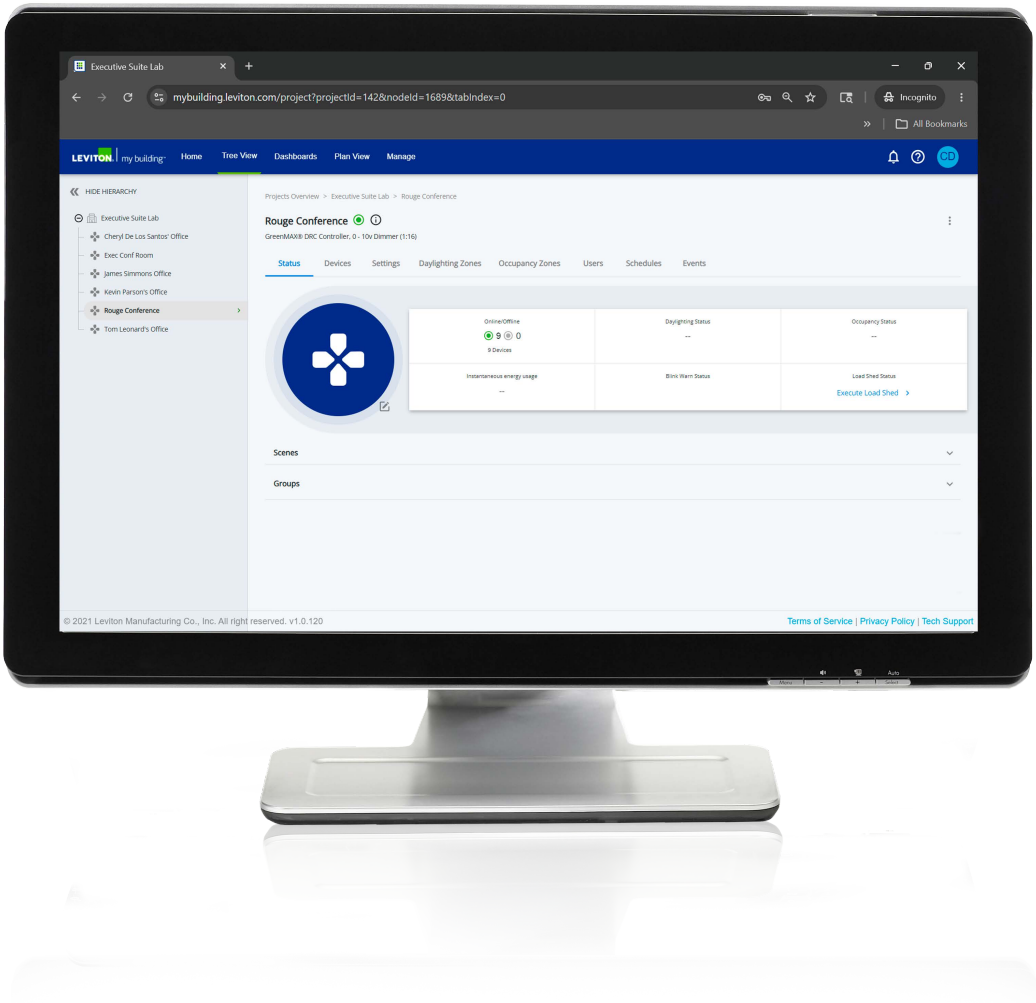
LEVITON | my building™

User Manual



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My Building Software System Architecture

The My Building software system architecture is that of a series of microservices running in a containerized environment, each executing their own specific role and function and interacting between each other and with the outside world following a defined set of rules. This architecture allows for a high degree of flexibility in deployment options as well as scalability. In addition to the microservices that make up the My Building application, there are a series of external applications which also may be containerized or may run stand alone. In all cases, care should be given to ensure that:

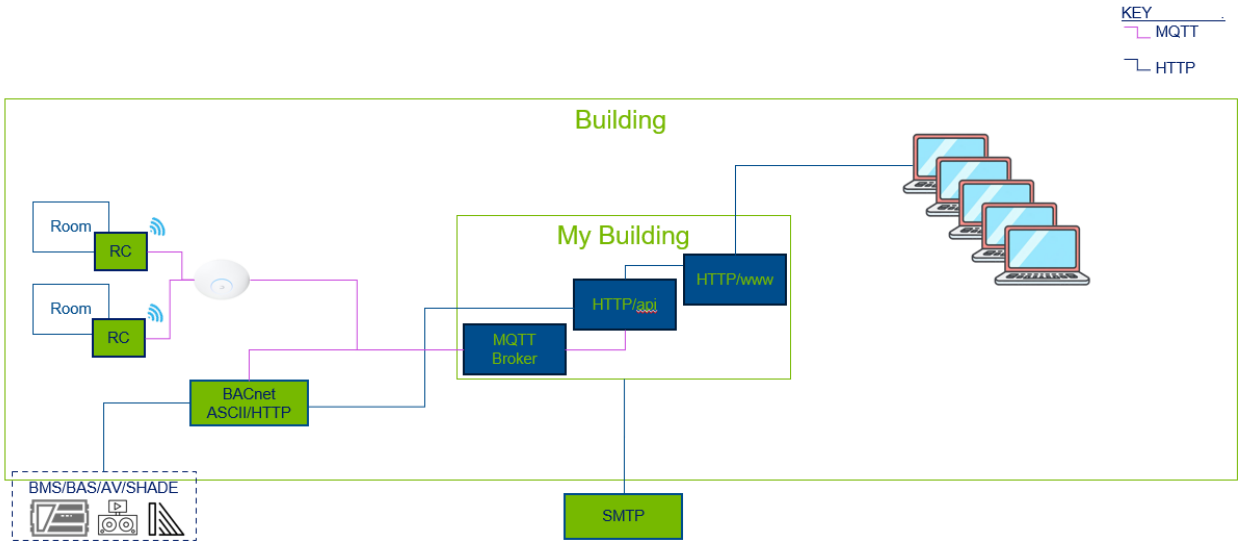
- Persistent data store is outside the container
- Processes for backup and restoration of data is well defined, monitored, and executed.
- Tools are implemented for monitoring the installation and alerting the appropriate individuals when there are problems.

The Leviton Lighting Control Systems & "The network"

Before we further discussion about My Building system architecture, it's helpful to understand the basic layout of the lighting control network. First, looking at a single building deployment:

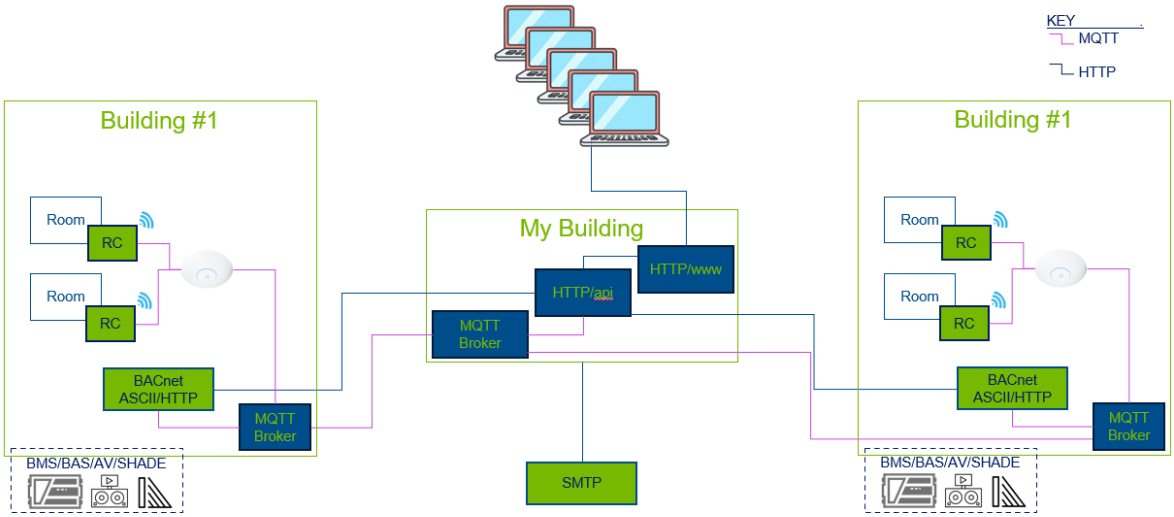
- Lighting control Devices, like relays, dimmer, sensors, switches, keypads and the like, are located inside the room. They all communicate with each other on a local in-room network which can be "wired" using a proprietary protocol we call LumaCAN or "Wireless" using a protocol similar to Zigbee. All in-room devices are managed by a Room Controller.
- All Room Controllers (RC), typically located one per room, communicate through a Wi-Fi network using MQTT/IP. The Wi-fi access points can be provided by Leviton or the customer. The customer is the preference.
- Clients using a web browser from their computer or the My Building app on their phone communicate to the My Building software.
    - Note: in some cases, the app will make a direct TCP/IP connection to the Room Controllers

- The BACnet point of presence, ASCII interface for A/V, et all, if provided, is local to the building network and at the location of the Building Management or Building Automation Server. These device that exposes bacnet to the network is one of the My Building microservices and often runs on a constrained Linux device provided by Leviton, but also be virtualized.
- My Building uses email for some notification, a SMTP server is required and should be provided by the local site IT team



A multi-building network is the same as a single building network except for the following:

- An MQTT broker must be located in (or available to) every building. This broker is used to keep communication necessary within the building…in the building. This broker will be setup as a bridge broker to the main MQTT broker



Virtualization

Roles & Responsibilities

Specific to virtualized environments, the roles and responsibilities are split between Leviton & the site IT team.

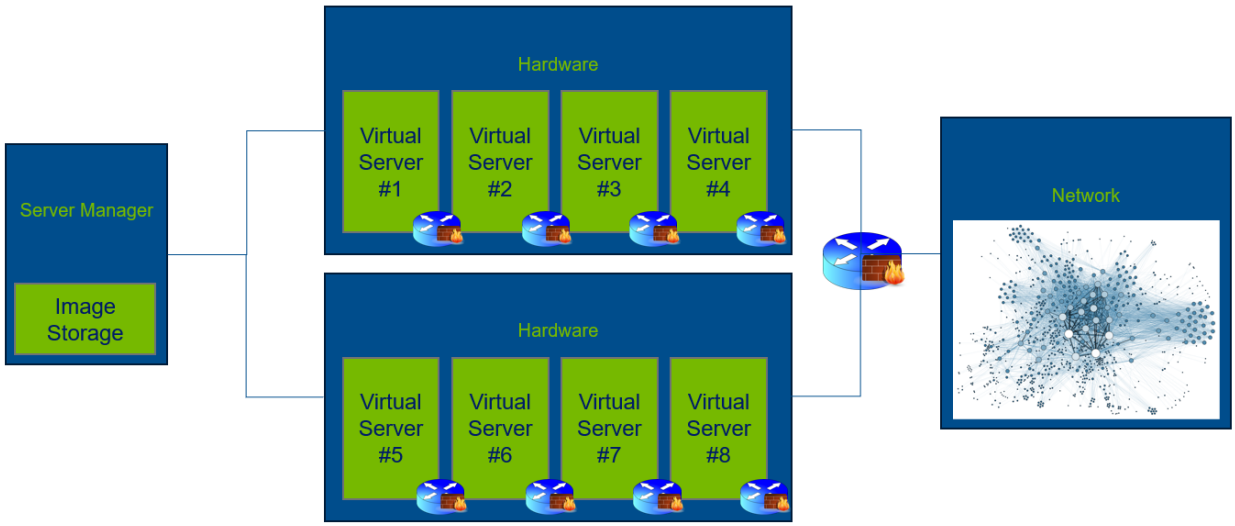
- Leviton
  - Commissions the control systems per the contract documents
  - Connects the control systems to My Building
  - Provides training on how to use the system to the end users
  - Provides My Building software and installation instructions to the IT team
  - Provides phone, email, and community support services
  - Provides Remote Support if remote access is provided
  - Provides Dev Ops support if purchased
- Site IT Team
  - Provides hardware for installation of My Building
  - Defines specific My Building architecture
  - Executes all required network configuration
  - Installs My Building software
  - Performs all system upgrades

Understanding Virtualization

A virtual server is a software-based server that mimics the functionality of a physical server by partitioning a physical server into smaller, self-contained computer platforms. Virtual servers are often located in a cloud environment or off-site data center. There are several benefits to virtualization, and, the industry is ripe with broad and differing options on the topic, however, some of the key benefits are:

- No dependency on physical hardware
- No single point of failure
- Ability to scale computing resources based on needs - static or dynamic
- Build-in redundance
- Centralized backup & management
- Increased security
- Lower total cost of ownership

The diagram below shows a rudimentary representation of what server virtualization looks like:



Effectively, in this diagram:

- Hardware: There are two physical pieces of hardware. In a virtualized environment we call these "Host Machines" and typically would have lots of process, memory, or storage capabilities.
- Sever Manger: This is the devices which is responsible for managed the hardware, where, and how the virtual machines are deployed
- Network: These are the clients and devices that interact with the virtual machines.

The sever manager and Virtual Machine network is on a private and every secure network with very strict firewall and routing rules defining how and what get's access into and out of the network. Further, the virtual servers are fully isolated from each other and the only means by which they can communicate to each other is through the internal or external network which is also protected by routers and firewalls. In a VM world the rule is that there is no communication or access unless it's specifically and intentionally configured.

Operating System Requirements

My Building will operate in any environment that runs Linux containers (aka docker containers.) Leviton has tested and offers, for fee, dev ops support services, for My Building under Windows Server 2022 or later, Windows 10 Pro, and Ubuntu Linux.. As such, any of these environments are suitable for the installation and your preference of OS.

Note:

- When installing on all platforms, our installations include Rancher & k3s except for servers which are BACnet only which run containerd and docker usually on Linux. Other architectures are supported but require local IT team support.
- When installing on Microsoft platforms, containers are not natively supported in production environments. That said, many people choose to do it anyway. A solution for auto-start of containers is required; auto-login+lock is most commonly used for this purpose.
- If BACnet is required, Microsoft has a bug passing UDP data between the container host and the container itself. IF this is required, local IT team support will be required to implement a solution.

Storage Space Requirements

Leviton recommends 1TB available for application and storage which will cover most system sizes. However, for systems of < 300 rooms, 250GB is sufficient to get started and then monitor consumption over time. The amount of required space will vary greatly based on the quantity of rooms, number of devices installed per room, the type of information that is being stored, and retention policies in place.

- ~ 6GB Staging directory and image storage
- ~ 30GB Database & File Storage for moderate sizes installation
    - Based on retention policies, storage requirements will grow over time and vary significantly based on the size of the project

IT Communication

My Building communicates between software modules, the network, and other Leviton equipment on the IP network. Most of this communication is TCP/IP communication, however, some of it is UDP/IP. This article document what type of communication is required between various parts of the system, it's orgin, and it's destination. This will help you to create the appropriate firewall and routing rules to have a successful network deployment.

The Ports List

My Building uses the following ports for communication between various devices in the system. Device layout is documented in My Building System Architecture, only summary information is provided herein:

Protocol Common Name	Source->Destination	Protocol/Port #	Purpose/Notes
MQTTS	Room Controller->MQTT Broker	TCP 8883	TLS with AES Encryption
MQTTS	MQTT Broker (Building) -> MQTT Broker Central	TCP 8883	Only in multi-building system architectures
DHCP	Room Controller->DHCP Server DHCP Server->Room Controller	UDP 67 UDP 68	Static addressing is possible but not recommended
DNS	Room Controller->DNS Server	UDP 53	Required when DHCP is used
NTP	Room Controller -> NTP Server My Building -> NTP Server	UDP 123	for time synchronization, can be turned off
API	My Building Phone App -> My Building	TCP 443	Access to API calls. Secured with TLS with AES encryption as well as user tokens drive by a user permissions model. Certificate is a private certificate unique per project.
HTTP/HTTPS	Client Computer -> My Building Phone App -> My Buildilng	TCP 80,443	Secured with TLS with AES encryption as well as user tokens drive by a user permissions model. Certificates used for web browser access can be automatically generated by Lets Encrypt, provided by user, or used insecure.
SMTP	My Building -> SMTP Server	25	Outbound email, alarms/alerts, account validation. Port number, username, password is configurable.
BACnet	BAS/BMS Controller -> My Building	UDP 47808*	BACnet is a protocol defined by ASHRAE for communication between Building Management Systems (BMS) and/or Building Automation Systems (BAS) to other devices.
TCP/ASCII	My Building Phone App -> Room Controller	TCP 57786	Only needed when direct access to room controller is needed and when phone is on lighting control network.
HTTP	Client Computer -> Grafana on My Building Server	3000	Used if grafana is installed on your system
MySql	My Building Microservices->MySQL Server	3306	Used for data storage. External access to MySQL is not required, the only client are the My Building microservices themselves. As such, access should be severely limited.
Mongo	My Building Microservices->MongoDB	27017	Used for data storage. External access to the Mongo database is not required, the only client are the My Building microservices themselves. As such, access should be severely limited.
SSH	Service management	22	May be required for management services
HTTP/API	Client Computer -> Grafana on My Building Server	9090	Prometheus Access - system monitoring

BACnet

If your project requires BACnet communication, which is often used to exchange sensor data with the BAS/BMS system and or allow the BAS/BMS system to control the lighting system, it will use either the BACnet/IP or BACnet/SC protocol. Which one is required is determined by your BAS/BMS system provider as that is the system to which we are interfacing. BACnet/IP is a UDP protocol that operates on Port 45808 and as such requires local access to the BAS/BMS. If local access is not possible, the BACnet/BBMD protocol can be implemented which in effect creates a UDP<->TCP/IP gateway for only BACnet data. This will need to be coordinated with the Leviton Field Tech and the BAS/BMS provider. A newer BACnet protocol referred to as BACnet/SC is also supported by our systems. This protocol uses TCP also on port 45808 and uses TLS for communication. BACnet/SC is only usable in your system if supported by your BAS/BMS provider.

Remote & Internet Access

Remote access is never required permanently. The system will operate fully standalone in a completely isolated environment. However, remote access can be a useful way to improve experience for the following:

- Internet Access - useful to download My Building updates, device firmware, device definitions, and related information from the public My Building.Leviton.com server. If internet access is not available, information can be transferred via USB or other means.
- Certificates - the system supports both user installed and Let's Encrypt certificates with auto-renewal. Internet access is required for auto-renewal.
- Dev ops Support - if you purchased dev ops support as part of your package, full "root" / administrator privileges with remote access to the computer is required during the installation and roll out period
- Remote Support - if remote support is needed by our team, remote access during the support exchange can be useful to aid in troubleshooting as it offers a streamlined experience with both parties looking at the same data.

Deploying a Leviton My Building Computer – Coordinating with IT

Congratulations! You have a "customer hosted" version of My Building that is provided on a Leviton supplied computer. Integrating this into your system will be performed by Leviton's Field Service team however there are some options with respect to how it's tied into your system (aka Customer Network or Customer).

Deployment Options

Option 1 - Fully Isolated

In this deployment the lighting control network is fully isolated from the Customer. This means that from the Customer network you can access the My Building software, both from the app and from the web UI, however, you can not access to the room controllers directly. This means you can do most activities, however, there are some you are restricted from, ex: device enrollment. To do device enrollment, you would have to connect directly to the lighting control network.

To physically connect to My Building in this scenario, you will be connecting to the secondary Ethernet port of the server running the My Building software.

Option 2 - Fully Integrated

In the fully integrated solution, the lighting control network is a native part of the Customer's network. It may be on a different VLAN, however, all routing, access, and like is controlled by the Customer.

To physically connect to My Building in this scenario, the customer will be connecting into the LAN side of the lighting control network. The secondary port of the computer with the My Building software will not be used.

Information Required from Customer IT

1. Preferred host name of the computer hosting My Building software. In absentia of any specific requirement, it will default to My Building.
2. Regardless of Option 1 or Option 2, you need to know what IP address to assign to the Ethernet port. In some cases, the customer may want the MAC address of the port so they can assign it a static address in their system. The MAC address can be

located in the windows GUI or using ipconfig from a command prompt. On a Linux machine, use ifconfig.

3. My Building software requires a mail server for sending periodic emails. We support only SMTP servers authenticated via username and password.
4. SSID & Passphrase to which the room controllers can communicate

Single Sign On (SSO)

My Building supports Single Sign On (SSO) in a variety of ways. This article discusses how SSO is used in your projects. There are some key differences in the SSO implication based on whether you are hosting the My Building Application yourself (Customer Hosted) or Leviton is hosting My Building for you (Managed Hosting).

Authentication Methods

My Building supports several different style of authentication, not all are available with every hosting scenario, for background, all methods are as follows:

- Email/Password - My Building uses your email to uniquely identify you and authenticates you with a password. The password is stored in a secured database on the My Building Server. Emails are validated prior to completion of account setup.
- SSO, Google, Public - Google Public servers are used for authenticating using your gmail email address. Multi-factor authentication (MFA) is used if it supported as described through your google account
- SSO, Microsoft, Public - Microsoft sever is used for authentication using the provided email address. Multi-factor authentication (MFA) is used if it supported as described through your google account.
- SSO, Apple, Public - Apple servers are used for authentication using your Apple credentials. Multi-factor authentication (MFA) is used if it supported as described through your google account.
- SSO, Microsoft, Private - Microsoft Active Directory Servers are used for authentication. The specific terms for allowed email addresses and MFA are defined by your organization.

- SSO, Google, Private - Microsoft Active Directory Servers are used for authentication. The specific terms for allowed email addresses and MFA are defined by your organization.

Authentication Methods/Hosting Matrix

Based on your hosting method, different authentication modes may be used based on how your system is configured. The matrix below identifies all possibilities. In addition, difference between the My Building App and the web browser App (Web App) are identified as necessary.

Authentication Method	Leviton Hosted	Customer Hosted	Managed Hosting
Email/Password	Yes	Yes	Yes
SSO, Google, Public	Yes App requires if you use gmail email address	No	Yes
SSO, Microsoft, Public	Yes	No	Yes
SSO, Apple, Public	WebApp - No App - Yes	No	Yes
SSO, Microsoft, Private	No	Yes	Yes
SSO, Google, Private	No	Yes	Yes

My Building Mobile App User Manual

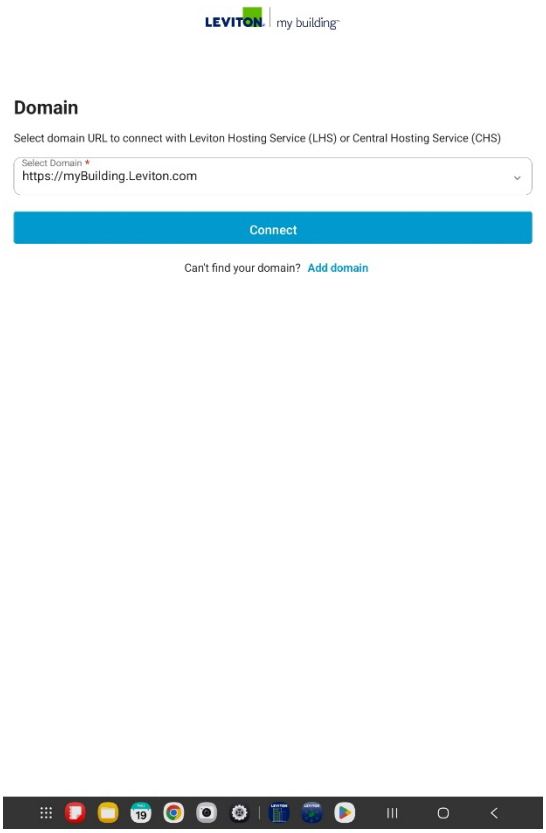
Domain Selection

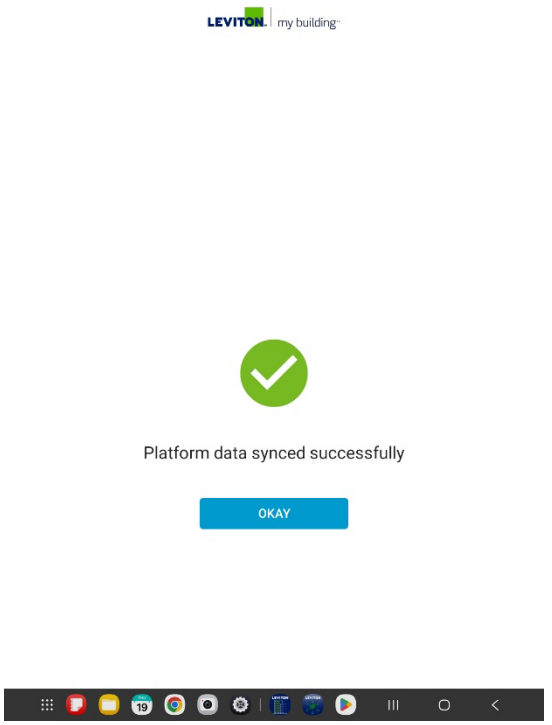
When first launching the My Building mobile app, the Domain screen will be shown. My Building installations can connect to either a Leviton Hosted Service (LHS) or a Customer Hosted Service (CHS)

- The Leviton Hosted Service (LHS) is a hosting service that is managed and maintained by Leviton Manufacturing, Inc.
- The Customer Hosted Service (CHS) is a hosting service that is managed and maintained by the end user.

Select Domain

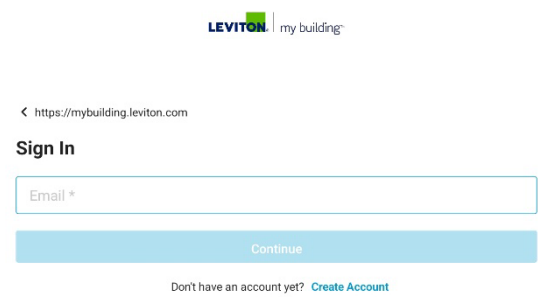
The Leviton Hosted Service (LHS) will be selected by default. If another domain would like to be used, select the “Add Domain” option and enter the URL for the desired Domain. Select the “Connect” button to sync to the Domain. This process will take a few minutes. Select “OKAY” once the sync has completed.





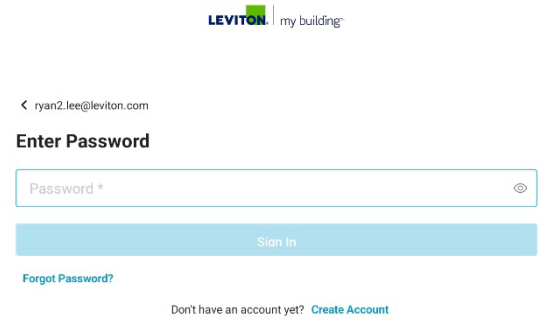
Login

A My Building account is needed to login into the My Building app. If you do not have an account, select “Create Account” and follow the prompts to create one.



Enter Email

If you already have a My Building account, enter the email associated with the My Building account and select “Continue.”



Enter Password

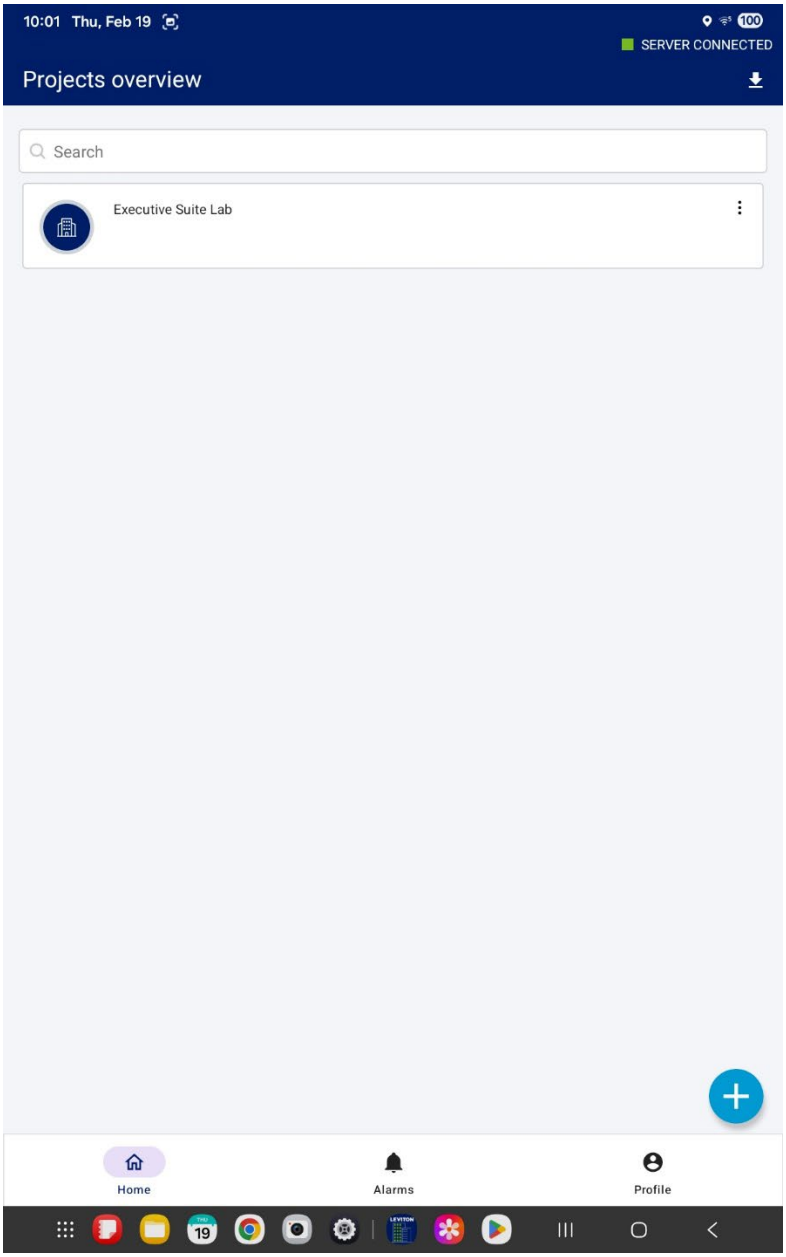
Enter the password for the My Building account and select “Sign In.”

Forgot Password

In the event the password is forgotten, enter the associated email address and select “Continue.” Then select the “Forgot Password?” link. Enter the email address again and select “Reset Password” to receive an email with a new temporary password.

Home Page

After successfully logging in, the My Building app will show the Home Page, where the Projects overview screen is shown. Here a list of Projects can be viewed, Firmware updates can be downloaded, and Alarms, as well as the Project's Profile can be viewed/edited.



Connection Status

Connection status can be seen in the top right of the Home Page. The app will show a colored square and a description of the connection.

The following Connections may be shown:

Server Connected

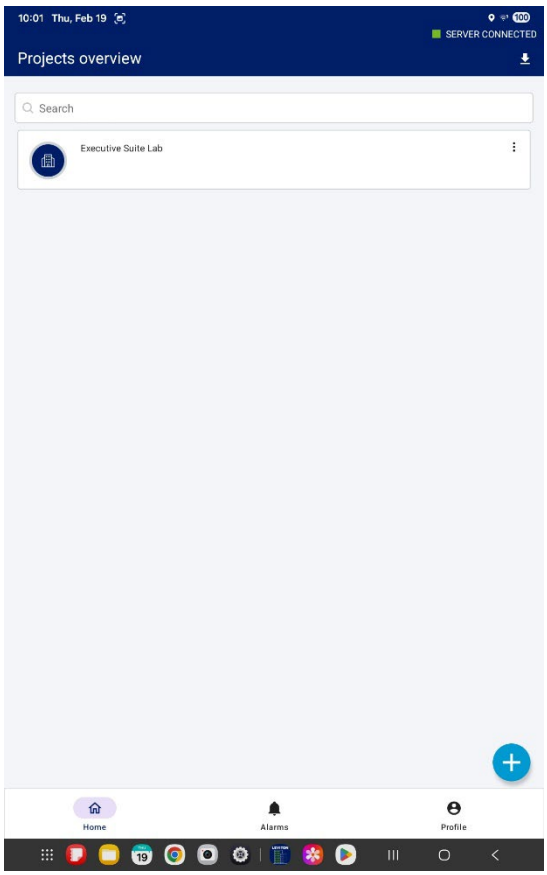
Mode 1: Access Point or AP Mode

Mode 2: Client Mode

Mode 3: Connected to My Building Server

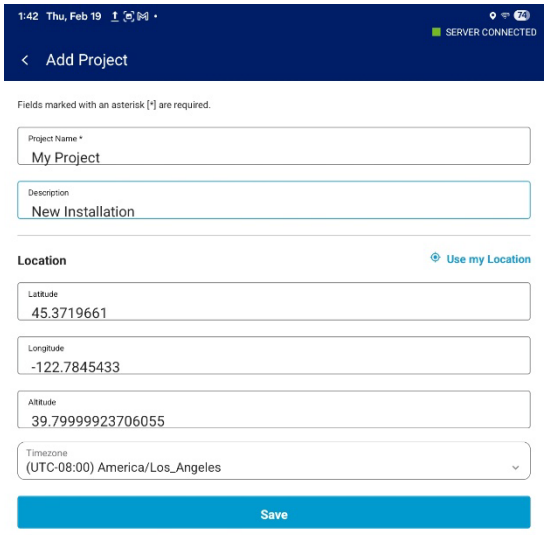
Project Management

A list of Projects the My Building account has access to are shown on the Projects overview screen. Projects can be searched by name using the Search Bar on the top of the screen.



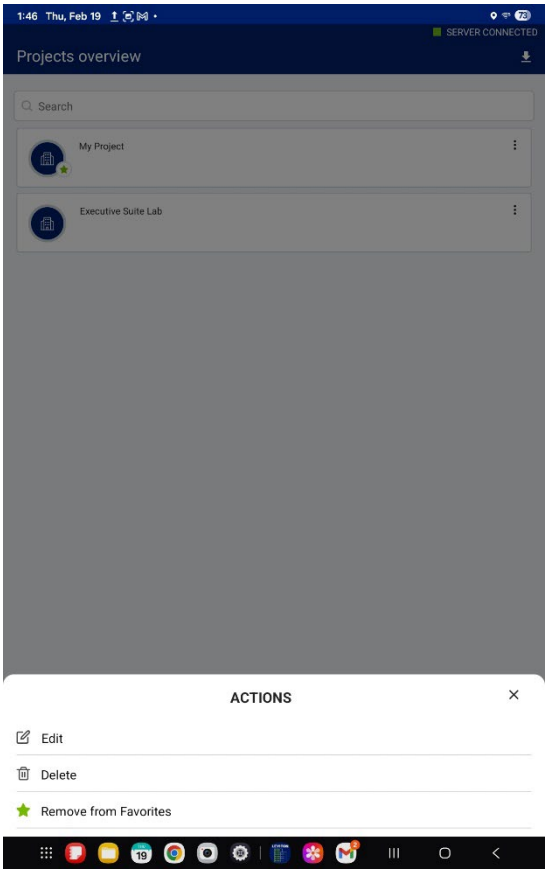
Creating a New Project

To create a new project, select the + button in the bottom right of the screen. Enter the Project Name, a Description if desired, and Location details. Location details can be manually entered or automatically populated using the mobile device's location by selecting the "Use my Location" button. Select "Save" to create the new Project.



Editing a Project

Once a project has been created, it's details can be edited by selecting the 3 dots to the right of the Project name. To edit the Project Name, Description, or Location, select the "Edit" option. The Project can also be Deleted as well as marked as a Favorite in this menu. Up to 5 Favorite Projects can be designated to display at the top of the Project list.



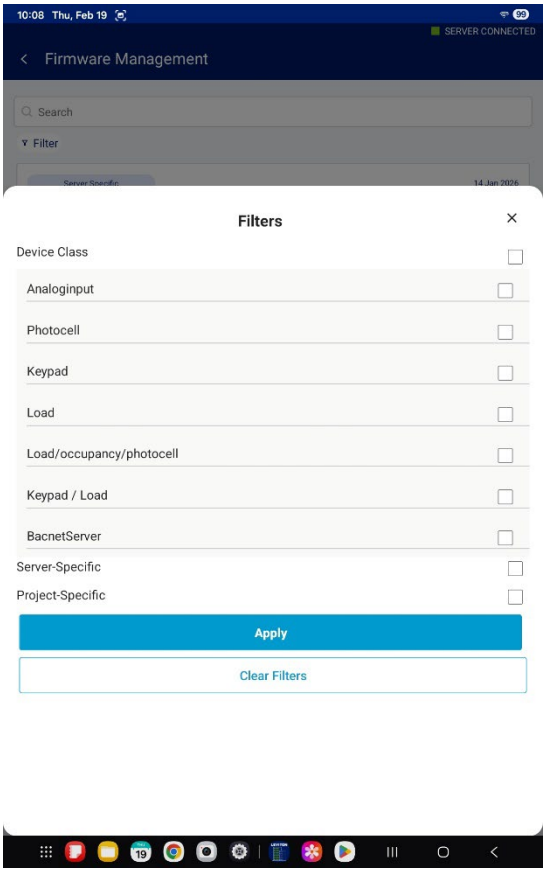
Firmware Management

Firmware can be downloaded by selecting the "Download" button shown in the top right corner of the Home Page. After selecting the "Download" button, the Firmware Management screen will be shown.

Note: Firmware must first be downloaded on the Home Page but is then updated within the Node shown later in this manual. Refer to the "Node Room Tabs" section for more info.

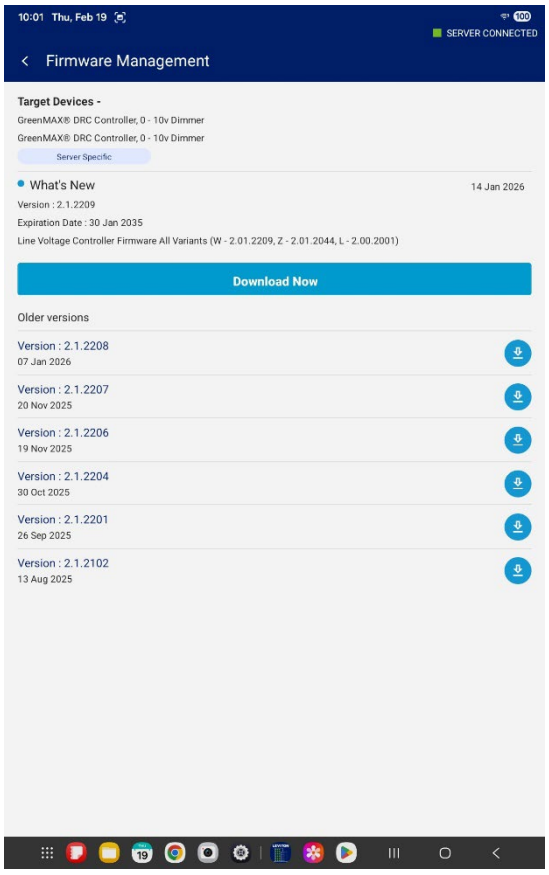
Search and Filter

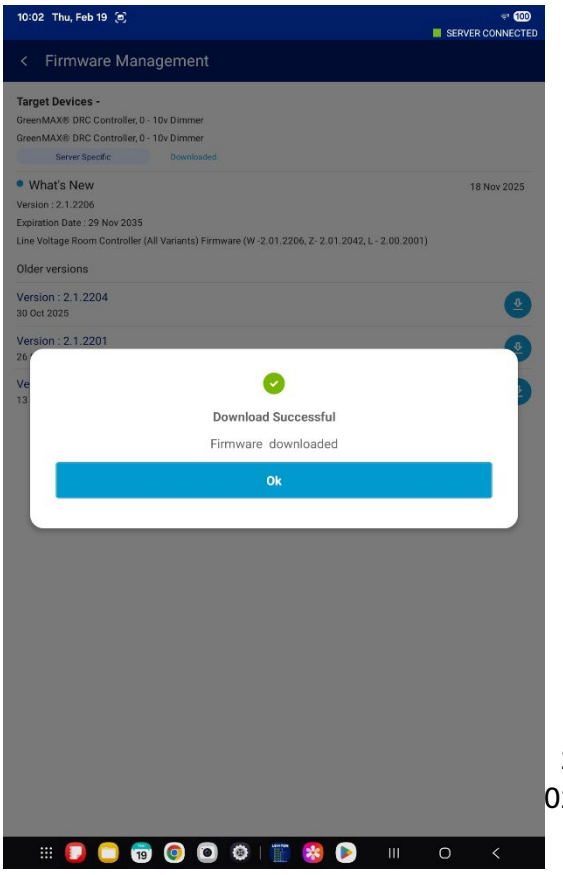
Firmware versions can be searched and filtered by using the Search Bar or selecting the Filter button toward the top of the screen. Filter options are shown in the screenshot to the right.



