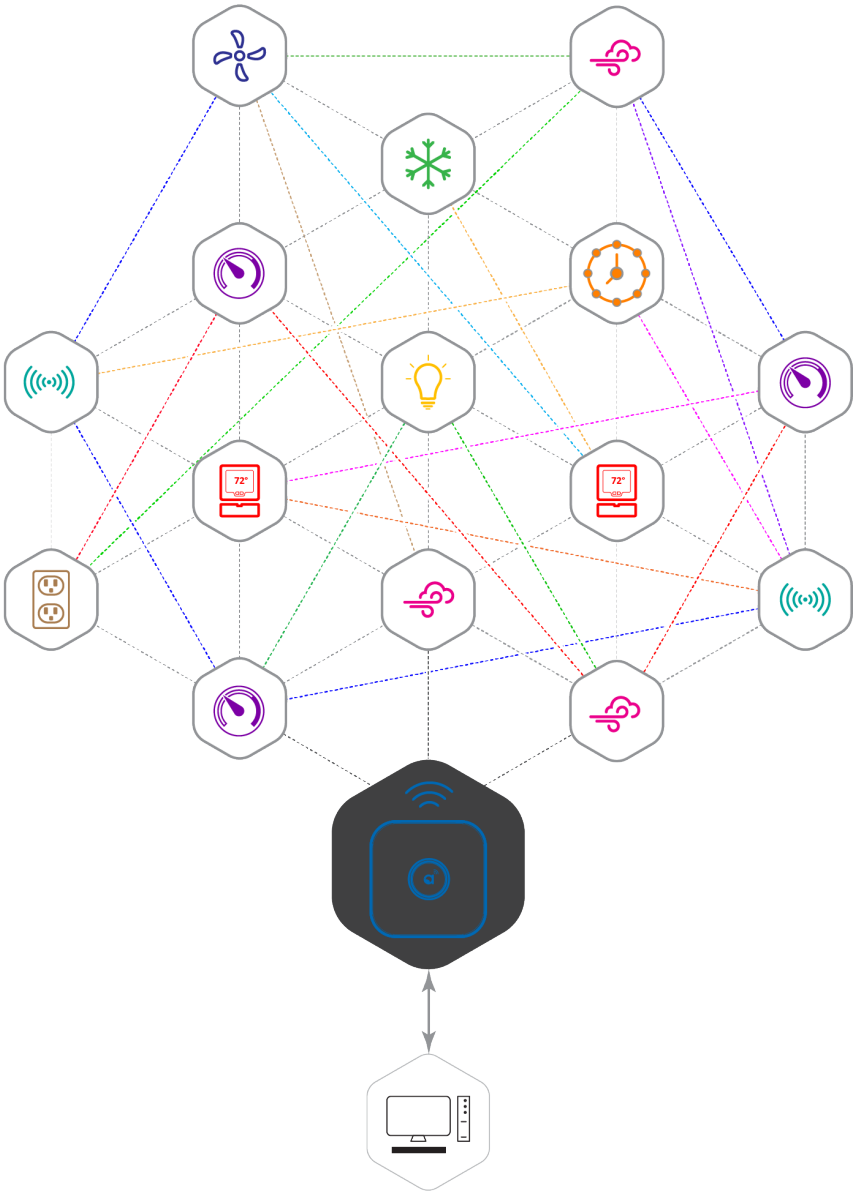
User Guide

EnergyCenter®

Virtual Circuit



EnergyCenter BY AUTANI

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1. Software Overview

A Virtual Circuit is designed to create a virtual location that controls a group of individual Lighting controllers and apply a common behaviour to all the lights by changing the settings for the Virtual Circuit. This is needed when there is significant amount of individual lighting controllers that need to be controlled as one lighting circuit or 'zone'. The Virtual Circuit behaves very much like a 'Light' in the Autani System.

Virtual Circuits are created during commissioning at the time of the systems installation. The primary advantage of configuring your lights for Virtual Circuits is the ability to control a group of lights at once. For example,

- The **Light Detail** for each light controller is controlled by the Virtual Circuit.
- The **Schedule** for each light controller is controlled by the Virtual Circuit.
- Virtual circuits are intended to be used with 3rd party Zigbee devices only.
- Virtual Circuits can be driven by any combination of Switch or Sensor, that are compatible with EnergyCenter®.

NOTE: The **Lighting Setup** for the Virtual Circuit is still handled at the individual light. Setup options include min/max dim level, power on level, and energy estimation (device dependent).

NOTE: Virtual Circuits only work with **HA Lighting Conditions**.

The following is the high-level process of creating a Virtual Circuit.

- Start by creating a Location Group for all devices in the lighting circuit or zone, be sure that the occupancy sensors, and switches are included with lighting controllers. Sensors can be cross referenced to other Virtual Circuits later on under the 'Details' page for the Virtual Circuit.
- Create Virtual Circuit for the new Location Group.
- Configure the light behaviours for the Virtual Circuit.
- Virtual Circuits will apply the same settings to all light controllers within the location Group.

1.1. Navigating Through the Software (Site map)

Log-in to EnergyCenter®. The following two tables provide site maps of the Virtual Circuit module. The options on the left navigation bar appear in the tables as the column headings. The column lists are the light-related tabs that appear when an option is selected.

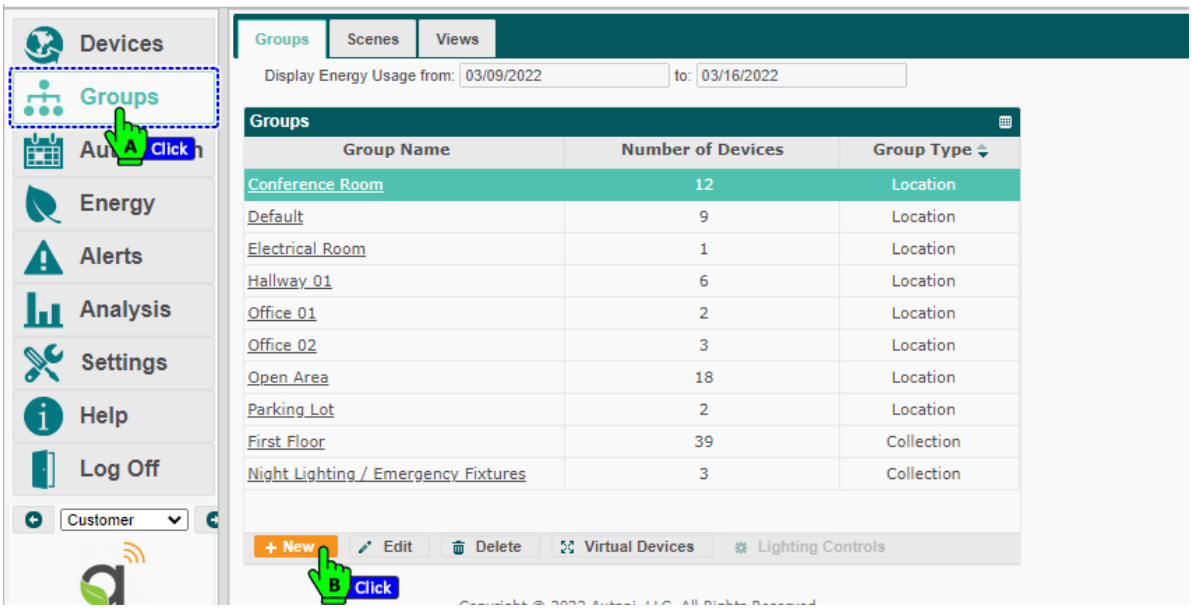
Table 1: Site Map for Entering Data or Selecting Options

Devices	Automation	Settings
▪ Dashboard ▪ Lights ▪ Sensors	▪ Lights ▪ Sensors ▪ 24/7 Schedules ▪ Calendar ▪ Advanced	▪ Site ▪ Contractor ▪ System ▪ Data Maintenance ▪ Energy ▪ Security ▪ Device Setup

2. Create a Location Group for Virtual Circuit

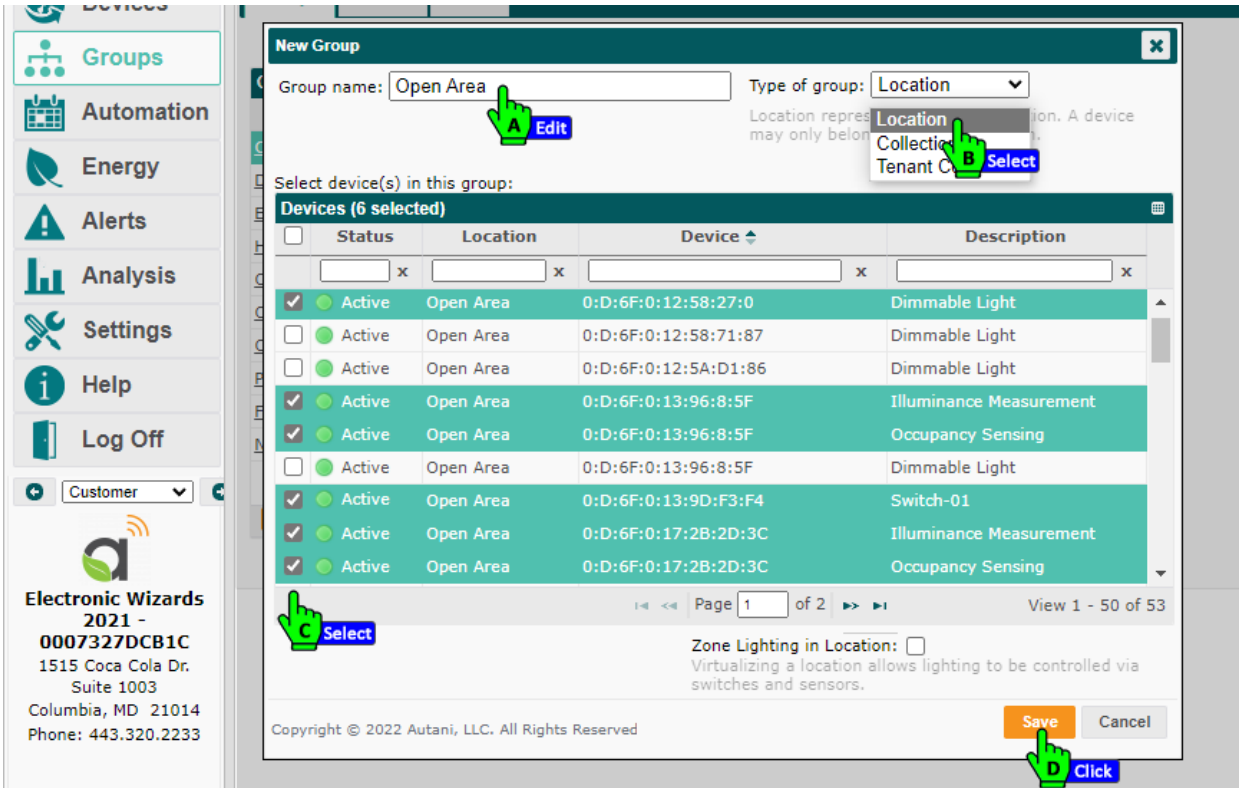
The first step in creating a virtual Circuit is to create a Location Group that contains the lighting controllers, sensors, and switches.

1. Select **Groups** from the main section and the screen will list the groups already created. Click **New** button to create a new group for the Virtual Circuit.



2. The **New Group** window appears. Enter a name for the group and select **Location** from the drop down for the **Type of group**. The **Devices** section lists all the end points available. From the list of endpoints select the Lights, Switches, Occupancy Sensors and Photocell Sensors. And click **Create/Save** button. (NOTE: the end points for HVAC controls are not applicable to Virtual Circuits).

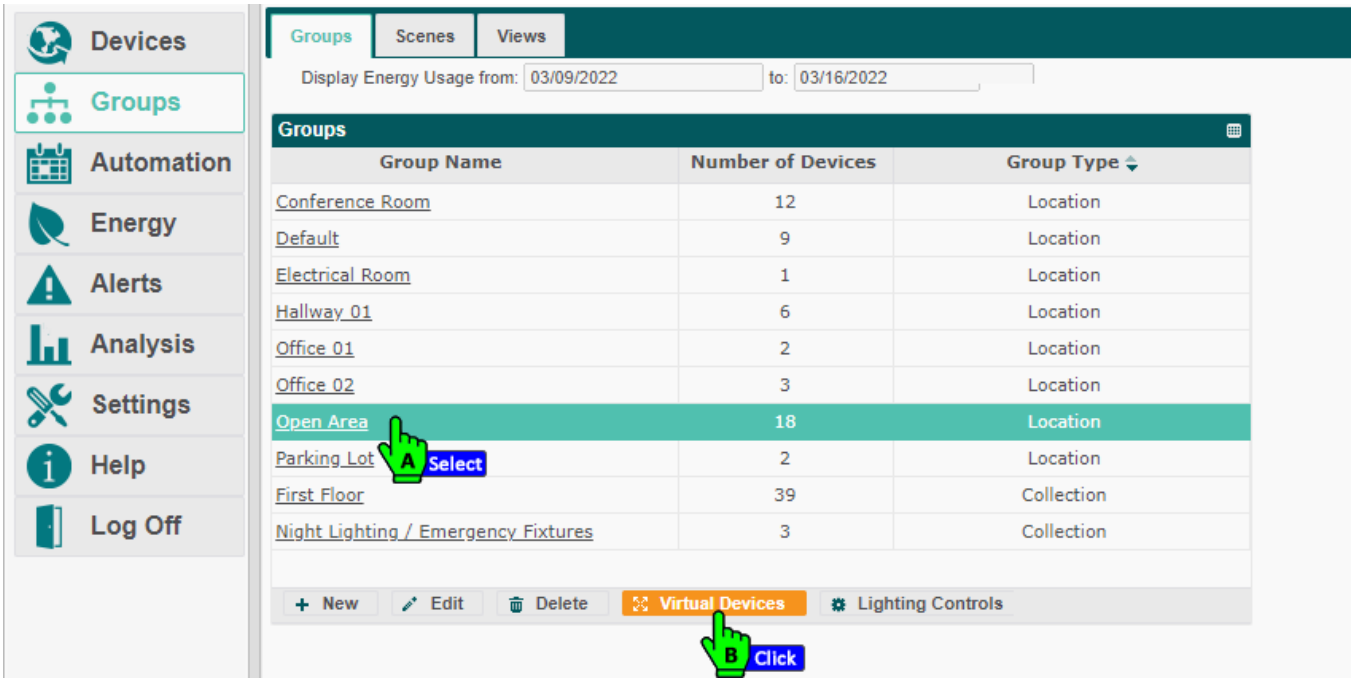
   NOTE: If the 'Sensors' and/or 'Switches' are included in the location prior to the Virtual Circuit being formed, they will be automatically associated. Sensor and Switch associations can be modified for the Virtual Circuit at any time.



