

TP-Link Omada Mesh Introduction

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TP-Link Omada Mesh Introduction

- **What is Mesh Network, Omada Mesh Device and Typical Scenario**
- **Brief Introduction of EAP Mesh Network**
- **Configuration Guide for EAP Mesh Network**
- **Deployment & Optimization for EAP Mesh Network**
- **Chain Topology Three Hops Mesh Aps**

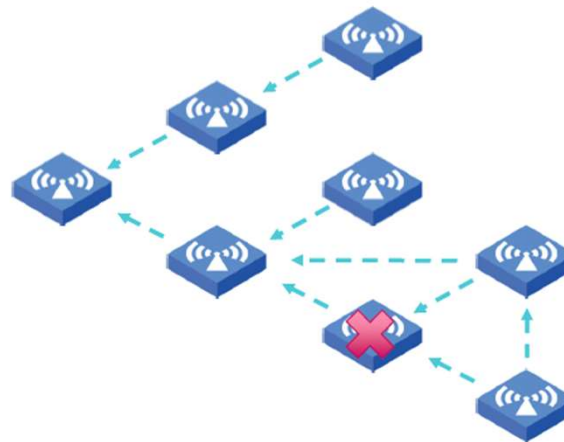


What is Mesh Network, Omada Mesh Device and Typical Scenario

What is Mesh Network ?

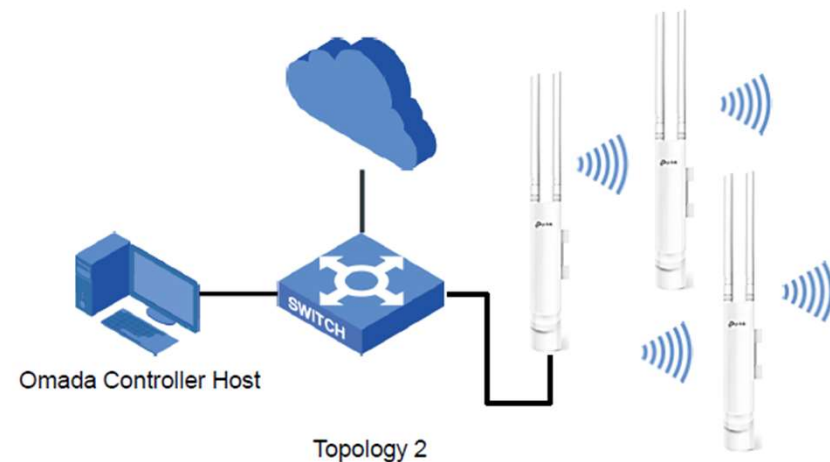
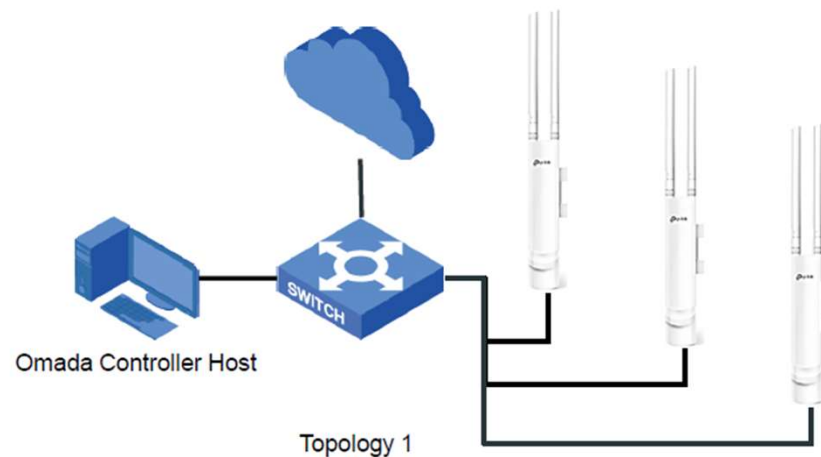
The Mesh network we are talking about now often refers to a wireless mesh network with following characteristics:

- The Mesh network is formed by multiple wireless APs (node), these APs will connect to each other wirelessly.
- The Mesh network has certain robustness and adaptability, which means the Mesh network can still work even some of the APs are failed.



Why do we need Mesh?

- In traditional wired AP deployment, all APs will be connected with Ethernet cable, like topology 1 shows:
- But in some cases, for example: To provide Wi-Fi coverage for a beach or a farm. To use traditional deploy method, Ethernet cable wiring can be very expensive and time-consuming. Sometimes due to environmental restriction, the wired deployed can be very difficult, even impossible.
- Mesh network is designed to provide a solution for these situations. With Mesh network, most of cable wiring is no longer required, AP can be deployed anywhere the user need (within the wireless coverage of any uplink AP).



Omada Mesh Devices

Note: The products marked "Planned" require subsequent firmware update and are not guaranteed. The compatible device list will be updated regularly, and TP-Link reserves the right to modify this page at any time without notifying the user. Both listed and higher hardware versions of these models support Omada Mesh.

***Omada Mesh requires the use of Omada Controllers. And please make sure the latest firmware of the devices are installed. If not, download the latest firmware and follow the instructions to upgrade it.**

Controllers



OC300 V1

Omada Hardware Controller



OC200 V1

Omada Hardware Controller



**Omada Software Controller
V5.4**

Omada Software Controller

Omada Mesh Devices

Both listed and higher hardware versions of these models support Omada Mesh.

Access Points



EAP670 V1

AX5400 Ceiling Mount WiFi 6 Access Point



EAP660 HD V1 *

AX3600 Wireless Dual Band Multi-Gigabit Ceiling Mount Access Point



EAP650 V1

AX3000 Ceiling Mount WiFi 6 Access Point



EAP653 V1

AX3000 Ceiling Mount WiFi 6 Access Point



EAP620 HD V1

AX1800 Wireless Dual Band Ceiling Mount Access Point



EAP610 V1

AX1800 Ceiling Mount WiFi 6 Access Point



EAP245 V3

AC1750 Wireless MU-MIMO Gigabit Ceiling Mount Access Point



EAP610-Outdoor V1

AX1800 Indoor/Outdoor WiFi 6 Access Point



EAP225-Outdoor V1

AC1200 Wireless MU-MIMO Gigabit Indoor/Outdoor Access Point

***The firmware version EAP660HD(JP)_V1_1.1.0 build 20211224 or more is needed**

Typical Scenario : Beach

A park manager plan to provide Wi-Fi coverage for a beach. Beach size is 400x180 m. Wireless clients number is about 50 smartphones and tablets in average. Internet gateway locates at the red arrow in the picture. According to wireless clients distribution and coverage requirement, set the APs' location as the blue arrows.

Wired Networking Plan:

- **Difficult in Ethernet cabling.** Since maximum length for normal twisted-pair cable is only 100m. For some parts (like A-D in picture), the Ethernet cabling can be very complicated and expensive.
- **Inflexible Deployment.** Once the Ethernet cable wiring is done, AP's position will be fixed. To change AP's position, the cabling will need to be redone.



Typical Scenario : Beach

- Mesh Networking Plan:
 - Easy to deploy. No Ethernet cabling is required for the Mesh AP. Save time and money for Ethernet cable wiring.
 - Flexible Deployment. Deploy AP wherever needed (within the uplink AP coverage).
 - The AP close to Root AP can make direct wireless uplink to Root AP, we call it as 1-hop Mesh AP.
 - For the AP locates out of Root AP's coverage, you can build a wireless uplink with the Mesh AP and make it as 2-hop Mesh AP or 3-hop Mesh AP.
- Note: Root AP, 1-hop Mesh AP and 2-hop Mesh AP will be introduced in later chapter.