Downloading Firmware

Select the Firmware that needs to be downloaded. Review the details to ensure the appropriate Firmware version is being downloaded for the devices. Selecting the “Download Now” button will download and store the firmware to the mobile device. Once the Firmware has been downloaded, select the “Ok” button.

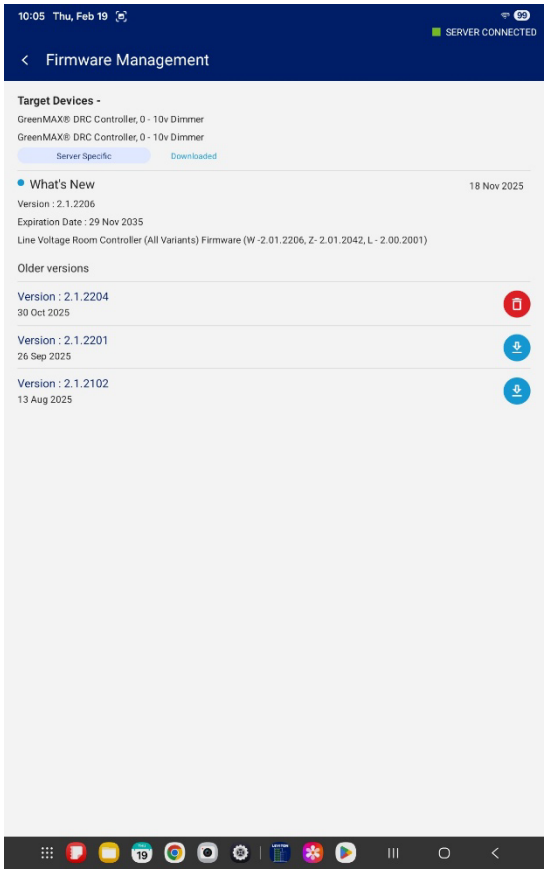




Downloading Older Firmware Versions

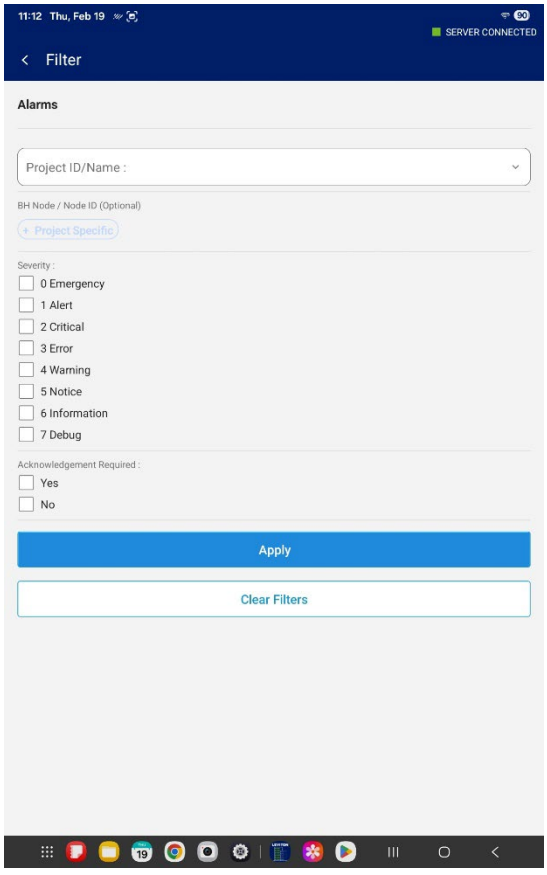
Older versions may also be downloaded by selecting the Download button next to the older version. They can be deleted from the mobile device by selecting the red Trash Can button.

Note: For Customer Hosted Solutions (CHS), Firmware must be manually loaded on the server before it is available on the My Building mobile app.



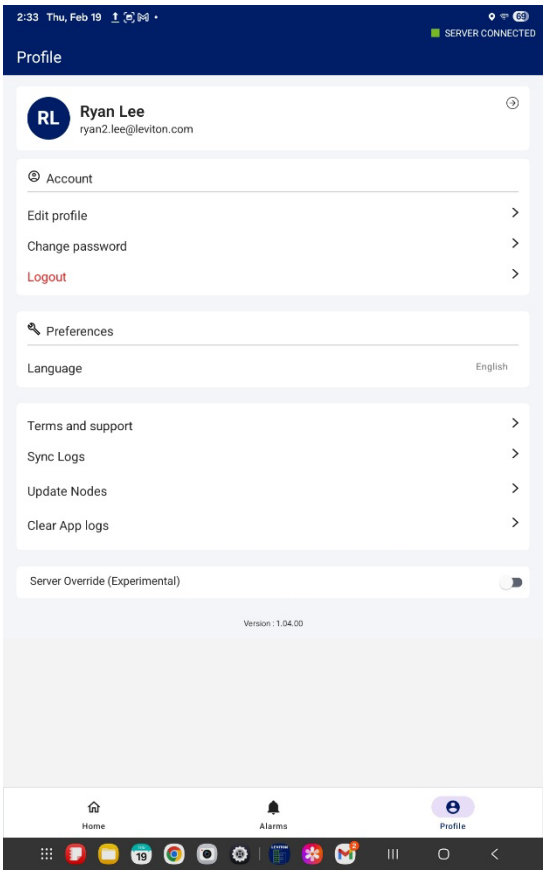
Alarms

The Alarms Page tab is shown in the bottom center and shows a list of Alarms. Alarms can be searched or filtered by using the Search Bar or by selecting the Filter button toward the top of the page. Filter options are shown in the screenshot below. Alarms can only be viewed in the My Building mobile app and must be created or modified on the Building Web App.



Profile Page

The Profile Page tab is shown in the bottom right of the My Building app. This page shows Account info, Language selection, Terms and Support, and Diagnostic options.



Account

My Building account profile details such as Name, Phone Number, Company Name, and Address can be edited using the Edit profile option.

The account password can be changed by using the “Change password” option and the user account can also be logged out in this menu.

Preferences

The My Building app Language can be set in this menu. English is currently the only supported language.

Terms and Support

Terms of Service and Privacy documents can be viewed here as well as Tech Support contact information. The Help option provides a link to My Building FAQs, found on the My Building website; user account login is required to view the FAQ section.

Diagnostic Options

A list of Sync Logs files can be viewed by selecting the “Sync Logs” option.

Nodes can be updated by selecting the arrow next to the “Update Nodes” option.

App Logs can be cleared by selecting the arrow next to “Clear App Logs.”

Server Override

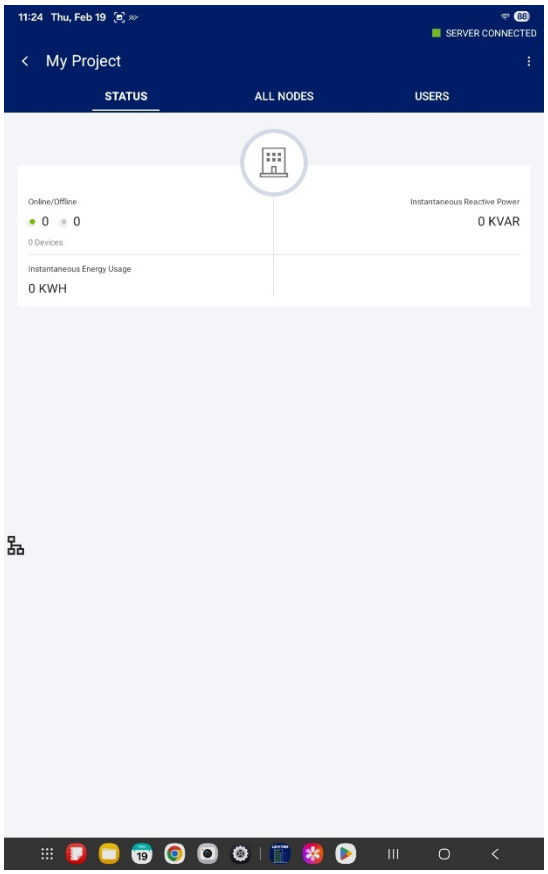
This option should not be used unless instructed by an authorized Leviton representative.

Accessing a Project

Click on a Project from the Projects overview list to access the Project. This page shows the Project Status, All Nodes, and Users tabs as well as a Project Hierarchy Tree (left side). When first accessing a Project, the Status Page is shown.

Status Page

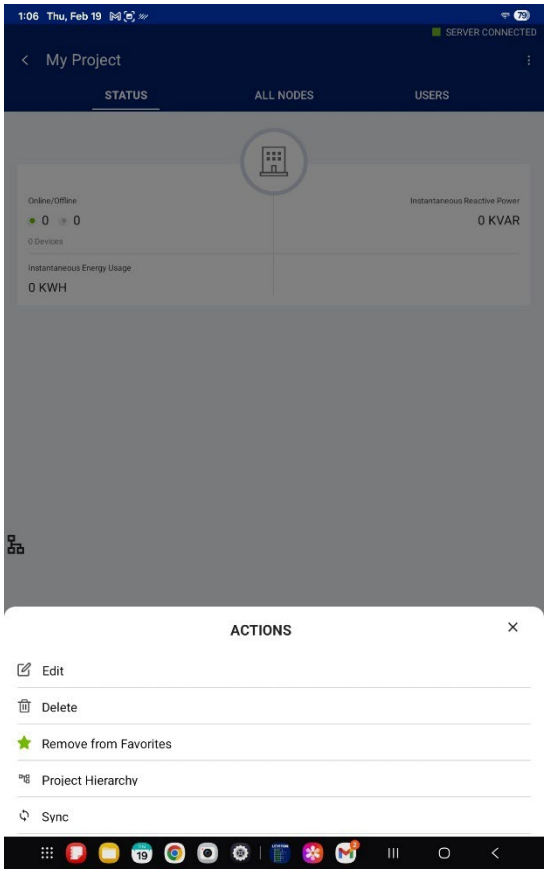
The Status Page shows total number of Online/Offline devices (if networked), Instantaneous Reactive Power (if available), and Instantaneous Energy Usage (if available) for the selected Project.



The three dots in the top right corner of the page provide similar options as the three dots in the previous Projects overview page. Project info can be viewed/edited, the Project can be Deleted and Selected or Removed as a Favorite. Two additional options are also available: Project Hierarchy and Sync.

The Project Hierarchy Tree option is the same as the icon on the left of the screen.

The Sync option forces a sync to the Project's Domain/Cloud Server.



All Nodes

The All Nodes Page shows a list of Nodes created in the Project. Node types can be Country, Region, State or Province, City or Town, Interior Lighting, Exterior Lighting, Plug Load, HVAC Load, Building, Floor, Area, Room, and Hard Room.

Nodes types such as Country, Interior Lighting, or Floor are intended to help organize a project into different categories.

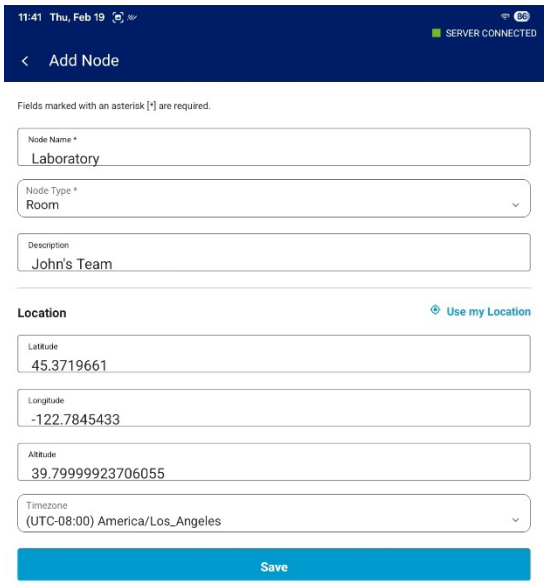
A GreenMAX DRC Room Controller can only be associated to a “Room” Node.

Utilizing different Node types is left to the discretion of the individual commissioning the Project.

Nodes can be Searched using the Search Bar located on the top of the page.

Adding a New Node or Room

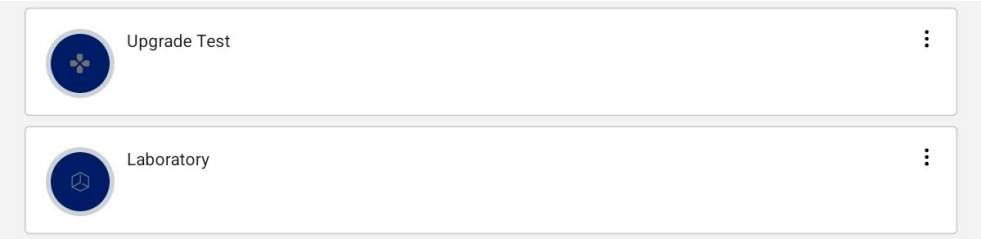
To add a new Node or Room for association to a GreenMAX DRC Room Controller, select your Project and navigate to the All Nodes tab. Select the Plus Symbol in the top right corner. Enter your Node or Room Name, select “Room” as Node Type, and a description of the Node or Room if desired. Select the “Use my location” button to autofill the Latitude, Longitude, Altitude, and Timezone values or enter them manually.



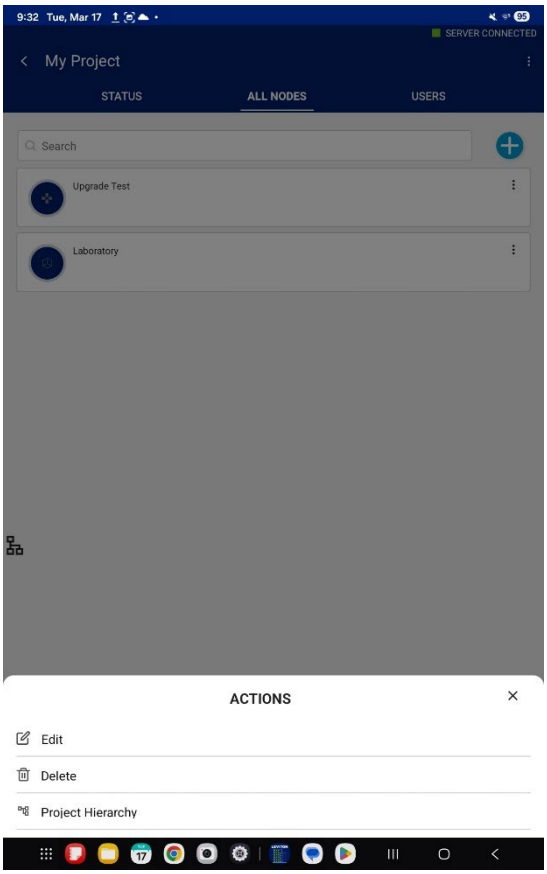
Once a Node or Room has been created, it will appear in the “All Nodes” list. Note that a new Node that has not been associated to a GreenMAX DRC Room Controller has 3D box symbol. Once the Node is associated with a Room Controller, the symbol will turn into a shaded plus symbol as shown below.

Associated ->

Not Associated ->

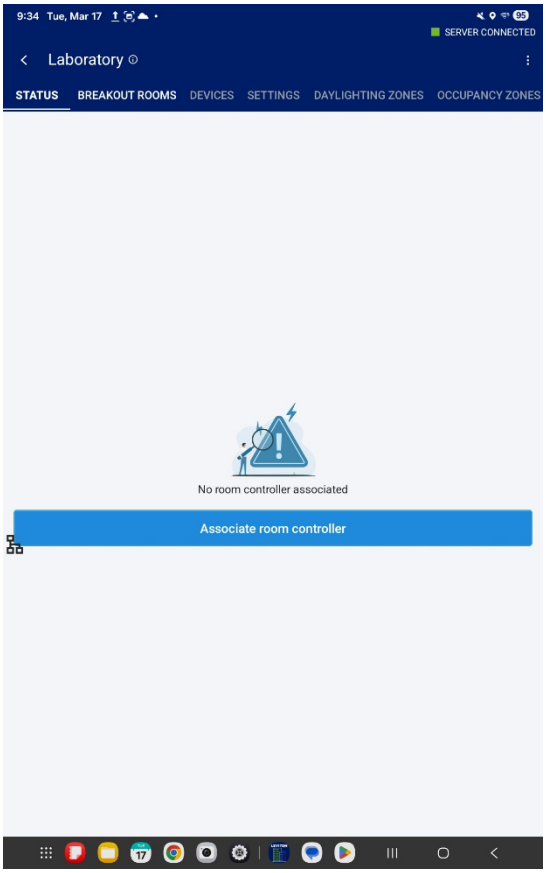


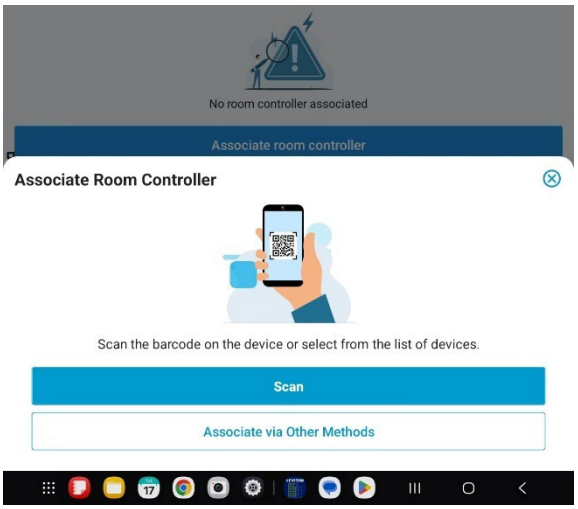
Selecting the three dots next to the Node reveals Edit, Delete, and Project Hierarchy options for that Node.

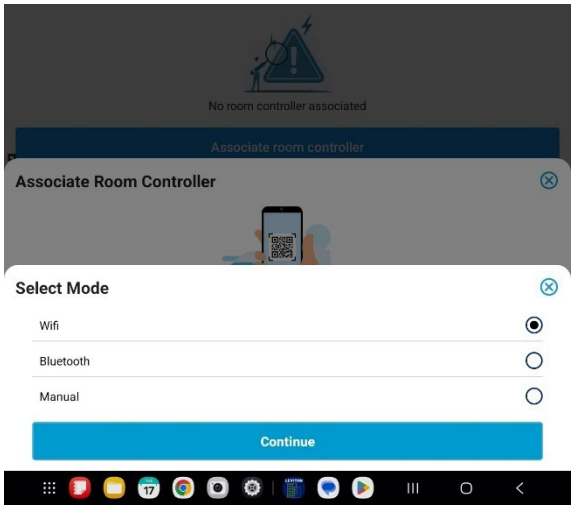


Associating a GreenMAX DRC Room Controller to a Node

Once a Node or Room has been created. Select it from the All Nodes list and select the “Associate room controller” button.







Select the connection method. Room Controllers can be associated via QR Code or via Wi-Fi. To associate a Room Controller via Wi-Fi, select “Associate via Other Methods”, then “Wifi” and “Continue”

When using the QR method, you may need to enable the device’s camera for the My Building app. Follow the prompts on the device’s screen to allow access to the camera.

Scan the QR code on the GreenMAX DRC Room Controller and wait for the app to associate the new Room Controller to the Node.

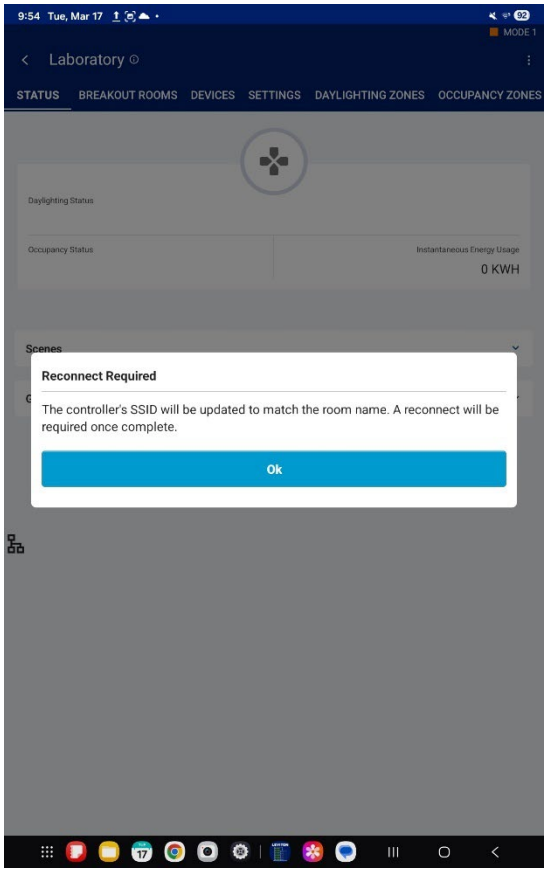
When using the Wifi option, the app will open the device's Wi-Fi Settings to select the GreenMAX DRC Room Controller's Wi-Fi network. The Room Controller will have a default network name (SSID) ending in the Room Controller's ID; GreenMAX DRC-39E9, 39E9 being unique to each Room Controller. The default SSID password is "leviton0000" without quotes. Once the device is connected to the Room Controller's Wi-Fi, navigate back to the My Building App and wait for the app to associate the Room Controller to the Node.

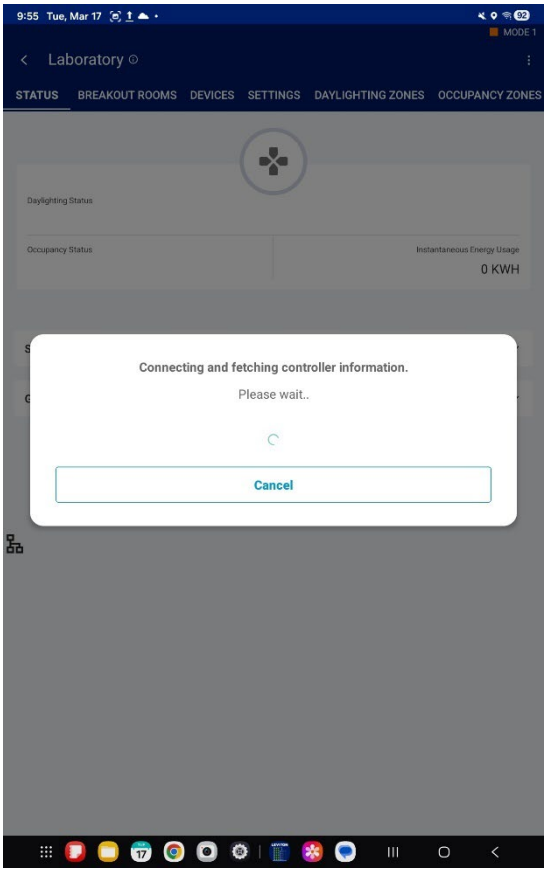
GreenMAX DRC Room Controller Default SSID Info:

SSID: GreenMAX DRC-39E9, 39E9 being unique for each Room Controller

Password: leviton0000

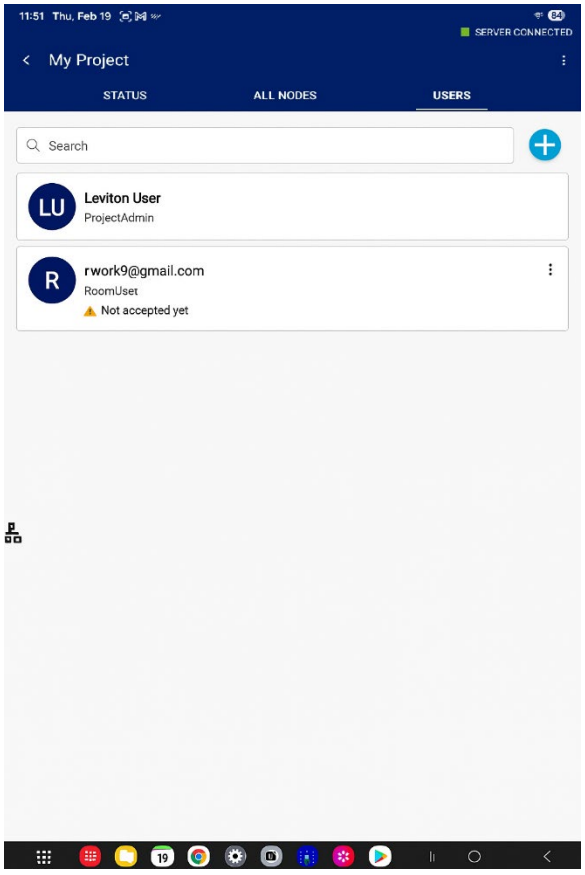
Once the Room Controller has been associated with the Node, the Room Controller will be assigned a new Wi-Fi network name, matching the Node name entered in the app. The app will prompt you to reconnect to the new Room Controller's network or SSID (left screenshot below). After selecting OK, the app will redirect you to the device's Wi-Fi Settings app to select the new network name. Select the new network name and navigate back to the My Building app where it will attempt a connection to the new network SSID (shown in the right screenshot below).





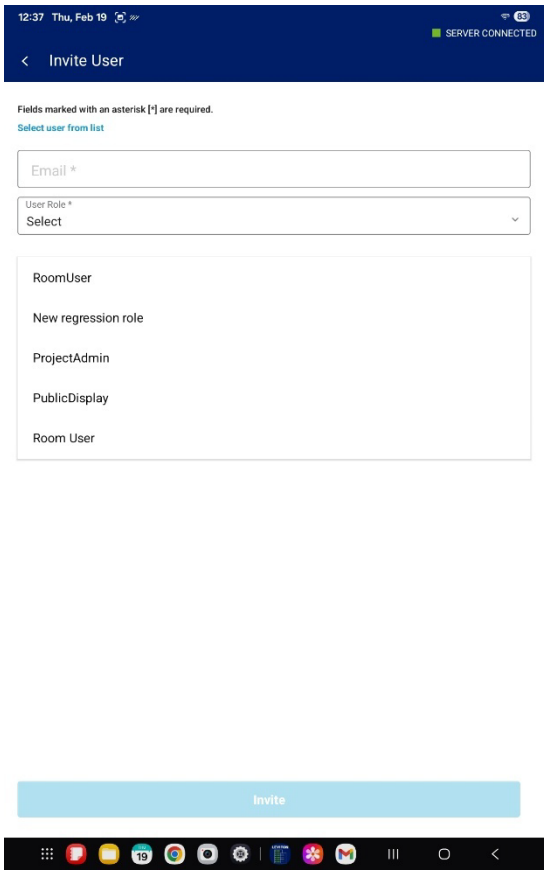
Users

The Users Page shows a list of all Users added to a Project. The Project Admin is automatically assigned to the account that initially created the Project. Additional Users can be added to the project using the + button located in the top right. The following User Roles can be assigned to each new User; Room User, New Regression Role, Project Admin, and Public Display. There is no limit to the amount of Users that can be added to a Project.



Creating a New User

To create a new User, select the + symbol in the top right of the page. Enter the new User's email address, select a role, and select Invite on the bottom of the page. A message will pop up on the screen that indicates a notification has been sent to the User. Select "Ok", got it to proceed.



Roles:

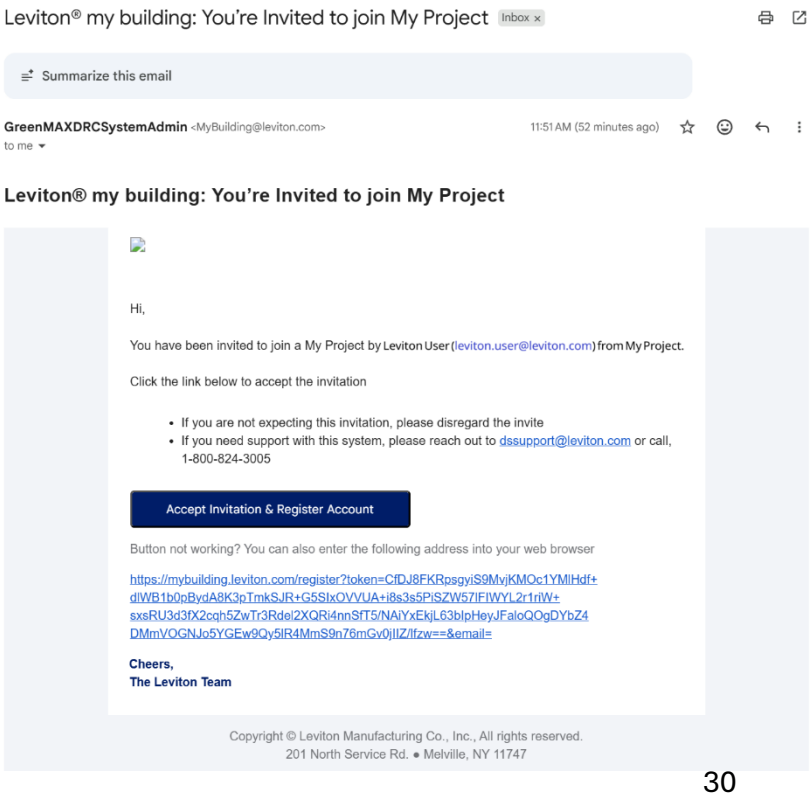
Room User

New Regression Role

Project Admin

Public Display

The new User will receive an Invitation email asking them to Accept the Invitation & Register an Account if they do not already have one. If the User does not receive an Invitation email, double check that the email address was entered correctly and have the user check their Spam folder.

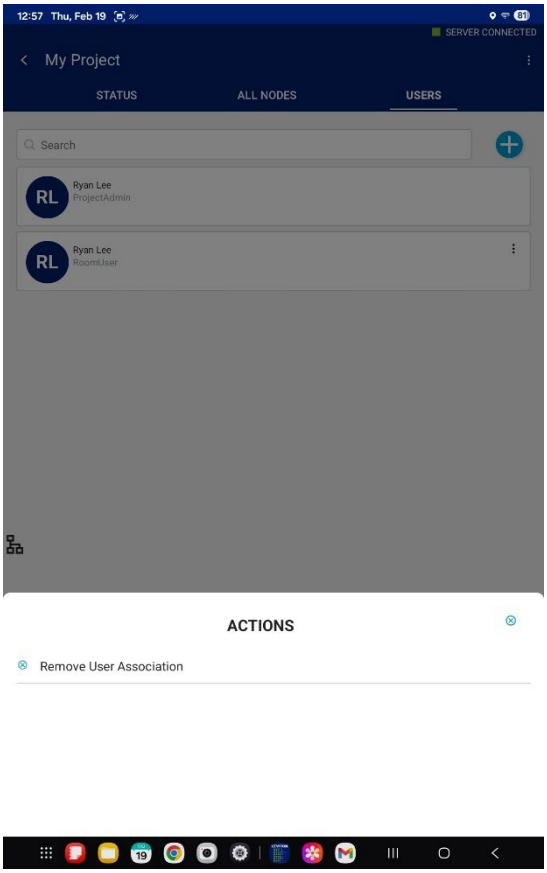


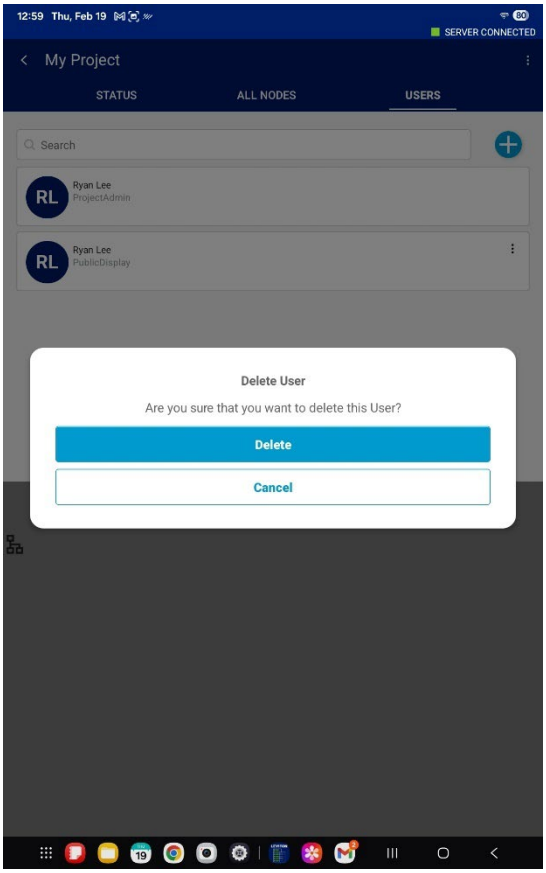
Changing a User's Role

To change a User's Role, the User must be removed from the account using the steps below, then re-added using the steps detailed above.

Deleting a User

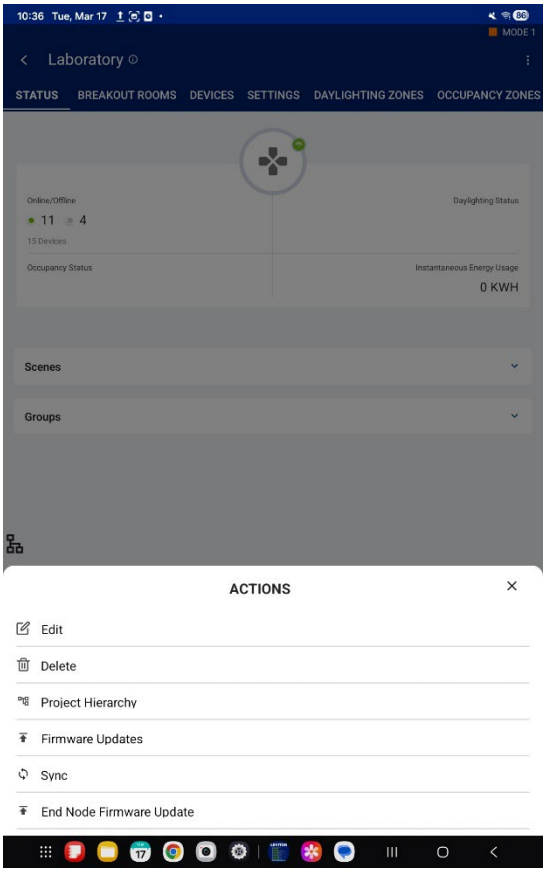
To remove a User from the Project, select the three dots to the right of the User's name. Then select Remove User Association. A pop up will appear asking for confirmation. Select "Delete" to remove the User from the Project.





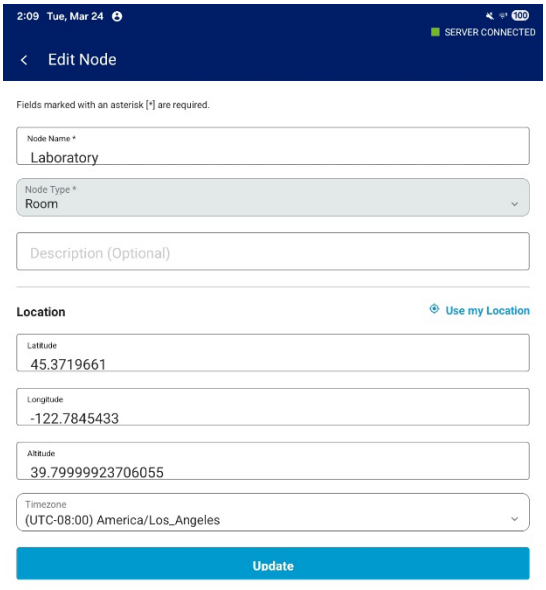
Node Tabs – Room

After associating a GreenMAX DRC Room Controller to a Room Node, the Status page will be displayed by default. The top of the screen shows the following tabs; Status, Breakout Rooms, Devices, Settings, Daylighting Zones, Occupancy Zones, Schedules, and Users. The three dots in the top right corner provide options for Edit, Delete, Project Hierarchy, Firmware Updates, Sync, End Node Firmware Update, Reboot Controller, and Send Logs (scroll up for last two options).



Editing a Node

To Edit an existing Node, select the three dots in the top corner of the Node. The “Edit” option can be selected from the three dots menu in the Node List menu (next to the Node) or within the Node itself (top corner).



The following parameters are editable:

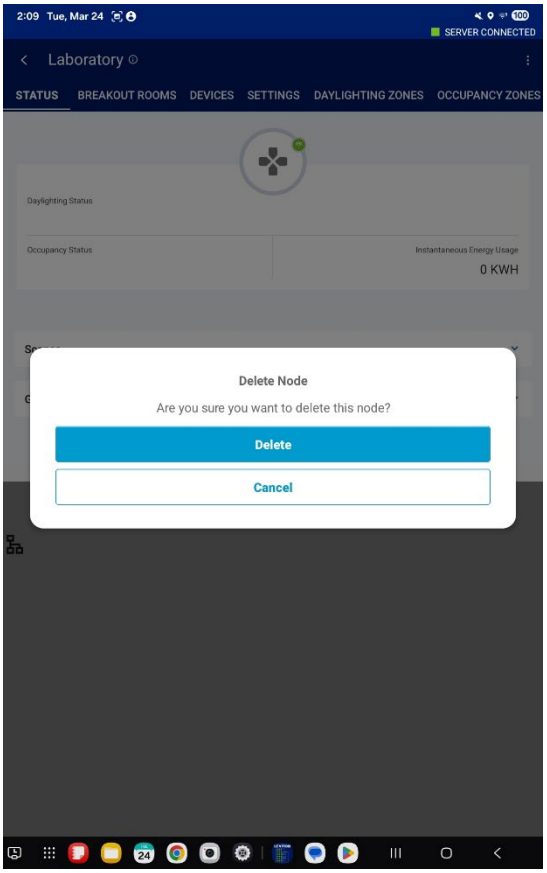
Node Name

Location Latitude, Longitude, Altitude, and Time zone.

Deleting a Node

Deleting a Node is similar to Editing a Node. To Delete an existing Node, select the three dots in the top corner of the Node. The “Delete” option can be selected from the three dots menu in the Node List menu (next to the Node) or within the Node itself (top corner).

Select “Delete” to delete to Node. The app will provide a confirmation the Node has been deleted.



