



How to set up a Mesh network with WiFi 6 AP

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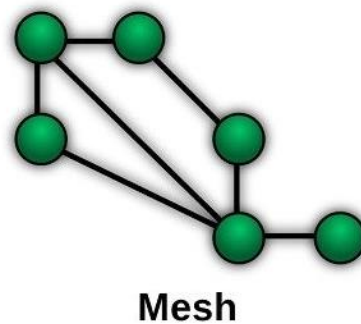
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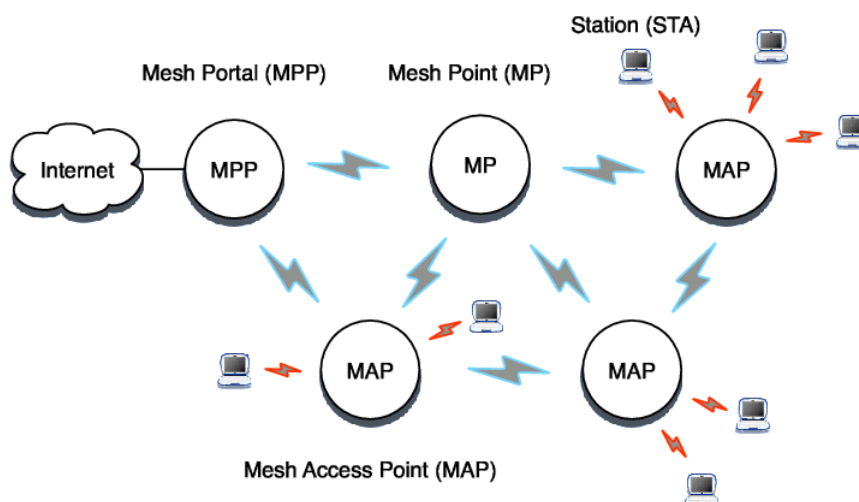
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1. What is a Mesh network?

- A wireless mesh network is a communications network made up of radio nodes organized in a mesh topology.
- Wireless mesh infrastructure is a network built of peer radio devices that do not have to be cabled to a wired port like traditional WLAN access points (AP) do. Mesh infrastructure carries data over large distances by splitting the space into a series of short hops.
- Mesh network establishes the multi wireless link between nodes, providing backup uplinks when one of the nodes was out of service. It enhances the stability of network service.



- In the Mesh network, WiFi 6 AP could be a Mesh Portal Point (MPP), Mesh Point (MP), or a Mesh Access Point (MAP).



2. How to set up a Mesh network with stand-alone

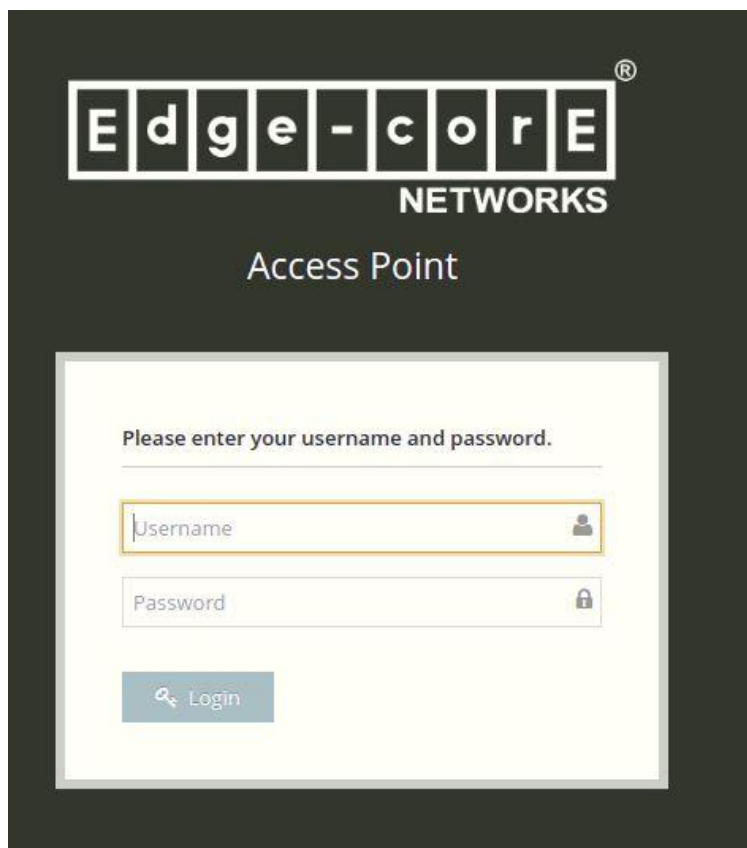
WiFi 6 AP?

