

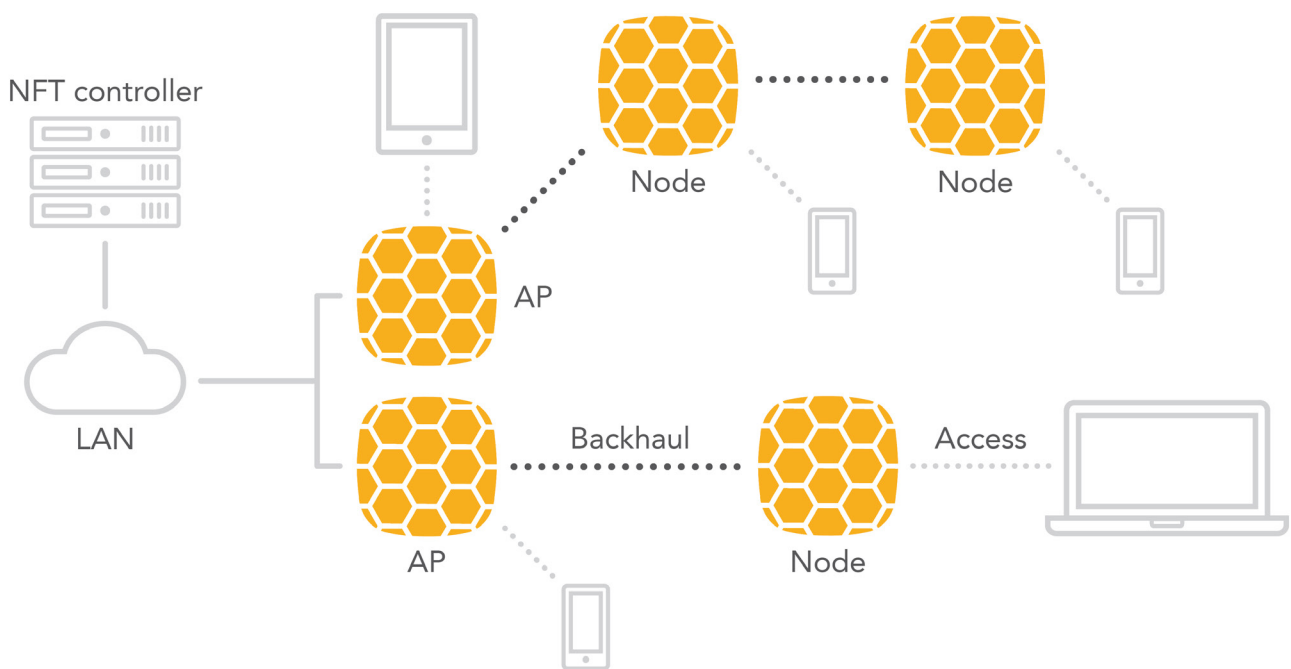
# Simple Mesh Scenario

# Simple 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 any other 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 both backhaul and access, 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 Simple Mesh. When the device is assigned to that network, it starts to act as an auto-repeater: 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 Simple 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
<b>Band</b>	<b>SSID</b>	<b>Broadcast SSID</b>	<b>Security</b>	<b>Type</b>
2G / 5G	Backhaul	OFF	Open	Backhaul
2G / 5G	Infinity	ON	Open	Access

## The main steps for creating a Simple Mesh network:

1. Create a new Simple Mesh network:

 **Enter network information**

My mesh

**Network type:** Simple mesh

2. Change the SSID name (if necessary) and turn on encryption (highly recommend).
3. Register all devices onto the Simple 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:03:4D:CF	21 hours 33 min.	AP
Ap_2	location	LigoDLB 2	192.168.13.138	00:19:3B:06:A0:72	1 day 19 hours	AP
Ap_3	location	LigoDLB 2	192.168.13.137	00:19:3B:06:A0:68	21 hours 35 min.	AP
Ap_4	location	LigoDLB 2	192.168.13.135	00:19:3B:06:A0:20	10 min. 45 sec.	AP

4. Leave at least one AP with 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 become repeaters and will appear as Nodes in the controller.

Device	Location	Product	IPv4	MAC	Uptime	Type
Ap_1	location	LigoDLB 2-14	192.168.13.124	00:19:3B:03:4D:CF	22 hours 7 min.	Node
Ap_4	location	LigoDLB 2	192.168.13.135	00:19:3B:06:A0:20	47 min. 3 sec.	Node
Ap_3	location	LigoDLB 2	192.168.13.137	00:19:3B:06:A0:68	2 min. 47 sec.	Node
Ap_2	location	LigoDLB 2	192.168.13.138	00:19:3B:06:A0:72	1 day 20 hours	AP

5. The network should now be 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:03:4D:CE	192.168.13.124	Ap_2	2.4 GHz	-56	19 min. 16 sec.	296.96 KB	301.19 KB
12:19:3B:06:A0:1F	192.168.13.135	Ap_2	2.4 GHz	-30	19 min. 19 sec.	55.64 KB	42.77 KB
12:19:3B:06:A0:67	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.

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