



Network

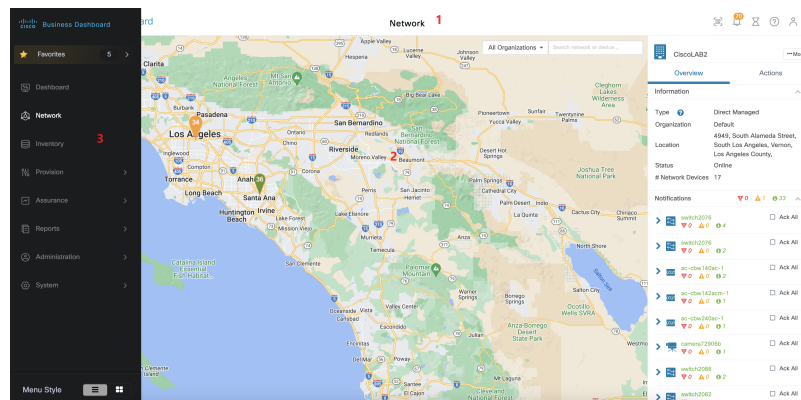
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About Network

Access the Network page to see an overview of the location and all the devices in your network. You can also note other networks and devices nearby. You can select the network and then see more details about that network and devices and how they are all working.

The **Network** page provides an overview of the network as either a geographic map showing the location and status of each site in the network, or as a list of all sites.



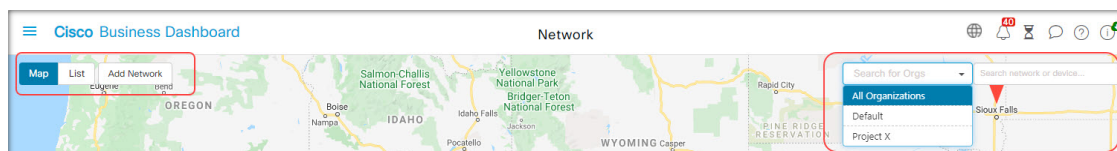
In the **Map View**, the number displayed on each network icon indicates the number of outstanding notifications that exist for that site, and the color of the icon indicates the highest severity level outstanding.



Note When two or more network icons are positioned too closely on the map to be easily distinguished, they will be replaced with a single cluster icon. Click on the cluster icon to automatically zoom the map to a level where the networks in that cluster can be separated.

The **Network Map** offers the following controls:

You can also click and drag anywhere in the map area to move the map in the **Work** pane.



Control Name	Control Action
Map/List selection	Use this control to chose to view networks on a map or in a table.
Add Network button	Use this button to create a new network record prior to deployment.
Organization drop-down	Select an individual organization from the drop-down list to limit the networks displayed.
Search box	<p>Enter all or part of the name, address or IP address of a network to locate that network on the map. Alternatively, you can enter all or part of the name, IP address, serial number or MAC address of a device to identify the network where the device is located. As you type, a list of matches is displayed.</p> <ul style="list-style-type: none"> • Hover over a match and the corresponding network will be highlighted. • Select a match and the corresponding network will be selected and centered in the view.
Zoom controls	Use these controls to zoom in and out of the map. Click the (+) plus sign to zoom in and the (-) minus sign to zoom out.
Fit-to-view button	This button automatically zooms out the map so that all the network markers can be displayed.

In the **List View**, the same information can be seen in the last column of the table. To see more information about a network, click on the network icon or on the table row for that site.

In the **List View**, the following controls are available:

Control Name	Control Action
Map/List selection	Use this control to chose to view networks on a map or in a table.
Column Select icon	This icon allows you to select the columns to be displayed. You can click on the column headings to sort the table.
Add Network	Click the (+) plus sign to add a new network prior to deploying a probe for that network.

Control Name	Control Action
Refresh	Click the refresh button to update the table and display the most current information.
Organization drop-down	Select an individual organization from the drop-down list to limit the networks that are displayed.
Search box	Enter all or part of the name, address or IP address of a network to list only matching networks in the table.

Click on a network icon or row to bring up the **Basic Info** panel for that network. The **Basic Info** panel contains the following information:

- The name of the network.
- The organization the network belongs to.
- The physical address of the network.
- The Probe IP address for the network and the IP subnet(s) discovered at the network.
- The software version of the Probe.
- The connection status.
- The number of managed devices in this network.
- A list of all current, unacknowledged notifications for this network.
- A list of events that occurred for this network in the previous 24 hours.