The steps below show how to set up a Mesh network with two WiFi 6 APs with firmware 11.5.0-1175. One acts as a Mesh Portal Point (MPP), the other works as a Mesh Access Point (MAP).

2.1 Configure the Mesh Portal Point

1. Power on the EAP101, and plug the WAN uplink to a DHCP network. The default WAN setting is DHCP. The MPP should reach the network.
2. Configure the laptop ethernet to DHCP and connect to AP's LAN to access the IP at 192.168.2.1.

The default administrative account is **Username=admin, Password=admin**.



3. Configure the AP with Stand-alone Mode and finish the setup wizard.

SETUP WIZARD

Will this device be managed?

Yes, I will manage this device by ecCloud controller.

Yes, I will manage this device by EWS-Series controller.

No, I will be operating this device in stand-alone mode.

+ Wireless Setup

+ Network Setup

+ Change Your Password

+ Select Your Country

Done

4. The AP can only enable Mesh with one interface, either 2.4GHz or 5GHz wireless interface. Please configure the Mesh wireless interface with a specific channel and then click Save and apply.

Please note: Mesh network is a low-mobility centralized form of wireless connection. Please don't set Channel=Auto.

Wireless Settings(Radio 5 GHz)

PHYSICAL RADIO SETTINGS

Status ON

Mode Access Point (Auto-WDS)

802.11 Mode 802.11ax

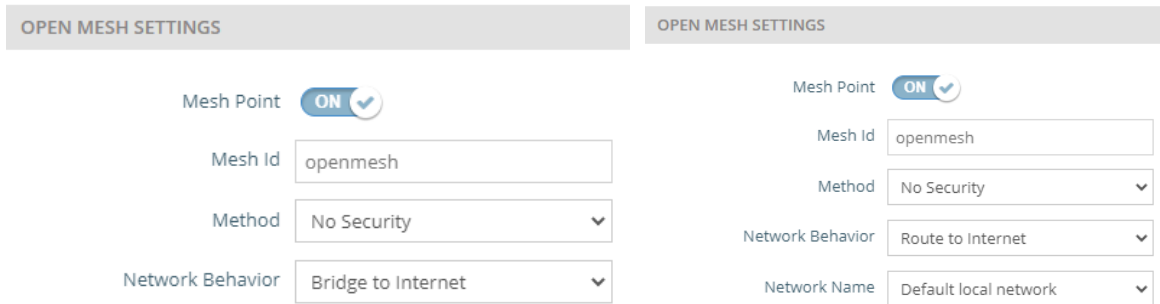
Channel Bandwidth 80MHz

Channel 36 (5.18 GHz)

Beacon Interval 100

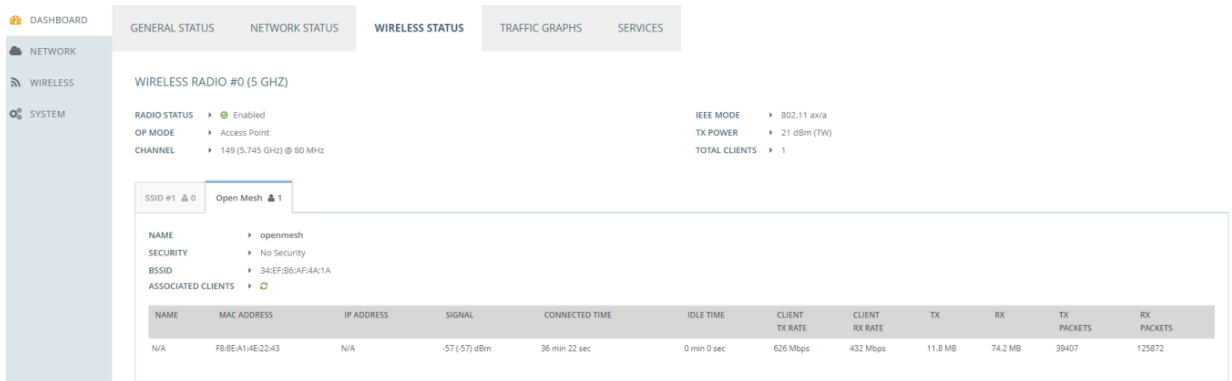
Minimum signal allowed 0

5. Enable the Mesh point of the wireless internet. Configure the Mesh ID. Mesh security is not necessary needed but recommended, in this guide we will be using "No Security", and then apply the setting. If a security is selected, remember to set the same security on the Mesh Access Point as well.



About the network behavior, MPP supports Bridge to the Internet & Route to Internet. MAP must Bridge to the Internet.