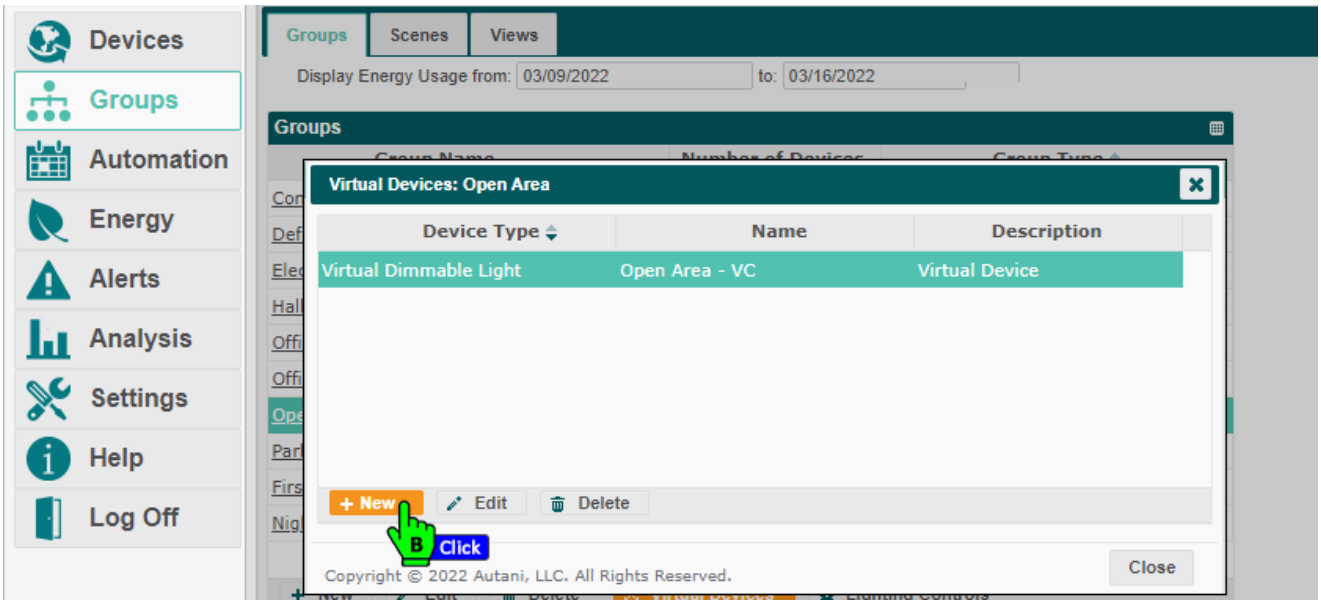
3. The new Location Group 'Office Space' is created and available in the list of groups.

3. Create a Virtual Circuit

4. The new location group '**Open Area**' is created and listed in the groups list. Select the location group '**Open Area**' and click the **Virtual Devices** button.



5. The **Virtual Devices: Open area** window appears, click on the **New** button to create a new Virtual Device.



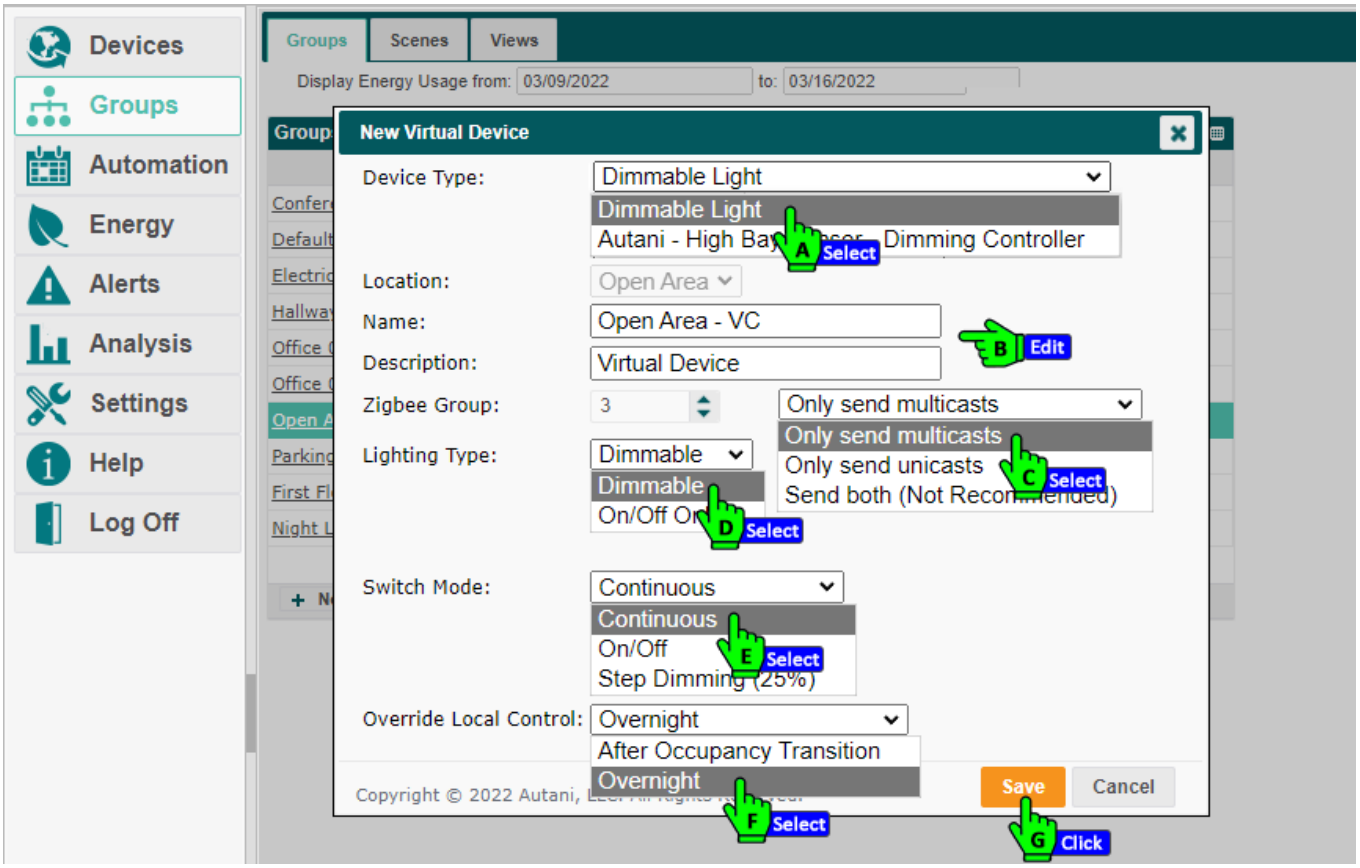
6. The 'New Virtual Device' window appears.
   A. Select a **Device Type** from the drop down.
   B. Enter a **Name** and **Description** for the for the new virtual device.

   NOTE: DO NOT modify the **Zigbee Group** ID, it is an unused ID picked by the system.

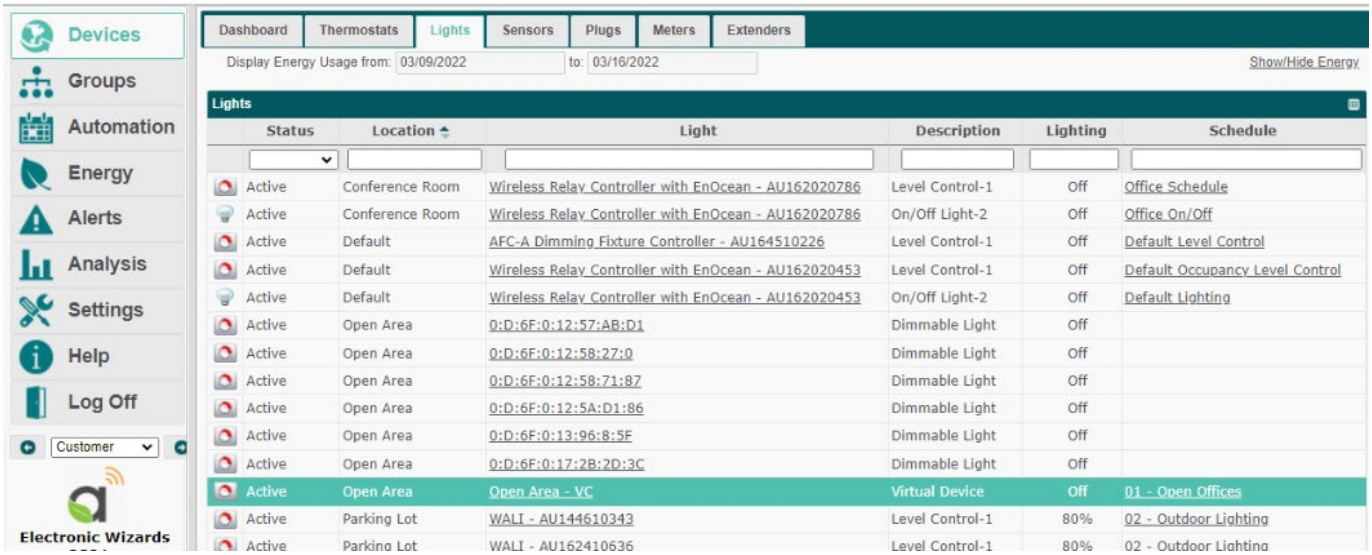
   C. From the Zigbee Group drop down select the message delivery type to **Only Send Multicasts**, used when the Group has more than four devices, or **Only Send Unicasts** used when the Group has up to four devices.
   D. Select the Lighting type as **Dimmable**. (If the dimming (0-10v) connections are not made for the lighting controllers, set the lighting type to 'On/Off Only' instead of 'Dimmable'.)
   E. Select the Dimming Mode as **Continuous**, will allow you to press and hold on the Rocker and it will lamp up continuously. The **Step Dimming (25%)**' will jump the dim level to 25%. The Dimming Modes are always dependent on the message delivery type chosen (in the previous step).

