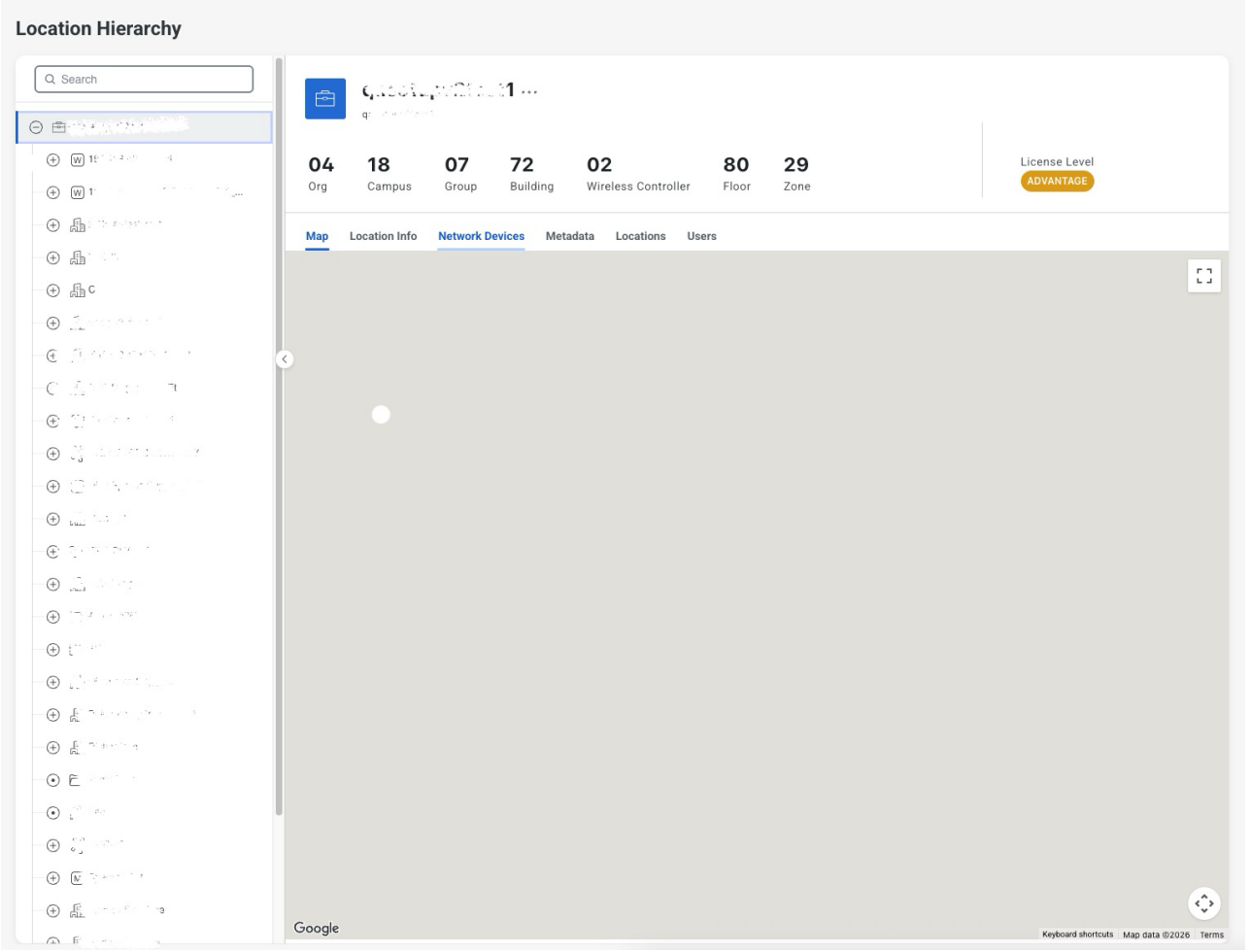


Location Hierarchy

Location Hierarchy's enhanced user interface simplifies the import of locations in the same structure that you have defined using Cisco AireOS Wireless Controller, Cisco Catalyst 9800 Series Wireless Controller, or Cisco Meraki, in your wireless network.

The hierarchical structure in maps imported from Cisco Prime Infrastructure or Catalyst Center is automatically reflected in Location Hierarchy.

In **Location Hierarchy** window, the default customer name (root location) is automatically selected, and the **Map** tab displays the location on the map.



The left pane of the **Location Hierarchy** window displays the imported root locations with the default customer name (root name). You can click the plus sign to expand and view the hierarchy. You can view the buildings and the associated floors in the root location.

If you select a root location from the left pane, you can also view additional information related to the number of organizations, campuses, wireless controller, buildings, groups, floors and zones.

The screen opens with the Location Hierarchy title, a searchable hierarchy tree, a collapsible left pane, and the selected root location when no other location is already selected.

The selected-location summary can also display a license-level badge when the account is enabled for Smart Licensing and license information is available for the selected location.

When Smart Licensing is enabled, Cisco Spaces can display license-level badges next to locations in the hierarchy tree. The badge indicates the license level that is applicable to the corresponding hierarchy node.

