User Manual

ubivu®

LIGHTS | WIFI | CAMERAS & VIDEO |
TRANSFORMERS | AIR QUALITY

powered by

ubicquia®

CONTENTS

1. UBIVU OVERVIEW

1.1 LOGIN & NAVIGATION

Manage your entire installation of Ubicquia products with UbiVu. Get started here:

http://panel.ubicquia.com

To set up your password, check your inbox for an email from Ubicquia (*ubicquia-support-no-reply@ubicquia.com*). Your system administrator or field engineer created your UbiVu profile and generated an access email. Click on the link in your email to create your unique password. Be sure to incorporate all password rules when setting up your account (see **Figure 1**).

If you have already created your account and forgot your password, click the **Forgot Password** link on the login screen (see **Figure 2**).

If your city or organization has single sign-on set up, please refer to your system administrator for the link you will use to access UbiVu, and for instructions on how to update your login credentials.

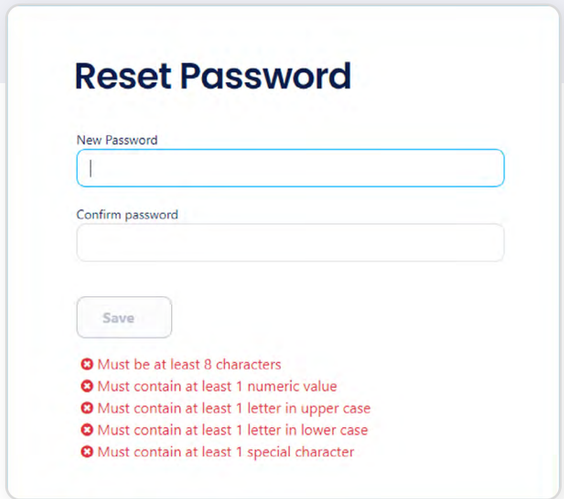


Figure 1 - Password Rules

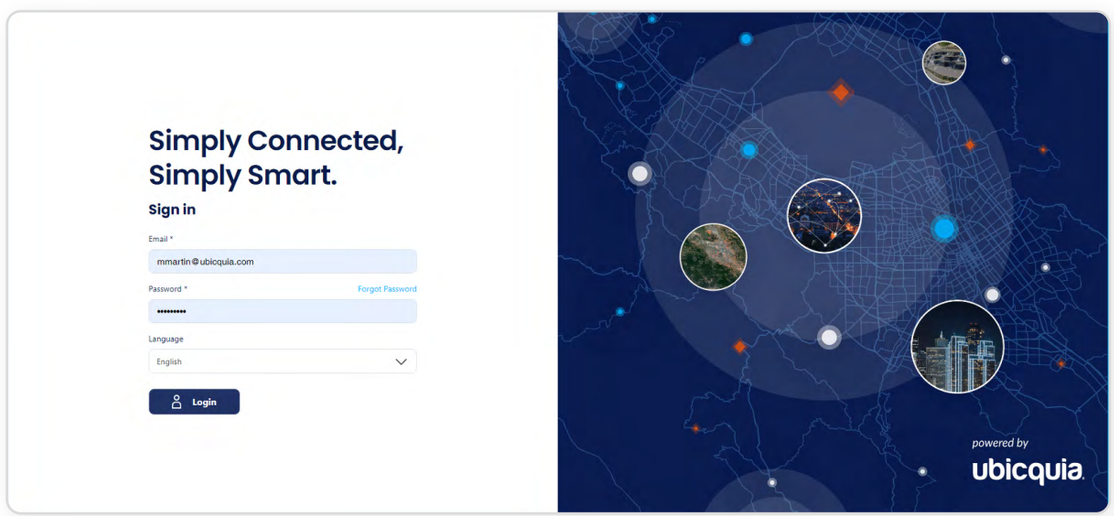


Figure 2 - Login Screen

Use the left side navigation bar to travel to each of UbiVu's main pages:

Dashboard: Insights and installation overview

Map: View and manage your deployments

Alerts: View alert details when set thresholds are exceeded

Configurations: Manage accounts, roles, and all deployment settings

Support: Create a support case or contact Ubicquia Support

User Profile: Personalize your profile and configure UbiVu preferences

NOTE: availability of pages and functionality may be limited depending on the user's access level. See the Configurations - User Management section for more information.

1.2 SUBPANEL FEATURE

The UbiVu Subpanel feature provides a customization option that can help you more effectively structure and organize your smart city. Break your deployment down into sections with tags, schedules, thresholds, and user access unique to each subpanel.

NOTE: Once enabled, the subpanel feature cannot be disabled.

Reach out to your Ubicquia representative to activate the feature. Once enabled, a default subpanel will be created. After login, you will be prompted to select a subpanel. Select the newly created default subpanel to get started.

From here, you can add and edit subpanels (including the default) on the **Subpanel Management** page found in the **Administration** section of the Configuration menu. Click the + Add Subpanel button to create a new subpanel. Select the ··· button and choose **Edit** to change an existing subpanel.

Creating and editing a subpanel is simple: give it a name, a description (not required), select the applicable time zone, and upload your logos (or keep using ours). The small logo will appear in the top left corner of the subpanel. The large logo will appear in all email notifications from that subpanel.

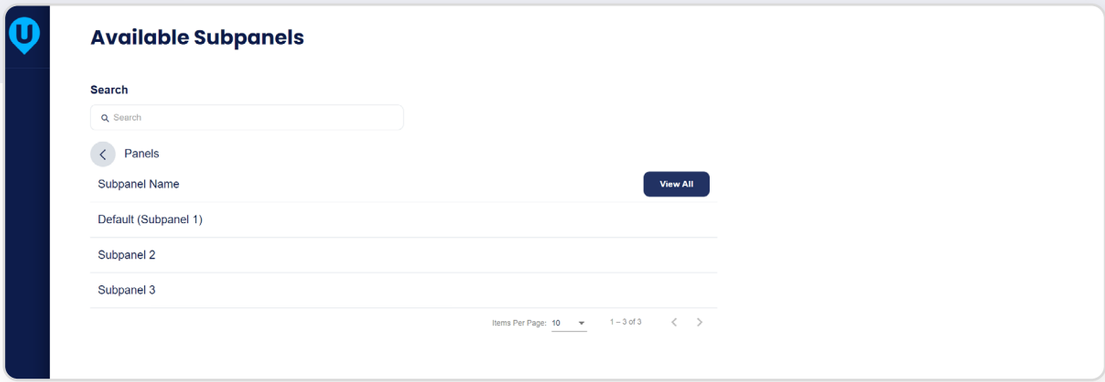


Figure 3 - Subpanel Selection After Login

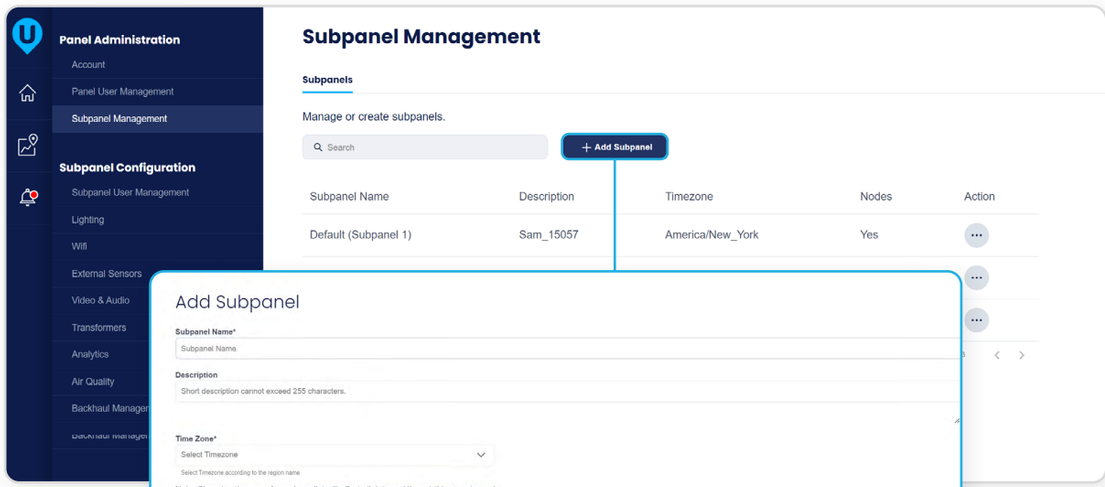


Figure 4 - Subpanel Management Configuration Page

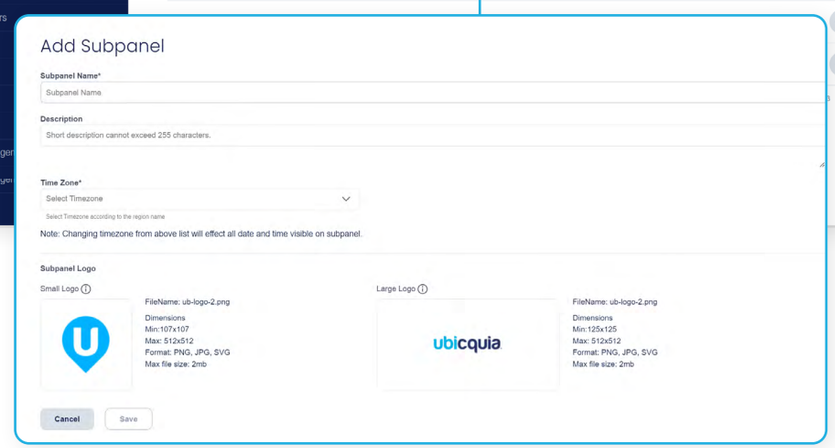


Figure 5 - Create a New Subpanel

1.2.1 Node Migration

Finished creating and editing your subpanels? Go to the map and use the **Node Migration** tool on the side panel's **Manage** tab to move nodes to their appropriate subpanels.

NOTE: Before beginning node migration, apply a filter or select one or more tags to refine the list of nodes on the **Node Selection** screen. See the Tags & Filters section of this manual for more info.

On the **Node Selection** screen, select nodes from the nodes list or map, or use the draw tool to select a group of nodes. Choose a target subpanel from the drop-down menu in the top left corner of the screen. When ready, click Next .

A pop-up will prompt you to choose one: copy existing node settings (assigned tags, schedule and threshold templates), or remove all settings and move the node to the target subpanel as if it were a newly installed node. It will be assigned the target subpanel's default threshold template if there is one, and a default ALS schedule template.

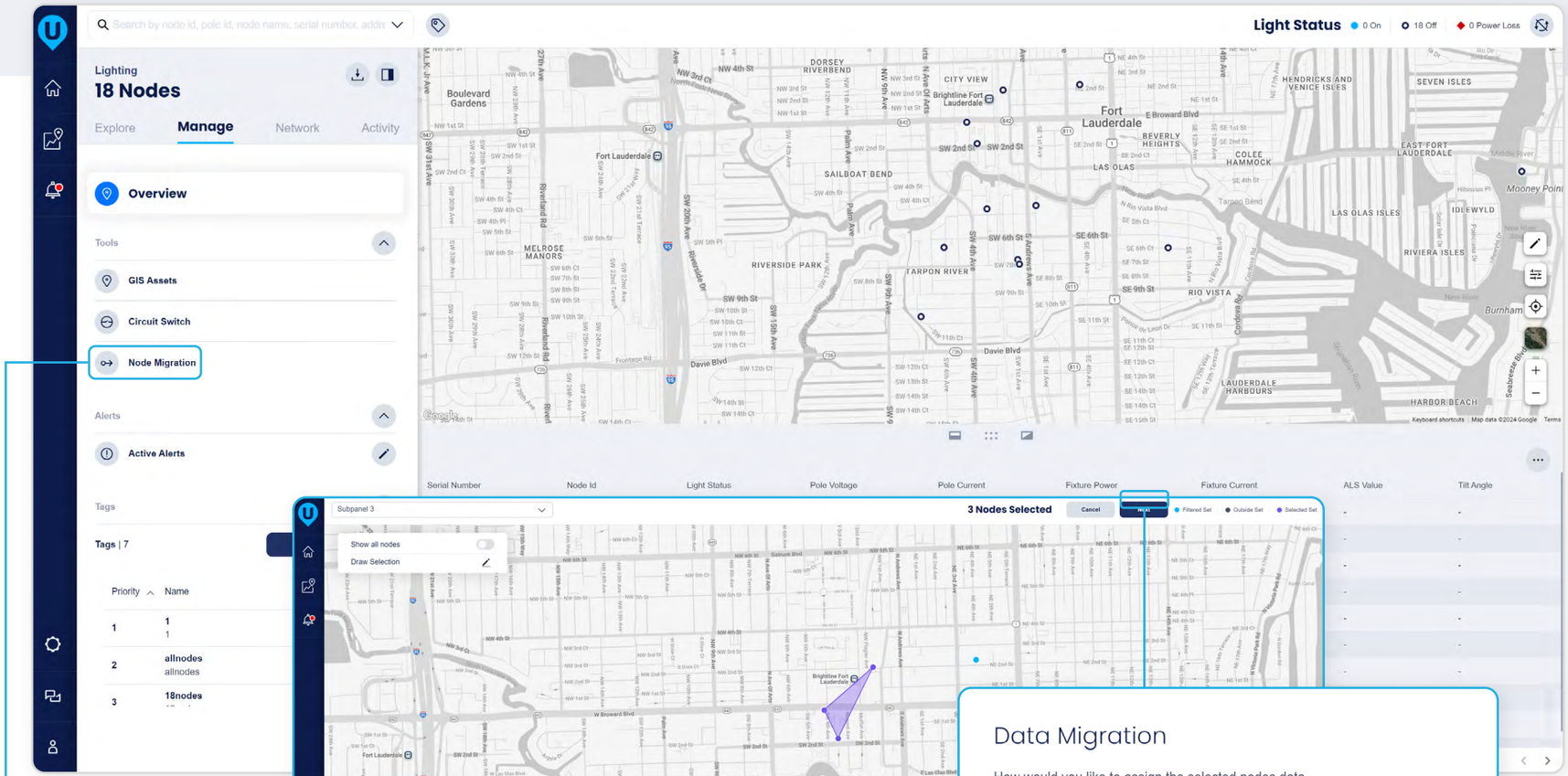


Figure 6 - Map Page > Manage Tab > Node Migration Tool

Figure 7 - Node Selection Screen

Review the info on the **Migration Summary** screen. If you chose to copy settings (See **Figure 8**), the tags, schedules, and threshold templates assigned to each node will be listed in their corresponding columns on the summary screen.

NOTE: Custom fields will not migrate to the new subpanel - they should be re-created if needed.

If you chose to remove settings, only the Node ID, Node Name, and Pole ID will migrate with the nodes.

Click the Back button to return to the **Node Selection** screen if you want to add or remove nodes, or change whether settings are copied or removed.

Click Confirm to begin the migration. You will be re-directed back to the map. While in progress, the **Node Migration** tool will be unavailable. When migration is complete, the **Node Migration** tool will be ready to use again.

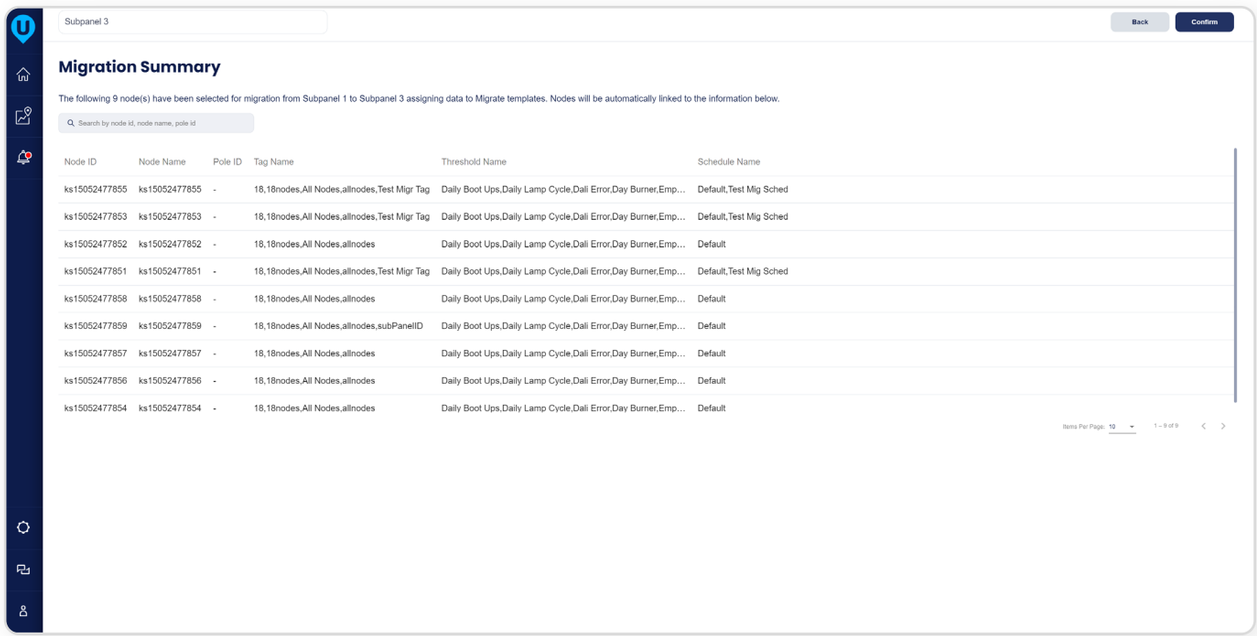


Figure 8 - Migration Summary - Copy Settings Chosen

1.3 DASHBOARD

The UbiVu Dashboard (see **Figure 9**) is your home page. It provides a summary of your deployment at a glance. If applicable, hover over the logo in the top left corner to search for and select a different UbiVu panel or subpanel. Use the tabs in the top left, under the name of your panel, to select a desired capability. This will highlight that capability's node status widget and update the **Insights** section to show all associated insight widgets.

If applicable, use the arrows beneath the map to cycle through the node status widgets. Click a node status widget to jump to the **Map** page for that capability.

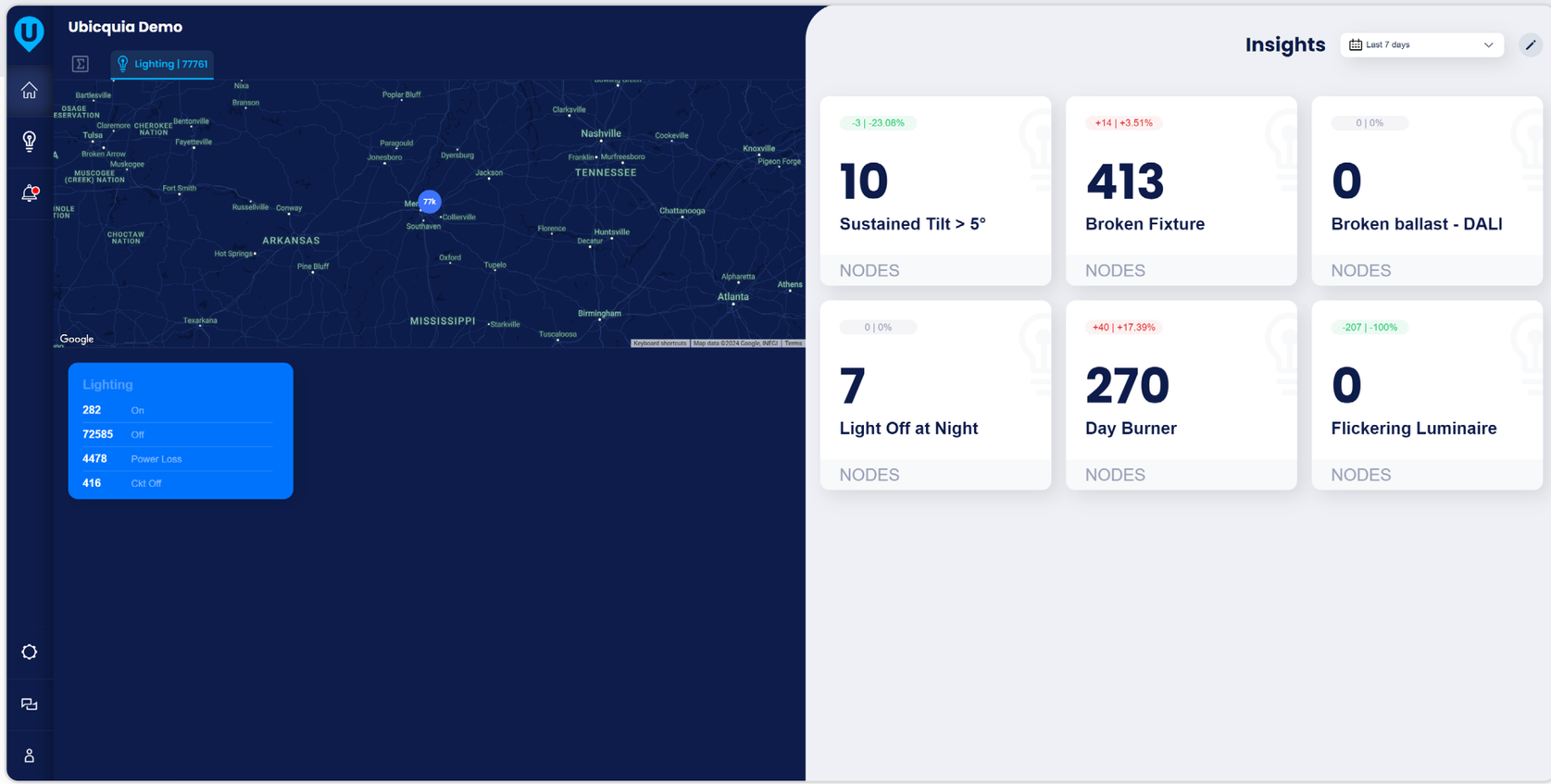


Figure 9 - UbiVu Dashboard

1.3.1 Insights

Your UbiVu panel leverages advanced analytics to detect fault signatures, helping you identify and resolve issues before they escalate.

Customize your **Insights** to keep a close eye on key variables that matter most to your city. Click the button to re-order your insight widgets.

When in edit mode, click the icon and drag to re-order your widgets. The top three widgets per capability will be those displayed when **All Nodes** is selected on your **Dashboard**.

Click on an insight widget to investigate further on the **Alerts** page. See the appendix of this guide for definitions.

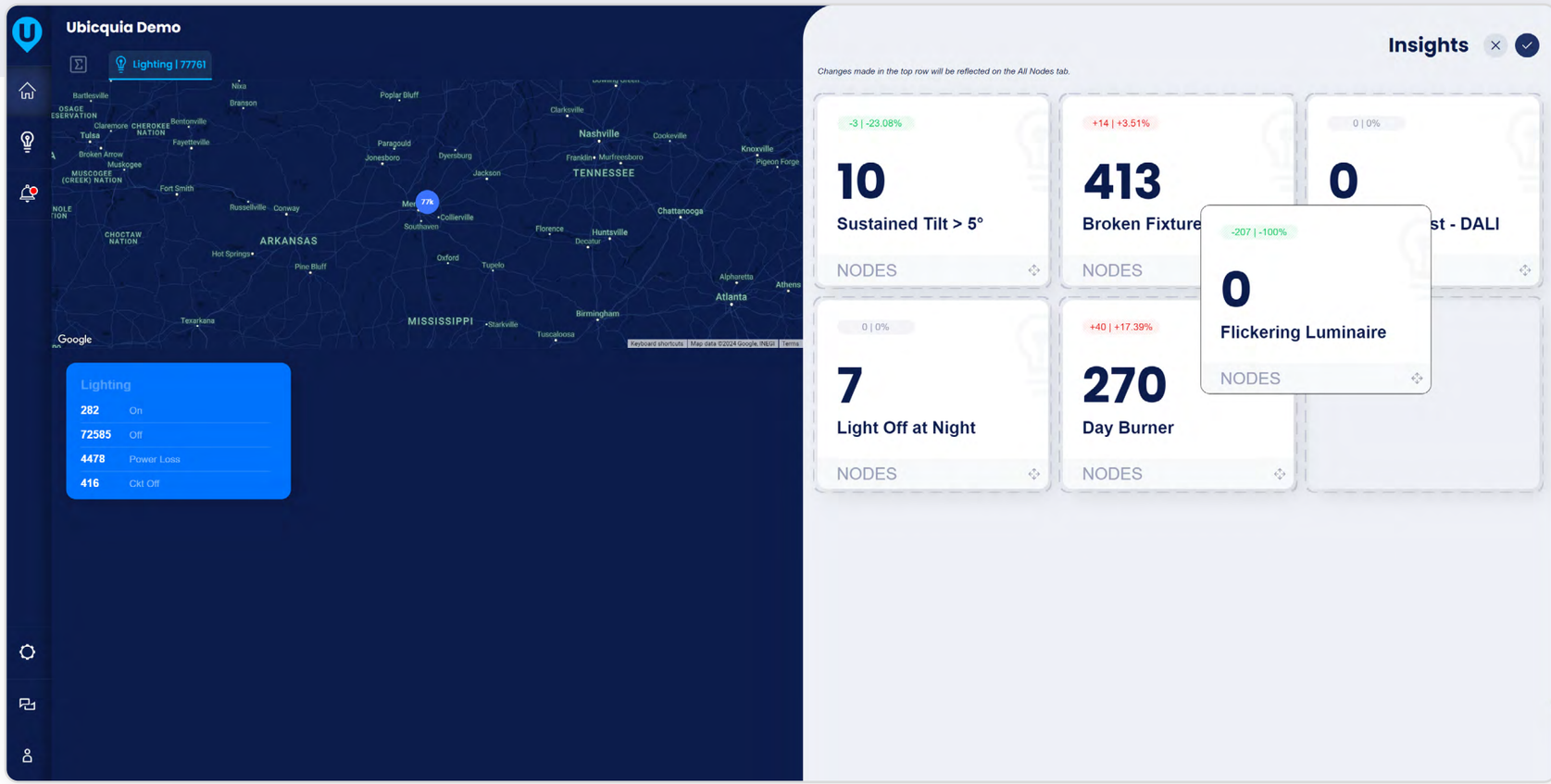


Figure 10 - Edit Insights

1.3.2 Switching Subpanels

When the Subpanel feature is enabled and multiple subpanels are available, hover over the logo in the top left corner of any UbiVu page to choose another subpanel. The currently selected subpanel will be highlighted in the list of available subpanels.

When multiple subpanels are selected, remember that nodes from one subpanel may not have the same threshold templates, schedule templates, and tags available as nodes from another. Also, when multiple subpanels are selected, or when working with the master view (**All Subpanels** selection), the only Configuration menu options available are **Panel User Management** and **Subpanel Management**. Select a single subpanel to adjust other settings.

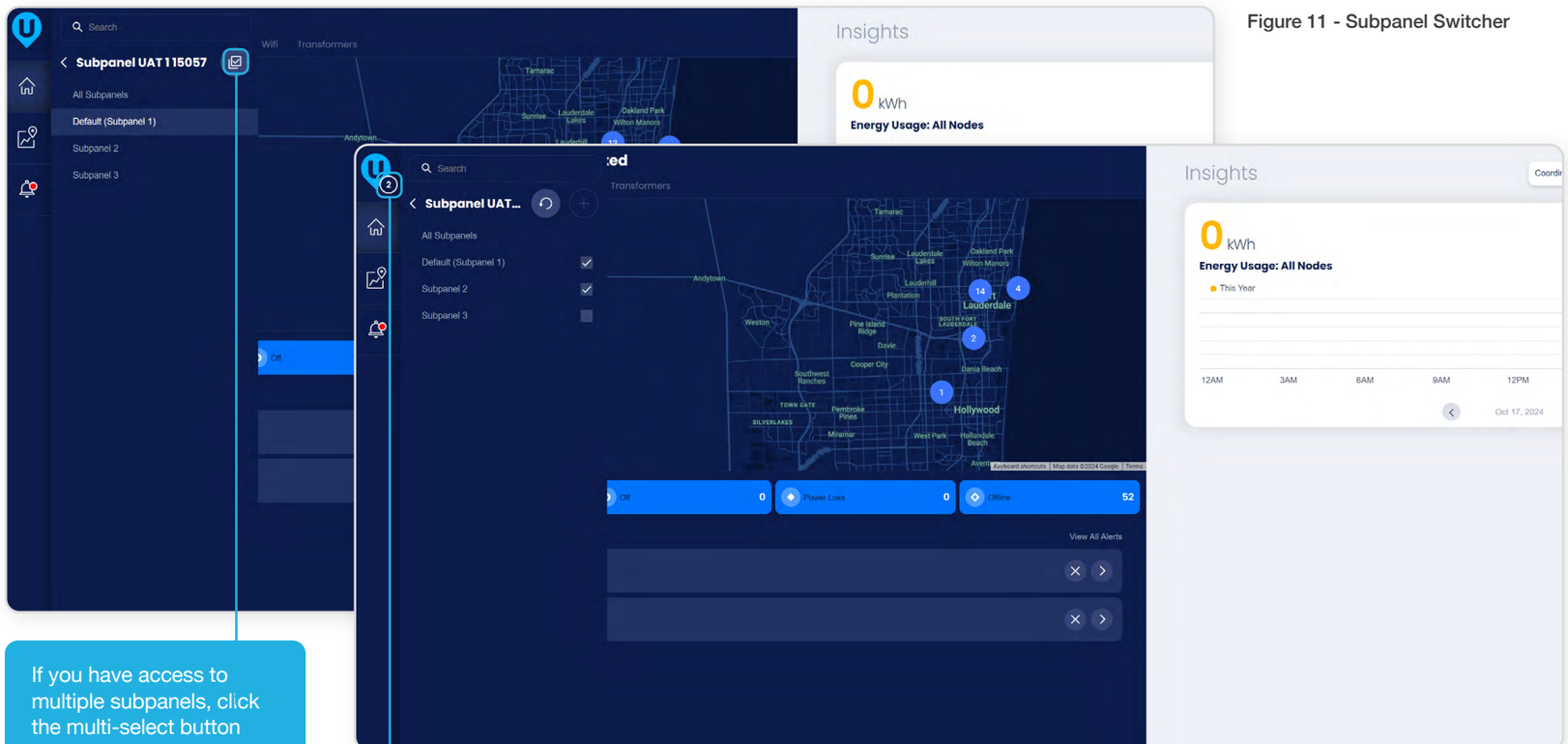


Figure 11 - Subpanel Switcher

If you have access to multiple subpanels, click the multi-select button to choose multiple subpanels.

Click the ⊕ icon to confirm your selection. Note that the number of subpanels selected will display in the bottom right corner of the logo. This icon will show an **M** for Master View when the All Subpanels option is selected.

Figure 12 - Multi-Select Subpanels

1.4 MAP

Your **Map** page may appear as a lightbulb icon if your only deployment is Lighting. If more than one Ubicquia solution was deployed, when you hover over the Map page icon, the capability switcher will appear (see **Figure 13**).

Regardless of the selected capability, the Map page in UbiVu will show a large map with a collapsible side panel for analysis and controls on the left side, and a collapsible nodes table on the bottom right. The top bar on this map provides filter and search options and a node status key for the map (see **Figure 14**).

Depending on the capability selected (Lighting, Transformers, etc.), your panel and map may be set to one of four views (Explore, Manage, Network, or Activity) which will affect the node status indicators and information that displays as you toggle between views.

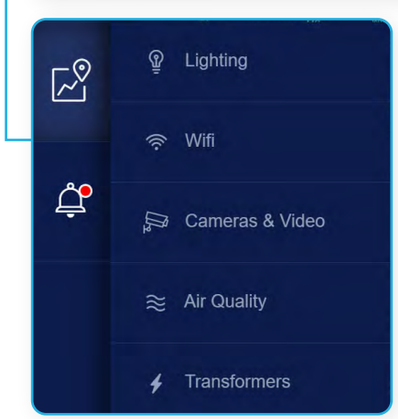


Figure 13 – Capability Switcher

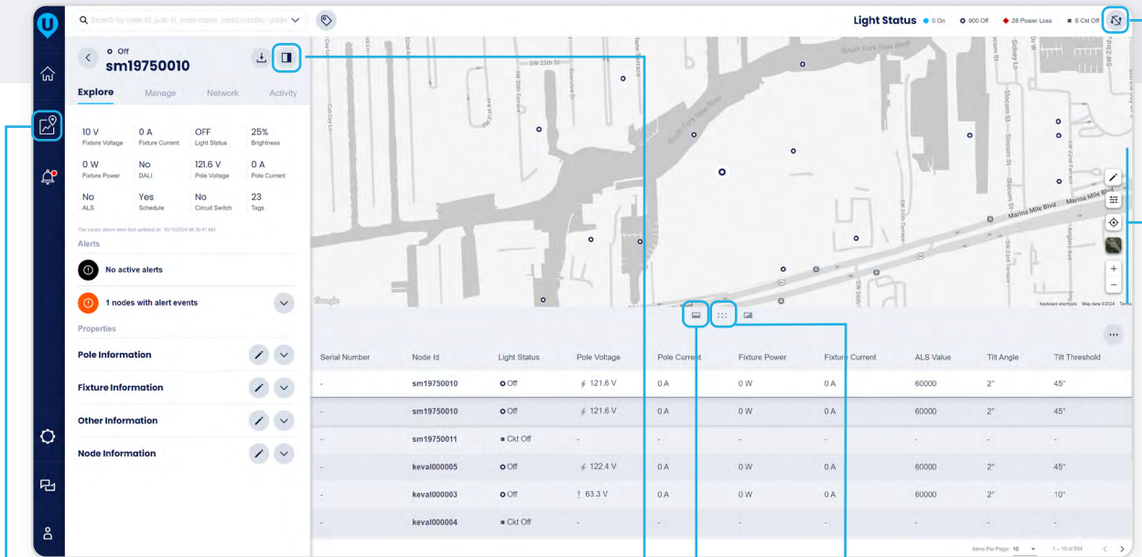


Figure 14 - Location Page

Use these buttons to collapse or expand the left panel or nodes table.

Click and drag the six dots on the nodes table to customize table size.

Click the Refresh icon in the top right corner of the Location page to customize your map and nodes table refresh settings. Your selection will last for the duration of your session.

There are several node statuses users should become familiar with:

- **ON:** the light is on.
- **OFF:** the light is off.
- **Power Loss:** the node is not communicating with UbiVu due to suspected loss of power.
- **Circuit Off** (Ckt Off): the node is installed to a pole on a circuit switch and the circuit is off (see the Lighting - Circuit Switch section for more info).
- **RMA:** the node has been marked for return by you or your system administrator
- **No Network:** the node has not sent a message to UbiVu in 48 hours or longer.

NOTE: Contact your Ubicquia representative to disable the 48-hour offline feature and your nodes will show as No Network if the node has not sent a message to UbiVu in an amount of time which is 1.25 times the set reporting frequency. For example, a unit with a 60 minute (1 hour) reporting period would show offline if it had not reported to UbiVu in 75 minutes (1 hour, 15 minutes).