F. Choose the Override Local Control as **Overnight**.

G. Click **Save** button to save the new virtual device.



7. The new Virtual Circuit **Open Area-VC** is created and is now available inside **Devices**>**Lights** section.

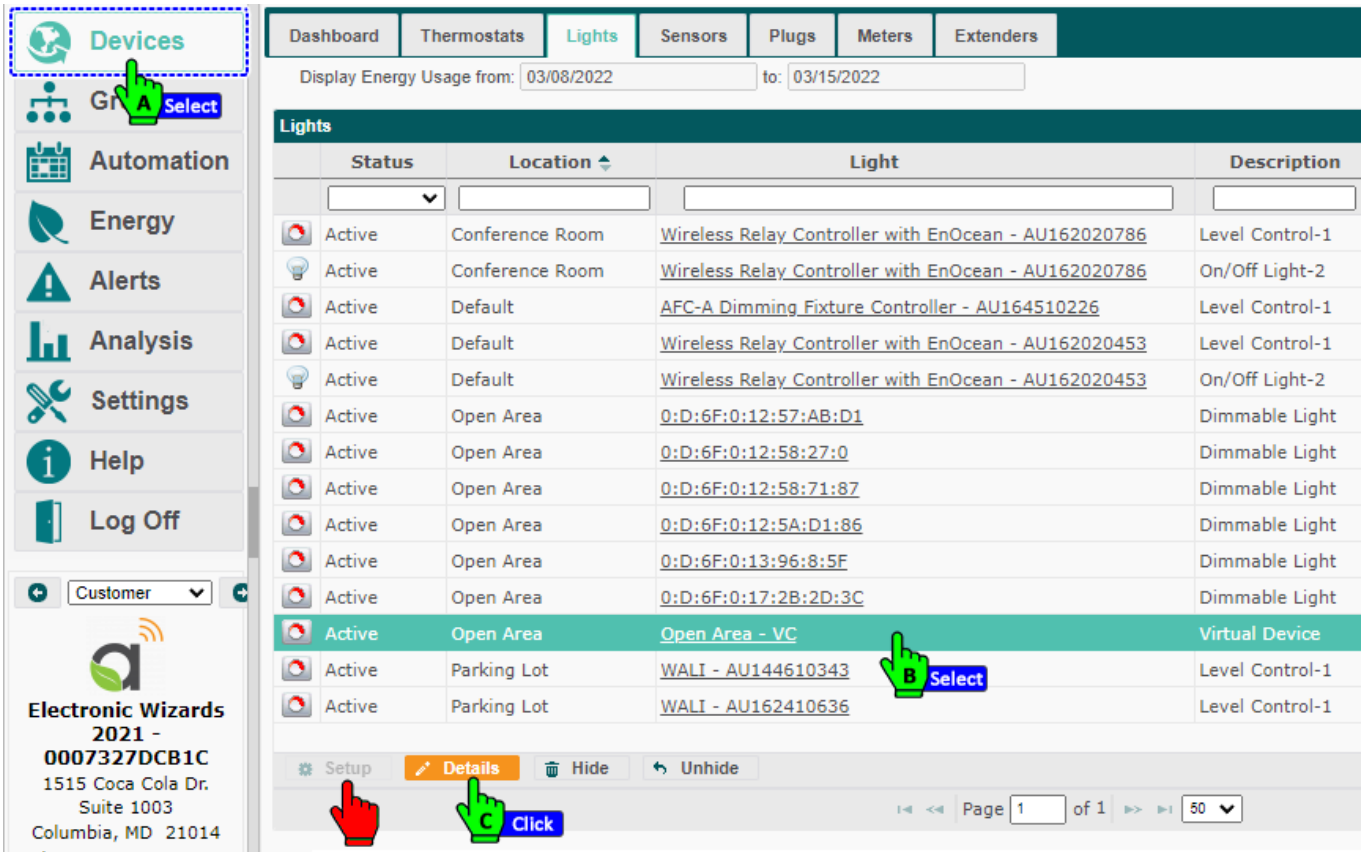


NOTE: for the physical Sensors grouped under a virtual device 'Open Area - VC'

- the **Light Details** is now controlled by the Virtual Circuit.
- the **Schedule** will be disabled for individual lights and applied to the Virtual Circuit Virtual Circuit.
- the **Light Setup** is disabled and is independent of Virtual Circuits, handled at individual lights.
- the **Energy Estimation** is independent of the Virtual Circuit, handled at the individual lights.

4. Configuring Virtual Circuit

1. On the left navigation bar, click **Devices**, and click the **Lights** tab.
2. Click a Virtual Device name link, double-click the row of the light, or click the row of the light and then the **Details** button.



3. The **Light** setup window appears with the **General** tab selected by default.
   - If required, edit the **Name** and **Description** of the Virtual Circuit.
   - NOTE: the **Location** is disabled, as this Virtual Circuit is created from a Location Group.
   - Select a **Level Mode** for the Virtual circuit from the drop down.
   - Set **Occupied** and **Unoccupied Level** percentages.
   - Check the **Current Status** of the Virtual Circuit.
   - Click **Save** to accept the changes.

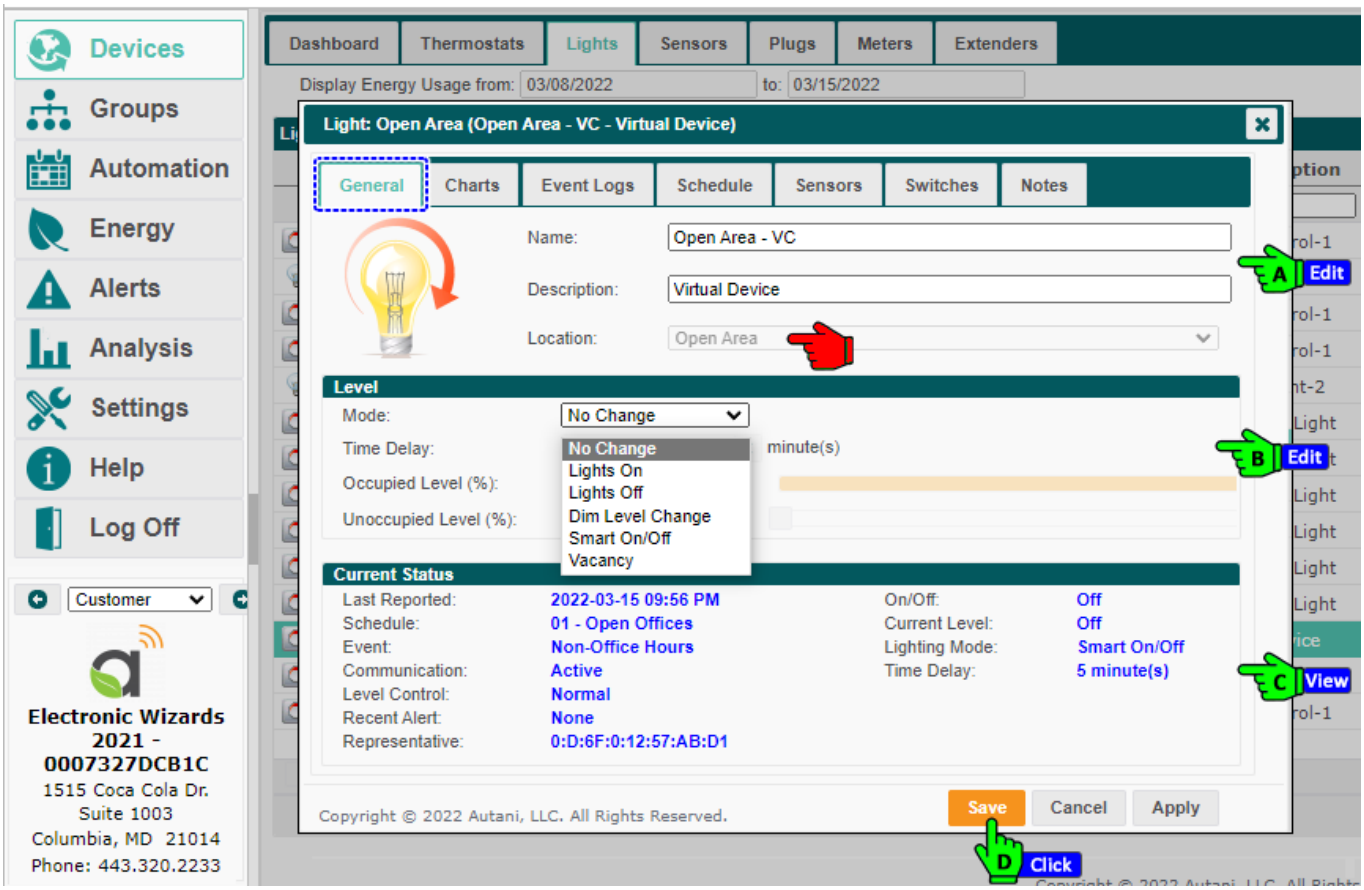
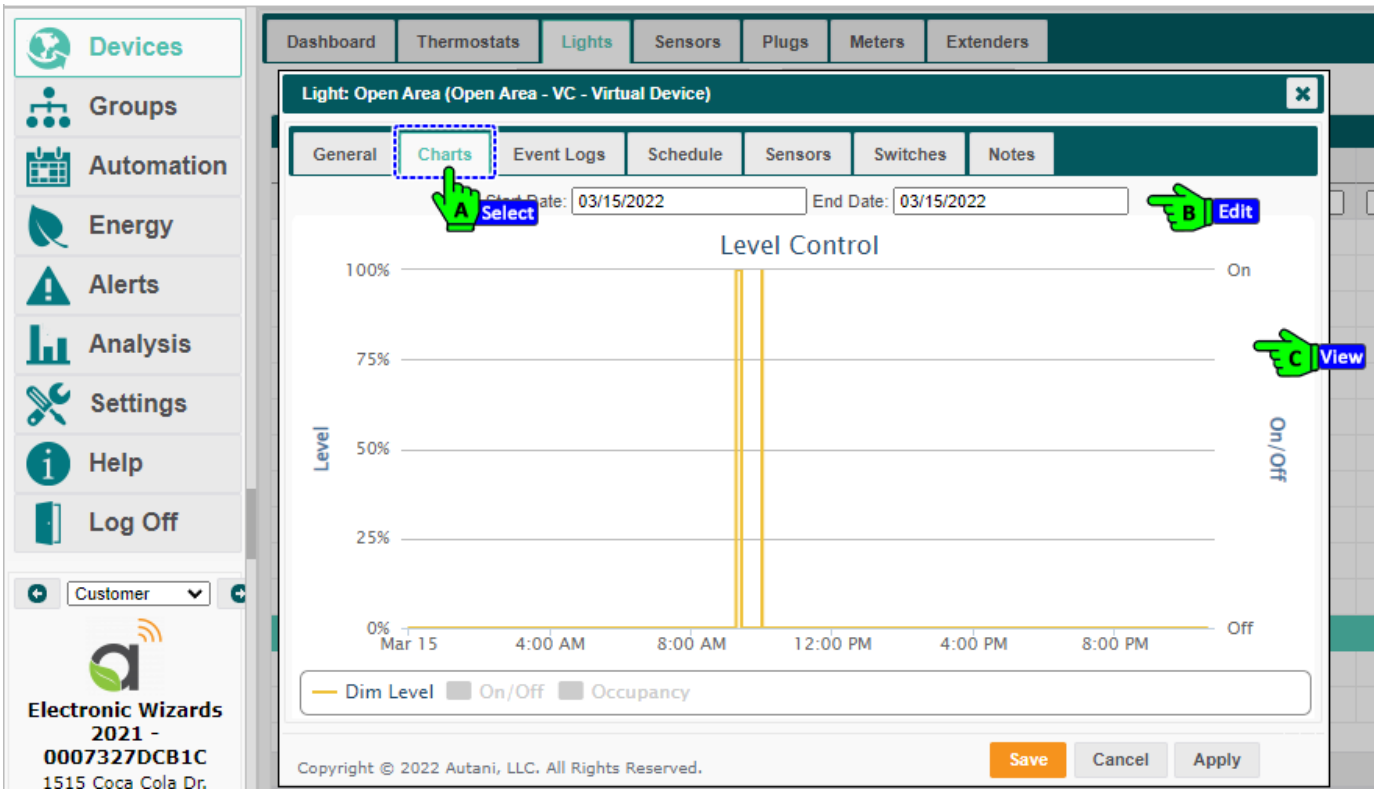


Table 2: Editing General Light Settings

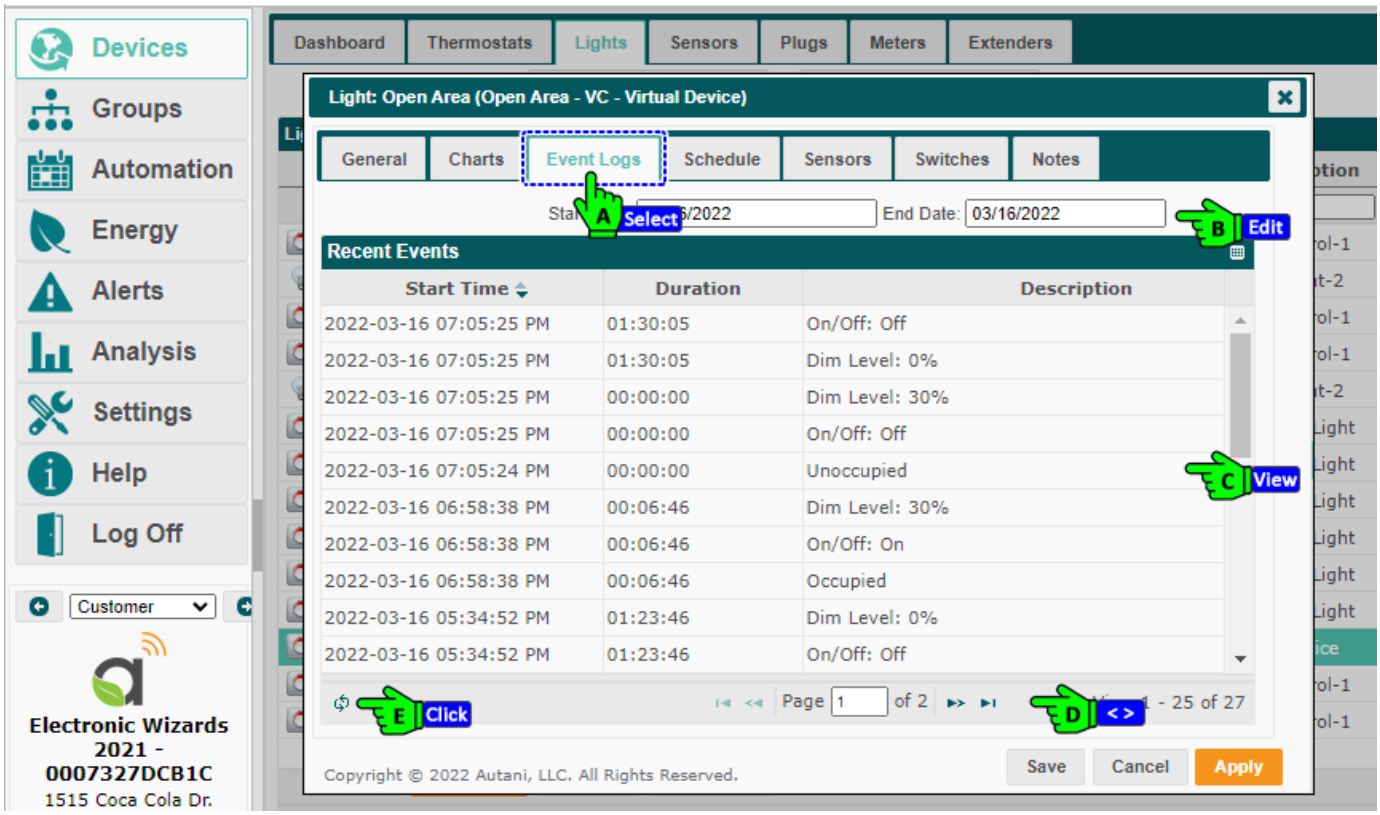
Setting	Used To	Options
Name	The name of the Virtual Circuit.	▪ User-defined name for light (Alphanumeric characters)
Description	Description of the lighting end point.	▪ User-defined description of light ▪ Alphanumeric characters
Location	This is a read only value.	
Change Mode (for dimmable lights)	Used to change light behaviour, when a mode change is made from the Details page the user is making an 'on demand' change. This change will hold until the next Event in the Schedule.	▪ No Change ▪ Lights On ▪ Lights Off ▪ Smart On/Off ▪ Vacancy ▪ Dim Level Change
Change Mode (for on/off lights)	Used to change light behaviour, when a mode change is made from the Details page the user is making an 'on demand' change. This change will hold until the next Event in the Schedule.	▪ No Change ▪ Lights On ▪ Lights Off ▪ Smart On/Off ▪ Vacancy
Off Delay/Time Delay (Not displayed for manual dimming controllers)	Define the delay interval to be used before turning off lights when a space becomes unoccupied	▪ Available only when Lights OFF, Smart ON/OFF or Vacancy Mode is selected. ▪ 1-1440 minutes (24 hours)