Node and End Node Firmware Updates

Firmware updates must first be downloaded on the Home Page. Refer to the earlier section “Firmware Management” and “Downloading Firmware” for more info on downloading the latest firmware. Once the latest firmware has been downloaded into the app, selecting “Firmware Updates” or “End Node Firmware Updates” begins a query to check for available device updates. If an update is available, select the “Deploy” option to begin the update process. Depending on the device, this can take anywhere from under a minute to several minutes.

Syncing a Node

The “Syncing a Node” option syncs the app’s current configuration with the My Building server. Once selected, the app will attempt to sync with the My Building server and provide confirmation whether it was successful or not.

Reboot Controller

The GreenMAX DRC Room Controller can be rebooted by selecting this option. It can take a couple minutes for the Room Controller to reboot and restore all functionality.

Send Logs

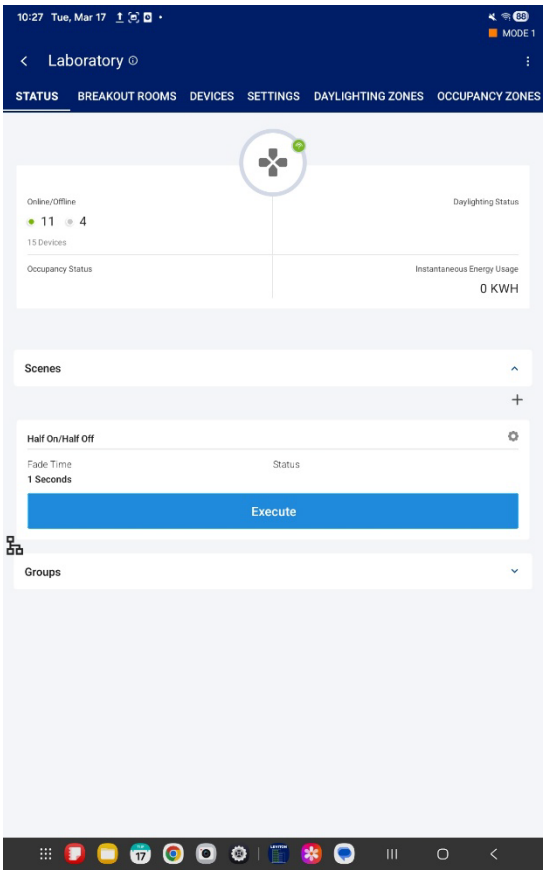
If instructed by Tech Support or a Leviton Representative, this option is used to send logs for diagnostic review. After the Controller Logs are prepared, a CSV file will be generated. Follow the prompts on the mobile device to save the CSV file to the device for later use or send the CSV file via email, etc.

Status Tab

The Status page shows the Room Controller's number of Devices Online/Offline, Daylight, Occupancy, and Instantaneous Energy Usage status (if available) as well as Scenes and Groups for the connected Room Controller.

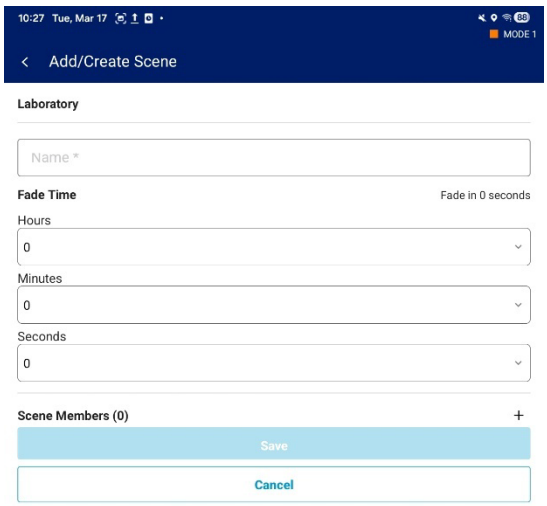
Creating a Scene or Group

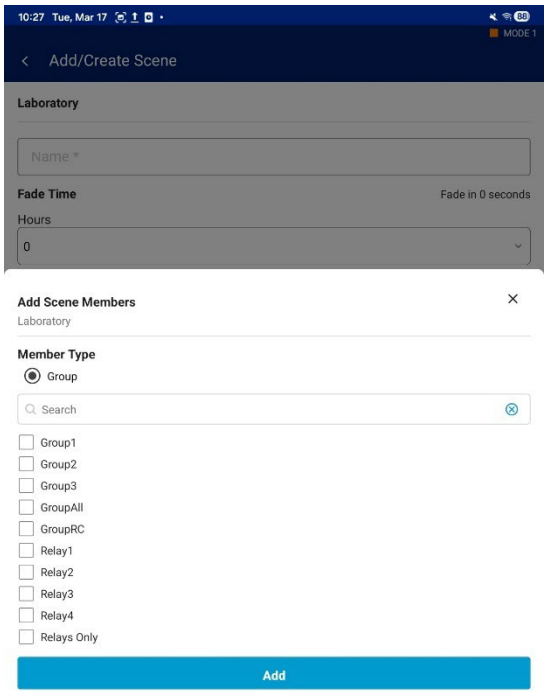
To create or edit a Scene or Group, select the drop-down arrow next to Scenes or Groups. Once the app has finished fetching data, select the + symbol to add a new Scene or Group or the "Gear Wheel" icon to edit an existing Scene or Group.



Note: Groups are required to configure Scenes. Groups must first be created before they can be added to Scenes!

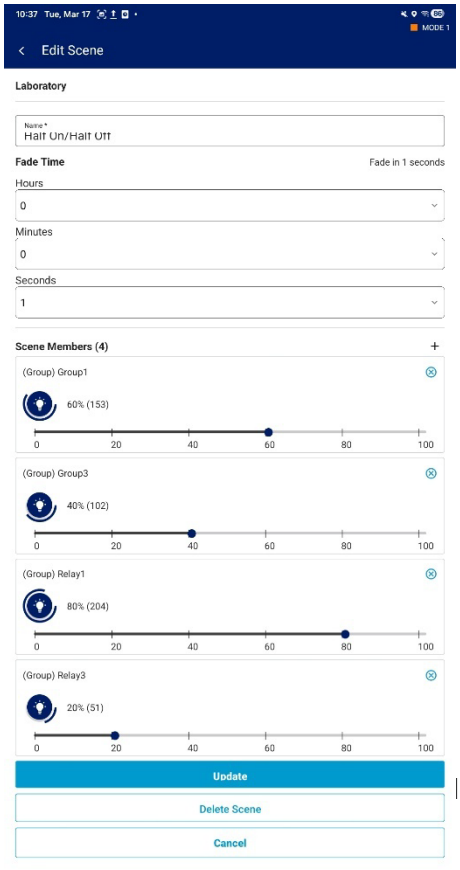
For Scenes, enter a Name for the Scene, select its Fade Time settings, and add Scene Members or Groups for control.





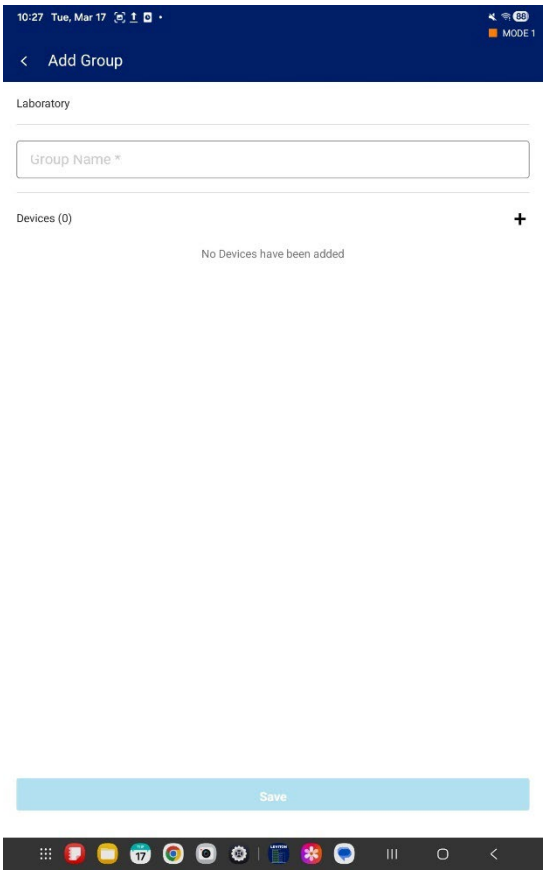
Once Groups have been selected, the app provides a live screen to configure Scenes. Dragging the slider will change the light level in real time for the selected Scene Member/Group.

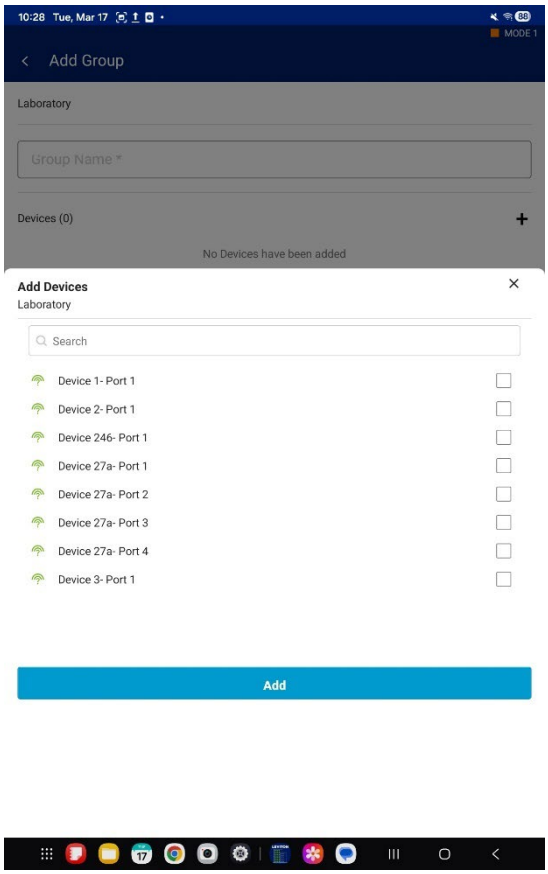
Once changes have been made, select “Update” to save.



For Groups, enter a Name for the Group and add Devices by selecting the + symbol.

Once changes have been made, select “Save”.

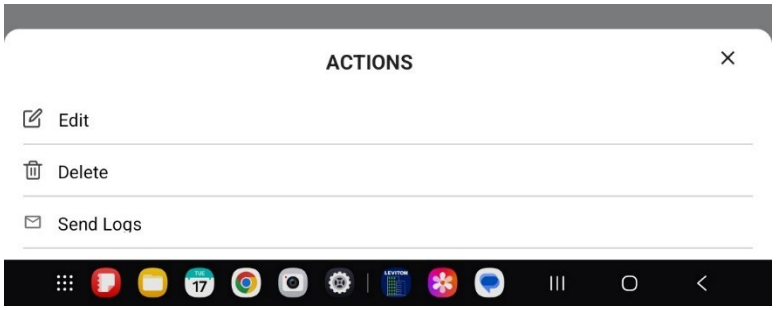




Deleting a Scene or Group

To Delete a Scene, select the Scene you wish to delete, then select the “Delete” option on the bottom of the page.

To Delete a Group, select the three dots next to the Group you wish to delete and select the “Delete” option.

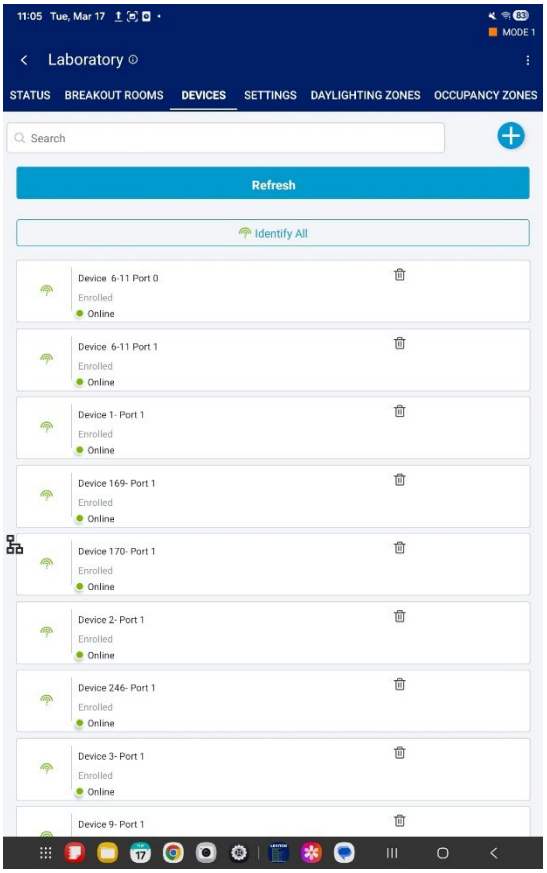


Breakout Rooms Tab

Breakout Rooms is not currently supported but will be supported in future app releases.

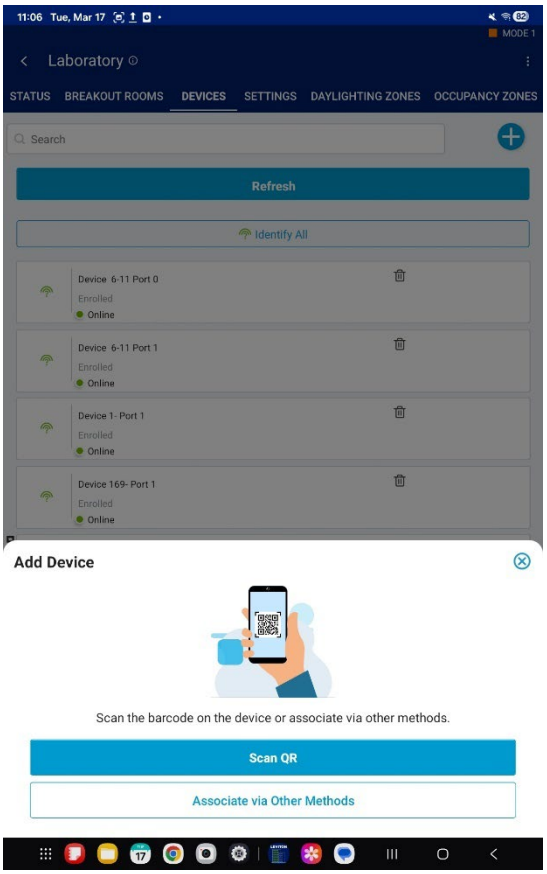
Devices Tab

The Devices tab lists all enrolled devices for the connected Room Controller. Device types can be Digital Occupancy/Photocell Sensors, Analog Input Boards, Multi Channel Relays, Phase Cut Dimmers, Smart Packs, Switches, and Touchscreens. Devices such as power supplies (DRC00-0D0/DRC10-0D0, DRAD0-PIN, etc) do not show up in this list and are not configurable.



Adding a Device

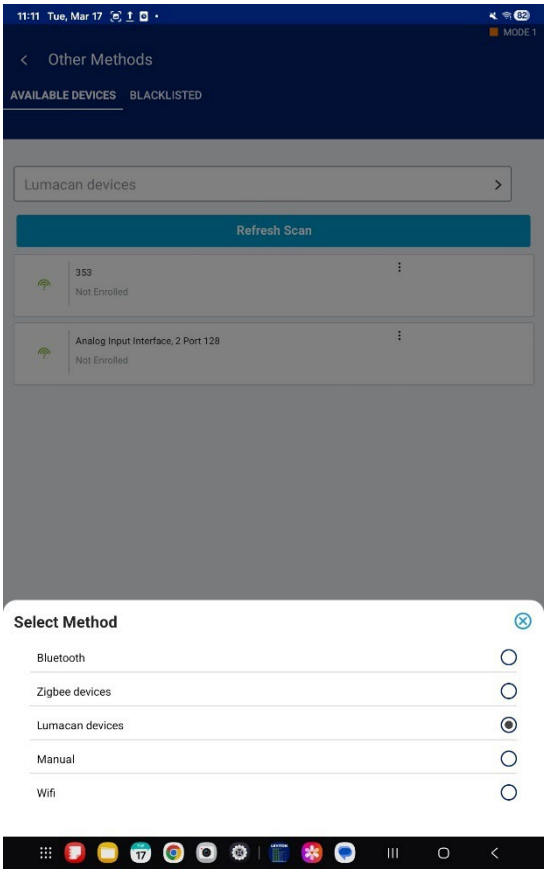
To add a Device, select the + symbol toward the top right. Devices can be added via QR Code or by scanning the LumaCAN network.

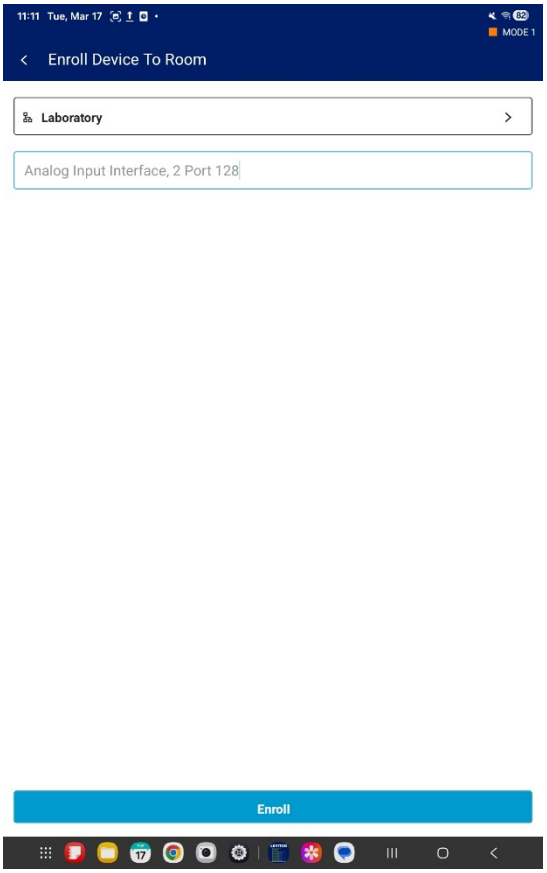


When using the QR Code method, scan the device's QR Code and wait for the app to add the new device.

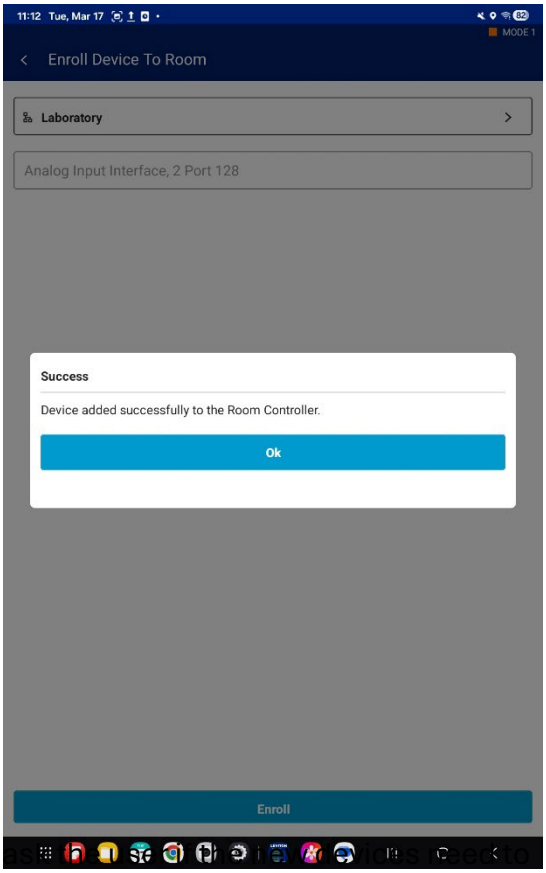
When using the Associate via Other Methods option, select "LumaCAN" from the drop down menu to scan for available devices on the LumaCAN network.

After adding a device, enter a name if desired then select "Enroll."

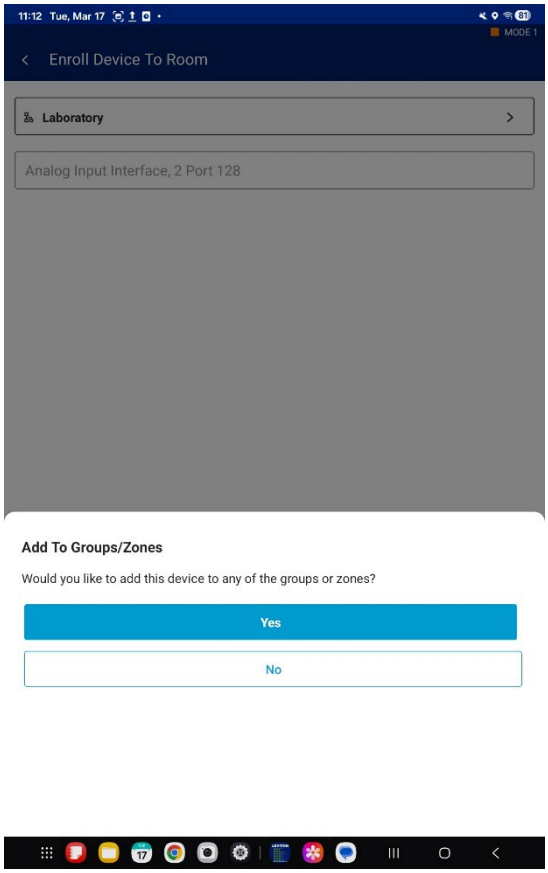


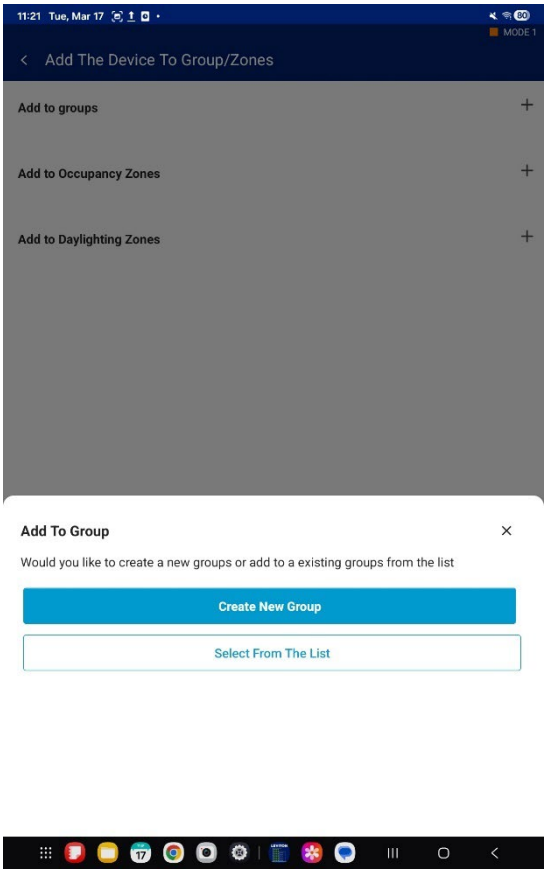


The app will provide a Success prompt after successfully adding a new device. Select “Ok” to proceed.

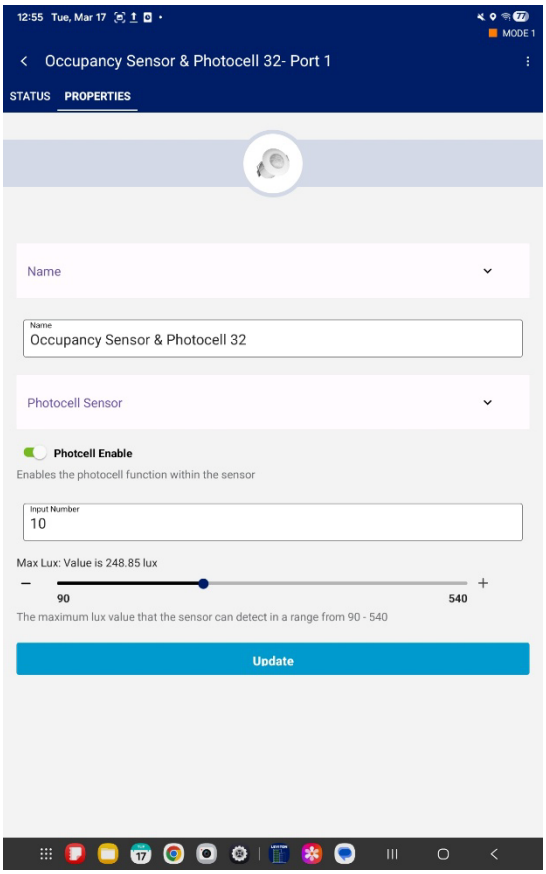


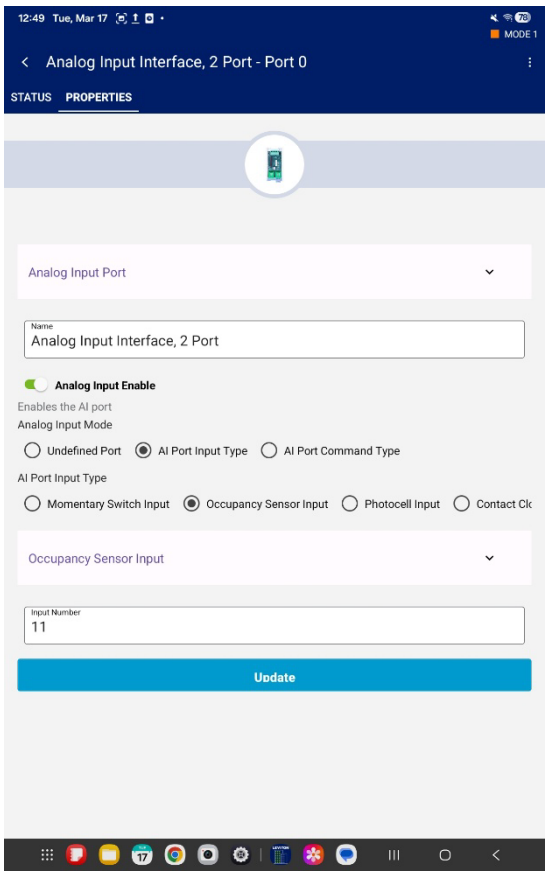
Once a new device has been enrolled, the app will as[illegible]ices need to be added to any Groups/Zones. New devices can be added to existing Groups/Zones or placed into a newly created Group/Zone.

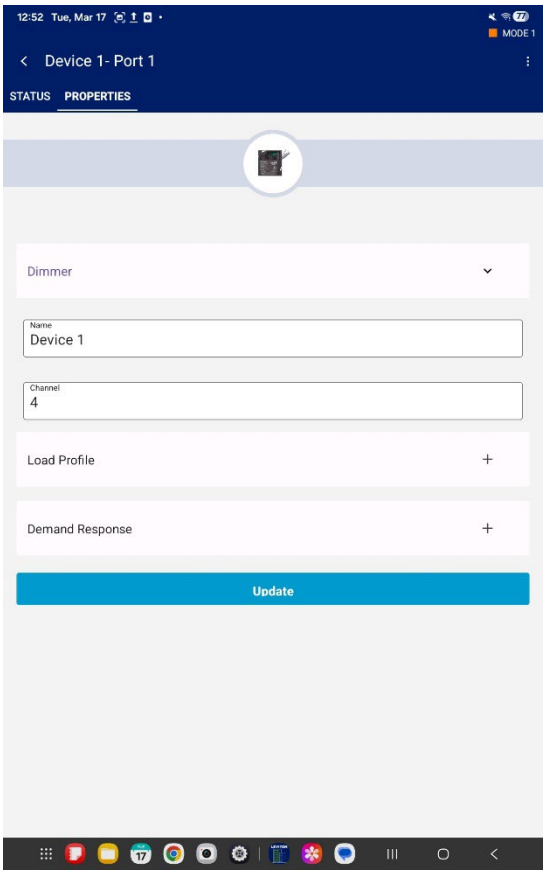


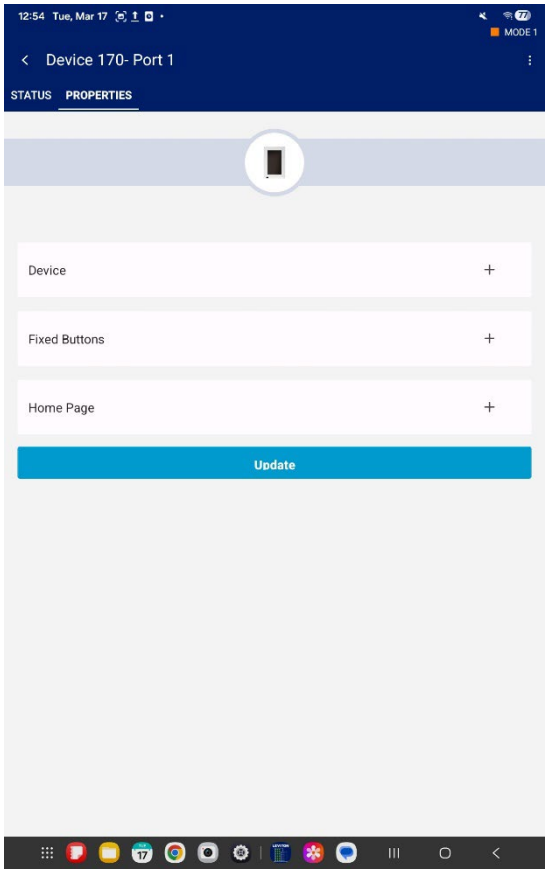


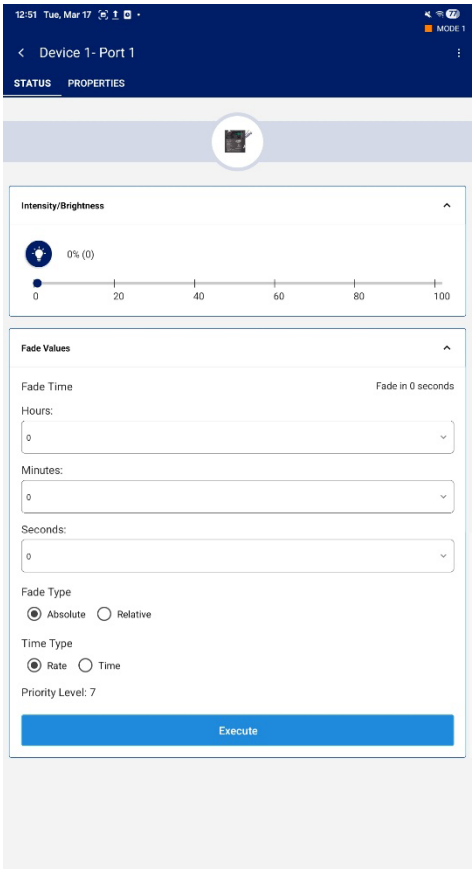
After adding a new device, selecting the device in the Devices list will allow the user to view Status and edit its Properties. Depending on the device, there can be several different properties to configure. Below are some screenshots of various devices. Note that the default tab is the Status tab; to configure Properties, select the Properties tab. Not all devices show Status.









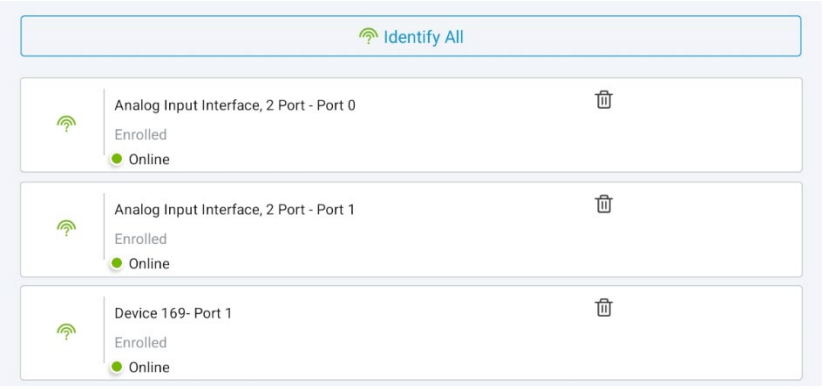


Identifying a Device

The My Building app provides users with the ability to Identify devices by flashing its LEDs or connected load. For devices such as switches and sensors, the LEDs on the device will flash to indicate they are in Identify mode. For load devices, such as Smart Packs or Multi Channel Relays, the connected loads will turn on/off and dim up/down if capable.

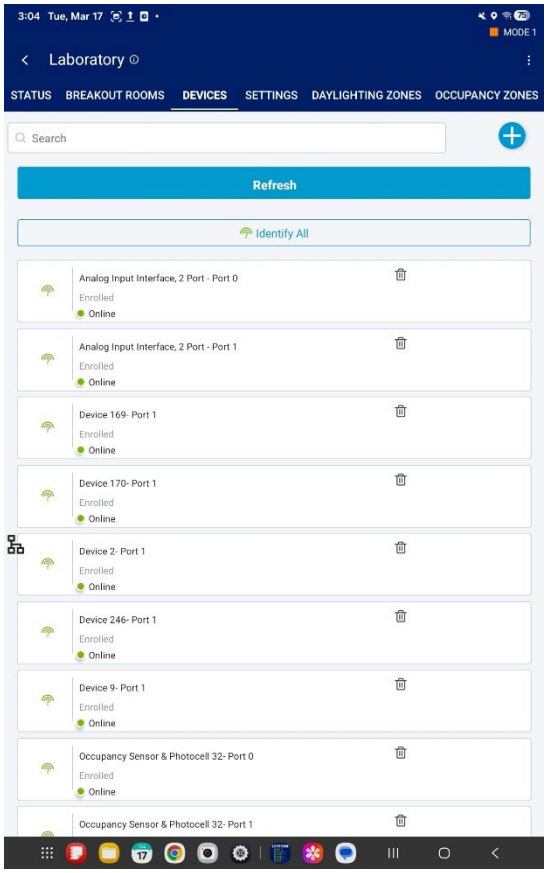
Devices can be individually Identified by selecting the green symbol with a question mark next to the device. The option to Identify all devices is also provided at the top of the screen.

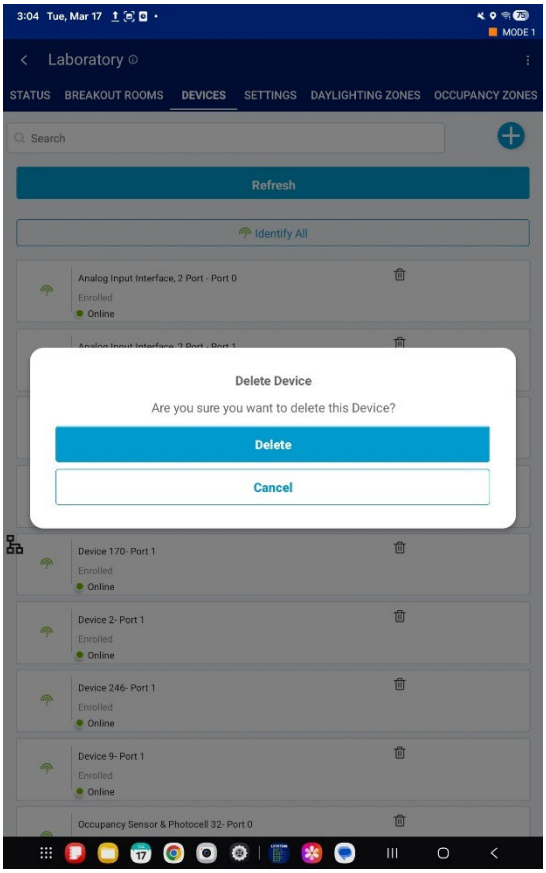
The device will continue to Identify until the Identify symbol is pressed again.



Deleting a Device

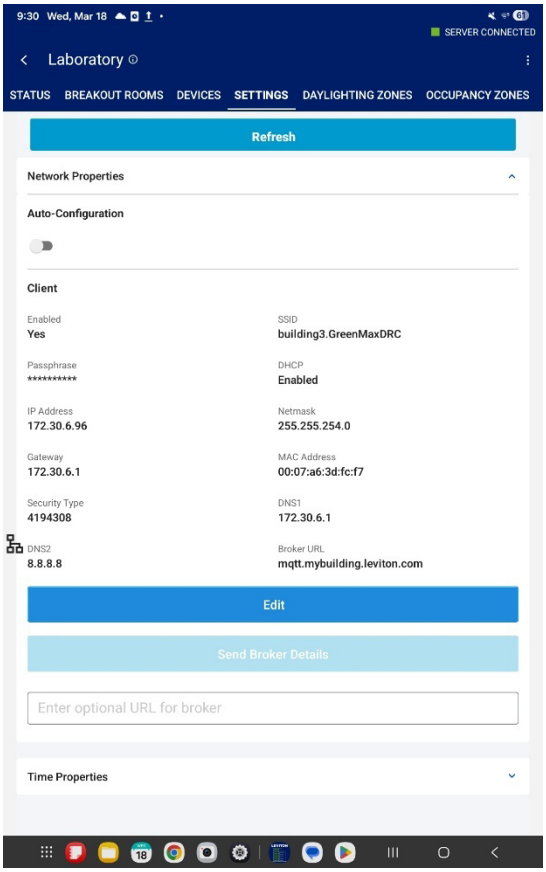
To delete a Device, select the Trash Can symbol next to the Device you want to delete. Then select “Delete” to confirm.





Settings Tab

The Settings tab shows the Room Controller's Auto-Configuration, Network, and Time properties. The Room Controller is in Access Point or AP Mode by default. However the Room Controller can also be connected as a Client to the site's Wi-Fi.



Auto-Configuration

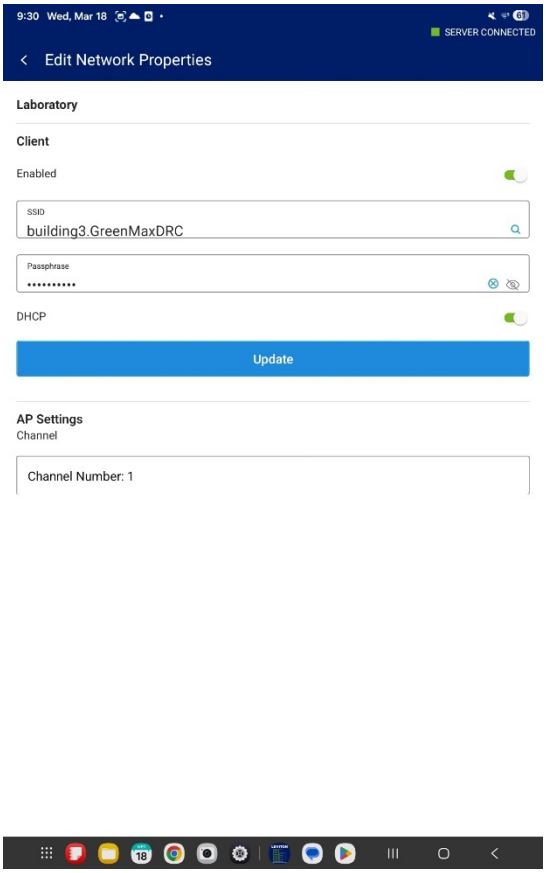
Auto-Configuration allows the Room Controller to assign LumaCAN addresses to each LumaCAN device on the network. Auto-Configuration can be enabled or disabled via the toggle on the Network Properties section of the Settings tab.

Access Point vs Client Mode

A GreenMAX DRC Room Controller's factory default is Access Point or AP Mode. In this Mode, the Room Controller behaves like an Access Point and allows for a direct connection to the My Building app. The Room Controller can also be connected to a local Wi-Fi network to access over the network or remotely. This Mode is called Client Mode.

