



Set Up Wireless Network

This chapter provides instructions on how to set up Cisco Spaces to work with various wireless networks and how to configure these networks using different methods.

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Setting Up Cisco Spaces to Work with Various Wireless Networks

You can set up Cisco Spaces with wireless networks that are based on the following options:

- Cisco AireOS wireless controllers
- Cisco Catalyst 9800 wireless controllers
- Cisco Meraki

Step 1 Log in to [Cisco Spaces](#).

Step 2 In the Cisco Spaces dashboard, click the **Menu** icon () and choose **Setup > Wireless Networks**.

Step 3 In the **Connect your wireless Network** window, click **Add New**.

The **Connect your wireless Network** window is displayed with the options **Cisco AireOS/Catalyst** and **Cisco Meraki**.

- For **Cisco AireOS/Catalyst**, configurations for the following methods are available:
 - **Via Spaces Connector**: To connect Cisco Spaces to Cisco Wireless Controller using Cisco Spaces: Connector.
 - **Connect WLC directly**: To connect Cisco Spaces to Cisco Wireless Controller using a Cisco Wireless Controller Direct Connect.
 - **Connect via CMX Tethering**: To connect Cisco Spaces Cisco Wireless Controller using Cisco CMX.
- For **Cisco Meraki**, configurations for the following methods are available:
 - **Connect via Meraki Login**: To connect Cisco Spaces to Cisco Meraki using a Cisco Meraki account.

- **Connect via API Key:** To connect Cisco Spaces to Cisco Meraki using a Cisco Meraki API Key.

You can login to the **Meraki** dashboard, choose **Account Name > My Profile > API Access** section and click **Generate** to generate an API Key. Enter this key in the **Connect via API key** field in the Cisco Spaces dashboard to add your network to Cisco Spaces. For more information, see [Set Up Meraki API Key Method, on page 6](#).

Note For new Cisco Spaces accounts, click **Get Started** option.

Step 4 Click **Select** to choose your preferred method through which you want to connect to Cisco Spaces.

The prerequisites for connecting to the wireless network using the selected method is displayed.

Step 5 Click **Customize Setup**.

The following message is displayed: `Successfully saved the configuration.`

Step 6 A bar corresponding to the wireless network configuration method selected is displayed in the **Connect your wireless network** window. For example, if **Via Spaces Connector** is selected, a bar with the label **Connect via Spaces Connector** displays.

Step 7 To view the instructions, and configure the wireless network, click the drop-down button at the far right of the bar.

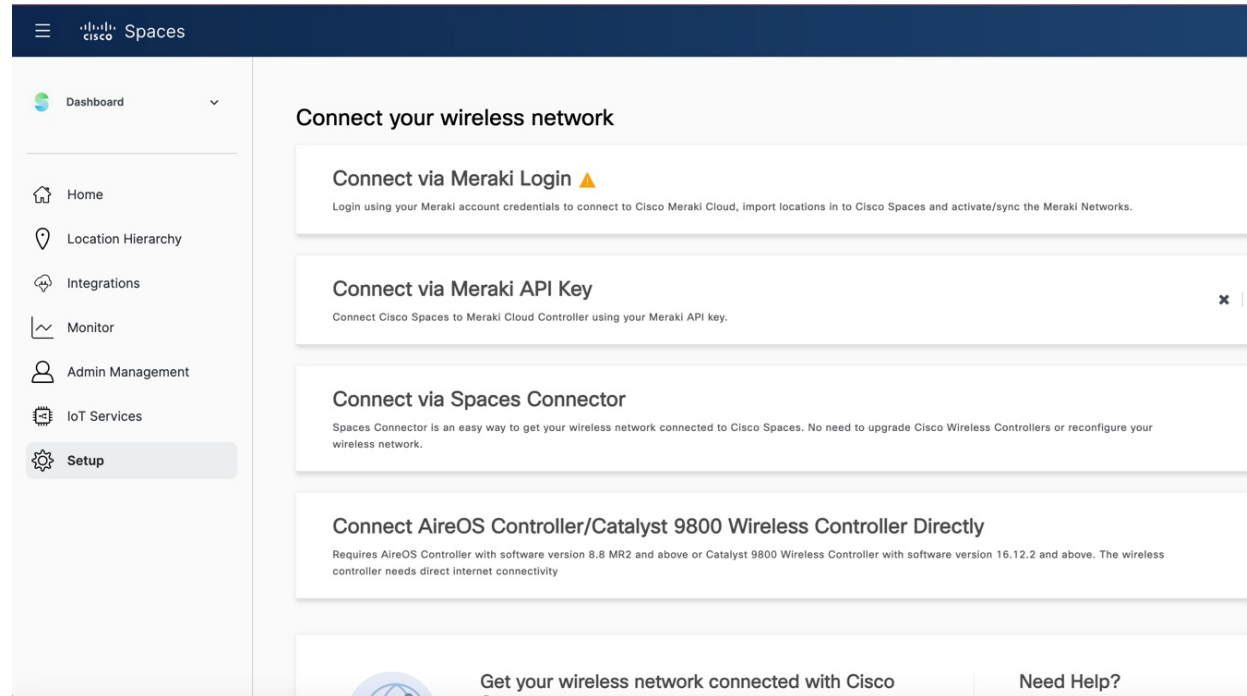
The instructions and the features to connect to preferred wireless network using the various methods are displayed.