Level (%)	Used to change light intensity. NOTE: A scroll bar is provided to quickly change the level setting.	Zero to 100%
Occupied Level (%)	Used to change light intensity during Occupancy. NOTE: A scroll bar is provided to quickly change the level setting.	Zero to 100%
Unoccupied Level (%)	Used to change light intensity during NO Occupancy. NOTE: A scroll bar is provided to quickly change the level setting.	Zero to 100%

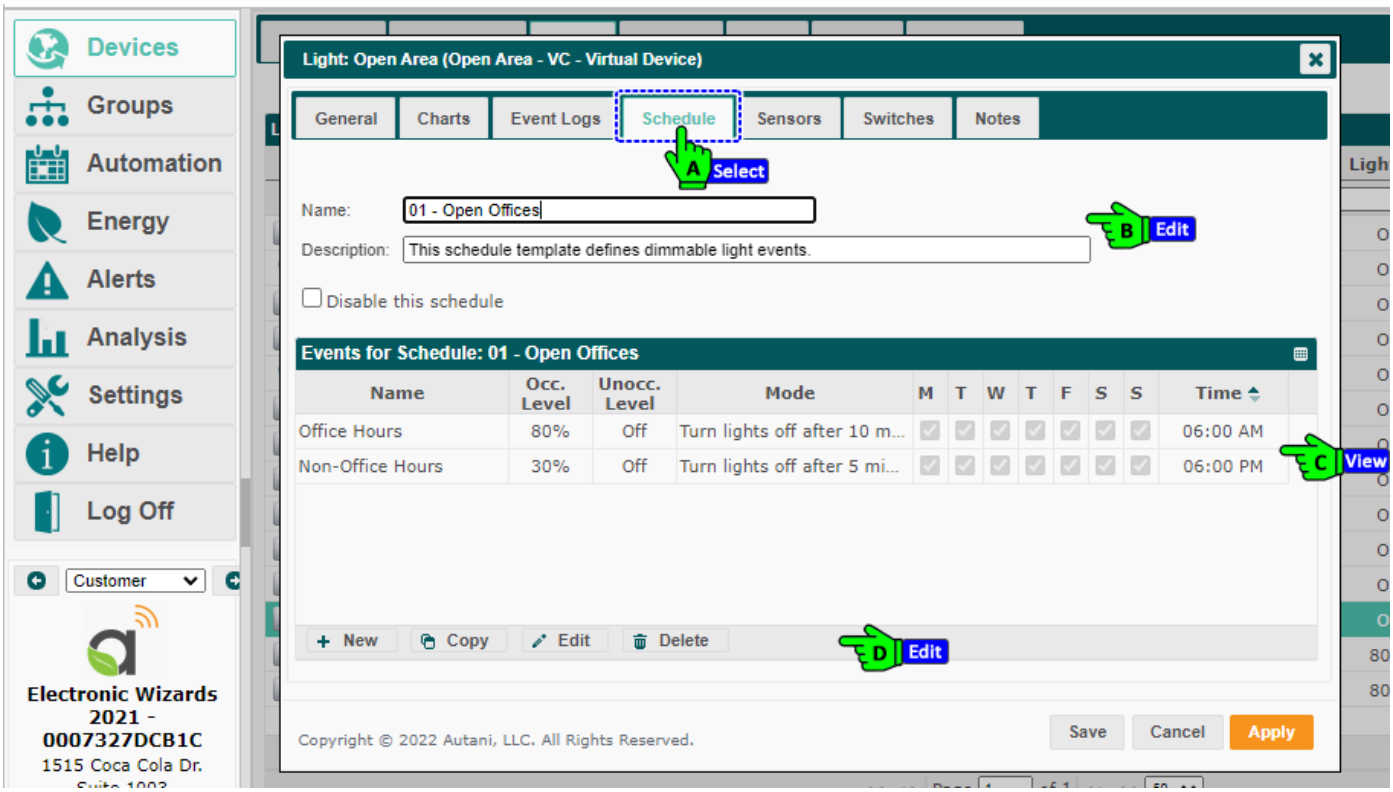
4. Next, select the **Charts** tab on the Light detail window. This section is only to view the Light Level data based on date range. Select a date range and view the Light Level data.



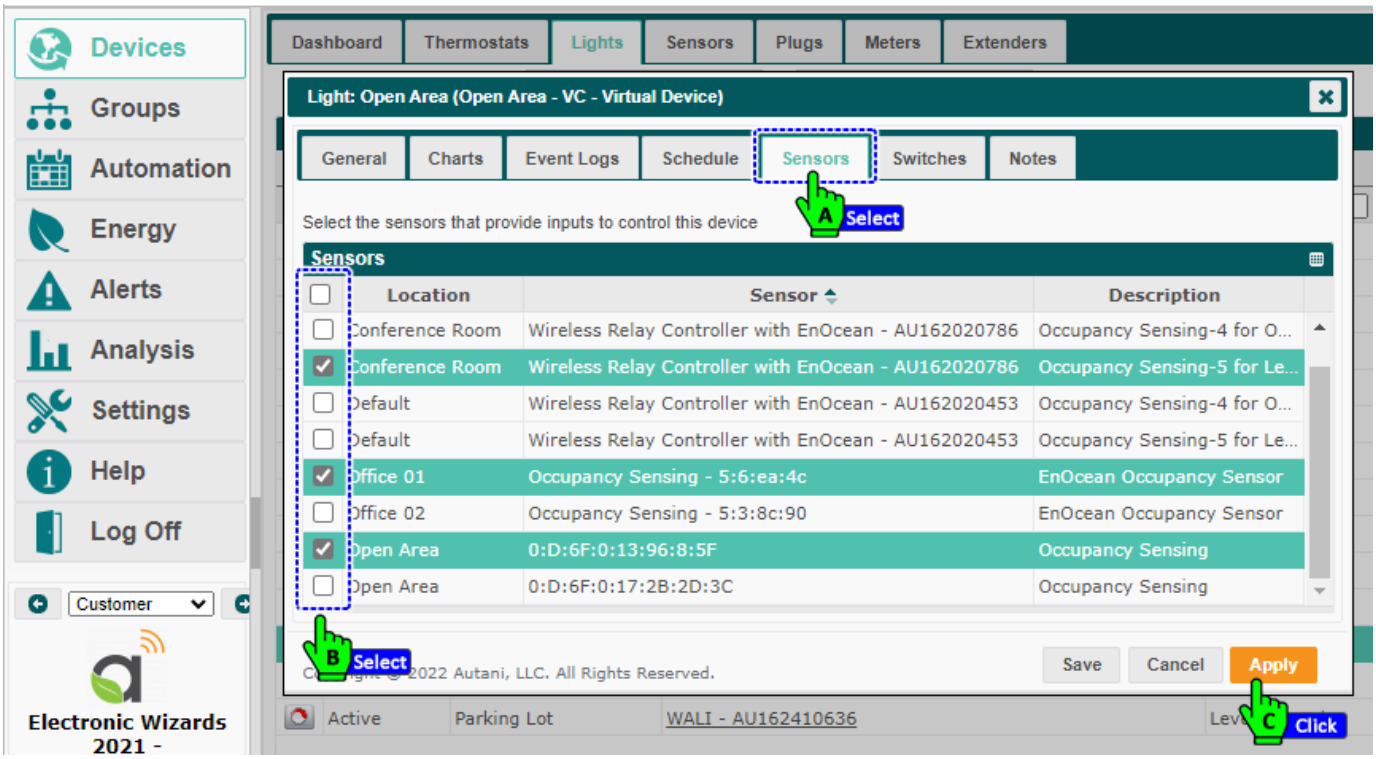
5. Next, select the **Event Logs** tab, to see the list of events of the Virtual Circuit for a data range. Use the date fields to set the date range. Use refresh icon at the bottom left corner to refresh the event list.



6. Select the next tab **Schedule** to view or disable a schedule for the Virtual Circuit and to verify the assigned events associated with it.
NOTE: It is not recommended to create or edit schedules here. Any changes made here will be overridden when a schedule template under **Automation** is reassigned. (Refer to section *5 Configuring Schedules*.)



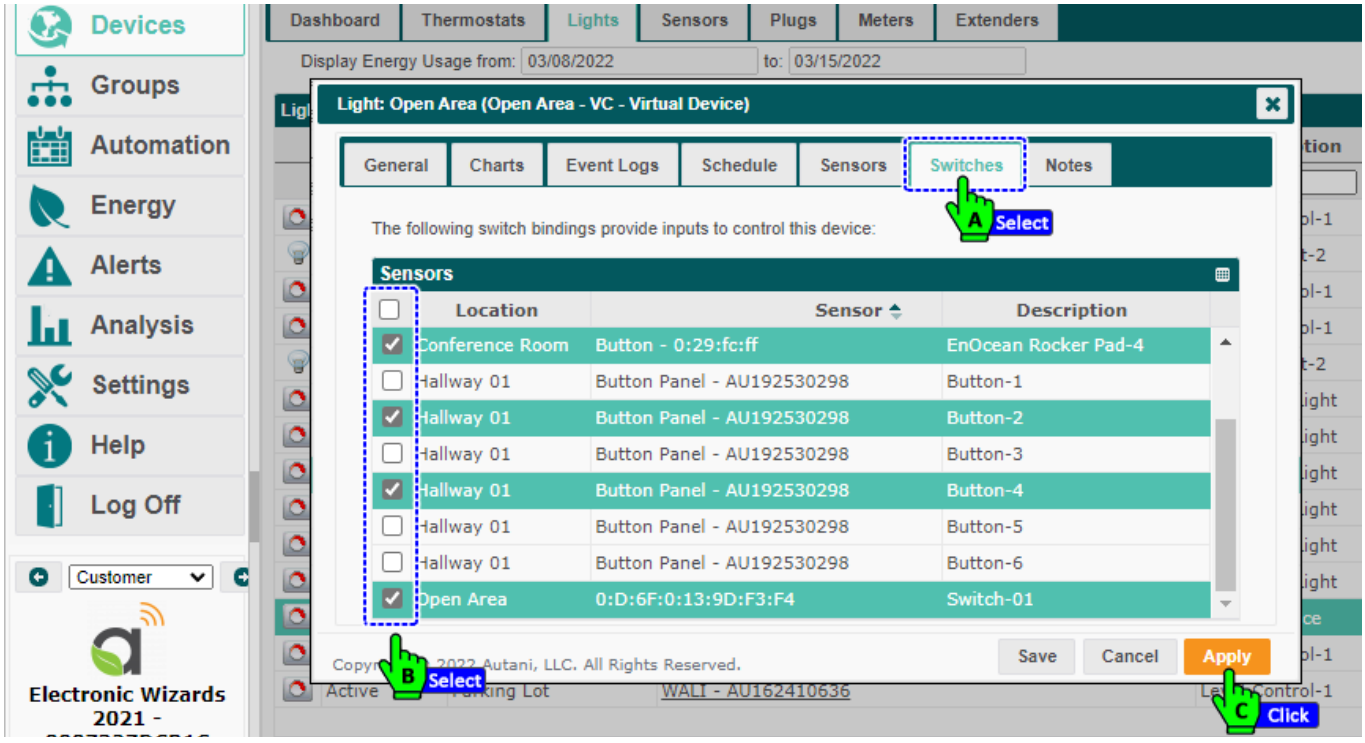
7. Select the next tab **Sensors** to virtually associate a standalone sensor or a sensor from other device(s) to the selected Virtual Circuit and affect the behaviour of the lights. (Any sensors included in the Location Group prior to the Virtual Circuits creation are automatically associated.)
   - Select a standalone sensor or a sensor from other device(s) in the system and click **Apply**.