You can also carry out the following actions for a network from the **Basic Info** panel:

- Click **Details** to view a detailed information about the network including the network topology and floor plans.
- See the section "About Network Detail" below for more information on the **Network Detail** panel.
- Click on the **Actions** tab to display additional actions available for the network.
 - Click **Remove** to delete this network and all associated data from the dashboard.
 - Click **Upgrade** to update the Probe software at this network.
 - Click **Show Tech** to generate a Network Show Tech archive for this network.
 - Other actions that can be performed on all devices in the network that support that action. For example, you can backup all network device configurations with a single click.

About Network Details Panel

The **Network Detail** panel allows you to view and update information specific to that network. This information includes:

- Key network parameters including the network name, type, description, organization and default device group.

- The location of the network.
- Logging configuration for the Probe in this network. See [Managing Probe Log Settings](#).
- Controls that allow you to restrict the devices discovered and managed by Cisco Business Dashboard based on IP address, device type and whether the device is manufactured by Cisco. If any device types are selected, then non-network device types are implicitly excluded from discovery.
- Select **Topology** to display a logical topology of all the discovered devices in the network. Information about each device is displayed, and you can perform actions on selected Cisco products.
- Select **Floor Plan** to document and display the physical location of your network devices within your environment.

Overview of the Topology Map and Tools

About the Topology Map

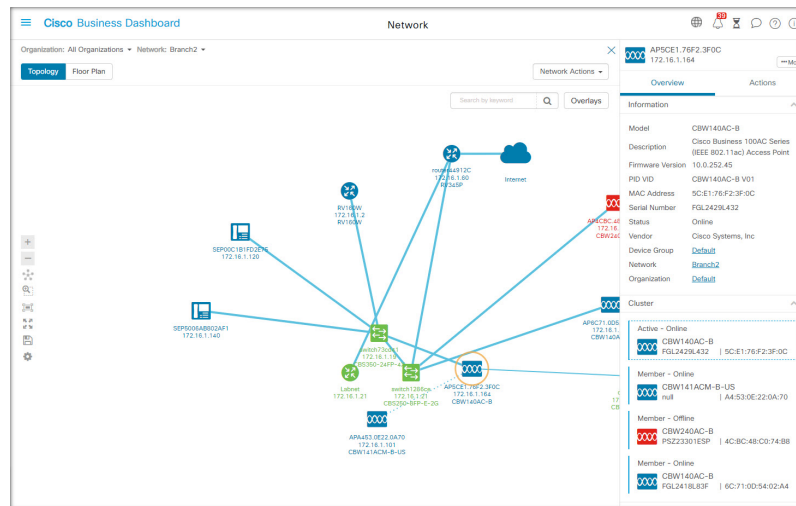
Cisco Business Dashboard looks for discovered devices for network connectivity details and then builds a graphical representation or topology from the information it gathered. The data collected includes:

- CDP & LLDP neighbor information
- MAC Address tables
- Associated Device tables from Cisco Business switches
- Routers
- Wireless Access Points

This information determines how the network is constructed. When the network contains network infrastructure devices that are not manageable for any reason, Cisco Business Dashboard will attempt to understand the topology based on the information that can be collected.

Click on devices or links in the topology to display the **Basic Info** panel for that device or link. This panel provides more detailed information about the device or link, and allows you to carry out different actions on a device.

Click **Overlays** in the **Topology Map** to display the **Overlays & Filters** panel. This panel allows you to limit the devices displayed in the topology by device type or by tag. It also allows you to enhance the topology to show additional information such as the traffic load on links or how a particular VLAN is configured in the network.



Accessing the Topology Map





To access the **Topology Map**:





1. Open the **Network** panel from the **Navigation** pane.
2. Click the icon or table row for the network you are interested in.

The **Topology** for that network is displayed in the work pane.

Topology Controls







The Topology controls are located to the left of the **Topology Map**.


Icon	Description
	Zoom in - Adjusts the Topology window's view. Click the + (plus) icon on the menu bar to increase the size of the network in the viewing area.
	Zoom out Adjusts the Topology window's view. Click the - (minus) icon to reduce the size of the network in the viewing area.
	Click Re-layout Topology to re-enable automatic layout of the topology after it has been disabled by manual changes. Redraw the topology using the automatic layout algorithm. If a device is selected in the topology when the button is clicked, then that device will be designated as the root of the topology tree when the layout is calculated. To select a device, click on the device icon and an orange circle will be shown around the device.
	Click and drag Zoom by selection to select an area to zoom in on.