For a selected location, building or floor, additional information is displayed in the following tabs:

- **Map**: Displays the selected location on the map
- **Location Info**: Displays the location data information
- **Network Devices**: Displays all the connected network devices and running devices and view the count of these devices

- **Metadata**: Displays the configured metadata information
- **Rules**: Displays the rules for **Captive Portal**, **Engagement**, **Location Personas** and **Density**
- **Locations**: Displays the location nodes
- **Users**: Displays the users
- **License Usage**: Displays the license type, access points, webex devices, meraki camera, locations and building units information

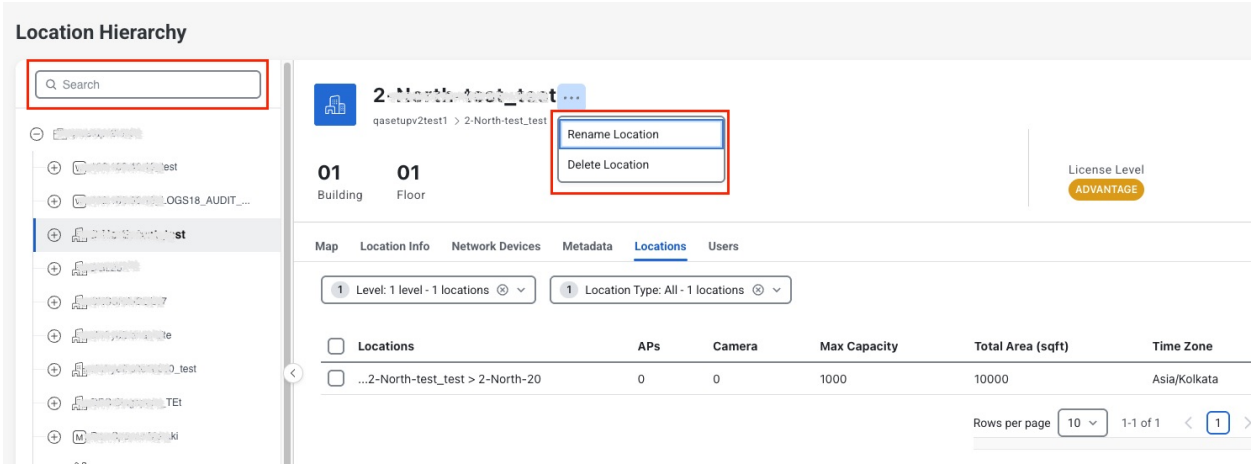
Note

- The **Rules** tab is displayed only for license levels of Advantage or higher.
- The **License Usage** tab is displayed only when Smart Licensing is enabled for the account.

You can perform the following additional tasks in the **Location Hierarchy** window:

- **Search**: Use the **Search** field to search for available locations. The search functionality works if you enter just a single character. The **Recent Searches** area displays the search results.
- **Rename**: Click the three dots next to the location and click **Rename Location** to edit the location name.
  - For the root location, only the option to rename the location is displayed.
  - For all other locations except the root, both the options to rename and delete the location is displayed.
- **Delete**: Click the three dots next to the location and click **Delete Location** to delete the location from **Location Hierarchy**.
- **Rename** and **Delete** actions are available only for locations where the signed-in user has Full access. Polygon zones are not renamed from this menu; they are updated from the floor map. Wireless Controller locations can also show Add/Edit Controller, and AP Zone locations can show Modify Access Points.

Figure 1: Location Hierarchy - Rename and Delete options



Location Hierarchy shows rich maps, if they are available for a particular floor. The option to upload rich maps is currently available under **Setup** > **Locations & Maps**. Click the **3D** toggle button to switch between 2D and 3D floor maps.

The 2D/3D toggle is shown only for floor locations. The 3D view is enabled when the selected floor has supported rich-map data and the parent building or network has a valid rich-map status. If rich maps are not enabled, the 2D/3D control is displayed in a disabled state.

In **Location Hierarchy**, only those locations that a Cisco Spaces user can access are displayed. The accessibility to these locations are defined when you create or edit roles or invite or edit the Cisco Spaces user in **Admin Management**.

- Manage Locations in Map view, on page 4
- Update Location Information, on page 7
- View the Network Devices, on page 9
- Configure Metadata, on page 10
- View Locations, on page 12
- View Users, on page 17
- View License Usage, on page 17

Manage Locations in Map view

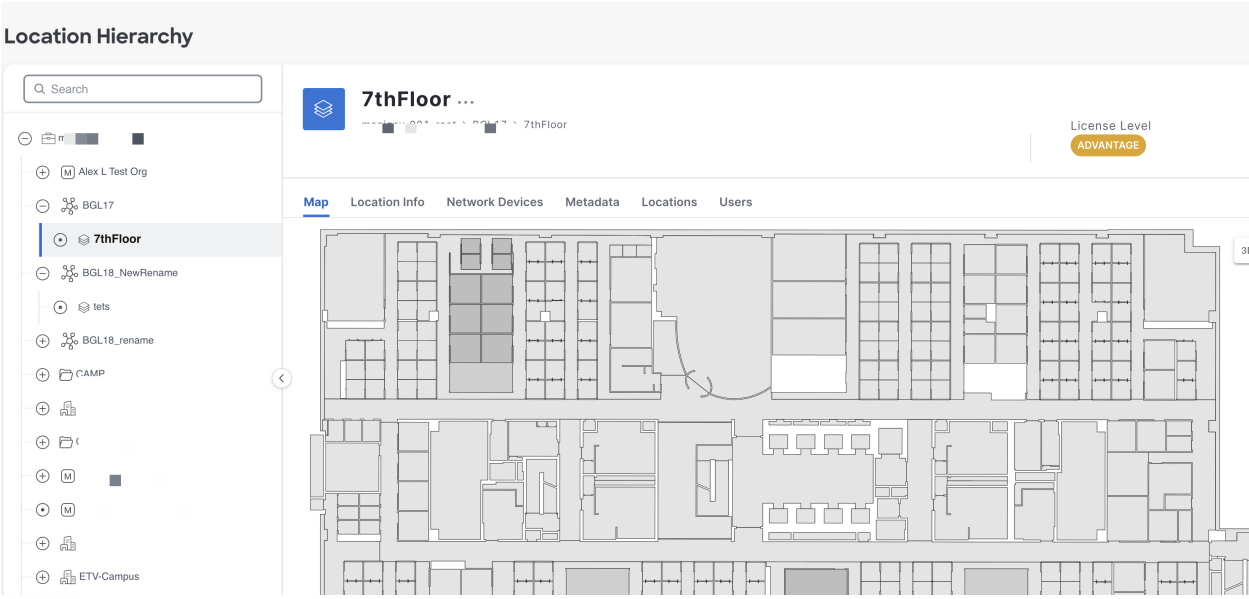
Use the **Map** tab (**Cisco Spaces dashboard** > **Menu icon (**) > **Location Hierarchy** > **Root Location**) to view the selected location, campus, building and floor information on the map.