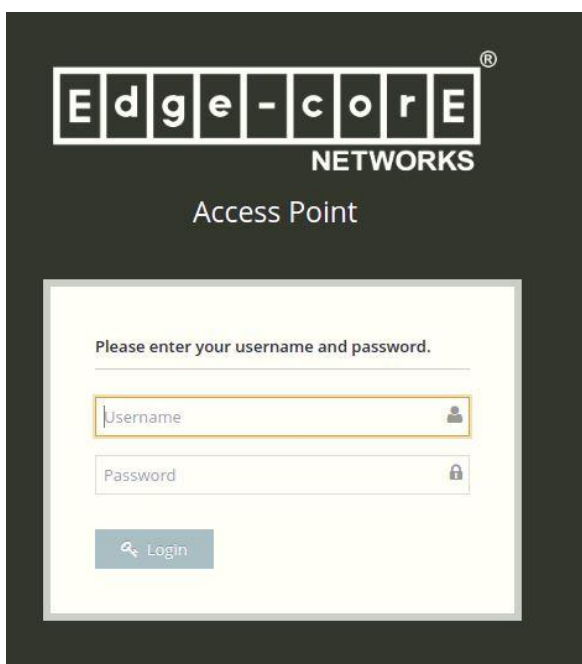
- Go to Dashboard to see the Mesh network associated stations.



2.2 Configure the Mesh Access Point

- Configure the laptop ethernet to DHCP and connect to AP's LAN to access the IP at 192.168.2.1.

The default administrative account is **Username=admin, Password=admin**.



- 2 Configure the AP with Stand-alone Mode and finish the setup wizard.

SETUP WIZARD

Will this device be managed?

Yes, I will manage this device by ecCloud controller.

Yes, I will manage this device by EWS-Series controller.

No, I will be operating this device in stand-alone mode.

+ Wireless Setup

+ Network Setup

+ Change Your Password

+ Select Your Country

Done

- 3 The EAP101 can enable Mesh with one interface, either 2.4GHz or 5GHz wireless interface. Configure the Mesh wireless interface with a specific channel.

Please note: Mesh network is a low-mobility centralized form of wireless connection. Please don't set Channel=Auto.

Wireless Settings(Radio 5 GHz)

PHYSICAL RADIO SETTINGS

Status

Mode Access Point (Auto-WDS) ▼

802.11 Mode 802.11ax ▼

Channel Bandwidth 80MHz ▼

Channel 36 (5.18 GHz)

Beacon Interval 100

Minimum signal allowed 0

- 4 Enable the Mesh point of the wireless internet. Configure the Mesh ID. Mesh security is not necessary needed but recommended, in this guide we will be using “No Security”, and then apply the setting. If the Mesh Portal Point has security, please remember to set the same security.

OPEN MESH SETTINGS

Mesh Point ON

Mesh Id

Method

Network Behavior

About the network behavior, MAP must Bridge to the Internet.

- 5 Go to Dashboard→Wireless Status to see the Mesh network associated stations.

The screenshot shows the 'WIRELESS STATUS' page in the OpenMesh dashboard. The left sidebar has 'WIRELESS' selected. The main content area shows the configuration for 'WIRELESS RADIO #0 (5 GHz)'. The radio is enabled, in Access Point mode, on channel 149 (5.745 GHz @ 80 MHz). The SSID is 'Open Mesh' with 1 associated client. The client details are as follows:

NAME	MAC ADDRESS	IP ADDRESS	SIGNAL	CONNECTED TIME	IDLE TIME	CLIENT TX RATE	CLIENT RX RATE	TX	RX	TX PACKETS	RX PACKETS
N/A	F8:8E:A1:4E:22:43	N/A	-57 (-57) dBm	36 min 22 sec	0 min 0 sec	626 Mbps	432 Mbps	11.8 MB	74.2 MB	39407	125872

3. How to set up a Mesh network with WiFi 6 AP from ecCloud?

By default, the WiFi 6 AP v11.5.0 Management Settings is to connect to ecCloud. Below shows how to configure the MPP & MAP from the ecCloud device level settings.

SETUP WIZARD

Will this device be managed?

- Yes, I will manage this device by ecCloud controller.
- Yes, I will manage this device by EWS-Series controller.
- No, I will be operating this device in stand-alone mode.

3.1 Register MPP & MAP to the ecCloud

1. Connect two WiFi 6 APs to the Internet with uplink port (ETH0).

INTERNET INFO

INTERNET STATUS	▶ Internet connection is up!
INTERNET SOURCE	▶ ETH0
IP ADDRESS	▶ 10.28.192.69
MODE	▶ DHCP-assigned
NETMASK	▶ 255.255.224.0
GATEWAY	▶ 10.28.192.1
DNS	▶ 10.2.244.1 , 10.2.244.2

2. Register WiFi 6 APs to the ecCloud account without inheriting site-level settings, and rename the AP.

Register new devices

A new device can be added to a site by inputting (or scanning) the serial number and MAC address of the device. [Learn more](#)

You can find the serial number and MAC address on the product box or on the back of the product itself.

