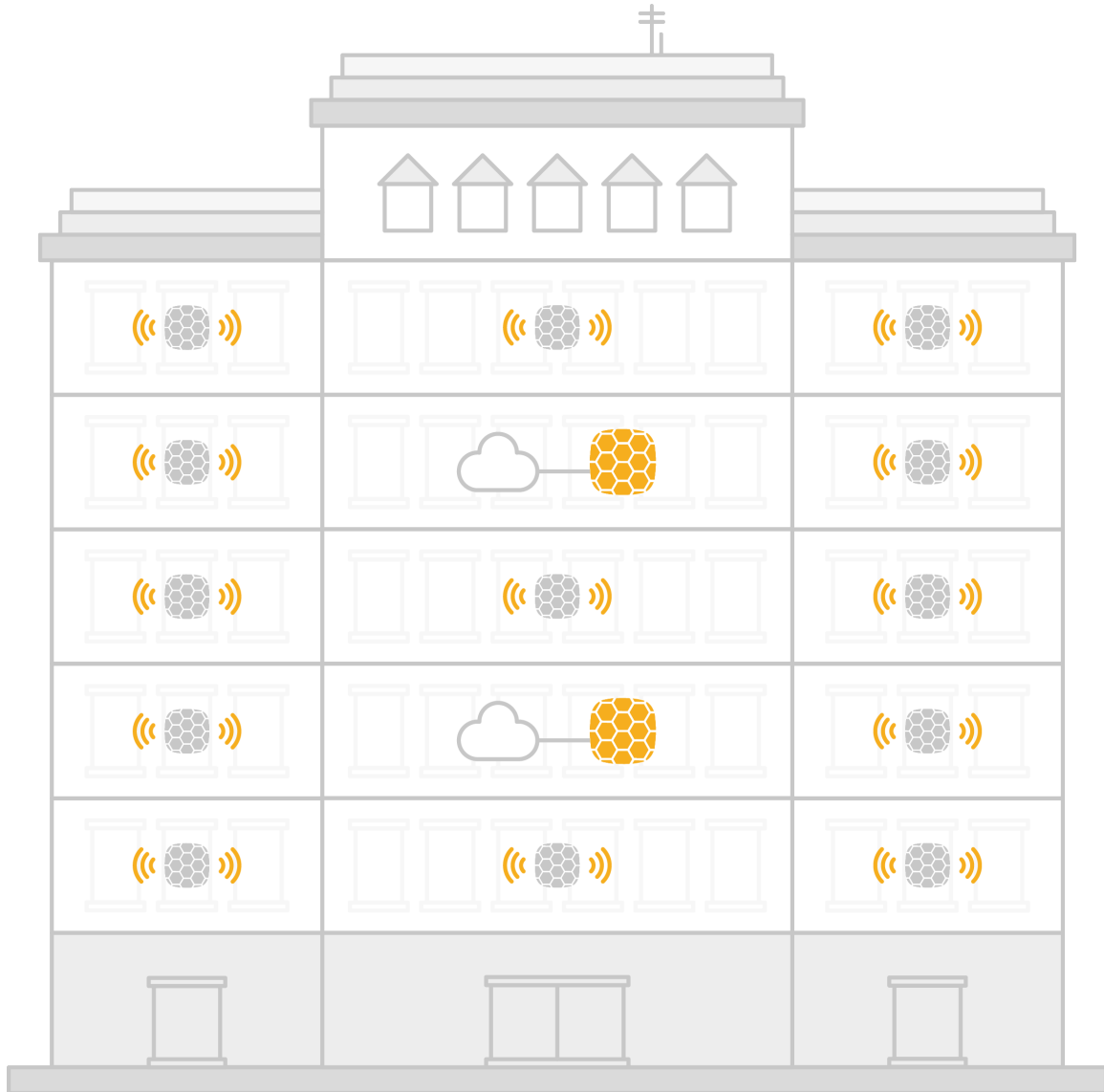# Easy Mesh Scenario

Easy Mesh Scenario Description

Terminology:

- Mesh AP – an AP that has a wired connection to the network and which provides wireless access to end users as well to Node APs.
- Node AP – an AP that is connected wirelessly to another node AP or to a Mesh AP and which provides wireless access to end users and can serve as a backhaul connection to other Node APs.
- Backhaul – a wireless connection between APs.
- Access – a wireless connection to end users.