The **Map** tab displays diff ernet map types such as default world map, latitude and longitude based maps, and 2D or 3D floor maps.

If you select the root location, the default world map is displayed.

However, in some instances, the map automatically zooms into the precise location on the map and is displayed with a map pin. You can click on the map pin to view the additional information such as location address, total area, maximum capacity, time zone details and so on. The precise location is plotted based on the latitude and longitude information.

Figure 2: Map Tab



If you select a building, the default world map is displayed.

If you select a floor, the exact floor map image is displayed. Use the Polygon tool ( ) to create zones. For more information, refer to Create a Zone for a Floor Location, on page 5.

Depending on the location you select, view these information:

- Organization
- Campus
- Building
- Floor
- Zone

Create a Zone for a Floor Location

Use the **Map** tab to create Cisco CMX zones in **Location Hierarchy**.

The current implementation creates and updates polygon zones from the floor map for supported floor maps. Zone creation is available only when the selected floor has Full access and a 2D floor map is available.

Note Currently, Cisco Meraki zone-based reports are only supported in the **Live Occupancy** application and **Firehose** device location update events.

In Location Hierarchy 2.0, you can create polygon zones for the floor locations under the Cisco Meraki network. To create polygon zones on the floor map, use the **Polygon tool** ( ) that is available in the floor

map view under the **Map** tab. The new polygon zones created are displayed under both Location Hierarchy and Location Hierarchy 2.0.

Procedure

Step 1 Log in to Cisco Spaces.

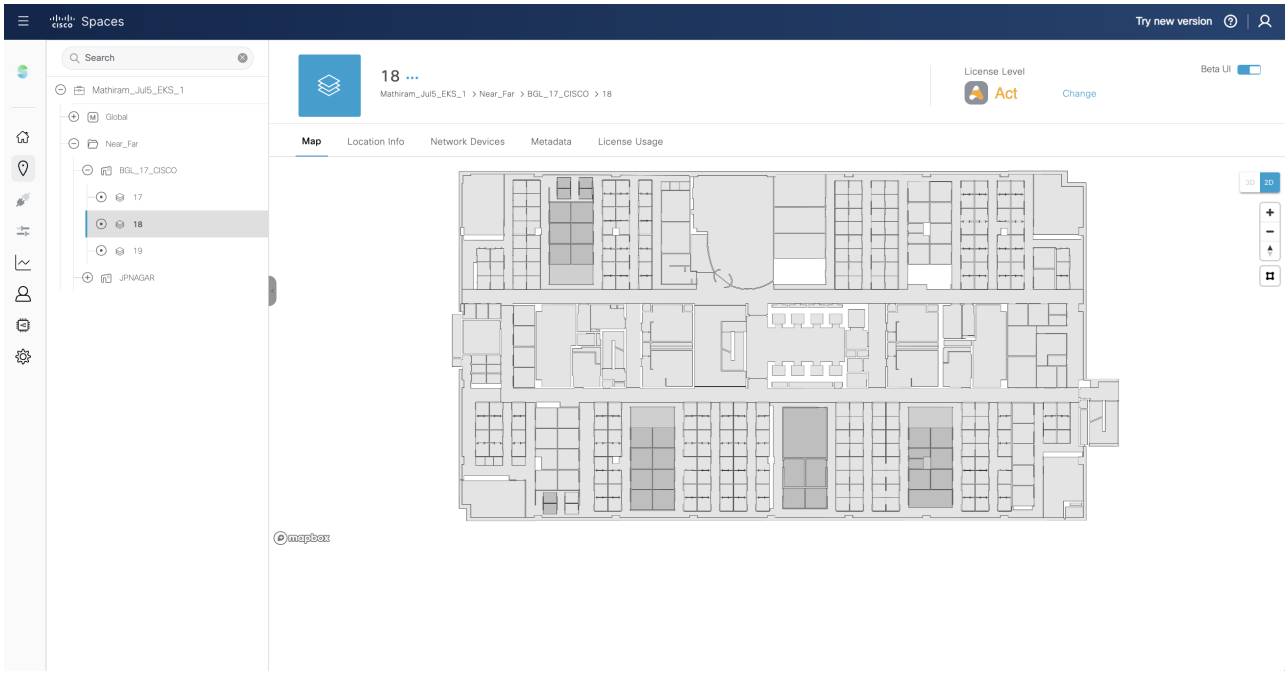
Step 2 In the Cisco Spaces dashboard, click the **Menu** icon ( ) and choose **Location Hierarchy**.

The **Location Hierarchy** window is displayed.

Step 3 In the left pane, navigate to the required floor location.

The floor map is displayed.

Figure 3: Map Tab



Step 4 Click the Polygon tool ( ) on the map.

The cursor changes to a plus icon.

Step 5 Click the required map area and move the cursor to draw a polygonal zone of your choice.

Step 6 Double-click to complete the zone creation.

A pop-up window is displayed on the right pane.

Step 7 In the **Zone Name** field, enter the new zone name.