Use these map control buttons to create a temporary filter, edit your map preferences, recenter, or toggle map views.

1.4.1 Nodes Table & Reporting

The nodes table is located at the bottom of the **Map** page. Collapse or expand it to your preferred size (see **Figure 14**). Select a node from the nodes table to view details specific to that node on the left panel. When a node is selected from the nodes table, click the Recenter button on the map (see **Figure 14**) to center on that node.

The data fields shown on the table are customizable and exportable. Available fields vary based on the installation type (i.e., Light Switch is only available for Lighting installations). Custom fields can be created from the **Configuration** page for most installation types, and these fields can be added to the nodes table.

Click the menu ··· button in the top right corner of the nodes table for options.

Choose **Edit Table** to open the Edit Table window (see **Figure 15**). Select the drop-down menu button in any field to replace it with a new data element. Use the **Search** bar in each drop-down menu to quickly search for the desired field. Click the **X** to the right of any field to remove that column. Click the + on the far right of the Edit Table window to add a new column. Click **Cancel** in the bottom left to exit the window without saving changes, **Apply** to save changes and exit, or **Reset** to revert the nodes table columns completely back to default.

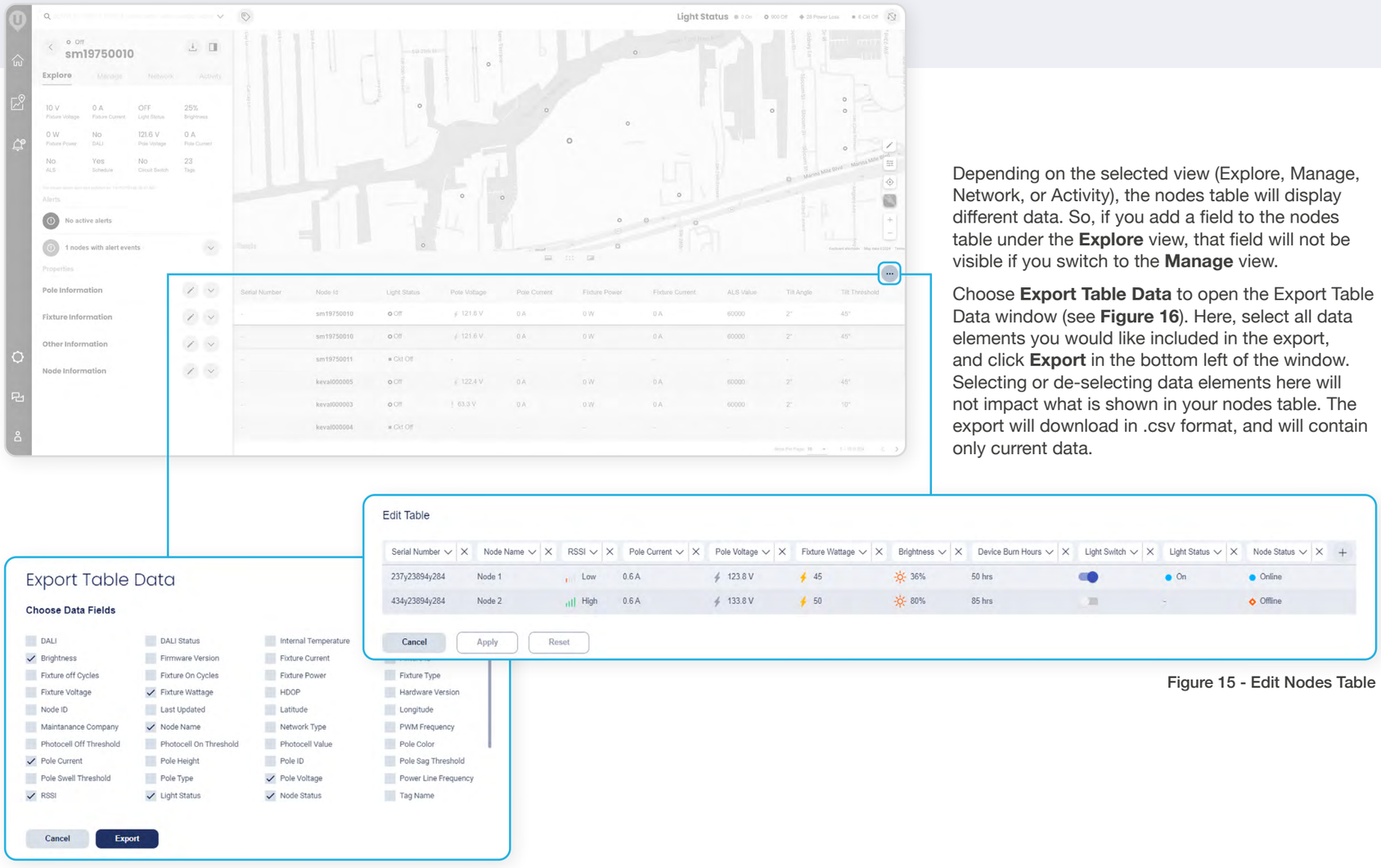


Figure 15 - Edit Nodes Table

Figure 16 - Export Table Data

Depending on the selected view (Explore, Manage, Network, or Activity), the nodes table will display different data. So, if you add a field to the nodes table under the **Explore** view, that field will not be visible if you switch to the **Manage** view.

Choose **Export Table Data** to open the Export Table Data window (see **Figure 16**). Here, select all data elements you would like included in the export, and click **Export** in the bottom left of the window. Selecting or de-selecting data elements here will not impact what is shown in your nodes table. The export will download in .csv format, and will contain only current data.

Additional reporting options are available for each product. Click on the download button in the top right corner of the side panel when it is expanded to open the **Export Data** window.

Data can be exported for all nodes, or for a selection of nodes based on what filters are applied (see the Map - Tags & Filters section for more information on filters). Any applicable filters will display at the top of this window, along with a count of the selected nodes, before reporting options are chosen. On this first page of the Export Data window, users must choose a report type and click **Next** to proceed (see **Figure 17**). Report types will vary depending on the selected capability.

On the second page of the Export Data window, users must choose a reporting period. Pre-selected options include Today, 24 Hours, Previous 7 Days, Previous 30 Days, and Past Month, or custom dates can be selected from the calendar (see **Figure 18**).

Users can also opt to create a scheduled report, which will generate at the selected time (daily, weekly, or monthly), and include data for the time passed between each report date (e.g., a weekly report will include a week's worth of data). Scheduled reports can be managed from the **User Profile page** (see the User Profile section for more details).

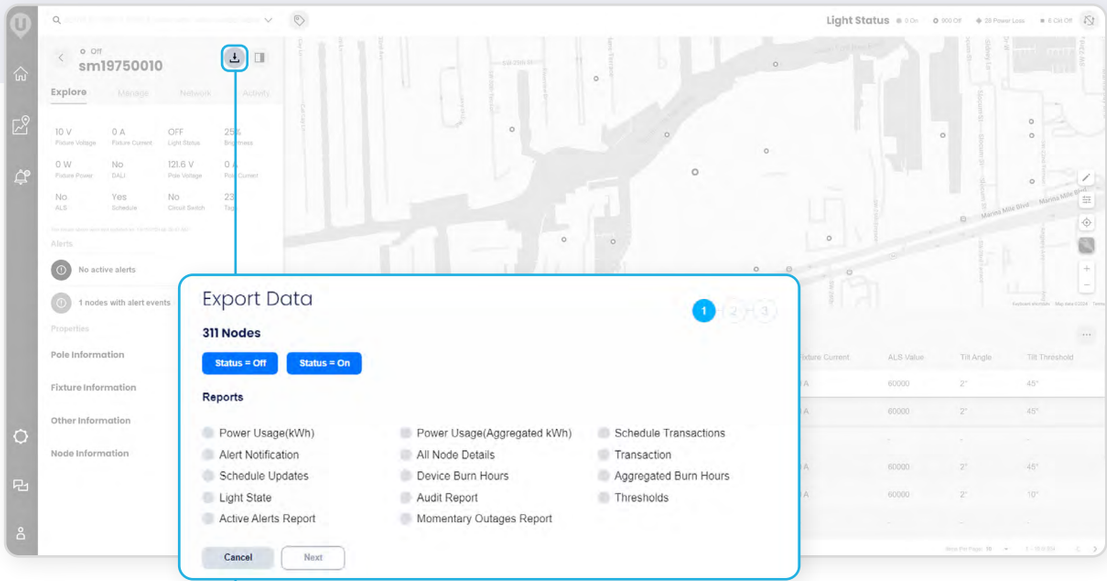


Figure 17 - Export Data Page 1

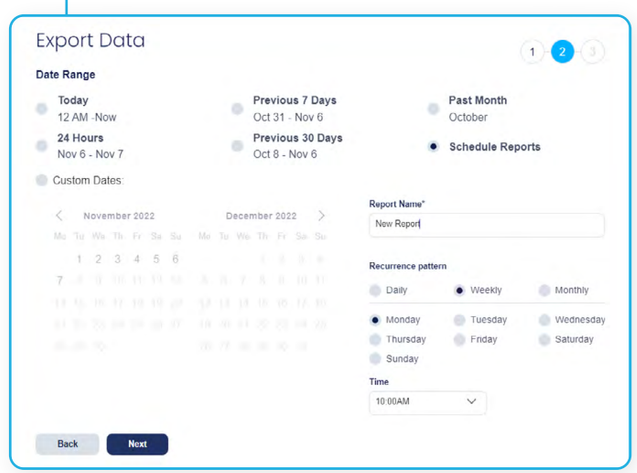


Figure 18 - Export Data Page 2

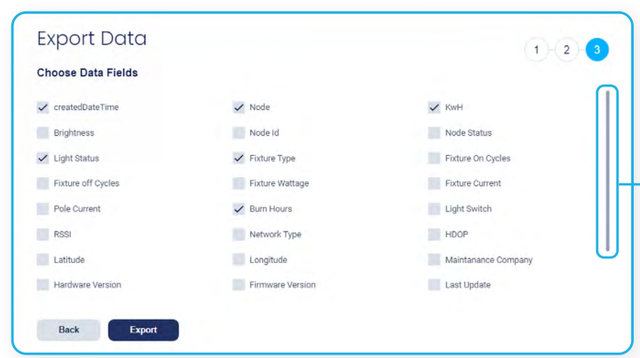


Figure 19 - Export Data Page 3

Use the scroll bar to see additional data field options.

The last page of the Export Data window contains a list of additional reporting column options. Each report contains default columns, but UbiVu gives users the option to add to or remove these default columns. Make any adjustments and click **Export** to pull your report (see **Figure 19**).

UbiVu will generate your report in the background. When it's ready, you will receive an email notification with a link to download your report (see the Appendix section for reporting definitions).

1.4.2 Tags & Filters

Tags are pre-defined, multi-purposed groups of nodes. They can be used to easily schedule specific groups of lights to turn on or off at set times, or to closely monitor activity in specific locations. The potential for use is limitless, and so is the number of tags a user can create.

Tags can be created and edited from the **Map** page for each capability. Select the **Manage** view on the side panel and scroll to the Tags section. From here, click the **Select Nodes** button. This will direct you to the Tag map view.

Your nodes table is still available to expand or collapse at the bottom of the screen, with a limited number of columns specific to the tag view. You can use the columns to search for specific node IDs or node names.

Select nodes from the nodes list or the map. Selected nodes will display as purple dots (see **Figure 20**).

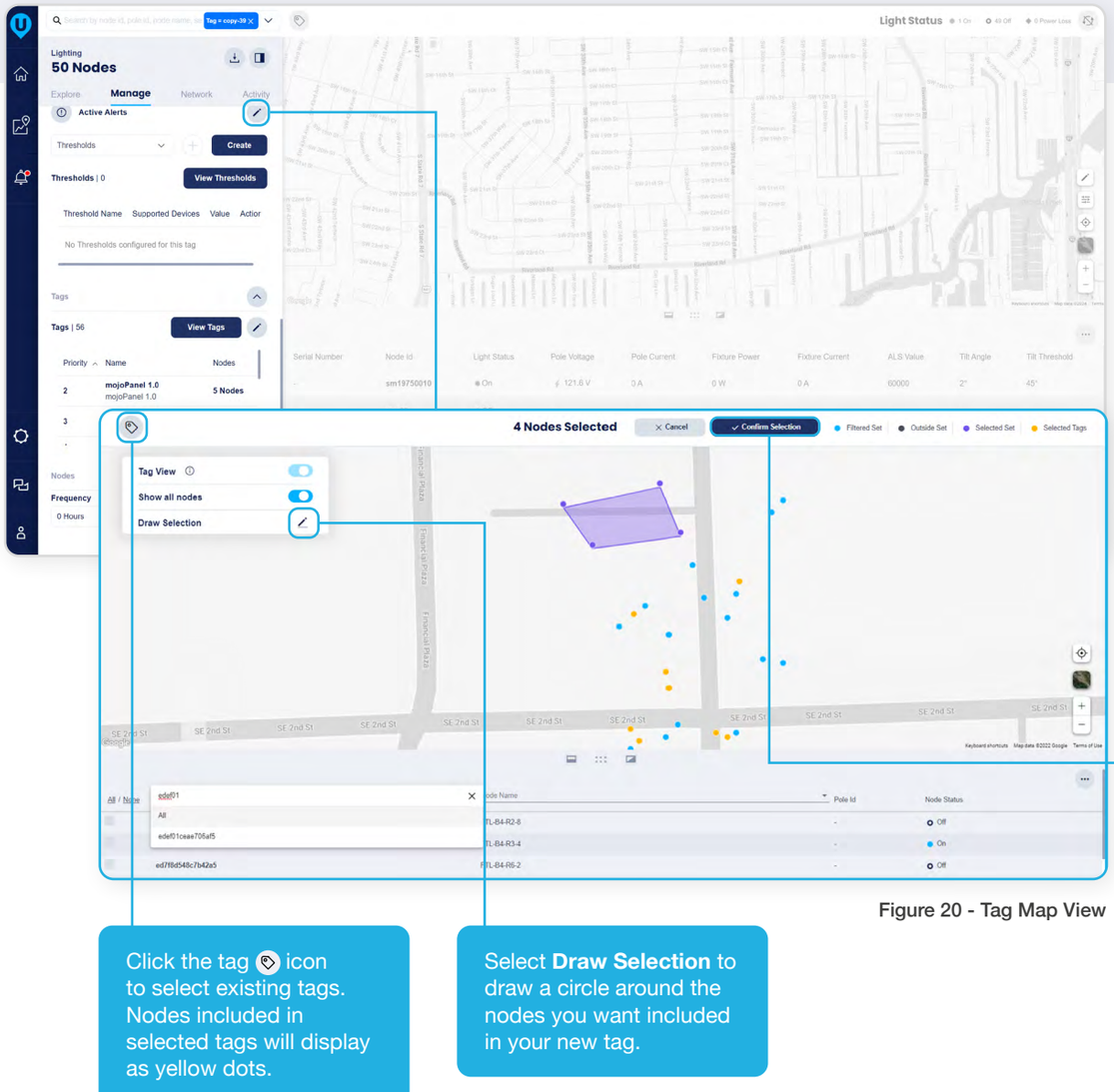


Figure 20 - Tag Map View

Click **Confirm Selection** at the top of the screen when node selection is complete. This will open the Tags window (see **Figure 21**), which will show a list of existing tags in which any of the selected nodes are already included. Users will then have 3 options:

1. Click the **X** to the right of any tag to remove the selected nodes from that tag.
2. Search for an existing tag to add the selected nodes to (click the **Save** button to add nodes).
3. Enter a new name and click **Create Tag** to create a new tag.

When done with tag management, click **Cancel** at the top of the screen (see **Figure 20**) to exit the tag map view.

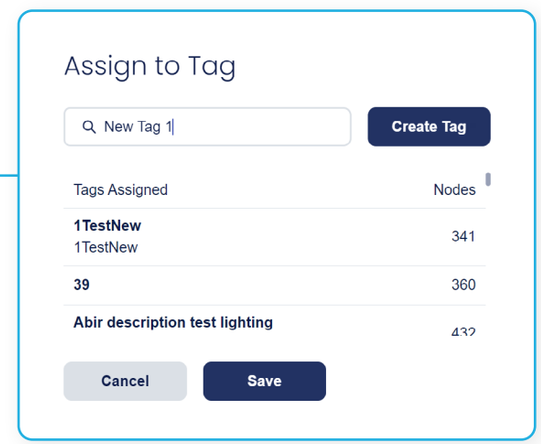


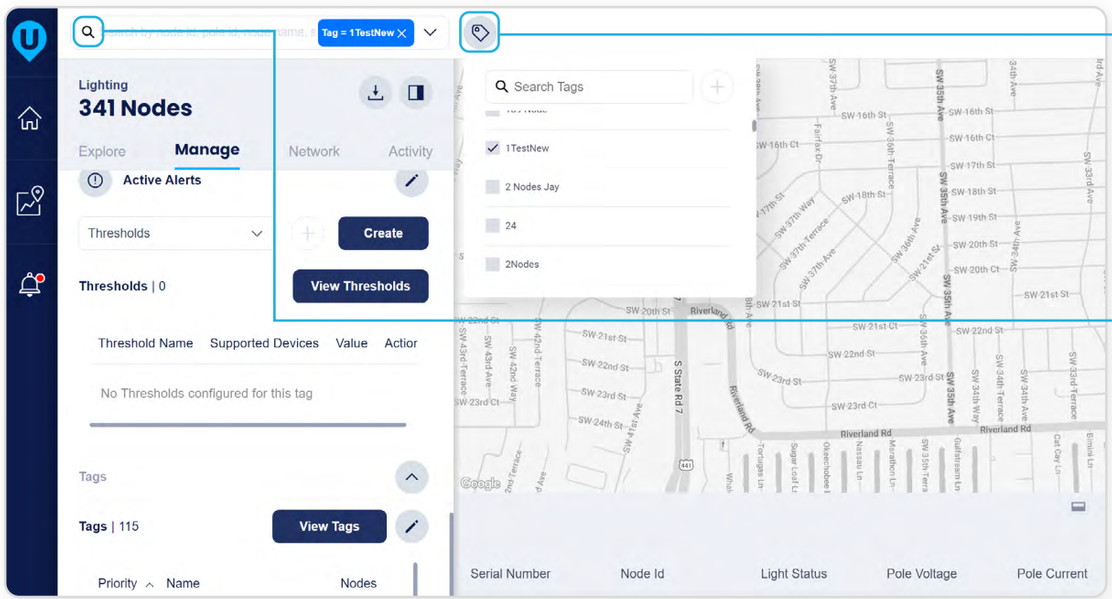
Figure 21 - Tags Window

To view only the nodes included in a tag on your map, click the tag icon on the search & filter bar (see **Figure 22**). Search for and select the tag from the drop-down list and click the plus icon to add this tag to the filter bar. Your map and nodes list will now only display nodes included in the tag.

You can also click the **View Tags** button on the side panel (**Manage** view) to scroll through or search your tags list, edit tag descriptions and names, view nodes included in tags, and remove tags.

UbiVu offers many other filter options, which vary by capability. Explore these options by clicking the expand button to the right of the search & filter bar.

NOTE: If some nodes in a tag are ON and the rest are OFF, the light switch will display as OFF. Toggle the switch once to turn all nodes ON, and twice to turn all nodes OFF. Remember that it may take a moment for the panel to show the nodes as ON or OFF.



Use the tag icon to filter for one or multiple tags quickly, without having to sift through other filter options.

This is the search & filter bar where applied filters will appear in blue boxes. Click the **X** to the right of any applied filter to immediately remove it.

You can also use the search icon here to search your installation by address, zip code, node ID, node name, pole ID, or serial number.

Figure 22 - Filter for a Tag

Why Use Tags?

Joe has UbiCells installed on all the lights in Sunshine Park. The park closes at 9 PM, and while Joe needs the park lights to stay on all night, he wants to save energy by turning off the tennis court lights at 9PM.

Joe creates a **tag** and includes all the UbiCells that are installed at the tennis court. While all the other nodes in Sunshine Park are on a photocell schedule, he can put the tennis court lights on their own schedule to turn off at 9PM.

Rachel's city installed UbiHub® APAI in multiple locations. The amount of data is overwhelming. She wants to focus on viewing data from Main Street where there are 3 major intersections.

Rachel creates a **tag** including only the UbiHub® nodes that were installed on Main Street. She can now filter out all other UbiHubs and analyze data only from the nodes included in her Main Street tag.

Click the star ☆ button to quickly select a saved filter, or create a new filter by choosing from the **Attribute** drop-down menu. Then, select an operator or value (see **Figure 24** for a table of operator definitions). Once a value is selected, click the plus ⊕ icon to apply the new filter.

If an operator is chosen, next enter the desired value, then click the plus ⊕ icon to apply the new filter (see **Figure 23**).

1.4.3 Node Details

Check out the 4 views available on the **Map** page's side panel:

- **Explore**: displays an overview of your deployment with high level data points and alerts. Select a single node to view specific metrics and node information.
- **Manage**: view, edit, and create schedule or threshold templates and tags. Perform mass node management actions such as migration (if the subpanel feature is enabled), circuit switch management, GIS assets, camera and audio profile application, streaming requests, sensor management, and more! Select a single node or tag to perform actions on a small selection of nodes.

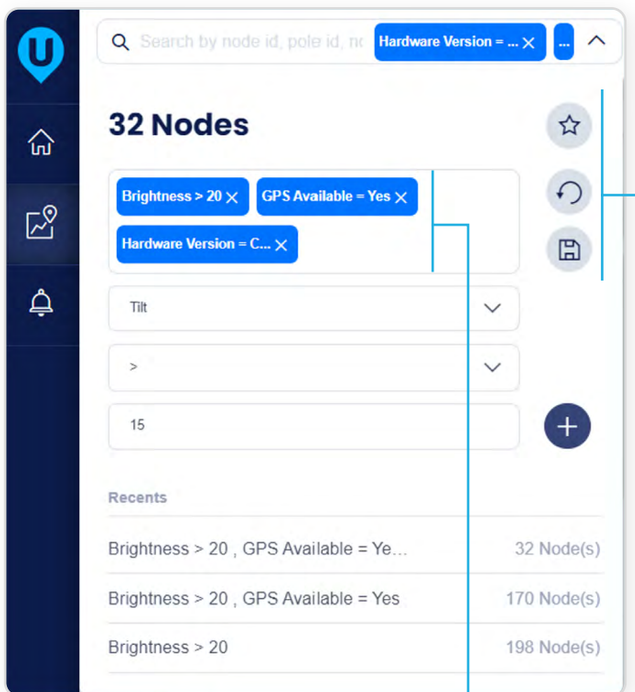


Figure 23 - Filter options

Click the refresh ↻ icon to clear all filters and start over. Click the save 💾 icon to save the current filter set for easy access later.

Apply as many filter options as you need! Hover over a blue box to view the full filter description.

- **Network**: provides an overview of your deployment's connection status. Focus on network, communication, and signal strength with this view.
- **Activity:** analyze collected data and gain valuable insights using the charts and graphs tools available under this view.

For more in-depth information on the functionality available from the Node Details panel, jump to the applicable capability section: **Lighting**, **WiFi**, **Cameras & Video**, **Air Quality**, **Transformers**.

OPERATOR DEFINITION

>	**Numeric operator** – filtered results will contain all nodes that have a value which is greater than the entered value in the chosen attribute field.
<	**Numeric operator** – filtered results will contain all nodes have a value which is less than the entered value in the chosen attribute field.
>=	**Numeric operator** – filtered results will contain all nodes that have a value which is greater than or equal to the entered value in the chosen attribute field.
<=	**Numeric operator** – filtered results will contain all nodes that have a value which is less than or equal to the entered value in the chosen attribute field.
=	**Numeric or alphanumeric operator** – filtered results will contain all nodes that have a value which equals the exact entered value in the chosen attribute field.
!=	**Numeric or alphanumeric operator** – filtered results will contain all nodes that have a value which does not equal the exact entered value in the chosen attribute field.
Contains	**Alphanumeric operator** – filtered results will consist of nodes containing the entered value in the chosen attribute field.
Not Contains	**Alphanumeric operator** – filtered results will consist of nodes that do not contain the entered value in the chosen attribute field.

Figure 24 - Table of Operator Definitions

1.5 ALERTS

The **Alerts** page has a side panel and collapsible table on top of a map, like the **Map** page.

Alerts are organized by default on the left side panel with the most recent of the last 7 days at the top of the list. At a glance, you can see a count of alert events and the number of nodes impacted by each recent alert type.

Use the search & filter bar at the top of the side panel to increase focus and efficiency. Adjust the date range, and filter by product, alert type, hardware version, resolution status, date range, or custom fields. Use the search bar itself to find specific nodes by node ID, name, serial number, or pole ID. Search an address to view that area on the map.

Alerts page filters function similarly to **Map** page filters. See the Tags & Filters section of this guide for more information.

NOTE: If you leave the **Alerts** page, your current filters will not stay applied as they do on the **Map** page, but they can be found in the **Recents** list.

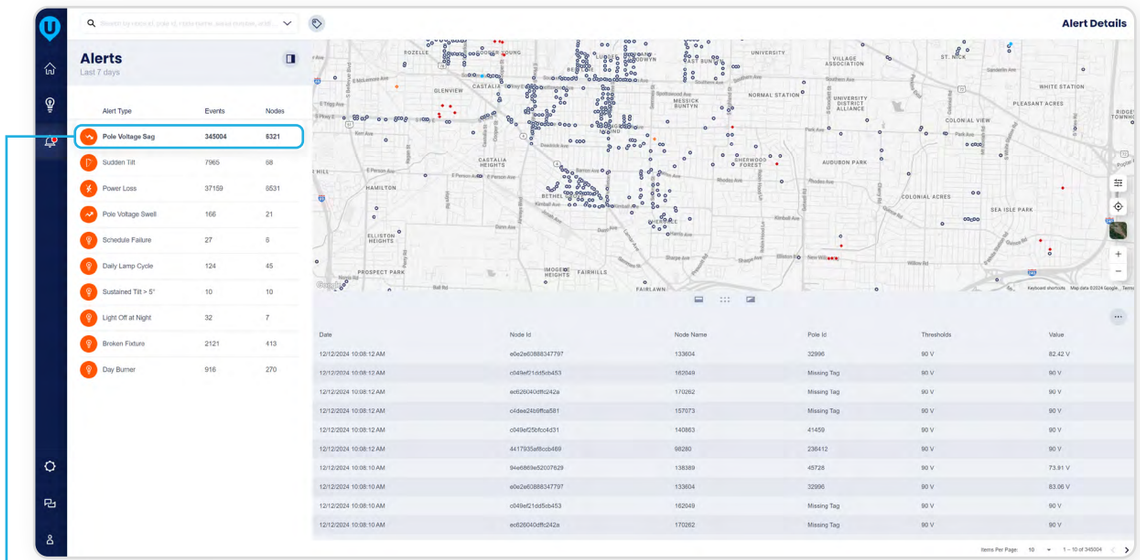


Figure 25 - Alert Organization

Select an alert from the side panel to view more data in the nodes table and on the map.

Notice that the table displays additional information such as the time of each alert, the node's ID and name, the name of the threshold template, the set threshold, and the detected value.

The fields shown here will vary based on the selected alert type and capability, and they can be adjusted based on your preference.

Edit the columns the same way you would edit the **Map** page nodes table – click the menu ··· button, then select **Edit Table**. Notice that you can export the table data using this menu as well.

Users can investigate the alert and mark it as resolved using the **Resolved** column. UbiVu will update the name of the user who resolved the alert, and the resolved date and time. This information will be viewable by all other users with the appropriate permissions.

Visualize data for applicable alert types in the graphs available when you select an alert and a node. Hover over a data point on an associated graph for specific details.

Want more information on this node without losing your place on the Alerts page? Click the View Node button to see the selected node on the **Map** page in a new tab.

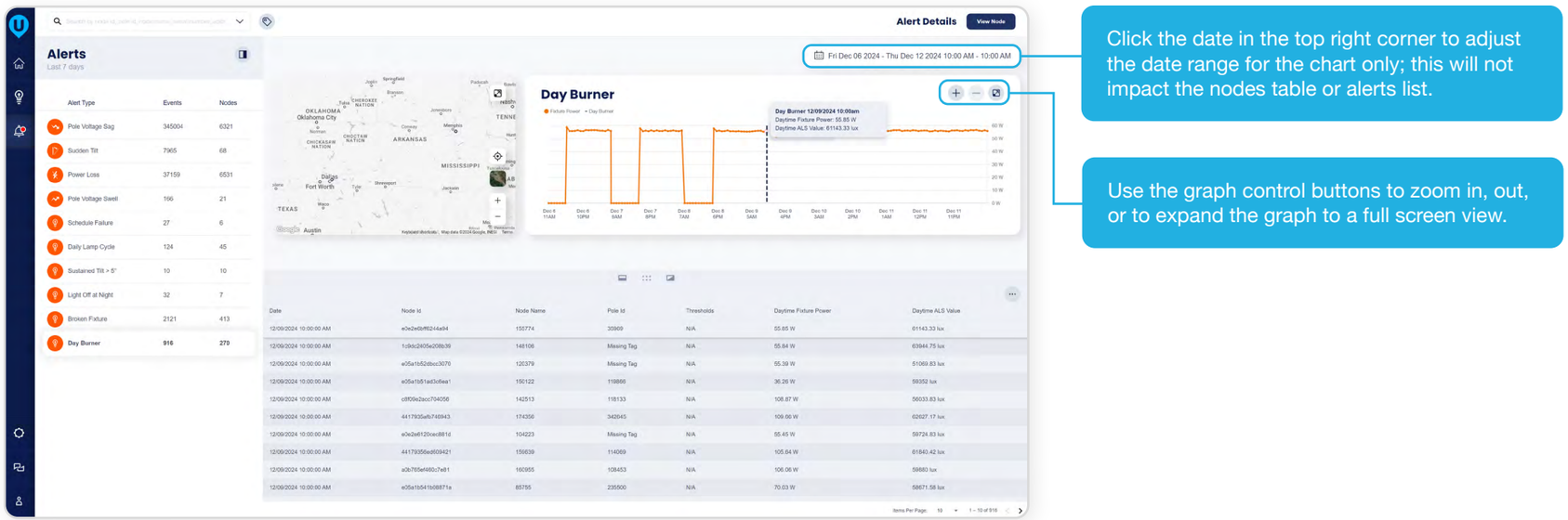


Figure 26 - Alerts Page Chart Example

Click the date in the top right corner to adjust the date range for the chart only; this will not impact the nodes table or alerts list.

Use the graph control buttons to zoom in, out, or to expand the graph to a full screen view.

1.5.1 Active Alerts

For all capabilities with applicable thresholds, active alerts can be set up for close monitoring on the **Map** page – **Manage** tab – **Alerts** section (see **Figure 27**).

Click the ✎ button to customize which threshold types will trigger notifications on the **Location** page under **Active Alerts**.

Once selected, these alerts will only display on the **Map** page when they are currently active. De-select every threshold type and save to turn off active alerts altogether.

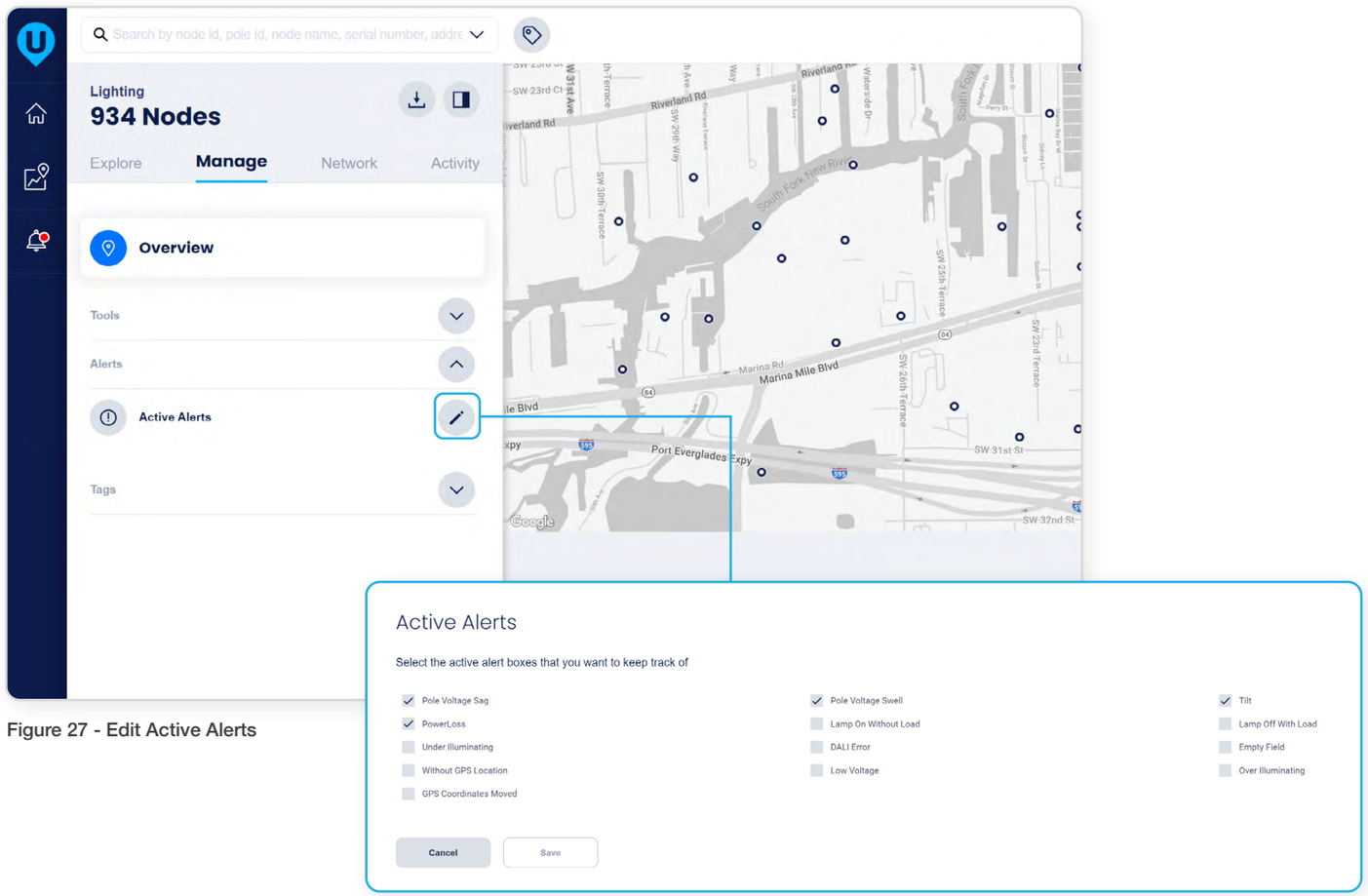


Figure 27 - Edit Active Alerts

Figure 28 - Active Alerts Selection Window

1.6 CONFIGURATION

Hover over the Configuration cog icon to view an overview of all available settings for your deployment. This is broken down into two parts (see **Figure 29**):

- **Administration**: where users will go to create and edit accounts and profiles for employees and clients, and to manage user permissions.
- **Configuration**: where users will go to create and manage various profiles and other settings which vary by deployment.