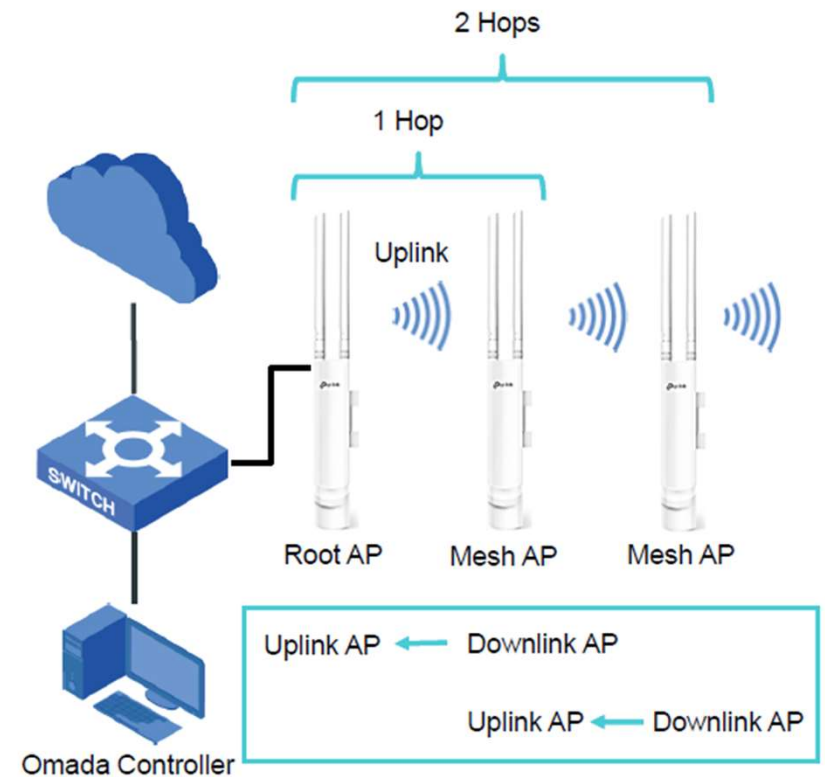




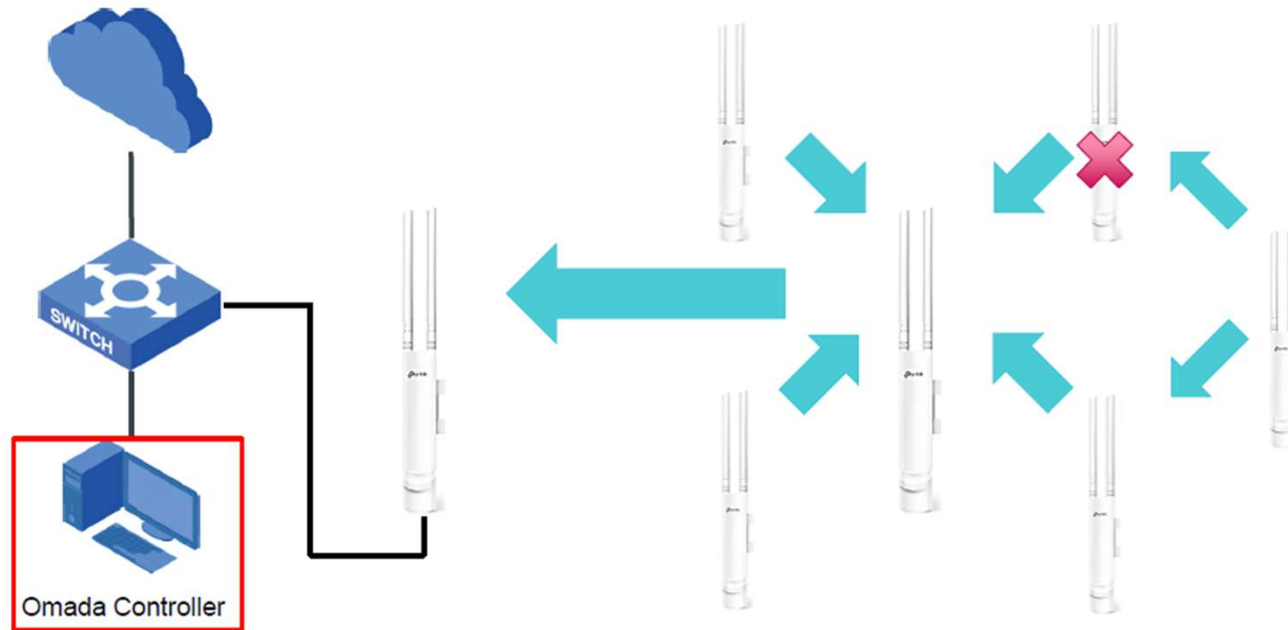
Brief Introduction of EAP Mesh Network

Basic Concepts for Mesh of EAP

Basic Concepts	Explanation:
Uplink	Data link between AP and its direct front-end EAP device.
Root AP	The wired AP in a Mesh network.
Mesh AP	AP with wireless uplink.
Uplink AP	The AP provide wireless uplink for Mesh AP will be called the Uplink AP for this Mesh AP.
Downlink AP	The Mesh AP connect to other AP wirelessly will be called as Downlink AP for the other AP.
Hop	The relative distance between Mesh AP and Root AP. For TP-Link Mesh network, it supports 3 hops in maximum.



Brief Intro for Mesh of EAP



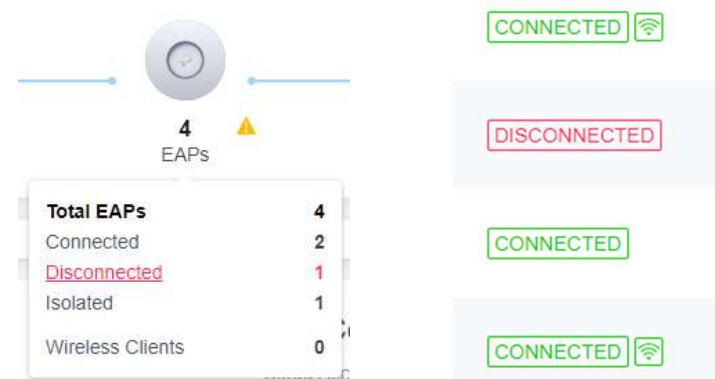
- An EAP Mesh network is formed by at most 1 Root AP and at least 1 Mesh AP.
- A Mesh AP can have up to 1 uplink, but it can have up to 4 downlinks.
- When one or more AP failed in EAP Mesh network, with Auto Failover feature enabled, the Mesh network will recover automatically.
- The EAP Mesh feature requires Omada Controller to keep running. User can only make Mesh related configuration in Omada Controller.



Configuration Guide for EAP Mesh Network

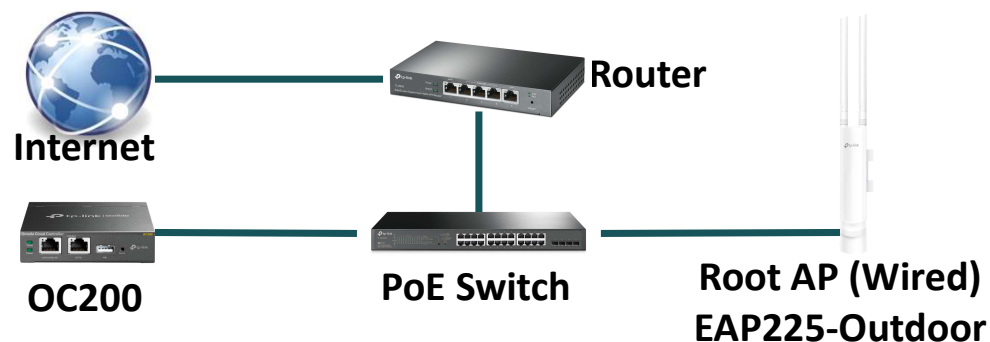
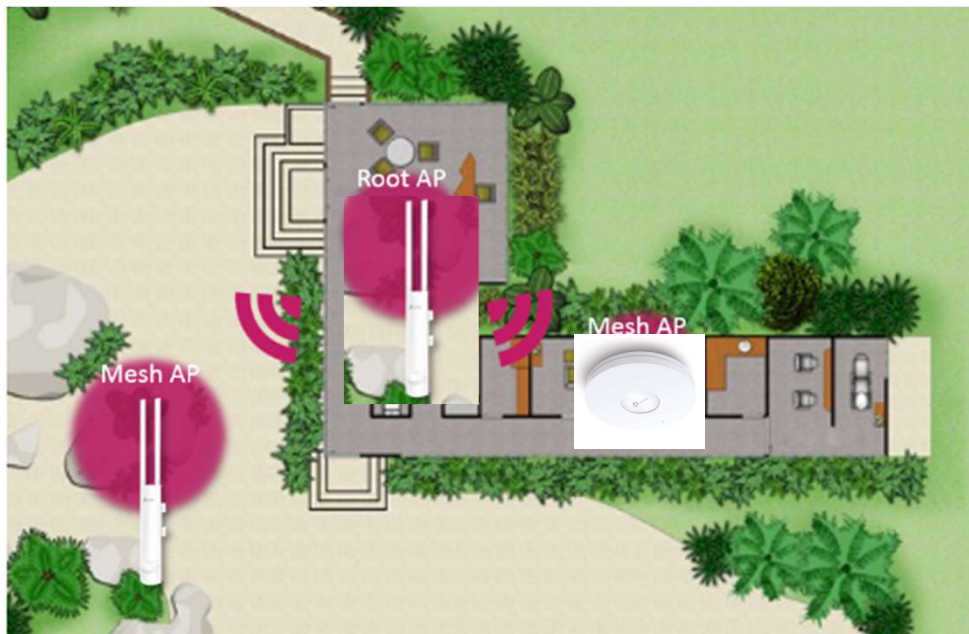
Explanation about EAP status

Here we will introduce different status of EAP, since mesh EAP is connected via wireless instead of wired, so compared with before, there are some new status like Pending (wireless), Connected (wireless), isolated, etc.



Status	When will you see this status
Pending	Controller find unmanaged EAP with wired connection.
Pending(wireless)	Controller find unmanaged EAP with wireless connection. (For Mesh Network)
Adopting	Controller is establishing session to EAP with wired connection.
Adopting(wireless)	Controller is establishing session to EAP with wireless connection. (For Mesh Network)
Configuring	Controller is distributing configuration to the EAP.
Connected	EAP is successfully managed by Controller with wired connection.
Connected(wireless)	EAP is successfully managed by Controller with wireless connection. (For Mesh Network)
Disconnected	Controller lose both wired and wireless connection to the EAP.
Isolated	Controller lose wired connection to EAP but find it in wireless. (For Mesh Network)

Network Topology



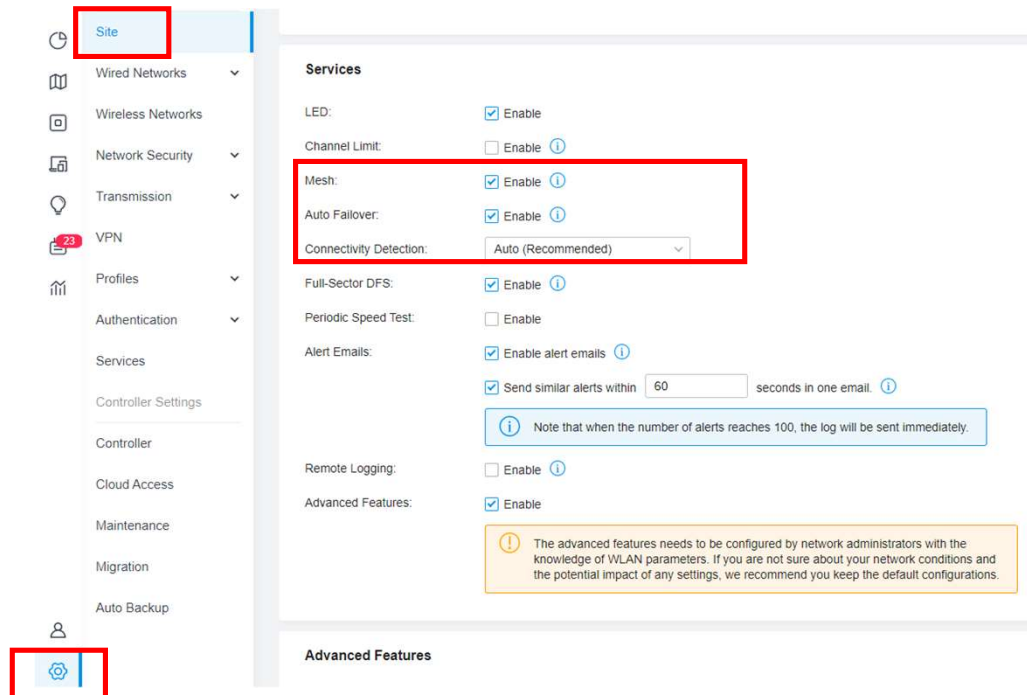
Mesh is used to establish a wireless network or expand a wired network through a wireless connection on the 5GHz radio band.

We can use Omada EAP products to build a mesh network for indoor and outdoor places together. Here is an example of how to build a Mesh Network in a home scenario via indoor and outdoor Mesh EAP. We are using EAP225-Outdoor, EAP660 HD, and EAP225-Outdoor to build the Mesh network. The EAP225-Outdoor connect with PoE Switch works as the Root AP. The EAP660 HD and EAP225-Outdoor connect with EAP225-Outdoor (Root AP) wirelessly as the Mesh AP.