Icon	Description
	Click Fit stage to zoom until the entire network fills the viewing area.
	Click Enter full screen mode to fill the screen with the Cisco Business Dashboard user interface.
	Click Export Topology to export the current topology view as an image in PNG format. The image will be saved to the default download location for the browser.
	Click Topology Settings to adjust the labels displayed for the topology icons.

Topology Icons

The following icons appear in the **Topology** window:

Icon	Description
	Access Point
	Cloud - This represents a network or part of a network that is not managed by Cisco Business Dashboard.
	Links - Links are connection lines between devices. Click a link to display the target and the source device names and other basic details such as speed and so on. The thickness of the link represents the speed of the link, with a thin line representing 100Mbps or below and a thick line representing 1Gbps or above. A dashed line represents a wireless connection.
	Router
	Switch
	Host - A host attached to the network using a wired connection.

Icon	Description
	Wireless Host - A host attached to the network using a wireless connection.

Overlays & Filters Panel

This panel appears on the right of the **Topology** map when **Overlays** is clicked. It is at the top-right of the Topology screen, next to the **Search** box.

Item	Description
Select Overlay	<p>This feature enhances the Topology map with additional information based on the view selection. It can be one of the following:</p> <ul style="list-style-type: none"> • The Link Utilization View identifies current network performance by monitoring the amount of traffic. This traffic is displayed using the color coded links in the Topology map. The color coding changes based on the percentage utilization of the link. Green represents links that are only moderately loaded, while orange and red represent links that are approaching capacity limits. <p>Controls are provided to allow you to adjust the thresholds for different colors.</p> <ul style="list-style-type: none"> • The VLAN View displays where a VLAN is enabled in the network. This can be used to identify a partitioned VLAN or other misconfiguration. <p>When you select VLAN View in the Overlay drop-down, a second drop-down box appears below this field where you can select the VLAN ID to be displayed.</p> <ul style="list-style-type: none"> • The POE View highlights links in the topology map which indicates devices that are currently being powered from a POE-enabled switch. • L2 Path Trace shows the layer 2 path traffic between the two selected devices takes through the network. Select the device by typing the hostname, MAC address or IP address in the fields provided, or shift-click on two devices in the topology map.
Select Tag	Specify a Device Tag in the text box below the Select Tag to filter the topology to show devices matching the specified tag. Device tags are assigned in the Detailed Info panel.
Show only: <ul style="list-style-type: none"> • Routers • Switches • Wireless • Unmanaged Networks • Hosts • Others 	Check the check box against the devices in the list that you want to view in the Topology map. This feature helps you filter the devices you want to view in the map and removes the ones that are unchecked in the device list.

Item	Description
Show Discovery: <ul style="list-style-type: none"> • Both • Blocked • Enabled 	Use the radio button to control whether you wish to see devices found by the dashboard that are blocked for management.

Viewing Basic Device Information

Click on a network device such as a switch or a router, or a link connecting two devices, to view basic information about the device including outstanding notifications, and actions that may be performed.

The **Basic Info** panel also provides access to more detailed information for a device, and allows you to directly access the administration interface of the device.

The table in the following section provides the type of device details that are displayed. To view the basic device information follow the steps below.

- Step 1** In the **Network** page, select a network and click **Details** to display the topology.
- Step 2** In the Topology map, click on a network device such as a switch or a router to view the details.
- Step 3** In the **Basic Info** panel, the device details are displayed under the **Overview** tab. Each of these items are described in the following table.

Information Panel	
Model	Model name of the device.
Description	Device or product description.
Firmware Version	The firmware version of the device.
PID VID	Product ID and the Version ID.
MAC Address	The <i>Media Access Control (MAC)</i> address is a standardized data link layer address that is required for certain network interface types. These addresses are specific and unique to each device and are not used by other devices in the network.
Serial Number	The device serial number.
Status	The online / offline status of the device.
CBD Agent Status	The CBD agent status for the device, only available for devices that support direct management.
Domain	The domain name of the device.
Vendor	The manufacturer of the device.
Network	The name of the network where the device is located.
Organization	The organization to which the device belongs.