Step 8 Select the overlay color to distinguish the zone.

Step 9 Click **Save**.

- The new zone is created, and the **Location Hierarchy** window is refreshed to display the root location.

- In the left pane, navigate to the floor where you created the new zone and the zone is now listed as a new item under the floor hierarchy.

Step 10 (Optional) Click the Polygon tool ( ) on the map to update the zone details.

Update Location Information

Use the **Location Info** tab (**Cisco Spaces dashboard** > **Menu icon ( )** > **Location Hierarchy** > **Root Location**) to view and edit the location information.

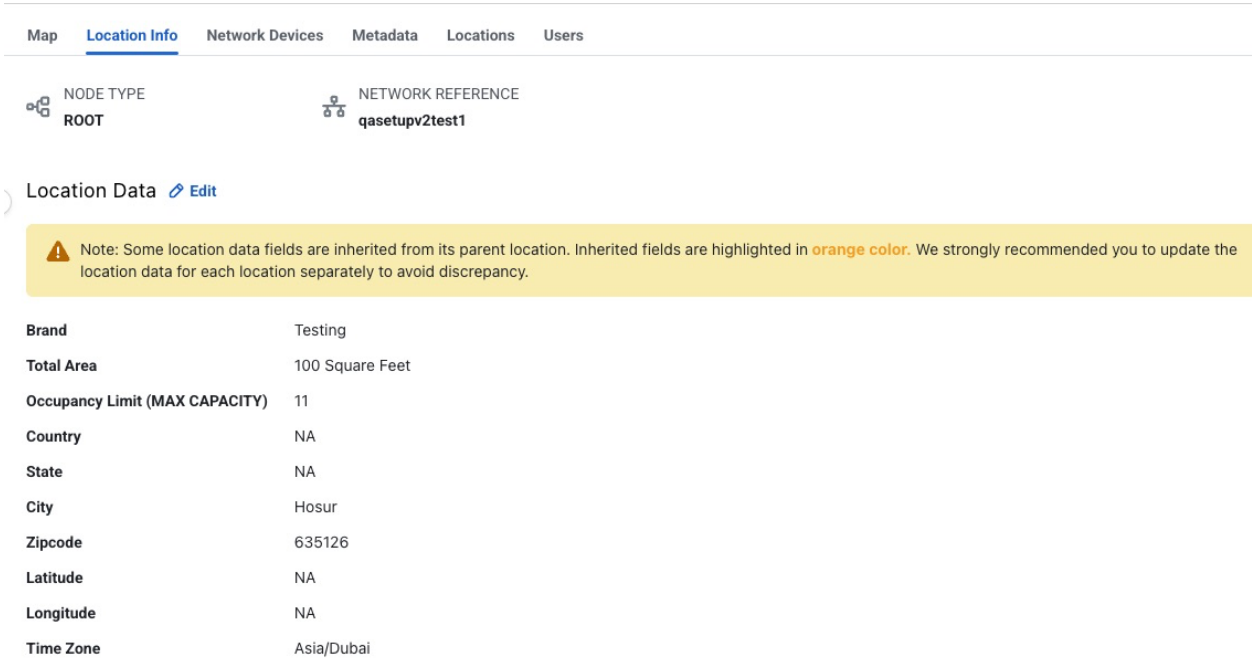
For the selected location, the **Node Type** and **Network Reference** details are displayed.

The Location Info tab displays read-only details for the selected location. The displayed details can include **Node Type, Network Reference, Brand, Total Area, Occupancy Limit, Address, Country, State, City, Zipcode, Latitude, Longitude,** and **Time Zone**.

The Node Type value identifies the hierarchy level of the selected location, such as **ROOT, NETWORK, or FLOOR.** The Network Reference value identifies the reference name associated with the selected location in the hierarchy.

If a value is not configured for the selected location, Cisco Spaces displays **NA**.

Figure 4: Location Info Tab



Click **Edit** to update location information. For more information, refer to Edit Location Info, on page 8.

Note Location data fields inherited from the parent location are highlighted in orange. For example, a floor can inherit **Address** and **Time Zone** values from the parent network or building. Update each location separately if you want to override inherited values.

Edit Location Info

Procedure

Step 1 Log in to Cisco Spaces.

Step 2 In the Cisco Spaces dashboard, click the **Menu** icon ( ) and choose **Location Hierarchy**.

The **Location Hierarchy** window is displayed.

Step 3 In the left pane, navigate to the required location.

Step 4 Click the **Location Info** tab.

Step 5 Click **Edit** next to **Location Data**.

The slide-in window is displayed.

Step 6

Note The fields displayed in the **Edit Details** drawer vary based on the selected node type. For the root location, the drawer displays fields such as **Location Name, Brand, Total Area, Unit, Occupancy Limit,** and **Time Zone**. For network or building locations, the drawer can also display **Address, Latitude, Longitude,** and the map panel.

Update the following location information as required:

a) **Location Name**: Edit the name of the location.
b) **Brand**: Edit the name of the brand.
c) **Total Area**: Edit the total area details. The value must be numeric and cannot include commas.
d) **Unit**: Select the unit for the total area entered. The options are **Square Feet** and **Square Meter**.
e) **Occupancy Limit (Max Capacity)**: Enter a positive integer.
f) **Address**: Enter the address details and select from the displayed options. The selected address is plotted on the map displayed on the right side. The map panel provides Map and Satellite views and supports marker-based location selection.
g) **Latitude and Longitude**: Edit decimal coordinates directly or drag the marker on the map. Values can be positive or negative decimal numbers and cannot include commas.
h) **Time Zone**: Select a valid time zone from the searchable **Time Zone** list.

Step 7 Click **Save**.