Configuration Steps*

1. Following the topology to connect the devices. Power on the EAPs and OC200 (you can also use a software controller) via PoE adapter or PoE switch.
2. Use the IP address of OC200 to log in to the management page. Go to Settings-> Site to enable the Mesh function. (It is enabled by default)



Configuration Steps

3. Go to Device page. And you can find the EAP225-Outdoor (Root AP) in the pending list. Click the “adopt” button to adopt the EAP225-Outdoor.

All

Gateway/Switches

APs

Overview

Mesh

Performance

Config

Batch Action

DEVICE NAME	SERIAL NUMBER	MAC ADDRESS	IP ADDRESS	STATUS ▾	MODEL	VERSION <div>↑</div>	UPTIME	ACTION <div>⋮</div>
B0-95-75-A1-B1-A4	--	B0-95-75-A1-B1-A4	192.168.0.112	PENDING	EAP225-Outdoor(EU) v1.0[Cus...	5.0.5	2m 20s	<div></div>

Showing 1-1 of 1 records

<

1

>

20 /page

▾

Go To page:

GO

All

Gateway/Switches

APs

Overview

Mesh

Performance

Config

Batch Action

DEVICE NAME	SERIAL NUMBER	MAC ADDRESS	IP ADDRESS	STATUS ▾	MODEL	VERSION <div>↑</div>	UPTIME	ACTION <div>⋮</div>
B0-95-75-A1-B1-A4	--	B0-95-75-A1-B1-A4	192.168.0.112	ADOPTING	EAP225-Outdoor(EU) v1.0[Cus...	5.0.5	2m 20s	<div></div>

Showing 1-1 of 1 records

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1

>

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▾

Go To page:

GO

All

Gateway/Switches

APs

Overview

Mesh

Performance

Config

Batch Action

DEVICE NAME	SERIAL NUMBER	MAC ADDRESS	IP ADDRESS	STATUS ▾	MODEL	VERSION <div>↑</div>	UPTIME	ACTION <div>⋮</div>
B0-95-75-A1-B1-A4	22032H9000431	B0-95-75-A1-B1-A4	192.168.0.112	CONFIGURING	EAP225-Outdoor(EU) v1.0[Cus...	5.0.5	4m 10s	<div><div></div><div></div></div>

Showing 1-1 of 1 records

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▾

Go To page:

GO

Configuration Steps

4. After adopting the EAP225-Outdoor (Wired, Root AP), the Controller will find other wireless EAPs automatically. Click the “adopt” button to adopt the EAP660 HD (Mesh AP) and EAP225-Outdoor (Mesh AP).

The screenshot displays the TP-Link Omada Controller interface. At the top, there are tabs for 'All', 'Gateway/Switches', 'APs', 'Overview', 'Mesh', 'Performance', and 'Config'. The 'APs' tab is selected, and the 'Overview' sub-tab is active. Below the tabs is a table listing the discovered APs. The table has columns for Device Name, Serial Number, MAC Address, IP Address, Status, Model, Version, Uptime, and Action. Two rows are highlighted with red boxes: the first row is for a PENDING EAP225-Outdoor v1.0 AP, and the second row is for a PENDING EAP660 HD v1.0 AP. Both rows have a checkmark icon in the Action column. Below the table, there are two 'Select Uplink AP' dialog boxes. Each dialog box shows a table with columns for AP Name, Channel, Signal, Hop, and Downlink. The first dialog box shows the EAP225-Outdoor v1.0 AP selected, and the second dialog box shows the EAP660 HD v1.0 AP selected. Both dialog boxes have a 'Confirm' button highlighted with a red box. Red dashed arrows point from the checkmark icons in the APs table to the 'Confirm' buttons in the dialog boxes.

DEVICE NAME	SERIAL NUMBER	MAC ADDRESS	IP ADDRESS	STATUS	MODEL	VERSION	UPTIME	ACTION
60-32-B1-60-2C-CC	--	60-32-B1-60-2C-CC	--	PENDING	EAP225-Outdoor v1.0	--		<input checked="" type="checkbox"/>
B0-95-75-A1-B1-A4	22032H9000431	B0-95-75-A1-B1-A4	192.168.0.112	CONNECTED	EAP225-Outdoor(EU) v1.0[Cus...	5.0.5	6m 17s	<input type="checkbox"/>
B0-A7-B9-CB-F2-5A	--	B0-A7-B9-CB-F2-5A	--	PENDING	EAP660 HD v1.0	--		<input checked="" type="checkbox"/>

Select Uplink AP

AP Name	Channel	Signal	Hop	Downlink
B0-95-75-A1-B1-A...	44	-23 dBm	0	0

Showing 1-1 of 1 records < 1 > Go To page: GO

Confirm Cancel

Select Uplink AP

AP Name	Channel	Signal	Hop	Downlink
B0-95-75-A1-B1-A...	44	-19 dBm	0	0

Showing 1-1 of 1 records < 1 > Go To page: GO

Confirm Cancel

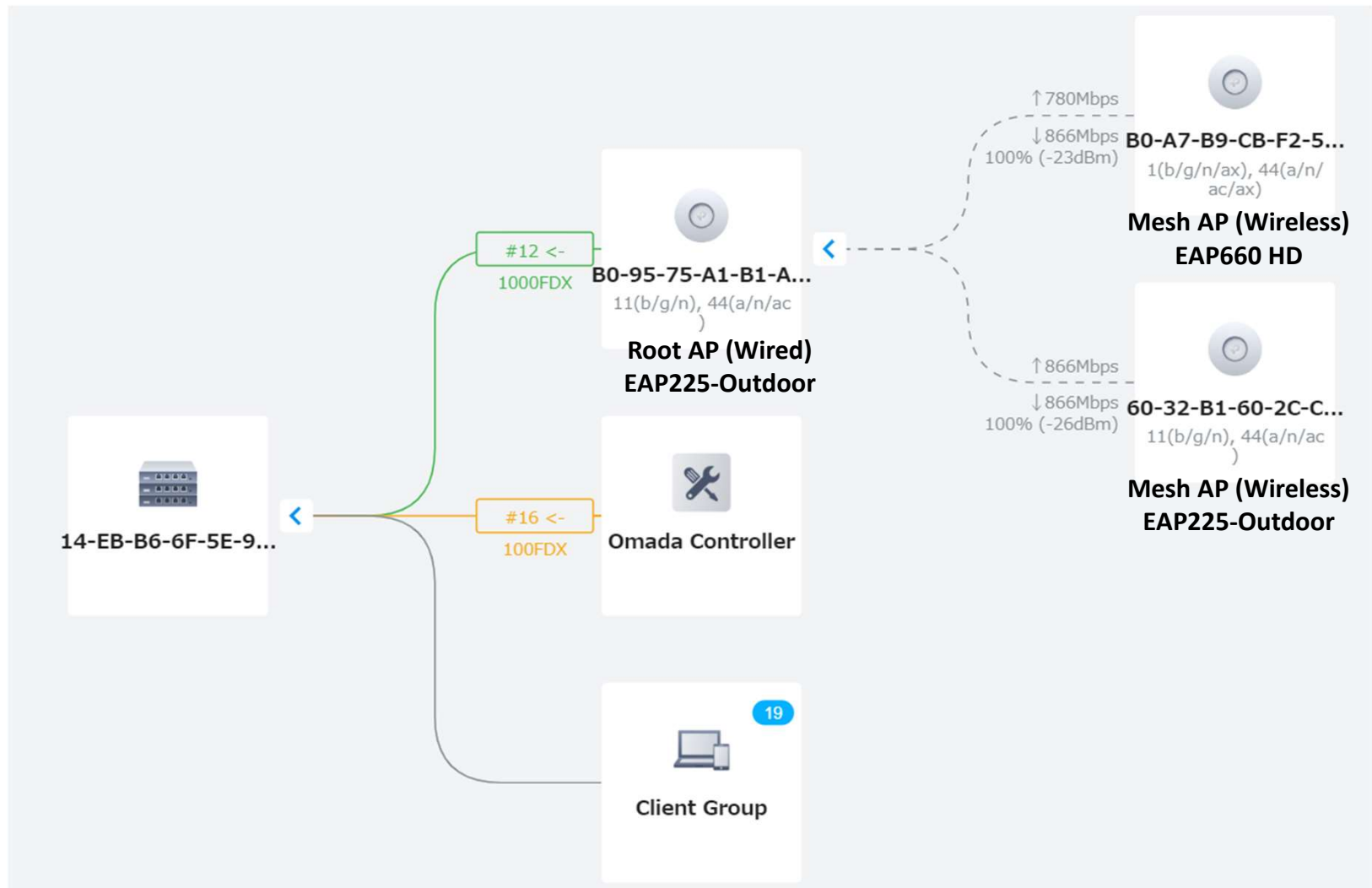
Configuration Steps

5. After 3-5 minutes, the EAP660 HD (Mesh AP) and EAP225-Outdoor (Mesh AP) will get an IP address from DHCP Server and connect with Omada Controller automatically.