Notification Panel	<p>Notifications Panel Header—The notifications panel header shows summary counts of the outstanding notifications for the device.</p> <p>Notifications Panel Body—The body of the notifications panel lists the outstanding notifications for the device. Check the check box against a notification to acknowledge it and remove it from the list of notifications. You may use notification filtering to display acknowledged notifications if needed.</p>
Events Panel	The Events Panel shows a list of all notifications and other events that have occurred over the past 24 hours for this device. To view and filter a complete list of all events for all devices, visit the Event Log.
POE Panel	The POE Panel is displayed on POE enabled switches and provides a summary of the power usage across each of the ports in the device.
Stack Information Panel	The Stack Information panel is displayed for switch stacks, and shows the hardware details for each member of the stack, including model information, serial number and MAC address
Service Panel	Lists the network services identified on the device.
Connected Device Panel	Host, AP, IP Phone and IP Camera devices include the Connected Device panel. This panel shows how the device is attached to the network, listing the upstream network device and, where applicable, port that the device is connected to.

In addition to the **Overview** tab, the **Basic Info** panel also has an **Actions** tab that allows you to perform various operational tasks on the device.

Performing Device Actions

You can perform actions such as firmware update, configuration backup & restore and reboot easily on devices in the network. To perform these actions, do the following:

Step 1 On the **Topology Map** or **Inventory** page, click on a network device such as a switch or a router.

Step 2 In the **Basic Info** panel, select the **Actions** tab. Depending on the device capabilities one or more of the following actions are displayed:

Update firmware to latest	Allows you to apply the latest firmware update to the device. Cisco Business Dashboard will download the update from Cisco and then upload it to the device. The device will reboot at the completion of the update.
Upgrade From Local	Allows you to upload a firmware upgrade file from your local drive. Cisco Business Dashboard will upload the file to the device, and the device will reboot at the completion of the update.

Backup Configuration	<p>Allows you to save a copy of the current device configuration on the Dashboard.</p> <ol style="list-style-type: none"> a. Click Backup Configuration. b. In the Backup Configuration window, optionally, you may add a note in the text box for the backup you wish to perform. <ul style="list-style-type: none"> Note This note is displayed whenever the backup is listed in the GUI. c. Click Save Backup to complete this action or Cancel if you no longer wish to proceed. <p>A backup configuration job is created and may be viewed in the Task Center.</p>
Restore Configuration	<p>Allows you to restore a previously backed up configuration to the device.</p> <p>Click Restore Configuration.</p> <p>The following backup configuration options are provided:</p> <ul style="list-style-type: none"> • Backups for <i>device name</i>—Lists all available backups to configure for a specific device • Backup for other device—Lists all available backups to configure other devices of the same type or same Product ID • Backup for other compatible device—Lists all available backups to configure other devices in the series that are compatible with the selected device <p>To perform the backup configuration, do the following:</p> <ol style="list-style-type: none"> a. In the Restore Configuration window, select the backup you wish to restore to the device. <p>Use the scroll bar to view all the available backups and click the corresponding radio button. This enables the Restore Configuration button.</p> <p>Alternatively, you may choose to upload a configuration file. To do so, drag and drop the configuration file onto the target area, or click on the target area to select a file from the file system.</p> b. Click Restore Configuration to complete this action. <p>A restore configuration job is created and may be viewed in the Task Center.</p>
Reboot	<p>Restarts the device.</p> <p>When you click this button, you will be prompted to click again to confirm.</p>
Save Running Configuration	<p>For devices that support separate running and startup configurations, this action copies the current running configuration to the startup configuration. This ensures any configuration changes that are retained when the device next reboots.</p>
Delete	<p>Remove an offline device from the Topology and Inventory.</p>
Disconnect	<p>Force a direct managed device to disconnect from the dashboard. This action should be used with caution as direct access to the device is required to reconnect the device after it has been disconnected with this action.</p>

Connect	Connect a disconnected direct managed device to dashboard.
Show Tech	Execute the device's Show Tech function and retrieve the resulting file through the dashboard. This action will typically only be used at the request of technical support.
Locate Device	Locate the device by flashing its LED.

Step 3 Device actions may optionally be scheduled to take place at a later time. To schedule a device action, click the **Schedule** button and fill out the form to create a new **Schedule Profile**. For more information on Scheduling Profiles see [Managing Schedule Profiles](#).

Accessing the Device Administration Interface

In some circumstances, you may need to access the administration interface of a network device directly. To access the administration interface, do the following:

Step 1 On the **Topology** or **Inventory** page, click on a network device such as a switch or a router for which you want to access the administration interface.