Edit Access Point Prefix

You can add APs of multiple prefixes to a network. For example, if you have APs with prefixes, AB, BC, and CA, and if you want to group the APs with AB and BC under one wireless network, you can do so.

The **Access Points Prefix Used** option will be available in the **Location Info** tab only for the network locations. However, the Access Points Prefix Used option will not be available for the **Unconfigured** network.

To add APs of multiple prefixes to a network of a Cisco Wireless Controller or Cisco Catalyst 9800 Series Wireless Controller, follow these steps:

Procedure

Step 1 Log in to Cisco Spaces.

Step 2 In the Cisco Spaces dashboard, click the **Menu** icon ( ) and choose **Location Hierarchy**.

The **Location Hierarchy** window is displayed.

Step 3 In the left pane, navigate to the required network.

Step 4 Click the **Location Info** tab.

Step 5 Click **Add/Edit** next to **Access Point Prefix Used**.

Step 6 In the **Add/Edit Prefix** window, in the **Prefix** field, enter the prefix.

The access points with the prefix entered get listed.

Step 7 Click **Add Prefix**.

The newly added prefix gets listed under **Added Prefixes** in the right pane of the window. **Add Prefix** is enabled only if the APs with prefix entered are available.

Step 8 Click **Save**.

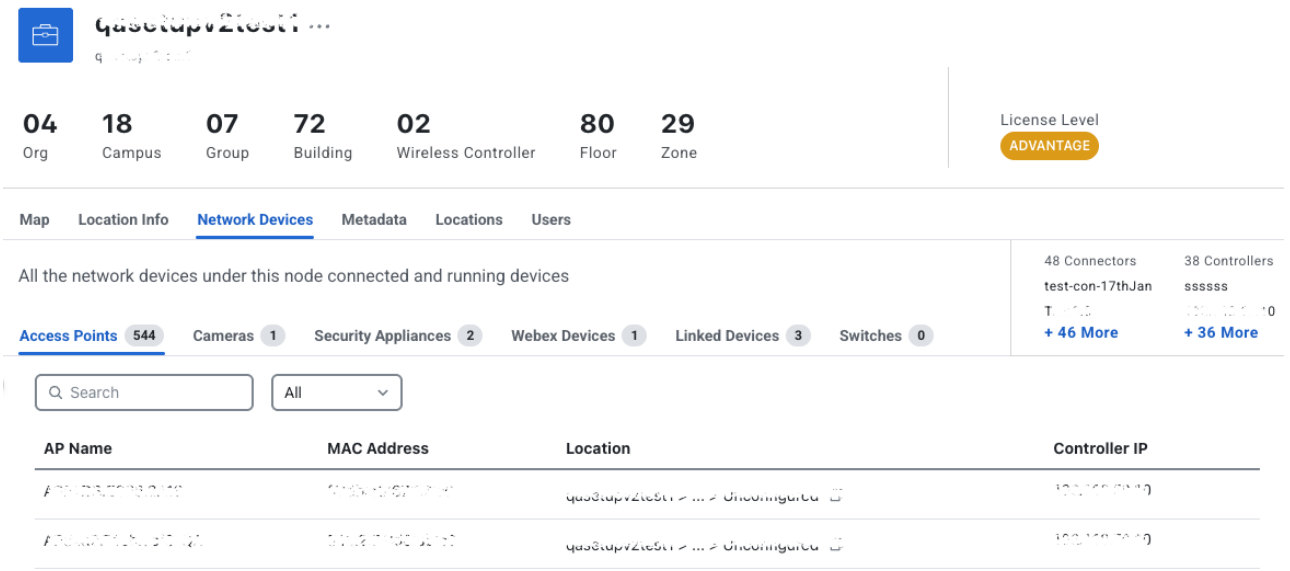
After adding the prefix, the APs under the **unconfigured** network with this prefix is moved to this network.

Use the trash icon in the Existing Prefixes panel to remove a prefix before clicking **Save**.

View the Network Devices

Use the **Network Devices** tab (**Cisco Spaces dashboard** > **Menu icon ( )** > **Location Hierarchy** > **Root Location**) to view all the network devices under the selected node. The root location displays all the connected devices available within the location hierarchy.

Figure 5: Network Devices tab



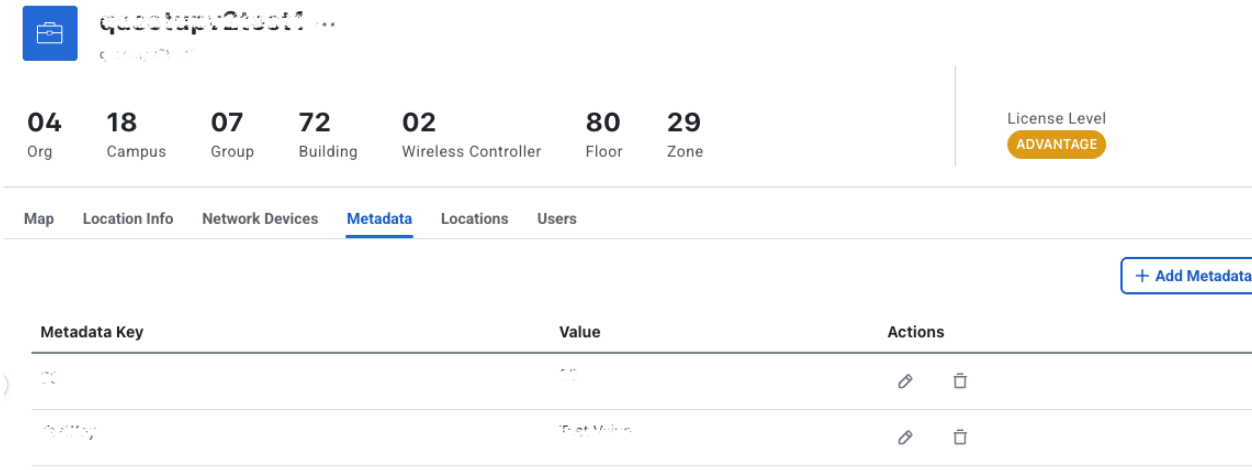
Depending on the selected location, you can view the following information:

