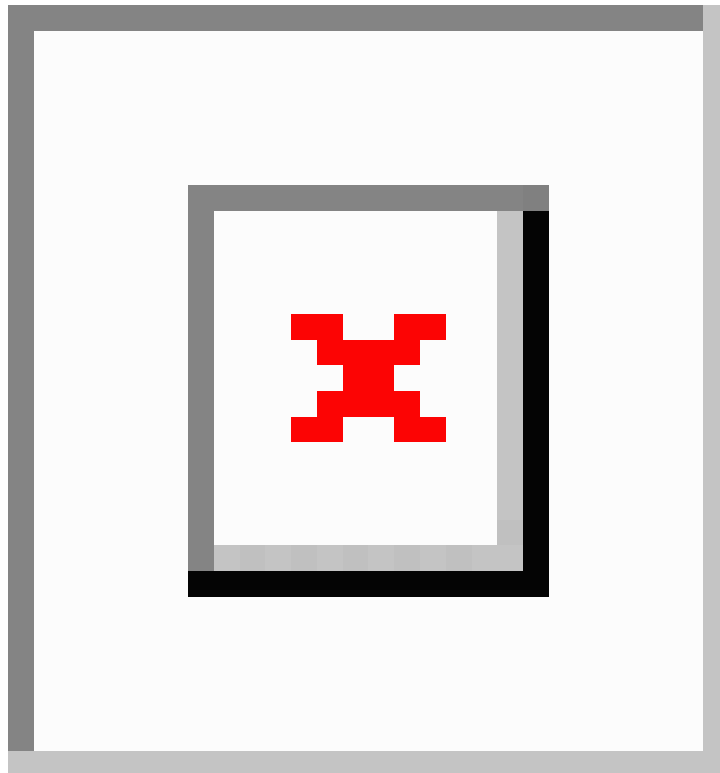
Note   Ensure that the switch is powered on and connected to the router for Internet access.

- **Mesh deployment (wireless deployment with single/multiple wired uplink APs)**— In this deployment model, the CBW AP network comprises of both Primary and Subordinate APs (wired APs and wireless Mesh Extenders). The APs that have a wired uplink act as Root AP (RAP) to which the Mesh Extenders (MAP) joins wirelessly. The Primary AP will act in Bridge mode. To set up this deployment, refer to About Cisco Mesh.

To add wireless Mesh Extenders to the network, add the Ethernet MAC address of the Extenders in the local MAC address table of the Primary AP. For details, refer to Adding Mesh Extenders, on page 8. Wireless Mesh Extenders have the dynamic algorithm to select the best RAP based on the signal strength and join the same.

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Note   Ensure that you enable **Mesh** while configuring the **Initial Setup Wizard** for this deployment model.

Only the Mesh Extender (CBW151AXM) is required to be manually added to the allowlist.

The the Subordinate AP (CBW150AX) is connected via wired uplink and is automatically added to the allowlist.

You can obtain the MAC address by reading the QR code on the back of the device with a QR Reader app on a wireless device. You can also find the MAC address at the bottom of the AP Device.

Supported APs in Mesh deployment:

- **Primary AP** — CBW150AX

- **Subordinate AP** — CBW151AXM and CBW150AX
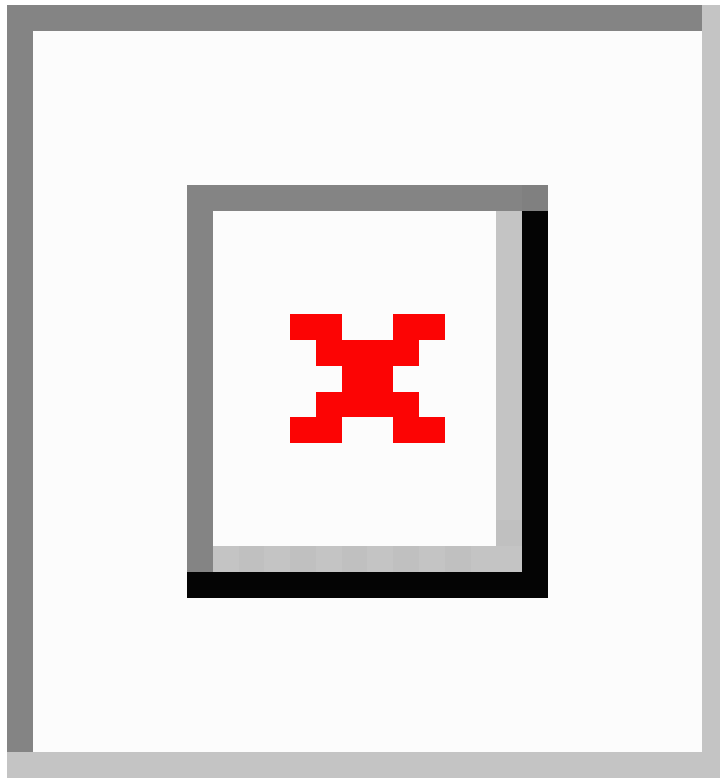
> **Note**   APs listed as Primary Capable can also function as Subordinate APs.