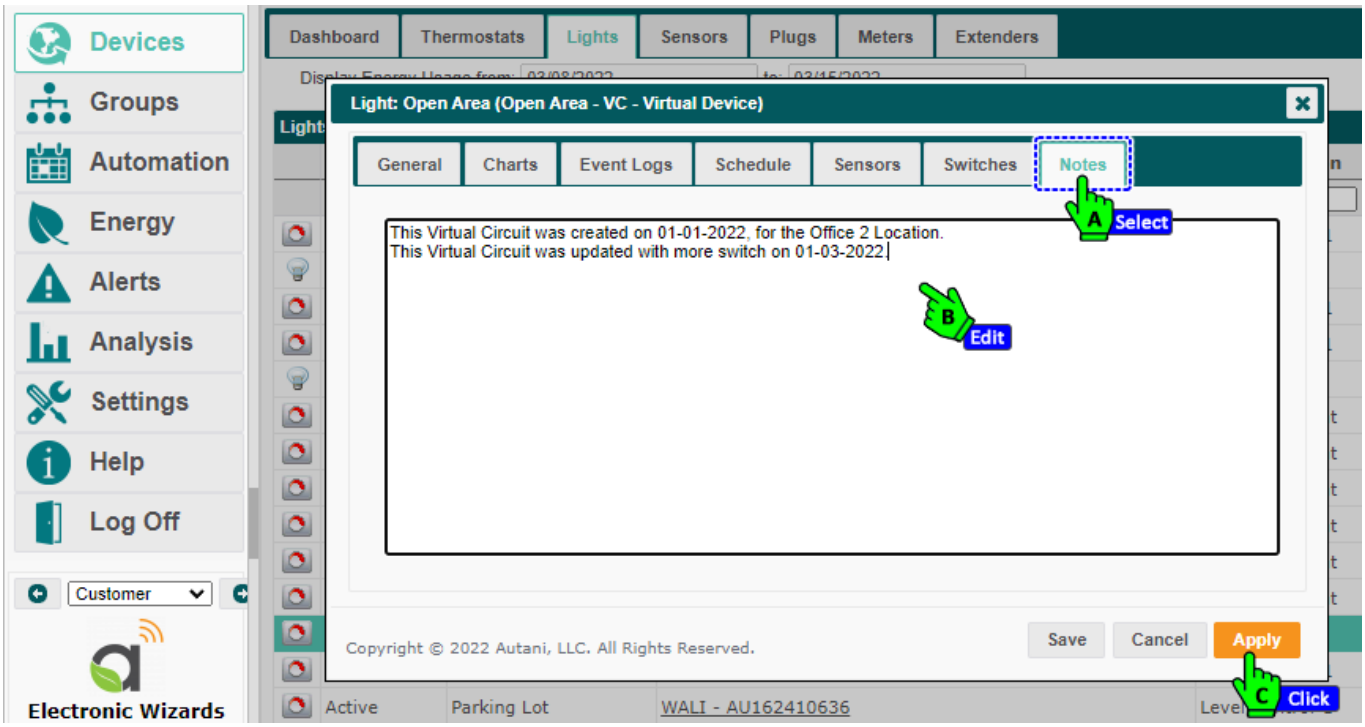
NOTE: There is NO limit on the number of sensors that can be virtually associated with the current device.

NOTE: The virtual association will not work if the software and the Manager are not functioning.

8. Select next tab **Switches** to see list of switches available to associate to the Virtual Circuit. Select the required switches and click apply to associate the switches to Virtual Circuit. (Any switches included in the Location Group prior to the Virtual Circuits creation are automatically associated.)



9. Select the next tab **Notes** to leave a note for other users to refer. (Example: The Virtual Circuit was created on XX.XX.XXXX date, and the last updated was done on XX.XX.XXXX date, etc.) Click within the text box type your notes and click **Apply** to save the note.



5. Configuring Schedules

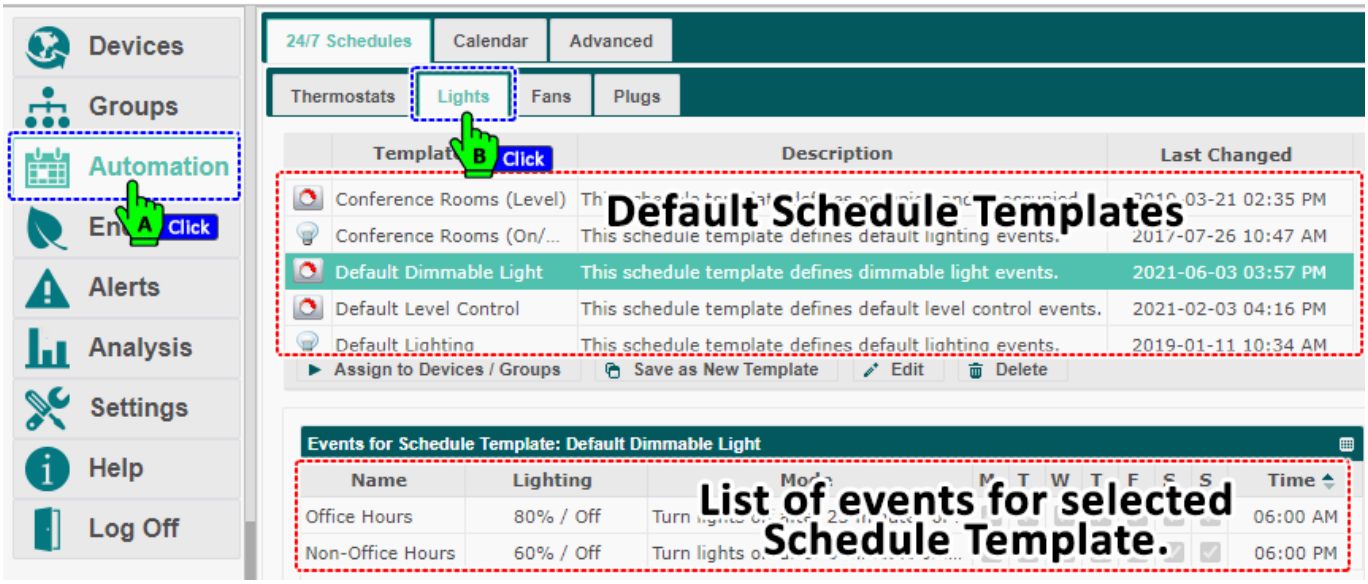
The purpose of a schedule is to trigger the lighting devices to function on a time basis.

NOTE: It is always recommended to configure a schedule through the **Automation** section. Schedule modifications made through any other section will be overridden by changes made in the Automation section.

NOTE: When working with Virtual Circuit the schedule may only be assigned to the 'Virtual Circuit' and not the individual lights that it contains.

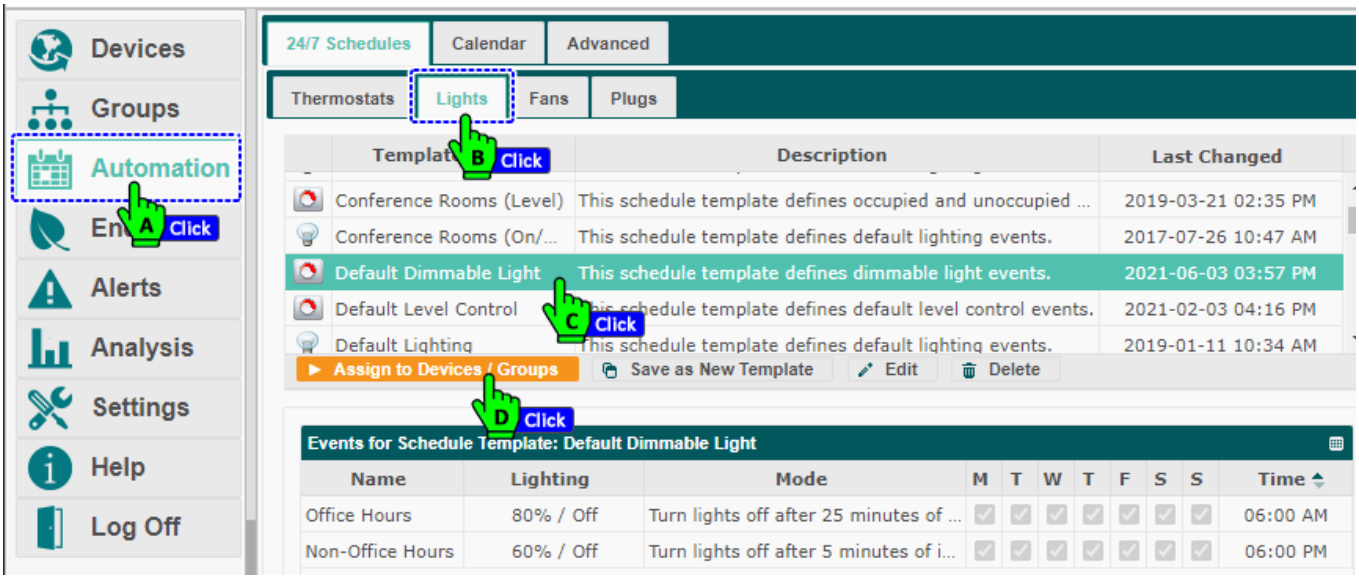
5.1. Configuring a Schedule

10. To configure a schedule, select **Automation** from the main menu. The **24/7 Schedules** tab is selected by default. It contains the sub-tabs for different categories of devices. Select the **Lights** tab to see the list of default templates. Select a template to see the list of events associated with it.

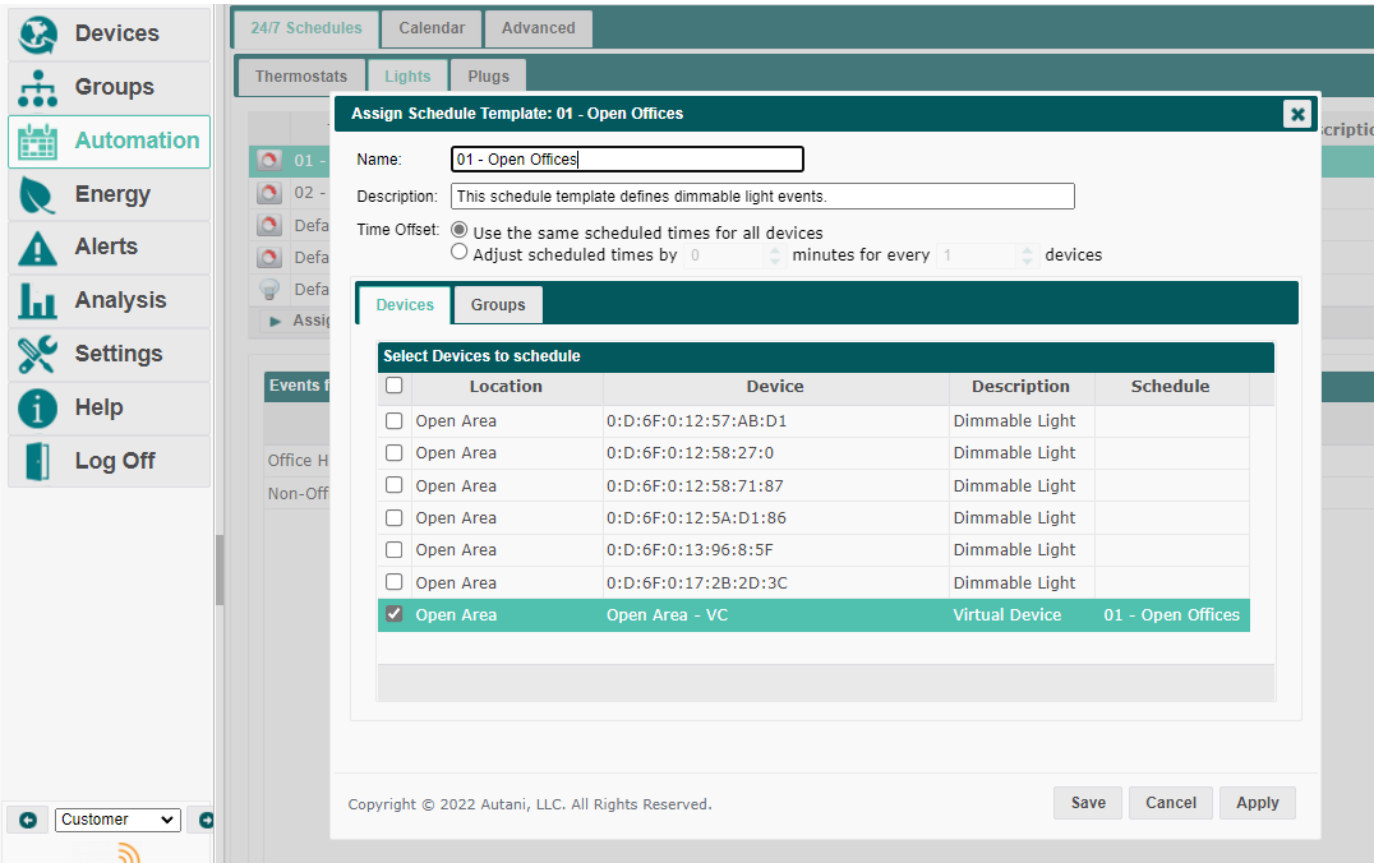


- **NOTE**: How the endpoints for a Virtual Circuit are configured will determine which template is used. If the Virtual Circuit is configured for On/Off endpoints, select a lighting template listed with the ICON light bulb. If the Virtual Circuit is configured for Level Control endpoints, select a Level Control template with the ICON dial.
- Double click a schedule to change the **Template Name** and **Description**.