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Topology

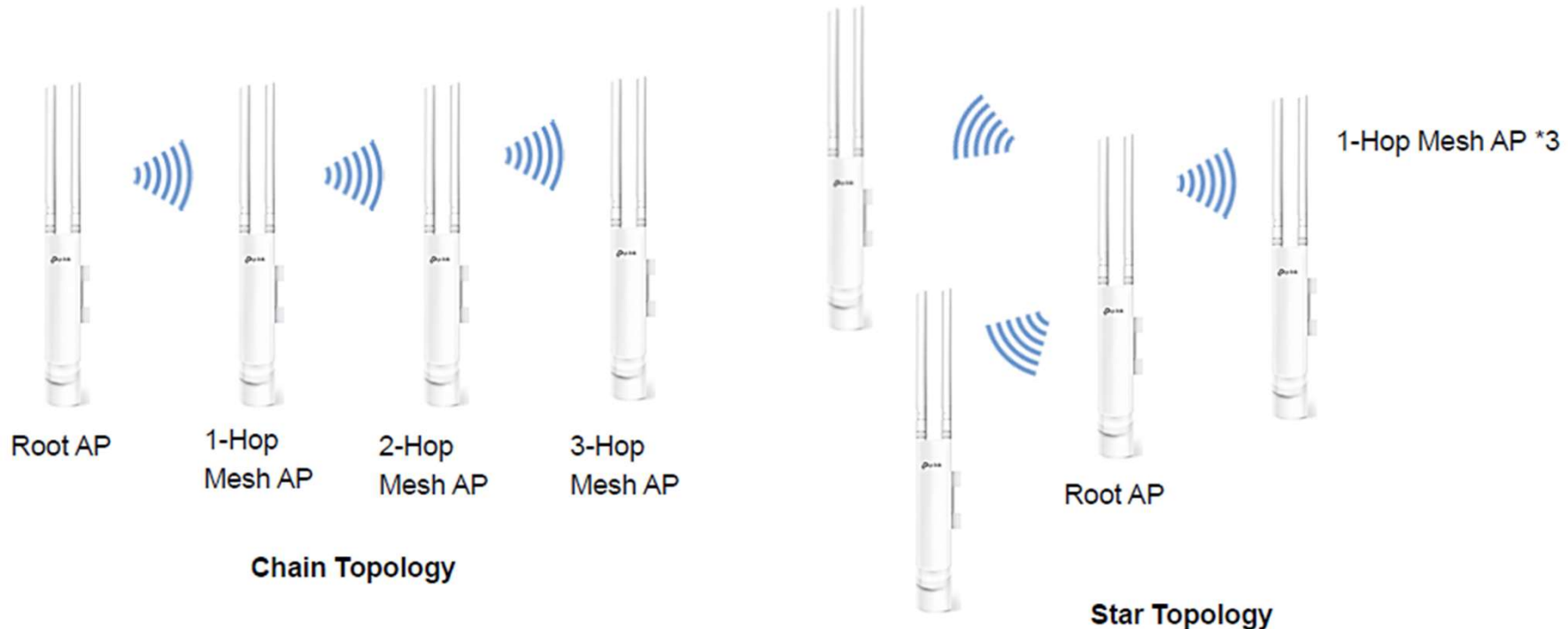




Deployment & Optimization for EAP Mesh Network

Deployment Optimization for Mesh Network

1. Topology Optimization:



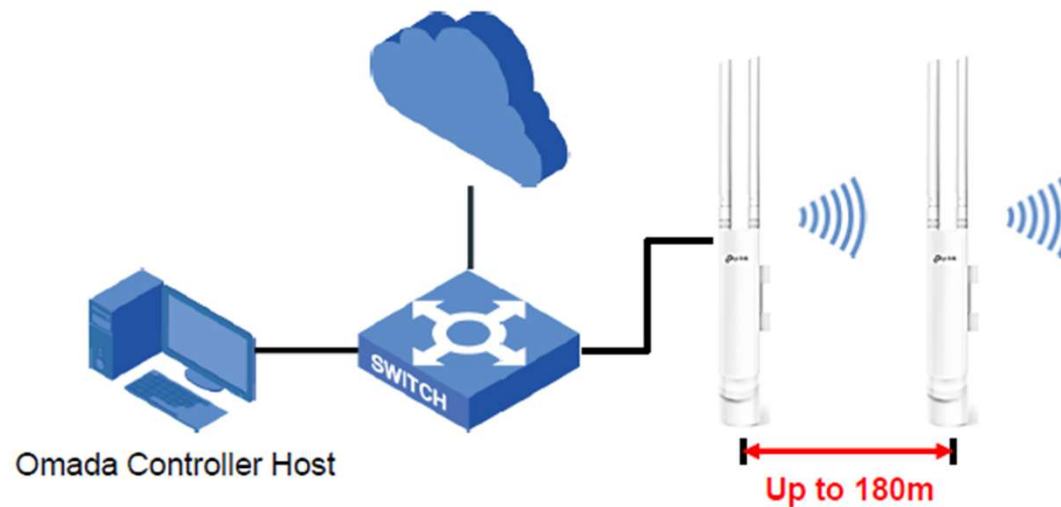
Note:

- Due to the half-duplex characteristics of wireless communication and the signal loss during transmission, the wireless performance will drop inevitably along with the hop increase in Mesh network.
- To reduce the hop number in a Mesh network, use **star topology** instead of **chain topology**. Star topology with less hops usually has a better wireless performance compared with chain topology.

Deployment Optimization for Mesh Network

2. Distance between Mesh AP and Uplink AP:

To make sure the stability of wireless link and provide high-speed Wi-Fi experience when roaming between the EAPs, the recommended distance between Uplink AP and Downlink AP is **up to 180m**.

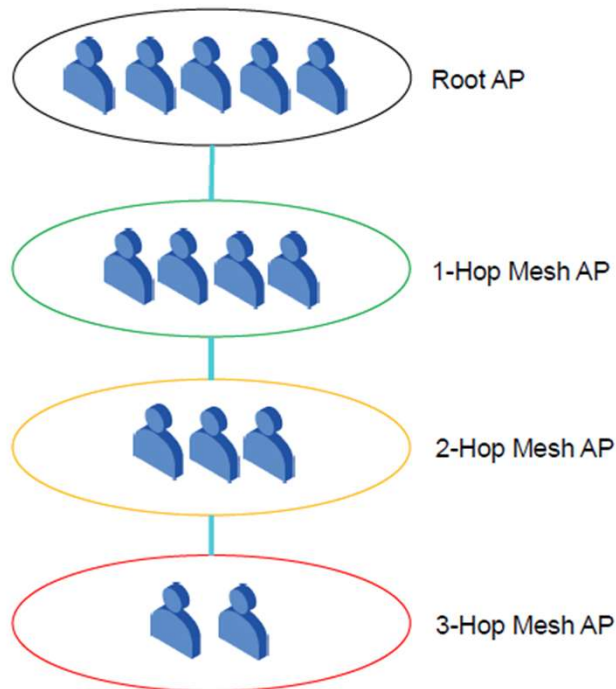


Note: The real supported distance depends on the real environment such as obstacles and wireless interference between Mesh AP and Uplink AP.

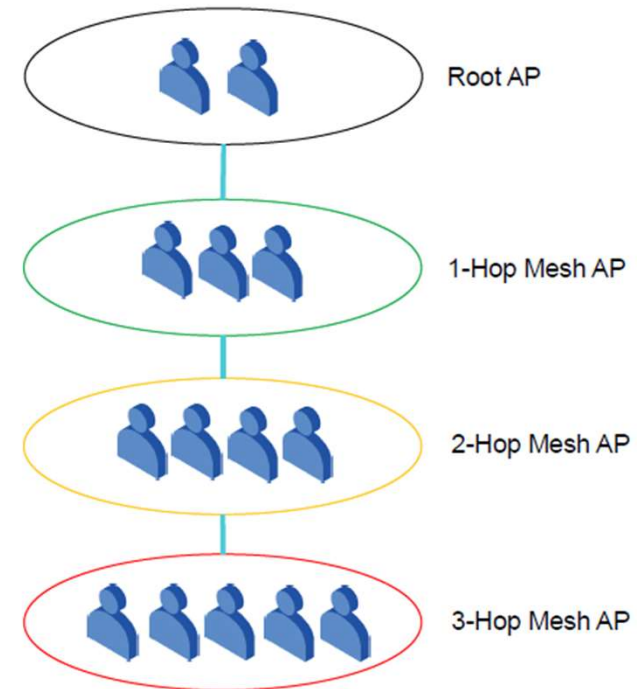
Deployment Optimization for Mesh Network

3. Wireless Client Distribution:

Make sure most of the wireless clients connect to root AP or 1-Hop AP(s). Because the Root AP and 1-Hop Mesh AP usually have better wireless performance than 2 or 3-Hop AP.



Most clients connect to root AP & 1-Hop Mesh AP(Recommended)

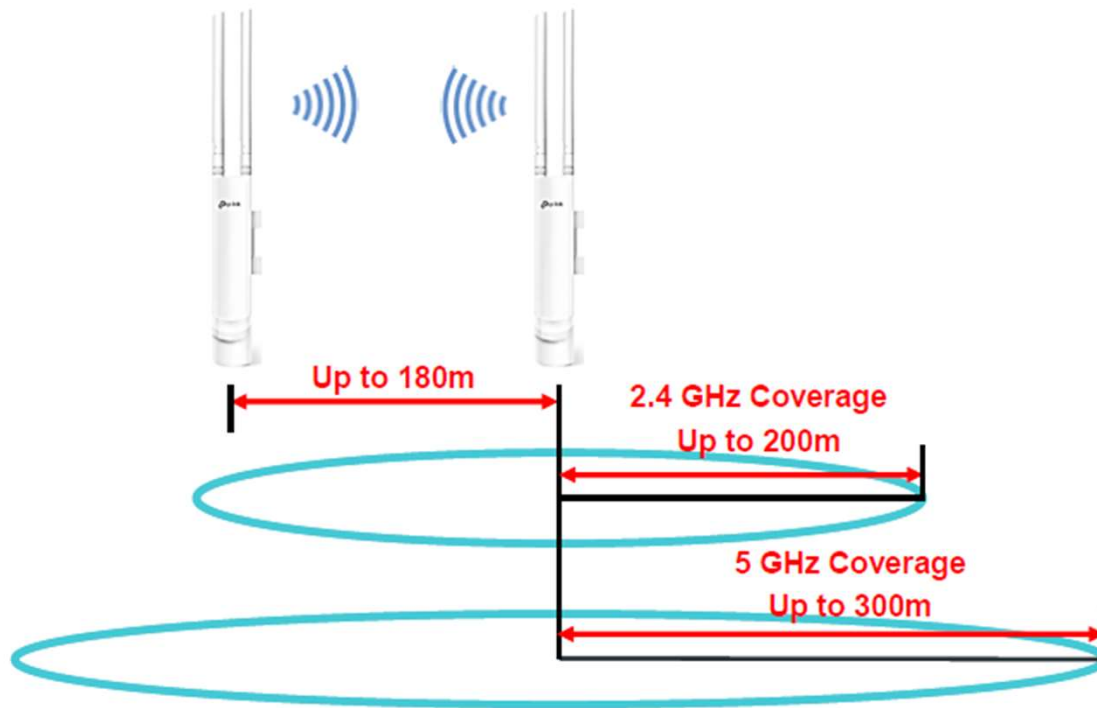


Most clients connect to 2 & 3-Hop Mesh AP (NOT Recommended)

Deployment Optimization for Mesh Network

4. Coverage (For EAP225-Outdoor):

The recommended coverage for EAP225-Outdoor is up to 200m (in 2.4GHz) and 300m (in 5GHz) in open space. The actual coverage depends on the obstacles, deployment height, wireless interference, wireless client's antenna gain & transmitting power and local laws & regulations about transmitting power.



To improve the coverage:

- Make sure there is no obstacle between the AP and wireless clients.
- Use the channel with least interference.
- For dual band clients, use 5GHz instead of 2.4GHz to connect. etc.

Deployment Optimization for Mesh Network

5. Can I configure Mesh in EAP's web interface?

No. Mesh network can only be configured with Omada Controller 2.7.0 or later version.