Client Mode can be enabled by selecting the "Edit" button, in the Network Properties section of the Settings tab. Select the magnifying glass symbol toward the right of the SSID field to scan for available nearby Wi-Fi networks. Select the desired Wi-Fi network and

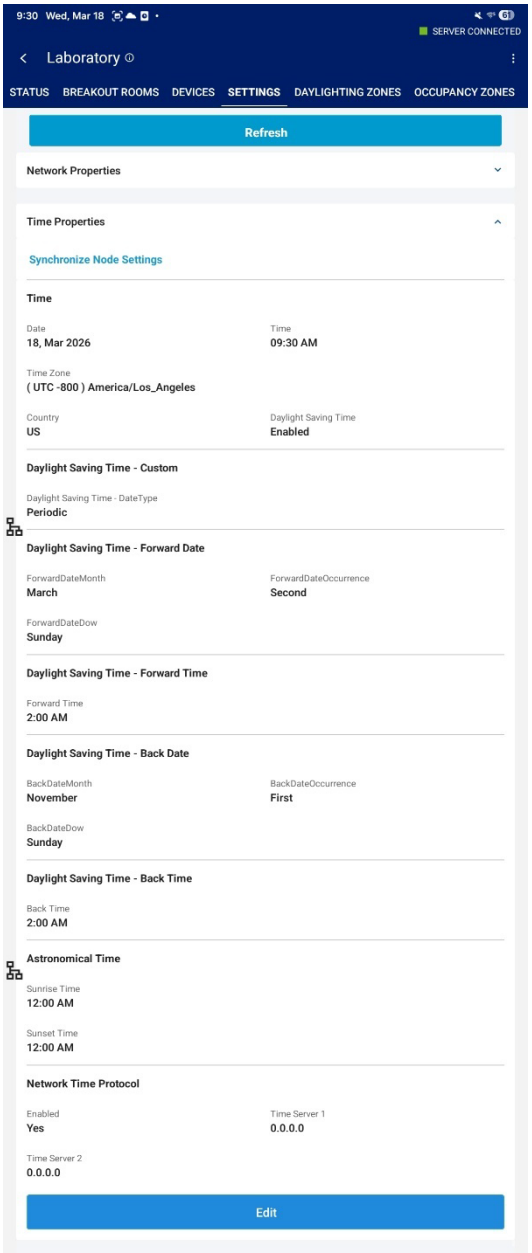
enter the network's password. In most cases, DHCP should be left enabled; work with the site's IT department to determine if DHCP or a Static IP address will be used. The Wi-Fi channel can also be selected on this page. Once the Wi-Fi settings have been configured, select "Update."



Time Properties

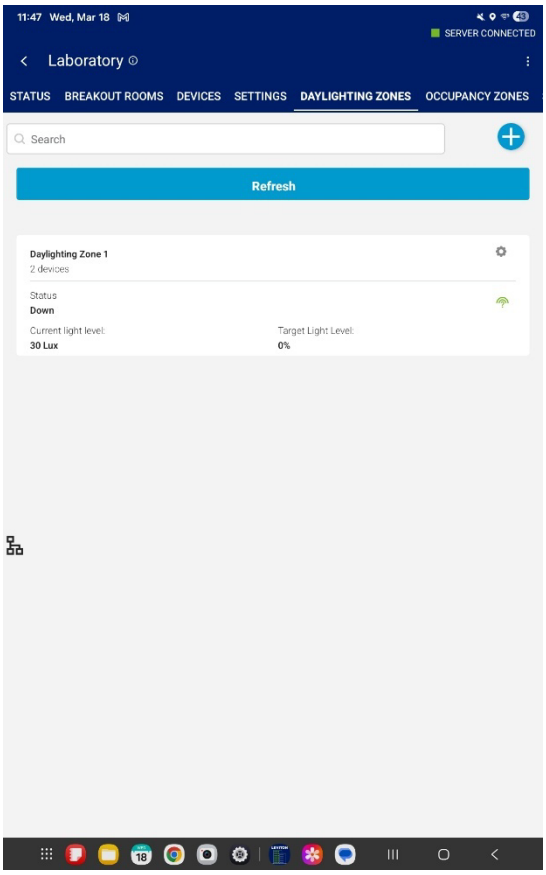
The Room Controller's time and date can be synchronized to a NTP server if available, synced with the mobile device used for commissioning, or manually configured. This section allows the user to change date and time, Daylight Savings, Astronomical Time, and NTP server settings (if applicable).

Synchronize Node Settings - Synchronizes all time and location settings from mobile device.



Daylighting Zones

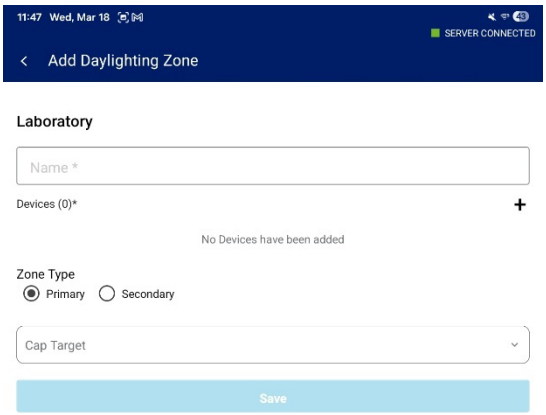
The Daylighting Zones tab shows all currently configured Daylight Zones with the ability to create, edit, and delete Zones. Each Zone will display its Status, Current Light Level, and Target Light Level.



Adding a New Daylight Zone

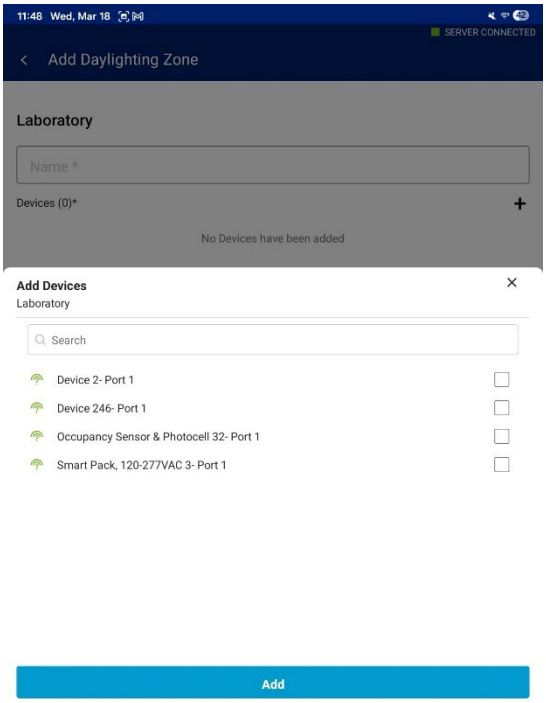
To add a new Daylight Zone, select the white/blue + symbol toward the top right.

Enter a Name for the Daylight Zone.



Add Devices by selecting the black + symbol.

Select your desired Devices and select Add.

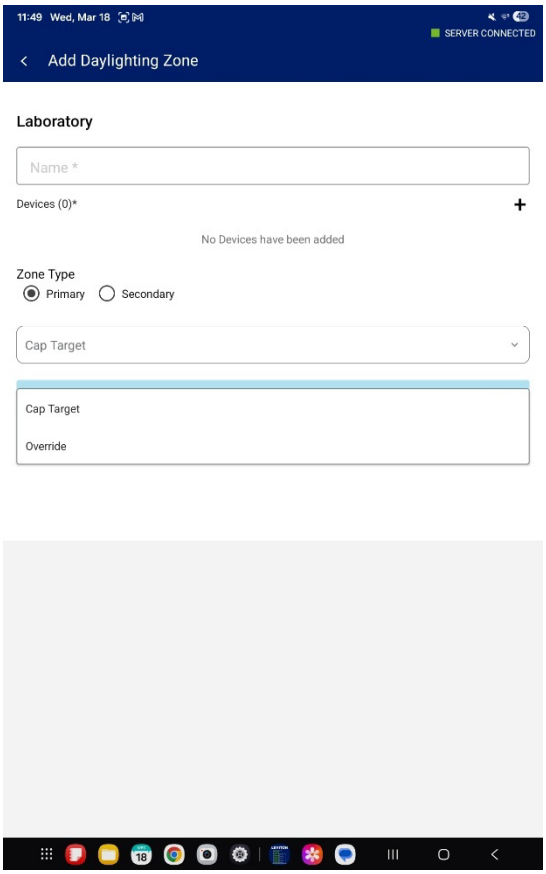


Select the Zone Type, Primary or Secondary and Cap Target or Override. Enter your desired settings.

A Primary or Secondary Daylight Zone can be defined.

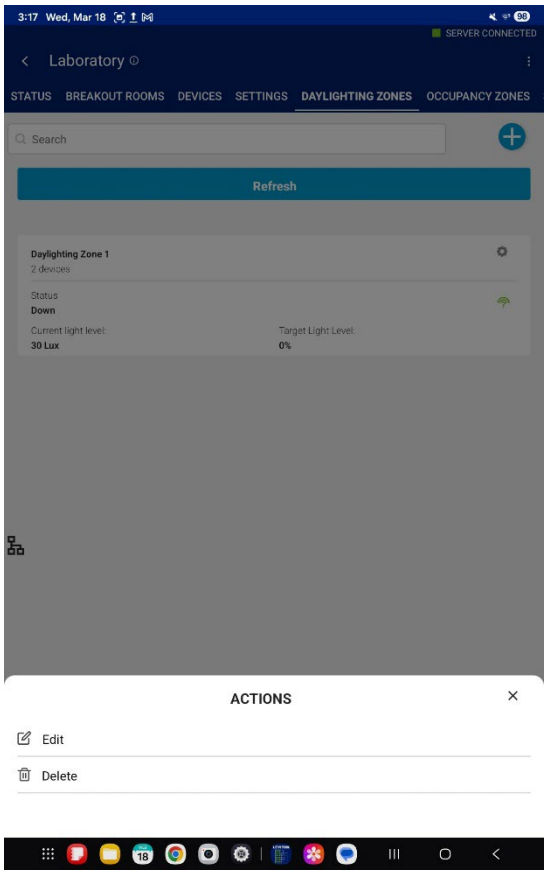
The zone can be set to Cap Target or Override. Cap target prevents the light level from rising above the defined light level. Override allows the occupants to temporarily override the light level for a defined period. Refer to local energy codes when configuring this option to ensure compliance.

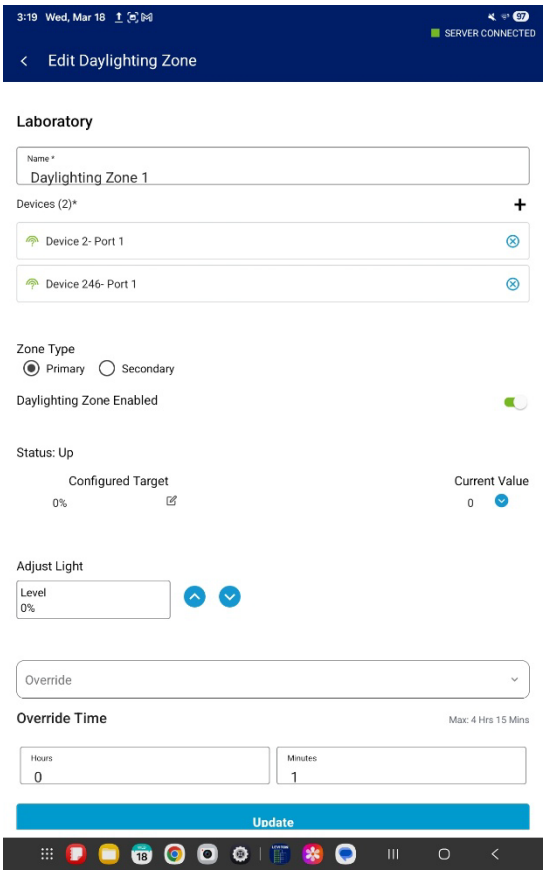
Select “Save” to create the Daylight Zone.



Edit a Daylight Zone

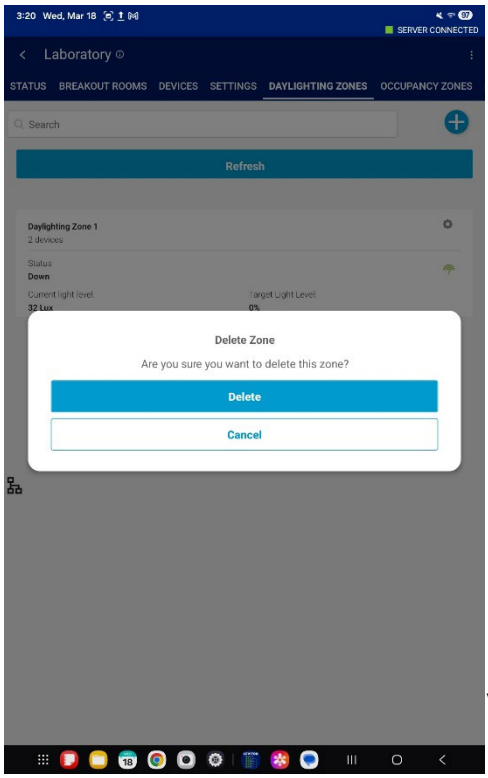
To edit a Daylight Zone, select the gear icon to the right of the Daylight Zone. In the pop up menu, select “Edit.” Once the desired changes have been made, select Update at the bottom of the page.





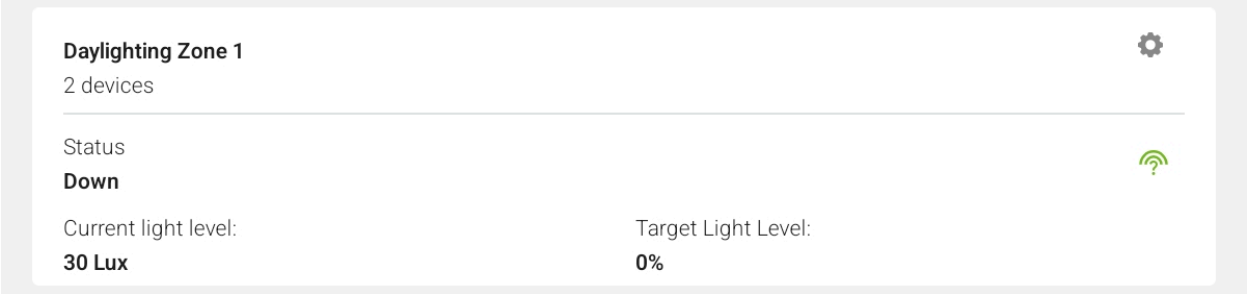
Delete a Daylight zone

Deleting a Daylight Zone can be done in two places. The first option is in the pop up menu when selecting the gear icon next to the Daylight Zone. The second option is in the zone itself, after selecting “Edit.” After selecting either option, the app will ask to confirm deleting the Zone and provide a “Success” prompt after successfully deleting the Zone.



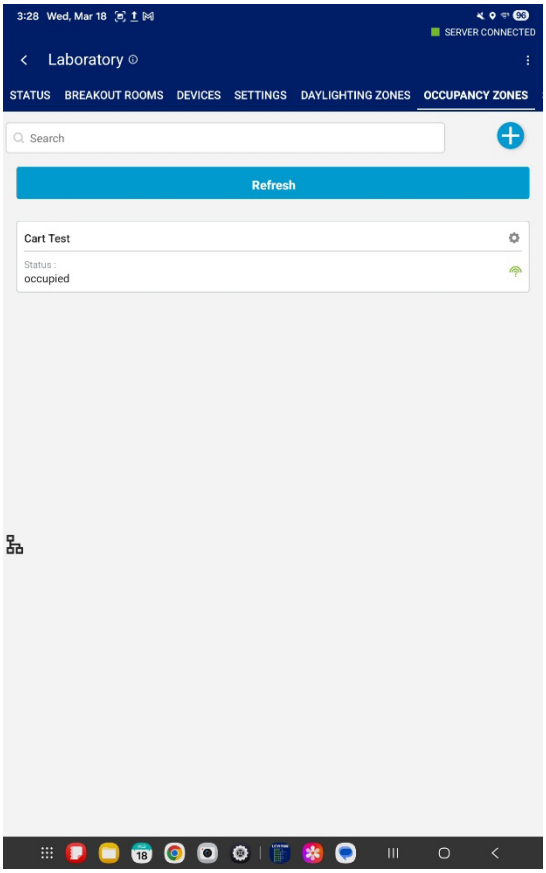
Identifying a Daylight Zone

To Identify a Daylight Zone, select the green symbol with a question mark to the right of the Daylight Zone. The luminaires tied to the selected Zone will dim up and down as well as turn off and on. Identify will continue to cycle luminaires until the Identify button is pressed again or the My Building app is disconnected from the Room Controller.



Occupancy Zones

The Occupancy Zones tab shows all currently configured Occupancy Zones with the ability to create, edit and delete Occupancy Zones. Each Zone will display its occupancy Status. The steps to configure Occupancy Zones are very similar to configuring a Daylight Zone.



Adding a New Occupancy Zone

To add a new Occupancy Zone, select the white/blue + symbol toward the top right.

Enter a Name for the Occupancy Zone.

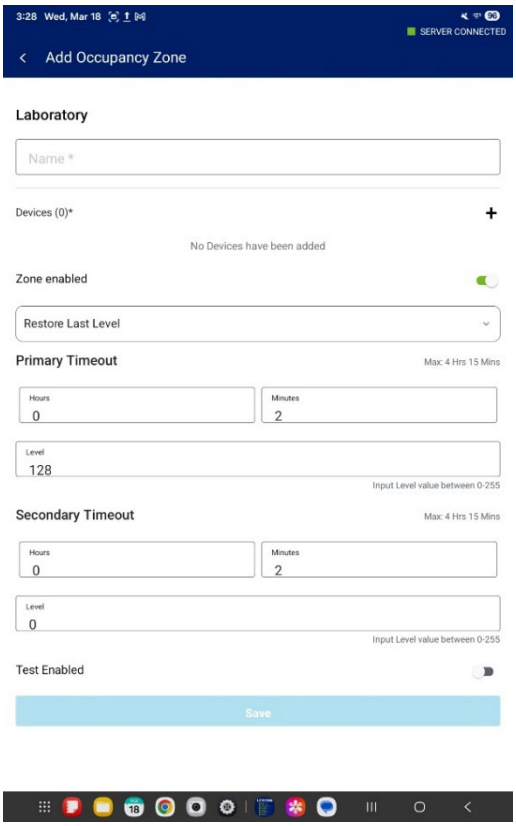
Add Devices to the Zone by selecting the black + symbol.

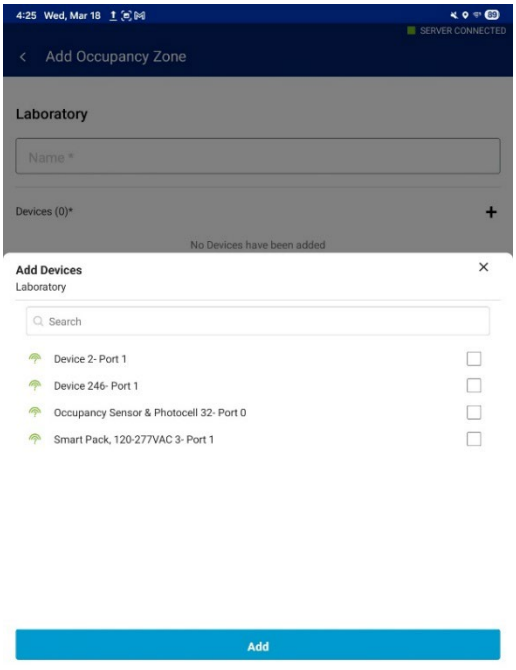
Make sure the “Zone enabled” toggle is enabled.

Select an action from the drop down menu: Restore Last Level, Go To Fixed Level, Manual On, or Restore Scene. Upon occupancy detection, the lights will execute this action.

Enter values for desired Primary and Secondary Timeouts. Level is on a scale from 0-255; for example 128 is about 50% dim level. Secondary Timeout provides the occupants in the space with a warning period before lights shut off. It is recommended to have a longer Primary Timeout than Secondary. For example, if a 15 minute timeout is desired, the Primary Timeout should be set to 13 minutes and the Secondary Timeout should be set to 2 minutes. Once the room is unoccupied for 13 minutes, the lights will go to 50% dim level and after another 2 minutes, shut off to 0%. The 2 minute period where lights are dim provide a grace period for the occupant to retrigger the Occupancy Zone if desired. Upon reactivating the zone, the lights will go to their defined light level.

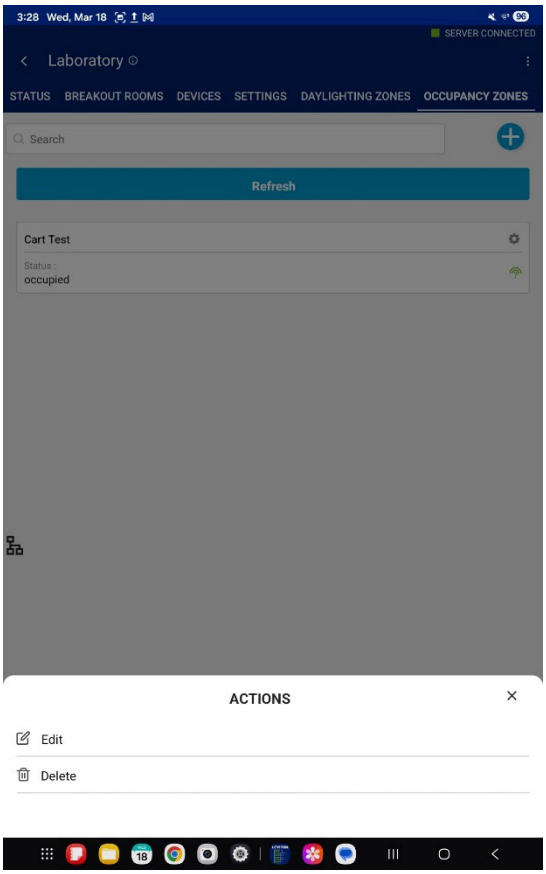
Select “Save” to complete configuration.

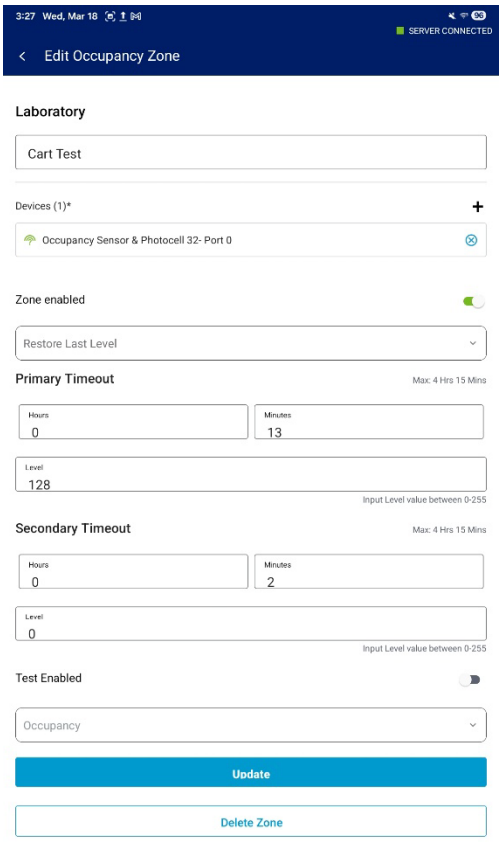




Editing an Occupancy Zone

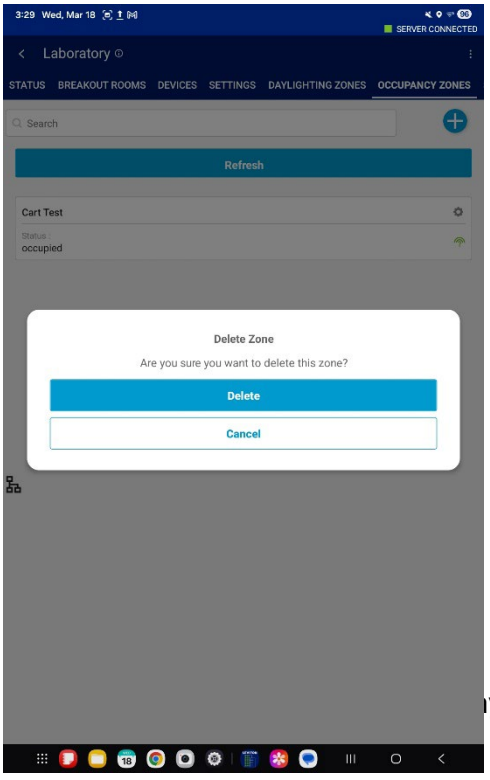
To edit an Occupancy Zone, select the gear icon to the right of the Occupancy Zone. In the pop up menu, select “Edit.” Once the desired changes have been made, select “Update” at the bottom of the page.





Deleting an Occupancy Zone

Just like Daylight Zones, deleting an Occupancy Zone can be done in two places. The first option is in the pop up menu when selecting the gear icon next to the Occupancy Zone. The second option is in the zone itself, after selecting “Edit.” After selecting either option, the app will ask to confirm deleting the Zone and provide a “Success” prompt after successfully deleting the Zone.

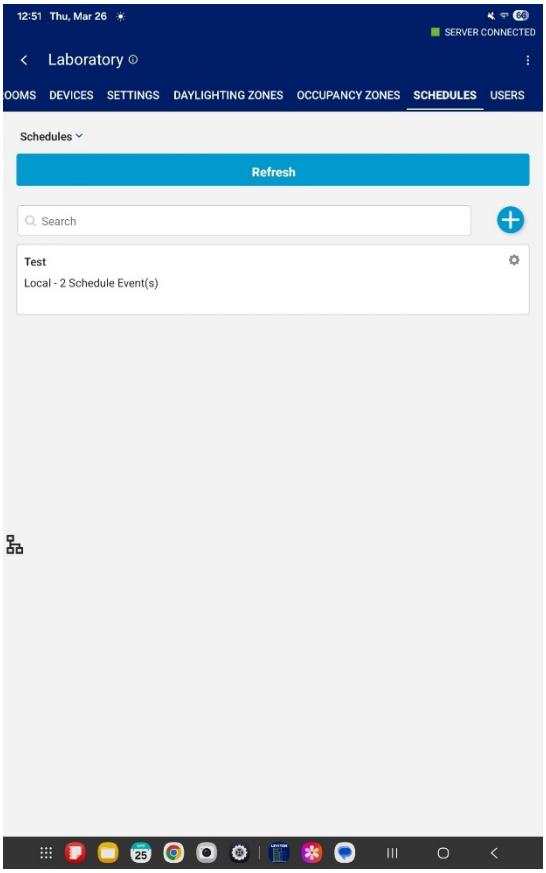


Identifying an Occupancy Zone

To Identify an Occupancy Zone, select the green symbol with a question mark to the right of the Occupancy Zone. The luminaires tied to the selected Zone will dim up and down (if capable) as well as turn off and on. Identify will continue to cycle luminaires until the Identify button is pressed again or the My Building app is disconnected from the Room Controller.

Schedules

Each GreenMAX DRC Room Controller can have its own local schedule as well as subscribe to Project schedules for central scheduling control. Scheduling is Event based and can be configured to manipulate Light and Behavior settings.

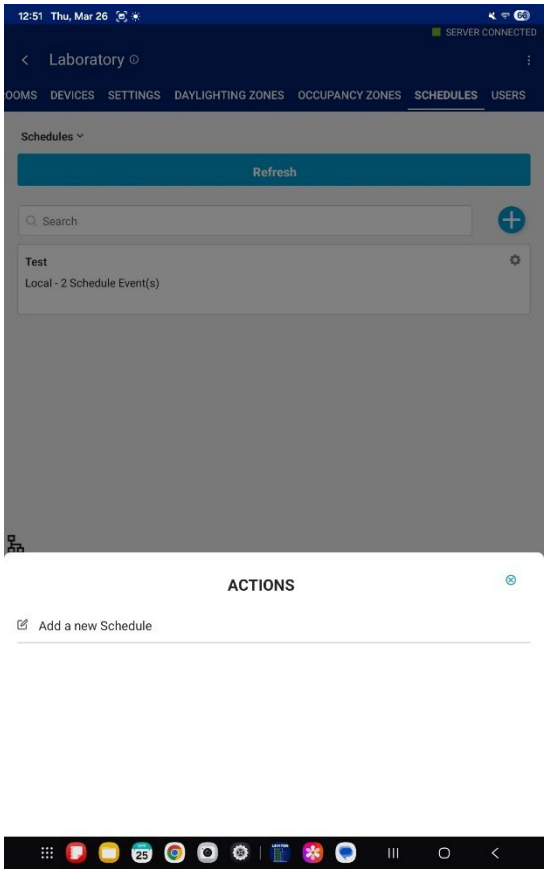


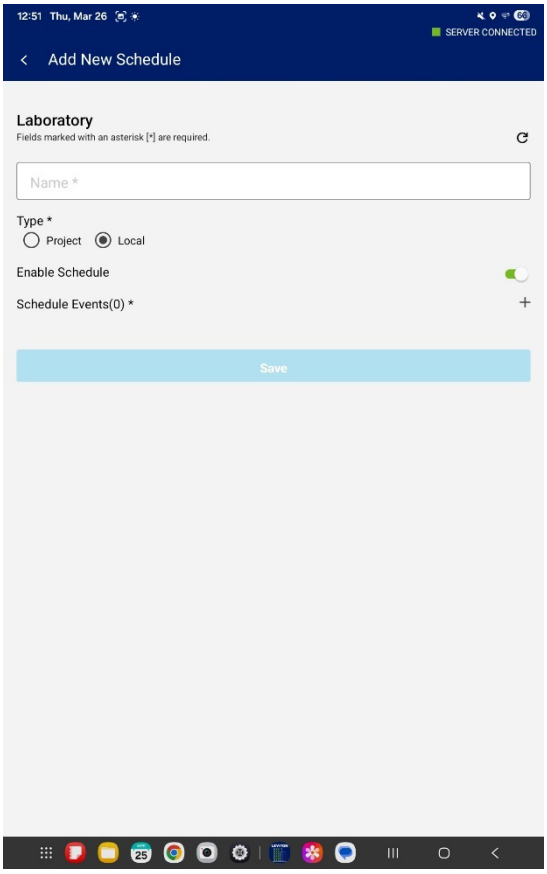
Creating a Schedule

To create new schedule, select the + symbol towards the upper right, then “Add a new Schedule.” Enter a Name for the Schedule and select the Type.

Project Schedules: Project schedules can be created aa a master or central schedule for other Room Controllers to subscribe to. This allows for simple schedule control in one Room Controller rather than having to create and maintain separate schedules in individual Room Controllers.

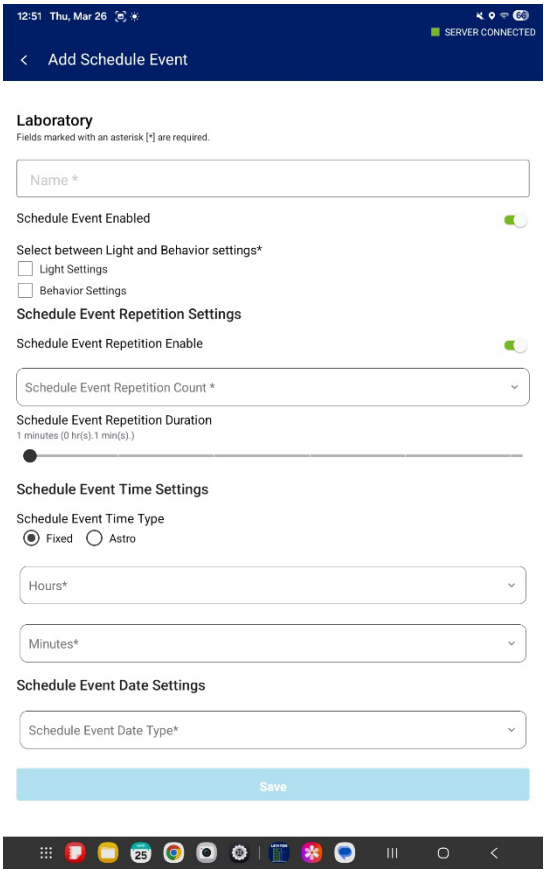
Local Schedules: Local schedules only control the devices enrolled within Room Controller that is currently connected to.





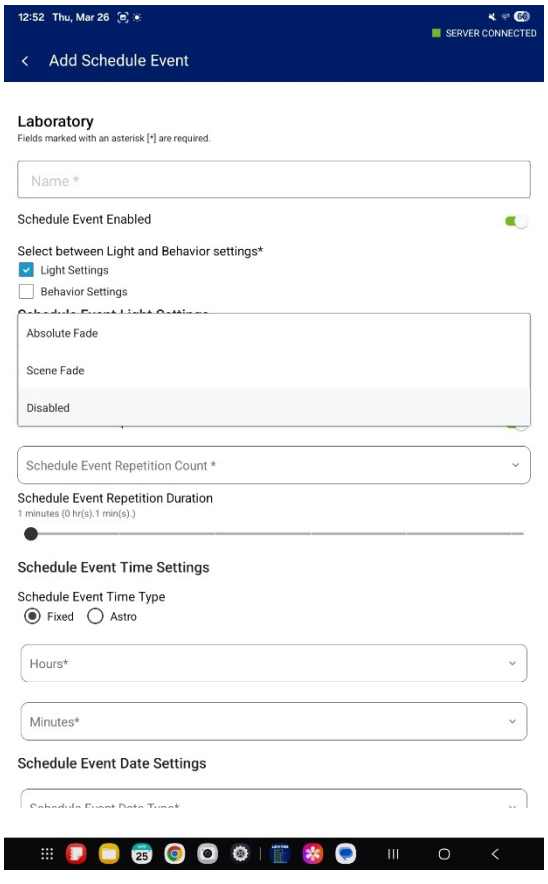
Creating Events

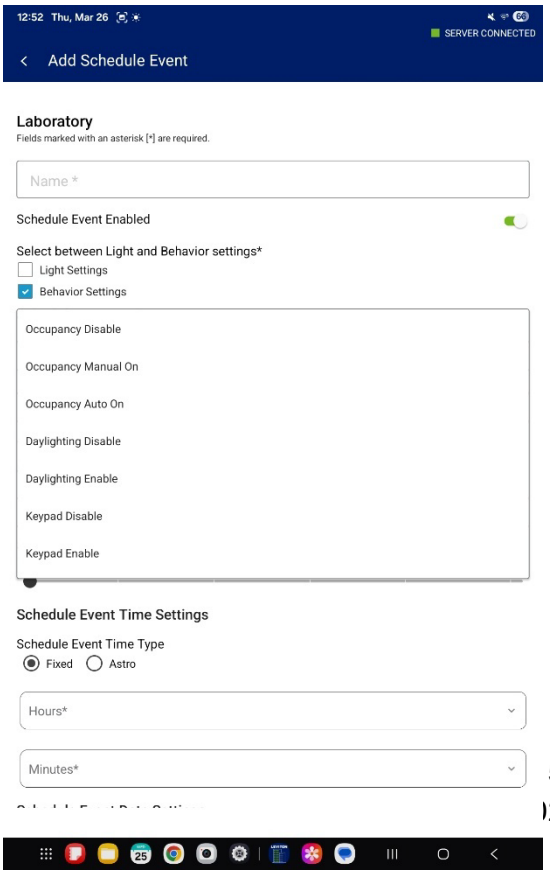
After naming a Schedule, each schedule must have an Event configured. Select the + symbol to the right of Schedule Events (refer to previous screenshot). Enter a name for the Schedule Event and select/configure Light and/or Behavior settings.



Configurable Light and Behavior Settings

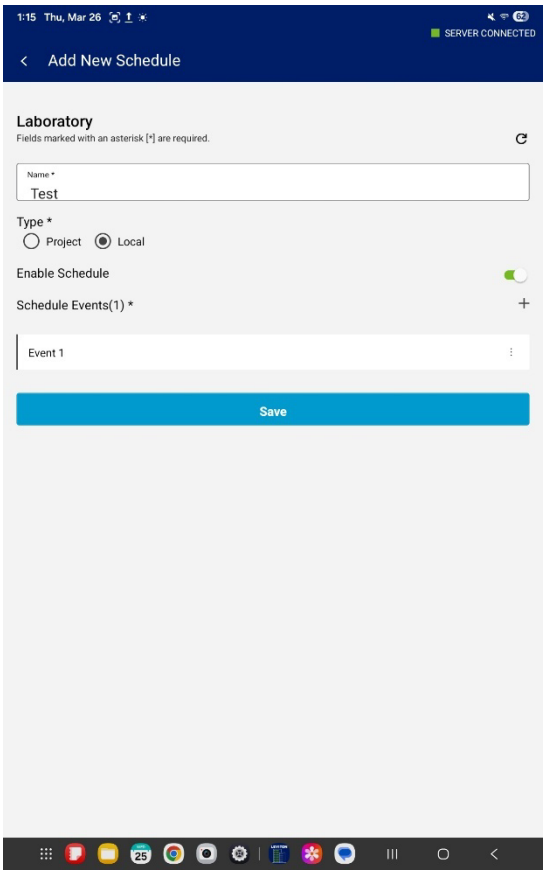
The screenshots below show the different Light and Behavior settings that can be scheduled. Once all parameters have been configured, select “Save” to create the Schedule Event.





Save the Schedule

Once the Schedule Events have been created, select “Save” to create the Schedule and push it to the Room Controller. Ensure the Time, Date, and Location settings are properly set on the Room Controller’s Settings Tab, under the Time Properties section.



My Building Web App User Manual

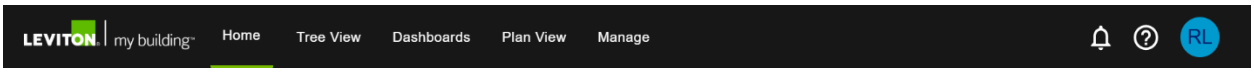
My Building can be accessed through any Web Browser to view, configure and monitor your system. The majority of configuration is completed through the My Building Mobile App however some settings such as occupancy zone settings and schedules can be manipulated through the Web App if a My Building server is deployed and configured properly.

Logging in

The same user account used for the My Building Mobile App is used to log into the My Building Web App. If an account has not been created yet, a new account can be created on the log in page by selecting the “Sign Up” link. Othwerwise, user your existing Username and Password to log into the Web App.