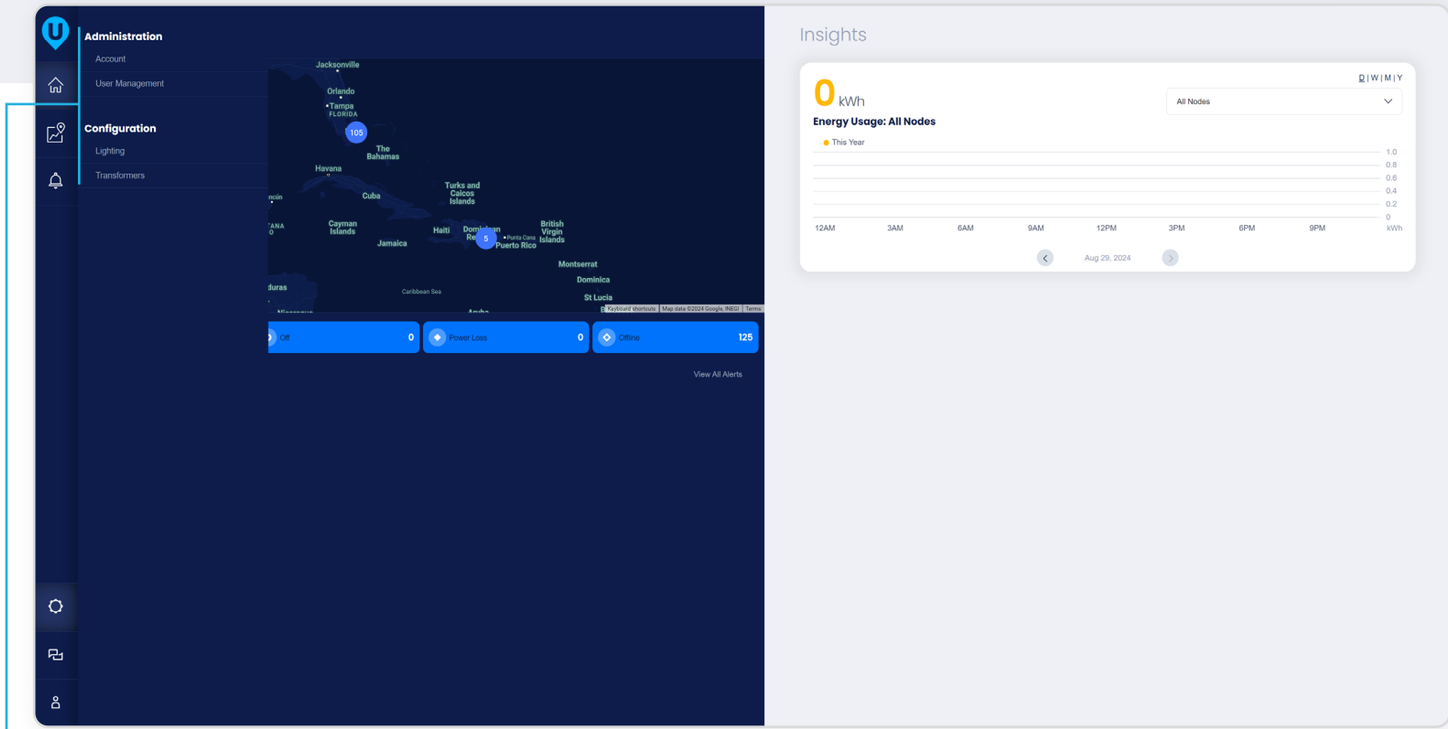


Figure 29 - Configuration Page

Select an option from the menu to lock the Configuration menu next to the left side navigation bar. The selected section will always be highlighted in this menu.

1.6.1 User Management

The User Management page contains two tabs: **Users**, where admins can create and edit user accounts; and **Roles**, where admins can create and manage custom permission profiles to save and apply to new or existing user accounts.

The Users tab contains a table of all users (see **Figure 30**) with columns for first and last name, user role, email address, user status, and an action menu ··· button. Admins can search for a specific user with the search bar at the top of the table, or add a new user by clicking the + Add User button.

There are four required fields on the **Add User** window: first and last name, email address, and role.

The phone number is optional, and can be added by the user later (see the User Profile section).

The email address must be active; once the user is added to UbiVu, they will receive an email with a link to set up their password.

Choose a role that you created, or one of Ubicquia's pre-set roles:

- **Viewer**: this user can view data only and cannot make changes to configurations, light status, or video streams and downloads.
- **Controller**: this user has all the capabilities of a viewer, but can also request video downloads, adjust light status, or make other changes on the **Manage** tab of the **Map** page.
- **Admin**: this user has all the capabilities of a controller, but can also manage other user accounts and all other settings on the Configurations page.

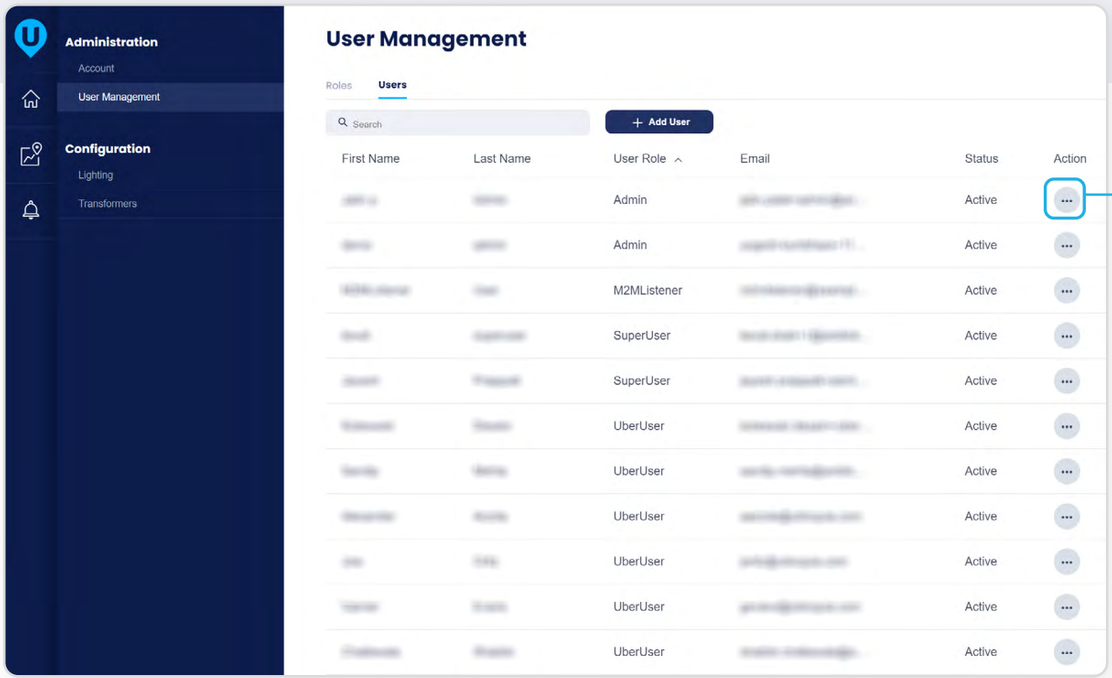
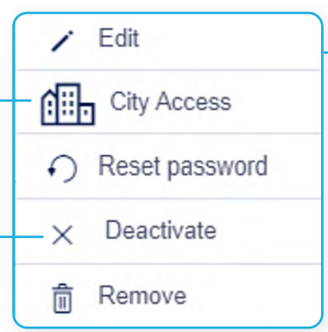


Figure 30 - Users Tab

If applicable, provide a user with access to multiple UbiVu panels using the City Access option.

Deactivating a user will leave you with the option to provide them access again later. Removing the user will completely delete their account.



Any of these roles can be customized per user using the switches and checkboxes on the Add User window (see **Figure 31**).

Existing user permissions can be edited using the menu ··· button in the Action column (see **Figure 30**). The only field that cannot be edited after a user is added is the email address.

If a mistake is made, or the user's email address needs to be updated, remove the incorrect user account (see **Figure 30**), and create a new one with the updated email address.

NOTE: a user's API access level will match that of his UbiVu account access level. If the user is only able to view data for one capability, he will only be able to use API calls to view data. Provide a user with "Manage" access to use API calls to configure settings and make changes.

NOTE: If Single Sign-On (SSO) is enabled, user and role management cannot be done in UbiVu. Contact Ubicquia Support for more information about configuring SSO.

The **Roles** tab contains a list of all saved custom roles. Here, you can create custom access level profiles that can be applied to multiple users.

Click the + Create New Role button to open the Create Role window. The same options available in the Add User window (see **Figure 31**) can be seen here, with the exception of the user info fields at the top. Enter a name and customize the access settings as needed, then click the Save button to complete the role.

The list of roles is organized alphabetically. All custom roles that have been created can be edited, duplicated, or removed using the menu ··· button to the right of the role name. Ubicquia pre-set roles (Admin, Controller, and Viewer) cannot be edited or removed.

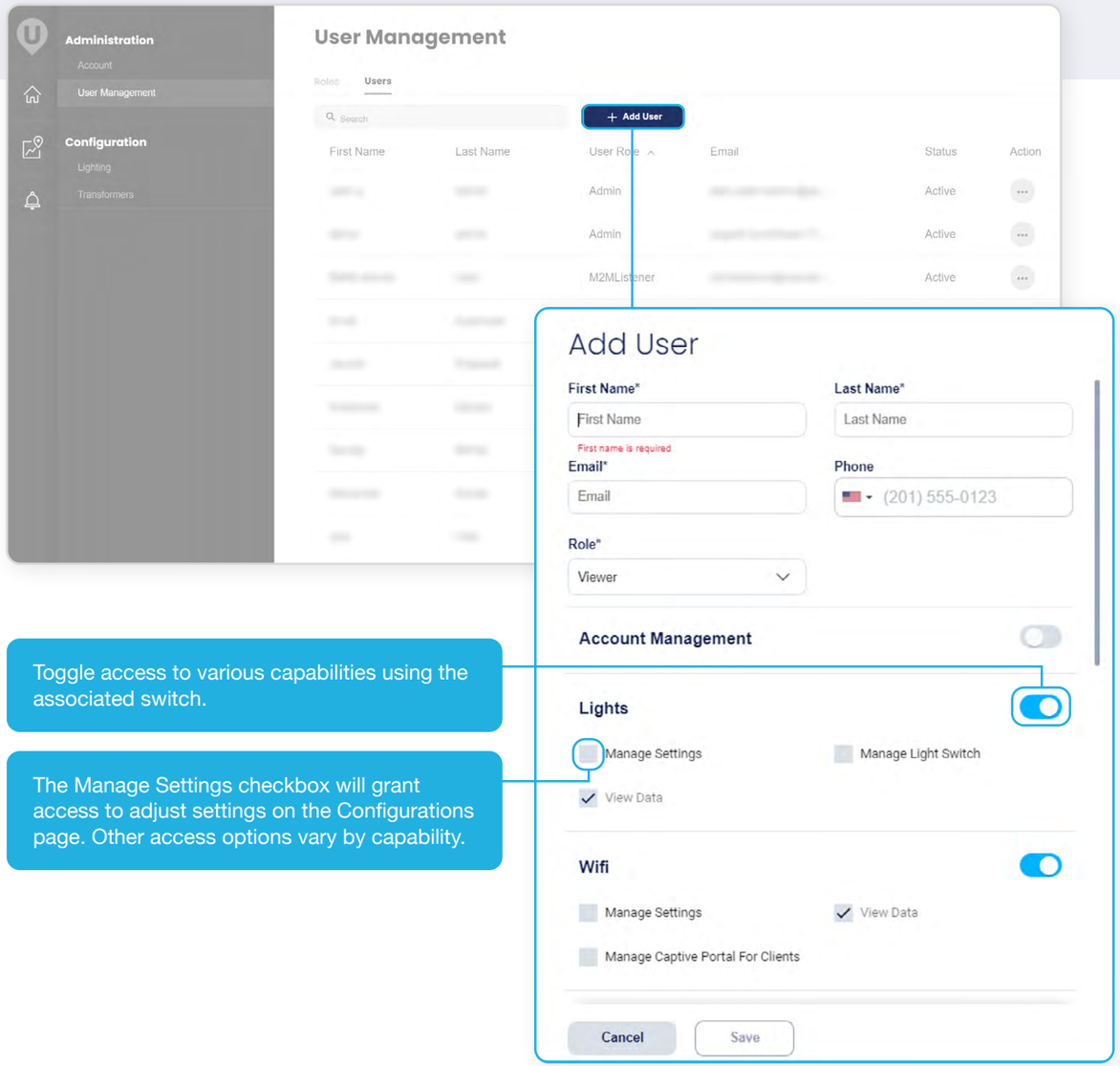


Figure 31 - Add User Window

1.6.2 Subpanel User Management

When the subpanel feature is enabled, you can create different roles for access levels unique to each subpanel. From the applicable subpanel's **Configuration** menu, select **Subpanel User Management**. Create new roles here on the **Roles** tab and switch to the **Users** tab to add users who only need access to that subpanel (see **Figure 32**).

Navigate to the **Panel User Management Configuration** page to manage overall access to your UbiVu panel as usual, with some adjustments now that the subpanel feature is active.

On the **Users** tab, you'll see a Subpanels column. Click the ⌄ button to view that user's subpanel access settings (see **Figure 33**).

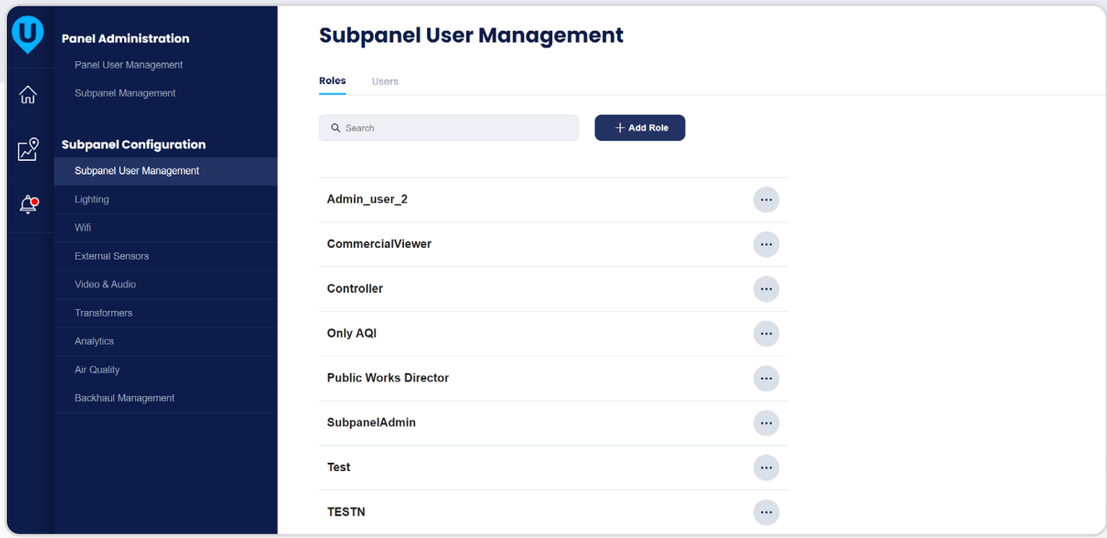


Figure 32 - Subpanel User Management

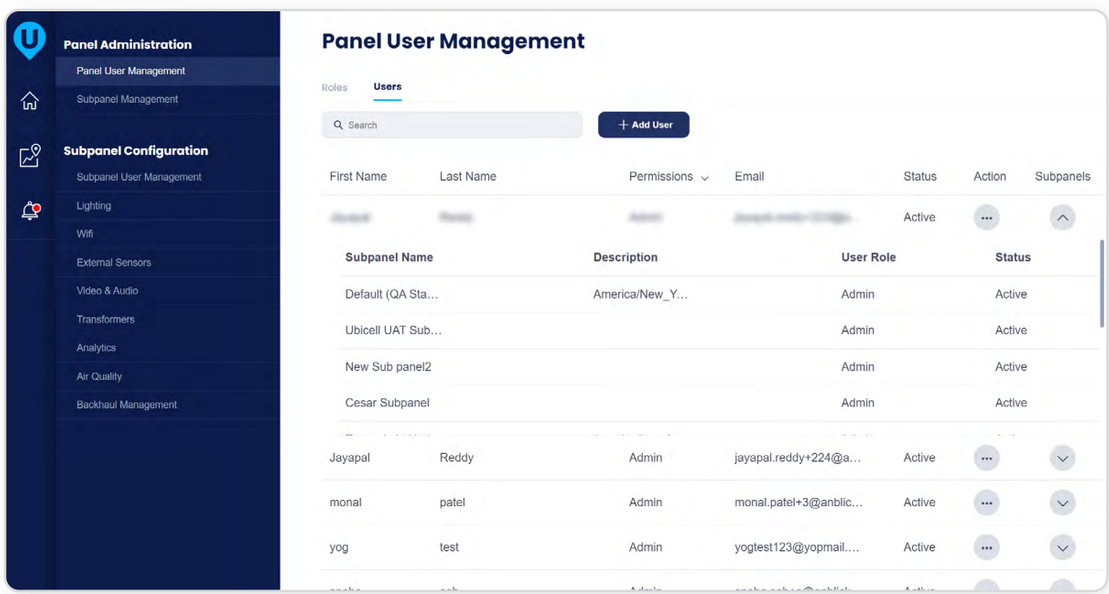


Figure 33 - Overall UbiVu Panel User Management

Add users and grant access to all subpanels with either the Admin role (ability to create and edit subpanels and their configurations), or the Panel Viewer role (ability to view all subpanels) – (see **Figure 34**).

Grant access to specific subpanels here as well – toggle the **Subpanel Role Management** switch from the **Add User** window and select the desired subpanel(s). Then, choose a role from the associated drop-down menu (see **Figure 35**).

NOTE: The roles found in these menus can only be edited and created from their associated subpanel's **Subpanel User Management** page.

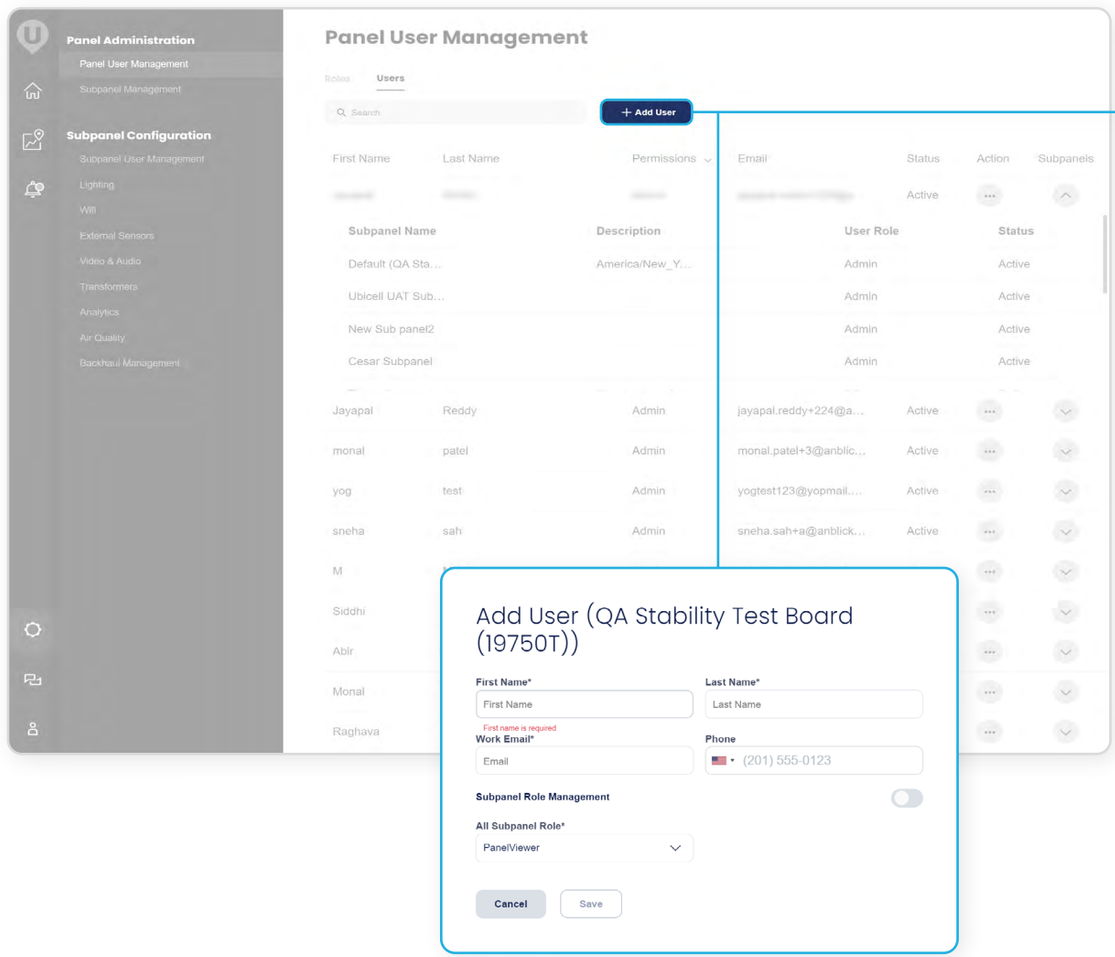


Figure 34 - Add User window

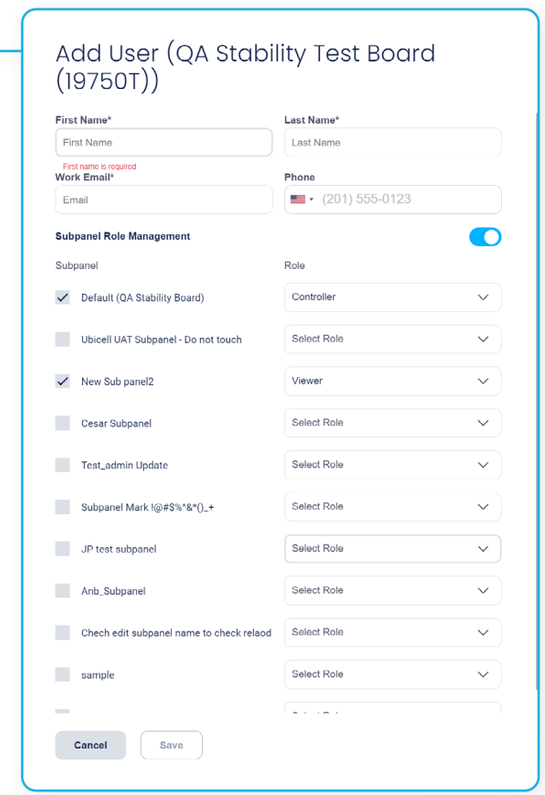


Figure 35 - Add User window

1.6.3 Threshold Templates

Threshold templates can be created on the applicable **Configuration** page and applied to individual nodes or tags on the **Map** page. Threshold templates can be created and assigned for Lighting, Transformers, and Air Quality capabilities.

When thresholds are set in a template and the template is assigned to a node or tag, an alert will trigger if those thresholds are exceeded. There are various ways to receive alerts, which can be configured by individual users based on their preference (see the User Management section for more information).

To create threshold templates for Lighting, go to the **Lighting Configuration** page – **Thresholds** tab. Travel here directly from your map by clicking the View Thresholds button on the side panel (see **Figure 36**) and clicking the **Configuration** page link in the bottom right of the pop-up window. Here, templates can be created by clicking the + Add Threshold button. Edit or delete a template using the menu ··· button in the appropriate threshold list.

When creating or editing a threshold template, the **Add Threshold** window will open, where users must name their template and select an attribute. Depending on which attribute is selected, one or more values may need to be entered. For a list of threshold types and their definitions by capability, see the Appendix section.

Start receiving vital notifications immediately – create a default threshold template for each alert type which can be assigned not only to existing nodes, but also to new nodes as they are installed.

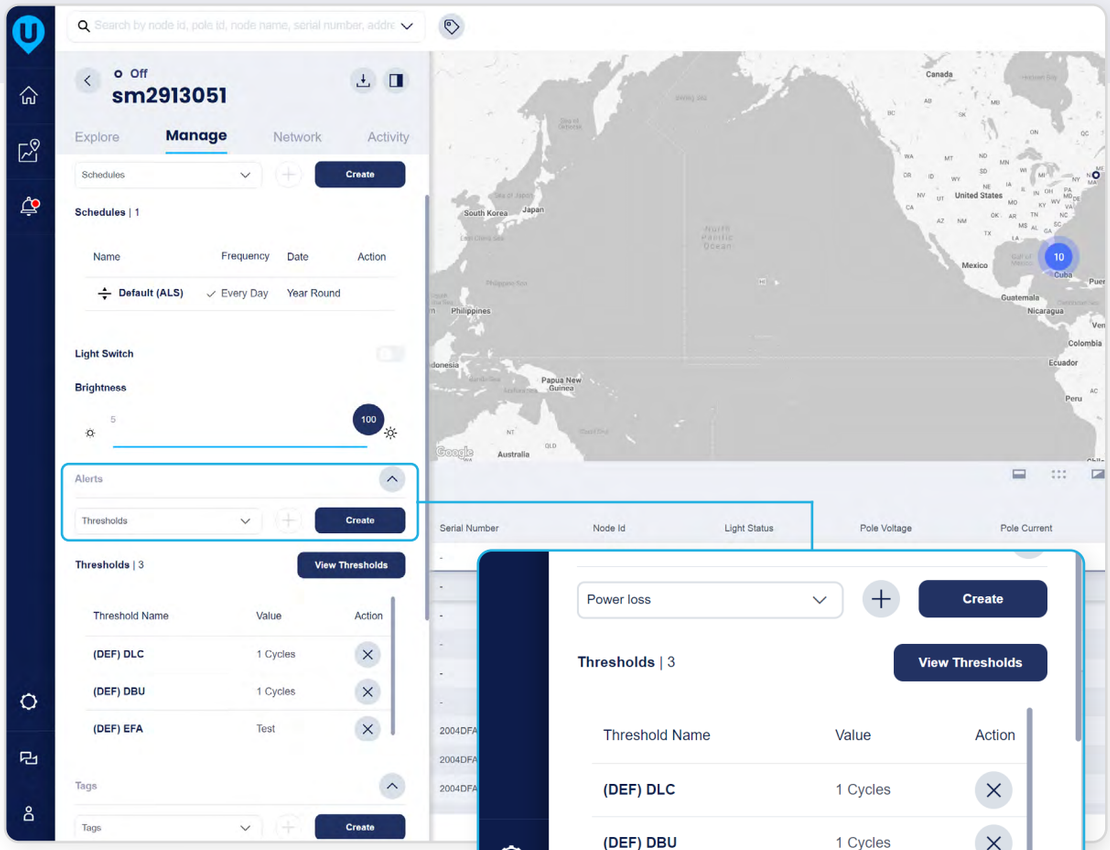


Figure 36 - Lighting Thresholds

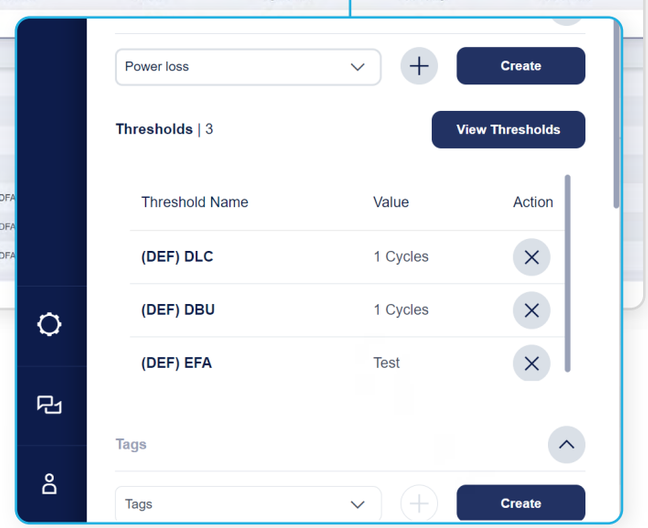


Figure 37 - Add a Threshold Template

Select the checkbox at the bottom of a new or existing threshold template to mark it as a default template. If you manage a UbiGrid® DTM+ installation, select whether the default template should be applied to single or three phase nodes only, or to both single and three phase nodes.

When ready, click Next. Then, choose to either assign the default template only to new nodes, or to all nodes (new and existing). You can create one default threshold per alert type and, if applicable, per transformer type.

NOTE: Each threshold type (attribute), when selected, will display devices which support that threshold type (for example, the **lamp off with load** threshold type can only be used with H1 and C3 devices). See the Appendix section for hardware version definitions.

Once a template has been created, it can be applied to a node or tag from the **Map** page – **Manage**. Select an individual node or tag, then choose a threshold template from the **Thresholds** drop-down menu and click the + button (see **Figure 37**).

1.6.4 Custom Fields

Custom fields can be created from the **Lighting Configuration** page – **Custom Fields** tab (see **Figure 38**). There are also Custom Fields tabs on the **WiFi**, **Analytics**, and **Transformers Configuration** pages. Users can create up to 50 custom fields per capability, and they can be used in filters and reports to help manage deployments.

Click the + Add Custom field button to create a new custom field (see **Figure 39**). Enter a name and description for your new custom field – this will be what users on the **Map** page – **Explore** tab see. Then, select a data type: numeric or alphanumeric.

NOTE: Custom fields can be edited using the menu ··· button, reset from the edit window, or disabled using the checkbox in the custom fields list, but they cannot be completely deleted.

You can edit a custom field's name and description easily, but to change the data type you must use the reset function.

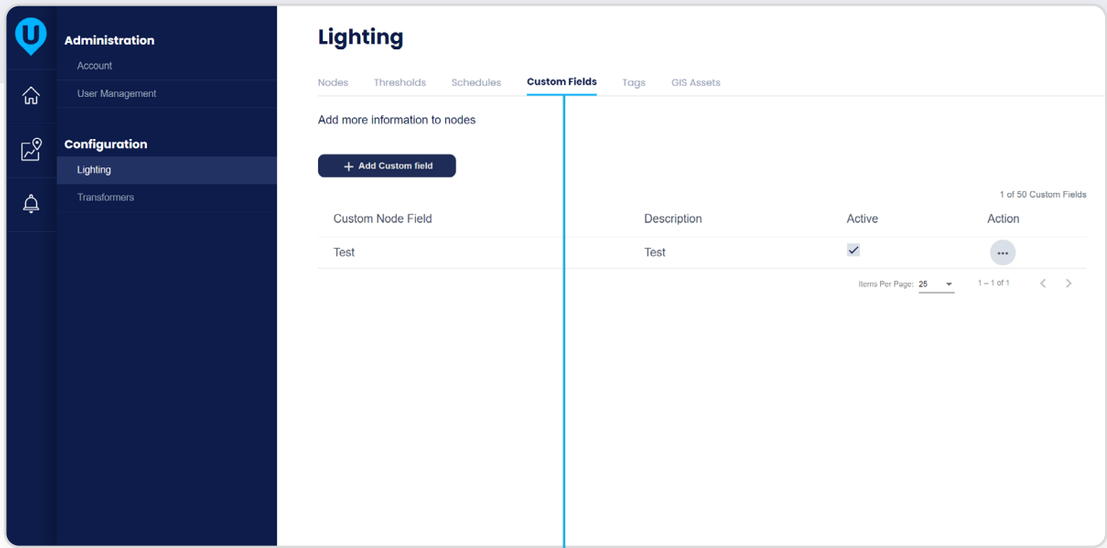


Figure 38 - Lighting Configuration - Custom Fields Tab

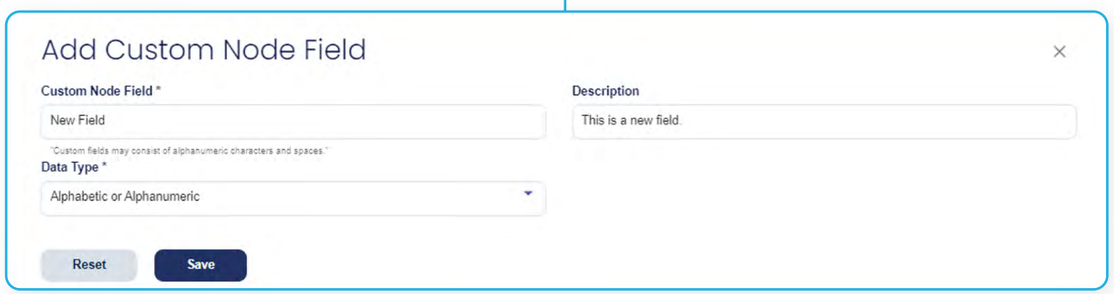


Figure 39 - Add Custom Field Window

1.6.5 Tag Management

Additional tag management features (see **Figure 40**) for all capabilities are available from the **Configurations** menu – Lighting, Video & Audio, Transformers, WiFi, or Air Quality pages. Select the **Tags** tab on any of these pages to manage your tags for the selected capability.

Create new tags by clicking the Upload Tag Data 

button and following the instructions included in the **Upload Tag Data** window.

> **NOTE:** Tag creation and some editing options are available on the **Map** page – check out the Tags and Filters section of the manual for more information.

In the tag list, click and drag existing tags to prioritize them for nodes included in multiple tags with multiple schedules assigned. You can also click on the priority number to the left of the tag name and enter a new number to change the priority.

Use the menu ··· button to edit a tag name, › to open the View Nodes window (see **Figure 41**), to quickly bump a tag to first or last priority, or to remove a tag entirely.