All the EAPs in Mesh network must be managed by Omada Controller. What's more, Omada Controller can't be shut down when Mesh network is running. If Controller is shut down accidentally, the wireless uplink for Mesh AP will be broken.

The screenshot displays the Omada Controller web interface. On the left is a navigation sidebar with a tree view containing: Site, Wired Networks, Wireless Networks, Network Security, Transmission, VPN (with a red '23' badge), Profiles, Authentication, Services, Controller Settings, Controller, Cloud Access, Maintenance (highlighted in blue), Migration, and Auto Backup. At the bottom of the sidebar is a gear icon. The main content area is divided into two sections. The 'Controller Status' section lists: Controller Name (OC200_B77690), MAC Address (5C-A6-E6-B7-76-90), System Time (Aug 02, 2022 03:54:28 pm), Uptime (2h 54m 53s), Controller Version (5.1.7, highlighted with a red box), Model (OC200 1.0), Firmware Version (1.15.2 Build 20220323 Rel.60717), and Internal Storage (Disk with a progress bar showing 2.25 GB free of 3.00 GB). The 'User Interface' section includes: Use 24-Hour Time (toggle off), Statistic/DashBoard Timezone (Site's), Fixed Menu (toggle off), Show Pending Devices (toggle on with an info icon), Refresh Button (toggle on), Refresh Interval (2 minutes), Enable WebSocket Connection (toggle on), and Controller Update Notification (toggle off with an info icon).



Deployment Optimization for Mesh Network

6. What's the recommend capacity/coverage of EAP Mesh network?

For EAP225-Outdoor, the recommend maximum coverage in open space is 200m (656 feet) in 2.4GHz and 300m (984 feet) in 5GHz; The recommend maximum capacity for one Mesh network is 50~60.

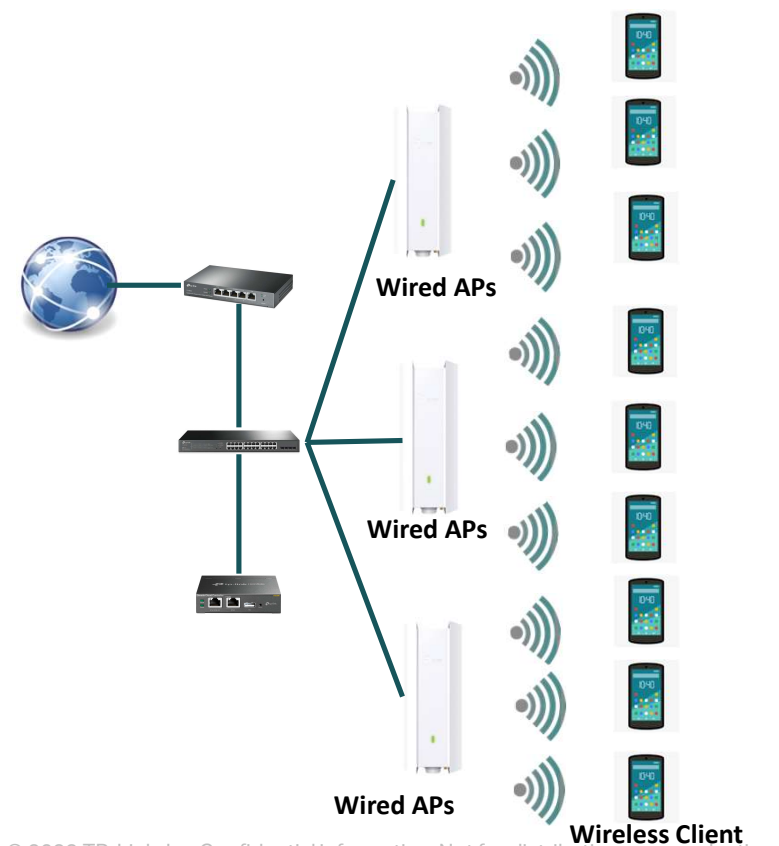
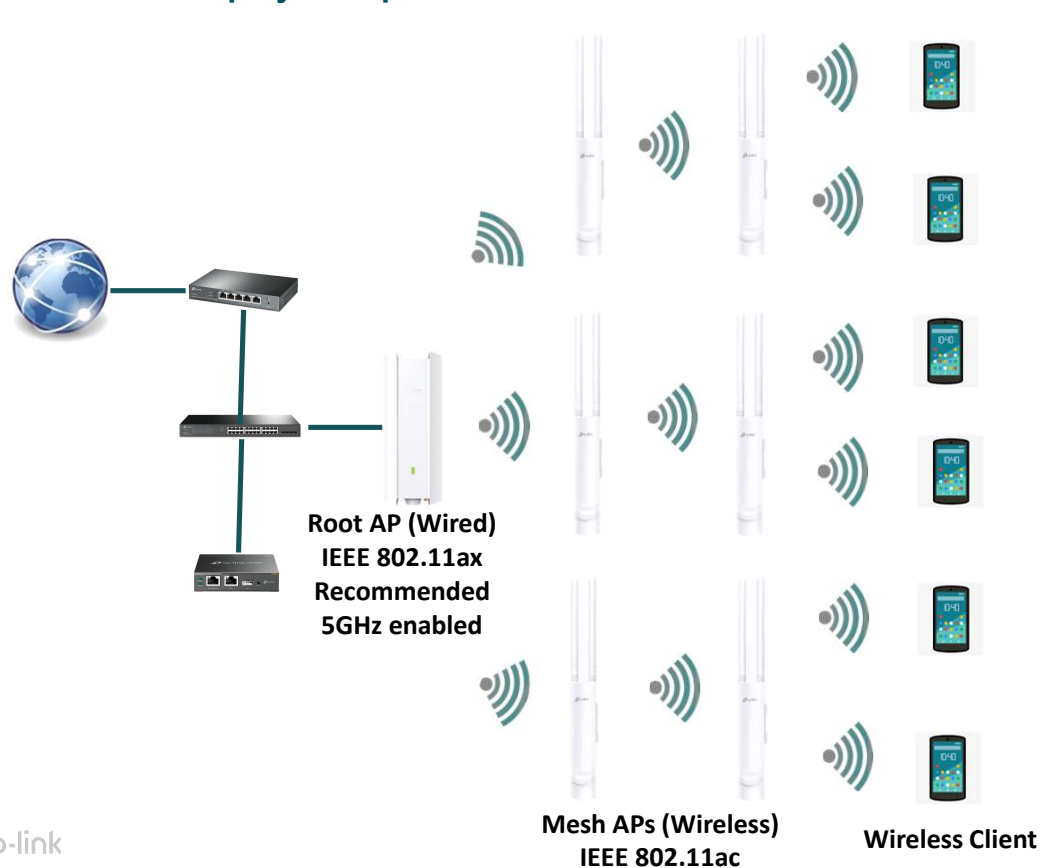
When talking about capacity/coverage, here are some information you may need to know:

- A) First of all, the recommend capacity/coverage is related to the model of EAP.
- B) The capacity/coverage will always depend on wireless interference, deployment plan, application of the wireless clients and so on, so the capacity/coverage here is just an average value for reference.
- C) The Mesh network is mainly designed to simplify EAP deployment and extend the coverage, but not aim to expand the wireless client capacity. So the capacity here is for the whole Mesh network including Root AP and all Mesh APs together rather than for one single Mesh AP. So if you need to provide Wi-Fi coverage for high user density environment, please use wired deployment plan.

Note: This coverage is a little longer than the recommend maximum distance between Mesh AP and Uplink AP, the reason is that the Mesh AP need to be closer to get better signal strength for the wireless clients connected to it.

Deployment Optimization for Mesh Network

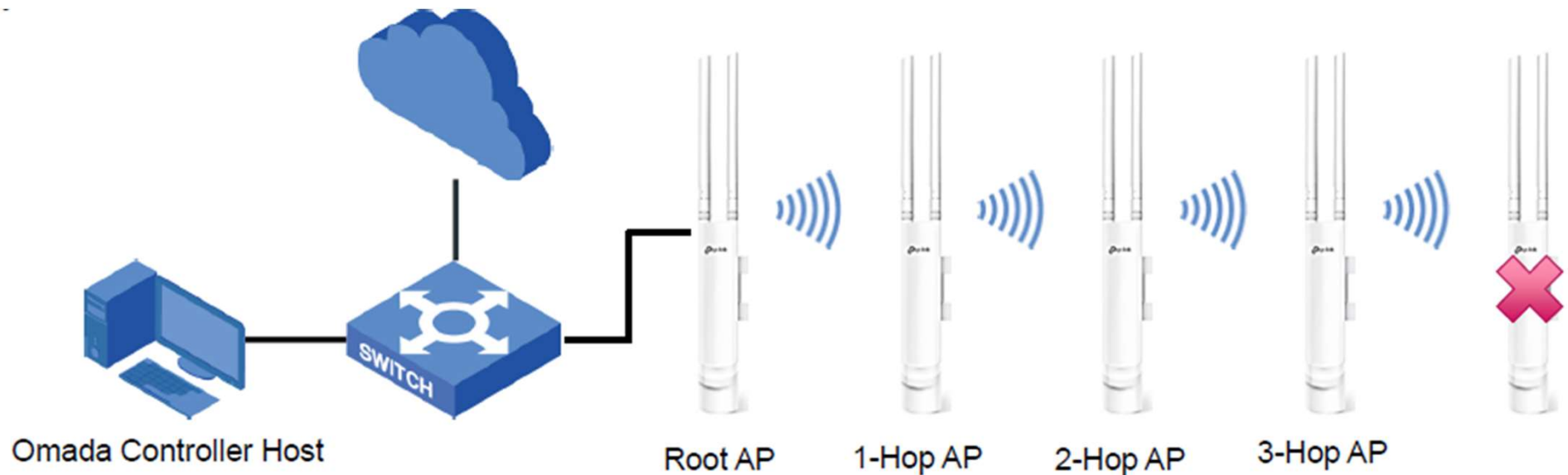
C) The Mesh network is mainly designed to simplify EAP deployment and extend the coverage, but not aim to expand the wireless client capacity. So the capacity here is for the whole Mesh network including Root AP and all Mesh APs together rather than for one single Mesh AP. So if you need to provide Wi-Fi coverage for high user density environment, please use wired deployment plan.