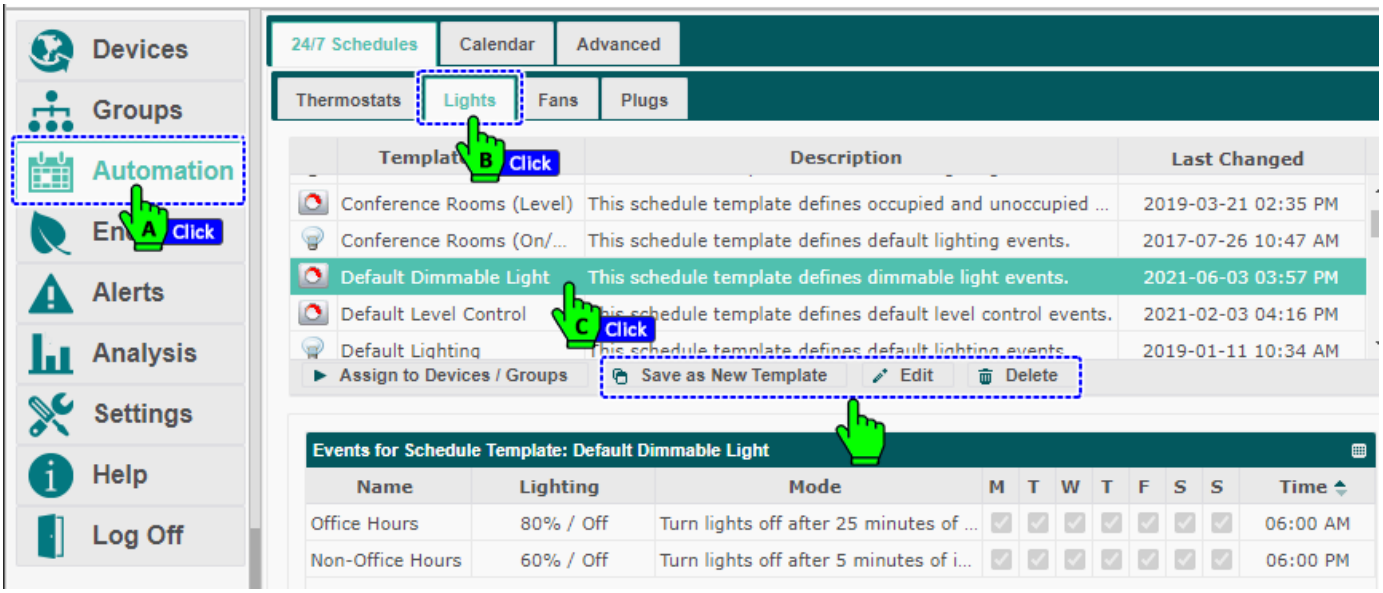
11. To ensure that you are using the right template, select a template and click **Assign to Device/Groups**.



- The **Assign Schedule Template** window appears with the list of devices. Check for Virtual Circuit endpoints listed.

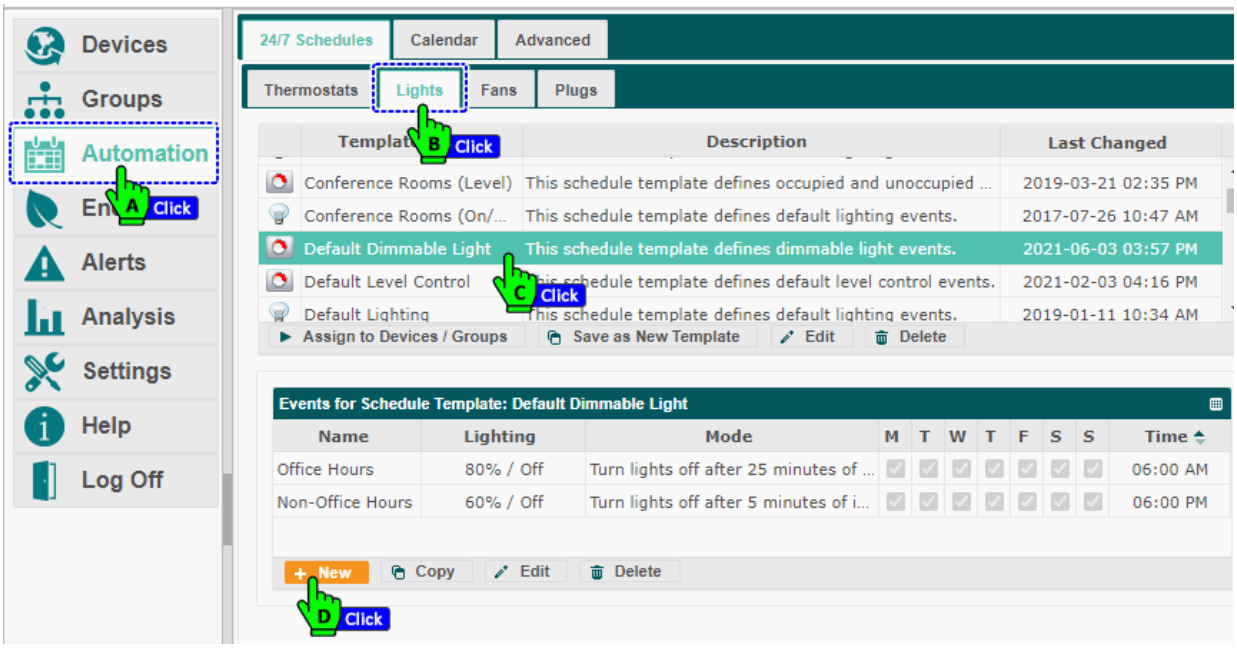


12. There are three more options in **24/7 Schedules > Lights** tab:
    - Select a template and click **Save as New Template** to create a new template based on the selection.
    - Select a template and click **Edit** to edit the template.
    - Select a template and click **Delete** to delete the template.

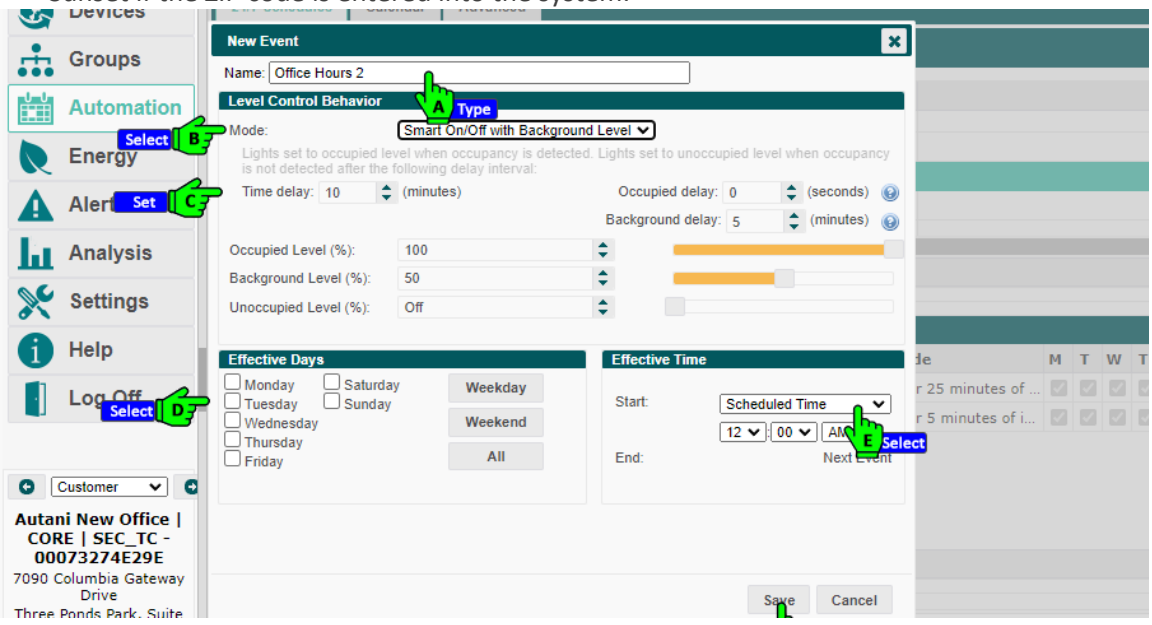


5.1.1. Configuring Events for a Schedule

13. To create a **New Event** for a schedule, select a schedule from the list of templates. Then click **New** in the **Events** section.

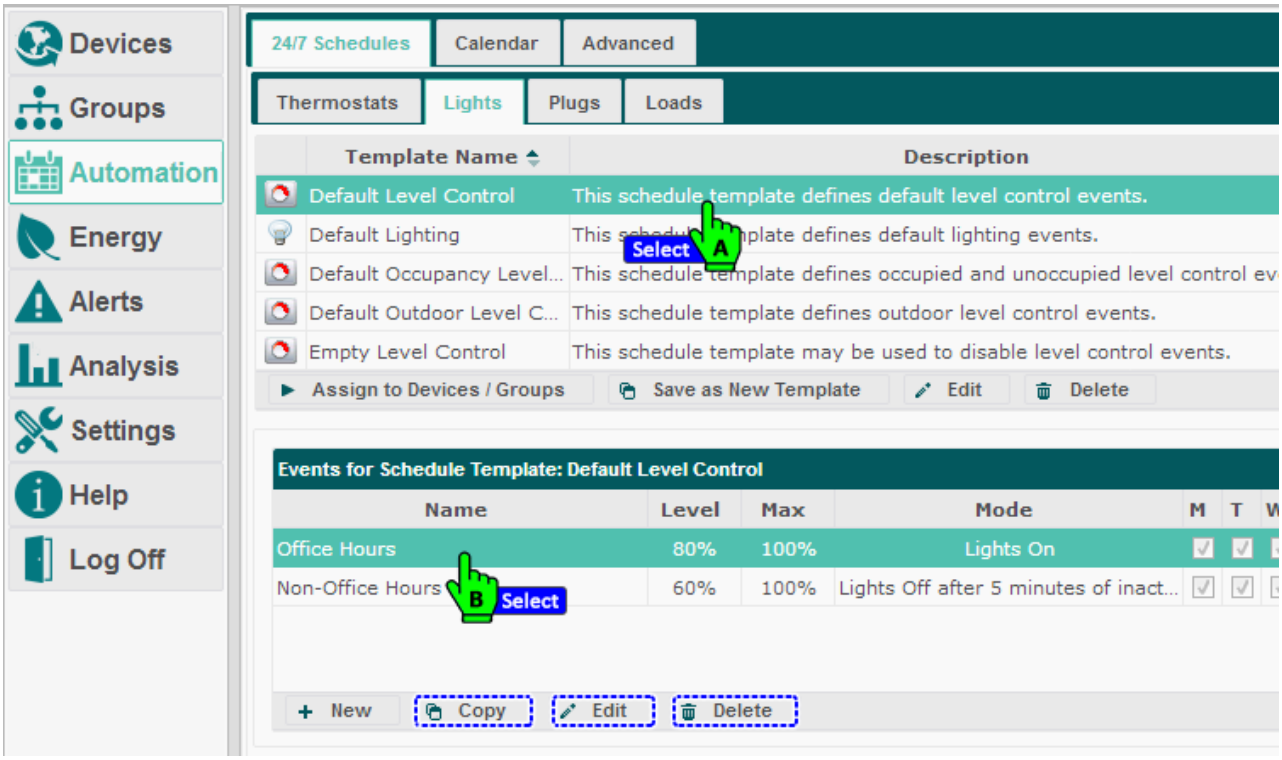


14. The **New Event** window appears. (**NOTE**: This window is for Level Control per the schedule template selected. It will be different if the schedule template selected is for Lights On/Off)
    - Enter a **Name** for the new event in the name field.
    - From the **Mode** dropdown, select the mode as per On/OFF.
    - Set the **Time Delay**
    - Set the **Level (%)** of the light.
        NOTE: The Lights On/Off control is different for each mode. Read the conditions below each dropdown.
        NOTE: The OFF delay can used for all modes except the "Lights On" option.
        NOTE: This is specific to a physical dimmer, not the EnOcean Rocker Pad.
    - Under **Effective Days**, select the box for each day the schedule should be in effect.
    - Under **Effective Time**, select the time the schedule should begin and end. Schedules can be based on Sunrise or Sunset if the ZIP code is entered into the system.