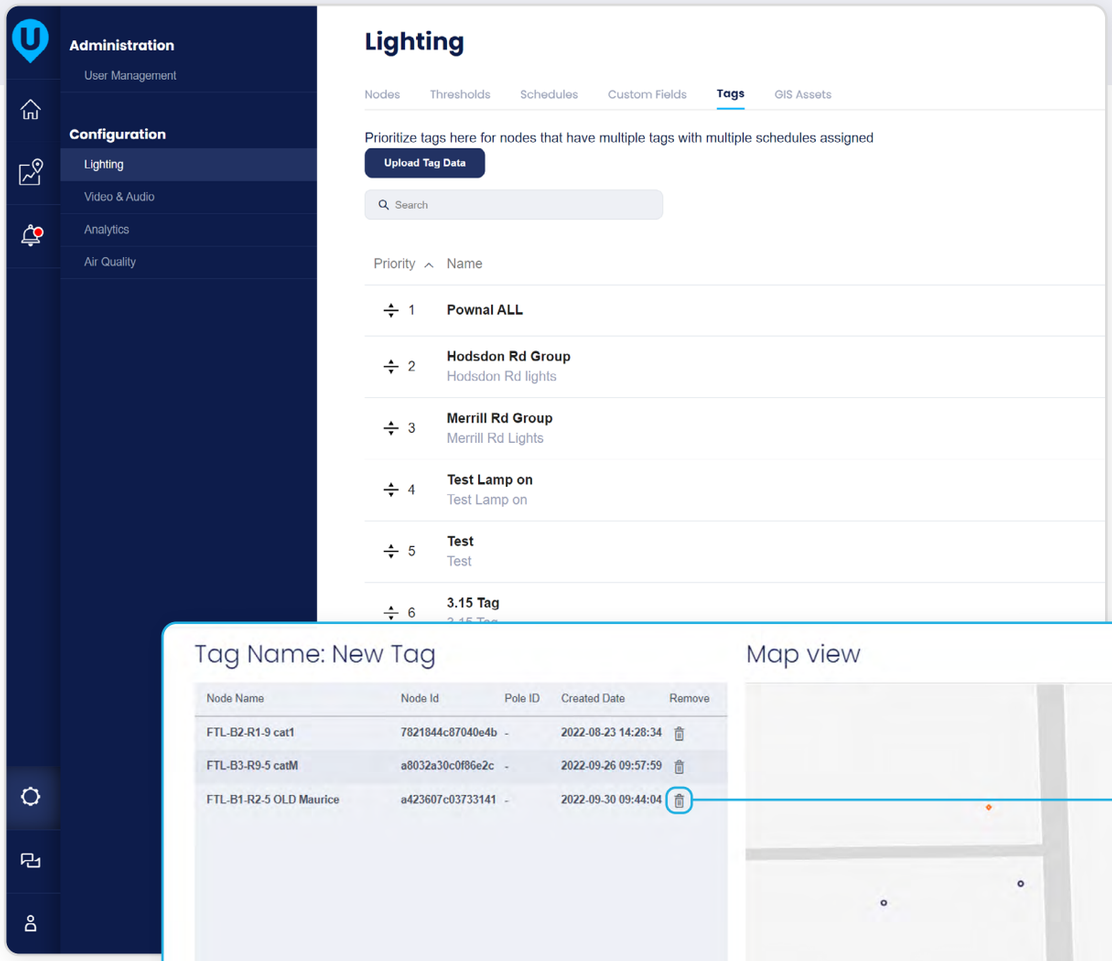


Figure 40 - Lighting Tag Management

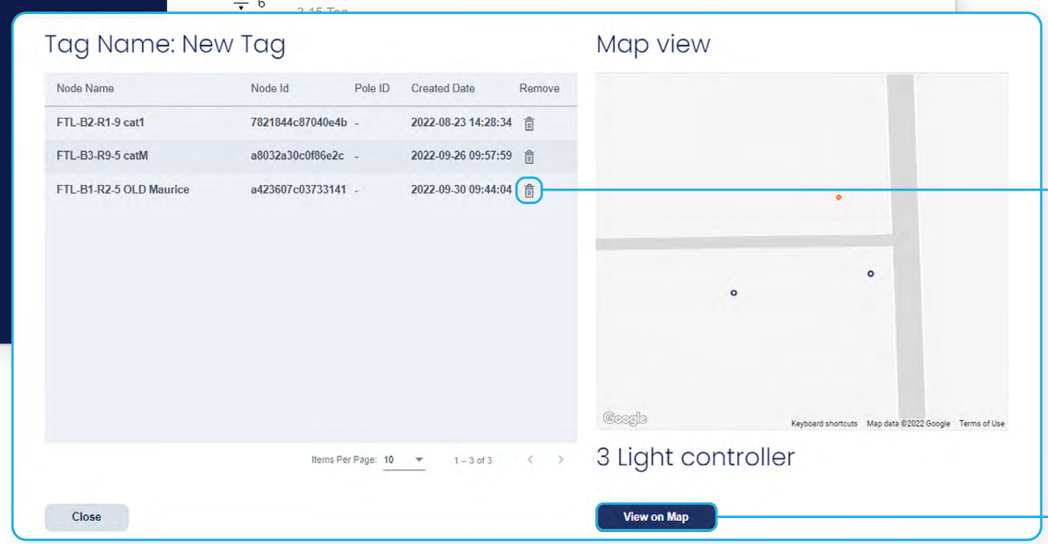


Figure 41 - View Nodes Window

Click the trash can icon to remove a node from the selected tag.

Jump to the **Map** page to see the map and nodes table filtered for the selected tag.

1.7 SUPPORT

The **Support** page has a simple form for users to create a support case and submit it directly to the Ubicquia Support team. Ubicquia's address, and the support phone number and email are also available on this page.

When filling out the **Contact Us** form (see **Figure 42**), be sure to enter accurate contact information so the support team will be able to reach you with a response. It is also helpful if you include your location or UbiVu panel name in the description.

NOTE: Ubicquia Support will respond to your request within 24 hours, but during hours of operation, the support team usually responds within one hour.

Hours of Operation:
Mon – Fri, 9:00 AM – 5:30 PM ET

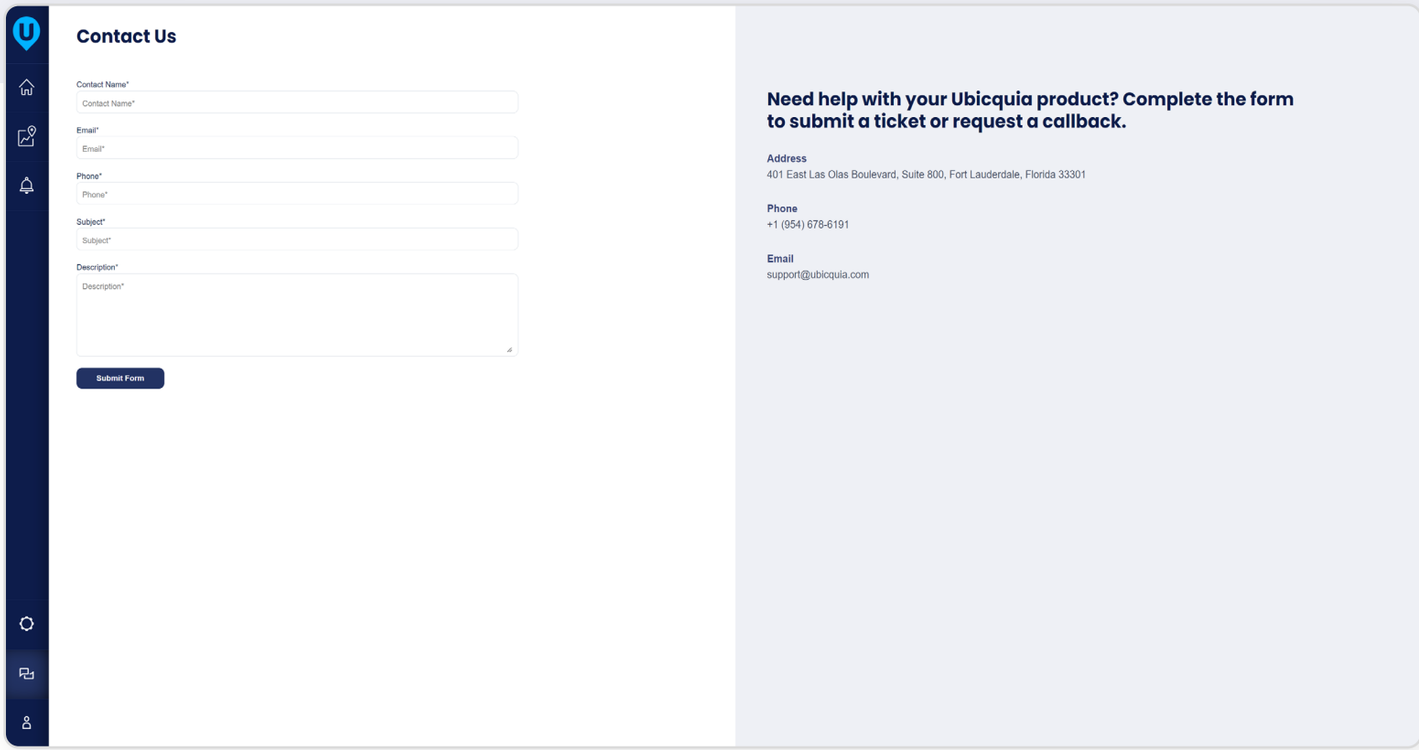


Figure 42 - Support Page

1.8 USER PROFILE

Manage personal preferences, scheduled reports, and API access from the applicable tabs on the **User Profile** page. Users can personalize their accounts on this page by adding a profile image: click the edit button on the left side panel to upload an image. Click the trash can icon to remove the image (see **Figure 43**).

Edit profile details such as name, country code, and phone number, change your password, or sign out of UbiVu here.

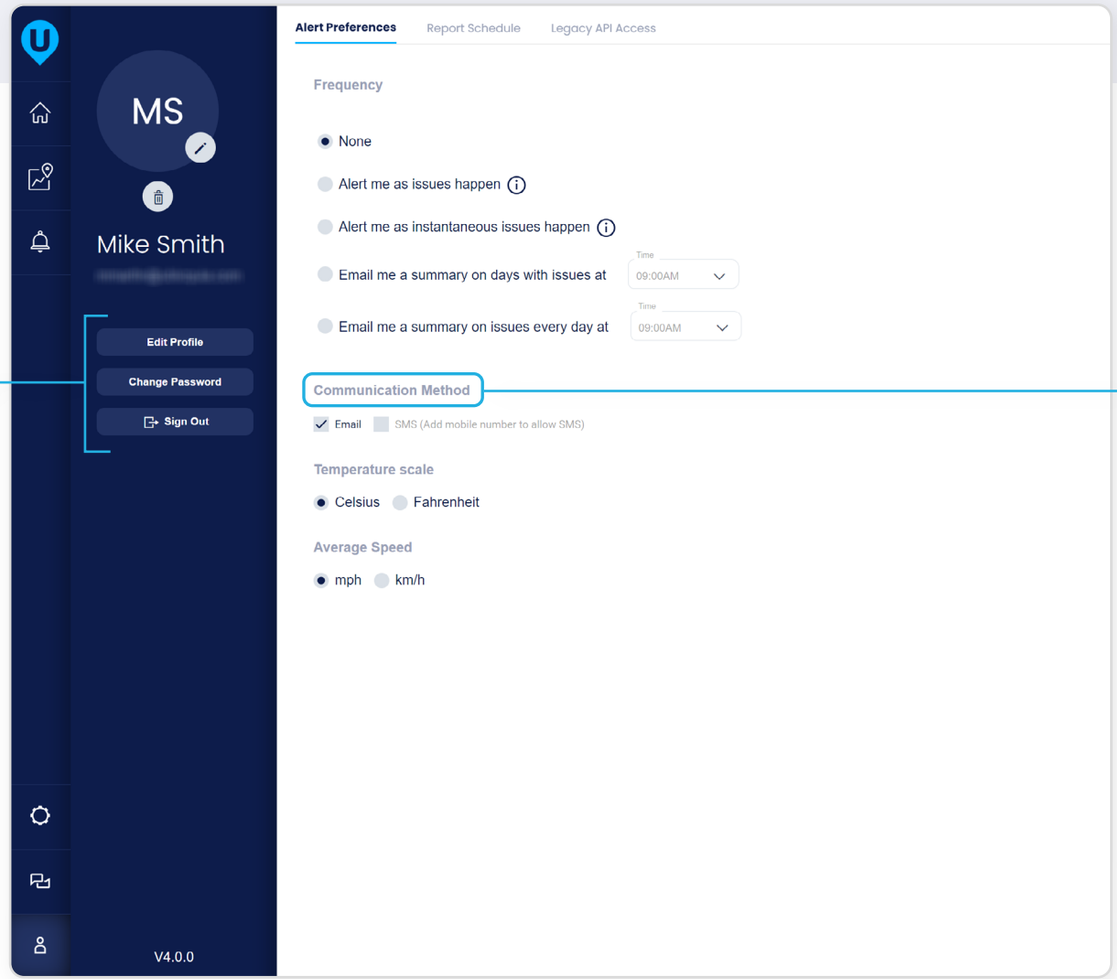


Figure 43 - User Profile Page

Users can opt out of receiving email or SMS notifications when alerts are triggered, or they can select one of the following four options for notification frequency:

- **Alert me as issues happen:** the user receives a notification per alert type, per node, every 24 hours. Insights summary reports are sent daily at 11AM.
- **Alert me as instantaneous issues happen:** the user receives a notification instantaneously for all alerts. Insights reports are sent daily at 11AM.
- **Email me a summary on days with issues:** the user receives a daily summary of all alerts at the set time if any alerts are triggered. If no alerts are triggered, a summary will not be received.
- **Email me a summary on issues every day:** the user receives a summary of daily alerts, every day at the set time.

Add a mobile number in the Edit Profile window to choose the SMS option for alert notification delivery.

Jump to the **Report Schedule** tab to view a list of all scheduled reports by capability type (see **Figure 44**). Click the menu ··· button to the right of a report name to delete a report. Once deleted, you will no longer receive that report on the scheduled day and time (see the Map – Nodes Table & Reporting section for details on creating a scheduled report).

Go to the **API Access** tab and click the Generate API Access Generate API Access button to view and copy your API access information. You can generate a Client ID and Secret Key for each UbiVu panel you use that requires access to the panel API (see **Figure 45**).

If you do not have an **API Access** tab on your **User Profile** page, contact the administrator who created your UbiVu login information.

Contact Ubicquia Support for a list of supported APIs.

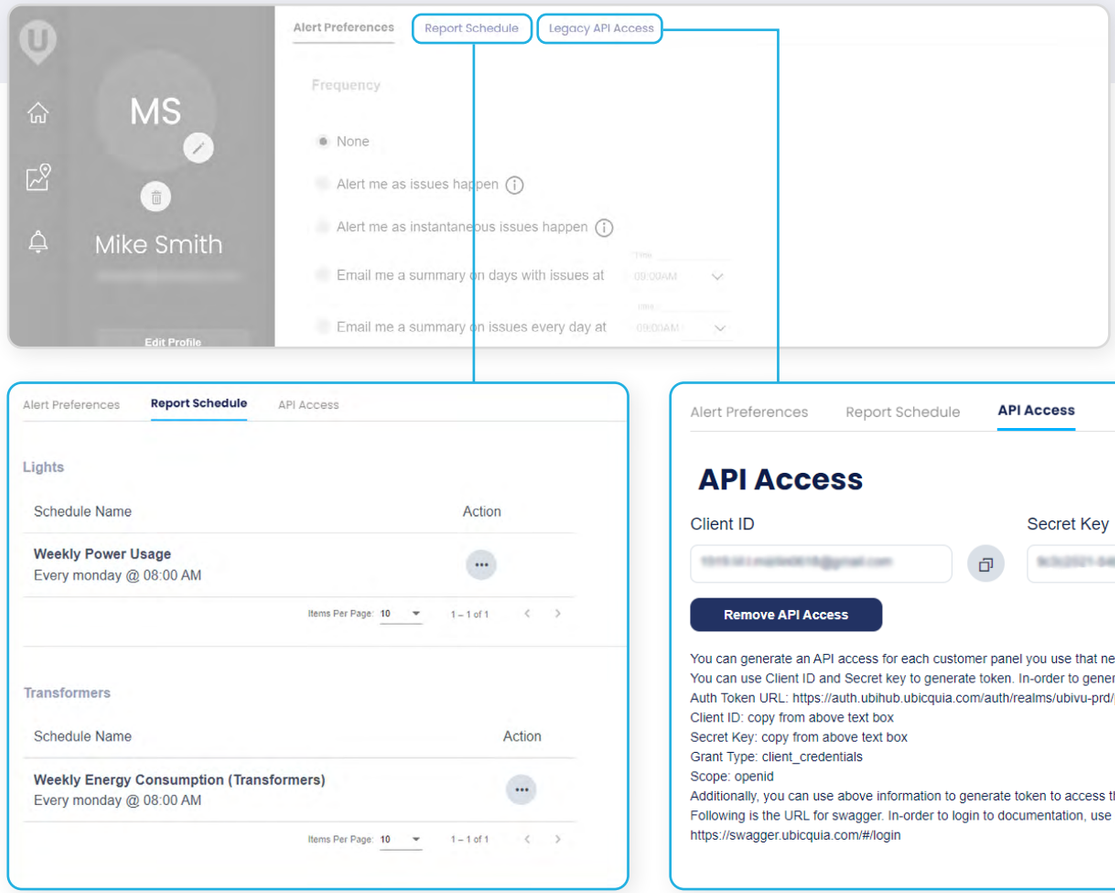


Figure 44 - Report Schedule Tab

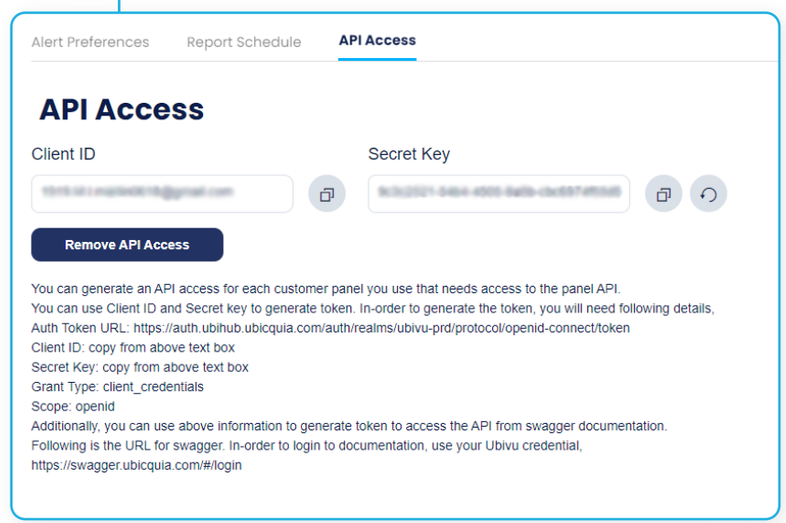


Figure 45 - API Access Tab

2. LIGHTING

The lighting capability is available for deployments of UbiCell® or UbiHub®. This section will cover lighting-specific functionalities and features such as GIS assets, schedule templates, lighting threshold configurations, and more.

2.1 GEOGRAPHIC INFORMATION SYSTEM (GIS) ASSETS

The Global Information System (GIS) Assets feature allows users to link their UbiCell® or UbiHub® nodes with the location of the poles where they were installed, which allows users to more easily and efficiently monitor all assets.

From the **Lighting Configuration** page – **GIS Assets** tab, users can upload *.csv* files containing asset information (Pole ID, Luminaire, GPS coordinates) by selecting the Upload Asset Data button, choosing a *.csv* file containing their asset information, and selecting **Upload**. The data will load and once complete, it will show the last upload date with an option for more information. Additional information available includes the file name, how many entries were successfully uploaded, and how many entries failed.

Once the file has been uploaded, click the refresh icon to view successfully uploaded asset data beneath the Pole heading on this screen (see **Figure 46**). Link assets from this page, or with the GIS Assets tool on the **Map** page – **Manage** tab.

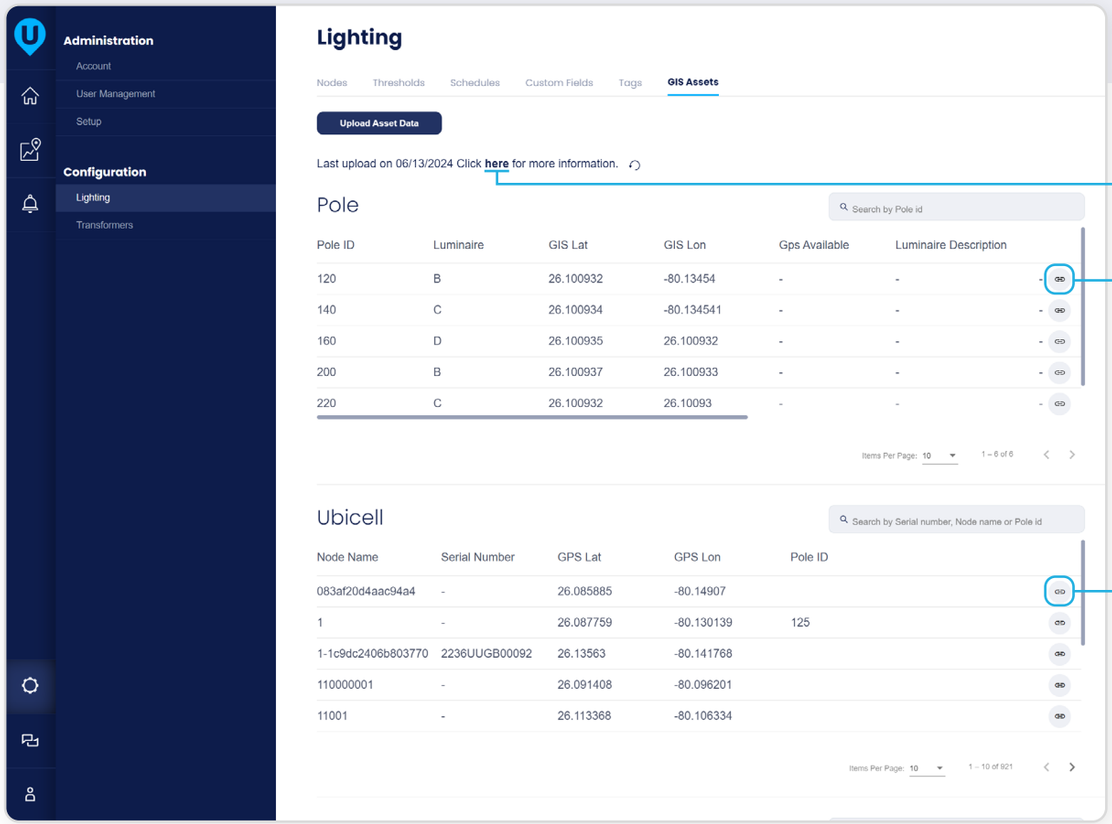


Figure 46 - GIS Assets Uploaded and Link Assets

Click **here** for additional information about your file upload: the file name, a count of both successfully uploaded entries, and failed entries.

Click the link icon next to an unlinked asset on the Pole list, then select the corresponding node from the UbiCell® list to link an asset.

NOTE: UbiVu allows for up to 6 luminaires on one pole. If a pole has more than one luminaire, enter **A** through **F** in the Luminaire column on your .csv file. Each different luminaire on a given pole should have its own line item with the same pole number:

Pole ID	Luminaire	GIS Lat	GIS Lon
A72	A	26.117	-80.142
A72	B	26.117	-80.142
A72	C	26.117	-80.142

Before UbiVu links a pole and node, it will prompt the user to choose whether to use asset location data (uploaded from the asset file), or UbiCell® location data (recorded by the node in the field). When a pole and a node are linked, they will move to the **Linked Asset** list as one line item (see **Figure 48**).

Link assets directly from the **Map** page by using the GIS Assets tool on the **Manage** tab when no nodes are selected. (see **Figure 47**).

The GIS Assets tool includes a new legend in the top right corner of the screen, and a nodes table at the bottom. This table is the same as your regular nodes table, with a new **Linked** column on the far left, which shows a linked or unlinked icon depending on the linked status of the node. When the table is exported, the **Linked** column will show **Yes** if the node is linked to a pole, and **No** if the node is not linked.

You can also click in the **Serial Number** or **Node Name** column headings to search a specific node.

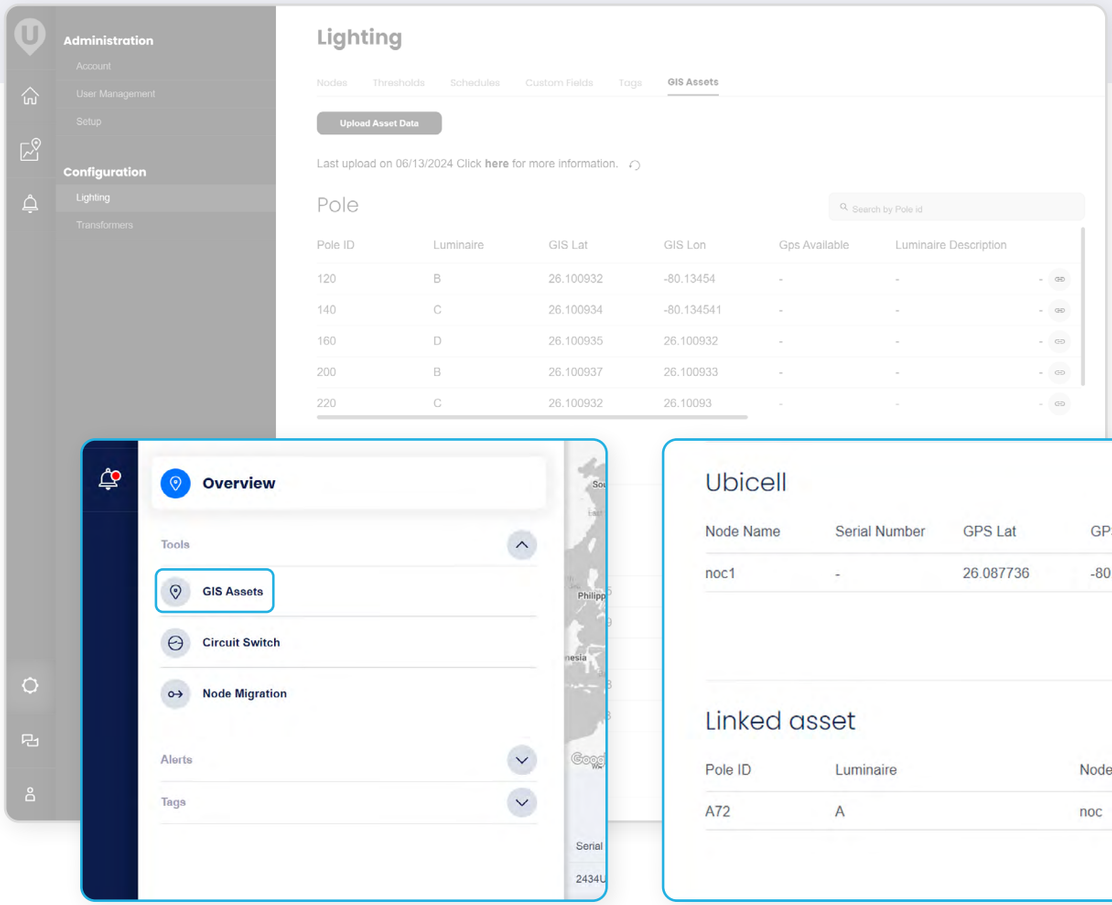


Figure 47 - GIS Assets Tool Button

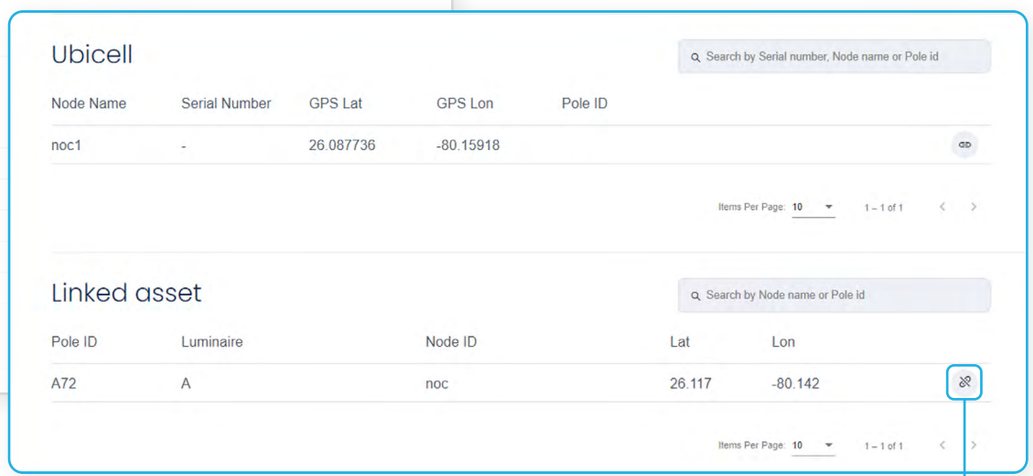


Figure 48 - Linked Asset List

Click the un-link icon next to a linked asset on the **Linked Asset** list, then confirm in the pop-up window to un-link an asset.

For More Information, Please Contact Support.

To see node icons on the map, the map must be zoomed in to street view. From here, there are 3 actions a user can take:

- **Manually Link Assets:** manually select individual poles and choose which nodes to link them to (see **Figure 49**). When complete, Click the Confirm ✓ Confirm Selection button to confirm your selections.
- **Automatically Link Assets:** draw a circle around a group of nodes and poles, and UbiVu will make the selections for you based on proximity of each node to each pole within the circle (see **Figure 50**). When complete, Click the Confirm ✓ Confirm Selection button to confirm your selections.
- **Unlink Assets:** manually select individual linked or partially linked assets and choose which node to unlink (see **Figure 51**). Once selections are made, the linked asset will turn red to indicate that it was already selected to be unlinked. Click the Confirm ✓ Confirm Selection button to confirm your selections.

NOTE: When automatically linking assets, UbiVu will not be able to link multiple nodes to one pole. If multiple nodes should be linked to one pole, use the **Manually Link Assets** option.

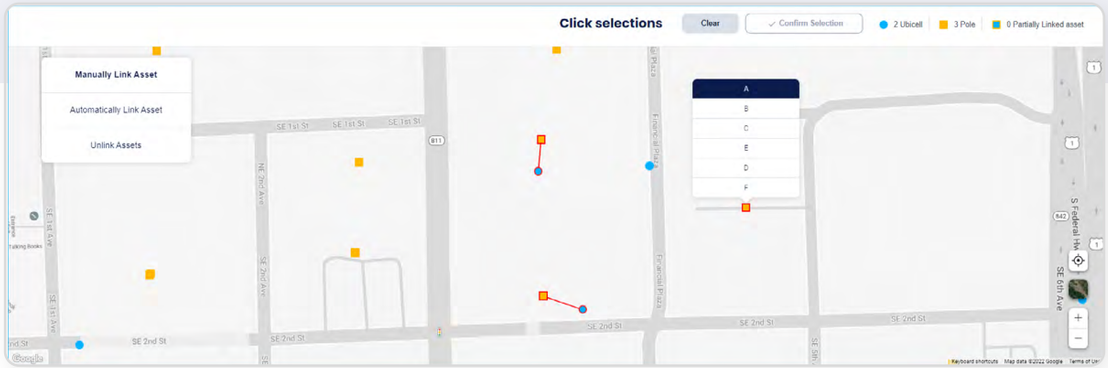


Figure 49 - Manually Link Assets

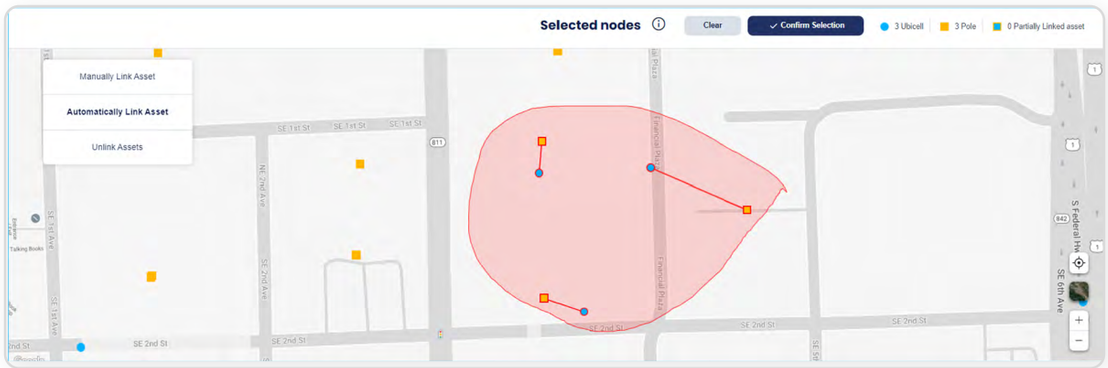
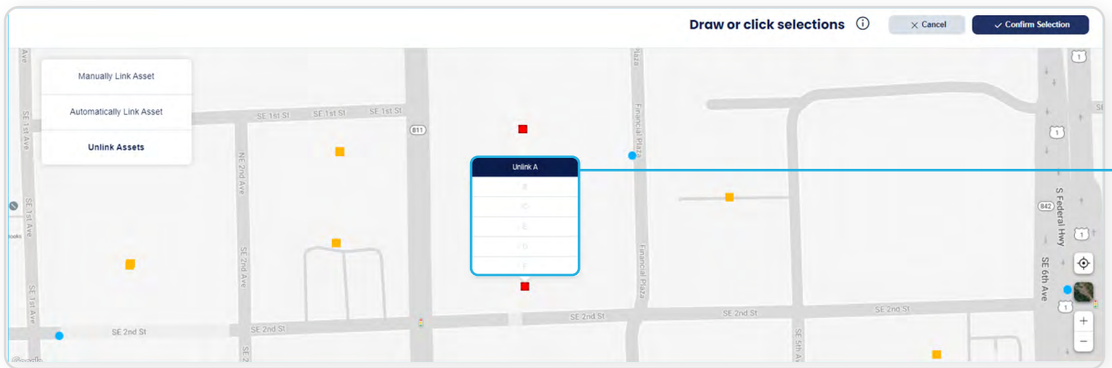


Figure 50 - Automatically Link Assets



When a linked asset is selected, users must then choose which of the 6 possible luminaires should be unlinked.

Figure 51 - Unlink Assets

2.2 CIRCUIT SWITCH PREDICTION

UbiVu can use collected data to predict whether a node is installed on a circuit switch. Using the **Circuit Switch** tool, users will be able to confirm or remove these predictions, and the information will be reflected in the nodes table via a Circuit Switch (Yes/No) column that can be added. There is also a Circuit Switch filter attribute (see **Figure 52**).

Find the **Circuit Switch** tool on the **Map** page – **Manage** tab when no nodes are selected. The Circuit Switch tool has a legend in the top right corner of the screen.

Any nodes predicted to be on circuit switches will appear as yellow boxes on the map. To confirm or remove the prediction, click on the node on the map, or search it in the table below, and click the Confirm ✓ Confirm Selection button to choose **Circuit Switch** or **Normal Circuit** (see **Figure 53**).