Deployment Optimization for Mesh Network

7. What's supported maximum hop number and Downlink AP number?

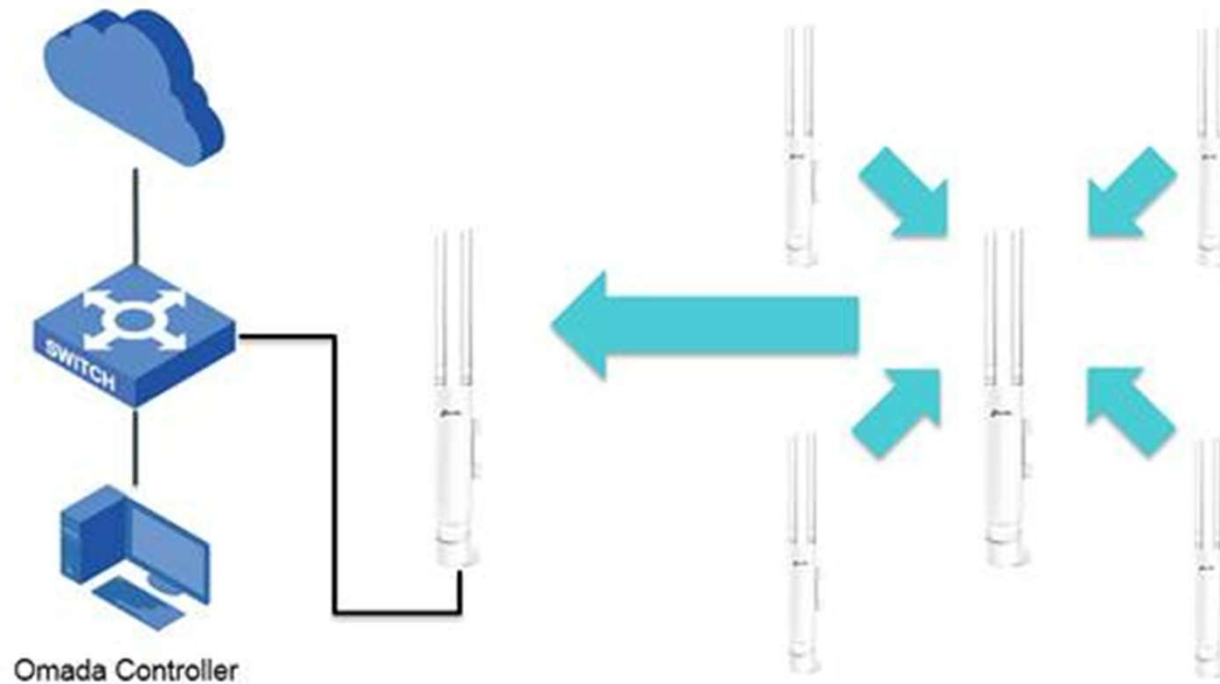
The supported maximum hop number is up to 3 hops. For each Uplink AP, it can have up to 4 Downlink APs connected to it directly.



Deployment Optimization for Mesh Network

8. Maximum Downlink AP number is 4.

It means for one single Uplink AP, it can have at most 4 Downlink APs connected to it.



Deployment Optimization for Mesh Network

9. What's the recommended RSSI when choosing Uplink AP?

Uplink AP with RSSI higher than -60 dBm can provide better uplink performance. The AP with RSSI lower than -80 dBm is not recommended. The RSSI will be displayed when you choose an Uplink AP.

DEVICE NAME	SERIAL NUMBER	MAC ADDRESS	IP ADDRESS	STATUS ▼	MODEL	VERSION ▲	UPTIME	ACTION ⋮
B0-95-75-A1-B1-A4	--	B0-95-75-A1-B1-A4	--	PENDING	EAP225-Outdoor v1.0	--		

Select Uplink AP

AP Name	Channel	Signal	Hop	Downlink
40-3F-8C-76-94-6... Recommend	40	-35 dBm	1	0 <input type="checkbox"/>
B0-A7-B9-CB-F2-5A	40	-18 dBm	0	2 <input type="checkbox"/>
60-32-B1-60-2C-CC	40	-27 dBm	1	0 <input type="checkbox"/>

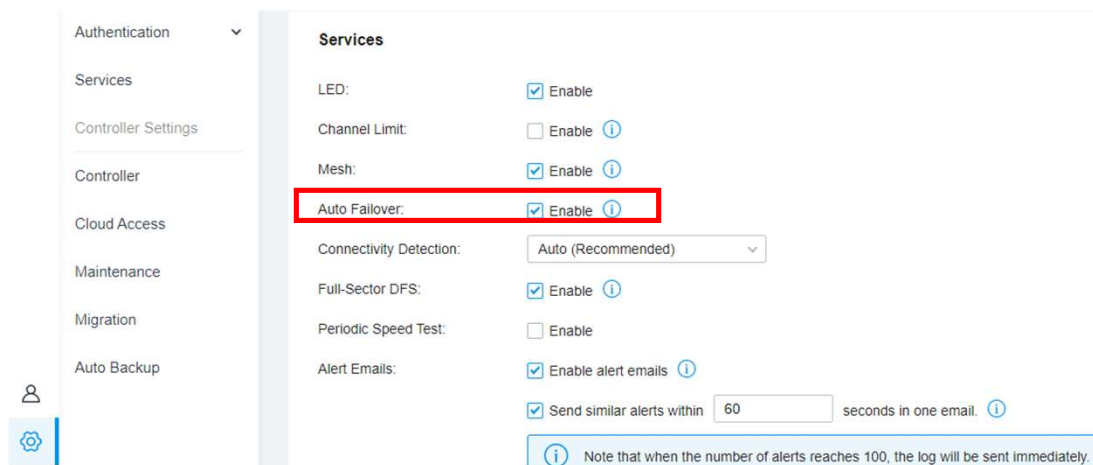
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[Confirm](#) [Cancel](#)

Deployment Optimization for Mesh Network

10. What is “Auto Failover” feature and how to use it?

- When some Mesh APs are failed in Mesh network, with Auto Failover enabled, the Mesh network will recover automatically (controller will select a new wireless uplink for the AP automatically).
- To use this feature, you just need to enable it in Omada Controller.



Note: When multiple Mesh APs failed and get back online at the same time, the Auto Failover may not be able to build the best topology. Because each Mesh AP's uptime may be different and they will connect to an uplink AP once back online, while they will not turn to other uplink Aps automatically during this process even there might have a better choice. So the topology might not be the best one compared with build up this topology manually (disable auto failover).

Deployment Optimization for Mesh Network

Build up this topology manually (disable auto failover).

The main table displays the following data:

DEVICE NAME	MAC ADDRESS	IP ADDRESS	STATUS	MODEL	VERSION	UPLINK	DOWNLINK	UPTIME	ACTION
60-32-B1-60-2C-CC	60-32-B1-60-2C-CC	192.168.0.121	ISOLATED	EAP225-Outdoor(EU) v1.0[Custom]	5.0.5	40-3F-8C-76-94-6A	1	0 days 00:10:55	[Link]
B0-95-75-A1-B1-A4	B0-95-75-A1-B1-A4	192.168.0.122	ISOLATED	EAP225-Outdoor(EU) v1.0[Custom]	5.0.5	60-32-B1-60-2C-CC	0	0 days 02:00:16	[Link]

Below the main table are three detail windows for each device:

- Device 1: 60-32-B1-60-2C-CC**
 - Uplinks table:

AP Name	Channel	Signal	ACTION
40-3F-8C-76-94-6A	40	-11 dBm	Offline
B0-A7-B9-CB-F2-5A	40	-32 dBm	Link
- Device 2: B0-95-75-A1-B1-A4**
 - Uplinks table:

AP Name	Channel	Signal	ACTION
60-32-B1-60-2C-CC	40	-30 dBm	Offline
B0-A7-B9-CB-F2-5A	40	-18 dBm	Link
- Device 3: B0-95-75-A1-B1-A4**
 - Uplinks table:

AP Name	Channel	Signal	ACTION
B0-A7-B9-CB-F2-5A	40	-18 dBm	Retry
60-32-B1-60-2C-CC	40	-29 dBm	Link

Deployment Optimization for Mesh Network

Build up this topology manually (disable auto failover).

The screenshot displays the TP-Link Omada web interface for managing a mesh network. At the top, a table lists the network devices. Below this, four panels show detailed configuration for a specific device (60-32-B1-60-2C-CC).

DEVICE NAME	MAC ADDRESS	IP ADDRESS	STATUS	MODEL	VERSION	UPLINK	DOWNLINK	ACTION
60-32-B1-60-2C-CC	60-32-B1-60-2C-CC	192.168.0.111	CONNECTED	EAP225-Outdoor(EU) v1.0[Cus...	5.0.5	B0-A7-B9-CB-F2-5A	1	[Location Icon] [Refresh Icon]

The four panels below show the configuration for the selected device:

- Panel 1:** Shows radio settings for 2.4GHz (54% Utilized, High) and 5GHz (15% Utilized, Good). The 'Mesh' tab is highlighted.
- Panel 2:** Shows radio settings for 2.4GHz (60% Utilized, High) and 5GHz (17% Utilized, Good). The 'Mesh' tab is highlighted.
- Panel 3:** Shows radio settings for 2.4GHz (44% Utilized, High) and 5GHz (24% Utilized, Acceptable). The 'Mesh' tab is highlighted.
- Panel 4:** Shows radio settings for 2.4GHz (44% Utilized, High) and 5GHz (24% Utilized, Acceptable). The 'Mesh' tab is highlighted.