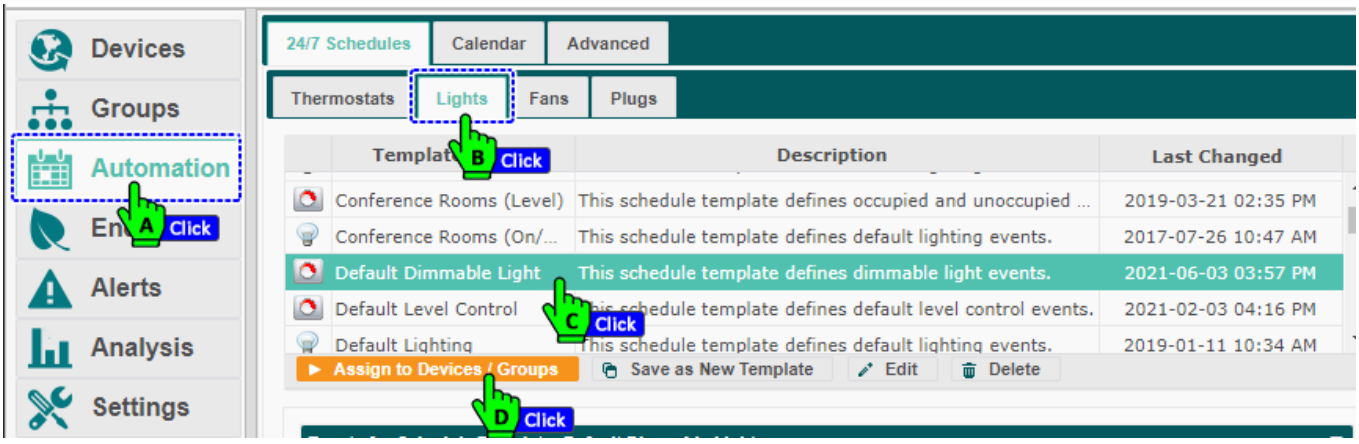
NOTE: After creating a new event for a schedule, the schedule needs to be assigned to a device. Refer to the section **Assigning an Event to a Schedule** for more information.

15. Additional **Event** configurations are below.
    - Select an event and click **Copy** to copy the settings to another event.
    - Select an event and click **Edit** to edit the event. (**NOTE**: After editing an event in a schedule, it is mandatory to reassign the schedule to a device or group for the changes to be applied. Refer to the section **Assigning an Event to a Schedule** for more information.
    - Select an event and click **Delete** to delete the event.

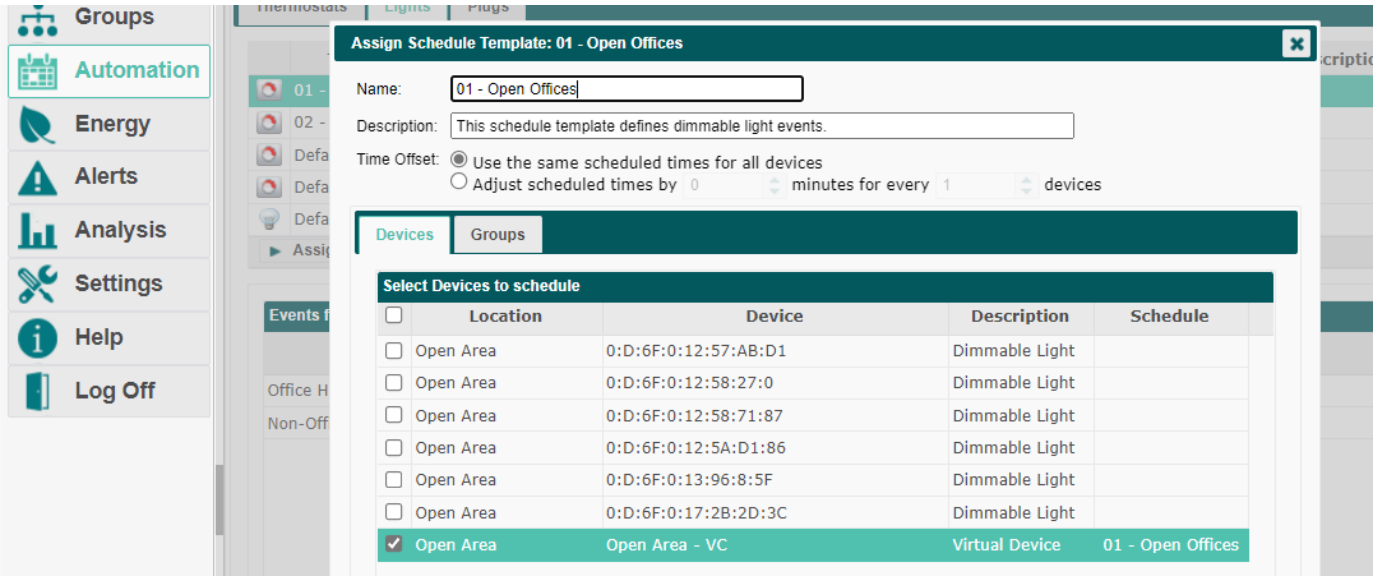


5.1.2. Assigning an Event to a Schedule

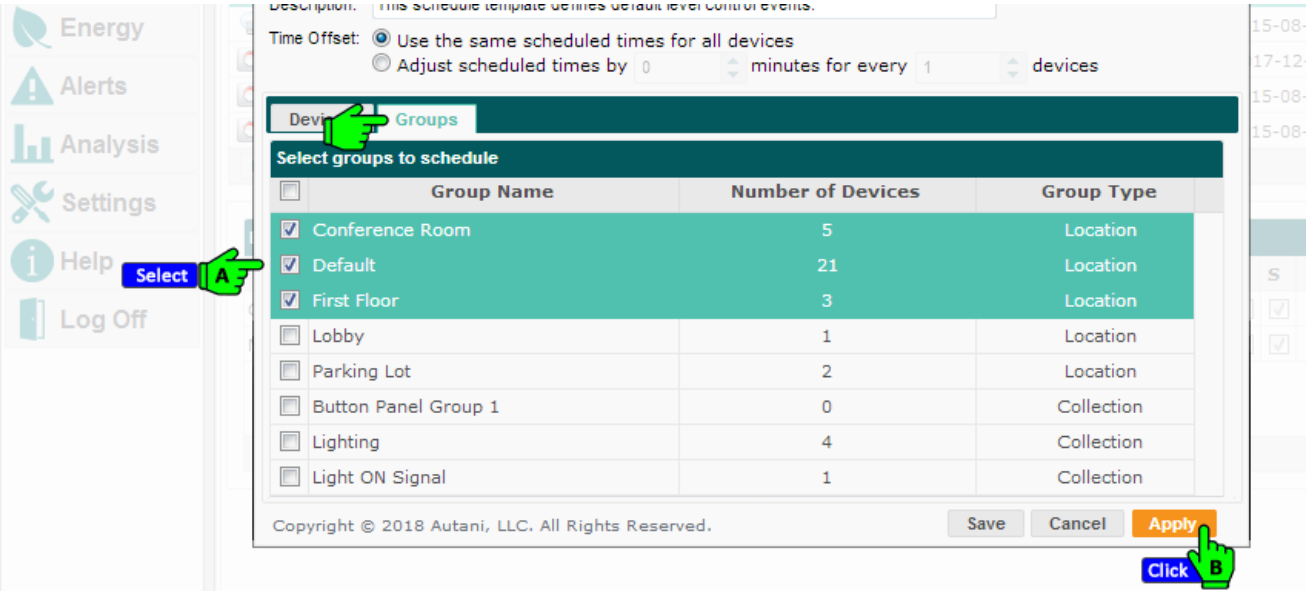
16. After **creating a new event** or after **editing an event**, the schedule template needs to be assigned/reassigned to devices or groups. Select a schedule template and click **Assign to Device/Groups**.



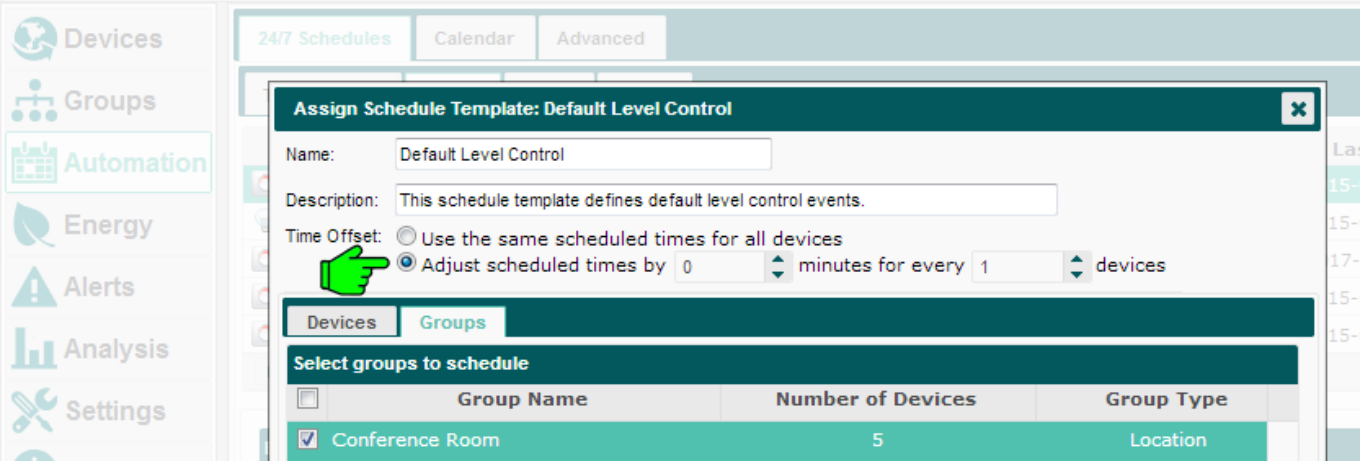
17. The **Assign Schedule Template** window appears with the **Devices** tab selected by default. Select one or more VCs with relevant endpoints from the list of available devices. If you are assigning the same schedule as before note that it will already be selected.



- Select the next tab **Groups**. Choose the required group(s) from the list and click **Apply**.



- The **Time Offset** feature is typically used in HVAC applications. Device start times can be staggered to mitigate electrical surges.



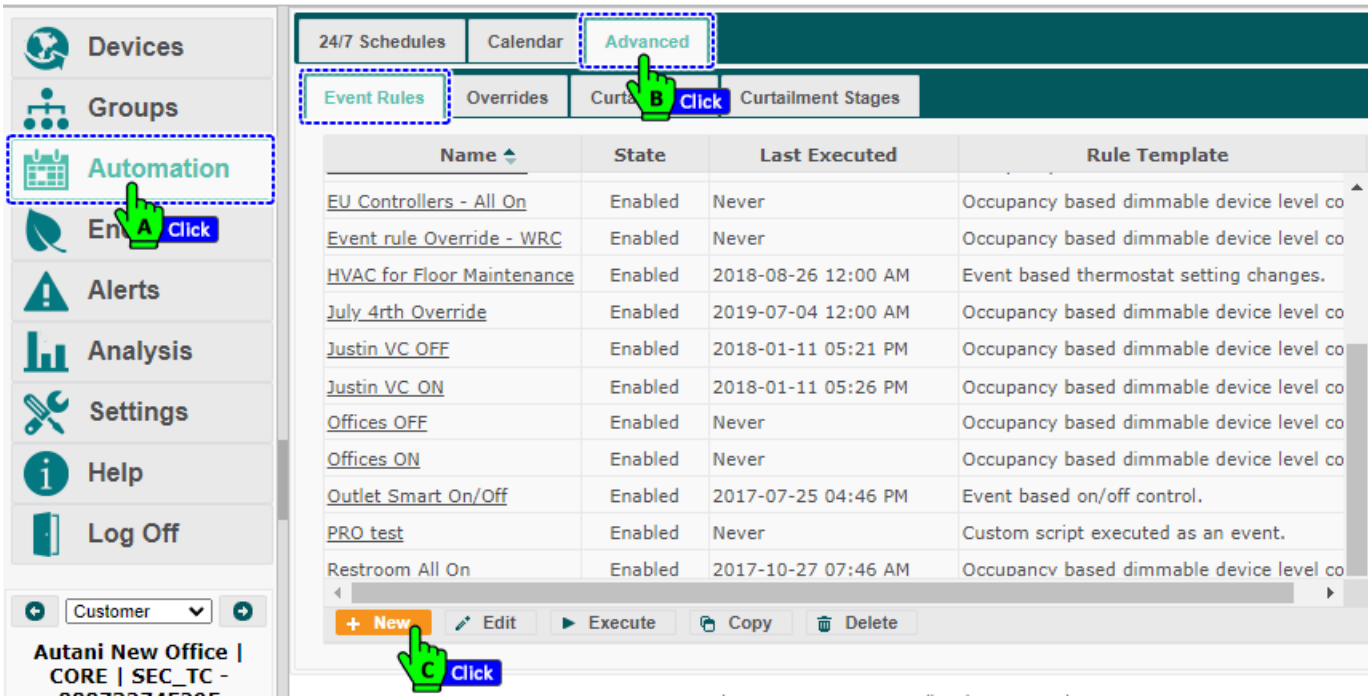
5.2. Configuring a Schedule Override

Schedule Overrides are used to make an on-demand change in the lighting system during certain events. The process to create a schedule override is explained below.