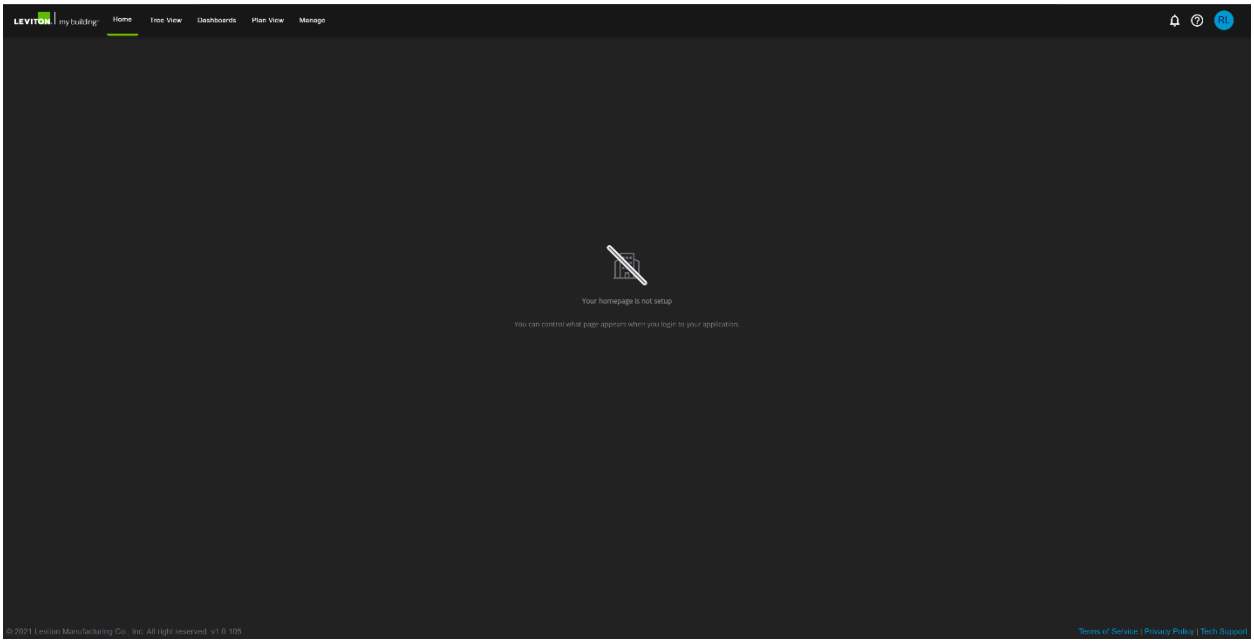
Navigation Bar

The Navigation Bar is available at the top of all pages and can be used to quickly view different areas of the My Building platform.



Home Page

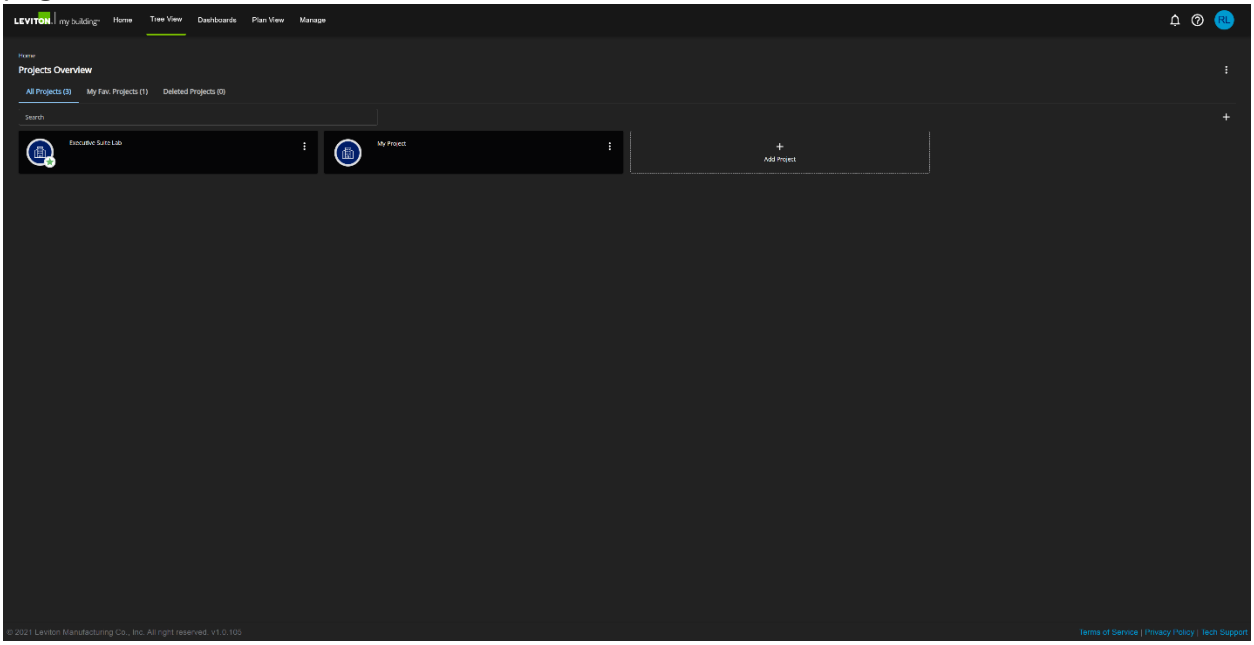
Any Project or Dashboard can be set as the Home Page but only one Project or Dashboard may be set as the Home Page at a time. By default, the Home Page is not configured.



Default Home Page, no Project set as Home Page

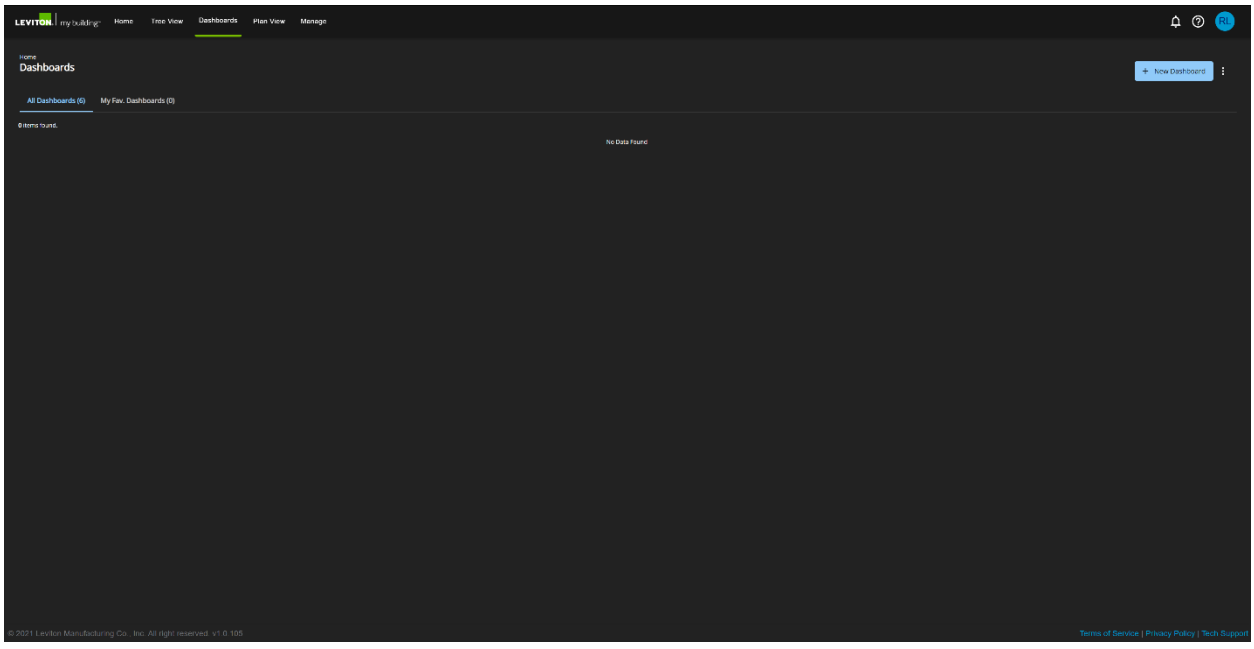
Tree View

The Tree View tab provides a high level overview of all Projects currently assigned to the logged in User. Favorites will appear at the top of the menu and all Projects can be viewed by selecting the “View All Projects” option. Below is a screenshot of the View All Projects page.



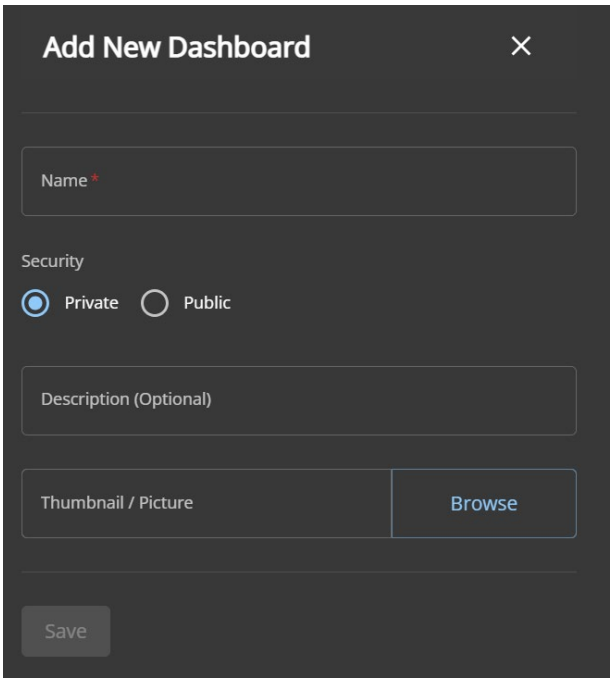
Dashboards

The Dashboards tab lists all available Dashboards for the logged in User. Dashboards are customizable and various Widgets can be added for reporting. Dashboards can also be set as the Home Page using the three dots menu.



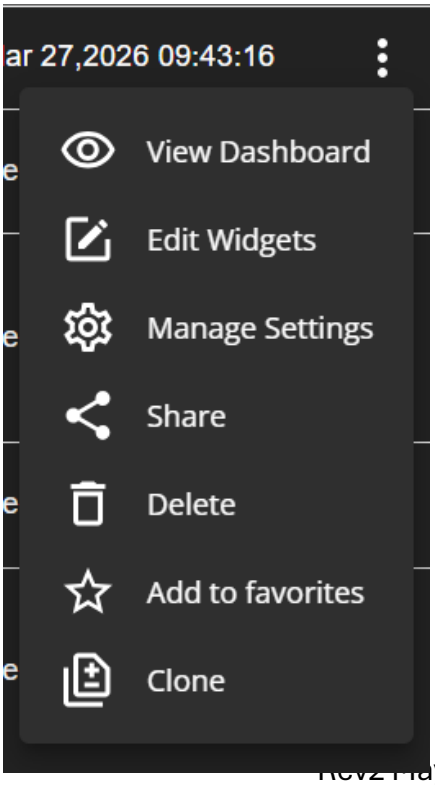
Creating a Dashboard

To create a Dashboard, select the "+ New Dashboard" button toward the upper right corner. A new window will display on the right of the screen. Enter a Dashboard Name and select the Security type. A description and Thumbnail/Picture may also be uploaded to the Dashboard. Select "Save" to create the new Dashboard.



Dashboards Options Menu

The three dots menu to the right of the Dashboard provides various options for management and sharing.

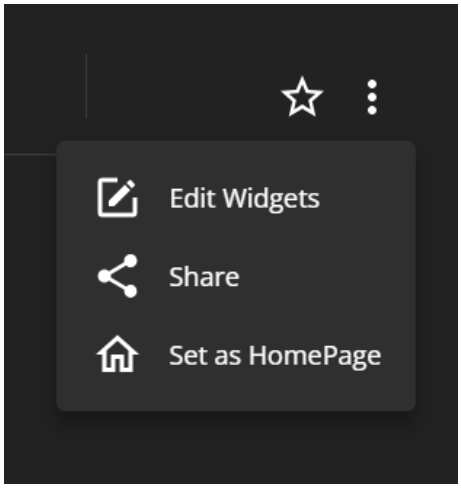


Managing Widgets

Adding a Widget, Step 1

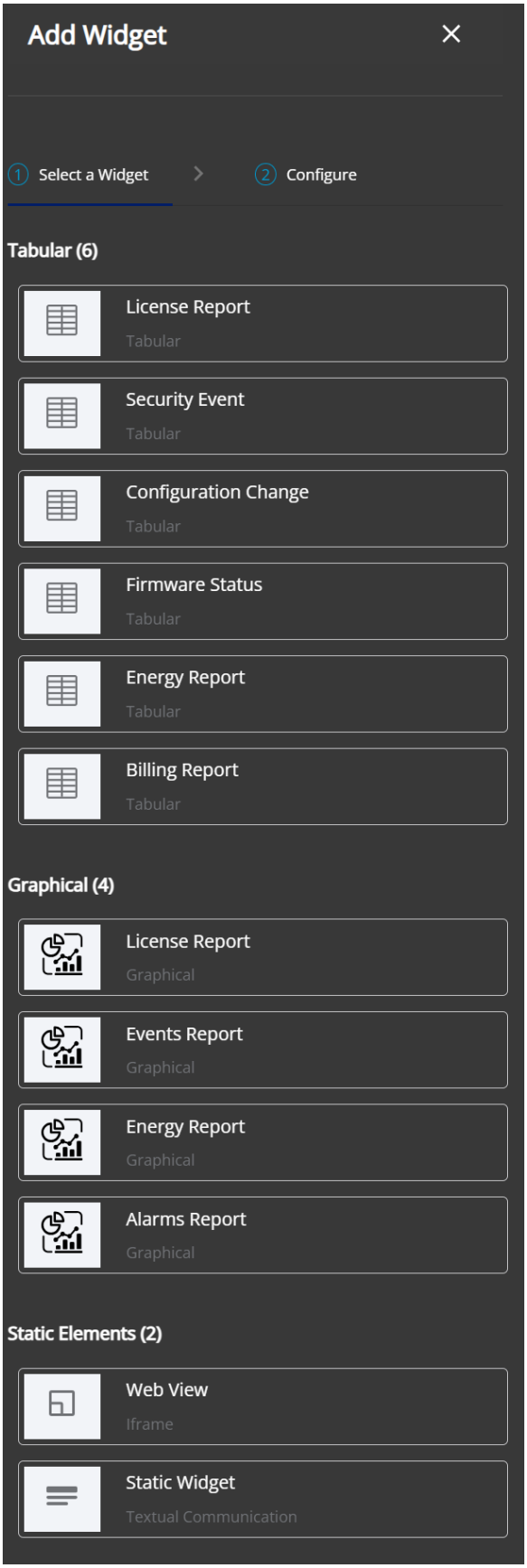
Once a new Dashboard has been created, you will be brought to the Edit Widgets page. Here you can Add, Edit, and Delete Widgets.

If you are adding Widgets to an existing Dashboard, there are two ways to Edit Widgets. Selecting the three dots menu next to the Dashboard on the Dashboard page or within the Dashboard itself reveals the option “Edit Widgets.”



To add Widgets, select the “+ Add Widget” option.

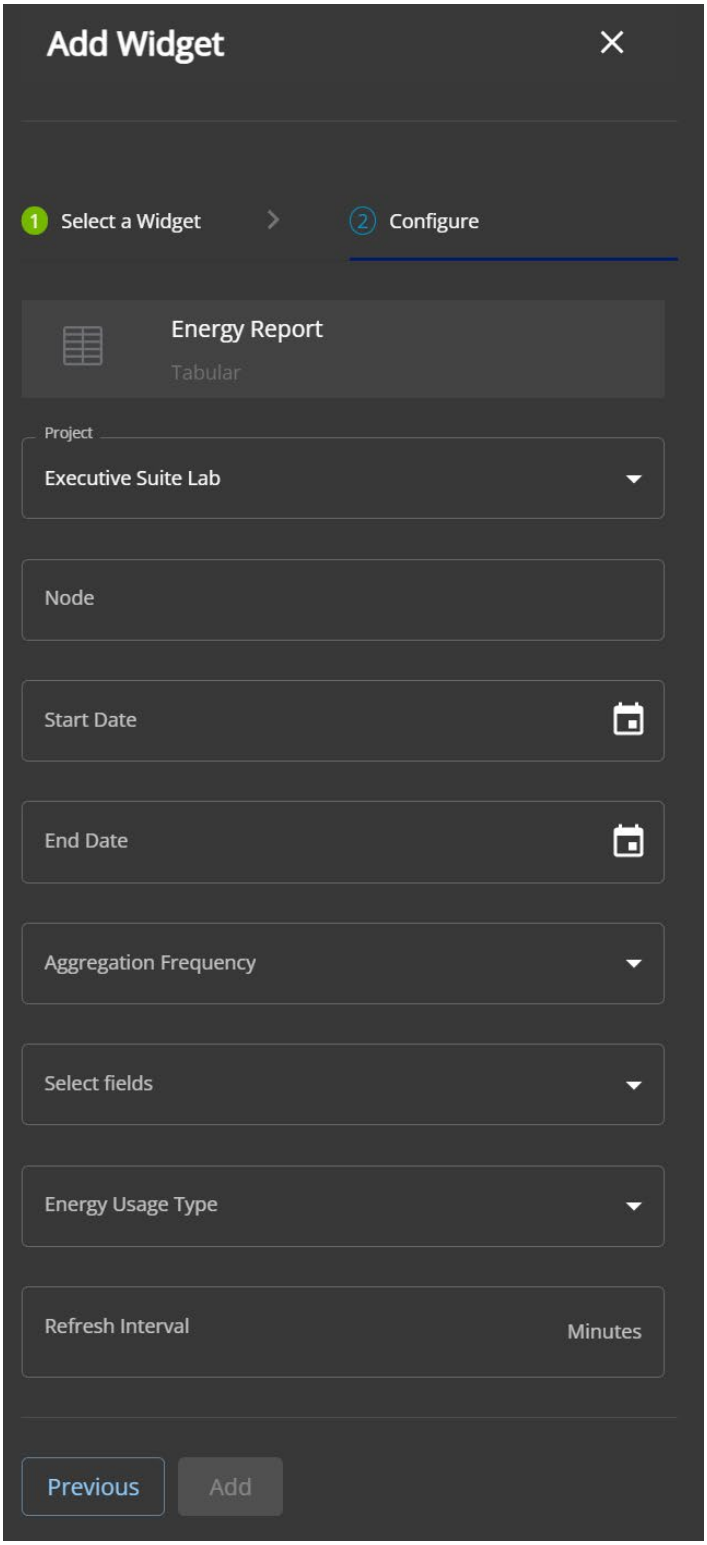
A new window will appear on the right of the screen. Select the desired Widget, then select “Continue” on the bottom of the screen. You may need to scroll down to see the Continue option.



Configure the Widget, Step 2

The next step is to configure the Widget. Each Widget has its own set of properties to configure. The screenshot to the right shows the Energy Report Widget. All Widgets have the option to select the Project and Node to report as well as the Refresh Interval but may also include other options such as Start and End date or Display type.

Once all parameters have been configured, select the “Add” button to add the Widget to the Dashboard.

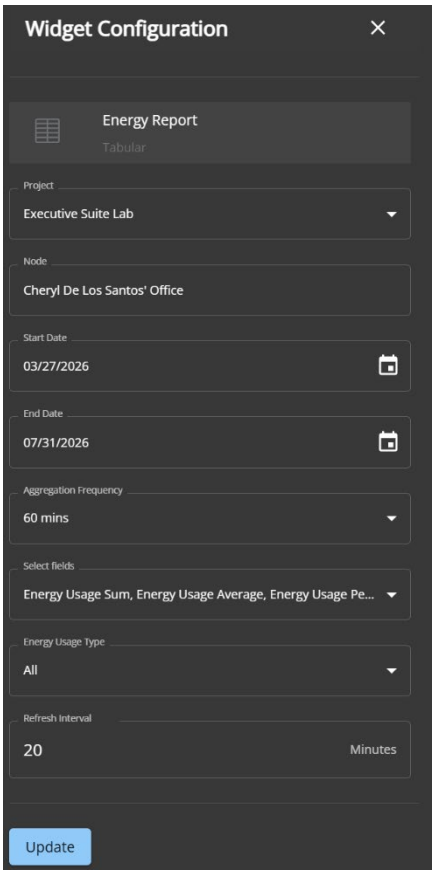


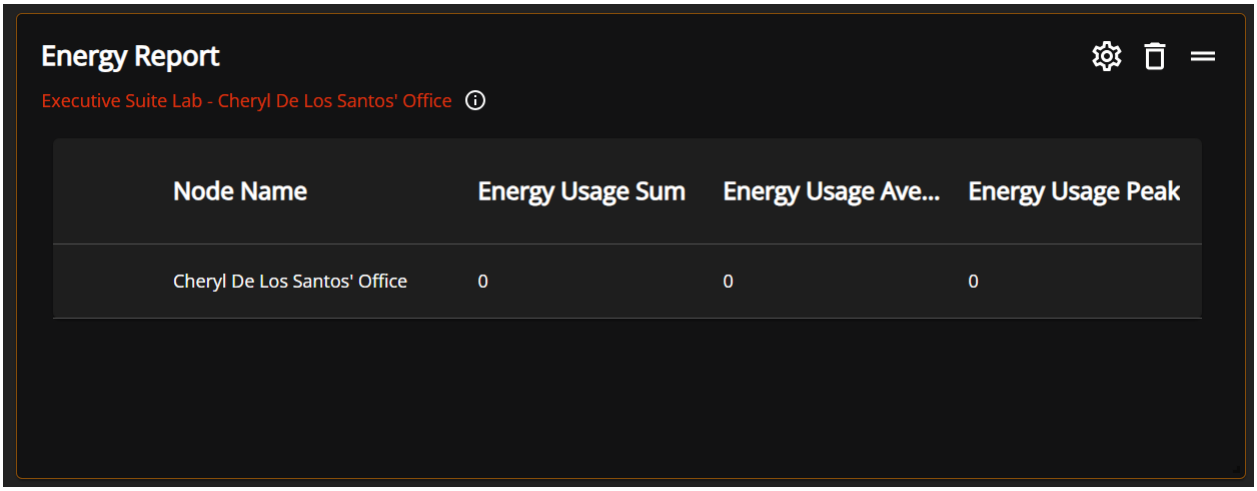
Exit Edit Widgets View

After making changes to Widgets, exit the Edit Widget view by selecting “Done” in the top right corner.

Edit A Widget

To Edit an existing Widget, enable the Edit Widget View by selecting “Edit Widgets” from the options menu. Then select the Gear icon next to the Widget that needs to be edited as shown below. A new window will appear to the right, allowing changes to be made. Once desired changes have been made, select “Update” to save changes.





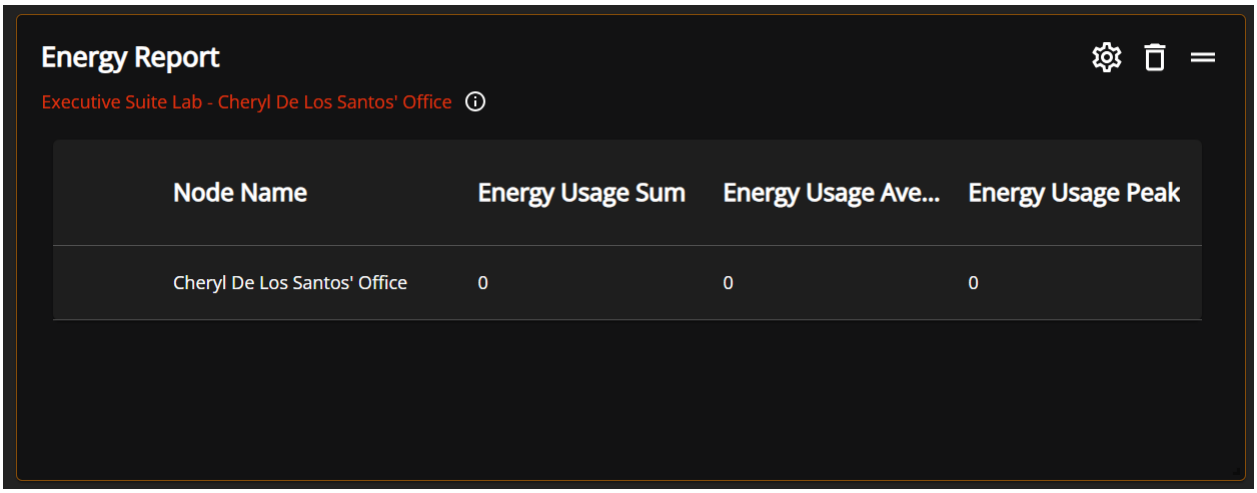
Exit Edit Widgets View

After making changes to Widgets, exit the Edit Widget view by selecting “Done” in the top right corner.

Delete a Widget

A Widget can be Deleted by entering Edit Widget mode and selecting the Trash can symbol next to the Widget.

A prompt will appear asking for confirmation. Select the “Delete” option to confirm and delete the Widget.

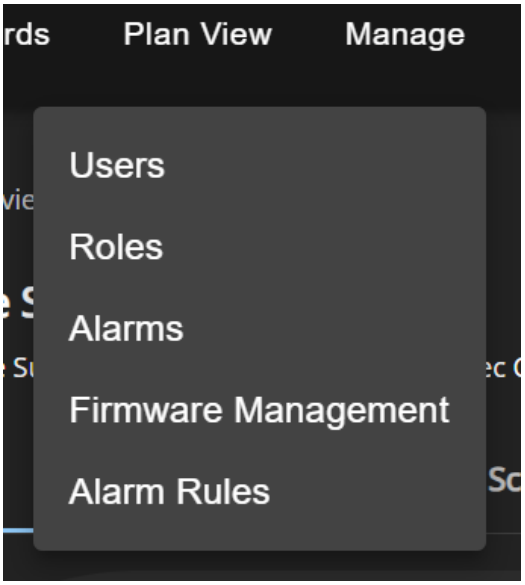


Exit Edit Widgets View

After making changes to Widgets, exit the Edit Widget view by selecting “Done” in the top right corner.

Manage

The Manage tab provides the ability to View Users, Role Types, Alarms, and Firmware Management. These categories are not editable from the Manage tab and must be edited in the Project itself. Firmware must be deployed from within the Project as well. However Alarm Rules are configurable through this menu. Alarm Rules can be tied to specific Projects and Nodes or Rooms.

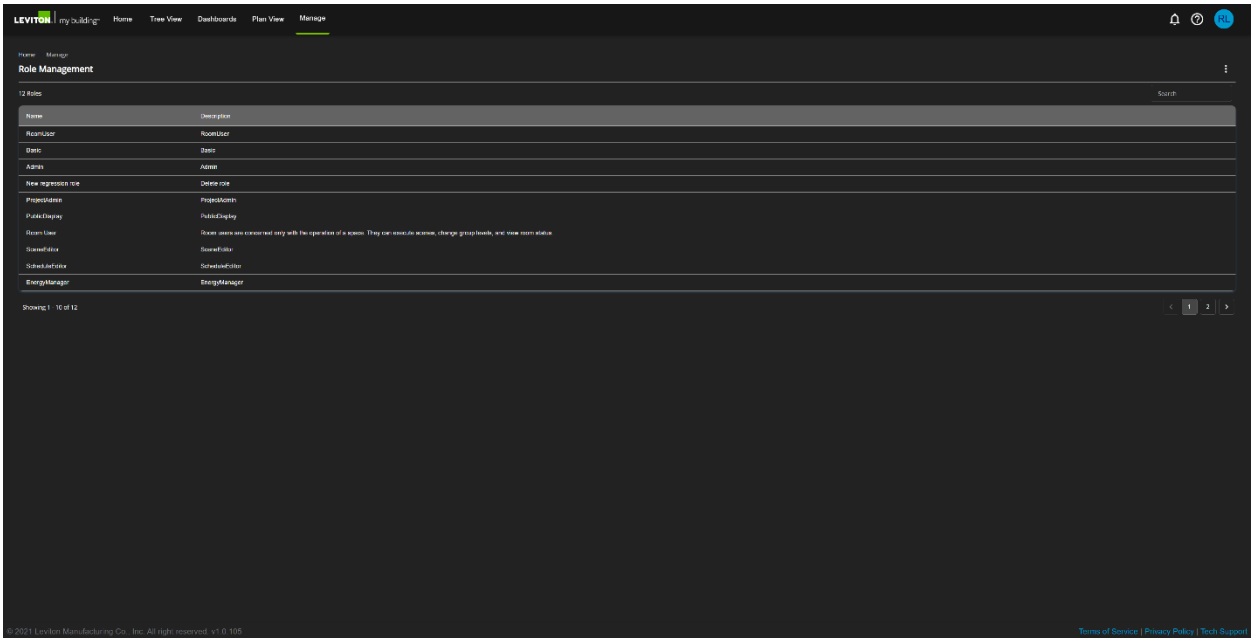


Users

The Users tab lists all Users for Projects assigned to the logged in User. User Roles and access are not edited in this menu view but be viewed. Modifications to User Roles must be done within the Project or Node.

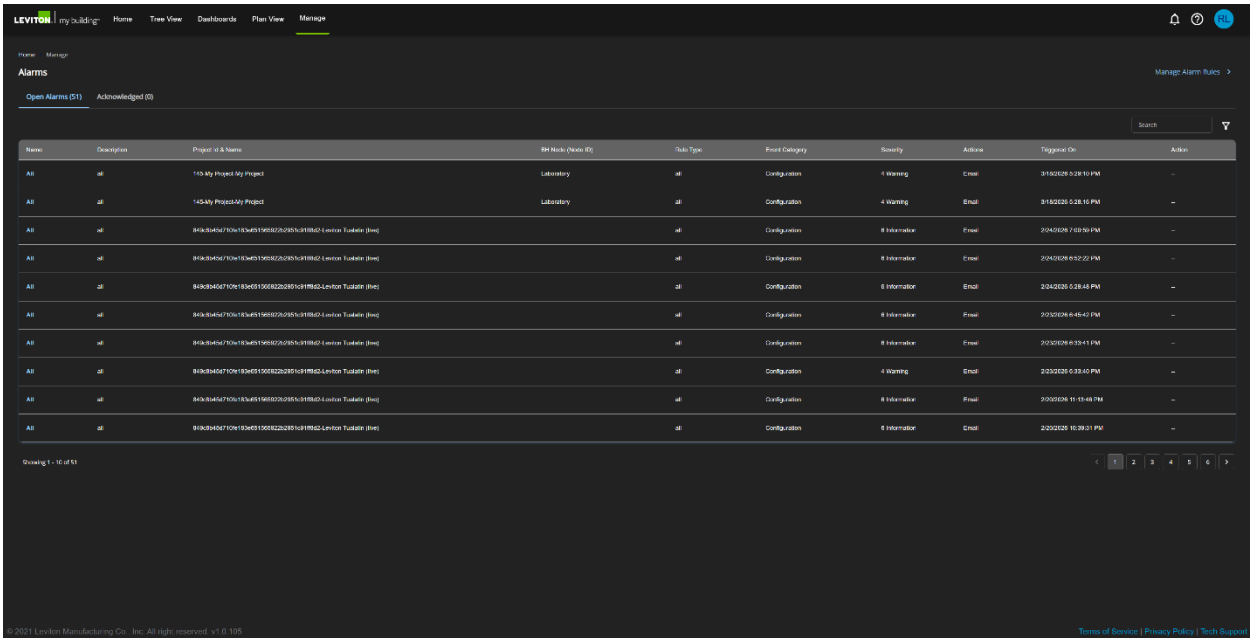
Roles

The Roles option lists all User Roles available in the system and their permissions. Roles cannot be edited in this menu view and are just listed for reference on this page.



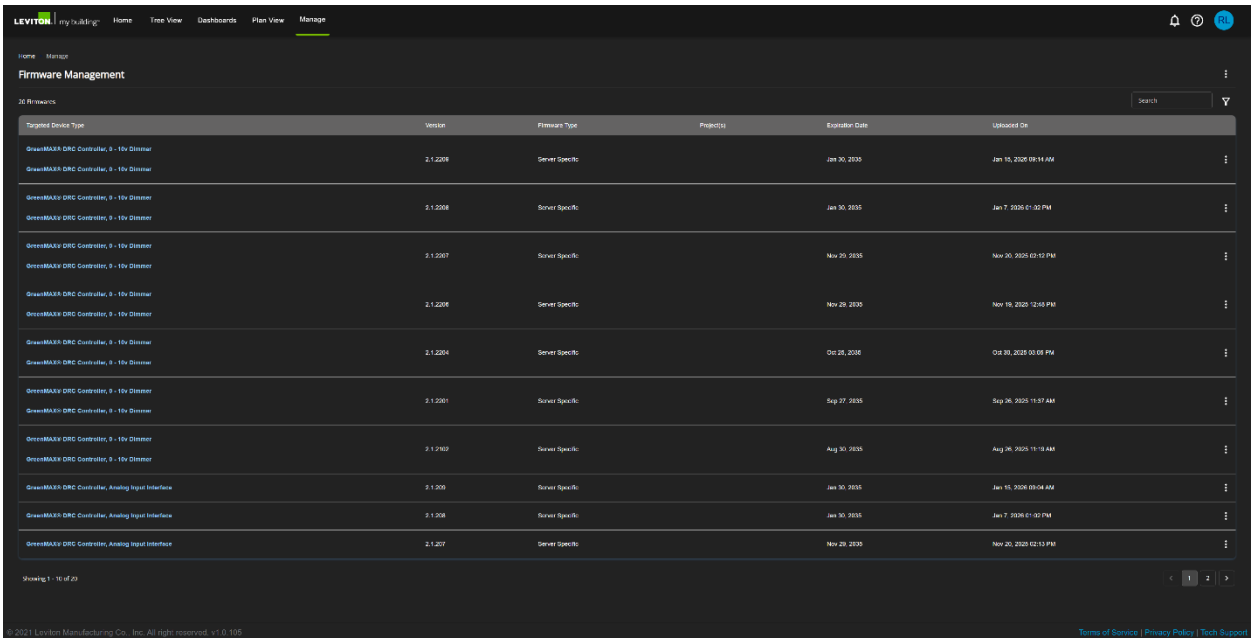
Alarms

The Alarms option displays a list of all currently configured Alarms for all Projects assigned to the logged in User. Alarms cannot be edited in the menu view and are just listed for reference.



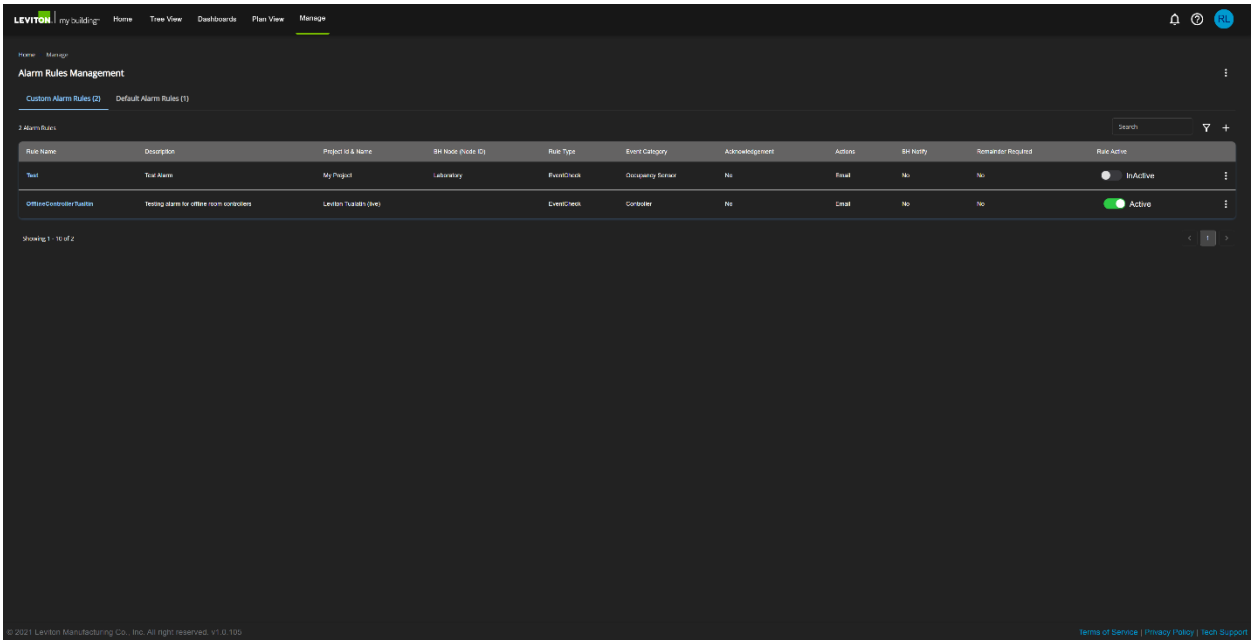
Firmware Management

The Firmware Management options list all available firmware versions for the connected Projects and devices. Firmware cannot be deployed from the menu view and only listed for reference. Firmware must be deployed from within the Project or Node/Room.



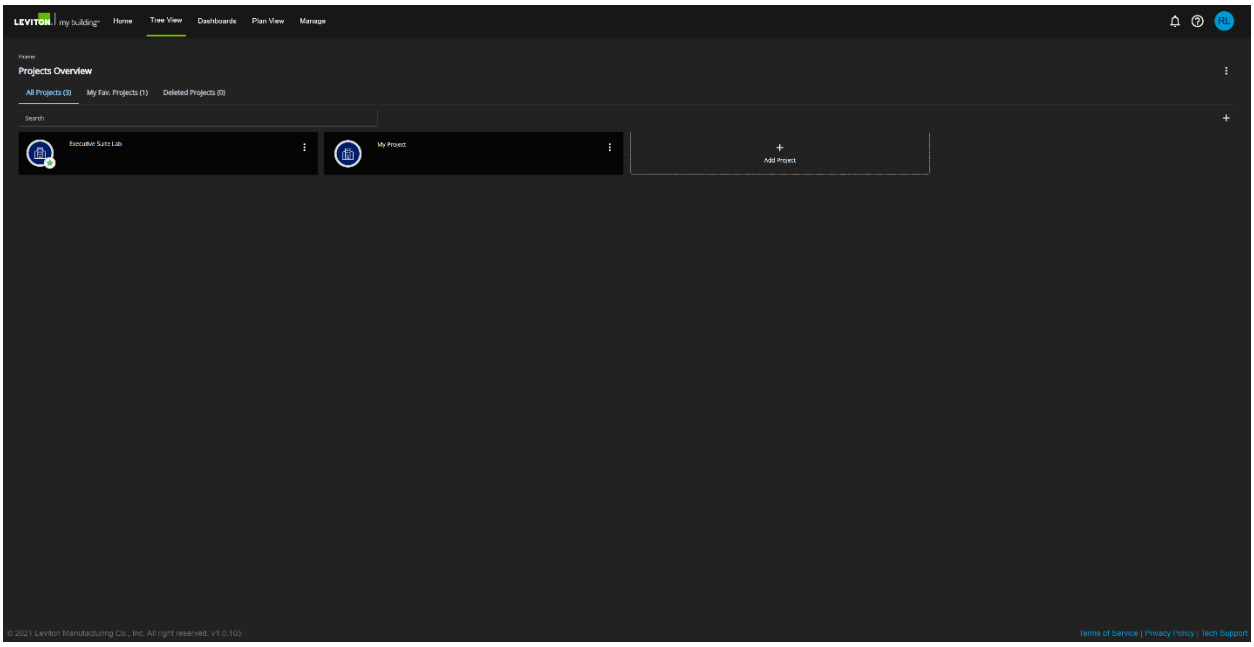
Alarm Rules

Alarm Rules can be viewed, edited, and deleted from this menu view.