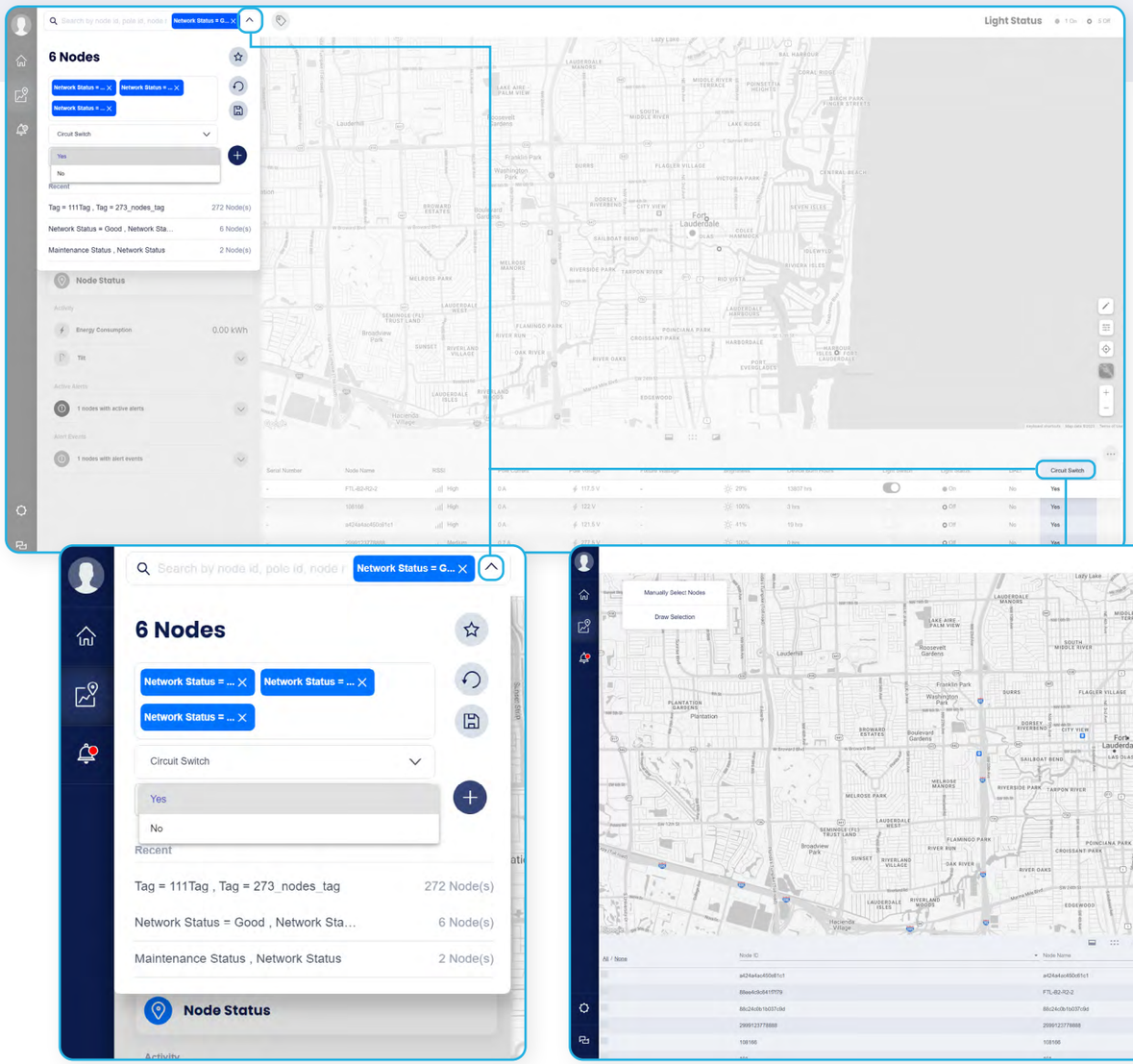


Figure 52 - Circuit Switch Info Locations

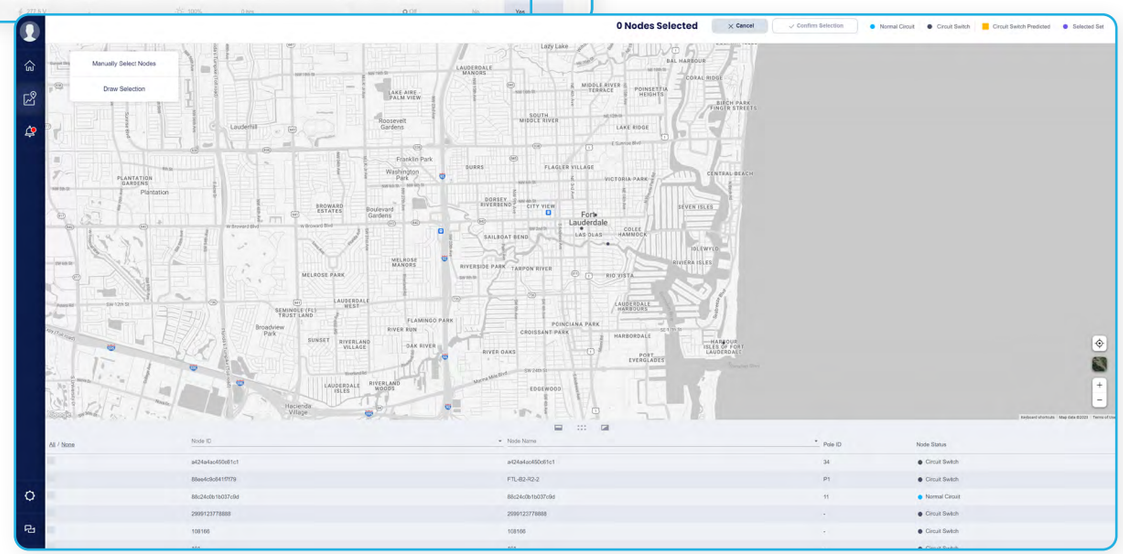


Figure 53 - Circuit Switch View

2.3 SCHEDULE TEMPLATES

Schedule templates can be created on the **Lighting Configuration** page – **Schedules** tab. Schedule templates can be applied to an entire lighting deployment, a group of nodes included in a tag, or to individual nodes on the **Map** page – **Manage** tab.

If you do not create and apply any schedule templates, all nodes will run a default ALS schedule where lights will turn on when 10 lux or less light is detected, and off when 100 lux or more light is detected.

There are two types of schedule templates that can be created:

1. **Time-of-Day Templates** (see **Figure 56**): lights can be scheduled to dim, or turn on/off at a specified time every day, or different times on various days. They can also be scheduled according to astronomical (sunrise/sunset) times.
2. **ALS Templates** (see **Figure 57**): lights can be scheduled to turn on or off based on the level of light detected at any given time every day.

On the Schedules tab, click the corresponding button to add either a Time-of-Day template or an ALS template (see **Figure 54**).

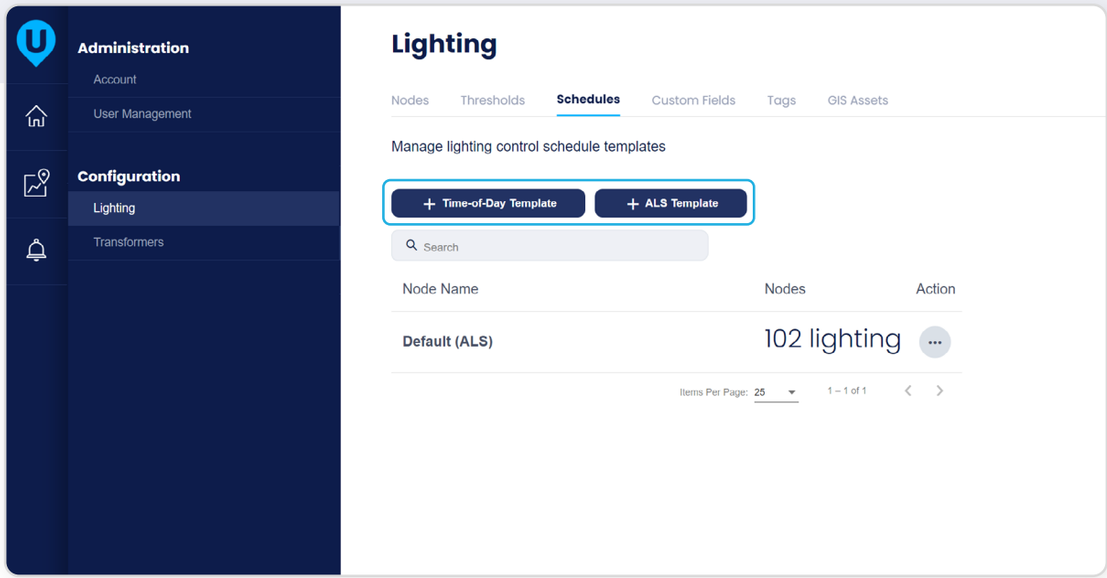


Figure 54 - Create a Schedule

NOTE: Keep in mind that more than one template can be applied to nodes, and they can be prioritized so that, for example, lights will turn on based on light levels (ALS template), except for on weekends when they will turn on an hour before sunset (time-of-day template).

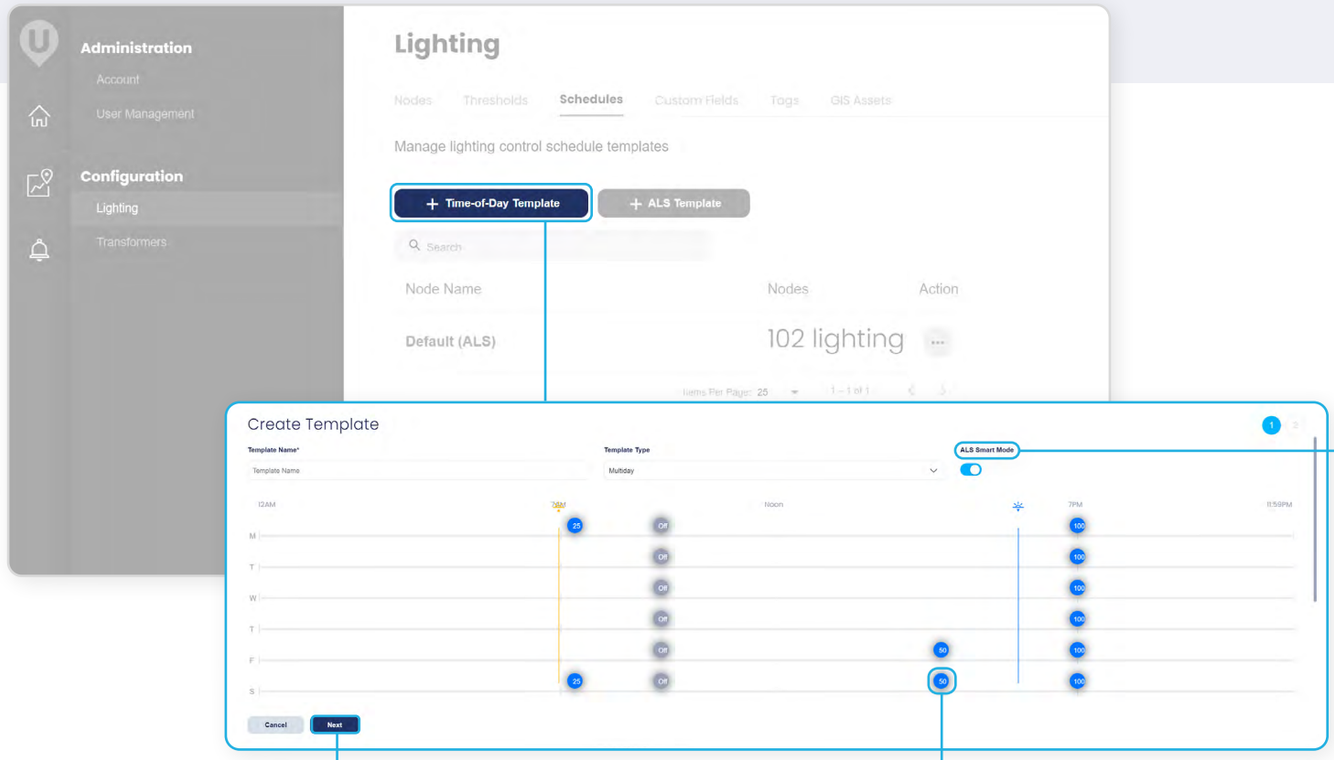
2.3.1 Time-of-Day Templates

Enter a template name and select **Everyday** or **Multiday** from the **Template Type** drop-down menu. An everyday template type will display one timeline with yellow and blue markers for sunrise and sunset. A multiday template (see **Figure 55**) will display 7 timelines, marked with a letter to symbolize every day of the week.

Click anywhere on the timeline to create a schedule action at that time. Adjust the time if necessary by using the drop-down menu in the pop-up window. Use the slider to adjust the light's brightness. Toggle the **Astronomical** switch to make the schedule action dependent on sunrise or sunset instead of at a specific time.

NOTE: Schedule templates can include up to **32 schedule actions** for all applicable hardware version except for **hardware version C1** (see the Appendix section for hardware version definitions).

If a user attempts to apply a schedule template to a tag which contains at least one **C1 device**, an error message will display. **C1 devices** can include up to **8 schedule actions** per template.



Toggle **ALS Smart Mode** on, and adjust the ALS Sensitivity sliders below the schedule template settings as desired to have schedule settings overridden if actual light levels exceed your configurations.

When complete, click the Next button to set custom dates for the template (e.g., October only), or choose for it to function year-round.

ON schedule actions will appear as blue bubbles on the timeline, while OFF schedule actions will appear as grey bubbles.

Figure 55 - Time-of-Day Multiday Template

2.3.2 ALS Schedule Templates

Enter a template name. Currently, the only template type available for ALS templates is the everyday type.

Use the sliders or the plus + and minus – buttons to adjust ALS sensitivity to the desired values (see **Figure 56**). When complete, click the Next Next button to set custom dates for your ALS template, or choose for it to function year-round.

2.3.3 Applying Schedule Templates

When one or more templates have been created, users can apply those templates to nodes on the **Map** page – **Manage** tab.

Select a single node or tag to apply a schedule template. If the node does not have a custom schedule template applied, it will display the default ALS template (see **Figure 57**).

To add a new schedule template, use the drop-down menu beneath the Schedules section to select a template from the list of templates. Once selected, click the + button. The newly added schedule will replace the default schedule (see **Figure 58**).

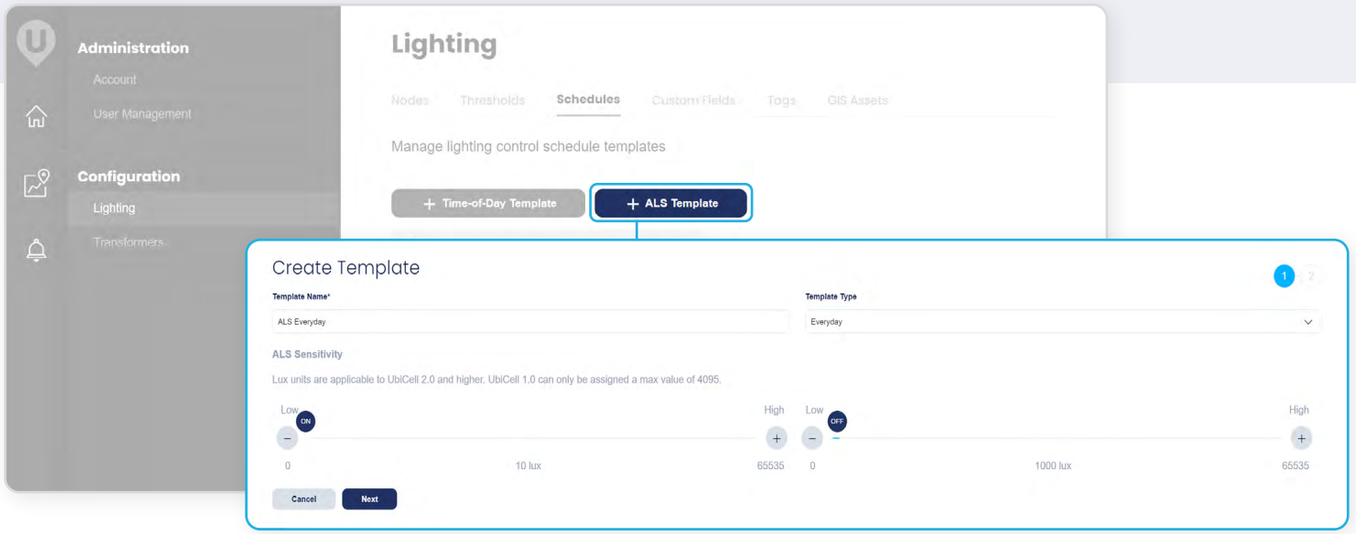


Figure 56 - ALS Template

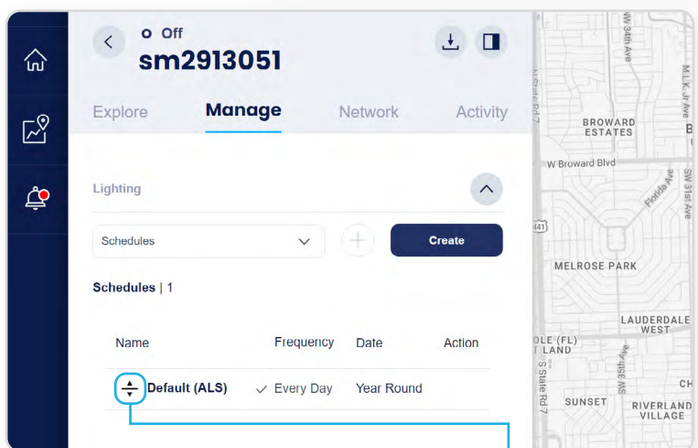


Figure 57 - Default Schedule

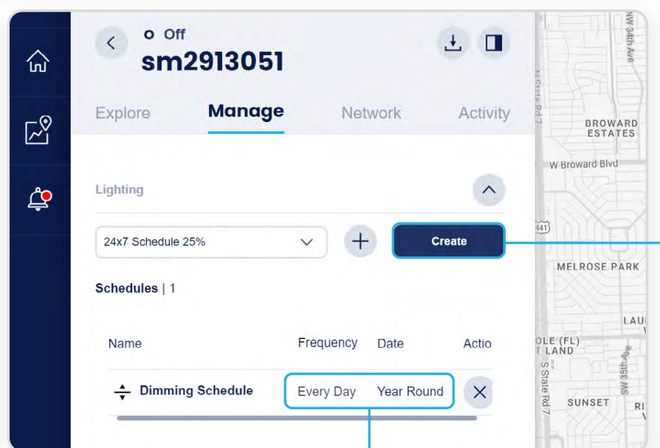


Figure 58 - Schedule Added

Click the **Create** button to create a schedule template from the **Map** page without having to navigate to the **Lighting Configuration** page.

If multiple schedules are applied, click and drag here to re-order the schedule templates. The top template will take priority.

Click on the schedule name to see a view-only version of the schedule template.

2.4 ADDITIONAL LIGHT MANAGEMENT

Manual lighting controls are available on the **Map** page – **Manage** tab. Select an individual node or tag and find the light controls on the side panel. There is a light switch that can be toggled on (blue) or off (grey).

Beneath the light switch there is a **Brightness** slider. Slide left to dim and right to brighten a light or all lights included in a tag.

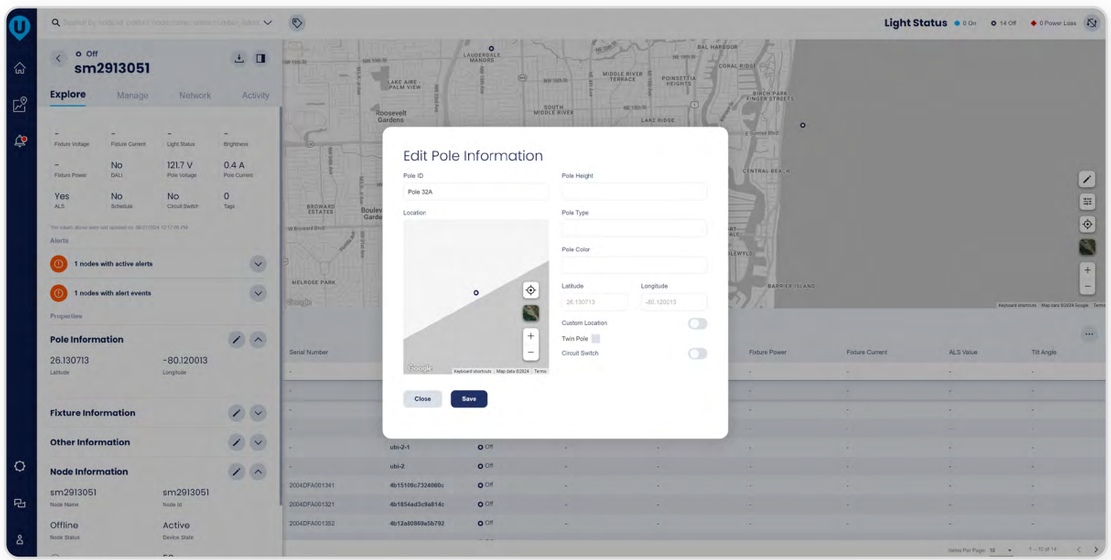


Figure 59 - Edit Pole Information Window

2.4.1 Node Properties

When a single node is selected, the **Properties** section appears on the **Explore** tab. Here, you can find individual node details, most of which are editable to help users better manage and organize their deployments. Enter any pole details into the **Pole Information** section: pole ID, height, type, color, twin pole status, circuit switch status, and manually adjust location (see **Figure 59**).

Add a fixture ID, type, manufacturer, wattage, and DALI information in the **Fixture Information** section, and find your custom fields in the **Other Information** section.

The **Node Information** section at the bottom of the Properties tab will display a node's name and device state, which are editable fields. You will also find the node ID, status, hardware version, and firmware version in this section; none of these fields are editable.

2.4.2 Individual Node Analysis

When a single node is selected, the **Activity** tab will display three activities: Energy Consumption, Light History, and Tilt. Click on **Energy Consumption** to view consumption data by year, month, week, or day.

Select **Light History** to view an interactive chart with multiple available data variables (see **Figure 60**). The default chart will display lamp state and brightness by week for the current week, but users can use the drop-downs at the top of the chart to select different variables, and those at the bottom to select different date ranges. Beneath the chart is a table of events. Users can filter for different event types or node states.

Click on **Tilt** to view the tilt widget where the selected node's degree of tilt will display on a half-arc (see **Figure 61**). If tilt thresholds are configured, these will display here as well.

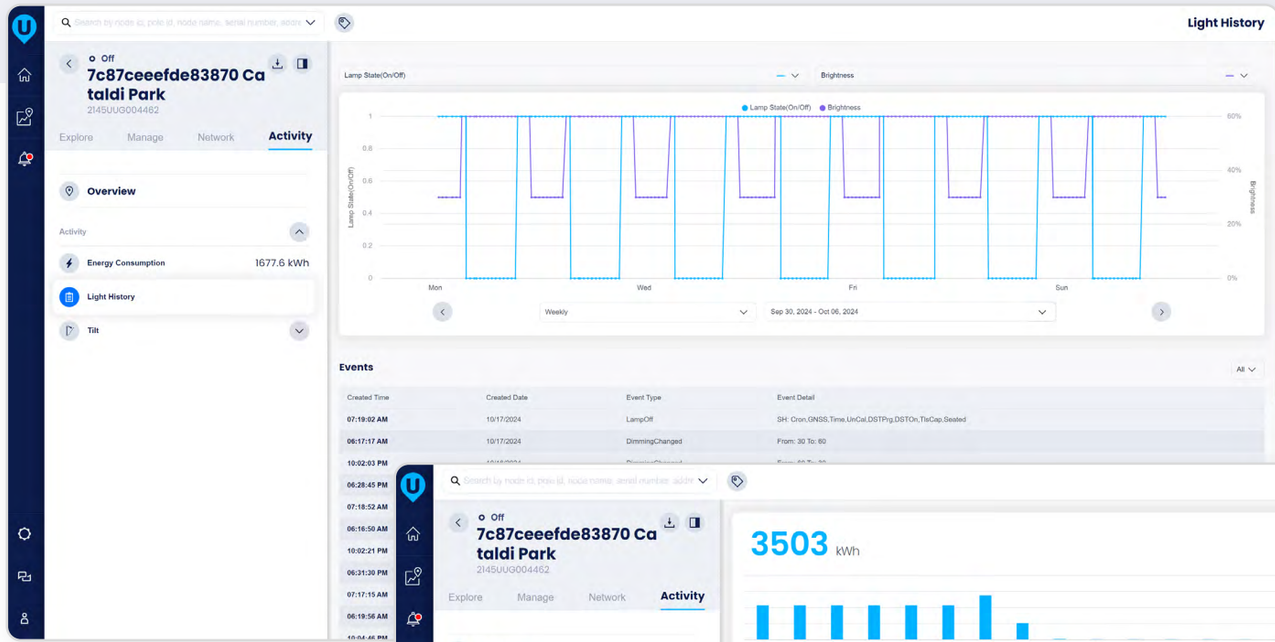


Figure 60 - Light History Chart

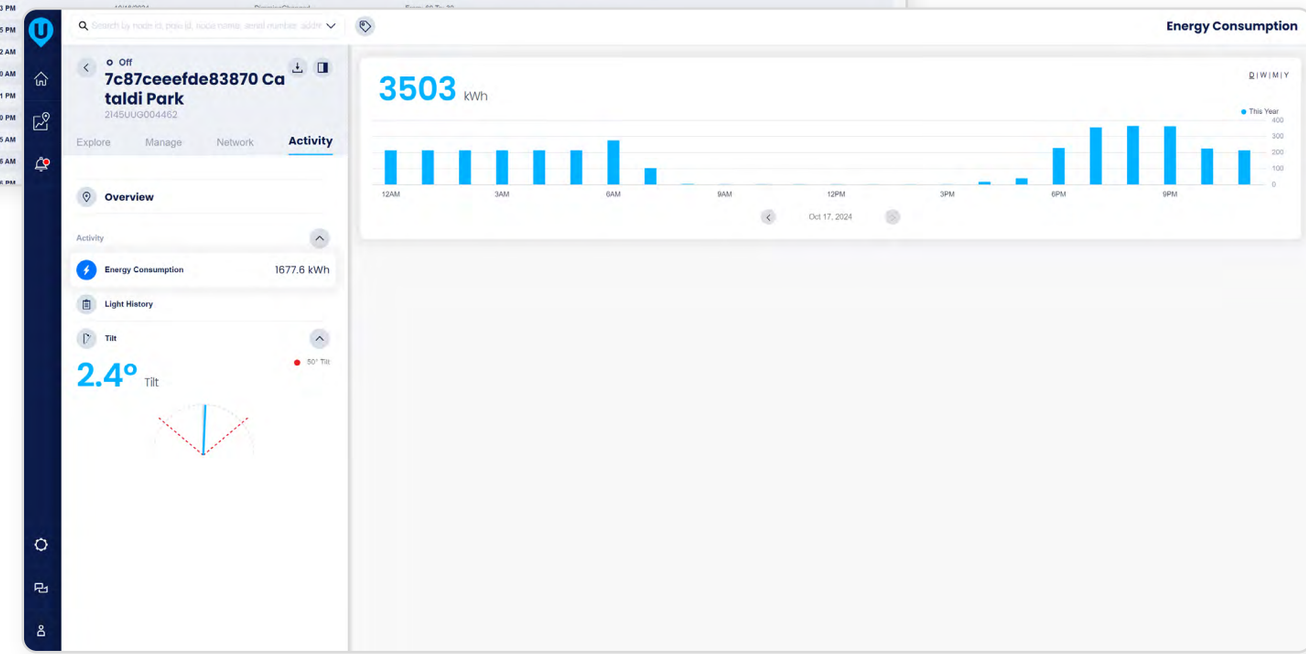


Figure 61 - Tilt Widget

3. WIFI

The **WiFi Map** page has features specific to deployments with the WiFi capability, which will be covered in this section.

The first thing to note is that the key in the top right corner contains a new set of markers:

- **CONNECTED ROOT:** a root node that is connected to the Wi-Fi server.
- **DISCONNECTED ROOT:** the root node that is disconnected from the Wi-Fi server.
- **CONNECTED LEAF:** Connected Leaf: a leaf node that is communicating with its root.
- **ORPHAN:** a leaf node that is not connected to a root.

The WiFi map (when the **Network** tab is selected) also has a drop-down menu in the bottom left corner for users to select from multiple views. The default view is the node view, but users can also choose to visualize 5 and 2.4 GHz signals surrounding nodes, or the connections between root and leaf nodes (see **Figure 62**).

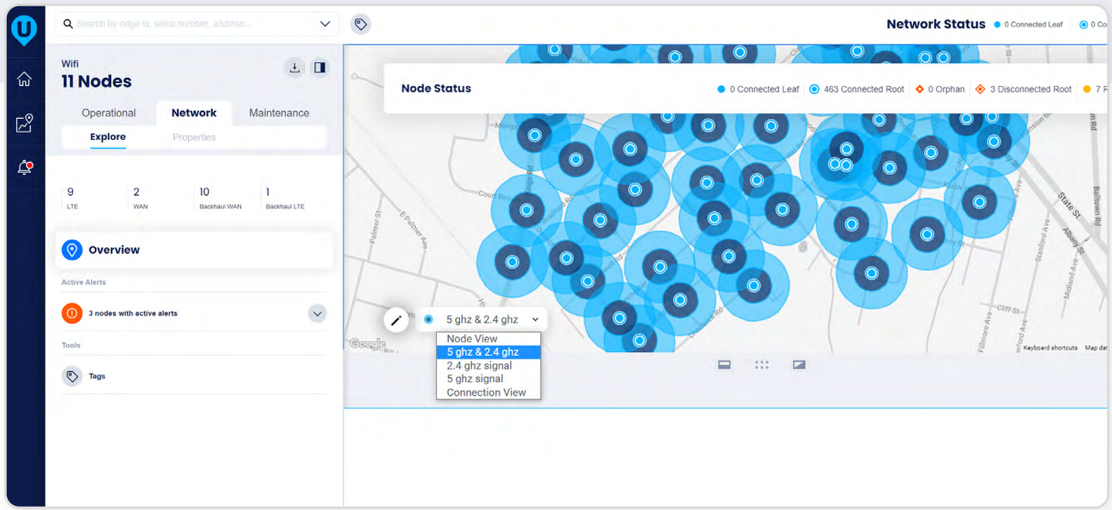


Figure 62 - WiFi Map Views

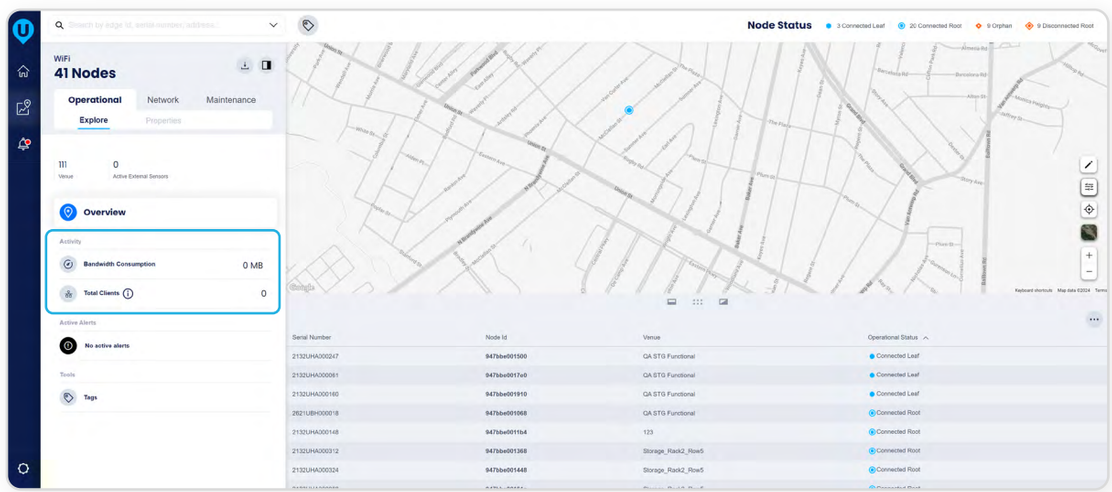


Figure 63 - WiFi Location Page - Activity Section

3.1 ACTIVITIES AND CONTROLS

The WiFi Map page has activity monitoring charts available from the side panel under the **Operational** > **Explore** tabs (see **Figure 63**). Options available for the entire WiFi deployment are **Bandwidth Consumption** and **Total Clients**. When an individual root or leaf node is selected, **WAN Health** is an option, and additional controls become available on the **Controls** tab.

3.1.1 Bandwidth Consumption

When the Bandwidth Consumption activity is selected, a consumption chart replaces map (see **Figure 64**). This chart displays bandwidth consumption in megabits per second (Mbps) over time. Hover over any data point for additional details. Click **Map** in the top right corner to visualize this data on the map. Click **Node Status** on the left side panel to close this activity.

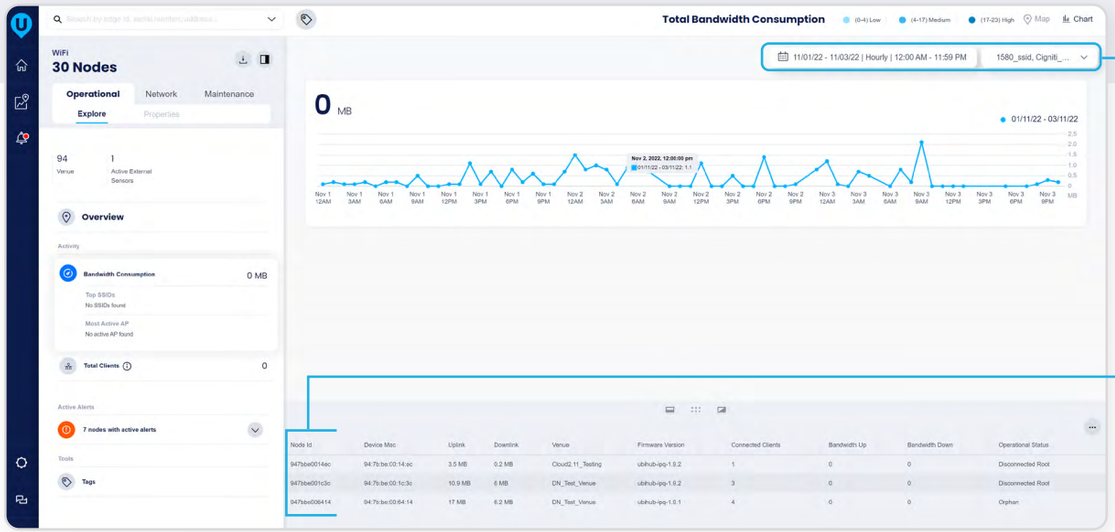


Figure 64 - Bandwidth Consumption

3.1.2 Total Client

The Total Client activity displays data related to all clients who have accessed WiFi (see **Figure 65**). The chart shows number of connected clients over time. This chart has similar features to the Bandwidth Consumption chart: hover over any data point for additional details. Click **Map** in the top right corner to visualize the data on the map. Click **Node Status** on the left side panel to close this activity.