Step 8 Follow the on-screen instructions [Wireless Network Bars](#).

Wireless Network Bars

To connect your wireless network with Cisco Spaces, use any available options in the **Setup > Wireless Networks > Connect your wireless network** window.

Figure 1: Wireless Network



The following tabs are displayed for Cisco Meraki based on your selection:

- **Connect via Meraki Login**: Use this option to connect to Cisco Meraki cloud using the Cisco Meraki account credentials and import locations in to Cisco Spaces and synchronize Cisco Meraki networks. Follow the on-screen instructions to connect Cisco Spaces to Cisco Meraki network.

Perform the following:

1. **Connect**: Connect Cisco Meraki with Cisco Spaces using your Meraki login credentials.
2. **Configure Meraki scanning API**: Cisco Meraki scanning APIs are automatically configured after importing the networks into the location hierarchy.
3. **Import Meraki Networks into Location Hierarchy**: Use the **Import Networks** option to import a Cisco Meraki organization and the related child locations to the location hierarchy.

For more information, see [Adding a Cisco Meraki Organization](#).

- **Connect via Meraki API Key**: Use this option to connect Cisco Spaces to Cisco Meraki Cloud Controller using your Cisco Meraki API key. Follow the on-screen instructions to import a Cisco Meraki organization and the related child locations to the location hierarchy using the **Import Networks** option.



Note We recommend that you use the **Connect via API Key** to connect your Meraki with Cisco Spaces.

Perform the following:

1. **Connect your Meraki**: Connect Cisco Meraki with Cisco Spaces using the API key.

2. **Configure Meraki scanning API:** Cisco Meraki scanning APIs are automatically configured after importing the networks into the location hierarchy.



Note To configure manually, use the **Post URL** with URL validator and **Secret Key** and validate manually in the Cisco Meraki dashboard to establish a connection with Cisco Spaces.

3. **Import Meraki Networks into Location Hierarchy:** Click **Import Networks** to import the Cisco Meraki networks.

For more information, see [Importing Cisco Meraki Locations Using the API Keys](#).



Note The user count that is getting synchronized with Cisco Meraki is displayed under the **Connect your Meraki** options (**Connect via Meraki Login** and **Connect via Meraki API Key**).

The following bars are displayed for Cisco AireOS based on the connection method selected:

- **Connect via Spaces Connector:** Use this option to connect Cisco Spaces to Cisco Wireless Controller using a Cisco Spaces: Connector.



Note You need not upgrade your Cisco Wireless Controllers or reconfigure your wireless network when you use **Connect via Spaces Connector** option.

Perform the following:

1. **Install Spaces Connector OVA:** Download and install Cisco Spaces: Connector OVA as a virtual machine.
2. **Configure Spaces Connector:** Click **Create Connector** to create a new connector. You need a token to configure Cisco Spaces: Connector. Connect to `https://<your connector IP>/` from a browser to configure the token. You can optionally configure Cisco Spaces: Connector to connect via HTTPS proxy.

Click **View Connectors** to view the available connectors.
3. **Add Controllers:** Click **Add Controllers** to add Cisco Wireless Controllers. Click **View Controllers** to view the available controllers.
4. **Import Maps:** Click **Import/Sync Maps** to import or synchronize the maps. You must upload a Cisco Prime Infrastructure or Catalyst Center (version 1.3.1 and above) map to work with Cisco Spaces: Detect and Locate, Asset Tracker, and IoT Services.
5. **Setup location hierarchy:** Click **Add Locations** to add the imported maps to Location Hierarchy.

**Note**

- You can view the location hierarchy using the **View Location Hierarchy** option.
- For the OpenRoaming app, you can configure the hotspots through the **Add OpenRoaming Hotspot** option. You can also view the configurations for the OpenRoaming app for various controllers separately using the **OpenRoaming Controller Configuration** option.

For more information, see [Cisco Spaces: Connector Configuration Guide](#).

- **Connect AireOS Controller/Catalyst 9800 Wireless Controller Directly:** Use this option to connect Cisco Spaces to Cisco AireOS Wireless Controller or Cisco Catalyst 9800 Series Wireless Controller.