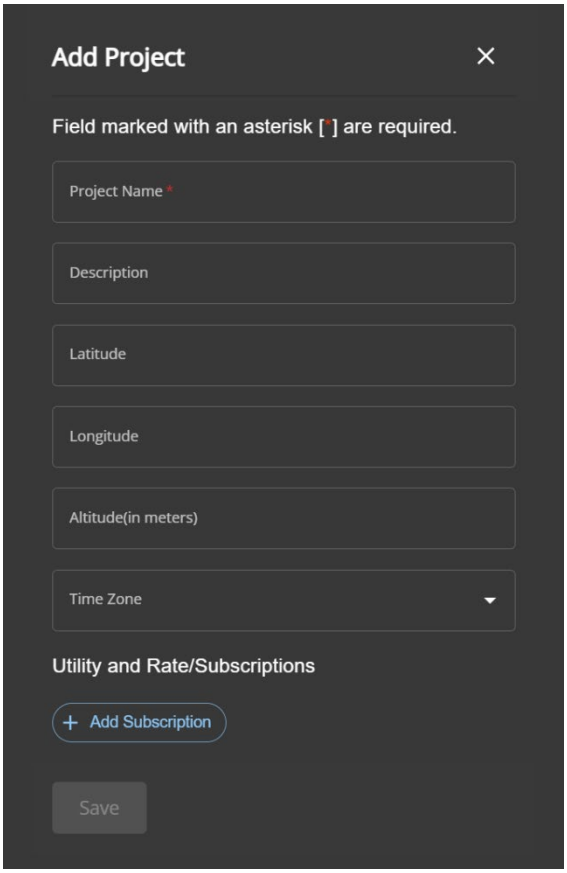


Adding a Project

If a Project has not yet been created in the Mobile App, a new Project can be created by selecting the “Tree View” tab toward the top of the page then “View All Projects.” To create a new project, select the “+ Add Project” option.



A new pane will show up on the right side of the screen. Enter the required details and select “Save” to create a new project. If desired, the location details can be entered later using the Mobile App and syncing the details from the mobile device’s settings.

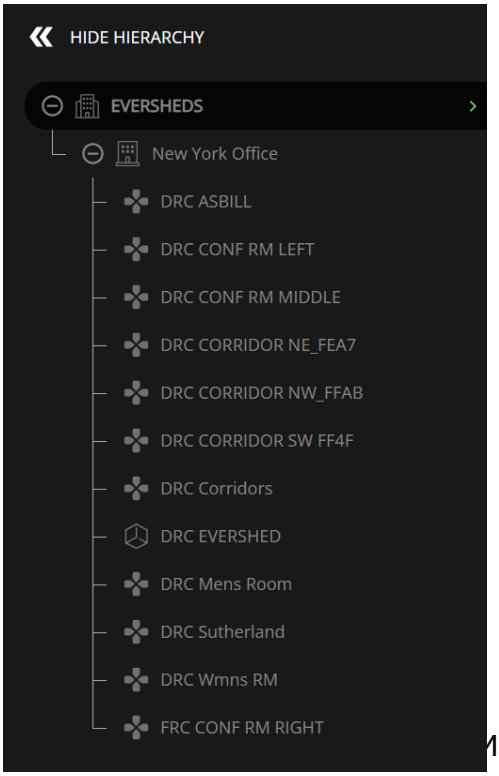


Accessing a Project

Once a Project has been assigned as a Home Page, the view for Home Page and selecting the Project from the Tree View tab will be the same.

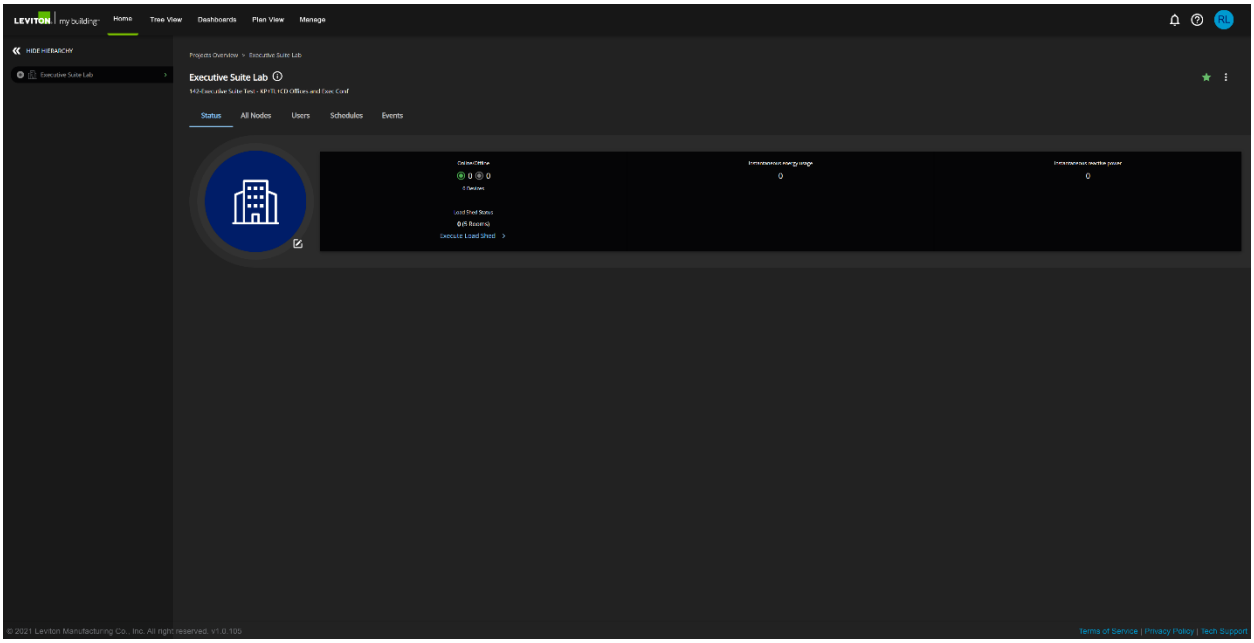
Hierarchy

The left pane shows a hierarchy for the Project. Selecting the + symbol will expand the list to show all Nodes for the Project.



Status Page

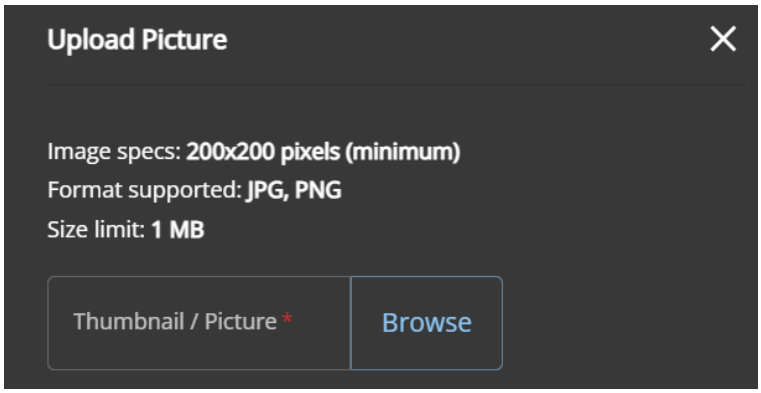
The Status Page shows total number of Online/Offline devices (if networked), Instantaneous Reactive Power (if available), and Instantaneous Energy Usage (if available) for the selected Project.



Uploading a Custom Project Image

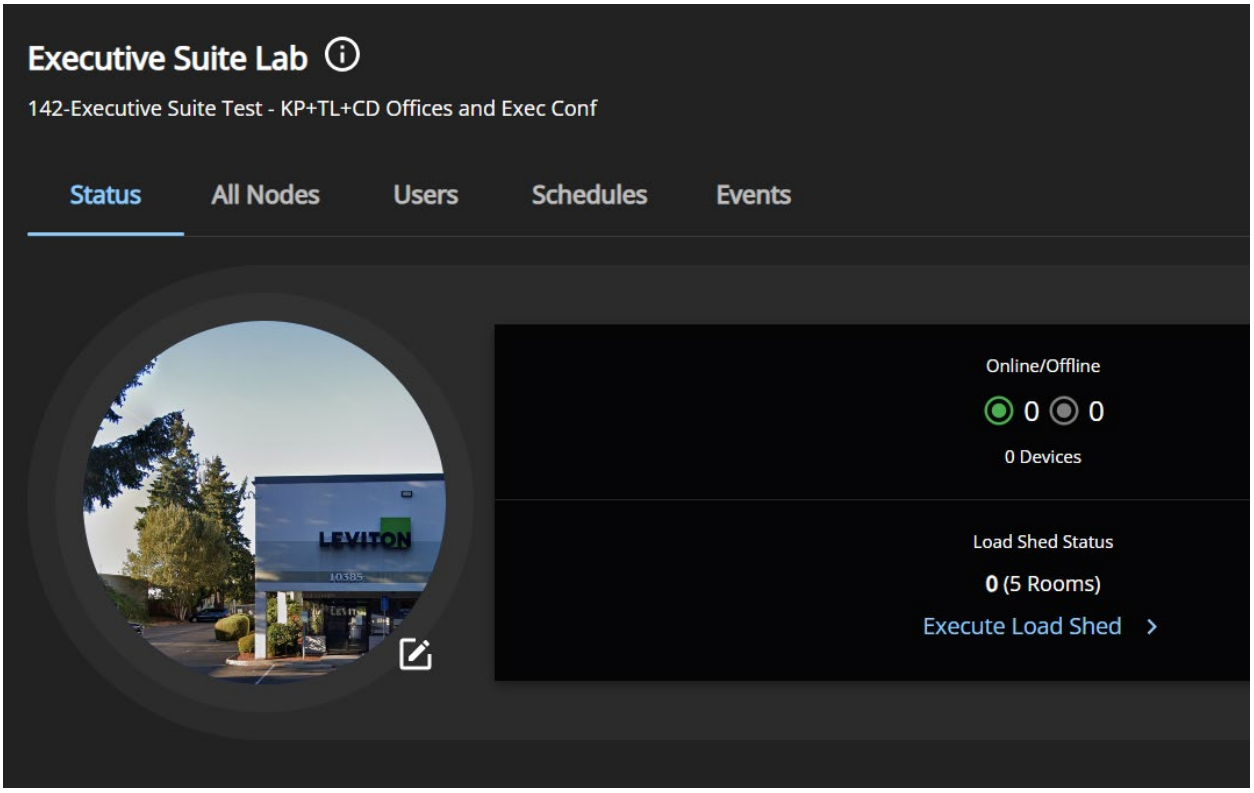
Each Project can have a unique image displayed on its Status page. Select the box with a pencil to upload a new image. Images must follow the guidelines detailed below.

Image specs: **200x200 pixels (minimum)**
Format supported: **JPG, PNG**
Size limit: **1 MB**

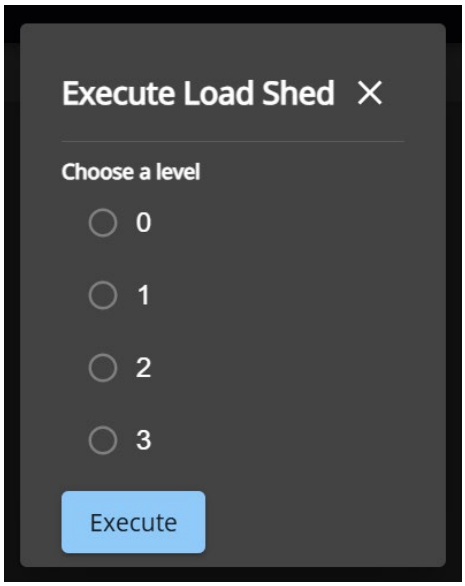


Executing a Load Shed

To execute a Load Shed command, select the “Execute Load Shed >” option on the Status Page of the Project.

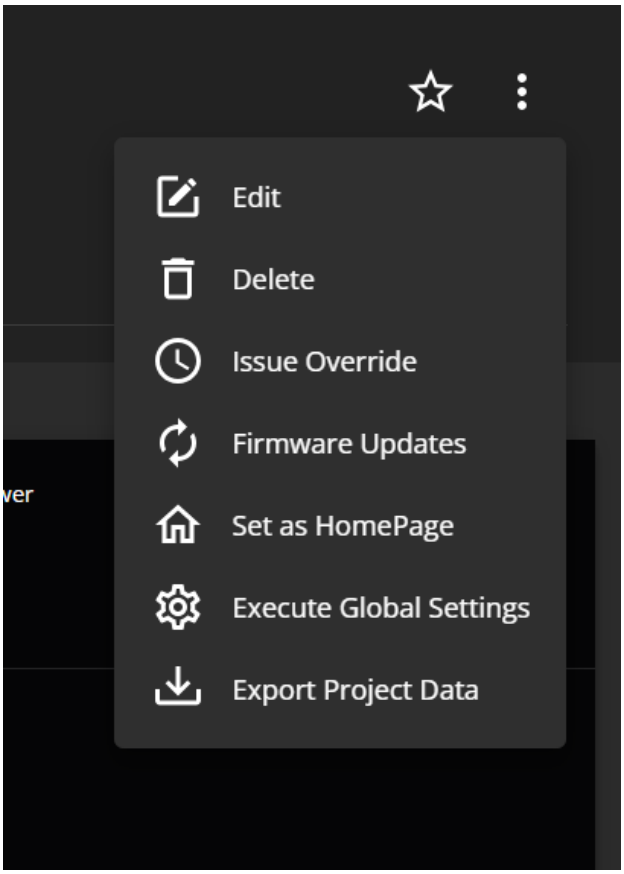


A new window will appear. Make the selection for level and select “Execute” to send the command to the Project and connected devices. Load Shed parameters must be configured on each GreenMAX DRC Room Controller as well as networked to the My Building Server.



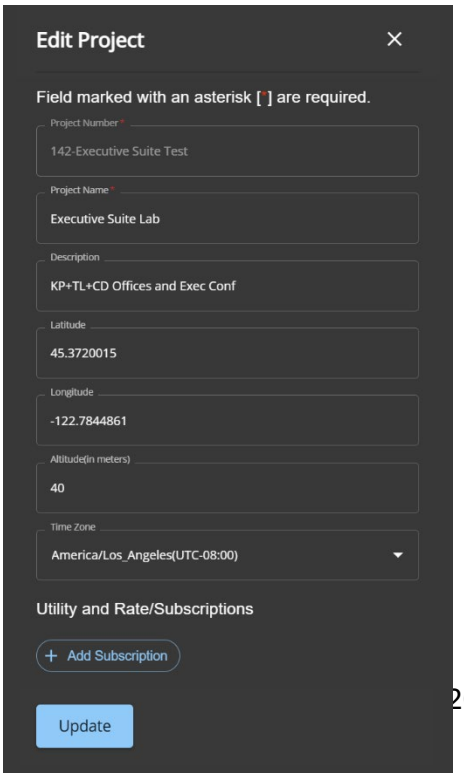
Project Options Menu

The Options Menu can be accessed by selecting the three dots toward the top right of the Project Page. This menu is available at any time within the Project.



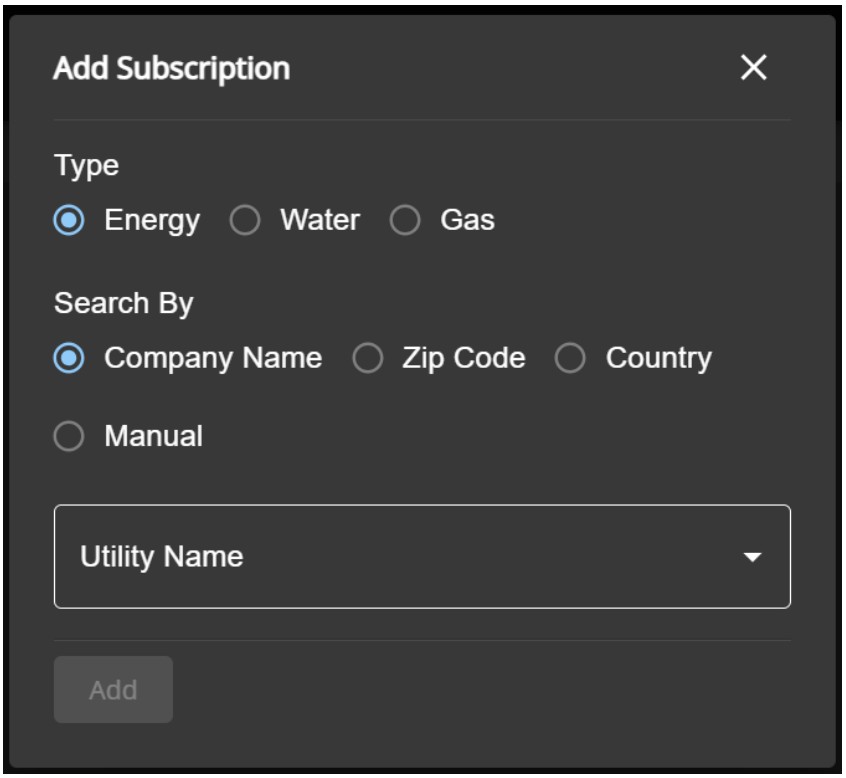
Editing Project Details

Selecting the Edit option allows a user to change the Project Name, Description, and Location information. Project Number is system generated and cannot be changed. This menu also provides the ability to subscribe to Utility Companies for up-to-date Rate data. Once the desired changed have been made, select “Update” to save.



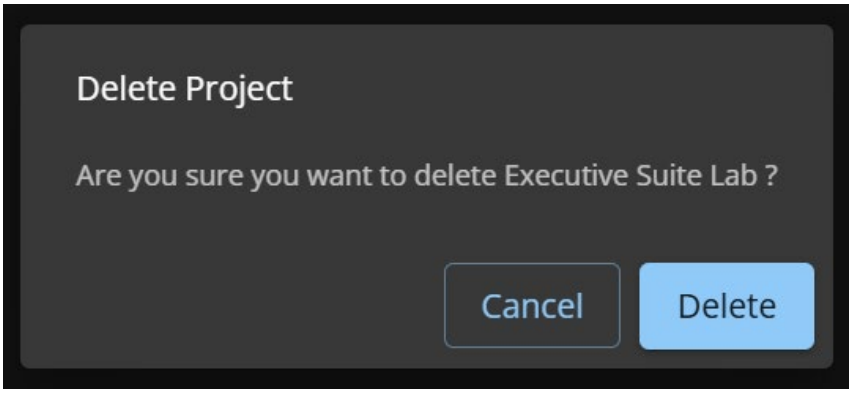
Subscribing to a Utility

To subscribe to a Utility for up-to-date Rate data, select the "+ Add Subscription" option in the Edit menu. Select your Type and search for the name of your Utility Company by using the Search By options. Once your Utility and subscription have been selected, select "Add" to create the subscription.



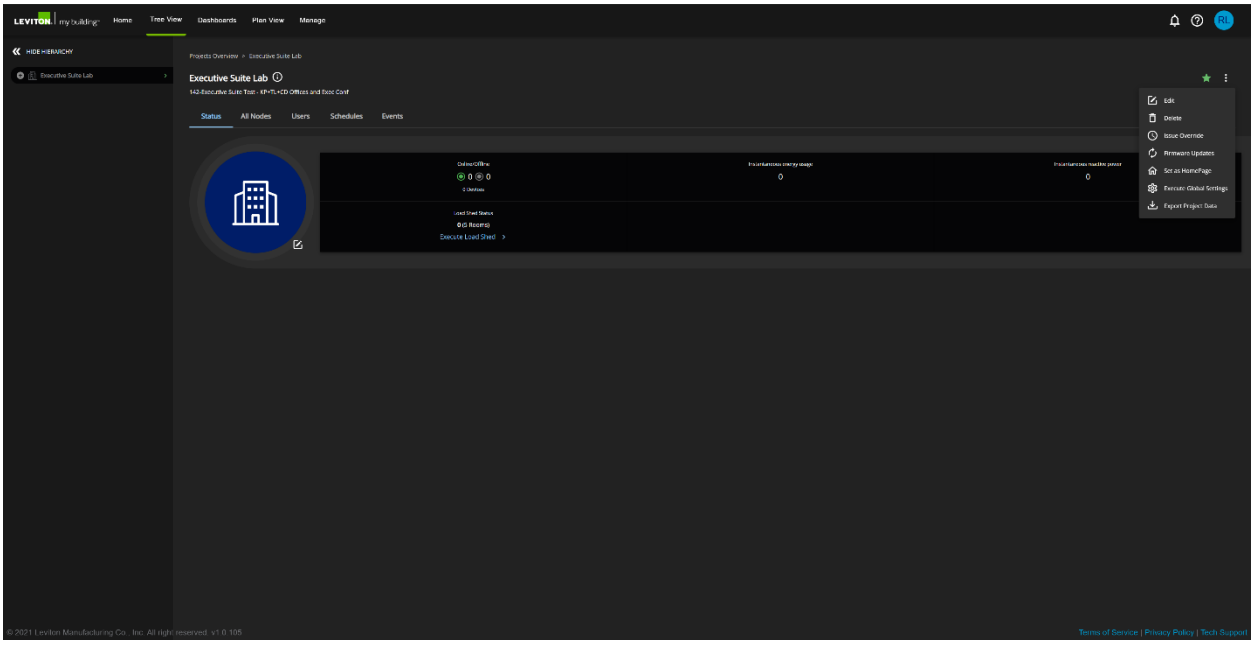
Deleting a Project

To delete a Project, select "Delete" from the Options menu. A prompt will display in the center of the screen asking for confirmation. Select "Delete" once more to confirm deletion of the Project.

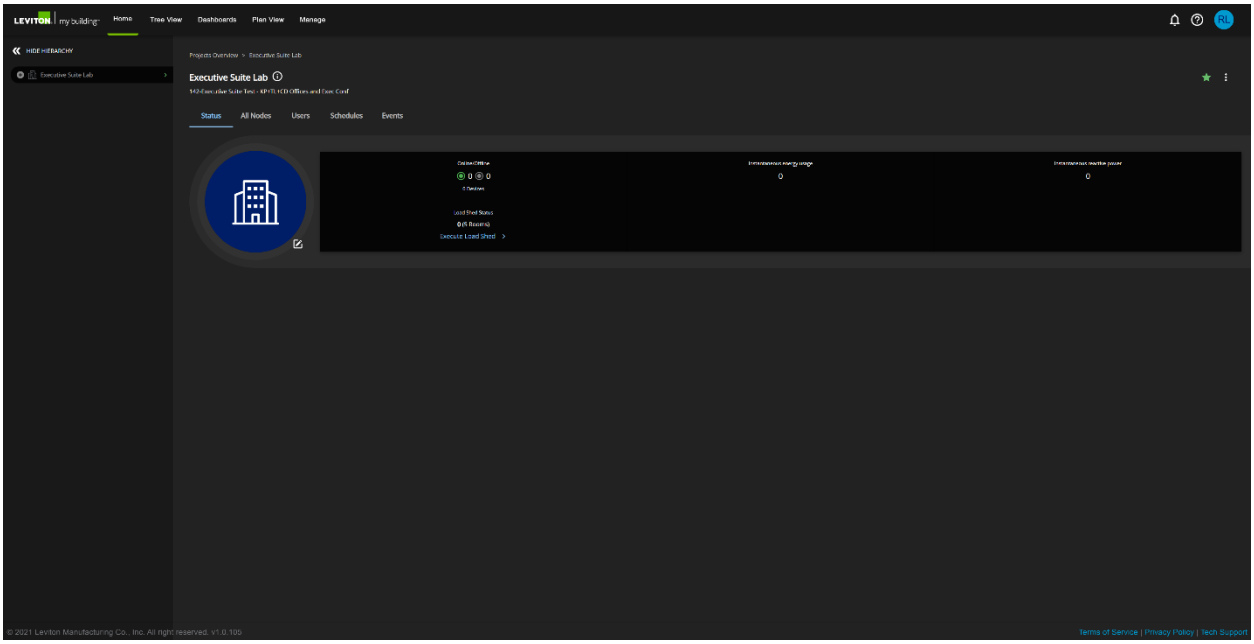


Setting a Project or Dashboard as the Home Page

To set a Project or Dashboard as the Home Page, first select the Project or Dashboard you wish to use from the appropriate page. Then select “Set as HomePage” from the Options menu a shown below.



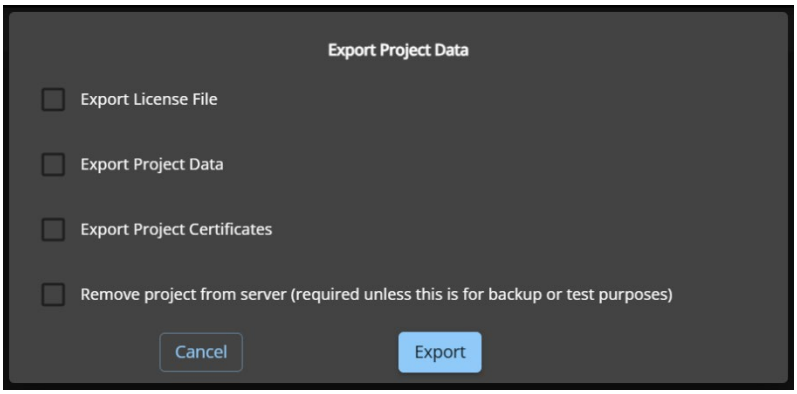
Project Example



Home Page set to Executive Suite Lab Project

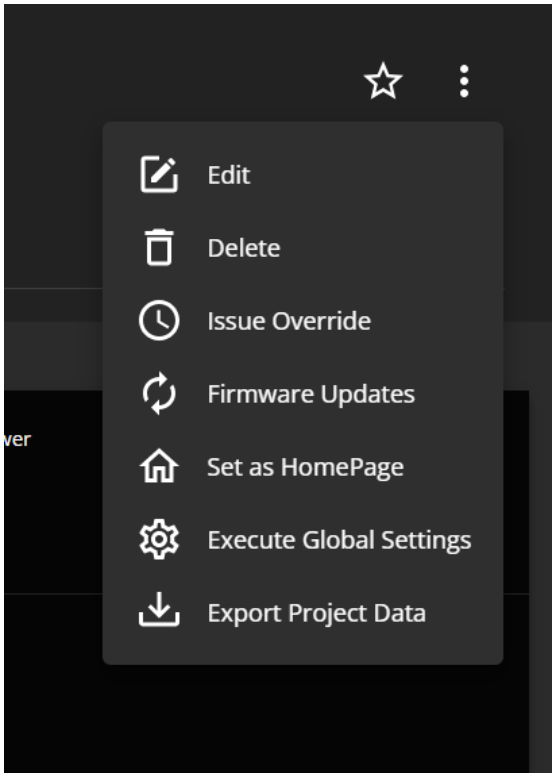
Export Project Data

Project data can be exported using the “Export Project Data” option. A new window will appear in the center of the screen. Select the items to be backed up and exported, then select “Export.” Once the files have been generated, they will automatically download through the Web Browser.



Marking a Project as a Favorite

Up to 5 Projects can be marked as a favorite. Marking a Project as a Favorite will list the Project first on the Projects overview page.

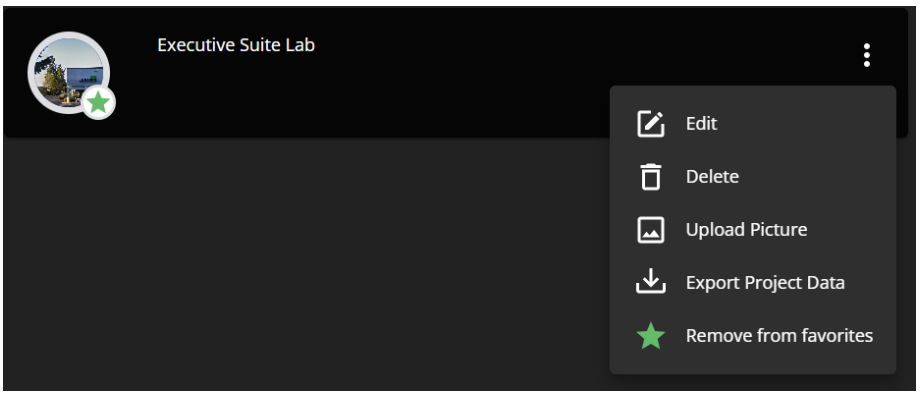


Adding a Favorite Project

To mark a Project as a Favorite, select the STAR symbol toward the upper right corner of the Project. A Project can also be marked as a Favorite by selecting “Add to favorites” option on the Projects overview page. Select the three dots next to the Project name, then select “Add to favorites” from the menu.

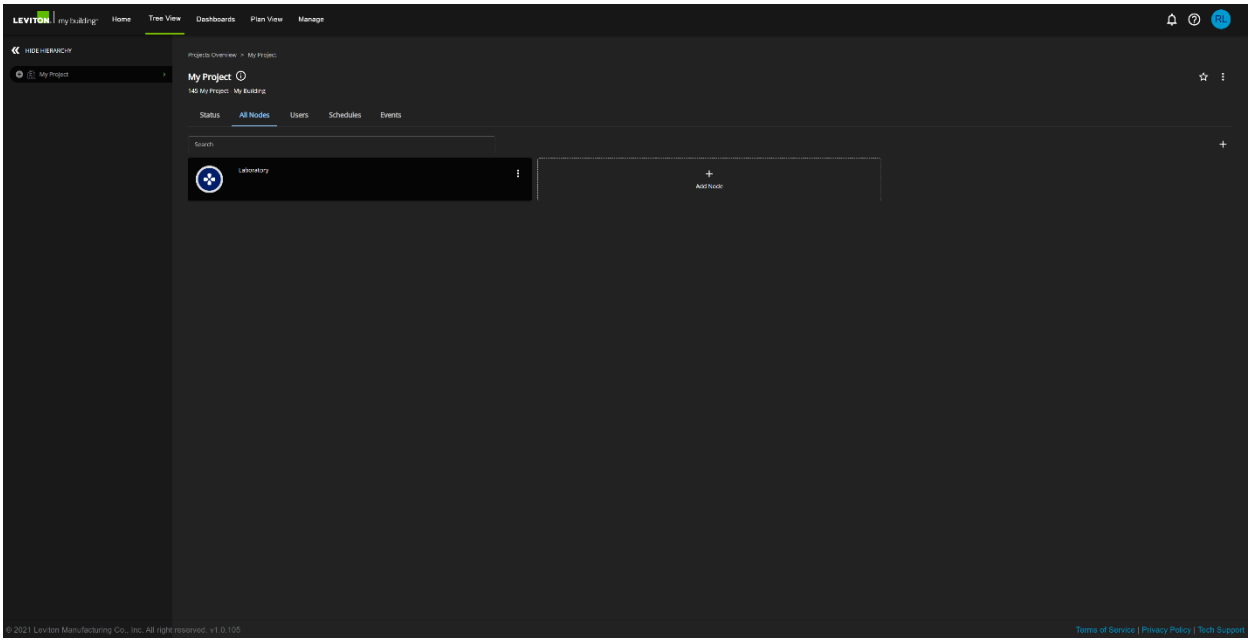
Deleting a Favorite Project

Deleting a Project as a Favorite is the same as adding a Favorite. Select the star symbol again or select “Remove from favorites” from the Project option menu.



All Nodes Tab

The All Nodes tab shows all created Nodes within a Project. Nodes are used to help organize the Project with categories such as Location (Country, Region, etc), Area (Building, Floor, etc), or Type of Load (HVAC, Plug Load, Lighting, etc). It is up to the commissioner to determine how the Project is organized. Keep in mind User roles are tied to Node categories or hierarchy levels.



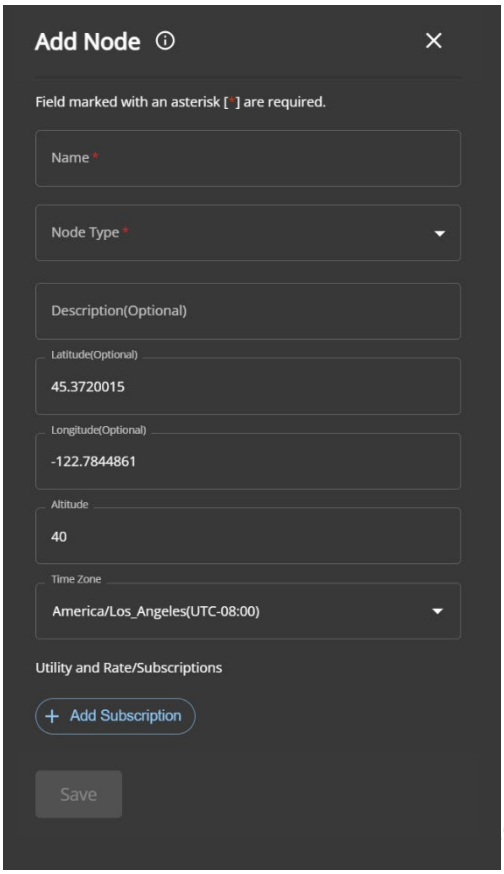
Adding a Node

To create a new Node, select the + symbol in the top right corner. A new window will appear on the right side of the screen.

Enter a Node Name, select a Node Type, and enter the location details. Location details are optional but are required when using features such as Astronomical Timeclock.

Location details can be added later using the My Building Mobile App and synced with the device's GPS location for easier configuration.

Select "Save" to create the new Node.



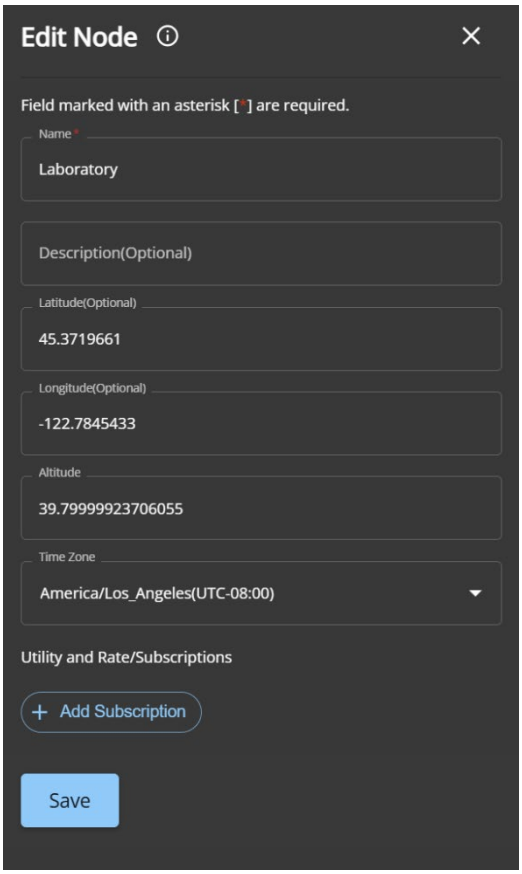
Node Options

Once a Node has been created, the Options menu provides the ability to Edit, Delete, Move, or Upload a Picture for the Node.

Editing a Node

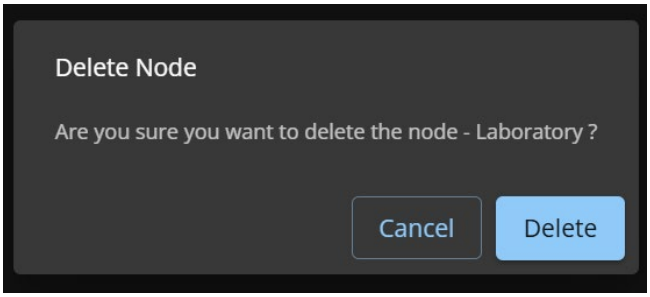
To Edit a Node, select the “Edit” option from the Options menu (three dots). A new window will appear on the right where the Node details can be modified.

Once the desired changes have been made, select “Save” to save changes.



Deleting a Node

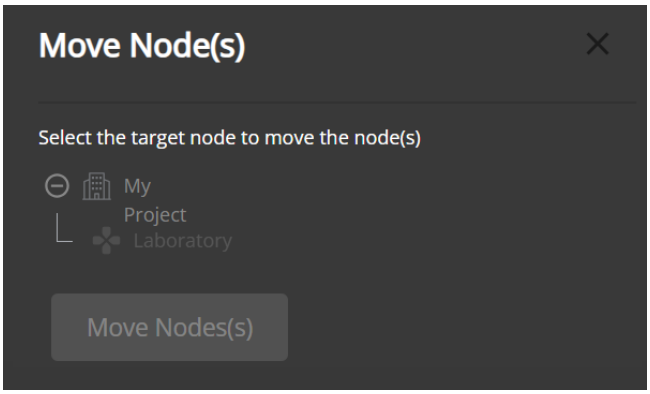
To Delete a Node, select “Delete” from the Options menu (three dots). A new window will appear asking to confirm the action. Select “Delete” once more to delete the Node.



Moving a Node

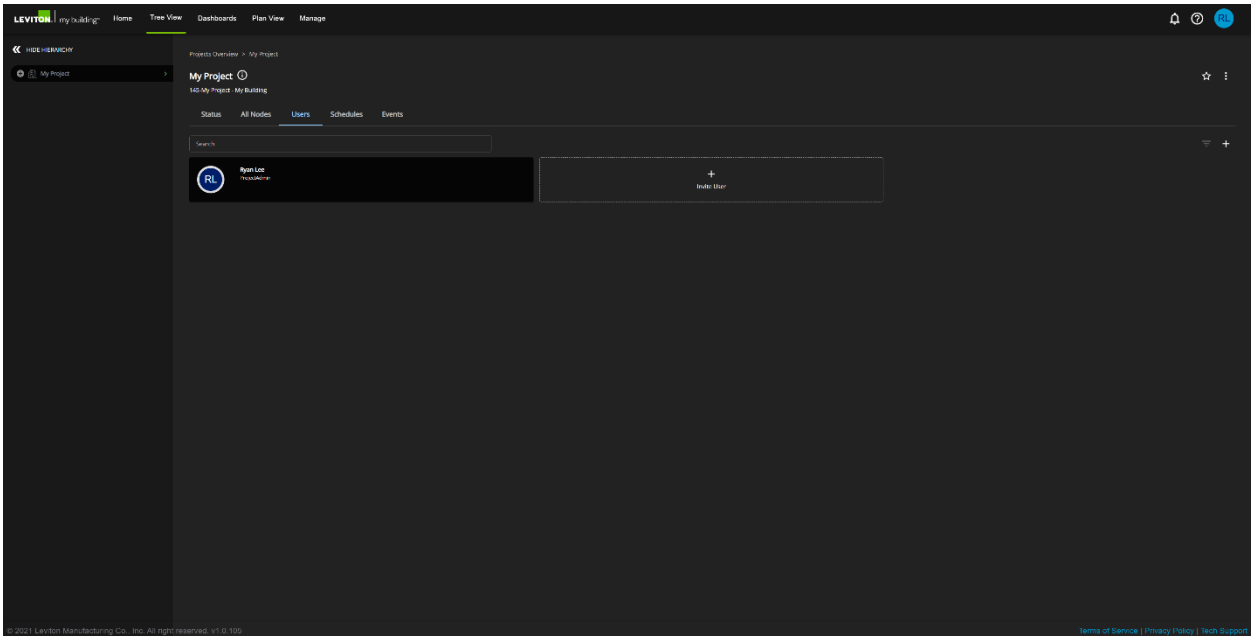
Nodes can be moved to different hierarchy levels. To Move a Node, select “Move” from the Options menu (three dots).

A new window will appear to the right. Select the hierarchy level to move the Node to. Then select “Move Node(s)” to move the Node to the selected level.