The 'Uplinks' section in each panel shows a table of uplink devices:

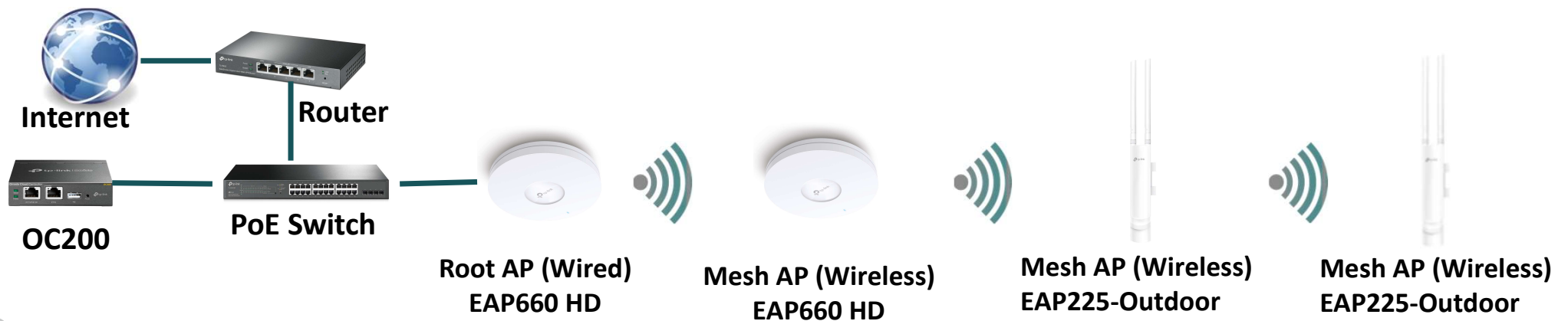
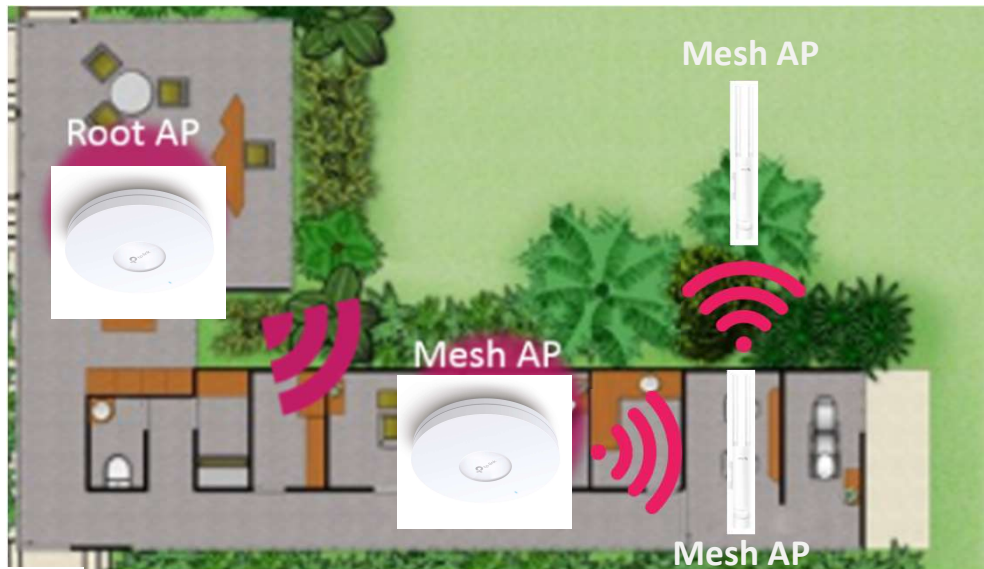
AP Name	Channel	ACTION
B0-A7-B9-CB-F2-...	44	-
B0-95-75-A1-B1-...	44	Link
40-3F-8C-76-94-6...	44	Link

Red arrows indicate the manual configuration of the mesh topology, specifically linking the selected device to the uplink devices listed in the 'Uplinks' section.



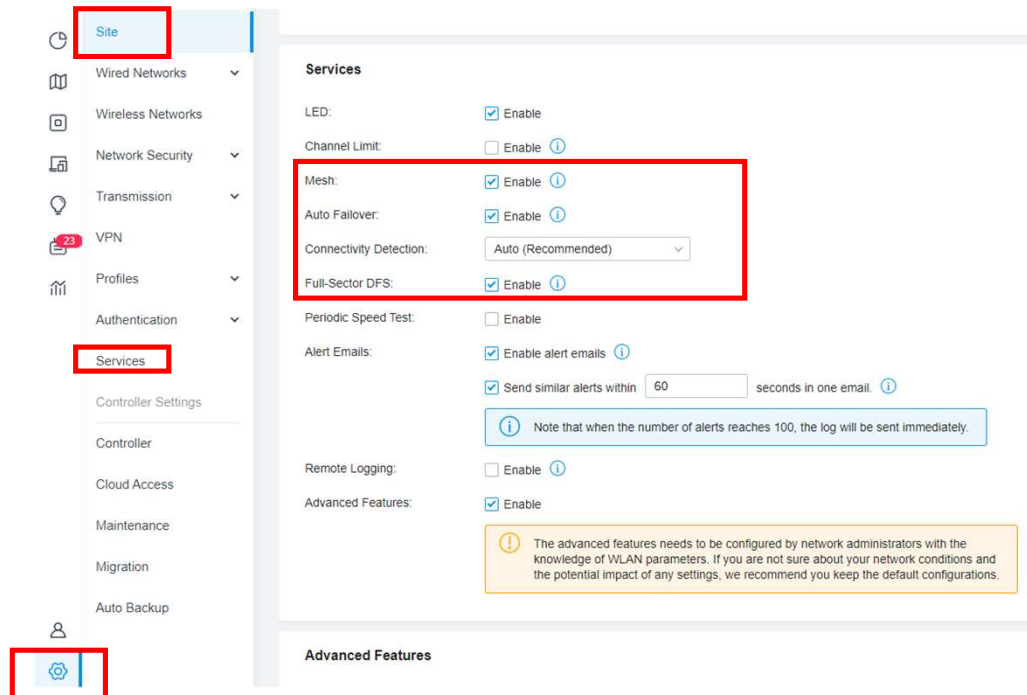
Chain Topology Three Hops Mesh Aps

Chain Topology Three Hops Mesh Aps Configuration




Configuration Steps*


1. Following the topology to connect the devices. Power on the EAPs and OC200 (you can also use a software controller) via PoE adapter or PoE switch.
2. Use the IP address of OC200 to log in to the management page. Go to Settings-> Site to enable the Mesh function. (It enables by default)



Configuration Steps













- Go to Device page. And you can find the EAP660 HD (Root AP) in the pending list. Click the “adopt” button to adopt the EAP660 HD.

DEVICE NAME	SERIAL NUMBER	MAC ADDRESS	IP ADDRESS	STATUS ▾	MODEL	VERSION ↑	UPTIME	ACTION ⋮
B0-A7-B9-CB-F2-5A	--	B0-A7-B9-CB-F2-5A	192.168.0.128	PENDING	EAP660 HD(EU) v1.0[Custom]	1.1.0	33m 9s	

DEVICE NAME	SERIAL NUMBER	MAC ADDRESS	IP ADDRESS	STATUS ▾	MODEL	VERSION ↑	UPTIME	ACTION ⋮
B0-A7-B9-CB-F2-5A	--	B0-A7-B9-CB-F2-5A	192.168.0.128	ADOPTING	EAP660 HD(EU) v1.0[Custom]	1.1.0	33m 9s	

Configuration Steps

4. After adopting the EAP660 HD (Wired, Root AP), the Controller will find other wireless EAPs automatically. Click the “adopt” button to adopt the first hop EAP660 HD (Mesh AP).

	DEVICE NAME	SERIAL NUMBER	MAC ADDRESS	IP ADDRESS	STATUS ▼	MODEL	VERSION ↑	UPTIME	ACTION ⋮
	40-3F-8C-76-94-6A	--	40-3F-8C-76-94-6A	--	PENDING 	EAP660 HD v1.0	--	--	
	60-32-B1-60-2C-CC	--	60-32-B1-60-2C-CC	--	PENDING 	EAP225-Outdoor v1.0	--	--	
	B0-95-75-A1-B1-A4	--	B0-95-75-A1-B1-A4	--	PENDING 	EAP225-Outdoor v1.0	--	--	
	B0-A7-B9-CB-F2-5A	22191F1000304	B0-A7-B9-CB-F2-5A	192.168.0.128	CONNECTED	EAP660 HD(EU) v1.0[Custom]	1.1.0	1h 7m 7s	 

Select Uplink AP

AP Name	Channel	Signal	Hop	Downlink
B0-A7-B9-CB-F2-5... Recommend	44	-36 dBm	0	0

Showing 1-1 of 1 records

< 1 >

Go To page:




















GO

Confirm

Cancel

Configuration Steps

- After 3-5 minutes, the first hop EAP660 HD (Mesh AP) will get an IP address from DHCP Server and connect with Omada Controller automatically.

Search or select tag									
All Gateway/Switches APs Overview Mesh Performance Config									
Batch Action									
DEVICE NAME	SERIAL NUMBER	MAC ADDRESS	IP ADDRESS	STATUS	MODEL	VERSION	UPTIME	ACTION	
 40-3F-8C-76-94-6A	--	40-3F-8C-76-94-6A	--	ADOPTING	EAP660 HD v1.0	--			
 60-32-B1-60-2C-CC	--	60-32-B1-60-2C-CC	--	PENDING	EAP225-Outdoor v1.0	--			
 B0-95-75-A1-B1-A4	--	B0-95-75-A1-B1-A4	--	PENDING	EAP225-Outdoor v1.0	--			
 B0-A7-B9-CB-F2-5A	22191F1000304	B0-A7-B9-CB-F2-5A	192.168.0.128	CONNECTED	EAP660 HD(EU) v1.0[Custom]	1.1.0	1h 11m 10s	 	
 40-3F-8C-76-94-6A	220A1R9000838	40-3F-8C-76-94-6A	192.168.0.110	CONNECTED	EAP660 HD(EU) v1.0[Custom]	1.1.0	38m 47s	 	
 60-32-B1-60-2C-CC	--	60-32-B1-60-2C-CC	--	PENDING	EAP225-Outdoor v1.0	--			
 B0-95-75-A1-B1-A4	--	B0-95-75-A1-B1-A4	--	PENDING	EAP225-Outdoor v1.0	--			
 B0-A7-B9-CB-F2-5A	22191F1000304	B0-A7-B9-CB-F2-5A	192.168.0.128	CONNECTED	EAP660 HD(EU) v1.0[Custom]	1.1.0	1h 11m 10s	 	

Configuration Steps














6. Click the “adopt” button to adopt the second hop EAP225-Outdoor (Mesh AP).















The screenshot displays the TP-Link Omada web interface. At the top, a table lists network devices. The second row, representing the 'second hop', is highlighted with a red box. This row shows a device with MAC address 60-32-B1-60-2C-CC, status 'PENDING', and model 'EAP225-Outdoor v1.0'. To the right of this row, a checkmark icon is also highlighted with a red box. A red dashed arrow points from this checkmark to a 'Select Uplink AP' dialog box. The dialog box contains a table of available uplink APs. The first row is 'B0-A7-B9-CB-F2-5A' (status 'Recommend'). The second row, '40-3F-8C-76-94-6A', is highlighted with a red box, and its checkbox is checked (also highlighted with a red box). Below the table, the 'Confirm' button is highlighted with a red box.

AP Name	Channel	Signal	Hop	Downlink
B0-A7-B9-CB-F2-5A	44	-37 dBm	0	1
40-3F-8C-76-94-6A	44	-16 dBm	1	0

Configuration Steps

7. After 3-5 minutes, the second hop EAP225-Outdoor (Mesh AP) will get an IP address from DHCP Server and connect with Omada Controller automatically.