- **Access Points**: Displays the name of the AP, MAC address and the location hierarchy path. Use the **Search Table** field to search for a specific AP. Click the copy icon next to the **Location** field to copy the hierarchy path. Navigate to the **Setup** window to configure the AP.
- **Cameras**: Displays the connected camera details such as camera name, serial number, MAC address and status of the trip-wire as a set or not. Use the **Search Table** field to search for a specific camera. Navigate to the **Connect your Meraki Camera** window to connect additional devices.
- **Security Appliances**: Displays the detailed list of security appliance devices for the respective locations.
- **Webex Devices**: Displays the connected Cisco Webex devices.
- **Linked Devices**: Displays the linked devices configured for this location. You can link IoT Devices, Non-Webex Signages and Smart PUDs.
- **Switches**: Displays the switches configured for this location. Navigate to **Setup** > **Wired Network** to onboard your switches.

Configure Metadata

Use the **Metadata** tab (**Cisco Spaces dashboard** > **Menu icon (**) > **Location Hierarchy** > **Root Location**) to view the metadata information. If metadata is not configured yet, click **Add Metadata** to add metadata. For more information, refer to Add Metadata, on page 11.

Figure 6: Metadata Tab



Depending on the selected location, you can view the following information:

- **Metadata Key**: Displays the metadata key.
- **Value**: Displays the value for the metadata key. The value can be alphanumeric and accepts special characters also, for example, xyz123@.

Add Metadata

Procedure

Step 1 Log in to Cisco Spaces.

Step 2 In the Cisco Spaces dashboard, click the **Menu** icon ( ) and choose **Location Hierarchy**.

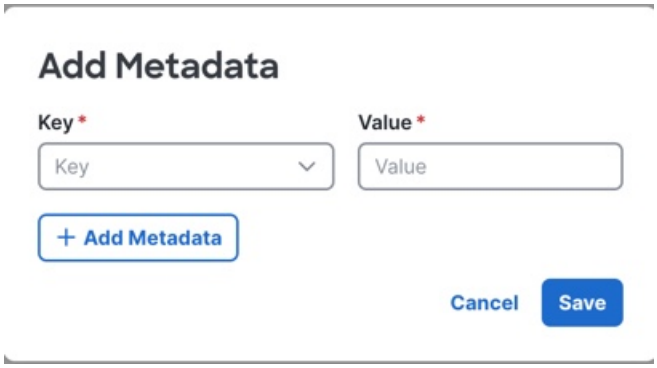
The **Location Hierarchy** window is displayed.

Step 3 In the left pane, navigate to the required location.

Step 4 Click the **Metadata** tab.

Step 5 Click **Add Metadata**.

Figure 7: Add Metadata



Step 6 In the **Key** field, enter or select a metadata key.

Step 7 In the **Value** field, enter a value for the key.

Step 8 (Optional) Click **Add Metadata** to add multiple metadata keys and the corresponding values.

Click the **Delete** icon next to the metadata key to delete the keys.

Step 9 Click **Save**.

After **Save**, the Metadata tab refreshes and displays the saved keys and values. Existing metadata can be edited or deleted from the Actions column.

View Locations

Use the **Locations** tab (**Cisco Spaces Dashboard** > **Menu icon (☰)** > **Location Hierarchy** > **Root Location**) to view the location information such as **Location Type** and **Level**.

Use the **Location Type** and **Level** drop-down options to select the location preferences. The location types are:

- Network/Building
- Campus
- Group
- Organization
- Wireless Controller
- CMX

View these details for the selected location:

- Locations
- APs
- Camera

- Max Capacity
- Total Area (sqft)
- Time Zone

Select the required check box next to the location and click **Create Group** to add location to create your own group.

If a single selected row is a group that has child locations, the Locations tab also displays **Ungroup**.

Create a Group

Use this procedure to organize multiple child locations by creating a group.

Before you begin

- Verify that the parent building and the child location that you want to group already exist.
- Verify that your account has permission to update the location hierarchy.
- All selected locations must have the same parent node. If the selected locations belong to different parents, Cisco Spaces displays an error and does not create the group.