Users

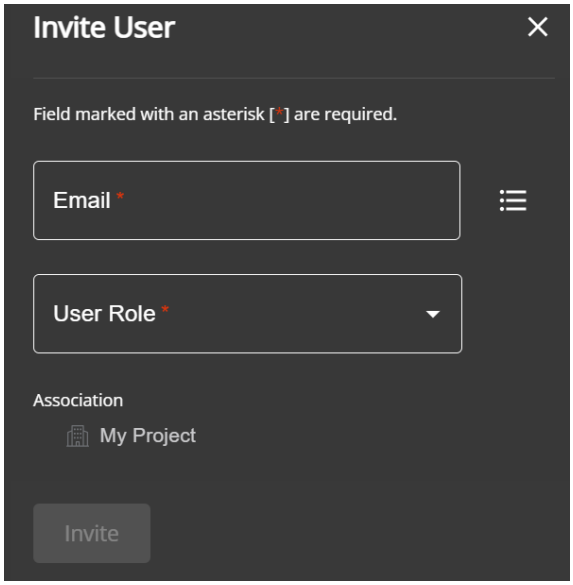
Users can be managed from a Project level or Node level. Adding users to the Project level grants access to all Nodes within the Project. However User access may also be restricted to individual Nodes.



Managing Users

Adding Users

To Add a User to a Project or Node, select the + symbol in the upper right corner or the "+ Invite User" option in the User list. A new window will appear to the right of the screen.

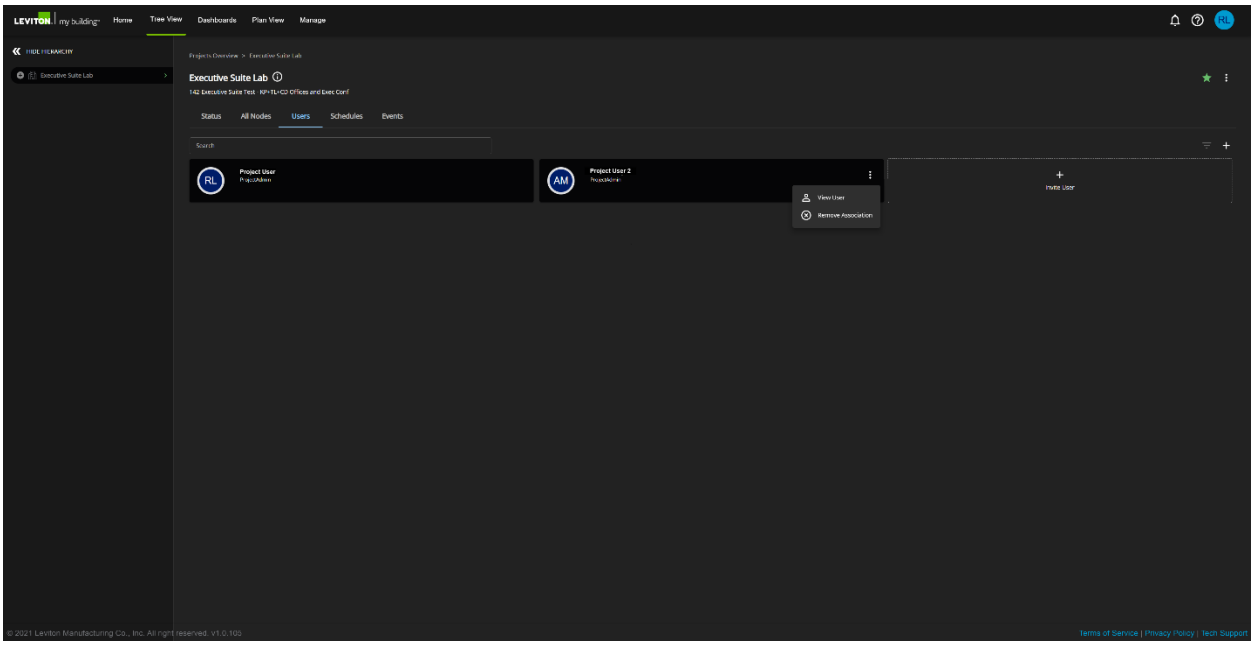


Enter an Email address or select one from the list by clicking on the Email Address menu (3 lines), choose a User Role and an Association.

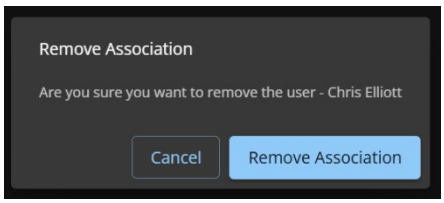
Select "Invite" to notify the User they have been added to the Project or Node.

Deleting a User

To Delete a User, select the Options menu (three dots) next to the User that needs to be deleted. Then select "Remove Association"

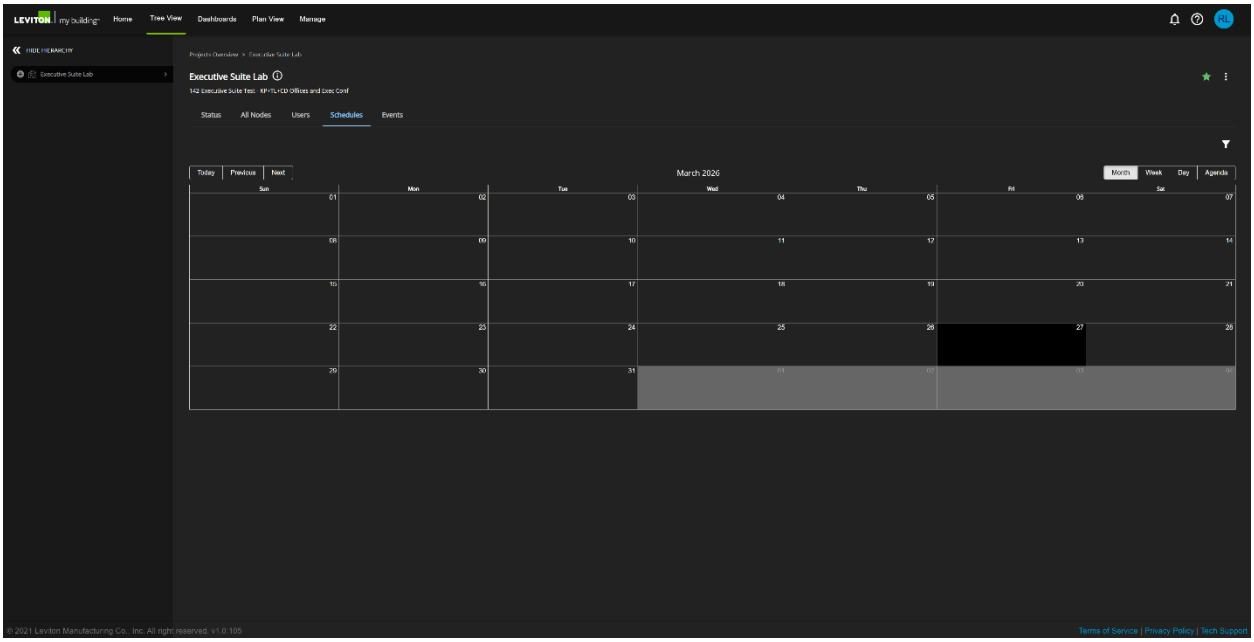


A confirmation window will appear. Select "Remove Association" again to delete the User.



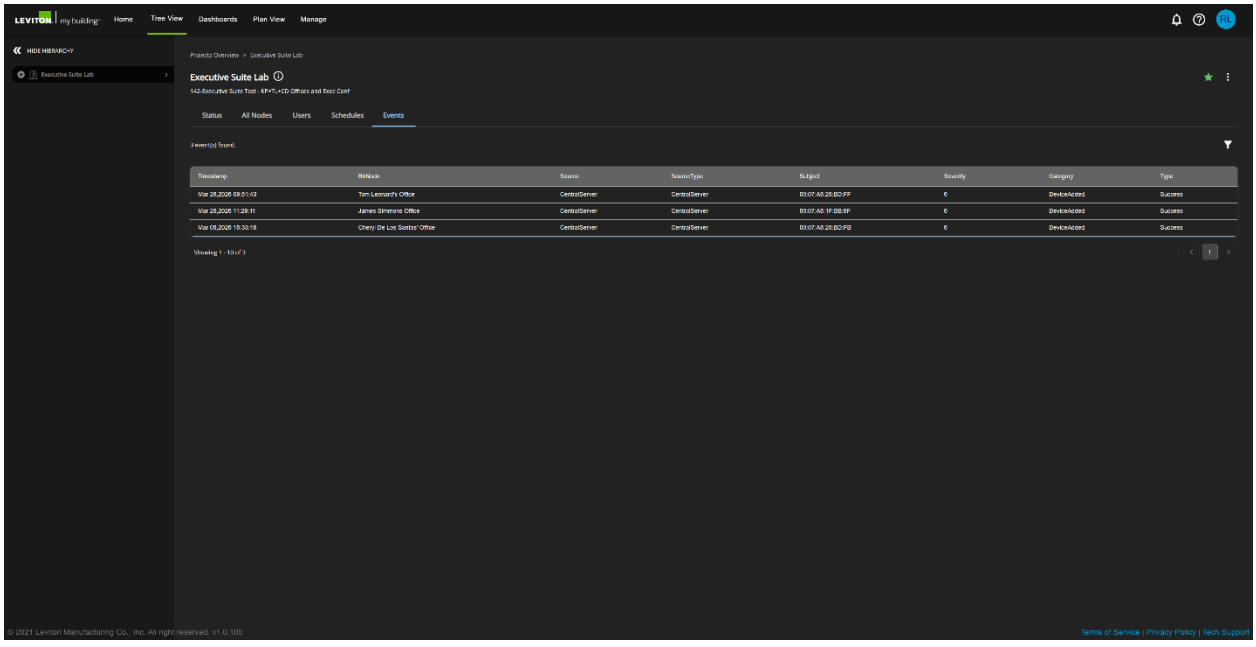
Schedules Tab

Schedules at the Project level can only be viewed. Schedules can only be managed at the Room level. In this view, schedules can be viewed and filtered by Day, Week, or Month. Managing schedules will be explained later in this guide, within the Room Node.



Events Tab

The Events tab is similar to the Schedules tab. A list of upcoming Events are displayed in this list.

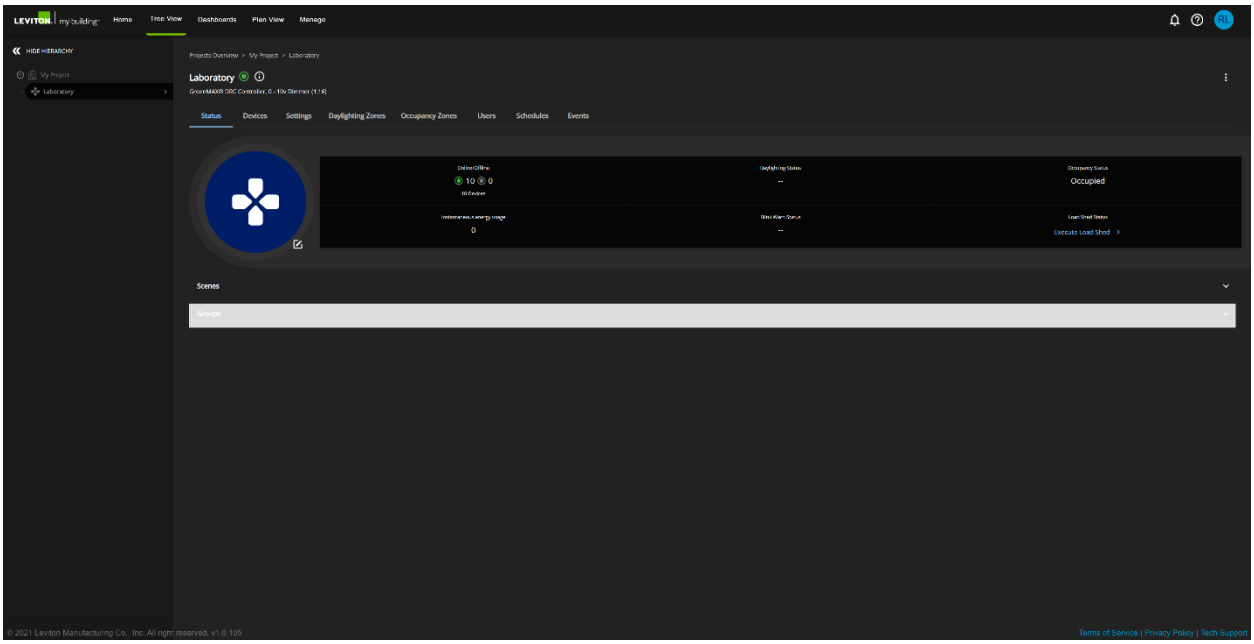


Room Node

The Room Node is the only Node type that can have a GreenMAX DRC Room Controller associated with the Node. Once a GreenMAX DRC Room Controller is associated with the Node and networked to the My Building server, it can be remotely configured and controlled. Not all configuration options are available on the Web App and some functions are only available on the My Building Mobile App. The majority of configurations are completed with the My Building Mobile App. Refer to the Mobile App User Manual for more information on associating and commissioning a Room Contoller.

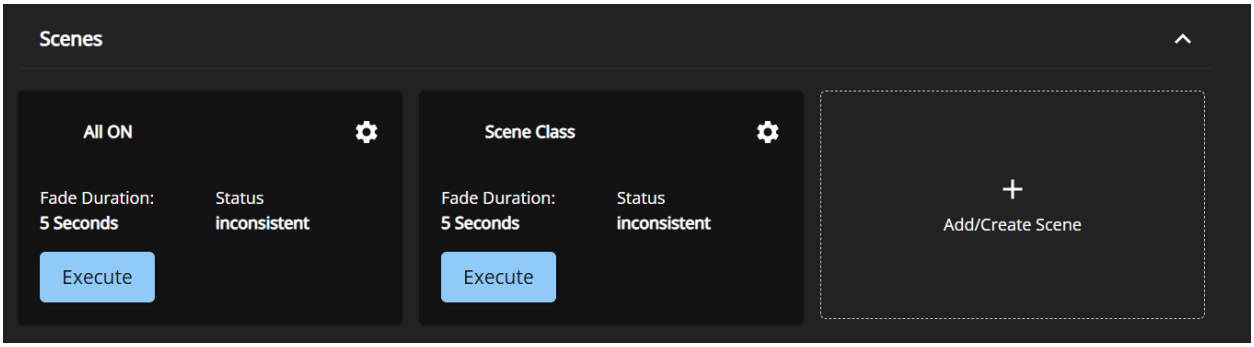
Status Tab

The Status tab in the Room Node is identical to the Status Tab on the main Project level. Features such as the Option menu (three dots) and Executing Load Shed are the same and won't be covered in this section. Refer to the previous Status tab section in this manual for more information on using these features.



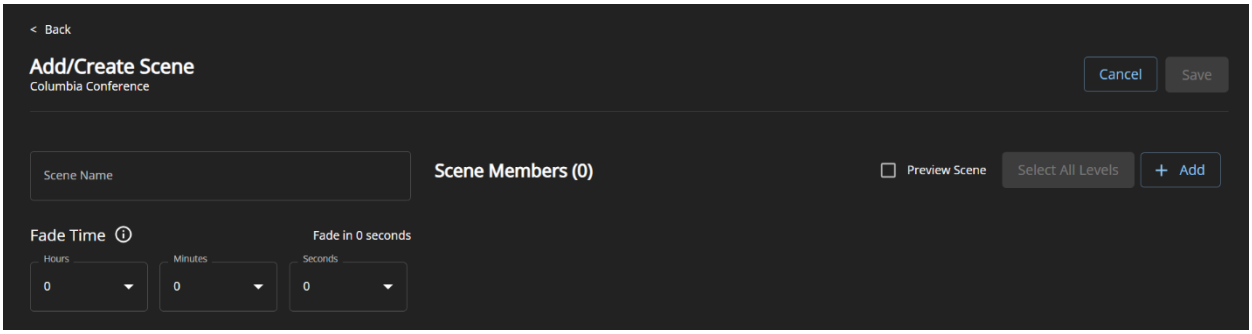
Managing Scenes

Scenes can be added, edited, deleted, and controlled by expanding the Scenes list. Use the arrow on the right to expand the Scenes list.



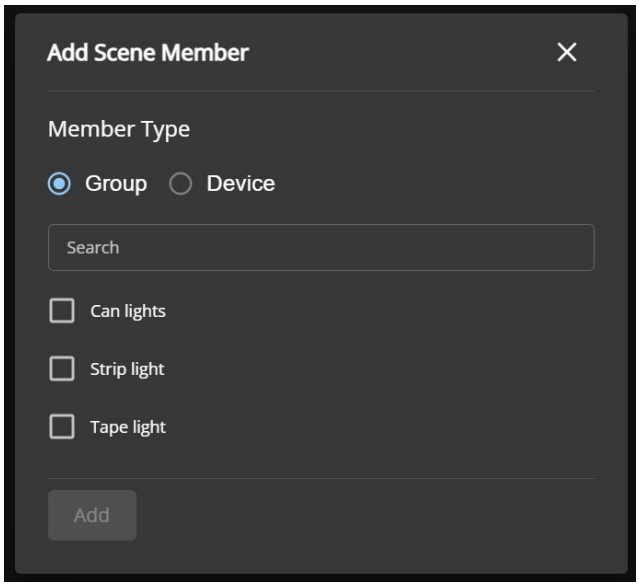
Adding a Scene

To add a new Scene, select the "+ Add/Create Scene" option. A new page is displayed. Enter the Scene Name and Fade Time Values.



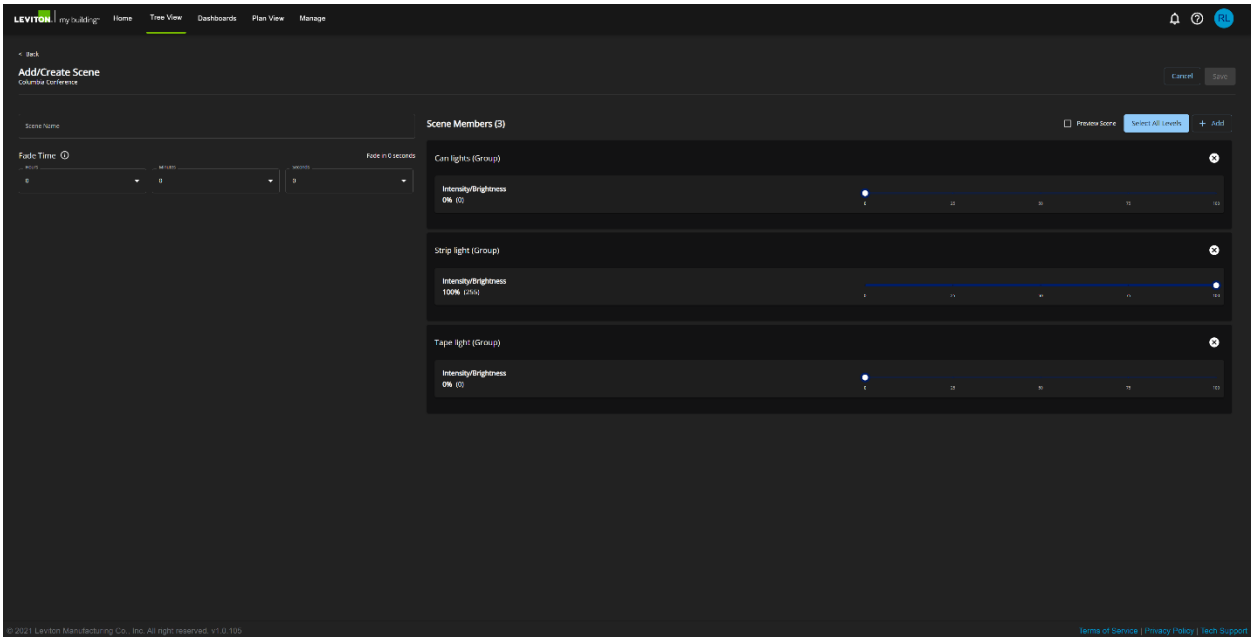
The next step for adding a Scene is to select its members. These are the Groups or Devices that will be controlled by the Scene.

Check the desired Groups or Devices, then select "Add" to add the members to the Scene.



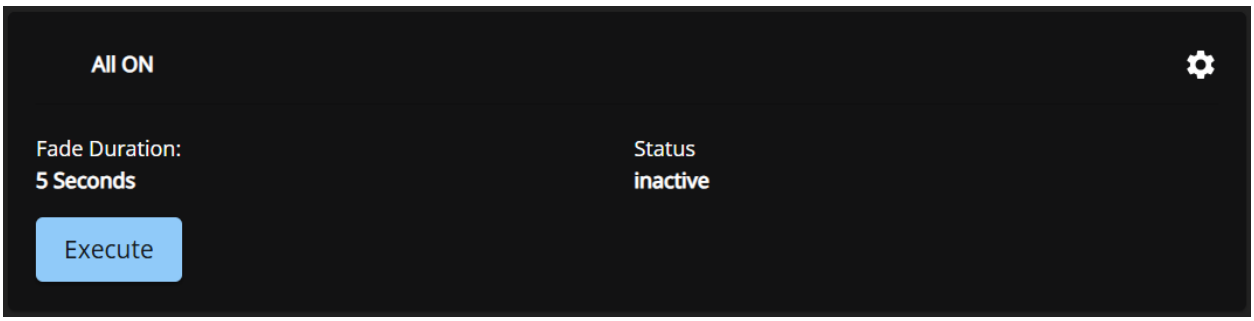
Once members have been added to the Scene, they will appear as sliders. Set the desired light level for each Group or Device. Then select “Save” in the upper right corner to create the Scene.

Use the “Preview Scene” check box to see a live demonstration of the Scene in the space.

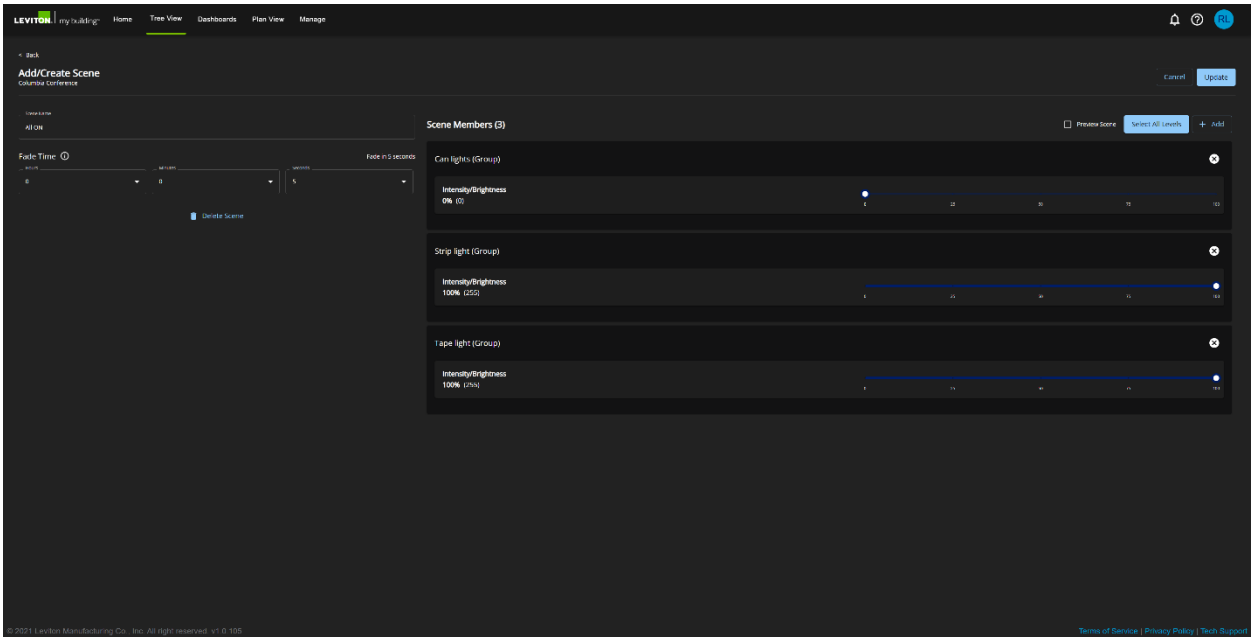


Editing or Deleting a Scene

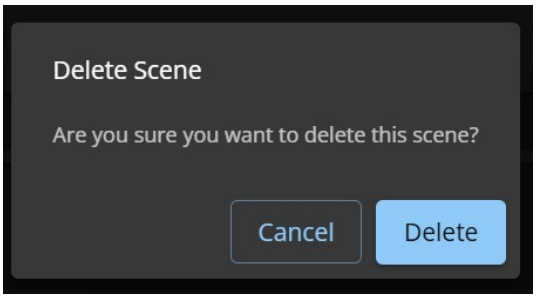
Scenes can be edited or deleted by selecting the Gear icon in the right corner of the Scene.



Make the desired changes on the screen and select “Save” in the upper right corner to update the Scene.

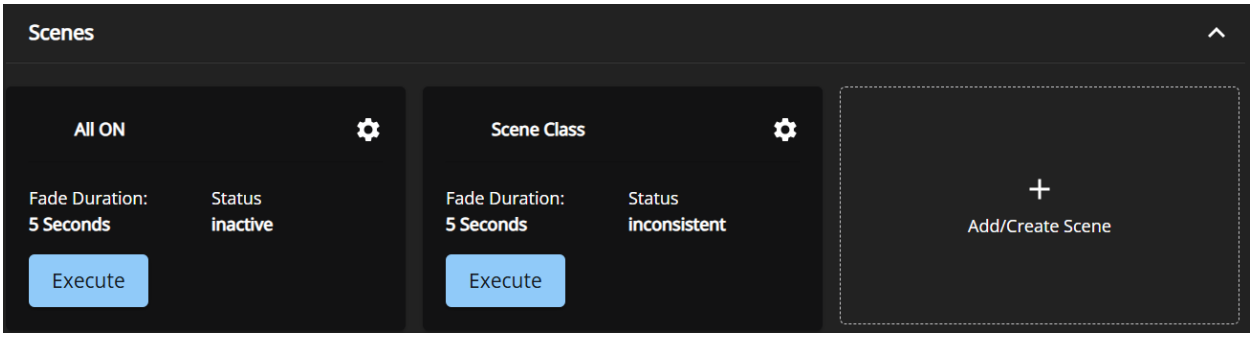


To Delete a Scene, select the “Delete Scene” option under the Fade Time settings. A confirmation window will appear. Select “Delete” again to confirm and delete the Scene.



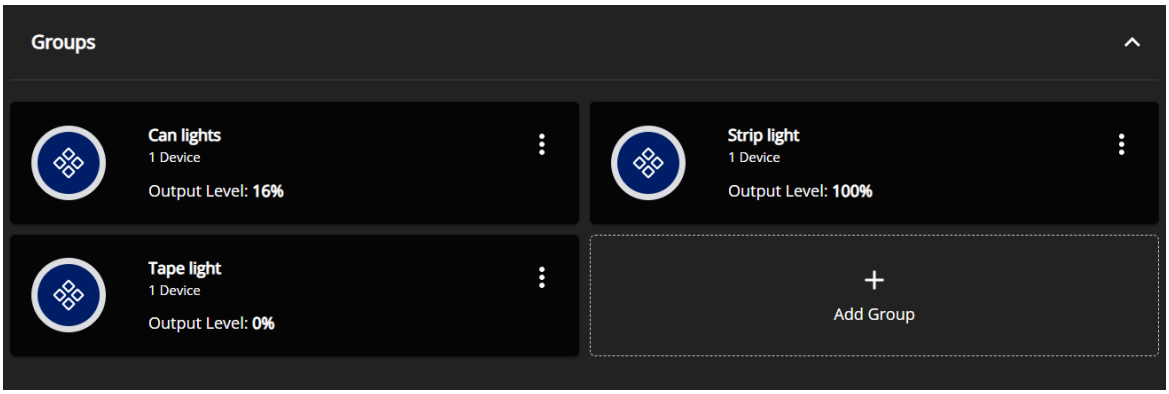
Controlling a Scene

Scenes can also be controlled on the Status page. To execute a Scene, select “Execute” under the desired Scene. The Scene will immediately begin to adjust the lighting levels to the predefined values.



Managing Groups

Groups can be added, edited, deleted, and controlled by expanding the Groups list. Use the arrow to the right to expand the Groups list.

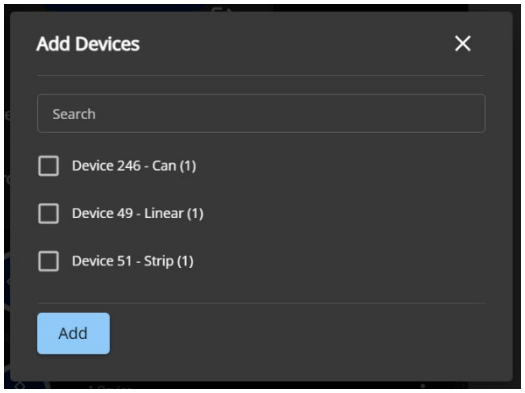


Adding a Group

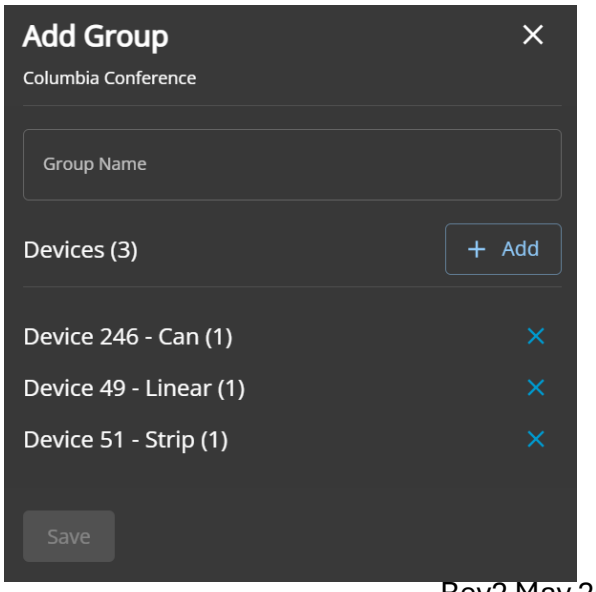
To add a new Group, select the "+ Add Group" option. A new pane is displayed to the right. Enter the Group Name and add Devices by using the "+Add" option.

In the window that pops up, check the Devices that are to be included in the Group.

Then select "Add."



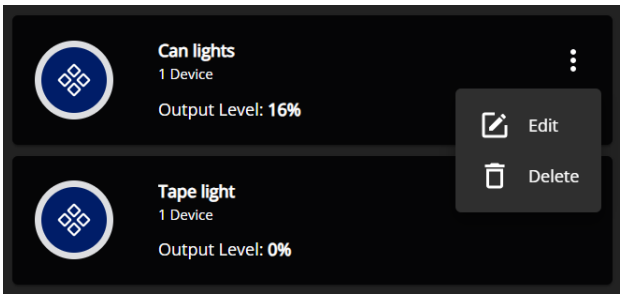
Once a Name has been entered and members added to the Group, select "Save" to create the Group.



Editing a Group

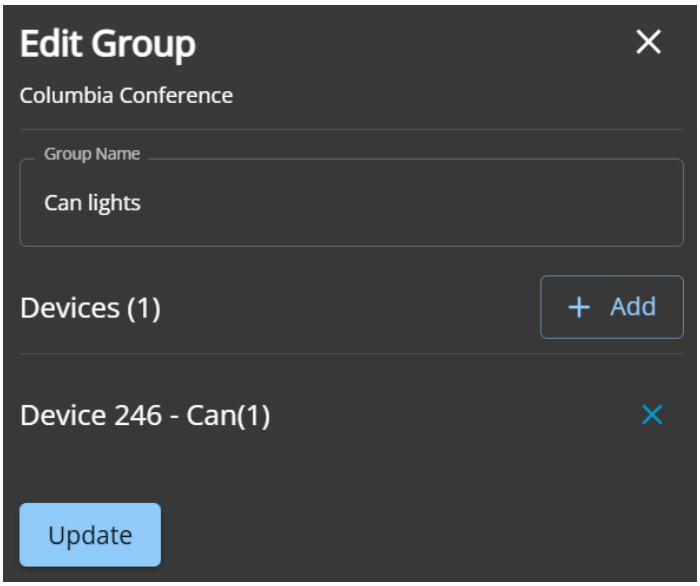
To Edit an existing Group, select the Options menu (three dots) next to the Group.

Then select the “Edit” option.



A new pane is displayed on the right. Add or remove Devices just like in the previous section.

Then select “Update” to save changes.

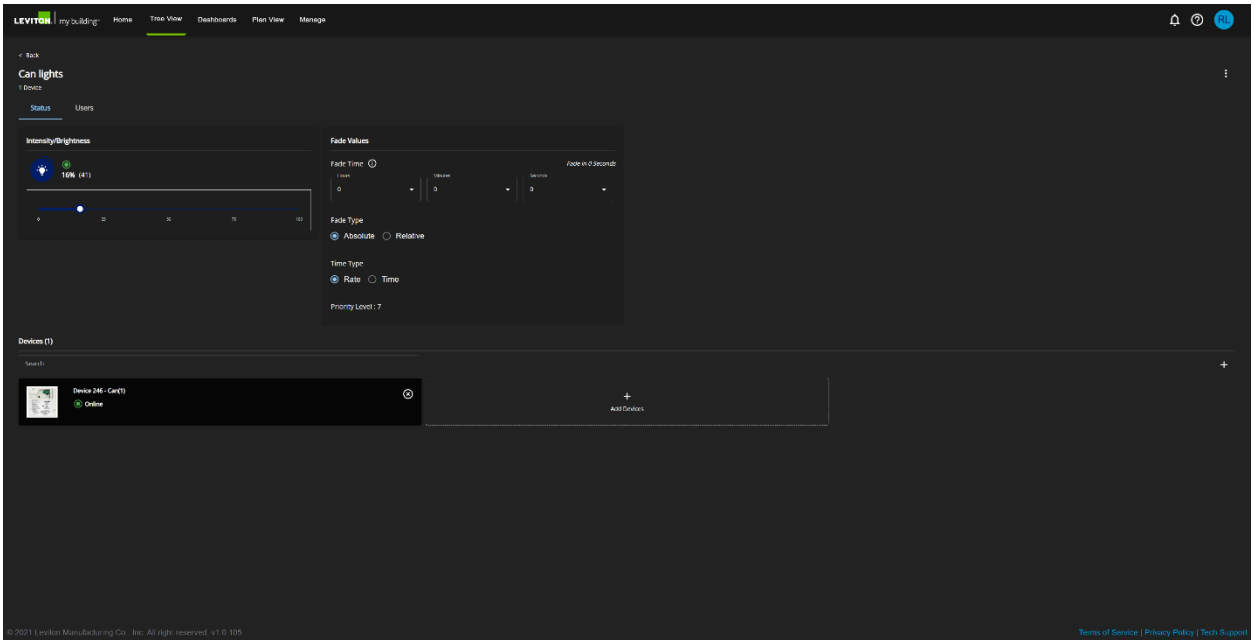


Controlling a Group

Groups can also be controlled from the Status page. To control a Group, select the Group from the Group list.

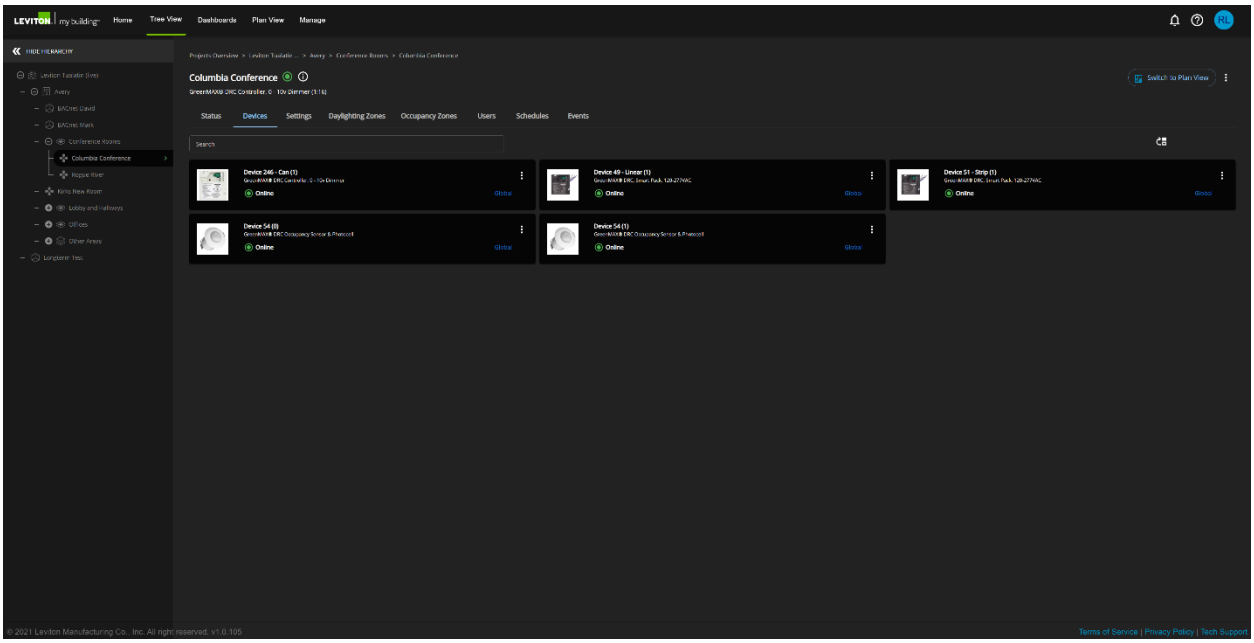
Use the slider and adjust Fade Values to control the Group and connected lighting loads.

Manipulating the slider will immediately send a command to the Group and its associated Devices.



Devices Tab

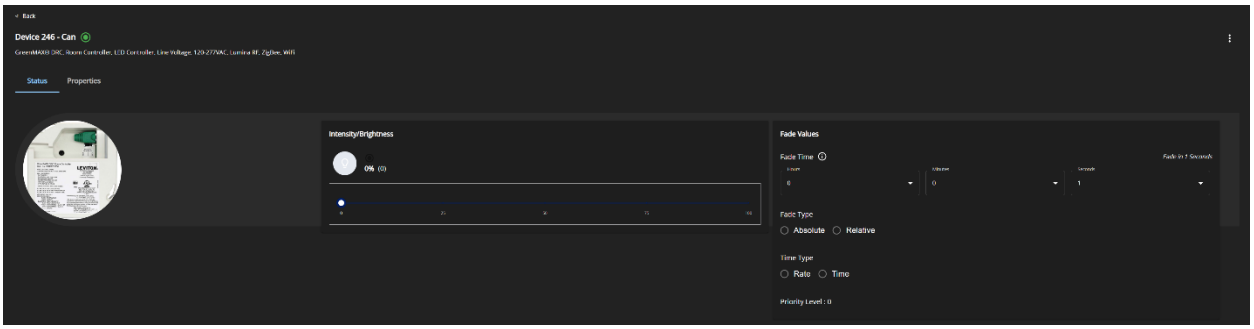
The Devices tab lists all enrolled GreenMAX DRC Devices for the Room Node. Device status (if available) and settings can be viewed and edited on this tab. However Devices cannot be added or deleted from this tab. Adding or deleting Devices from the Room Controller can only be done in the My Building Mobile App.