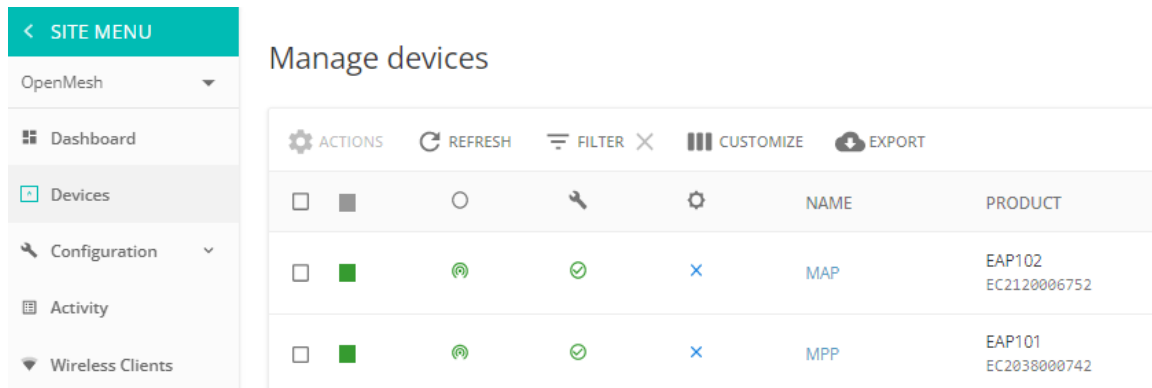
Add the following devices to the following site:

Inherit site-level settings

Enable this if you want to manage the devices in this site like a single unit with a common configuration. [Learn more](#)

Enable barcode scanning mode

Serial Number MAC Address Name



3.2 Configure the MPP

1. The AP can only enable Mesh with one interface, either 2.4GHz or 5GHz wireless interface. Please configure the Mesh wireless interface with a specific channel and then click Save and apply.

Please note: Mesh network is a low-mobility centralized form of wireless connection. Please don't set Channel=Auto.

PHYSICAL RADIO SETTINGS

802.11 Mode	802.11ax
Channel Bandwidth	80MHz
Channel	149 (5.745 GHz)
	EDIT CHANNEL LIST
Idle Timeout	300
Beacon Interval	100
Tx Power	21 dBm (125 mW)

2. Enable the Mesh point of the wireless internet. Configure the Mesh ID. Mesh security is not necessary needed but recommended, in this guide we will be using "No Security", and then apply the setting. If a security is selected, remember to set the same security on the Mesh Access Point as well.

MESH SETTINGS	MESH SETTINGS
Open Mesh <input checked="" type="checkbox"/>	Open Mesh <input checked="" type="checkbox"/>
Mesh Id: openmesh	Mesh Id: openmesh
Mesh Method: Open	Mesh Method: Open
Network Behavior: Bridge to Internet	Network Behavior: Route to Internet
Mesh Radio: 5GHz	Mesh Radio: 5GHz

About the network behavior, MPP supports Bridge to the Internet & Route to Internet. MAP must Bridge to the Internet.

3.3 Configure the MAP

1. The AP can only enable Mesh with one interface, either 2.4GHz or 5GHz wireless interface. Please configure the Mesh wireless interface with a specific channel and then click Save and apply.

Please note: Mesh network is a low-mobility centralized form of wireless connection. Please don't set Channel=Auto.

PHYSICAL RADIO SETTINGS

802.11 Mode	802.11ax
Channel Bandwidth	80MHz
Channel	149 (5.745 GHz)
	EDIT CHANNEL LIST
Idle Timeout	300
Beacon Interval	100
Tx Power	21 dBm (125 mW)

2. Enable the Mesh point of the wireless internet. Configure the Mesh ID. Mesh security is not necessary needed but recommended, in this guide we will be using "No Security", and then apply the setting. If the Mesh Portal Point has security, please remember to set the same security.

MESH SETTINGS

Open Mesh ?

Mesh Id

Mesh Method

Network Behavior

Mesh Radio

About the network behavior, MPP supports Bridge to the Internet & Route to Internet. MAP must Bridge to the Internet.

3. Confirm both MPP & MAP configuration are synchronized with the ecCloud.

Manage devices

ACTIONS						REFRESH	FILTER	CUSTOMIZE	EXPORT
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	NAME	PRODUCT			
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	MAP	EAP102 EC2120006752			
<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	MPP	EAP101 EC2038000742			

4. Remove MAP WAN ethernet connection from the Internet.
5. Manually reboot MAP from the local site.

After MPP rebooted and establish the Open Mesh connection with the MPP, users successfully extend their Mesh network.

Please contact Edgecore's Technical Support Team at ecwifi@edge-core.com for additional inquiries