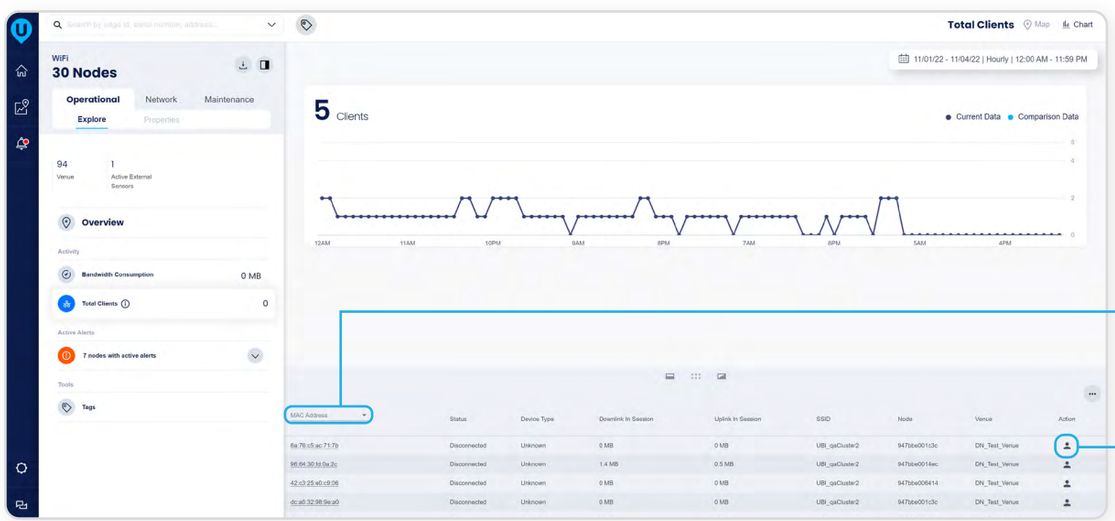


Figure 65 - Total Client Chart

3.1.3 WAN Health

The WAN Health activity is only available when a single node is selected. Visualize data such as uptime, packet retransmission, data sent, data received, sent packet loss, and received packet loss in chart views (see **Figure 66**). Hover over any data point on any chart to see more details.

3.1.4 Controls

Additional controls become available when an individual node is selected (see **Figure 67**). Click on the **Controls** tab to run network diagnostics. Available commands are ping, speed test, traceroute, and ARP scan. Click the Initiate button next to the desired command to begin.

Ping and traceroute commands require a target host or IP address be entered. The PoE reset will power cycle the 3rd party device connected to the node via the PoE port. This control option is only available if an External Sensor profile is applied to the selected node. All commands except the internet and WiFi speed tests, and the PoE reset require the user to select an interface:

NOTE: These commands are also available for the **Video & Audio** capability and can be found on the **Map** page side panel at the bottom of the **Manage** tab.

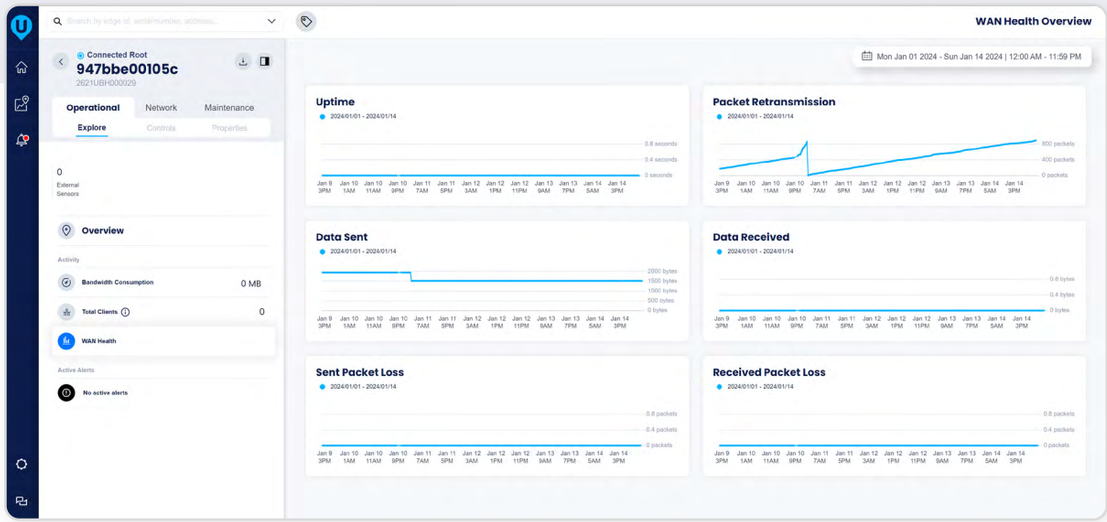


Figure 66 - WAN Health Charts

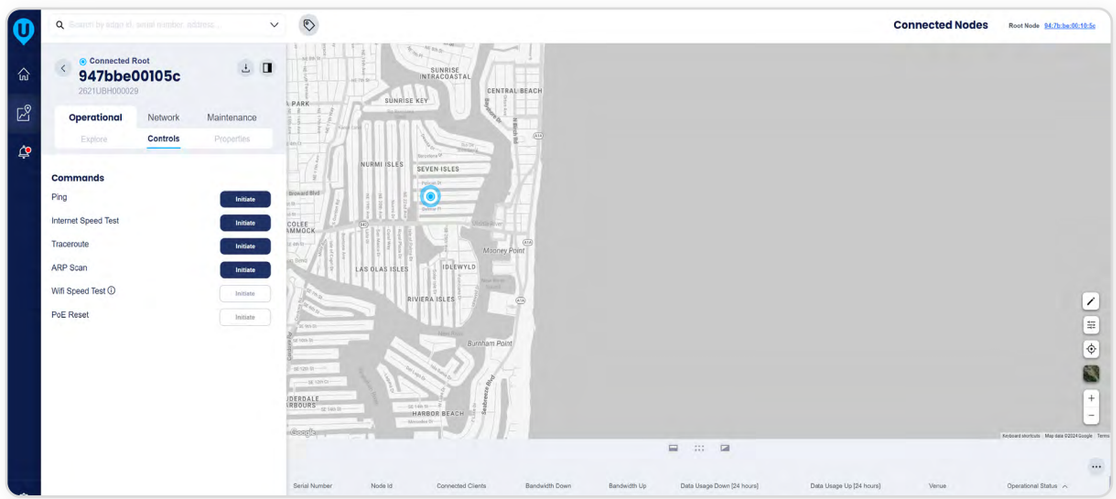


Figure 67 - Controls Tab

- **WAN:** when chosen for a root node, the ping or traceroute will be from the root node, through the backhaul, to the internet; when chosen for a leaf node, the ping or traceroute will be from the lead node, through the root node's backhaul, to the internet.
- **LTE:** when chosen for a root node, the ping or traceroute will be from the root node, through its own LTE connection, to the internet; when chosen for a leaf node, the ping or traceroute will be from the leaf node, through its own LTE connection, to the internet.

Please note that the Internet speed test will test the selected node's internet speed, while the WiFi speed test tests the WiFi connection speed between selected nodes.

In order to run a WiFi speed test, clustering must be disabled in the map preferences, and the selected node must be a connected leaf or a connected root with at least one leaf node. After clicking Initiate, the user must then select one or more connections on the map to test, then click **Start** in the top right corner of the map.

3.2 PROPERTIES & CONFIGURATION

UbiVu offers various customization options for your WiFi deployment. Many can be applied to tags for fast and simple setup (see the Map – Tags & Filters section of the manual for information on tag creation), and some can only be applied to individual nodes.

Information fields that can be edited for multiple nodes at once are (see **Figure 68**, left):

- **WiFi Radio** – toggle the switch to turn Wi-Fi radio on or off for selected nodes.
- **Venues** – apply Wi-Fi venues to one or more nodes.
- **Backhaul and External Sensor profiles** – apply backhaul management profiles to prioritize backhaul options. Apply external sensor profiles to manage any external sensors connected to the UbiHub's PoE port.
- **Other Information (Custom fields)** – edit custom fields from the **WiFi Configuration** page – **Custom Fields** tab.

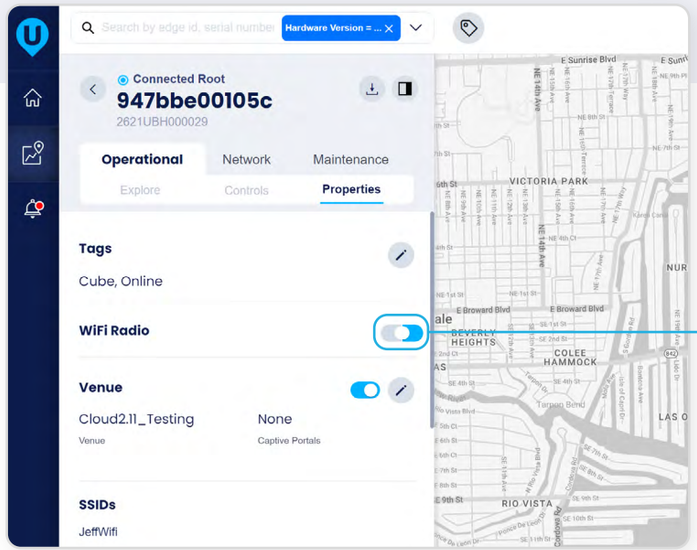


Figure 68 - WiFi Properties Tab

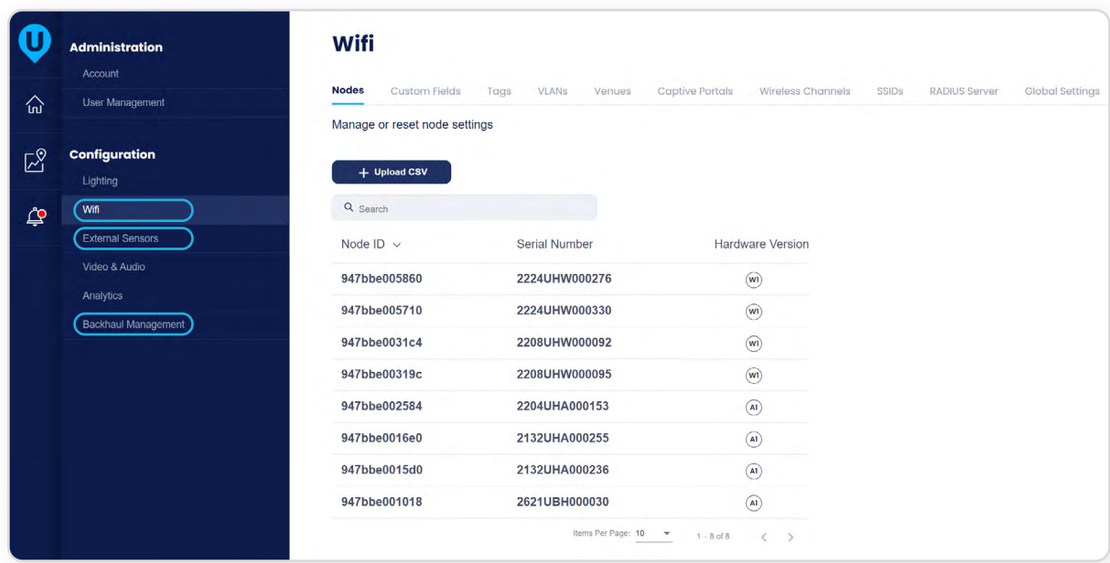


Figure 69 - WiFi Configuration page

Additional information fields that can only be edited for individual nodes are:

- **SSIDs** – view only field that shows SSIDs applied to the selected node.
- **Role** – choose whether the node is a root or leaf (mesh).
- **VLANs** – enable or disable the associated VLAN for the selected node.
- **WLAN DHCP Profile** – apply a WLAN DHCP profile to the selected node.
- **IP Address Configuration** – enter information for IP address allocation.

Node Information fields are set values that cannot be edited. **Pole Information** fields are set up when the deployment is first configured in UbiVu, and currently cannot be edited by users. If Wi-Fi pole information needs to be changed, please contact Ubicquia Support for assistance.

Several of the settings on the Properties tab require initial set-up on the WiFi Configuration page. There are 3 pages related to the WiFi capability (see **Figure 69**) that can be used to manage your WiFi deployment: **WiFi**, **External Sensors**, and **Backhaul Management**.

The first three tabs on the **WiFi Configuration** page (Nodes, Custom Fields, and Tags) function the same way as they do for Lighting installations; see the Lighting section for more information.

3.2.1 Venues

Create and edit venue templates on the **WiFi Configuration** page – **Venues** tab. A venue is a template that can be assigned to a group of nodes and allow them to share the same WiFi settings. Assign the venue a name, choose the operating channel of your preference and select the SSIDs that you would like any node within this venue to inherit (see **Figure 70**). It is important to note that only one WAN and LAN Extension VLAN can be assigned to a venue. Fronthaul VLANs can be assigned to SSIDs included in the venue.

3.2.2 Wireless Channels

Create and edit wireless channels on the **WiFi Configuration** page – **Wireless Channels** tab (see **Figure 71**). Give the channel a name and decide on the channel where nodes will operate. Your channel can then be assigned to a venue on the **Venues** tab (see **Figure 70**).

NOTE: Dynamic Frequency Selection (DFS) can be enabled or disabled by an admin on the **WiFi Configuration** page – **Global Settings** tab.

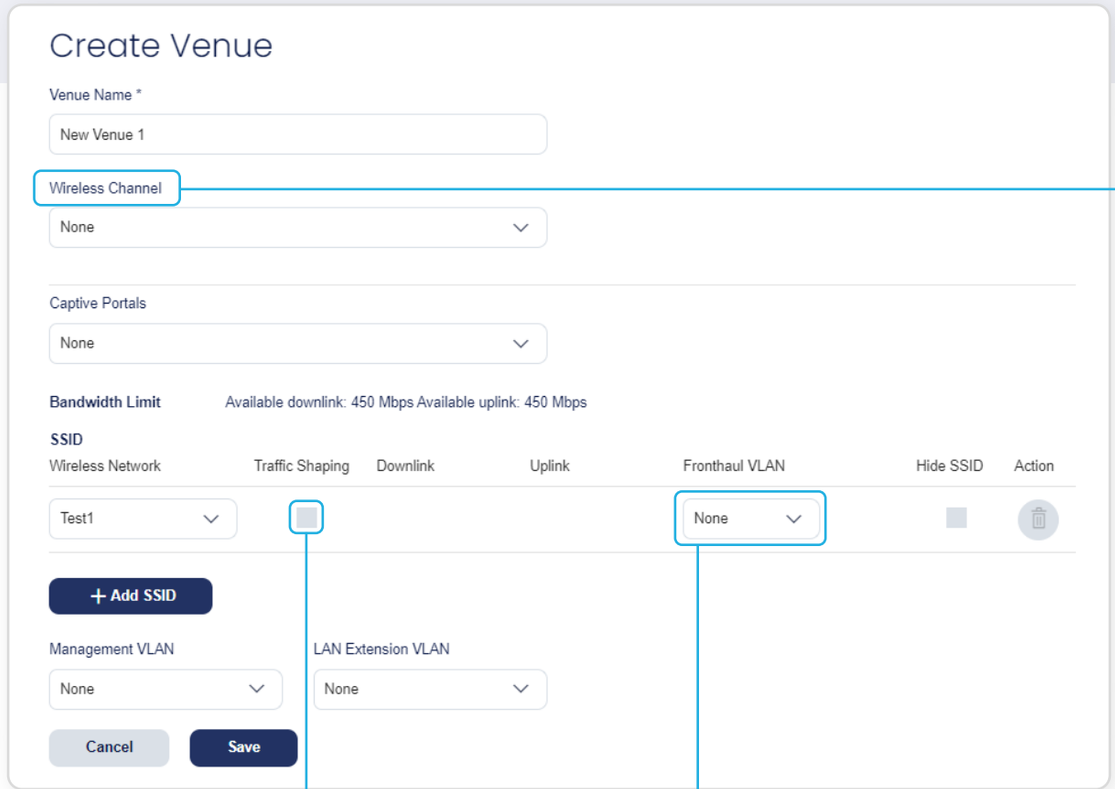


Figure 70 - Create Venue

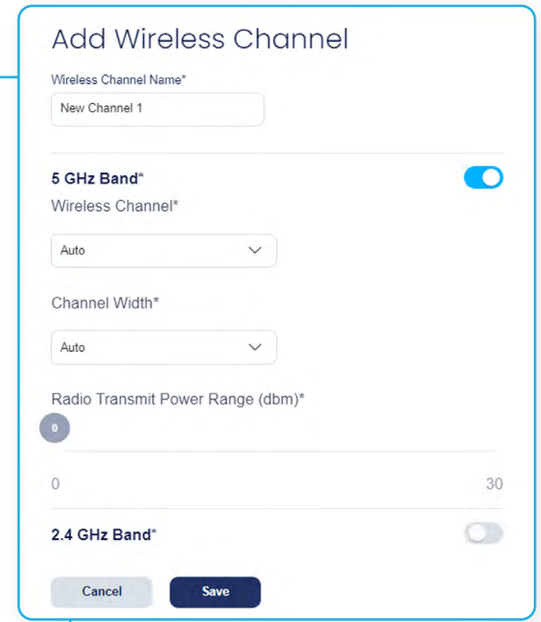


Figure 71 - Add Wireless Channel Window

Add up to 3 SSIDs per venue; check the box to turn on traffic shaping to manage bandwidth.

Assign a VLAN to an SSID; check the box here to hide the SSID.

Channel options are available based on the user's country code, or they can be auto selected.

3.2.3 SSIDs & RADIUS Server Templates

SSIDs can be created and edited on the **WiFi Configuration** page – **SSID** tab (see **Figure 72**). Give the SSID a name and choose your preferred security protocol. All **Personal** options will require a password except **Open** and **WPA3-OWE**; all Enterprise options will require a RADIUS server selection.

Create and edit RADIUS server templates on the **RADIUS Server** tab. These templates will contain the enrollment data required to authenticate clients on the network (see **Figure 73**).

3.2.4 VLANs

Create and edit VLANs and assign VLAN IDs on the **WiFi Configuration** page – **VLANs** tab. Associate VLANs to specific SSIDs when creating or editing venues on the **Venues** tab (see **Figure 70**), and associate IP addresses and gateway information on a per node basis from the **Map** page – **Properties** tab.

Click the + Add VLAN button to create a VLAN by entering a value between 100 and 4094, select a VLAN type, then click **Save**. VLANs cannot be edited, only deleted and re-created if necessary.

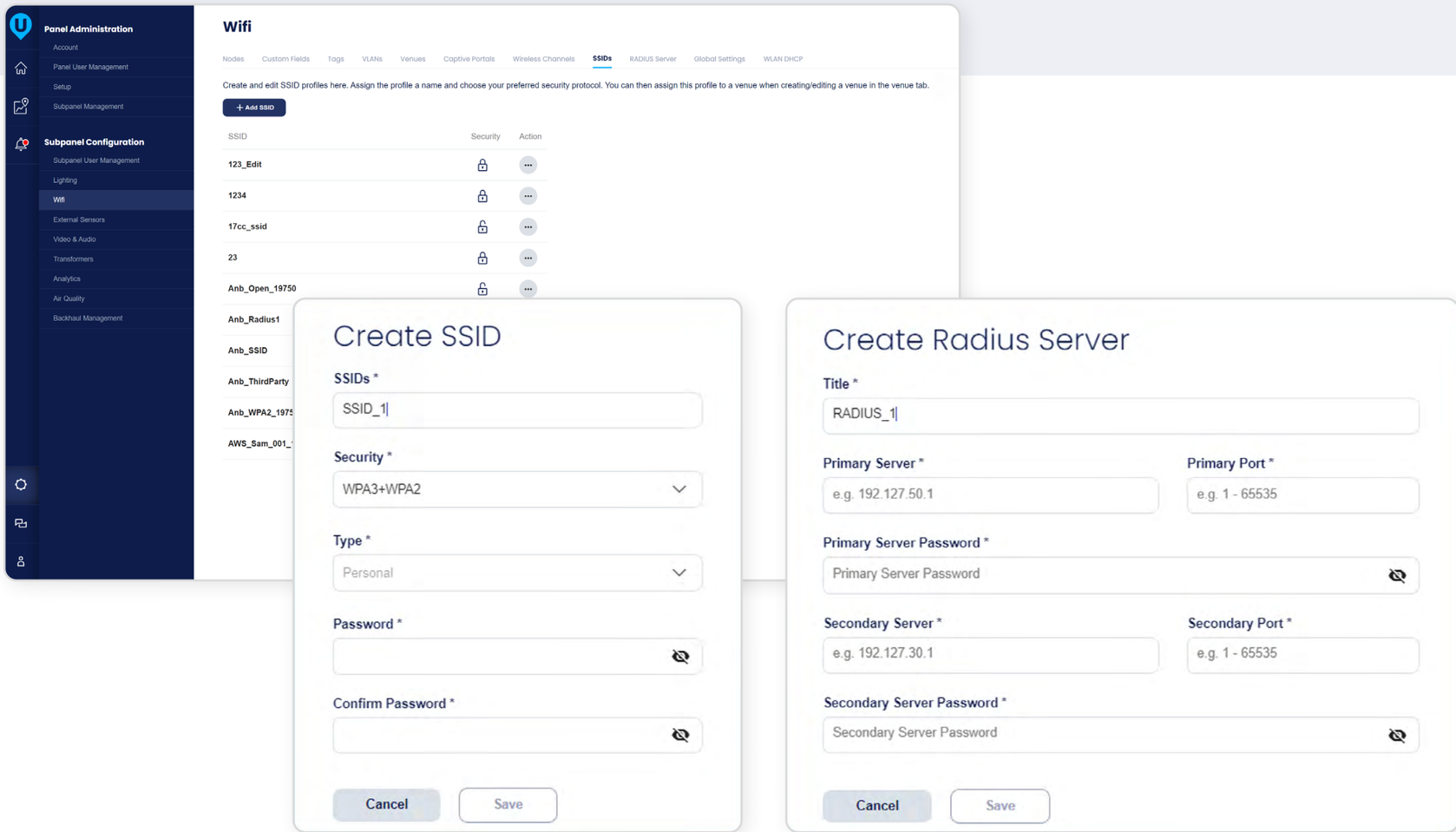
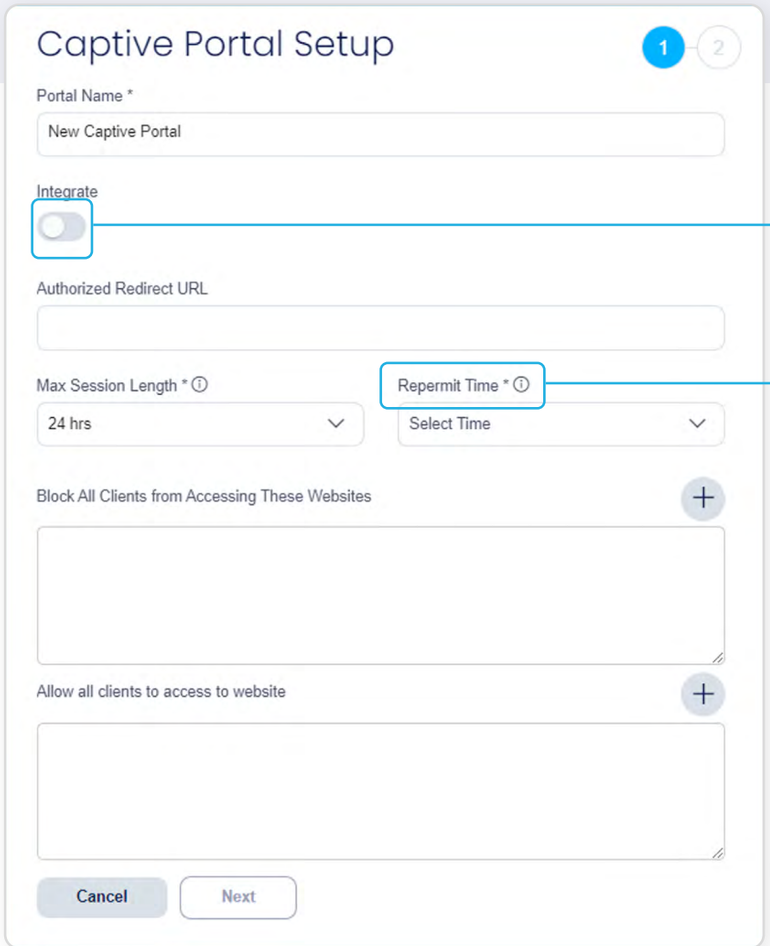


Figure 72 - Create SSID Window

Figure 73 - Create RADIUS Server Window

3.2.5 Captive Portal

Create and edit captive portal templates for your end users on the **WiFi Configuration** page – **Captive Portals** tab (see **Figures 74-76**). Customize a splash page, block specific websites, define session length, and create user groups for access to the network. You can assign a captive portal to an SSID when creating or editing a venue on the **Venues** tab (see **Figure 70**).



Toggle the Integrate switch to enter a redirection URL for a third-party captive portal.

The repermit time is the amount of time before a user can access the network again once the max session length is exceeded.

Figure 74 - Captive Portal Page 1

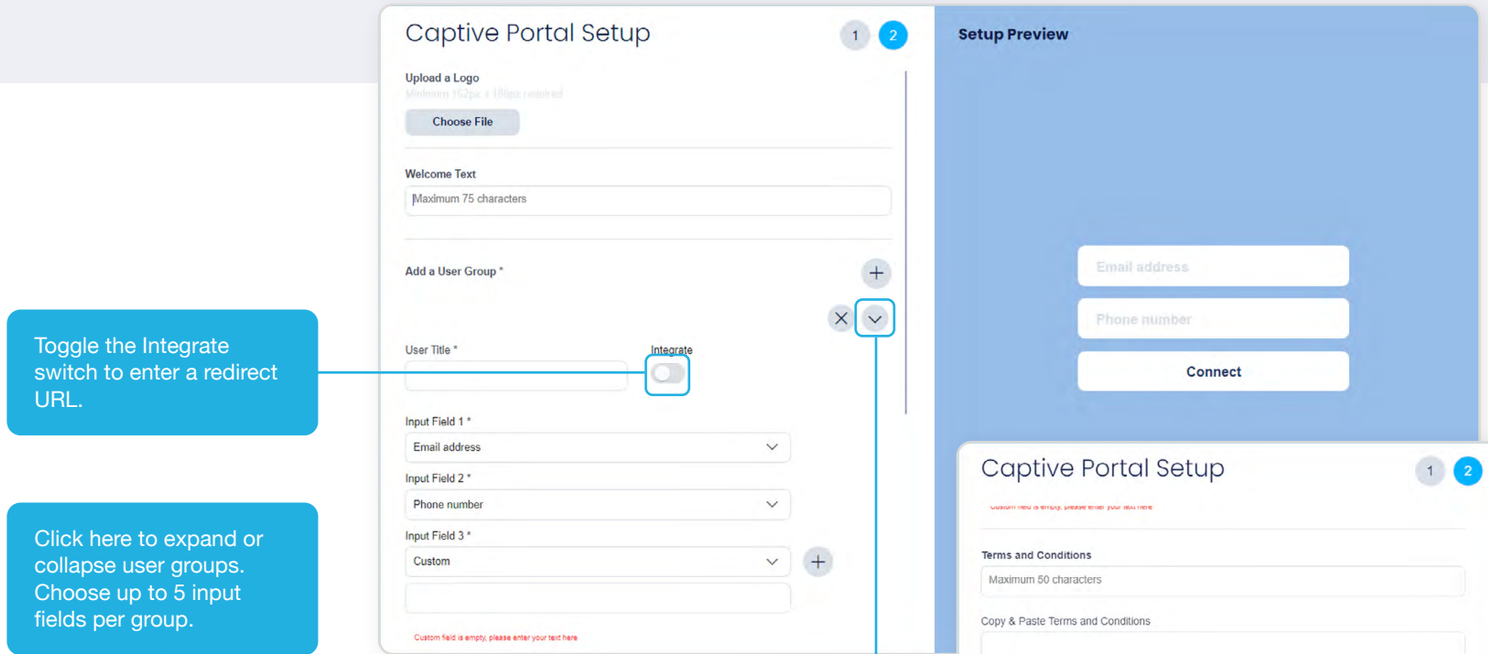


Figure 75 - Captive Portal Page 2, top

Toggle the Integrate switch to enter a redirect URL.

Click here to expand or collapse user groups. Choose up to 5 input fields per group.

Customize button, font, and background colors.

View a full preview of your splash page.

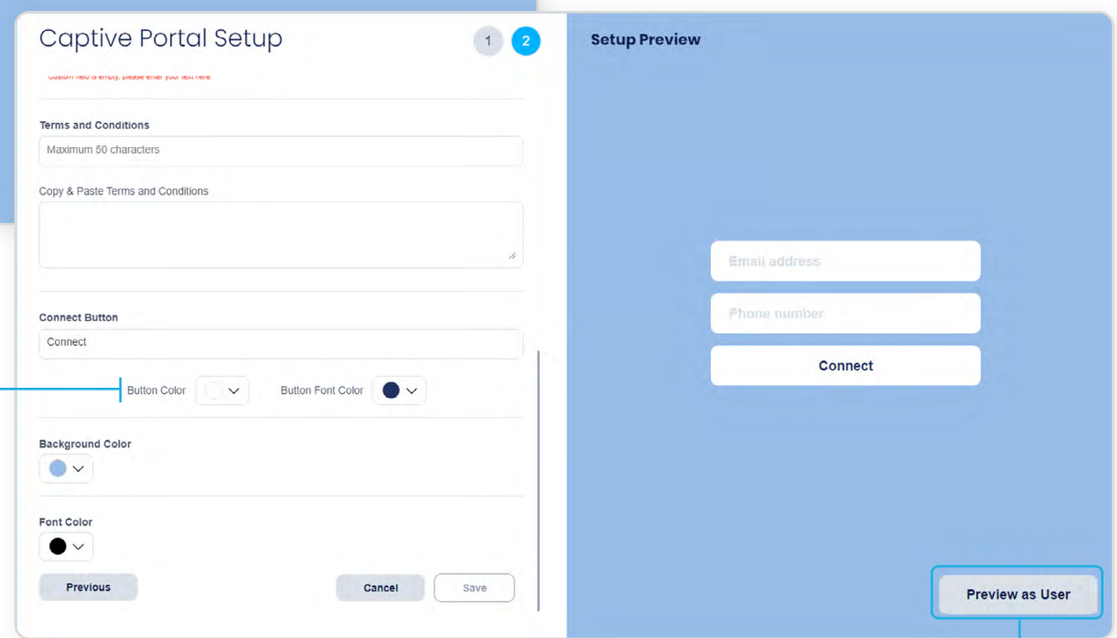


Figure 76 - Captive Portal Page 2, bottom

3.2.6 WLAN DHCP

Create a Dynamic Host Configuration Protocol (DHCP) profile on the **WiFi Configuration** page – **WLAN DHCP** tab. The DHCP is a network management protocol used on IP networks for automatically assigning IP addresses and other communication parameters to devices connected to the network.

The default profile (see **Figure 77**) will be automatically applied to nodes, but you can apply a custom profile to individual nodes on the **Map** page – **Properties** tab.

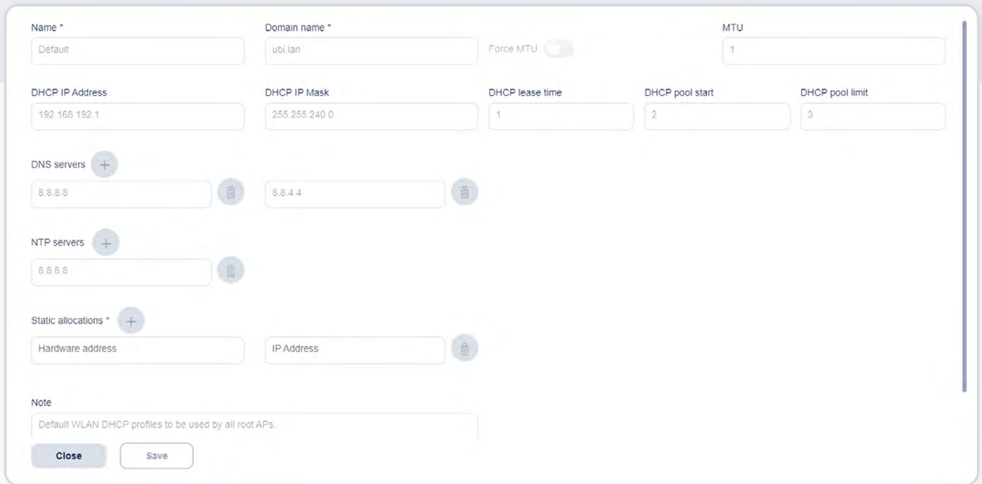


Figure 77 - WLAN DHCP Default Profile

3.2.7 Manage Blocked Clients

Users can block devices using the Total Client view on the **Map** page – **Explore** tab – **Activities** section. Go to the **WiFi Configuration** page – **Global Settings** tab to manage blocked devices.

Click the › button to open the list of blocked devices and view details (see **Figure 78**). Click the button to unblock the associated device.

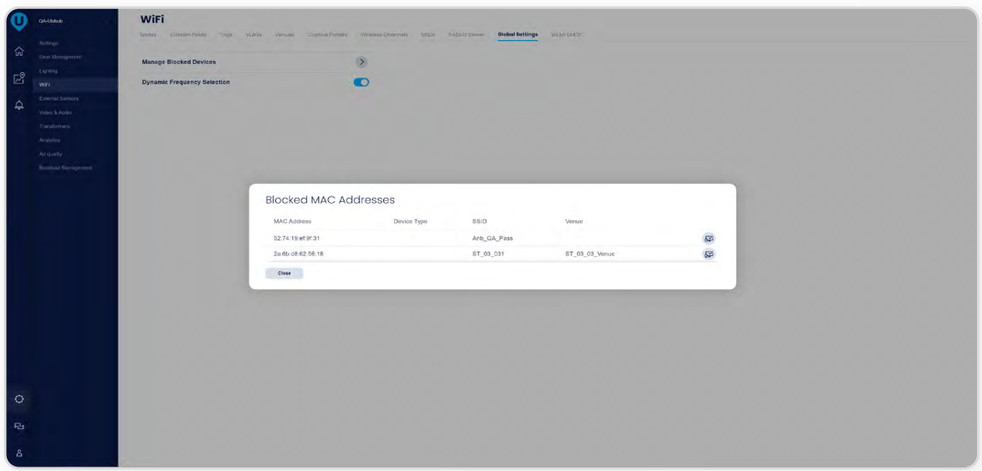


Figure 78 - Manage Blocked Devices

3.2.8 External Sensors

Sensor profiles can be created and edited on the **External Sensors Configuration** page. Click the Add Sensor Profile button to create a new profile, or select the menu button associated with an existing sensor profile to edit it (see **Figure 79**).