**Note**

To connect to this wireless network, you need either an AireOS Controller with software version 8.8 MR2 or later, or a Catalyst 9800 Wireless Controller with software version 16.12.2 or later. The wireless controller needs direct internet connectivity.

Perform the following:

1. **Install Root Certificate:** You can install the root certificate from the controller GUI
2. **Configure Token in AireOS Controller:** You can view token and controllers using the View Token and View Controllers options
3. **Import Maps:** You can now manage maps from the **Setup** window under Connect WLC/Catalyst 9800 Directly and Connect Via Spaces Connector
 - **Import/Sync Maps:** Upload a Cisco Prime Infrastructure or the Catalyst Center map in order to work with Detect & Locate, Asset Tracker, and IoT Services seamlessly.
 - **Map Upload History:** View the list of uploaded maps. You can view the filename, source type, status and other related information.
 - **Manage Maps:** Navigate to the **Map Service** application to manage maps.
4. **Setup location hierarchy**
 - **Connect via CMX Tethering:** Displays step-by-step instructions to configure location updates for a Cisco CMX node using CMX tethering with token. You can create the token using the **Create New Token** option in Step 2, and configure it in Cisco CMX.

The other options available on the **Connect your wireless network** window are:


Table 1: Connect your wireless network Options

View Configuration Steps	Redirects to the documentation for the particular wireless network.
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System Requirements	Provides the system requirements for Cisco Spaces.
Frequently asked questions	Provides the link to the frequently asked questions for Cisco Spaces.
Cisco AireOS/Catalyst	Displays instructions to import a Cisco CMX Node (CMX On-Prem) to the Location Hierarchy window.
Cisco Meraki	Displays instructions to import a Meraki Organization to the Location Hierarchy window.

Set Up Meraki API Key Method

Use the **Cisco Meraki** option to integrate Cisco Spaces with Meraki. Use the Meraki account credentials to connect to Cisco Meraki cloud, import locations into Cisco Spaces and activate or synchronize the Meraki networks.

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- Step 1** In the Cisco Spaces dashboard, click the **Menu** icon () and choose **Setup > Wireless Networks > Add New > Cisco Meraki > Connect via API key**.
- Step 2** In the Meraki dashboard, navigate to **Organization > Configure > Settings** and enable **Dashboard API Access**.
- Step 3** In the Meraki dashboard, navigate to **Username > My Profile > API Access** and generate the API token. The generated API token is an alphanumeric value.
- Step 4** Copy the generated API token to enter it in the Cisco Spaces dashboard.
- Step 5** In the Cisco Spaces dashboard, perform the following:
- In the **Connect our Meraki** pop-up window, paste the copied API token in the **API KEY** field.

Connect your Meraki



Connect via API key

Enter your Meraki API Key to fetch the network information

API KEY

Add API

Connect

- b) Click **Connect**. After a successful synchronization with Meraki, the connection status displays as active.
- c) From the **Configure Meraki scanning API** area, copy the values for **Post URL** and **Secret Key**.

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2 Configure Meraki scanning API

Configure below Post URL with URL validator and secret key and validate manually in Meraki dashboard to establish connection with DNA Spaces.

Post URL

`https://location.dnaspaces.io/notifications/Meraki/accountcisco4/<network_id>/<URLValidator>`

Secret Key

accountcisco4

0 networks configured

3 Import Meraki Networks into Location Hierarchy

Connect Meraki with DNA Spaces using the API key.

0 networks imported [Import Networks Sync Status](#)

[setup guide](#)
[Frequently Asked Questions](#)

Step 6 In the Meraki dashboard, navigate to your specific network and choose **Network-wide > Configure > General**.

- Step 7** Scroll down to **Location and Scanning** and enable **Analytics and Scanning API**.
- Step 8** In the **Post URLS** field, paste the post URL and secret key.
- Step 9** From the web browser's address bar (Meraki URL), copy the `network_id` (after the `/n/`). For example https://xxx.meraki.com/your-net/n/network_id/.
- Step 10** Edit the post URL `<network_id>` to include your network ID.
- Step 11** From the **Location and Scanning** field, copy the `validator id`.
- Step 12** Edit the post URL `<URLValidator>` with the validator.
- Step 13** Click **Validate** to validate the post URL functions.
- Step 14** In the Cisco Spaces dashboard, from the **Import Meraki Networks into Location Hierarchy**, select **Import Networks**.
After successful synchronization, verify if the networks are displayed in the **Location Hierarchy**.
- Note** If IP address restriction is enabled on the Cisco Meraki dashboard, reach out to Cisco Spaces support to add Cisco Spaces IP addresses to the allowed list.
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