This feature is supported by the External NFT controller only. Any NFT AP (including LigoDLB with NFT firmware) can be used in this type of network. A single-radio AP creates a backhaul and an access at the same time. A dual-radio AP uses 5GHz for access and backhaul or just for backhaul (configurable), while a 2.4GHz radio is for access only.
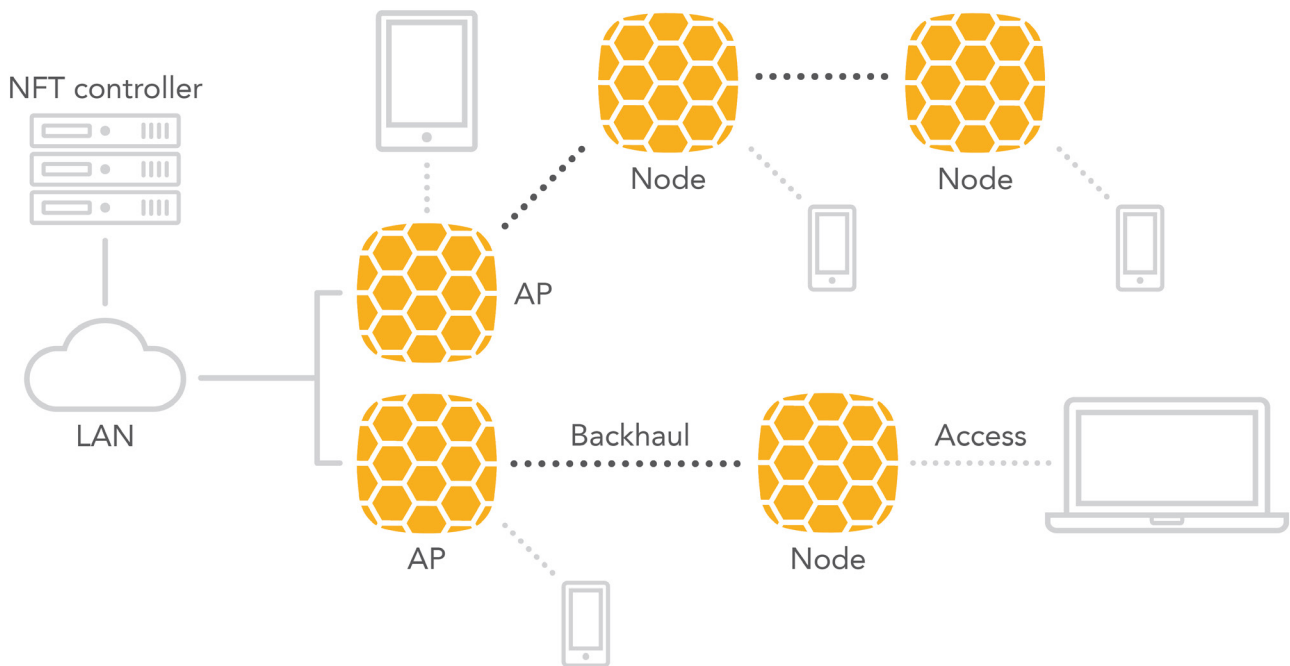
The main idea is to extend Wi-Fi coverage without using wires and to do that in an automated way without manual configuration.

The network allows to have several mesh APs. It is recommended to connect no more than 3 mesh nodes into a single chain.

The NFT controller has a new network type called Easy Mesh. When the device is assigned to that network, it starts to operate as Node AP: if the AP has a wired connection, it will create two VAPs for access and backhaul; however, if the device has no wired connection, it will create an additional virtual station interface and will look for an access point with the "Backhaul" SSID. Every device should be activated this way from the controller to work under a Easy Mesh scenario. The NFT controller creates two open SSIDs by default, but the name and security settings can be changed. UAM is not allowed.

Info	Wireless	Networking	Settings	Services

Band	SSID	Broadcast SSID	Security	Type
2G / 5G	Backhaul	OFF	Open	Backhaul
2G / 5G	Infinity	ON	Open	Access

The main steps for creating a Easy Mesh network:

1. Create a new Easy Mesh network:

⋙ Enter network information

Network name*

Name is required.

Network type: Easy mesh ⬍

2. Change the SSID name (if necessary) and turn on encryption (highly recommend).

3. Register all devices onto the Easy Mesh network. Wait several minutes until all of the devices assume the AP type.

	⬍ ▲ Device	⬍ Location	⬍ Product	⬍ IPv4	⬍ MAC	⬍ Uptime	⬍ Type
●	Ap_1	location	LigoDLB 2-14	192.168.13.124	00:19:3B:XX:XX:XX	21 hours 33 min.	AP
●	Ap_2	location	LigoDLB 2	192.168.13.138	00:19:3B:XX:XX:XX	1 day 19 hours	AP
●	Ap_3	location	LigoDLB 2	192.168.13.137	00:19:3B:XX:XX:XX	21 hours 35 min.	AP
●	Ap_4	location	LigoDLB 2	192.168.13.135	00:19:3B:XX:XX:XX	10 min. 45 sec.	AP

4. Make sure at least one AP has a LAN connection. The rest of the APs can be placed in locations that will not have a LAN (Ethernet) connection. After several minutes, the APs without a LAN connection will automatically start operating as Node APs and change its "Type" in the controller.

	⬍ Device	⬍ Location	⬍ Product	⬍ IPv4	⬍ MAC	⬍ Uptime	⬍ Type
●	Ap_1	location	LigoDLB 2-14	192.168.13.124	00:19:3B:XX:XX:XX	22 hours 7 min.	Node
●	Ap_4	location	LigoDLB 2	192.168.13.135	00:19:3B:XX:XX:XX	47 min. 3 sec.	Node
●	Ap_3	location	LigoDLB 2	192.168.13.137	00:19:3B:XX:XX:XX	2 min. 47 sec.	Node
●	Ap_2	location	LigoDLB 2	192.168.13.138	00:19:3B:XX:XX:XX	1 day 20 hours	AP

5. The network is now ready for use.

Moreover, users can see how Node APs are connected to the Mesh AP in the "Wireless clients" tab:

▲ Client MAC	⬍ IPv4	⬍ Device	⬍ Radio	⬍ Signal	⬍ Session time	⬍ Rx	⬍ Tx
12:19:3B:XX:XX:XX	192.168.13.124	● Ap_2	2.4 GHz	-56	19 min. 16 sec.	296.96 KB	301.19 KB
12:19:3B:XX:XX:XX	192.168.13.135	● Ap_2	2.4 GHz	-30	19 min. 19 sec.	55.64 KB	42.77 KB
12:19:3B:XX:XX:XX	192.168.13.137	● Ap_4	2.4 GHz	-35	3 min. 13 sec.	43.75 KB	33.2 KB

In the above example, two Node APs are connected on AP_2, while one Node AP is connected on AP_4.

Easy Mesh Scenario