Procedure

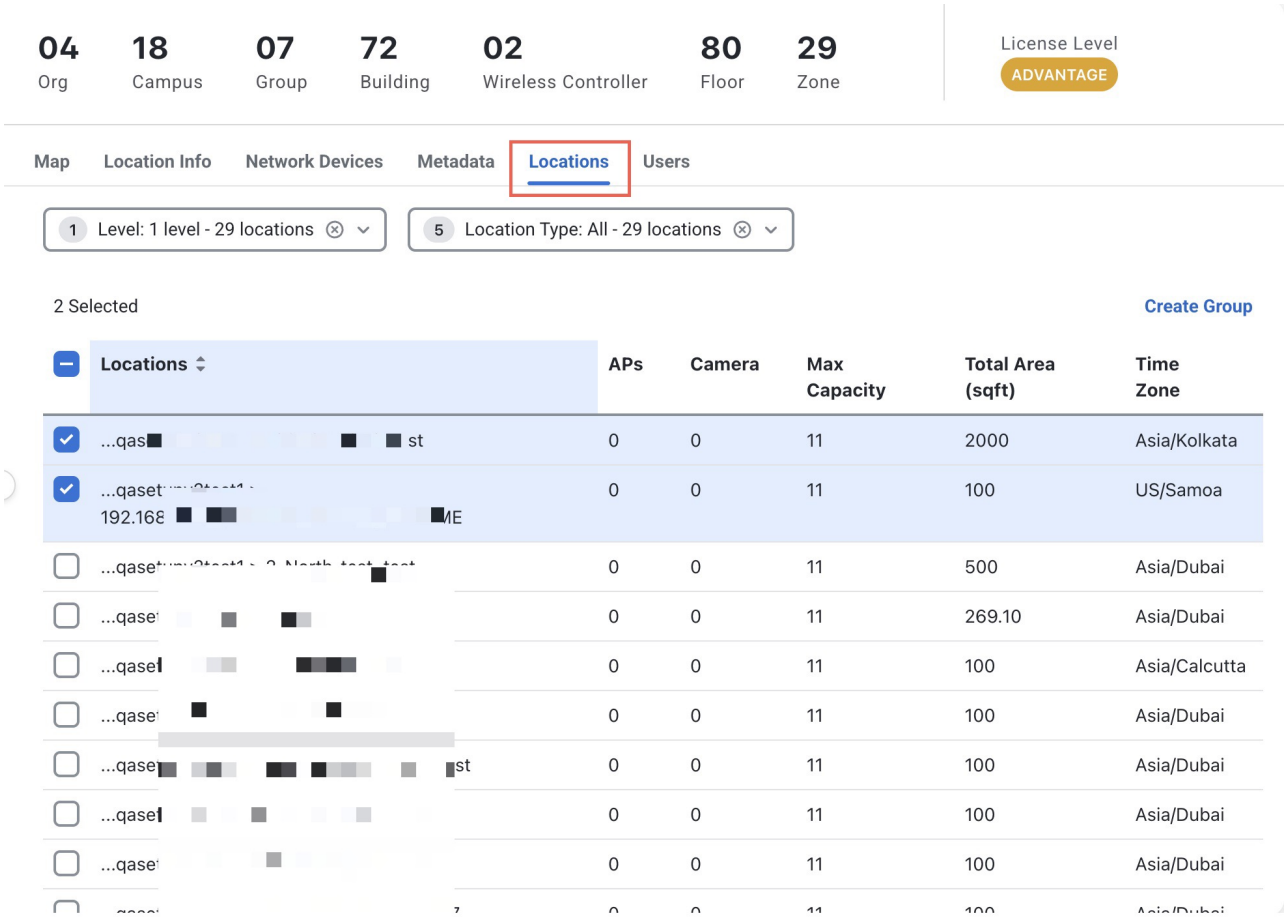
Step 1 In the left navigation pane, click **Location Hierarchy**.

Step 2 In the left pane, navigate to the location where you want to create a group.

Step 3 Click the **Locations** tab.

Step 4 Check the check box for each location that you want to add to the group.

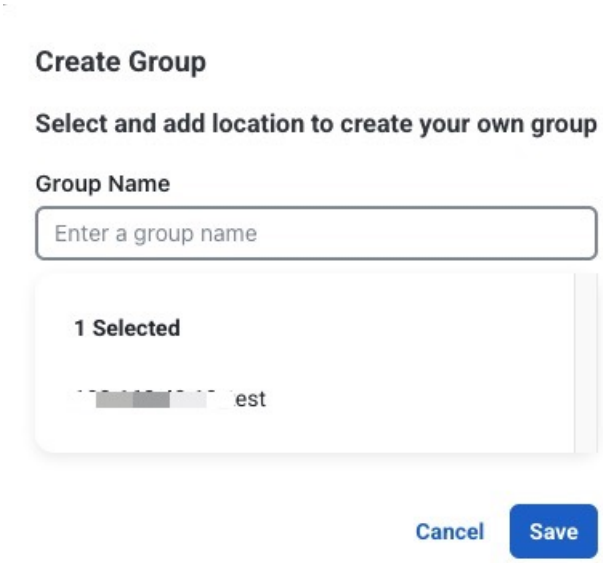
Figure 8: Locations Tab



Step 5 Click **Create Group**.
The **Create Group** pop-up window is displayed.

Step 6 In the **Create Group** pop-up window, enter a name in the **Group Name** field.

Figure 9: Create Group



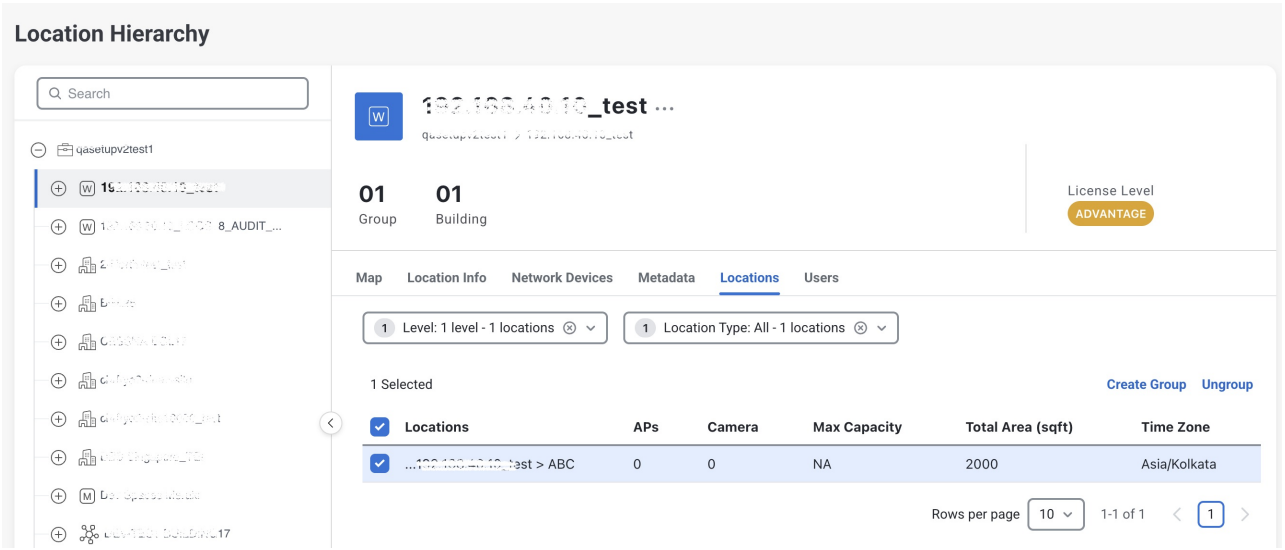
Step 7 Review the selected locations, and then click **Save**.