Step 2 In the **Basic Info** panel, click **Open Device GUI icon** at the upper right corner. A new window will open in your browser showing the device administration interface

Note When you access the administration interface by clicking **Open Device GUI icon**, your browser will connect to the device through the Dashboard. This means that if you are accessing the network remotely, only the Dashboard needs to be directly reachable from outside the site.

Because these connections all go through the same host - the Dashboard - cookies for one device will be presented to other devices, and may be updated by other devices if the name is the same. A common symptom of this is the browser session on the first device will be immediately logged out after connecting to a second device because the session cookie has been updated.

Viewing Detailed Device Information

Step 1 On the **Topology** or **Inventory** page, click on a network device such as a switch or a router for which you want to view detailed information.

Step 2 In the **Basic Info** panel, click **Details** at the upper right corner.

Step 3 In the **Detailed Info** panel, you will find a detailed list of device information on the left, and additional functions under the following tabs:

- **Dashboard**—Displays a series of dashboard widgets specific to the device
- **PnP**—Allows you to manage the Network Plug and Play settings for the device
- **Port Management**—Allows you to manage the configuration of the switch ports

Note This information is available only for devices with switch ports.

- **Wireless LANs**—Allows you to view the Wireless LANs and manage the radio configuration on the device. Each radio may be enabled or disabled, and the channel and transmit power controlled from this tab.

Note This information is available only for wireless devices.

- **Event Log**—Provides a list of past actions and notifications for this device
- **Config Backups**—Allows you to view a list of backup configuration of the devices and perform actions such as restore, save or delete configuration

Note This information is available only for devices that support the Backup Configuration operation

- **Pending Config**—Compares the desired configuration based on the configuration profiles defined with the current configuration on the device and highlights any differences.

Note This panel is only displayed for devices supported for configuration operations where the current configuration does not match the desired configuration.

- **CBD Agent**—Managing the logging configuration for the CBD Agent on a direct managed device.

Each of these are described in the following steps:

Step 4

A detailed list of information about the device is displayed on the left. This list contains the following information:

Item Name	Description
Hostname	Click Edit next to the device name to modify the device hostname. Click Save to save the changes.
Model	Model name of the device.
MAC Address	The <i>Media Access Control (MAC)</i> address is a standardized data link layer address that is required for certain network interface types. These addresses are specific and unique to each device and are not used by other devices in the network.
Status	Displays the current status of the device. For example, online or offline.
Actions	The Actions drop-down and Open Device GUI icon allow you to act on the device from the Detailed Info panel.
CBD Agent	The CBD agent status for the device, only available for devices that support direct management.
IP	The IP Addresses of the device.
Domain	The domain name of the device.
PID VID	Product ID and the Version ID.
Serial Number	The serial number of the device.
Vendor	The manufacturer of the device.
Description	Device or product description.

Item Name	Description
Network	The network that this device belongs to.
Organization	The organization that this device belongs to.
Device Group	Click Edit next to the device group to change the group the device belongs to. Click Save to save the changes.
Monitoring Profile	Click Edit next to the monitoring profile to select a monitoring profile to use for this device. Alternatively, the monitoring profile may be inherited from the device group this device belongs to. Click Save to save the changes.
TAGs	In the TAGs field, enter any alphanumeric characters and then press Enter to create new tags for this device. To delete an existing tag, click on the ✕ in the tag. Click Save to save the changes. Tags may be used to help identify devices with common characteristics. You may use tags elsewhere in Cisco Business Dashboard Probe to restrict views of the network to displaying a subset of devices.
Discovery Method	Displays the protocols and devices by which this device was discovered.
Pending Config	Displays the status of the device configuration and whether there are any differences between the current config for the device and the expected config.

Step 5 Click **Dashboard** to display a set of widgets showing the current state of the device.

Step 6 Click **PnP** to view the settings to be applied to the device using Network Plug and Play.

Step 7 Use the form to make changes, then click **Save** to apply the changes.

Step 8 Click **Port Management** to view and manage the configuration of the switch ports on the device. A visual representation of the device is displayed, similar to that shown in the **Port Management** page.

This window specifies the port details of the device in a visual representation. The model and serial number of the device are displayed above the image and a tabular view of the ports is displayed underneath.

Step 9 Click **WLAN** to manage the radio settings and view the Wireless LANs configured on this device.