Launching the Setup Wizard

> **Note**   You can use the Cisco Business Mobile app instead of the Web UI to run the setup wizard.

Step 1   Turn on the power to the primary capable AP in your network.

After a delay of a few minutes, the *CiscoBusiness-Setup* SSID will start broadcasting. The AP status LED will cycle through red, green, and off. This is normal and can take up to 6 minutes. The device is not ready until the LED is solid green.

Step 2   Connect the wireless device to the *CiscoBusiness-Setup* SSID through Wi-Fi and enter the default password: **cisco123**.

The wireless device obtains an IP address from the subnet of the Primary AP.

Step 3   Launch a supported web browser, such as Chrome, Firefox, Safari, or Internet Explorer.

For Apple clients, after connecting to the *CiscoBusiness-Setup* SSID, the captive portal window may open with the Welcome page followed by the initial Setup Wizard.

After connecting to the *CiscoBusiness-Setup* SSID and opening a web browser, you should automatically be redirected to *http://ciscobusiness.cisco*. If not, type the URL: *http://ciscobusiness.cisco* in the address bar and press **Enter**.

Step 4   Click **Start** on the **Cisco Business Wireless Access Point** page to launch the Setup Wizard. You will be required to create an admin account.

Only one client can be connected to the CiscoBusiness-Setup SSID at a time. If you see an invalid password error on your client when connecting to CiscoBusiness-Setup SSID, it indicates that another client has been connected to the SSID. The currently connected AP will display the LED status as solid green.

Turn off the connected client, and then proceed with the Setup Wizard configuration of your AP.

Using the Setup Wizard

The Setup Wizard helps you configure certain basic parameters on your Cisco Business Wireless AP (CBW AP), and get your AP network running.

Once you have completed the steps in , use the following sections as a reference for the data that you enter and then proceed with the configuration wizard pages.

Welcome Screen

Click the **Start** button in the **Welcome** screen. The **Cisco Business Wireless Access Point** page relevant to your AP model is displayed.

1. Create an admin user account on the Primary AP. You can enter up to 24 ASCII characters.

    The username is case sensitive and cannot be cisco or any variant.

2. Enter a password. The password can contain 8-127 ASCII characters. When specifying a password, ensure the following:

    • The password must include a combination of lowercase letters, uppercase letters, digits, or special characters. The special characters can be **~, !, @, #, $, %, ^, &, ***.

    • No character in the password can be repeated more than three times consecutively.

    • The new password cannot be the same or the reverse of the username.

    • The password cannot be cisco, ocsic, or any variant obtained by changing the capitalization of the letters in the word Cisco. For example, you cannot substitute 1, I, or ! for i, 0 for o, or $ for s.

3. Confirm the password and click **Start**.

Set Up Your Primary AP

Specify the following basic parameters for setting up your Primary AP:

Field	Description
Primary AP Name	Enter the name that you want to assign to the Primary AP. • A max of 24 characters is allowed. • The characters can be upper/lowercase letters, numbers, dot, and hyphen.
Country	Choose the country that matches the physical location of the CBW AP. • The CBW AP will display only countries that are supported by the regulatory domain of the AP. You can choose your country from the drop-down list. • There are strict regulatory rules to operate under the proper country code during usage.
Date and Time	Specify the date. By default, your device's system time is applied. You can manually edit the date and time, if required.
Timezone	Select your time zone. • You MUST select a timezone that is valid for the country where the device is used. If you choose an invalid timezone, the deployment will not function.
Mesh	To add Mesh Extenders to your AP network, enable the **Mesh** option. By default this option is disabled. You can add Mesh Extenders after deployment.
Would you like Static IP for your Primary AP (Management Network)	Enable this option if you want to configure a static IP address for the management interface. If not, the interface gets an IP address from your DHCP server (typically your router). By default, this option is **disabled**. • A management IP address should be within current subnet of your local VLAN and not in the client pool issued by your DHCP server. • If you choose to configure the static IP address, then you will be required to enter data in the following fields. If not, proceed to the next section. Even when a static IP address is selected for the Primary AP, a DHCP server is still required to provide IP addresses to the Access Points and Clients. If the device cannot find a DHCP server after completing the Day 0 setup sequence and rebooting, it will not complete the bootup sequence and the LED will be blinking red.
Management IP Address	Enter the IP address for managing the Primary AP.
Subnet Mask	Enter the subnet mask for the Primary AP.
Default Gateway	Enter the default gateway or router IP address for the Primary AP.

Create your Wireless Networks

Specify the following parameters:

Field	Description
Network Name	Specify a SSID for your Wireless network. You can enter up to 31 characters in this field. Make a note of this SSID to connect a client and log into the CBW web user interface which is detailed in the later section of this chapter. For details, refer to Logging into the Cisco Business Wireless AP, on page 7.

Security	By default, the SSID security is set to **WPA2 Personal** which uses a pre-shared key (PSK) authentication.
	
	Choose SSID security for your Wireless network. It can be one of the following options:
	
	  • **WPA2 Personal** - This uses pre-shared key (PSK) handshake mechanism for authentication.
	