Use the **Power State** switch to toggle external sensor power on or off via the PoE port in the UbiHub®. Use the **Data State** switch to enable ethernet connectivity over the PoE port. When data state is enabled, external sensor profiles can support multiple gateway modes: Router (default), LAN Extension, and WAN modes.

If the default Router mode is selected, the following fields have default entries and can be changed as needed: **Gateway IP Address**, **Gateway Mask**, **Gateway CIDR**, **DHCP Lease Time**, and **Sensor IP Address**. The **Sensor MAC Address** field is optional.

Click the Add Firewall Rules  button to set up additional security measures. Required fields are **Start Port**, **Zone**, **Type**, and **Protocol**. **Egress Forwarding** can be toggled on and off with the associated switch, and a note containing up to 155 characters can be added as needed.

When applying external sensor profiles with a WAN or LAN Extension gateway mode to UbiHubs, please be aware of the following dependencies:

- An external sensor profile with WAN gateway mode can only be applied to root nodes.
- An external sensor profile with LAN Extension gateway mode can only be applied to nodes included in venues with a LAN Extension VLAN assigned.

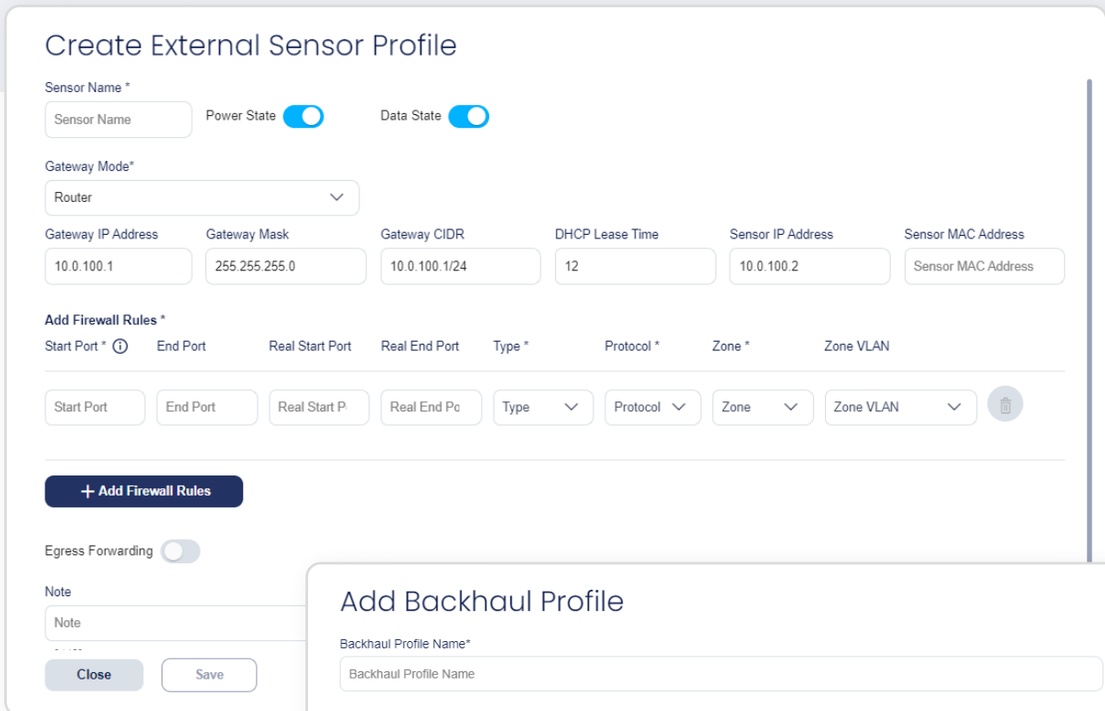


Figure 79 - Create External Sensor Profile

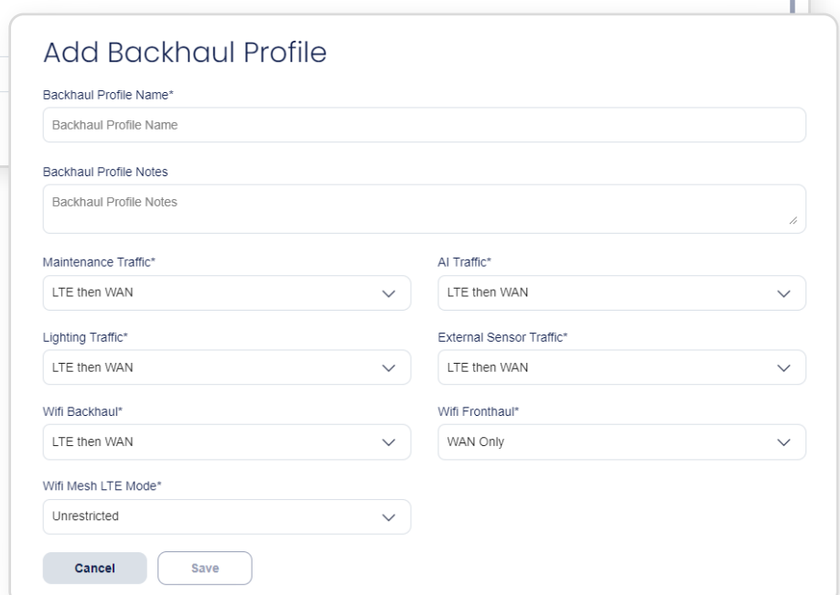


Figure 80 – Create Backhaul Management Profile

To add an external sensor profile to a node or tag, navigate to the **Map** page select the node or tag, and go to the **Properties** tab – **External Sensor Profile** section. The power state can also be toggled on or off from here.

3.2.9 Backhaul Management

Users can view the default backhaul profile which shows prioritization of the available backhaul options on the **Backhaul Management Configuration** page. Users can choose the Default profile (see **Figure 80**), or they can create a new profile to prioritize and manage network types for different capabilities.

4. CAMERAS & VIDEO

Configure, control, and analyze your UbiHub® deployment with cameras and video capabilities here. On the **Cameras & Video Map**, there is a default (no node or filter selected) view on the **Explore** tab containing counts of cameras with different configurations set up (recording, streaming, tripwires, etc.). Select a node or apply a filter to view counts of the configurations specific to that node or filtered set.

Select a single node to view its properties on the **Explore** tab.

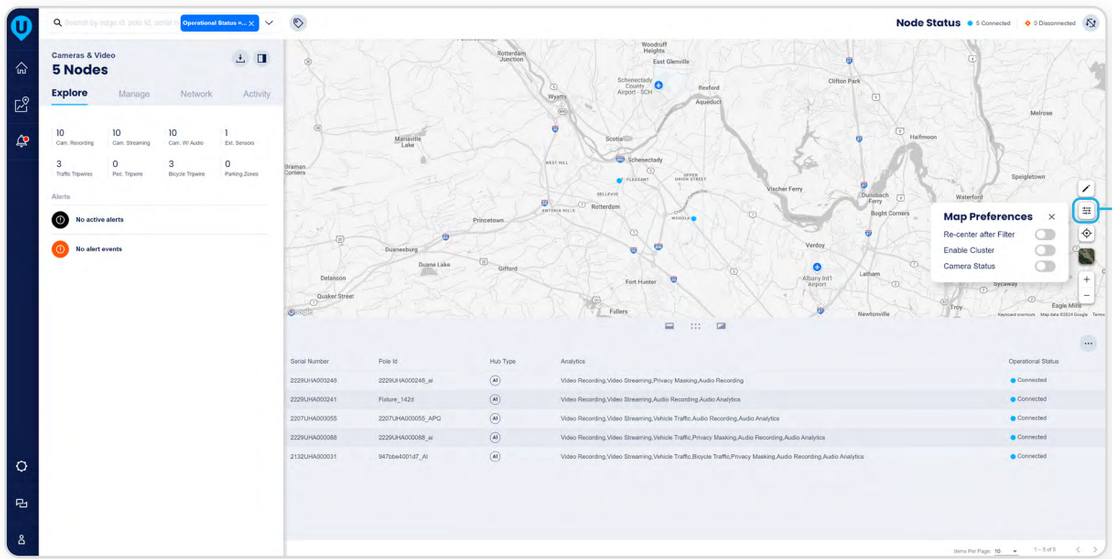


Figure 81 - Cameras & Video Map Page

Click on the Map Preferences button and toggle the switch to enable Camera Status view. Cameras available for video recording will show as a green dot, while unavailable cameras are shown with a red dot.

4.1 CAMERA PROFILES

Create recording, streaming, microphone, and image profiles on the **Video & Audio Configuration** page, and apply them to a node or filtered set of nodes on the **Manage** tab of the **Map** page – **Camera Management** section.

Create traffic and vehicle zone occupancy profiles on the **Analytics Configuration** page, and apply them to a node or filtered set of nodes on the **Manage** tab of the **Map** page – **Analytics Management** section.

See the **WiFi** section of this manual – External Sensors & Backhaul Management sub-sections for information on creating the respective profiles, and apply them to a single node on the **Cameras & Video Map** page **Manage** tab - **Sensors Management** section.

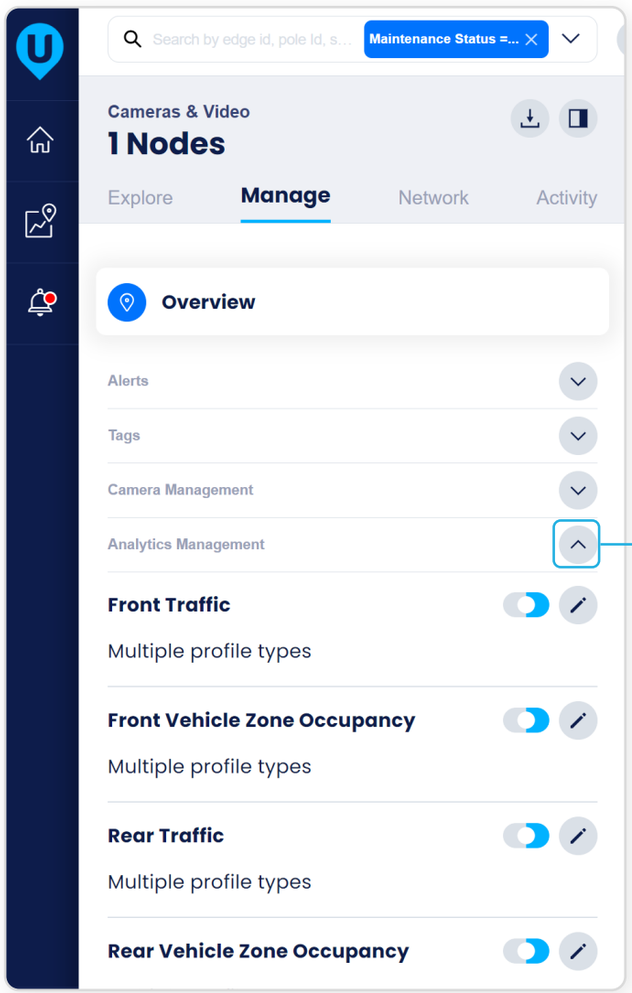


Figure 82 - Cameras & Video Manage Tab

Figure 83 - Cameras & Video Manage Tab Continued

4.1.1 Profile Configuration

All nodes have default profiles applied. Users can create their own on the **Video & Audio**, or **Analytics Configuration** pages, then apply them to cameras by selecting one or more nodes on the **Map** page – **Manage** tab.

Go to the **Camera Recording** tab on the **Video & Audio Configuration** page to create a recording profile. Name the profile and choose whether to include audio. If audio is included, select a microphone profile. Then, use the slider to select resolution and retention time. The longer video needs to be retained, the lower the quality will be. A sample video will display in the top right corner of the window (see **Figure 84**).

Streaming Quality profiles are simple and can be created and edited on the **Video & Audio Configuration** page – **Streaming Quality** tab. Give the profile a name, choose whether audio should be included (if so, add a microphone profile. Lastly, select a bit rate from the drop-down menu.

Microphone profiles can be created and edited on the **Video & Audio Configuration** page – **Microphone Profile** tab (see **Figure 85**). Give the profile a name at the top of the window, and use the slider to select microphone gain at the bottom – these are the 2 requirements for profile creation.

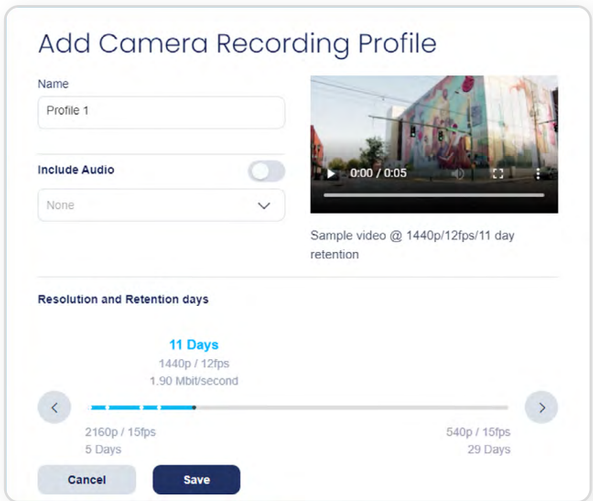


Figure 84 - Camera Recording Profile

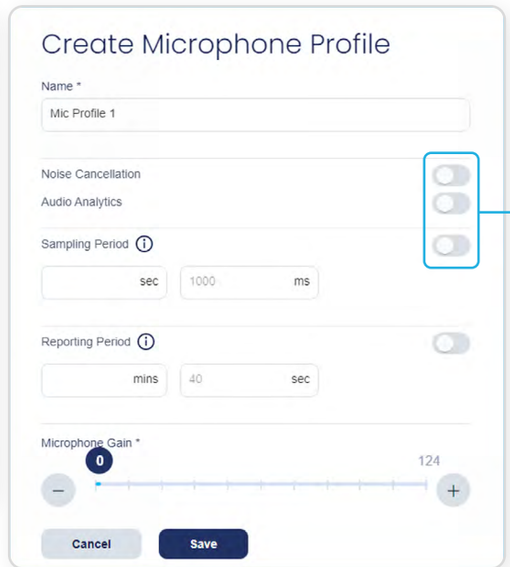


Figure 85 - Traffic Profile

Users can also opt to toggle **Noise Cancellation** or **Audio Analytics** on, and to include a sampling or reporting period for analysis. The sampling period cannot be greater than the reporting period.

Users can also opt to toggle **Noise Cancellation** or **Audio Analytics** on, and to include a sampling or reporting period for analysis. The sampling period cannot be greater than the reporting period.

Camera Image profiles can be created and edited on the **Video & Audio Configuration** page – **Camera Image Profiles** tab. Enter a name for the profile, manual and auto exposure time, and an ISO value (the default for this field is 0).

Traffic profiles allow users to control the rate at which packets are sent from a node to the cloud with vehicle, pedestrian, or bicycle detection data. Create them on the **Analytics Configuration** page - **Traffic** tab (see **Figure 86**).

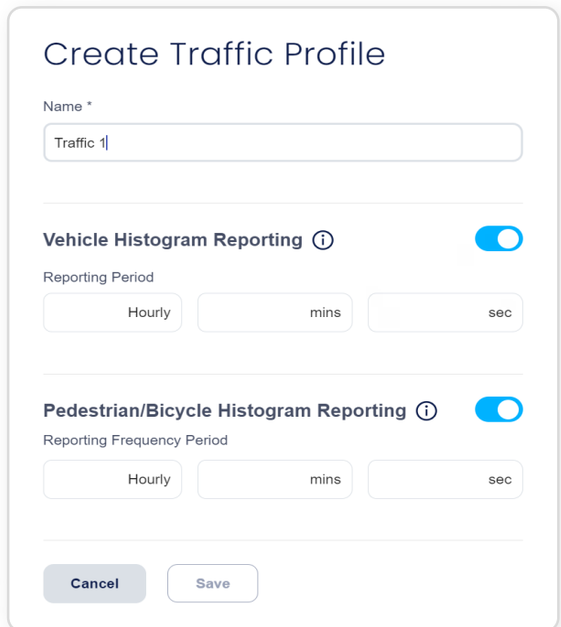


Figure 86 - Microphone Profile

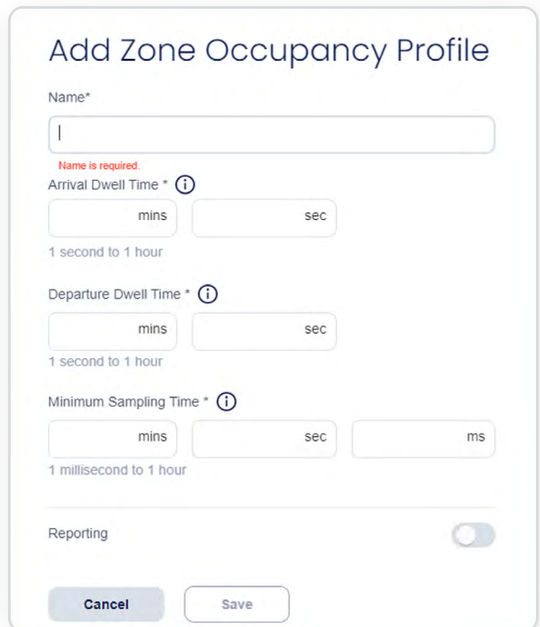


Figure 87 - Add Zone Occupancy Profile Window

To create or edit a **Vehicle Zone Occupancy** profile, navigate to the **Analytics Configuration** page – **Vehicle Zone Occupancy** tab (see **Figure 87**). Give the profile a name and fill out the two dwell time fields and the sampling time field:

- **Arrival Dwell Time:** The duration that the detector will wait after a vehicle enters a zone before generating a park-in event.
- **Departure Dwell Time:** The duration that the detector will wait from the time a vehicle enters a zone to the time it exits the zone before generating a park-out event.
- **Minimum Sampling Time:** The minimum time interval at which the parking detector analyzes the field of view.

Toggle the **Reporting** switch on to make the profile active. This can also be done on the **Map** page – **Manage** tab.

4.1.2 Motion Detection Threshold Configuration

When motion detection boxes are in use (edit from the **Map** page > **Manage** tab), users can set thresholds around when motion detection is enabled, and who and how to alert when pedestrian, bicycle, or vehicle motion is detected within the threshold.

Go to the **Analytics Configuration** page > **Motion Detection** tab. From here, users can create thresholds which will be used to determine the detection window of events (see **Figure 88**). Enter a name for the threshold and set the frequency and time range for alerts. Toggle the Daily and All Day switches to keep motion detection active all the time, or select specific days and time frames.

When complete, click Next to set up notification settings. Enter applicable email addresses and/or SMS numbers for alerts and choose the alert frequency. Users can receive no alerts, instant alerts, or a daily report at a set time. When ready, review your settings on the left side bar and click Save .

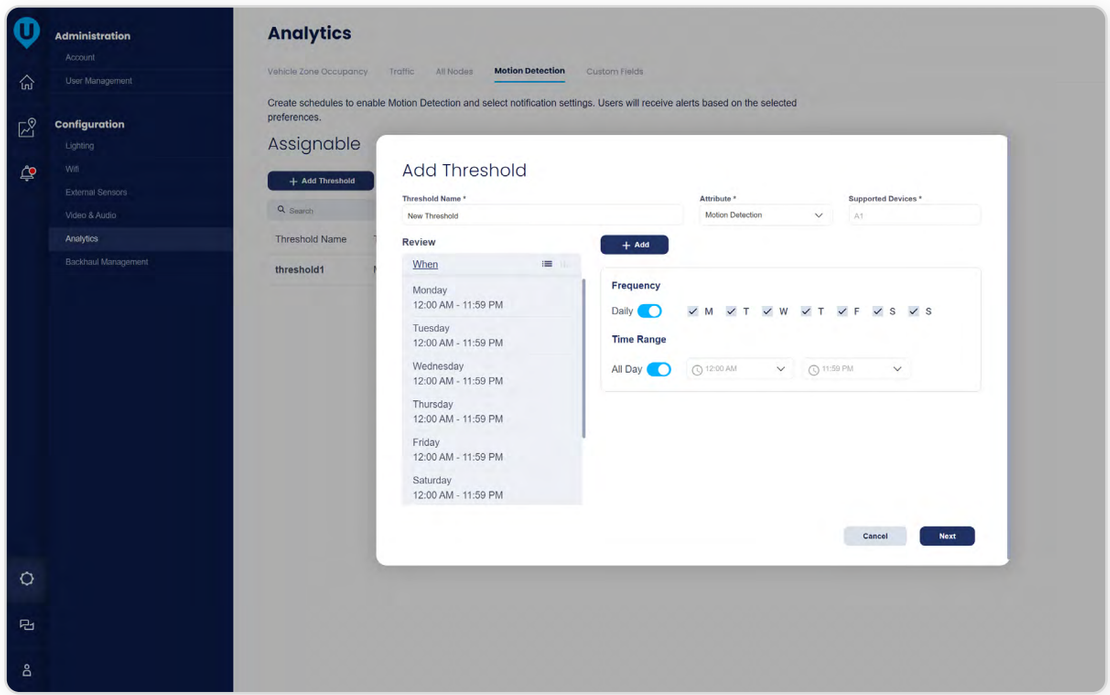


Figure 88 - Edit Motion Detection Threshold Window

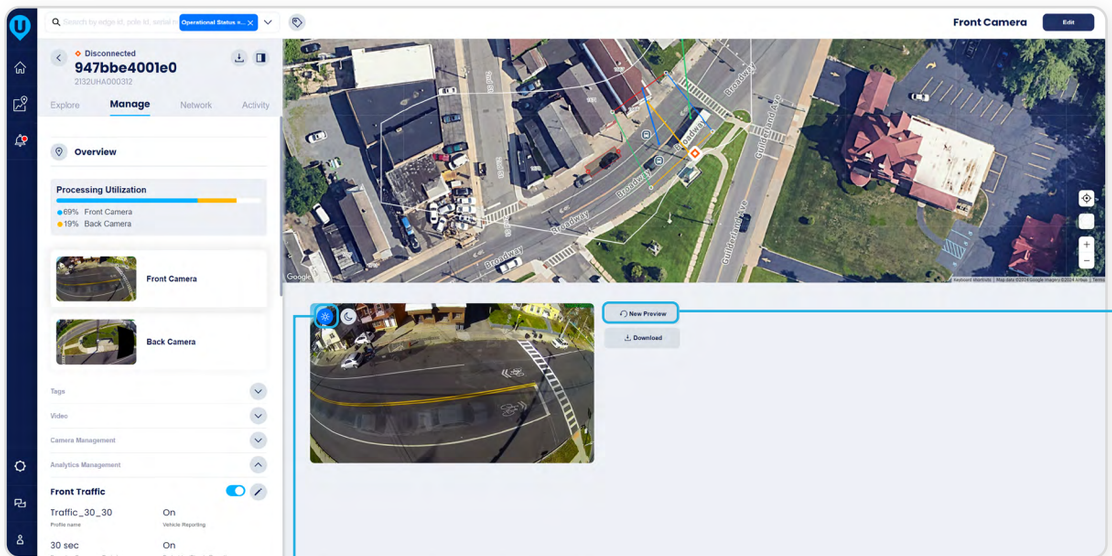
4.2 CAMERA ANALYTICS

When profiles have been created and applied, tripwires and detection windows need to be defined. If they are already configured, they can be edited here as well.

Select a node, go to the **Manage** tab, and choose a camera (front or back).

The map will switch to a satellite view of the node with an overhead view of the applied analytics. Use the same map buttons to zoom in and out or swap back to map view if needed. The processing utilization can be viewed on the side panel, broken out and color-coded between the front and back cameras (see **Figure 89**).

Click the Edit button in the top right corner to edit the selected camera's analytics. The **Editing Camera Analytics** screen includes a map above a re-sizable editing section which includes the associated camera view.



This section provides both a day and night preview of the camera's line of sight. Select the appropriate button to toggle between them.

Update the preview image here. Day hours are 9 AM to 4 PM. Night hours are 9 PM to 3 AM. If a request is made outside of those hours, UbiVu will refresh the image as soon as the next time window begins.

Figure 89 - Selected Camera Overview - Manage Tab

This map includes a check box to turn map labels on and off, zoom buttons, map/satellite view option, and pegman view option (drag and drop the yellow pegman to see a street view). The editing section below includes a front/back camera selection box, a processing utilization meter, the Configuration State indicator, analytics selections, the camera view, help text, and an undo button (see **Figure 90**).

The **Configuration State** indicator shows whether the selected camera can currently be updated with new configurations. **Ready** means it can be updated, **In Transit** means it was recently updated, but the change hasn't been implemented yet, so that change can be overwritten, and **Locked** means it cannot currently be updated.

There are five types of analytics that can be edited:

- **Homography:** Associate the map view with the camera view by aligning the colored lines (green, red, blue, yellow) on both views to achieve favorable analytics accuracy.
- **Vehicle:** Add up to two trip wires (yellow) within the pink detection box (cannot be edited) in the camera view. Cars, motorcycles, trucks, and buses that cross this wire in any direction will be counted.

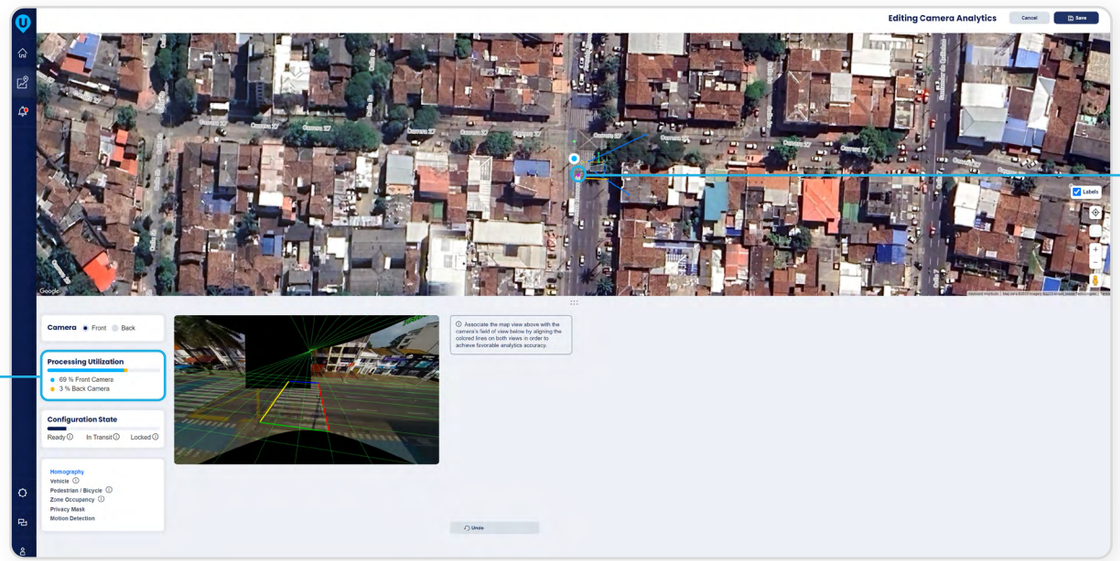


Figure 90 - Editing Camera Analytics Screen

The processing utilization meter shows how many analytic features can be added to the selected UbiHub®. If utilization is full, no further trip wires, detection boxes, zones, or masks can be added.

Notice that when you hover your mouse over the camera view on the bottom, a small, pink dot will appear in the corresponding spot on the map above, which helps align the map view with the camera view for analytics that require map configuration.

- **Pedestrian/Bicycle:** Add a pink detection box inside the outer teal boundary where pedestrian and bicycle traffic will occur. Add a blue trip wire in the pink detection box to detect pedestrians, or a green one to detect bicycles, or both (up to 2 trip wires per detection box).
- **Zone Occupancy:** Add a red zone box where vehicles will be detected based on the applied zone occupancy profile. Use the map view to click and drag the zone boundaries to the desired location. There is no limit to the number of zones.
- **Privacy Mask:** Add a privacy mask to restrict recording or streaming areas with sensitive information. Modify the location based on preference using the camera view. There is no limit to the amount of privacy masks.
- **Motion Detection:** When added, all other trip wires (pedestrian/bicycle/vehicle) will be removed. Boxes can be added to detect vehicle or pedestrian motion in desired locations. Add a threshold template using the **Assign To** drop down menu on the right to set an event detection time window for each box. Create a template on the **Analytics Configuration** page – **Motion Detection** tab.

While editing, use the Undo Undo button in the bottom right to undo any mistakes. Hit Cancel Cancel in the top right to disregard all changes, or Save Save to finish and save the new configuration.

4.3 VIDEO REQUESTS & STREAMING

When profiles are configured and applied, live video can be streamed, or previously recorded video can be downloaded using the options under the **Video** section on the **Activity** tab.

To download video, select **Video Request** from the **Video** menu on the **Manage** tab. The map will switch to a video request view, with nodes color coded by availability. Green indicates available while red is unavailable, and purple means video has already been requested for that node.

Once a node has been selected, the preview images will load underneath the map. Select front, rear, or both. Make all desired selections (multiple nodes and camera views can be selected), and then click **Next** at the top of the screen (see **Figure 91**).

On the next window, name your request, then select a start date and time, and a duration anywhere between 20 seconds and 20 minutes. Click the Request button when complete. A pop-up window will confirm your request and provide a link to the **Video Downloads** section.

Video Downloads is where you will find all requested video. The map will show where the requested video was recorded, and the list below provides more details and the options to watch the video in UbiVu, or download it locally (see **Figure 92**).

NOTE: Video downloads are stored in UbiVu for 24 hours before they are deleted.

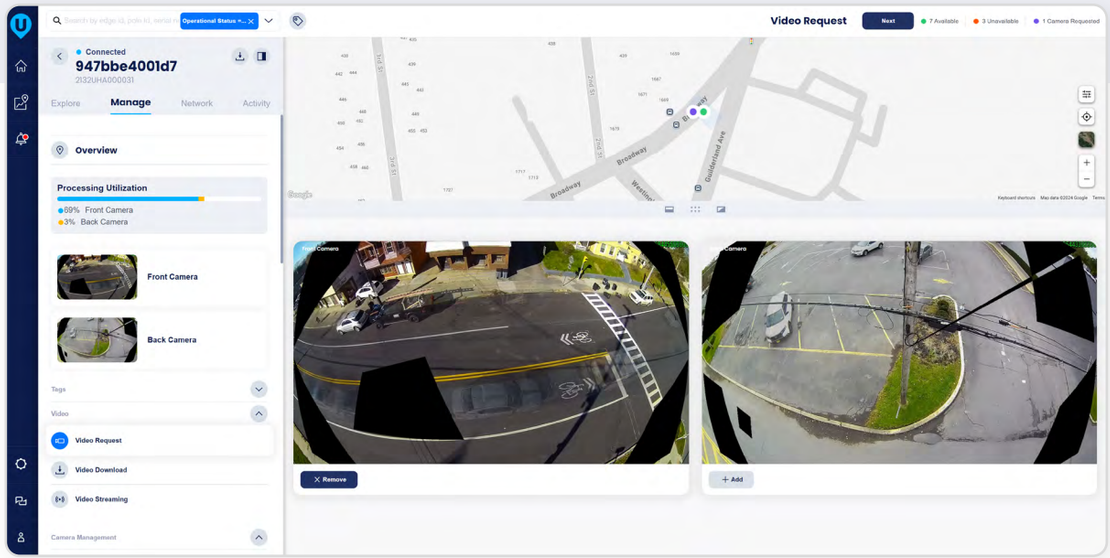
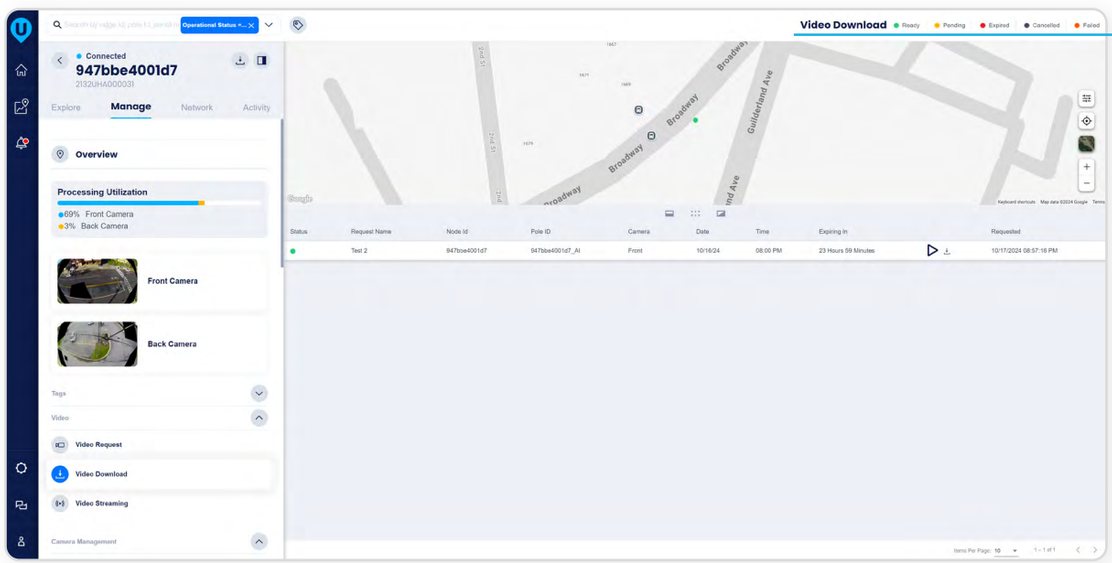


Figure 91 - Video Request



View the Video Downloads map key here. Nodes will indicate the status of video requests. There is also a status column in the list below.

Figure 92 - Video Downloads

To stream video, choose the **Video Streaming** option from the **Video** section on the **Explore** tab, then select a camera from the map. The front and back camera previews will display beneath the map. Click the play Play button on either camera to begin streaming (see **Figure 93**).