DEVICE NAME	SERIAL NUMBER	MAC ADDRESS	IP ADDRESS	STATUS ▾	MODEL	VERSION ↑	UPTIME	ACTION ⋮
 40-3F-8C-76-94-6A	220A1R9000838	40-3F-8C-76-94-6A	192.168.0.110	CONNECTED 	EAP660 HD(EU) v1.0[Custom]	1.1.0	44m 11s	 
 60-32-B1-60-2C-CC	--	60-32-B1-60-2C-CC	--	ADOPTING 	EAP225-Outdoor v1.0	--		
 B0-95-75-A1-B1-A4	--	B0-95-75-A1-B1-A4	--	PENDING 	EAP225-Outdoor v1.0	--		
 B0-A7-B9-CB-F2-5A	22191F1000304	B0-A7-B9-CB-F2-5A	192.168.0.128	CONNECTED	EAP660 HD(EU) v1.0[Custom]	1.1.0	1h 17m 13s	 

DEVICE NAME	SERIAL NUMBER	MAC ADDRESS	IP ADDRESS	STATUS ▾	MODEL	VERSION ↑	UPTIME	ACTION ⋮
 40-3F-8C-76-94-6A	220A1R9000838	40-3F-8C-76-94-6A	192.168.0.110	CONNECTED 	EAP660 HD(EU) v1.0[Custom]	1.1.0	44m 11s	 
 60-32-B1-60-2C-CC	22080N5004612	60-32-B1-60-2C-CC	192.168.0.111	CONNECTED 	EAP225-Outdoor(EU) v1.0[Cus...	5.0.5	48m 27s	 
 B0-95-75-A1-B1-A4	--	B0-95-75-A1-B1-A4	--	PENDING 	EAP225-Outdoor v1.0	--		
 B0-A7-B9-CB-F2-5A	22191F1000304	B0-A7-B9-CB-F2-5A	192.168.0.128	CONNECTED	EAP660 HD(EU) v1.0[Custom]	1.1.0	1h 17m 13s	 

Configuration Steps

8. Click the “adopt” button to adopt the third hop EAP225-Outdoor (Mesh AP).

The screenshot displays the TP-Link Omada web interface. A table lists the network devices. The third device, with name 60-32-B1-60-2C-CC and status PENDING, is highlighted with a red box. A red dashed line connects this device to a 'Select Uplink AP' dialog box. In this dialog, a table lists available uplink APs. The AP named 60-32-B1-60-2C-CC is selected, indicated by a checked checkbox in the 'Downlink' column, which is also highlighted with a red box. Below the table, the 'Confirm' button is highlighted with a red box. A red dashed line also connects the 'Confirm' button to the 'adopt' button (a checkmark icon) in the 'ACTION' column of the device table.

DEVICE NAME	SERIAL NUMBER	MAC ADDRESS	IP ADDRESS	STATUS	MODEL	VERSION	UPTIME	ACTION
40-3F-8C-76-94-6A	220A1R9000838	40-3F-8C-76-94-6A	192.168.0.110	CONNECTED	EAP660 HD(EU) v1.0[Custom]	1.1.0	48m 14s	
60-32-B1-60-2C-CC	22080N5004612	60-32-B1-60-2C-CC	192.168.0.111	CONNECTED	EAP225-Outdoor(EU) v1.0[Cus...	5.0.5	49m 39s	
B0-95-75-A1-B1-A4	--	B0-95-75-A1-B1-A4	--	PENDING	EAP225-Outdoor v1.0	--		
B0-A7-B9-CB-F2-5A	22191F1000304	B0-A7-B9-CB-F2-5A	192.168.0.128	CONNECTED	EAP660 HD(EU) v1.0[Custom]	1.1.0	1h 21m 16s	

Select Uplink AP















AP Name	Channel	Signal	Hop	Downlink
B0-A7-B9-CB-F2-5...	44	-16 dBm	0	1 <input type="checkbox"/>
60-32-B1-60-2C-CC	44	-28 dBm	2	0 <input checked="" type="checkbox"/>
40-3F-8C-76-94-6A	44	-29 dBm	1	1 <input type="checkbox"/>
















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Confirm Cancel
















Configuration Steps

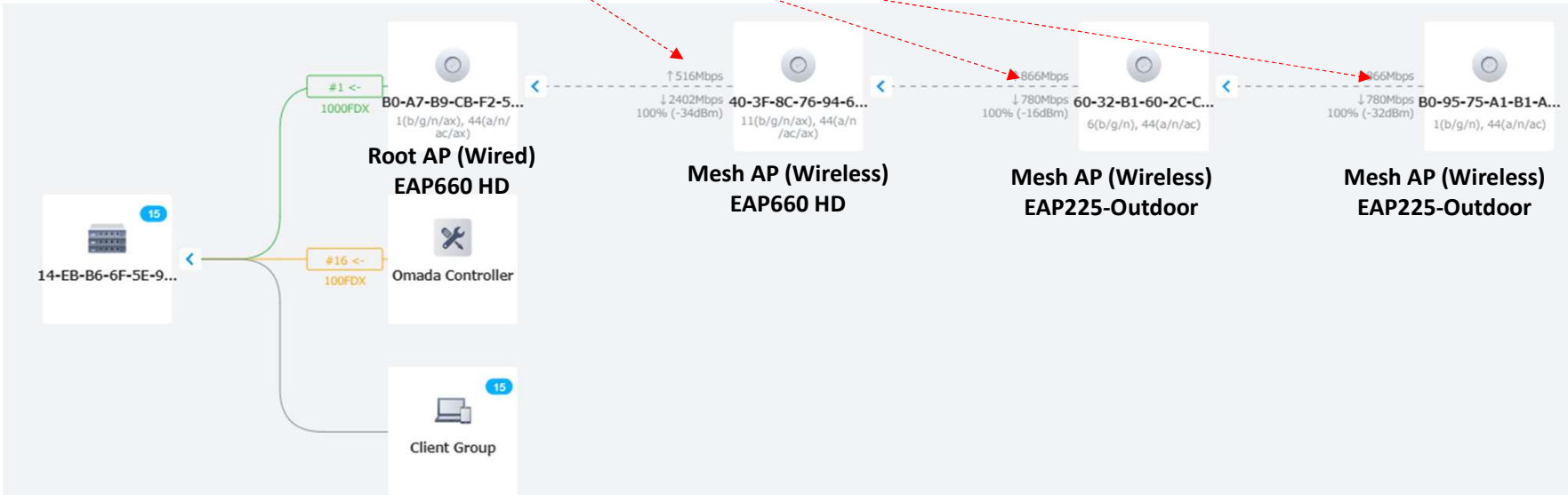
9. After 3-5 minutes, the third hop EAP225-Outdoor (Mesh AP) will get an IP address from DHCP Server and connect with Omada Controller automatically.

	DEVICE NAME	SERIAL NUMBER	MAC ADDRESS	IP ADDRESS	STATUS ▾	MODEL	VERSION ↑	UPTIME	ACTION ⋮
	40-3F-8C-76-94-6A	220A1R9000838	40-3F-8C-76-94-6A	192.168.0.110	CONNECTED 	EAP660 HD(EU) v1.0[Custom]	1.1.0	50m 15s	 
	60-32-B1-60-2C-CC	22080N5004612	60-32-B1-60-2C-CC	192.168.0.111	CONNECTED 	EAP225-Outdoor(EU) v1.0[Cus...	5.0.5	50m 50s	 
	B0-95-75-A1-B1-A4	--	B0-95-75-A1-B1-A4	--	ADOPTING 	EAP225-Outdoor v1.0	--		
	B0-A7-B9-CB-F2-5A	22191F1000304	B0-A7-B9-CB-F2-5A	192.168.0.128	CONNECTED	EAP660 HD(EU) v1.0[Custom]	1.1.0	1h 23m 17s	 

	DEVICE NAME	SERIAL NUMBER	MAC ADDRESS	IP ADDRESS	STATUS ▾	MODEL	VERSION ↑	UPTIME	ACTION ⋮
	40-3F-8C-76-94-6A	220A1R9000838	40-3F-8C-76-94-6A	192.168.0.110	CONNECTED 	EAP660 HD(EU) v1.0[Custom]	1.1.0	55m 48s	 
	60-32-B1-60-2C-CC	22080N5004612	60-32-B1-60-2C-CC	192.168.0.111	CONNECTED 	EAP225-Outdoor(EU) v1.0[Cus...	5.0.5	56m 42s	 
	B0-95-75-A1-B1-A4	--	B0-95-75-A1-B1-A4	192.168.0.112	CONNECTED 	EAP225-Outdoor(EU) v1.0[Cus...	5.0.5	57m 33s	 
	B0-A7-B9-CB-F2-5A	22191F1000304	B0-A7-B9-CB-F2-5A	192.168.0.128	CONNECTED	EAP660 HD(EU) v1.0[Custom]	1.1.0	1h 29m 23s	 

Configuration Steps

<div> <div>All</div> <div>Gateway/Switches</div> <div>APs</div> </div> <div>Batch Action</div>								
DEVICE NAME	MAC ADDRESS	IP ADDRESS	STATUS	MODEL	VERSION	UPLINK	DOWNLINK	ACTION
 40-3F-8C-76-94-6A	40-3F-8C-76-94-6A	192.168.0.110	CONNECTED 	EAP660 HD(EU) v1.0[Custom]	1.1.0	B0-A7-B9-CB-F2-5A	1	 
 60-32-B1-60-2C-CC	60-32-B1-60-2C-CC	192.168.0.111	CONNECTED 	EAP225-Outdoor(EU) v1.0[Cus...	5.0.5	40-3F-8C-76-94-6A	1	 
 B0-95-75-A1-B1-A4	B0-95-75-A1-B1-A4	192.168.0.112	CONNECTED 	EAP225-Outdoor(EU) v1.0[Cus...	5.0.5	60-32-B1-60-2C-CC	0	 
 B0-A7-B9-CB-F2-5A	B0-A7-B9-CB-F2-5A	192.168.0.128	CONNECTED	EAP660 HD(EU) v1.0[Custom]	1.1.0	--	1	 



The diagram illustrates a mesh network topology. A Root AP (Wired) EAP660 HD (MAC B0-A7-B9-CB-F2-5A) is connected to an Omada Controller (MAC 14-EB-B6-6F-5E-9A) and a Client Group. The Root AP is connected to three Mesh APs (Wireless): EAP660 HD (MAC 40-3F-8C-76-94-6A), EAP225-Outdoor (MAC 60-32-B1-60-2C-CC), and EAP225-Outdoor (MAC B0-95-75-A1-B1-A4). The diagram shows data rates and signal strength for each connection.