	  • **WPA2**+**WPA3 - Personal** - This has both WPA2 and WPA3 enabled. WPA3 uses a reliable handshake mechanism called Simultaneous Authentication of Equals (SAE).
	
	    This is only available after updating to FW release 10.4.1.0.

Passphrase	Specify the passphrase or the pre-shared key (PSK). The passphrase should contain 8 - 63 ASCII characters. Make a note of this passphrase to connect a client to the SSID and log into the CBW web user interface (detailed in the later section of this chapter). For details, refer to Logging into the Cisco Business Wireless AP, on page 7.
Confirm Passphrase	Re-enter the passphrase or the pre-shared key (PSK) here.
Show Passphrase	Enable this in order to display the passphrase in clear text for visible confirmation.

Once you complete the configuration settings, click **Next** to proceed or **Back** to modify the data in the previous screens if needed. Confirm the settings and click **Apply** to save the configuration.

The Access Point will reboot. This may take up to 5 minutes. The booting process is complete when the LED is consistently blinking or solid green.

Note For a detailed explanation on the LED behavior, see LED Color Indicators for Cisco Business Wireless APs.

Logging into the Cisco Business Wireless AP

Once you have completed the steps in Using the Setup Wizard, on page 5, follow the steps below to log into the CBW AP web user interface (Web UI). You can monitor and manage the Access Point and associated devices using this Web UI.

Step 1   Connect to the new SSID that you created using the **Setup Wizard** > **Create Your Wireless Network** process.

Step 2 Open a supported web browser. In the address bar, type *https://ciscobusiness.cisco* or *https://<ip address>* and press **Enter** to display the **Cisco Business Wireless Access Point** login page.

The CBW AP uses a self-signed certificate for HTTPS, so all browsers will display a warning and ask you whether you wish to proceed with an exception when the certificate is presented to the browser. Accept the warning to access the Primary AP login page.

Note If the Firefox browser displays an exception, navigate to **Options** > **Privacy & security** > **Certificates** > **View Certificates** > **Servers** > **Add exception**, and add an exception for **https://ciscobusiness.cisco**.

Step 3 Click **Login** and enter the username and password you created during the set up process to begin managing your CBW network.

What to do next

The default landing page is the **Network Summary** window when you log in. For more information, see About the Cisco Business Wireless AP Monitoring Service.

Adding New Subordinate APs

If you have a CBW Wi-Fi 6 network up and running, adding new wired APs to the network is easy.

Step 1 Plug the Wired uplink AP (CBW150AX) into the Ethernet LAN connected to the current Primary AP. The AP must be on the same VLAN as the Primary AP.

Step 2 After the new AP boots up, it will automatically download and update the firmware to match the Primary AP.

Step 3 Copy the configuration information and then join the wireless network.

To manage the newly added AP, navigate to the **Wireless Settings** > **Access Points** page and use the Web UI.

Adding Mesh Extenders

You can add a Mesh Extender such as CBW151AXM to the wireless network.

Ensure that you have enabled the **Mesh** option in the initial setup wizard. If not, go to **Wireless Settings** > **Mesh**, enable the **Mesh** toggle button and click **Apply**. For detailed information, refer to About Cisco Mesh.

Now add the MAC address of the Mesh Extender to the Local MAC Addresses table using one of the following methods:

Using the Management Web UI

A Primary AP responds only to discovery requests from indoor radios that appear in its authorization list, so you must enter the MAC address of all Mesh Extenders that you want to use in the mesh network with the Primary AP.

To add the MAC Address in the **Allowlist**, follow these steps:

1. Navigate to **Wireless Settings** > **WLAN Users** > **Local MAC Addresses**.

2. Click **Add MAC Address** and select the correct address from the list.

3. In the **Description** field, enter a description for the Mesh Extender that will identify the mesh access point on the Primary AP.

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Note You might want to include an abbreviation of its name and the last few digits of the MAC address, such as ap1522:62:39:10. You can also note details on its location physical such as *interior west wall, or corner ceiling by front door*.

4. Choose to join or block an AP using the following steps:

   • Choose the **Type** as **Allowlist** to join the access points to the Primary AP.

   • Choose the **Type** as **Blocklist** to block a particular access point from joining the Primary AP.

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Note Blocklisting a client or Mesh Extender that is currently joined to the network will not take effect until it attempts to rejoin the network (after a disconnect or reboot).

5. Select the **Profile Name** from the drop-down list and click **Apply**. By default, the profile name is mapped to **Any WLAN**.

   Check to see if the MAC address you added has been listed in the AP network. Navigate to **Wireless Settings** > **Access Points**. You should find the MAC address added in the column, **AP Mac** along with the AP model under the **AP Model** column of the table.

Using the Cisco Business Mobile App

1. Connect to the SSID setup for the Primary AP and log into the Primary AP admin account.

2. Select **Monitor my Network**, then choose **Add a device**.

3. Scan the MAC address of the Mesh Extender using the QR code reader on the wireless device.

To troubleshoot issues with Mesh Extender, refer to Deployment and Troubleshooting Guidelines.