Manually Changing Channels in a Mesh Network

In a Cisco Meraki wireless deployment, multiple APs (with or without connections to wired Ethernet) communicate over their wireless interfaces to form a mesh. Each AP develops a list of neighboring devices and exchanges information which is used to calculate best possible routes to the gateway/Internet. When a Meraki AP is connected to a wired Ethernet connection and obtains an IP address (either through static IP configuration or DHCP), the AP takes the identity of a "mesh gateway". If an AP is not connected to a wired Ethernet connection or does not obtain an IP address over that connection, the AP operates as a "mesh repeater", which relays wireless traffic through the mesh network, either to a gateway or through other repeaters.

Note: For a look into the difference between a Cisco Meraki MR Gateway and a repeater, please refer to our documentation on Gateways vs. Repeaters.

APs mesh automatically on the channels with the least interference possible using channel selection algorithms. It is not recommended to manually change channels in a mesh network unless absolutely necessary. However, there are special cases which merit the reason to manually select the specific channels that a collection of access points mesh in.

Manually Changing Mesh Channels

Allowing Cisco Meraki APs to automatically converge using our proprietary routing protocols and mesh network software mitigates the need for additional configurations, RF Planning and cumbersome wireless site surveys. It is not recommended to manually change channels in a mesh network unless absolutely necessary. In the event that it is deemed necessary to manually select a channel for the mesh network to service clients from, it is recommended that the process illustrated below is used to do so.


2. Locate the desired "Mesh Gateway and Repeaters" on this list.

3. Take note of the names of the Mesh Gateway and the Repeaters that it is connected too.


5. Search by AP name or scroll down to locate the desired AP.

Important Note: It is advised to manually change all repeaters (if any) before manually changing the channel of the mesh gateway. This is to speed up the wireless network convergence by eliminating the time a repeater is scanning for a gateway.

FOR 2.4GHz-----------------------------------------------------------------------------------------------------------------------------------
1. Under the Channel column in the table below, click the channel number or AUTO to bring out the channel setting pop-up. Select “Change channel setting”.

2. Select which specific channel and save in the upper right-hand corner of the pop-up. Please note it may take several minutes for the mesh network to re-converge.

FOR 5GHz

1. Navigate to the “Band” drop down and choose 5.
2. Under the Channel column in the table below, click the channel number or AUTO to bring out the channel setting pop-up. Select “Change channel setting”.

3. Select which specific channel and save in the upper right-hand corner of the pop-up. Please note it may take several minutes for the mesh network to re-converge.
Note: When selecting a new channel for the mesh network, only the channel for the "Mesh Gateway" needs to be changed. The mesh repeaters will automatically mesh again with the gateway without needing to be manually put on the intended channel themselves, but it is advised to manually change all repeaters (if any) before manually changing the channel of the mesh gateway. This is to speed up the wireless network convergence by eliminating the time a repeater is scanning for a gateway.

Additional Resources

Using a Cisco Meraki Access Point as a Mesh Repeater
Advantages of Cisco Meraki Mesh Networks
Cisco Meraki Mesh Gateway vs. Mesh Repeater
Extending the LAN with a Wireless Mesh Link