Step 10 Click **Event Log** to see a list of historical notifications and other events that are recorded for this device. You can use filters to limit the entries that are displayed.

Step 11 Click **Config Backups** to view and manage configuration backups for this device. On this tab, you will see a table listing each backup stored on the Probe, with the following details:

Table 1: Config Backups

Item	Description
Timestamp	The date and time the configuration backup was taken.
Comment	The notes entered by the user at the time the backup was performed.
Backed up by	The user who performed the configuration.

Item	Description
Actions	<p>Choose one of the following backup actions:</p> <ul style="list-style-type: none"> • Restore configuration to device—Restores the selected backup to the device • Save configuration to PC—Saves the backup as a zip file to your local drive on your PC • Delete configuration—Removes the backup • View configuration—Helps view the contents of the configuration backup in the browser

You may also trigger a config backup from the tab by clicking **Backup Configuration**.

- Step 12** Click **Pending Config** to view a side-by-side comparison between the current device config and the expected configuration based on the configuration profiles applied to the device. Configurations are represented in a device-independent format and any differences are highlighted. You may use the buttons at the top of the page to apply any outstanding changes, accept the current device configuration, or re-read the current device configuration.
- Step 13** For direct managed devices, click **CBD Agent** to manage the log settings associated with the dashboard connection. Typically this page will only be used at the direction of a support engineer, but more information on these settings may be found in the section titled [Managing Probe Log Settings](#). To retrieve the log files from the device, you can click the **Download Log File** button here, or access the device administration UI directly and download the files using the steps specific to that device.

Using Floor Plans

The Floor Plan view allows you to keep track of the physical locations of your network equipment. You may upload a plan for each floor in the building(s) and position each of the network devices on the plan. This helps you to easily locate devices if maintenance is required. The Floor Plan is similar in operation to the Topology Map, and devices placed on the Floor Plan may be operated in the same way as devices in the Topology Map.

Creating a New Floor Plan

1. Navigate to **Network Details Panel** and click **Floor Plan**. If an existing floor plan is displayed, click the **Home** icon at the top left of the floor plan.
2. If the building you wish to add a floor plan to has already been created, go to the next step. Otherwise, enter a name for the building that houses the floor into the **New Building** field. Click the **save** icon.
3. Drag and drop an image file containing the floor plan onto the target area for the new floor, or click on the target area to specify a file to upload. Supported image formats are `png`, `gif`, and `jpg`. Image files can be a maximum of 500KB in size.
4. Enter a name for the floor into the **New Floor** field. Click the **save** icon.
5. Repeat steps 2 to 4 for each building and floor with network devices.

Placing Network Devices on a Floor Plan

1. Navigate to **Network Details Panel** and click **Floor Plan**. If the floor plan you are interested in is not already displayed, then click on the floor plan.
2. Click **Add Devices**, and then use the search box at the bottom left to find the device you wish to place. You may search by hostname, device type, or IP address. As you type, matching devices will be displayed below the search box. Gray icons represent devices that have already been placed on a floor plan.
3. Click and drag a device to add it to the floor plan in the correct location. If you select a device that has already been placed on another floor plan, it will be removed and added to this one.
4. Repeat steps 2 & 3 until all devices have been added to the floor plan.

Removing a Device from the Floor Plan

1. Navigate to **Network Details Panel** and click **Floor Plan**. If the floor plan you are interested in is not already displayed, then click on the floor plan.
2. Identify the device you wish to remove and click to select it.
3. Click on the red cross that is displayed to remove the device from the floor plan.

Changing the Floor Plan

1. Navigate to **Network Details Panel** and click **Floor Plan**. If an existing floor plan is displayed, click the **Home** icon at the top left of the floor plan.
2. To change a building name, click the **edit** icon next to the name. Once the changes are complete, click the **save** icon.
3. To change a floor plan, click the **edit** icon next to the floor plan name. You may change the floor plan by dragging a new image file to the target area, or clicking on the target area to upload a new file from your PC. You may also change the name of the floor plan. Once the changes are complete, click the **save** icon.

Removing a Floor Plan

1. Navigate to **Network Details Panel** and click **Floor Plan**. If an existing floor plan is displayed, click the **Home** icon at the top left of the floor plan.
2. Identify the floor plan you wish to remove, and click the **delete** icon at the top right corner of the image target area.
3. If you wish to remove an entire building containing all the floor plans, click the **delete** icon next to the building name.