Step 8 Verify that the new group appears in the hierarchy under the selected building.
The new group is created under the selected building and moves the selected locations under that group. The building summary also updates to show the new group count.

Step 9 (Optional) Perform these steps if required.

a) To ungroup the location, select a group row that has child locations and click **Ungroup**.

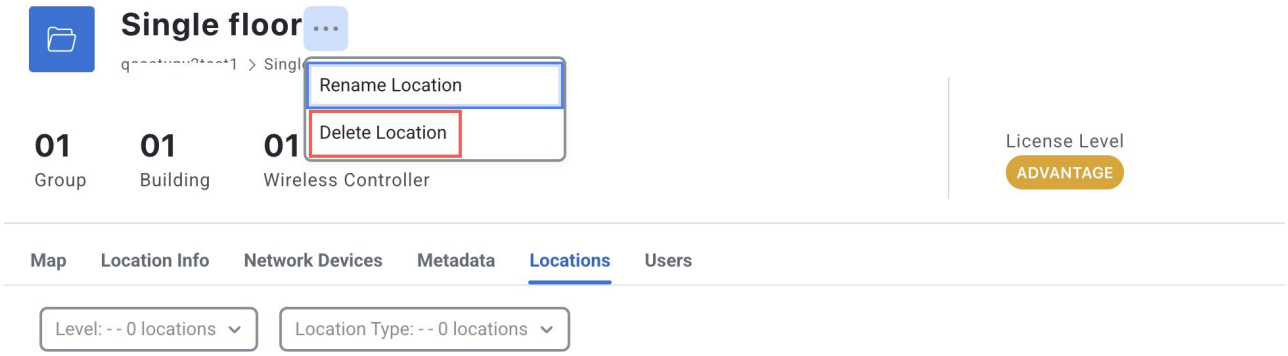
Figure 10: Ungroup



b) In the warning dialog, click **Yes** to confirm the ungroup action.

c) To delete a group or another non-root location, open the location action menu and click **Delete Location**.

Figure 11: Delete Location



Split License

Split License feature allows you to upgrade licenses at the location level.

You can upgrade location-level license to higher tiers (ADVANTAGE or Unlimited), regardless of the account-level license being at a lower tier, for example: ESSENTIAL, EXTEND, SMART OPS, and SMART VENUES. This flexibility extends to the floor level within the **Location Hierarchy**. Use the **License Level Change** option available in the **Location Hierarchy** (Beta UI) to upgrade the license type.

IoT Services licenses can be assigned at the campus or building level. The effective license level is displayed for supported locations in the hierarchy.

A valid IoT Services license is required to configure IoT Services for a campus or building. If the selected location does not have the required license, users can view the location and its existing information but cannot modify the IoT Services configuration.

To enable additional IoT Services capabilities for a location, assign a supported higher-tier license to the campus or building by using the location-level license change workflow.

The apps that include Split License support are:

- **Location Analytics**
- **Live Occupancy**
- **Captive Portal**
- **Detect and Locate**
- **IoT Explorer**
- **Environmental Analytics**
- **Engagements**
- **Location Personas**
- **Space Manager**

- **Space Experience**

To activate **Split License** feature for a location, click **Change** and select the license upgrade options.

The Change link is displayed next to **License Level** in the selected-location header. Use this link to modify the license level for the selected location.

Note This upgrade allows you to experience higher-tier license features in **Location Analytics** app and also in the Density Rule feature in **Live Occupancy** application.

The **Split License** feature is only available for accounts registered with the **Cisco Smart Software Manager** (CSSM) system and integrated with Cisco Spaces account by registering the Smart Licensing token with the Cisco Spaces dashboard. If your account is not registered with CSSM, we recommend reaching out to your account administrator.

View Users

Use the **Users** tab (**Cisco Spaces Dashboard** > **Menu icon ( )** > **Location Hierarchy** > **Root Location**) to view the users and their role permissions.

View these details:

- User
- Role
- Permissions: Read & Write
- Permissions: Read only
- Locations

Use the **Search** option to search for users. You can click a user to edit the permission setting in the **Admin Management** > **Edit User** window.

View License Usage

Use the **License Usage** tab (**Cisco Spaces Dashboard** > **Menu icon ( )** > **Location Hierarchy** > **Root Location**) to view the license type applicable for the logged in account.

The **License Usage** tab is visible only when Smart Licensing is enabled. For a selected location, usage is loaded from the location-specific license service.

View these details:

- License
- Access Points
- Webex Devices

- Meraki Camera
- Locations
- Building Units

Locations indicates the number of location nodes counted for license usage under the selected hierarchy context. Building Units indicates the number of building-level units counted for license usage under the selected hierarchy context.