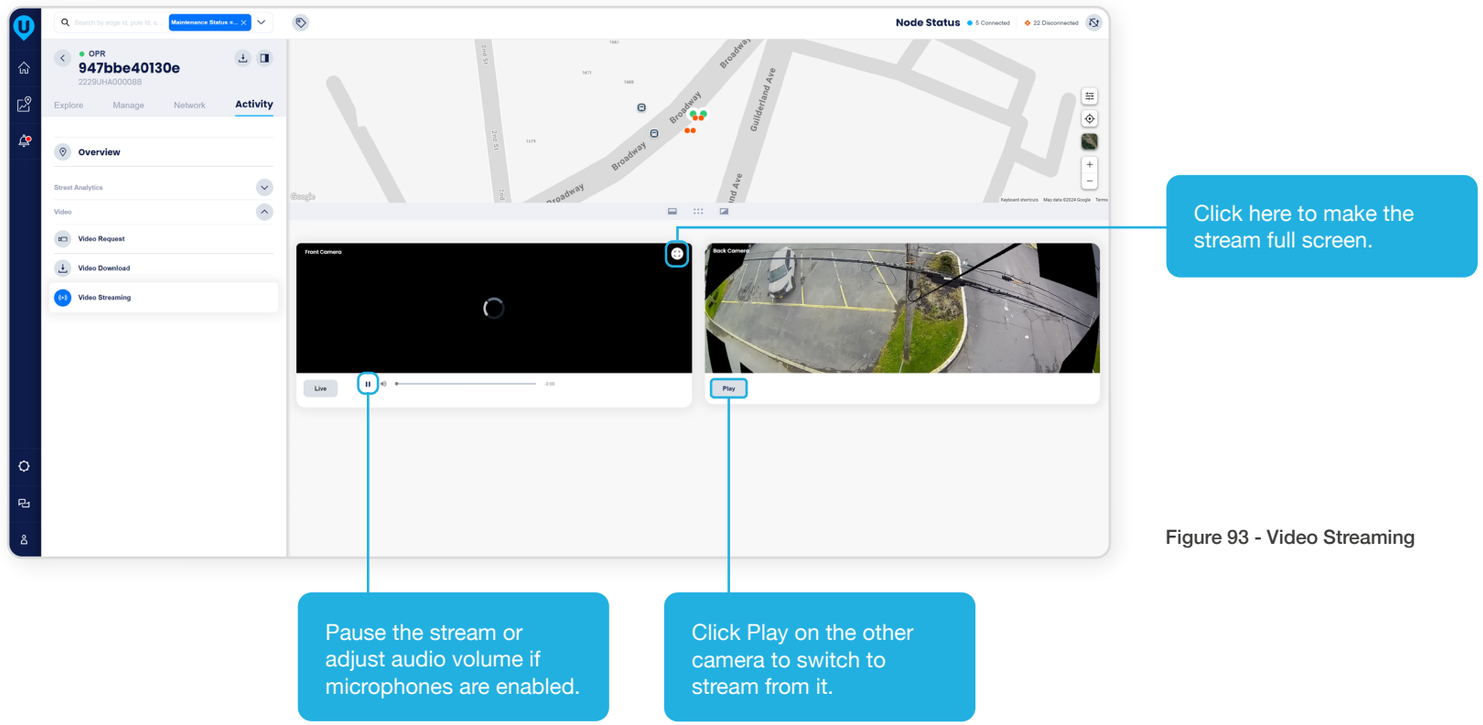


Figure 93 - Video Streaming

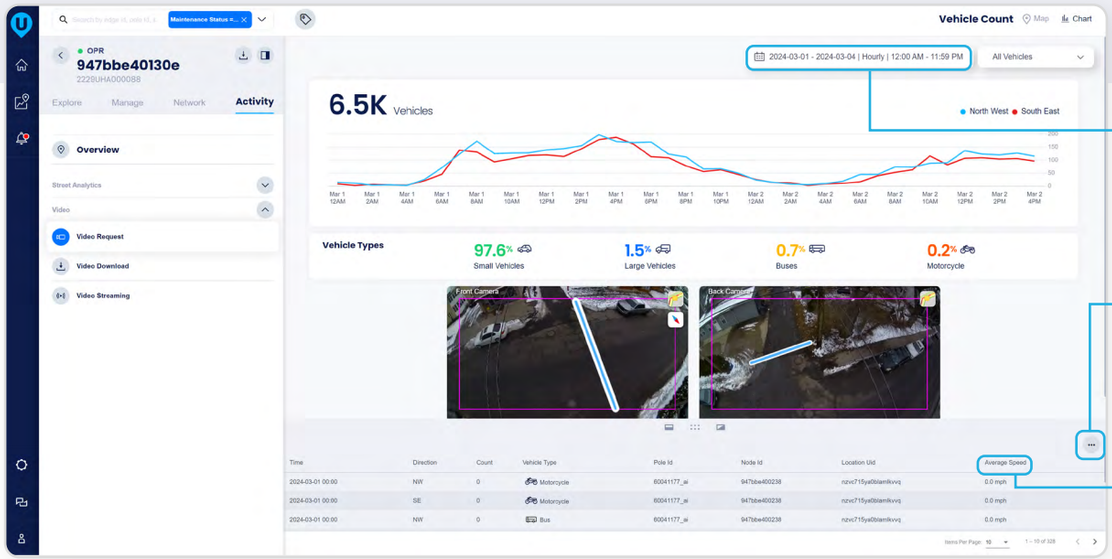
4.4 ACTIVITY ANALYSIS

Several charts and tables are available on the **Map** page – **Activity** tab. Use them to visualize and analyze your collected data.

Select a node with vehicle analytics applied and click on the **Vehicle Counts** button to view vehicle detection data.

Switch to the map view in the top right corner to see color-coded trip wires on the map (see **Figure 95**). Blue lines represent vehicle detection, yellow represents pedestrian detection, and purple represents bicycle detection. Click on a trip wire to look at the front and rear camera views, and to view data specific to that trip wire.

The **Pedestrian** and **Bicycle Counts** include all the same features and functionality as **Vehicle Counts**, with a chart view and map view.



Adjust the date, time, and interval displayed in the chart, and filter for vehicle type and direction of travel here.

Each instance of detected vehicles is listed in the exportable table below.

Go to the **User Profile** page to choose one of the following Average Speed measurement units: mph and km/h.

Figure 94 - Vehicle Counts Chart

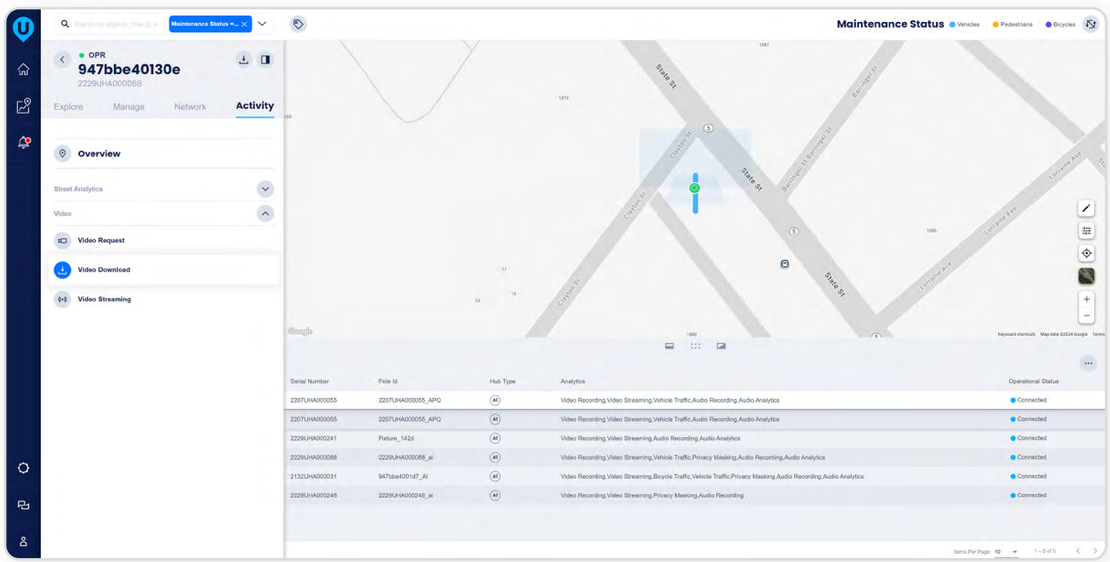
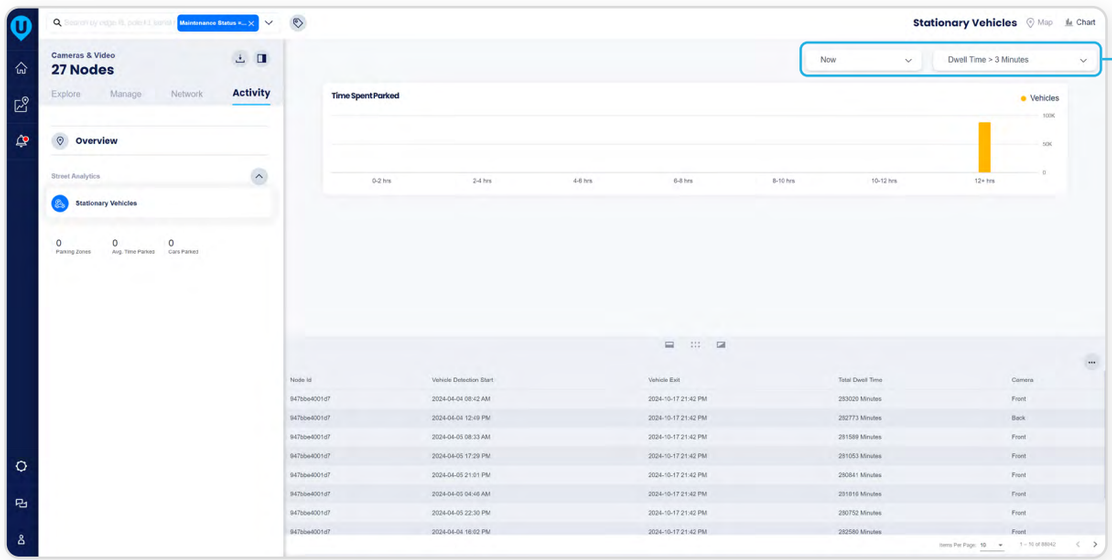


Figure 95 - Vehicle Counts Map

Stationary Vehicles functions similarly to **Vehicle**, **Pedestrian**, and **Bicycle Counts**.

The chart shows a count of vehicles and the time they spent parked in the pre-defined zone (see **Figure 96**). The list below shows each instance of a parked vehicle, its detection time, exit time, total dwell time, and the camera (front or rear) which was used to detect it.

The map view highlights any node that detected stationary vehicles.



Filter for time frame options: Now, Last Hour, Today, Yesterday, or Last 7 Days. Filter for dwell time greater than 3, 10, or 30 minutes.

Figure 96 - Stationary Vehicles Activity

5. AIR QUALITY

Deployments with the UbiSmart AQM+ will include the **Air Quality** capability on the **Map** page. Here, a map will load with the default AQI view. All active nodes will display on the map with color-coded zones depicting the AQI. A key for the color coding is in the top right corner of the map (see **Figure 97**).

Select a node to view individual node data on the **Explore** tab. All pollutants are listed on the left panel, color coded, and the primary pollutant will be outlined in a grey box (see **Figure 98**).

Use the Air Quality Index activity from the Explore tab only when a node is selected to visualize data on a chart. The AQI will display at the top of the chart, but the chart can be adjusted to display data for any pollutant. It will show levels of pollution over time (see **Figure 99**).

When a node is selected, go to the **Controls** tab to apply or remove a threshold template. Air Quality threshold templates are slightly different from other threshold templates (see the Air Quality Thresholds section for more information).

On the **Properties** tab, manage air quality tags for the selected node(s).

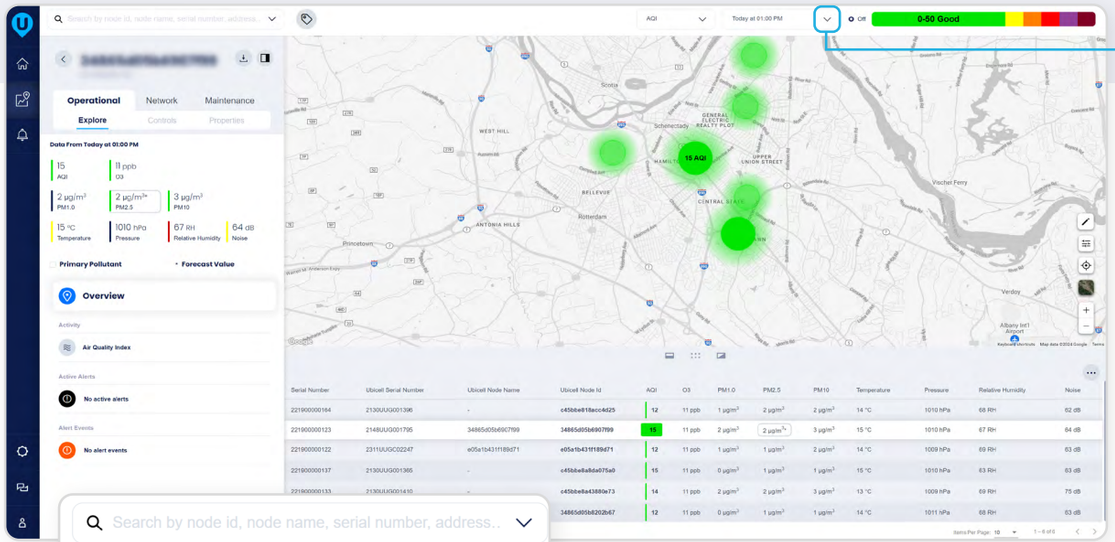


Figure 97 - Air Quality Location Page

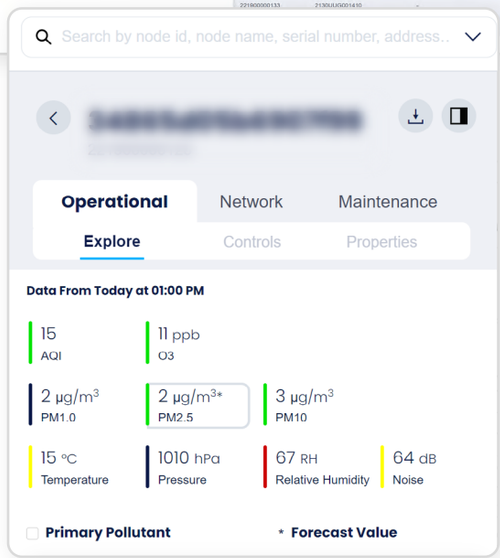


Figure 98 - Explore Tab for Selected Node

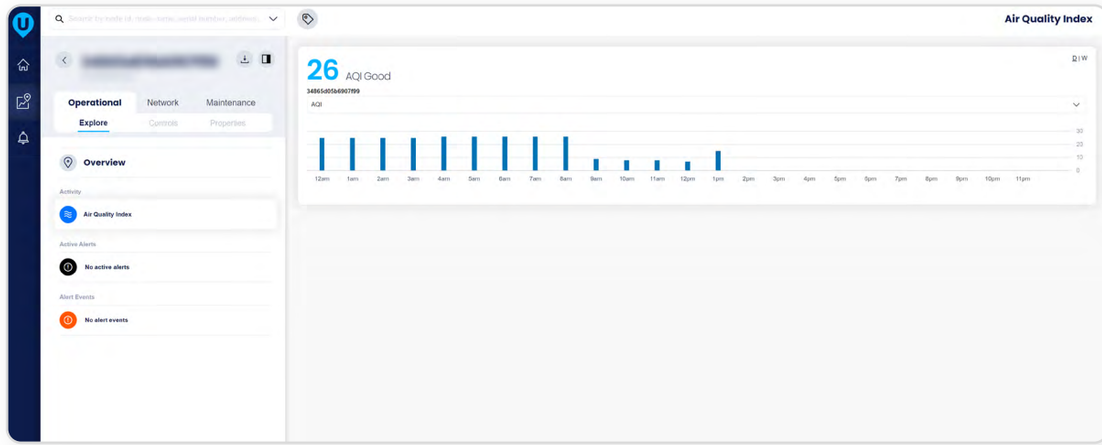


Figure 99 - Air Quality Index Activity

5.1 AIR QUALITY THRESHOLDS

Create and manage air quality threshold templates on the **Air Quality Configuration** page – **Thresholds** tab.

Thresholds can be created for pollutants (see Appendix D for a list of Air Quality threshold definitions). Each pollutant includes a color-coded slider to help users visualize the threshold level. Name the template, select a threshold type and an operator (see **Figure 24** for operator definitions), then use the slider to select the threshold level (see **Figure 100**).

Start receiving vital notifications immediately – create a default threshold template for each alert type which can be assigned not only to existing nodes, but also to new nodes as they are installed.

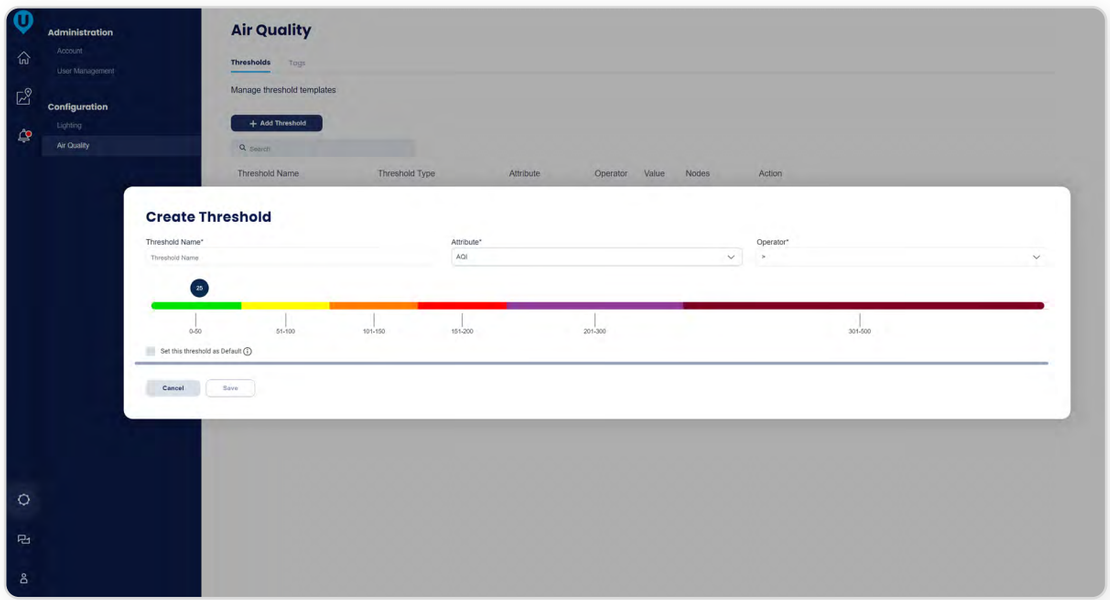


Figure 100 - Air Quality Threshold Template

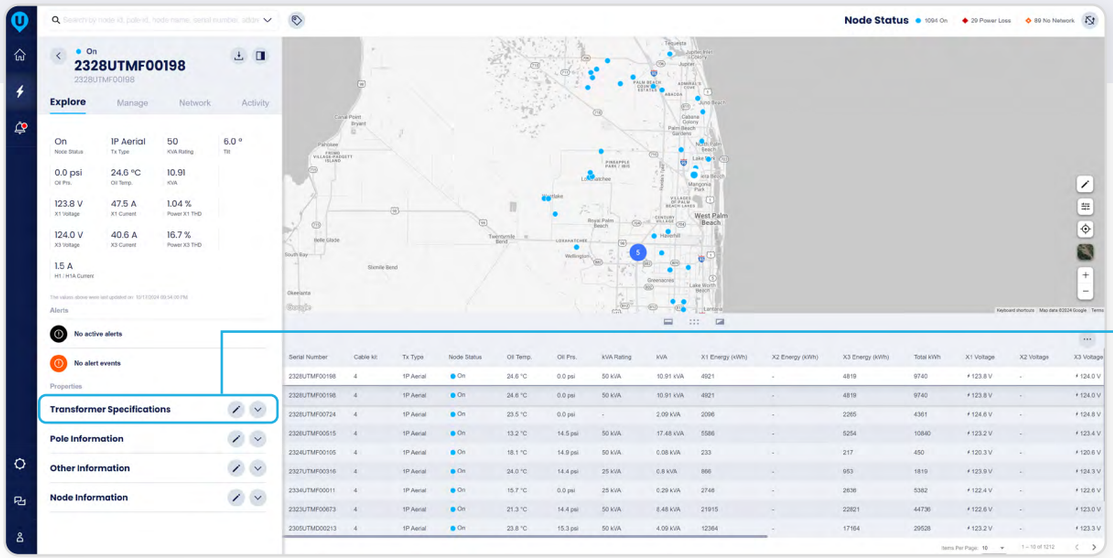
Select the checkbox at the bottom of a new or existing threshold template to mark it as a default template. If you manage a UbiGrid® installation, select whether the default template should be applied to single or three phase nodes only, or to both single and three phase nodes.

When ready, click Next. Then, choose to either assign the default template only to new nodes, or to all nodes (new and existing). You can create one default threshold per alert type and, if applicable, per transformer type.

6. TRANSFORMERS

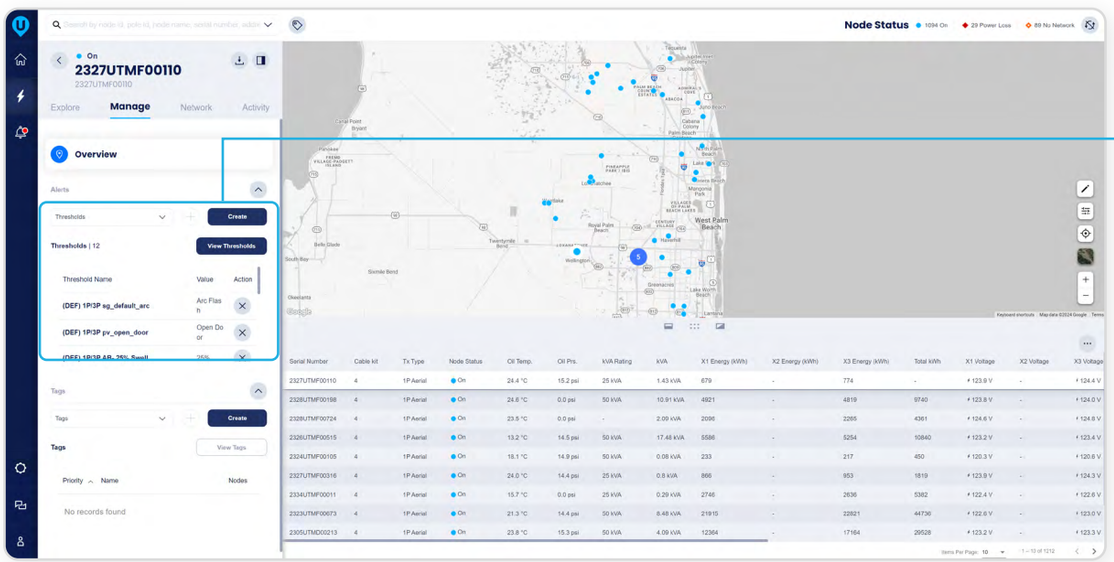
Deployments with the UbiGrid® DTM+ will display the **Transformers** capability on the **Map** page. The map and nodes table include the same main functionality as the Lighting capability, however when a node is selected, an overview of the node's collected data will display at the top of the **Explore** tab. Various options for entering and viewing transformer or node details specific to the selected node will show beneath the current metrics and alerts, under the **Properties** section (see **Figure 101**).

Go to the **Manage** tab to assign or edit thresholds and tags, or (with no nodes selected and the subpanel feature enabled) to use the **Node Migration** tool (see **Figure 102**).



Add or edit transformer details such as kVA rating, manufacturer, transformer location number, or rated HV here.

Figure 101 - Transformers Explore Tab



You can also create and edit thresholds on the Transformers Configuration page - Manage tab.

Figure 102 - Transformers Manage Tab

6.1 TRANSFORMER ACTIVITY ANALYSIS

With a node selected on the **Activity** tab (see **Figure 103**), several options for transformer activity analysis appear on the side panel.

Select the first one, **Metrics Overview**, to replace the map and nodes table with a summary of all major metrics in chart format (see **Figure 104**). Click on any chart to expand it and view more details in list form.

If you already know what you need to review closely, simply click on the appropriate metric to jump straight to that chart.

Individual metric charts provide additional options for analysis; hover over any point on the graph for more details. Edit and export the table below which lists each instance of collected data.

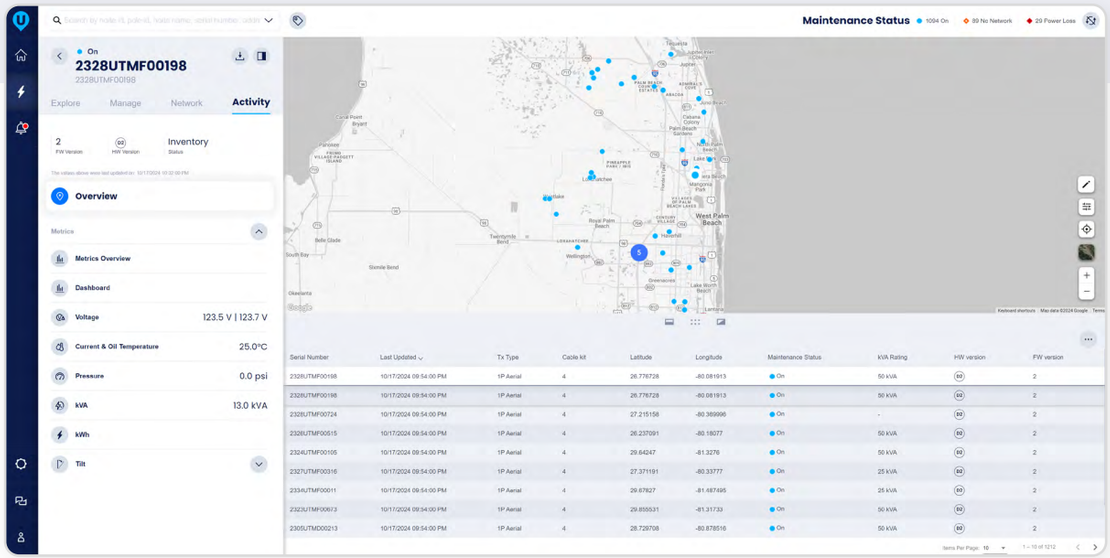


Figure 103 - Transformers Activity Tab

Click the date and time to adjust it and view data within a shorter or longer time frame.

Click the expand button to view this node's tilt widget. If tilt thresholds are defined, they will appear on the widget.

Figure 104 - Metrics Overview

A. LIGHTING

REPORT DEFINITIONS

Active Alerts Report	list of lighting alerts currently active
Aggregated Burn Hours	total burn hours by unit for the time range selected
Alert Notification	list of all alerts sent in the time range chosen
All Node Details	full list of installed nodes and associated details, one entry per node
Audit Report	log of user / API actions that have occurred on the panel
Device Burn Hours	returns the number of completed lamp burn hours for each device
Light State	this is a lighting audit log. There is an entry for every time a light turned on/off/dimmed for the time range requested
Momentary Outages Report	a list of devices that lost power momentarily
Power Usage (aggregated kWh)	total power usage in kWh by device for time range chosen
Power Usage (kWh)	power usage in kWh by device for time range chosen
Schedule Transactions	historical log of all schedules that have been sent to devices
Schedule Updates	current schedule state of all devices
Thresholds	a list of units and what alarms are applied to them
Transaction	all historical device messages from all selected devices in the time range

HARDWARE DEFINITIONS

C1	UbiCell® 1.0
C2	UbiCell® 2.0
C3	UbiCell® UG
C4	UbiCell® 3i
H1	UbiHub®

THRESHOLD DEFINITIONS

Daily Bootups	alert is triggered if any node reboots more than the number of times specified in the threshold template
Daily Lamp Cycle	alert triggers if any node cycles ON and OFF more than the number of times specified in the threshold template
Day Burner	alert triggers when a lamp is ON at both times set in the threshold template
Empty Field	alert triggers when fields specified in the threshold template are left empty by wwusers editing form details
GPS Coordinates Moved	alert is triggered if GPS coordinates of the assigned node are found to be greater than 100 meters from its last saved location.
Lamp Off With Load	alert is triggered when a lamp is OFF but there is a load detected in the fixture
Over Illuminating	alert will trigger if a lamp exceeds the defined percentage of rated power
Pole Voltage Sag	alert triggers when the voltage measured is less than the voltage specified in the threshold template
Pole Voltage Swell	alert triggers when the voltage measured is greater than the voltage specified in the threshold template
Power Loss	alert triggers when a node goes offline due to a power loss
Schedule Failure	alert triggers when any node with a time-of-day schedule template applied does not follow its scheduled actions
Sudden Tilt	alert triggers when the angle of tilt detected by the node is greater than the angle specified in the threshold
Under Illuminating	alert is triggered when active power is off by more than 12% of expected fixture wattage

	INSIGHTS DEFINITIONS
Broken Ballast – DALI	identifies luminaire ballast failure through DALI status signals.
Broken Fixture	detects fixtures with wattage too low to power the lamp.
Flickering Luminaire	flags fixtures with frequent voltage sags or power losses.
Light Off At Night	monitors lamps that remain off when they should be on.
Sustained Tilt	alerts on sustained tilt changes of 5 degrees or more.
Day Burner	detects lamps running continuously during daylight hours.

B. WIFI

	REPORT DEFINITIONS
Session Report	list of client sessions including length, device, and bandwidth consumed
Top Client by Traffic Report	list of clients who created sessions including total traffic, device, and bandwidth consumed
	HARDWARE DEFINITIONS
H1	UbiHub®

C. CAMERAS & VIDEO

	REPORT DEFINITIONS
Streaming Audit Report	audit report detailing users stream requests
Video Audit Report	audit report detailing users download requests
	HARDWARE DEFINITIONS
H1	UbiHub®

D. AIR QUALITY

	REPORT DEFINITIONS
Active Alerts Report	list of AQ alerts currently active
All Node Details	full list of installed nodes and associated details, one entry per node
AQM Pollutants (Daily)	AQ pollutant measurements by day
AQM Pollutants (Hourly)	AQ pollutant measurements by hour
Physical Pollutants	physical pollutant measurements – raw data
	THRESHOLD DEFINITIONS
AQI	alert will trigger when the AQI exceeds or drops below the value set in the threshold template
Noise Level	alert will trigger when the noise level exceeds the value set in the threshold template
O3	alert will trigger when the O3 level exceeds the value set in the threshold template
PM 1.0	alert will trigger when the PM 1.0 exceeds the value set in the threshold template
PM 2.5	alert will trigger when the PM 2.5 exceeds the value set in the threshold template
PM 10	alert will trigger when the PM 10 exceeds the value set in the threshold template
Pressure	alert will trigger when the pressure exceeds the value set in the threshold template
Relative Humidity	alert will trigger when the relative humidity exceeds the value set in the threshold template
Temperature	alert will trigger when the temperature exceeds the value set in the threshold template

E. TRANSFORMERS

REPORT DEFINITIONS

Aggregated Energy Consumption (kWh)	aggregated energy consumption in kWh by device for time range chosen
Energy Consumption (kWh)	energy consumption in kWh by device (D2 devices only) for time range chosen
Transformer Details	Export historical node data for up to 25 nodes per report. Due to the amount of data included in it, this report may take extra time to prepare. (For example, UbiGrid® DTM+ devices report every 2 minutes, so when only one is selected to include data for the past week, up to 5,040 rows of data will be compiled and exported.)

THRESHOLD DEFINITIONS

Arc Flash	if a DTM+ detects an ambient light value greater than 200 mV, for a duration of 1 second, the alert will be triggered, indicating an arc flash has occurred.
AUS Control Health	alert will trigger ABNORMAL if the AUS has not received a heartbeat signal for more than 7 days.
AUS End Of Life	alert will trigger when the switch has approached the end of life state.
AUS Status	alert will trigger every time the S&C relay undergoes a physical state change from normal to abnormal state indicating that the switch has changed position from its original (normally open or closed state) and vice versa.
Frequency Out of Range	alert will trigger when the detected line frequency is above the user defined threshold ranging between 0.001 and 10 Hz
Open Door	if a DTM+ detects an ambient light value greater than 200 mV, for a duration of 10 seconds or longer, the alert will be triggered, indicating the transformer door may be open.
Power Status	alert will be generated if power is lost or restored
Pressure Too High	alert will be generated if the pressure exceeds the set value in PSI
Primary Current Swell	enter a value between 50 and 400 Amps, and an alert will be triggered if the primary current (primary line corresponds to H1B, H1A, H2B, H2A, H3B, H3A depending on the coil configuration) swells the defined amperage over the nominal current. (D2 devices only).
Secondary Current Swell	enter a value between 100 and 2000 Amps, and an alert will be triggered if the secondary current (secondary line corresponds to X1, X3 for 1P, and X1, X3 & X2 for 3P transformers) swells the defined amperage over the nominal current. (D2 devices only).
Sudden Pressure Change	the user should enter a value in PSI – a value can be entered up to one decimal place (i.e. 5.1 PSI). If the differential pressure increases or decreases from the nominal value reported by the device past the set value in the threshold template, the alert will trigger.
Temporary Voltage	receive an alert when power is lost or restored on X2 or X3 for
Interruption	single or three phase transformers
Sudden Tilt	alert will trigger if the set degree of tilt is exceeded
Voltage Sag	alert will trigger when voltage sags below the user-defined percentage of the nominal voltage (the percent of nominal is a + or - value used to define acceptable upper and lower voltage threshold deviations)
Voltage Swell	alert will trigger when voltage swells above the
120/240/277V	user-defined percentage of the nominal voltage (the percent of nominal is a + or - value used to define acceptable upper and lower voltage threshold deviations)
Voltage Swell	alert will trigger when voltage swells above the user-defined
480V	percentage of the nominal voltage (the percent of nominal is a + or - value used to define acceptable upper and lower voltage threshold deviations)

HARDWARE DEFINITIONS

D1	UbiGrid® DTM+ (1st generation)
D2	UbiGrid® DTM+ (2nd generation)

INSIGHTS DEFINITIONS

High Oil Temperature	detects oil temperatures exceeding 95°C, signaling potential overheating.
Voltage Deviation	identifies secondary voltage deviations of 5% or more from nominal values for at least 1 hour.
Overloaded Transformer	flags transformers with calculated kVA exceeding their rating for at least 1 hour.
Repeated Pole Impact	tracks impacts of 2G or greater detected by the UbiGrid® DTM+ accelerometer.
Sustained Tilt > 10°	alerts on sustained tilt changes greater than 10 degrees, indicating structural shifts.
Voltage Step	detects sudden changes of more than 5V in secondary voltage across the legs.

LET’S GET TO WORK

For all other questions or more in-depth support, don’t hesitate to reach out!

Contact Ubicquia Support

By Email:
support@ubicquia.com

or

Submit a Ticket

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