Viewing a Device

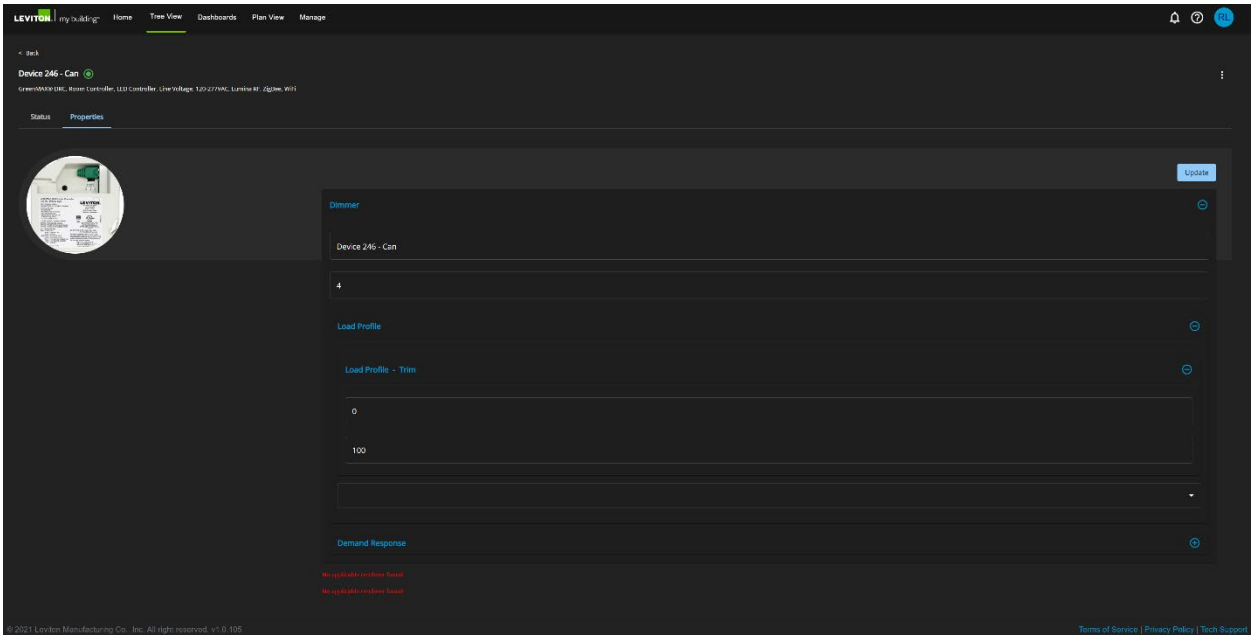
All Devices have unique properties that can be configured or monitored. Load devices such as Room Controllers and Smart packs can be controlled in addition to manipulating its properties.

Below is an example of a Room Controller. Its connected load can be turned on/off/dimmed with the slider bar and Fade Values on the Status Page.



Properties such as Device name, Channel Number, Trim Settings, and Demand Response values can be viewed and edited. These parameters will be unique to each Device type.

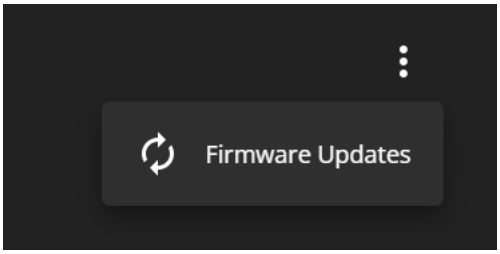
Select the “Update” button in the top right to save any changes.



Applying Firmware to a Single Device

Firmware can be applied at different levels for the entire Project or by Node. Selecting a Device in the Device List allows for individual updates.

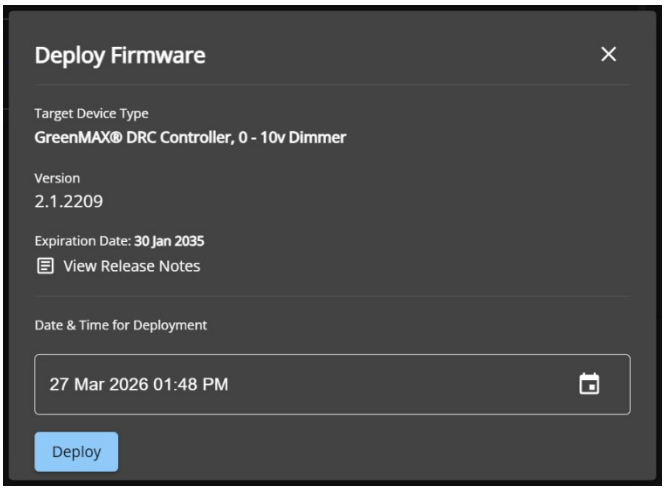
After selecting your desired Device, select the Options menu (three dots) in the upper right. Then select “Firmware Updates”



A new pane will appear on the right, showing any available firmware updates. The newest updates are at the top of the list. Users also have the option to rollback firmware if needed.

To apply firmware, select the “Deploy” option next to the desired version.

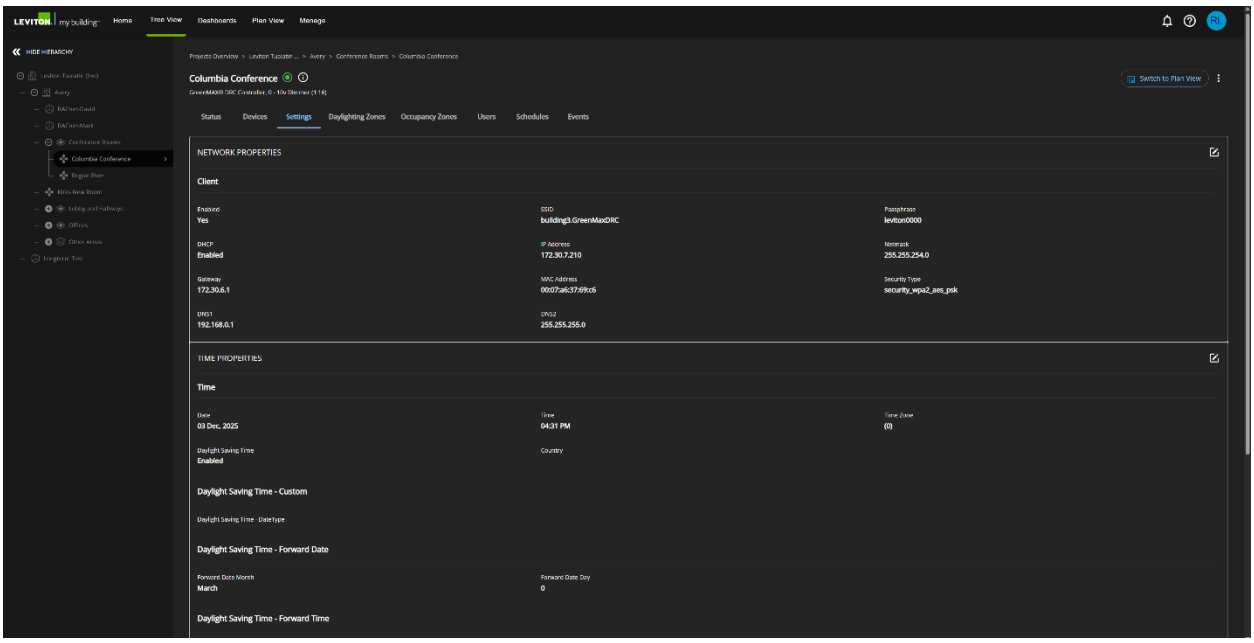
A new window will display. Select the Date and Time for deployment, then select “Deploy” to apply the firmware.



Settings Tab

The Settings tab shown in the Room Node is identical to the Settings tab in the My Building Mobile App. Network, Time/Date, and Location settings can be viewed and edited here.

To edit Network or Time/Date/Location settings, select the box with a pencil. A new pane will appear on the right. Make the desired changes, the select “Update” to save any changes.



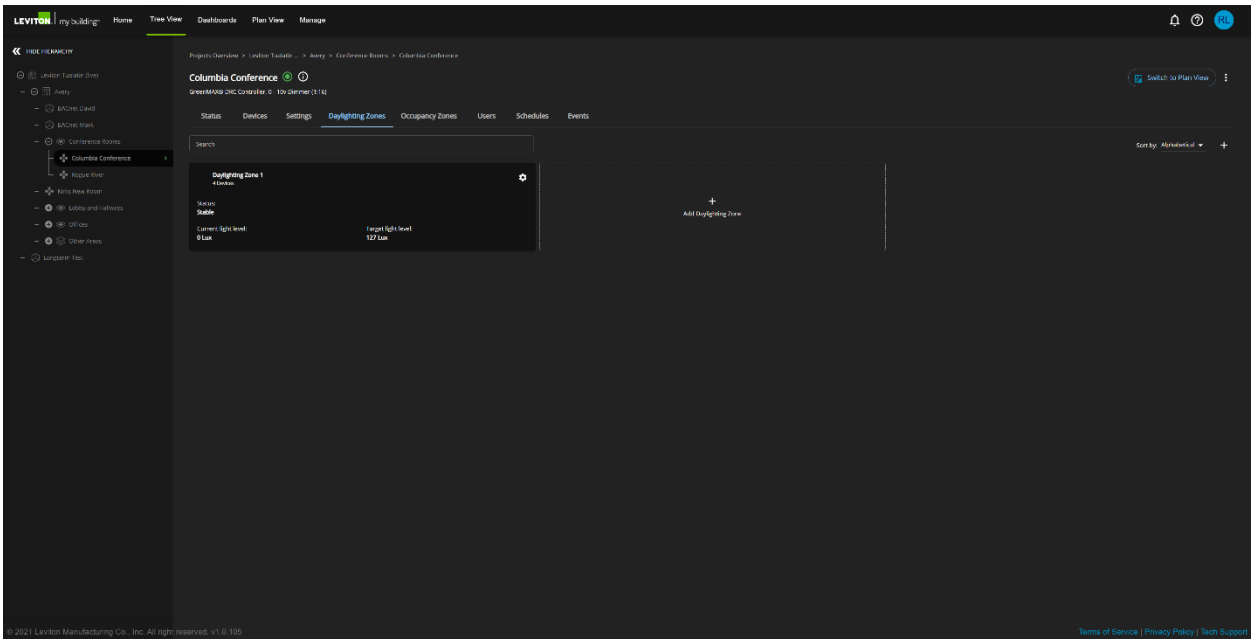
Daylighting and Occupancy Zones

The process to add, edit, or delete Daylighting and Occupancy Zones is identical. The example below refers to a Daylighting Zone but is very similar for Occupancy Zones.

Adding a Daylighting or Occupancy Zone

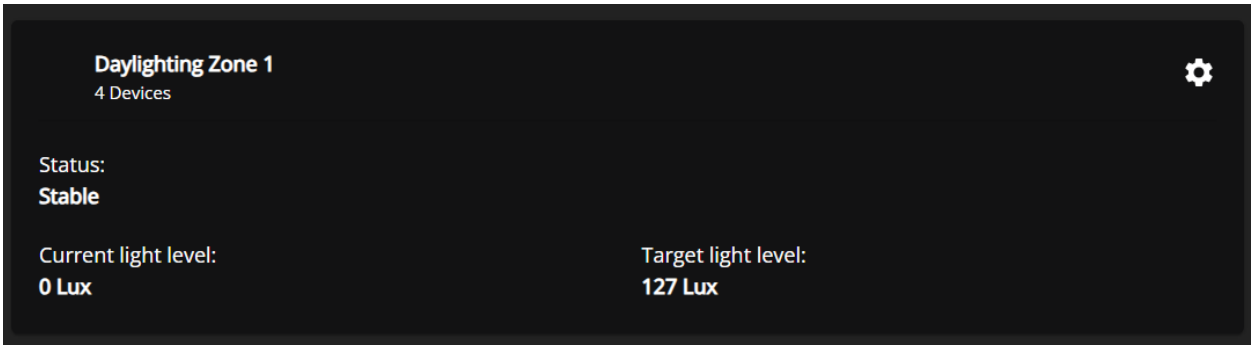
To add a new Daylighting Zone, select the + symbol in the top right corner or the "+ Add Daylighting Zone" option in the list. A new pane will appear to the right.

Enter a Name and select the desired Devices and properties for the Zone. Then select "Save" to create the new Daylighting Zone.

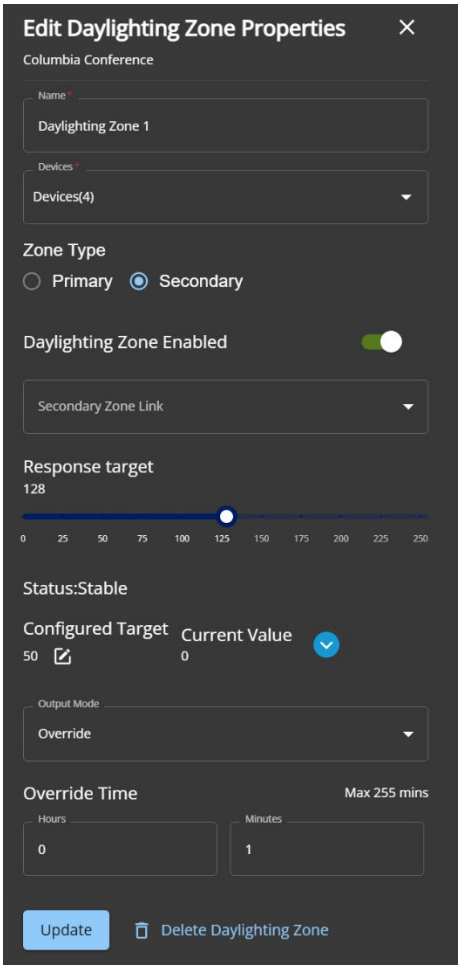


Editing or Deleting a Daylighting Zone

To Edit an existing Daylighting Zone, select the Gear icon next to the desired Daylighting Zone.

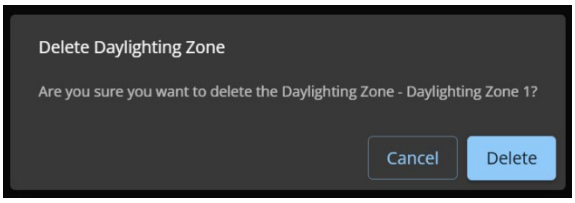


A new pane will appear to the right. Make the desired changes, then select “Update” to save any changes.



To Delete a Daylighting Zone, use the “Delete Daylight Zone” option at the bottom of the Edit pane.

A confirmation window will appear. Select “Delete” again to confirm and delete the Zone.



Users Tab

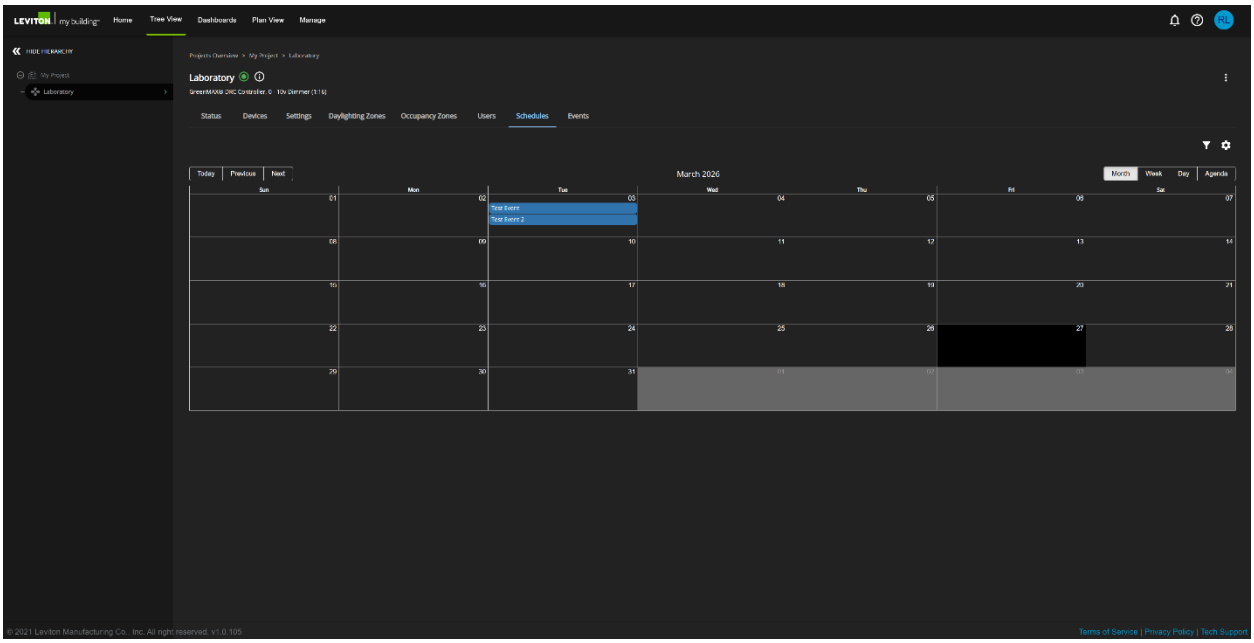
The Users tab within the Room Node is the same as the Users tab at the main Project level. The only difference is that managing Users within the Room Node tab only affects Users within the current Room Node. This option is used to restrict User access to individual Rooms or Areas versus the entire Project.

Refer to the previous Users Tab section for more information on managing Users.

Schedules

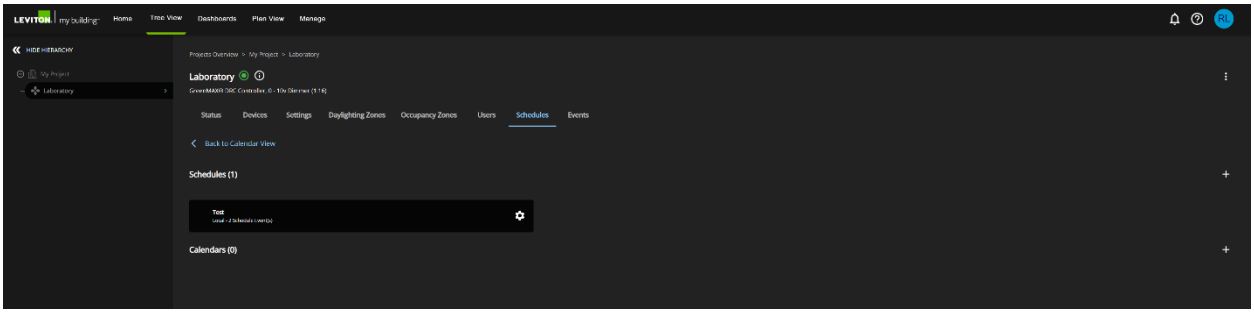
Each GreenMAX DRC Room Controller can utilize Schedules and Calendars to change light levels, execute scenes, and even change Behavior settings such as occupancy timeouts and keypad operation.

Schedules and Calanders can also be subscribed to reduce the number of Schedules and Calanders that need to be maintained within a Project. This allows for more centralized control of Schedules and Calendars.



Adding a Schedule or Calendar

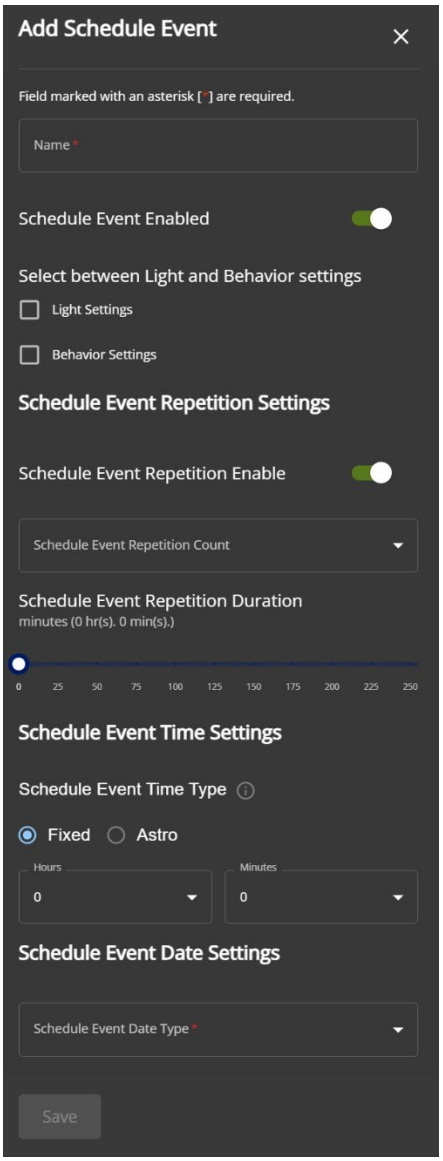
To add a new Schedule or Calendar, select the Gear icon in the top right corner. Then select the + symbol on the right for either option.

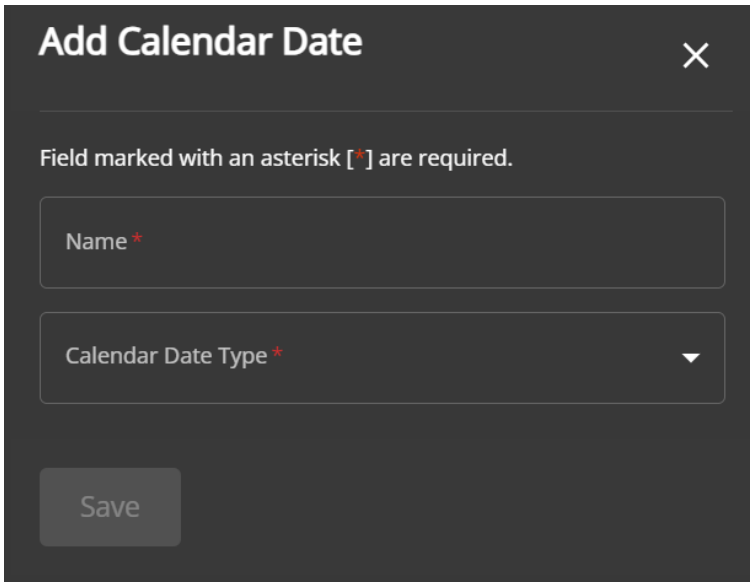


Enter a Name, select the Type, and a color to represent the Schedule or Calander when viewing events on the Calander.

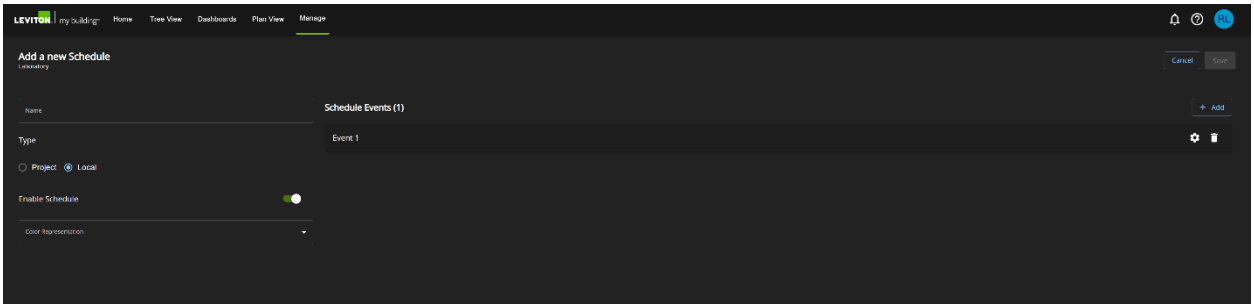
The next step is to add Events/Dates to the Schedule/Calander. Below are screenshots of both configuration panes.

Once the desired values have been configured, select “Save” to add the Event/Date.



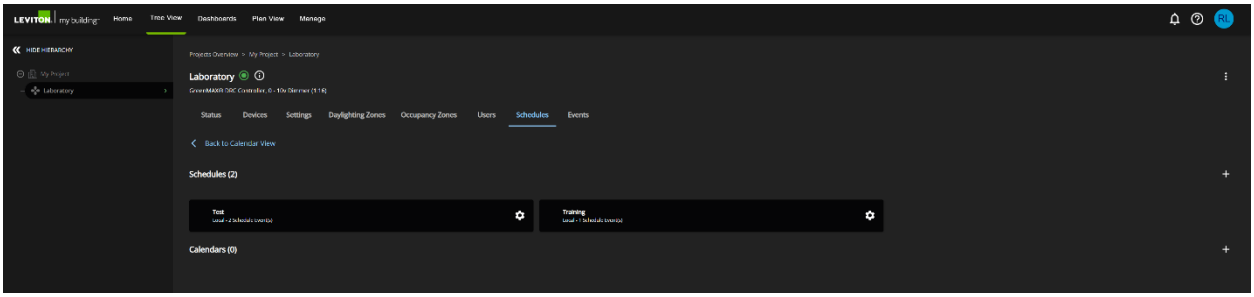


Continue adding Events/Dates if needed. Then select “Save” in the top right corner to save the New Schedule or Calander.

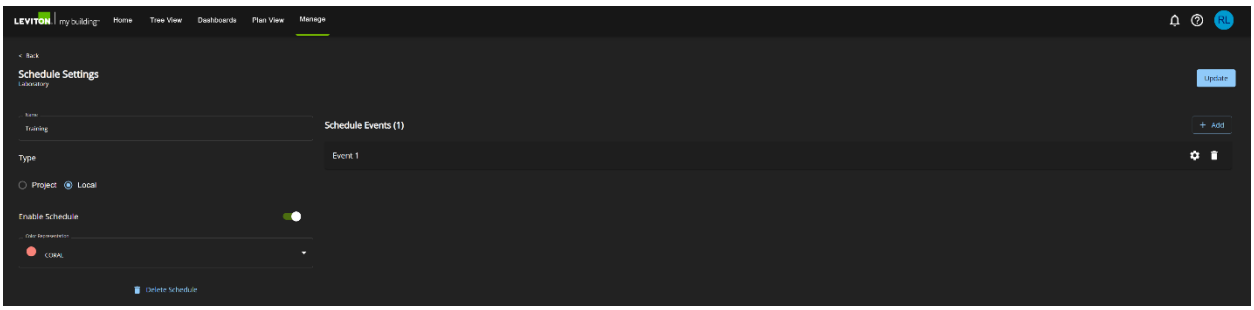


Editing or Deleting a Schedule/Calander or Event/Date

To Edit or Delete a Schedule/Calander, select the Gear icon next to the Schedule/Calendar. The option to Delete a Schedule or Calendar appears once in the Edit view.

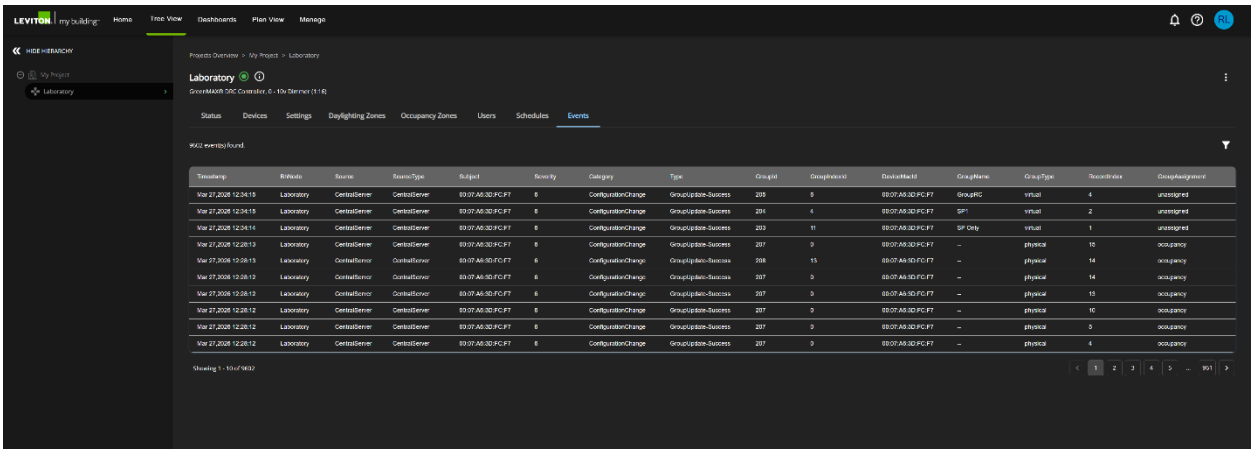


Once inside the Schedule/Calander Edit view, Events/Dates can be edited and deleted by selecting the Gear or Trash icon respectively. When deleting a Schedule/Calendar/Event/Date, a confirmation prompt will appear. Select “Delete” again to confirm and delete.



Events Tab

The Events tab within the Room Node is the same as the Events tab at the main Project level. Events can only be viewed in this tab. However the Events tab within the Room Node will only display Events within that Room Node versus for the entire Project when viewing the Events tab at the main Project level.



Diagnostics and Troubleshooting

My Building Mobile App Logs

The My Building mobile app generates logs that can be used for diagnostic purposes. If a Leviton representative requests logs, refer to the “Diagnostic Options” section found earlier in this manual to generate and send logs.

Diagnostic LEDs

Refer to device installation instructions for more information.

Room Controller and Smart Packs

Wi-Fi , Zigbee, and LumaCAN LEDs

- Solid GREEN LED - feature is enabled, no traffic
- Blinking GREEN LED - active network traffic
- Off - feature is disabled

Heartbeat LED

- Solid RED LED – Failed application or processor failure
- Blinking RED LED – Duplicate LumaCAN address
- Solid WHITE LED – Processor has a reset or startup failure
- Off – Failure or no power

Switches

- All LEDs Flashing (~1 sec per flash) – Device Address has not been set
- All LEDs rapidly flashing – Discovering network

Digital Sensors

- Blinking RED LED - PIR movement is detected
- Blinking GREEN LED - Microwave movement is detected
- Rapid flashing WHITE LED - Firmware update is in progress
- Slow flashing WHITE LED - Bootloader Mode
- Flashing Multi-Color LEDs - Waiting on LumaCAN address assignment

DRC Power Supply

- Solid GREEN – Normal operation
- Off – No power, short on LumaCAN network (CAT6), or over-current on LumaCAN network detected

Phase Cut Dimmers

Temp LED

- GREEN – Normal
- AMBER – Warm
- FLASHING RED – Hot
- SOLID RED – Shutdown

NET LED

- Blinking GREEN– Active network traffic
- Blinking CYAN – Waiting on LumaCAN address assignment

DALI Interface

Ethernet Link LED

- Blinking – Active network traffic

Ethernet Speed LED

- Solid – Ethernet speed is 100Mbps
- Off – Ethernet speed is 10Mbps

DALI CH1 and CH2 LED

- Intermittent Blink – Active network traffic

Communication LED

- Solid – Normal
- Rapid Flashing – Duplicate LumaCAN address

Status LED

- Slow Blink – Normal
- Rapid Blink – Bootloader Mode

Multi-Channel Relays

Network LED

- Solid GREEN – LumaCAN connected
- Blinking GREEN – Active network traffic
- Blinking CYAN – Awaiting on LumaCAN address assignment

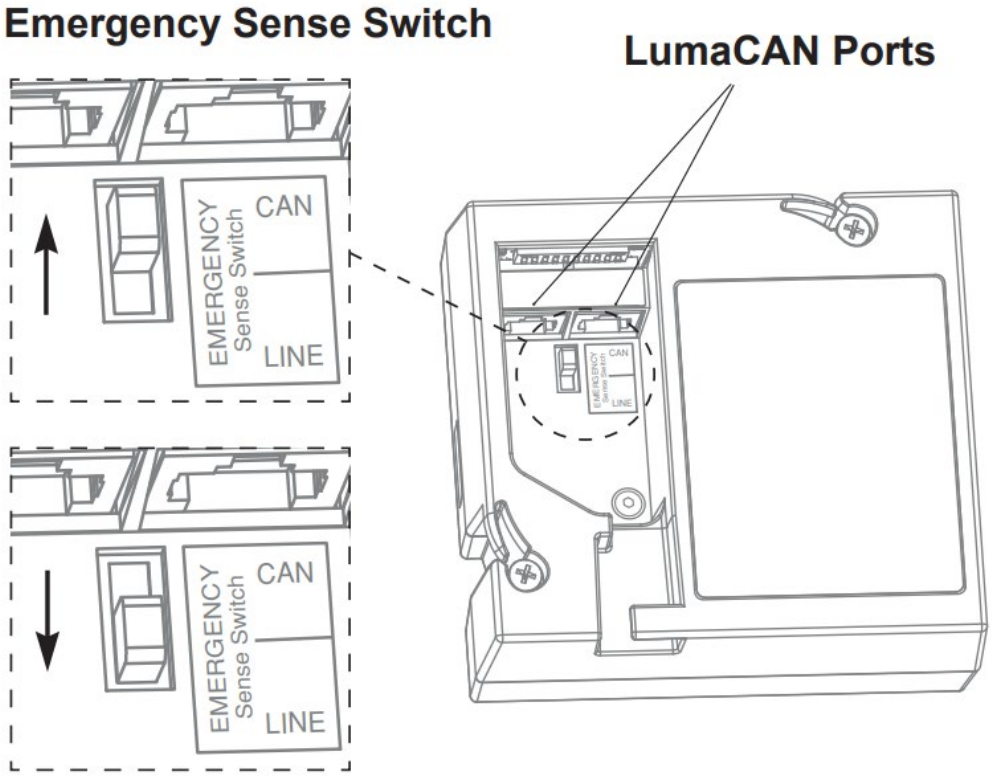
Power LED

- Solid GREEN – Normal
- Off – No power

Overriding DRC Room Controllers and Smart Packs

If the LumaCAN network is down or a device is not able to control a GreenMAX DRC Room Controller or Smart Pack over the network, lighting loads can be forced on.

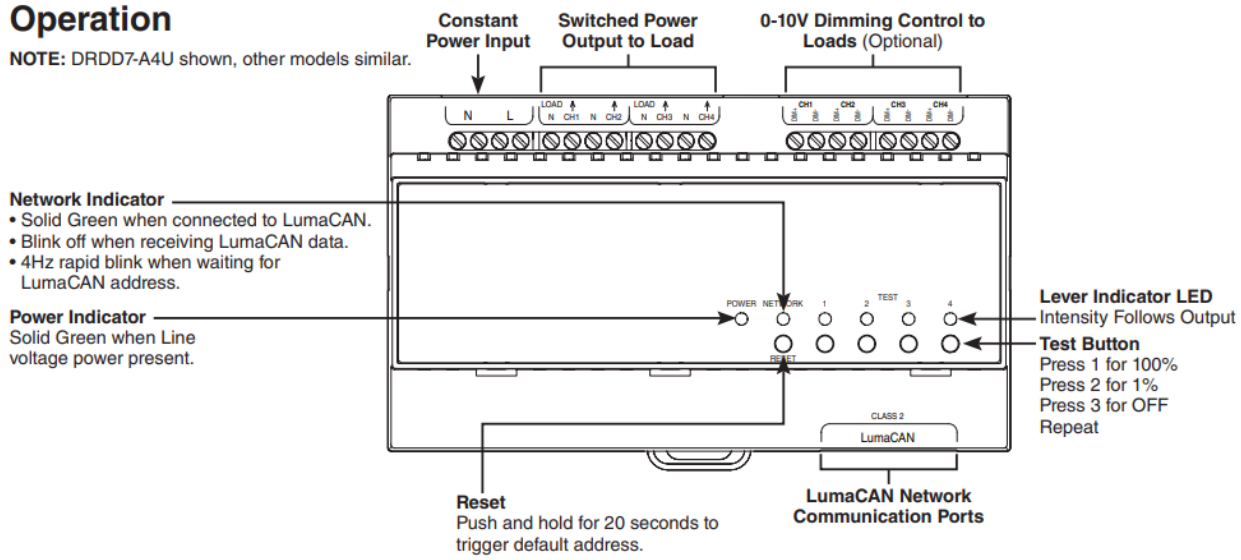
To override GreenMAX DRC Room Controllers and Smart Packs, disconnect both CAT6 cables and toggle the EM Sense Switch to CAN Mode. The device will turn on its relay and raise its dim level to 100%. If the lights do not turn on and raise to 100% brightness, the device is either defective, the circuit feeding the lighting load is switched off, or light fixture is defective.



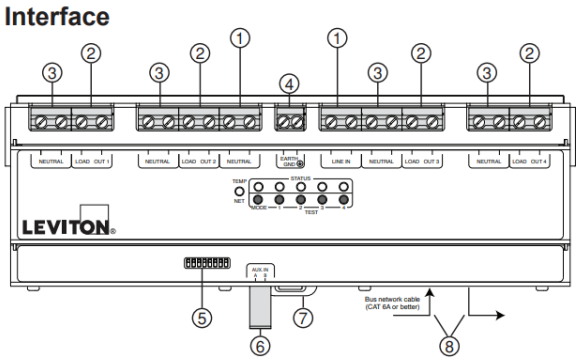
Overriding Multi-Channel Relays or Phase Dimmers

If the LumaCAN network is down or a device is not able to control a GreenMAX DRC Mutli-Channel relay or Phase Cut Dimmer over the network, lighting loads can be forced on.

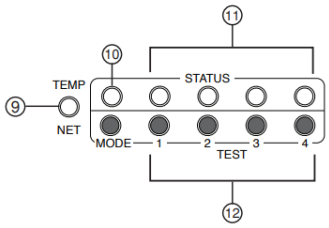
To override a a GreenMAX DRC Mutli-Channel relay or Phase Cut Dimmer, toggle the buttons on the front of the unit. Each button press will cycle through different dim levels and off. If the buttons do not respond or affect the connected loads, the unit may be defective.



Multi-Channel Relays



1. Line In and Neutral: Common to all channels.
2. Load Out 1, 2, 3, 4: Connects to the load for each channel.
3. Neutral: Individual neutral for each channel.
4. Earth Ground: Common to all channels
5. LumaCan Address & Start Channel Assignment DIP Switches
6. Aux In A & B: Auxiliary active high (+24V) or dry contact input (for future use)
7. DIN Rail Mounting Clip
8. LumaCan: Network input and feedthrough RJ45



9. Indicator light - Displays device operating temperature status
   a. TEMP indicator
      - Green – Normal
      - Amber – Warm
      - Red flashing – Hot
      - Red solid – Shutdown
   b. NET indicator
      - Blinks during TX/RX of network data
      - Blinks Green upon TX/RX of LumaCAN network data.
      - Blinks Cyan once every two seconds, indicating that a LumaCAN address is pending assignment.
10. MODE LED Indicator & Button: Used to select and display device operating modes. (see below)
11. Channel status 1, 2, 3, 4: Individual indicator for each channel.
    a. Indicator intensity follows channel level
    b. Alternates from 25%->50%->100%->0%
12. Channel button 1, 2, 3, 4: Individual channel status selector

Configuration

Phase Cut Dimmers

Leviton Manufacturing Co., Inc. Lighting & Controls
10385 SW Avery Street, Tualatin, OR 97062 **tel** 800-736-6682 **tech line** (6:00AM-4:00PM PT Monday-Friday) 800-954-6004

Leviton Manufacturing Co., Inc. Global Headquarters
201 North Service Road, Melville, NY 11747-3138 **tel** 800-323-8920 **tech line** (8:00AM-10:00PM ET Mon-Fri, 9:00AM-7:00PM ET Sat, 9:00AM-5:00PM ET Sun) 800-824-3005

Visit our website at: www.leviton.com/mybuilding

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