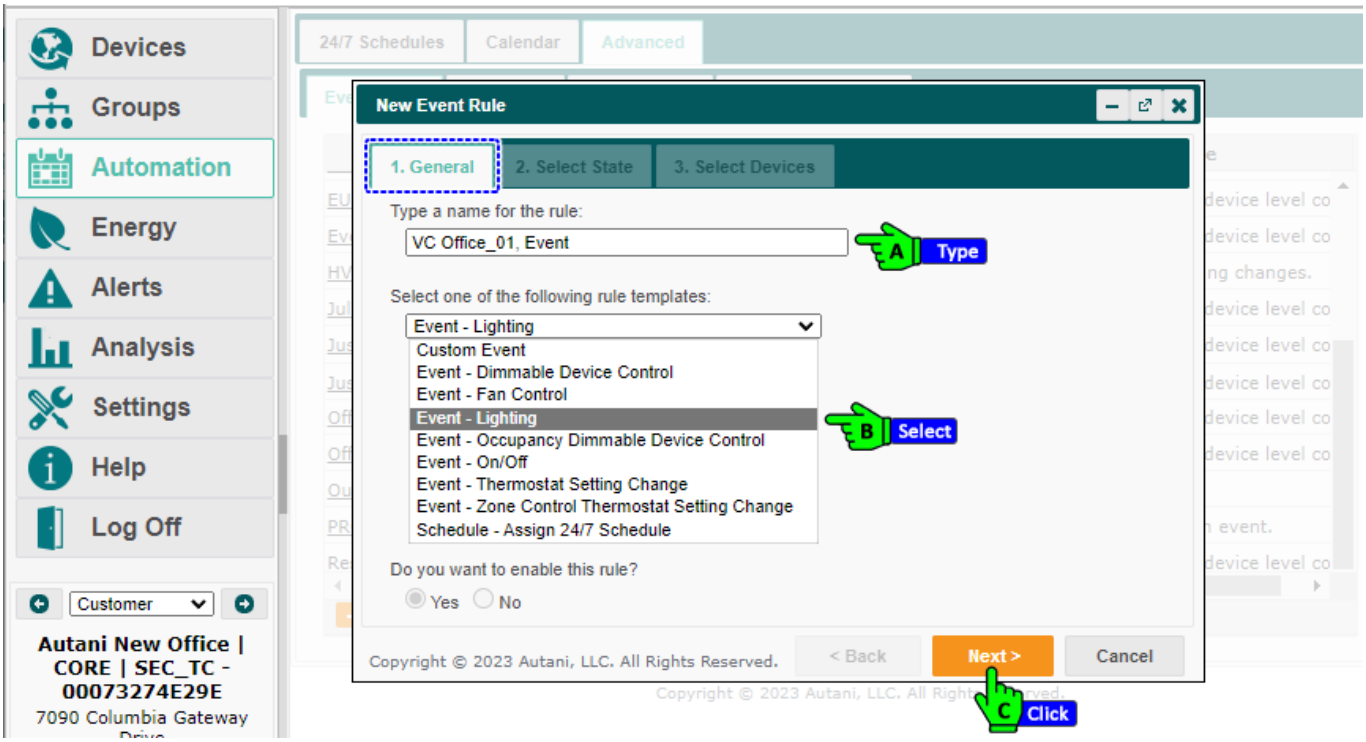
A. Create an Event Rule
B. Associate the Event Rule to an Override
C. Schedule an Override in Calendar

5.2.1. Create an Event Rule

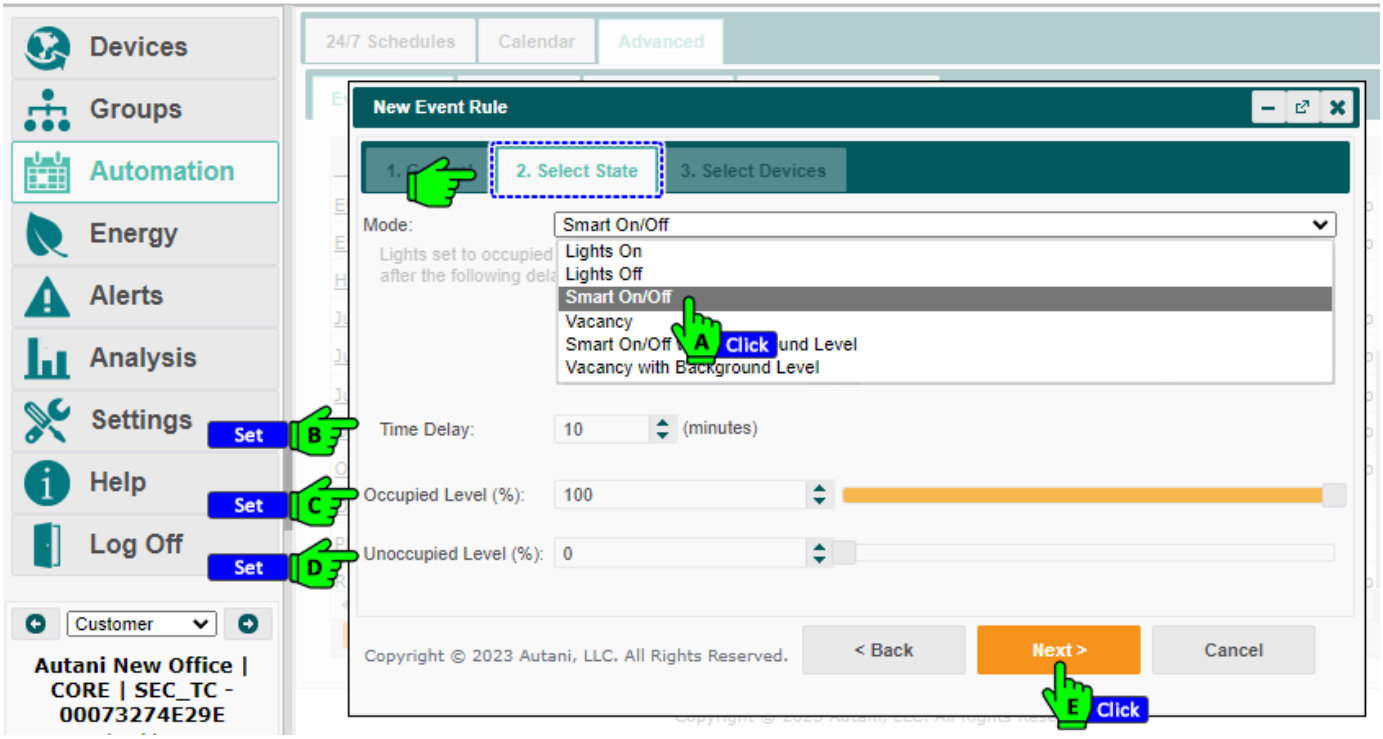
1. To create an event rule, select **Automation** > **Advanced**. The **Event Rules** tab is selected by default, displaying the list of existing event rules. Click **New** to create a new event rule.



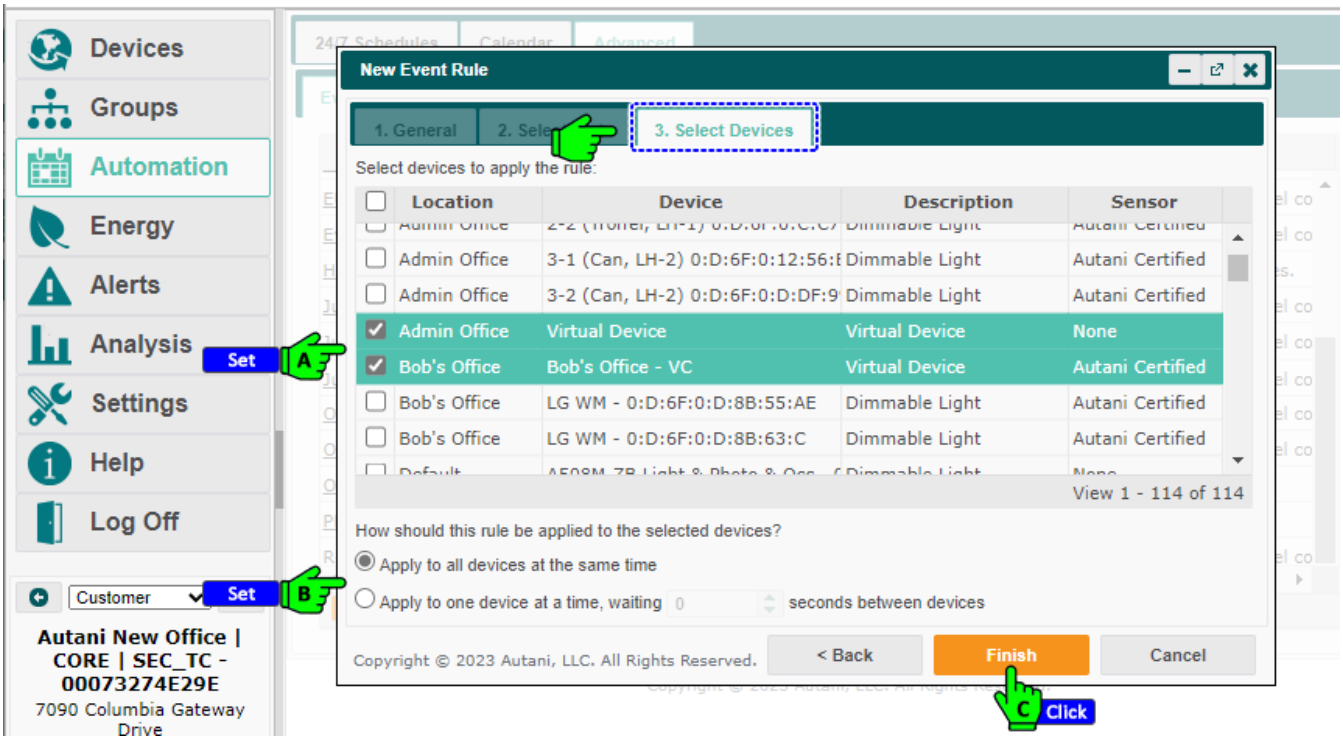
2. The **New Event Rule** window appears with the **General** tab selected by default. Type a **name** for the new event rule, and select a **rule template** from the dropdown, and click **Next**.



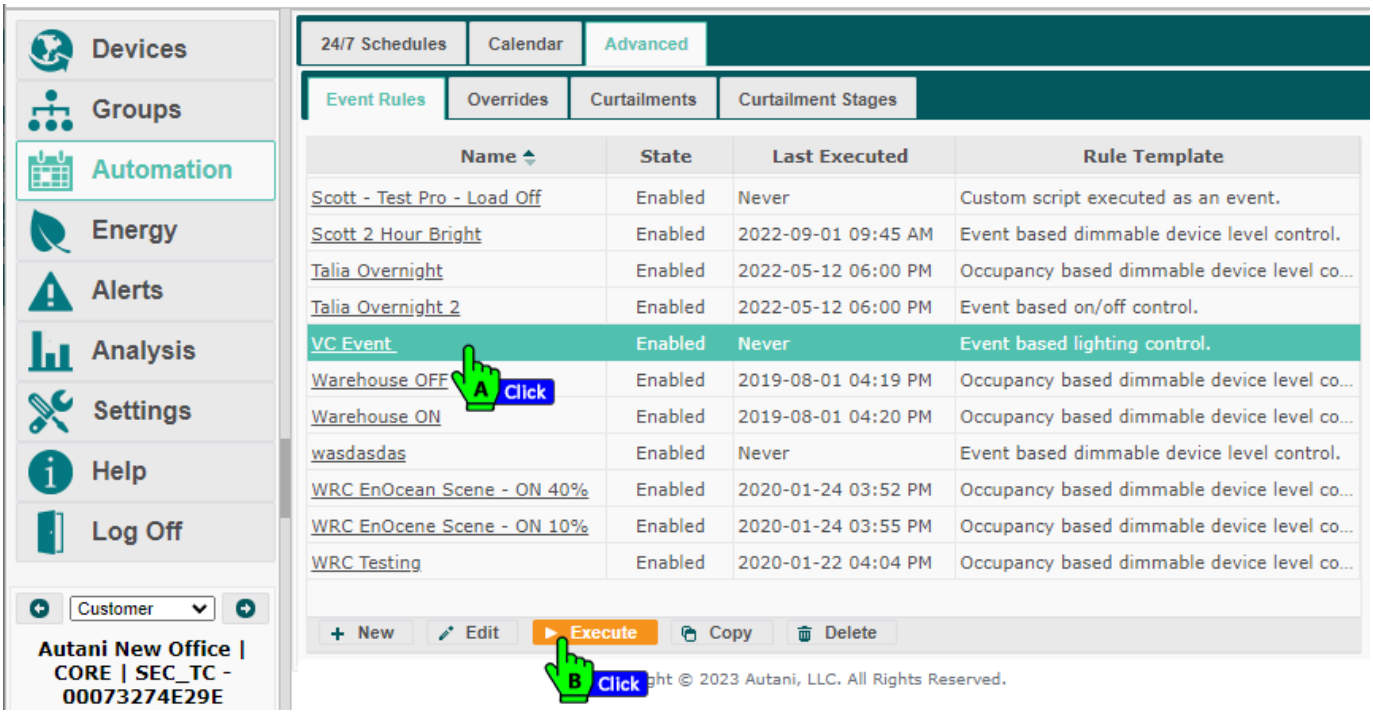
3. On the next tab **Select State** which has the settings for the **rule template** that was selected in the General tab. (**NOTE**: The setting details will differ for each type of rule template selected in the General tab.)
   - From the **Mode** dropdown, select a **Light Mode**.
     NOTE: The Lights On/Off control is different for each mode. Read the conditions below each dropdown.
   - The Time delay can be used for all modes except the **Lights On** option.
   - Set the Occupied & Unoccupied **Lighting Level %** and click **Next**.



4. On the tab **Select Devices**, select the devices for which the new event rule will be applied to. Click **Finish** to end the creation process.



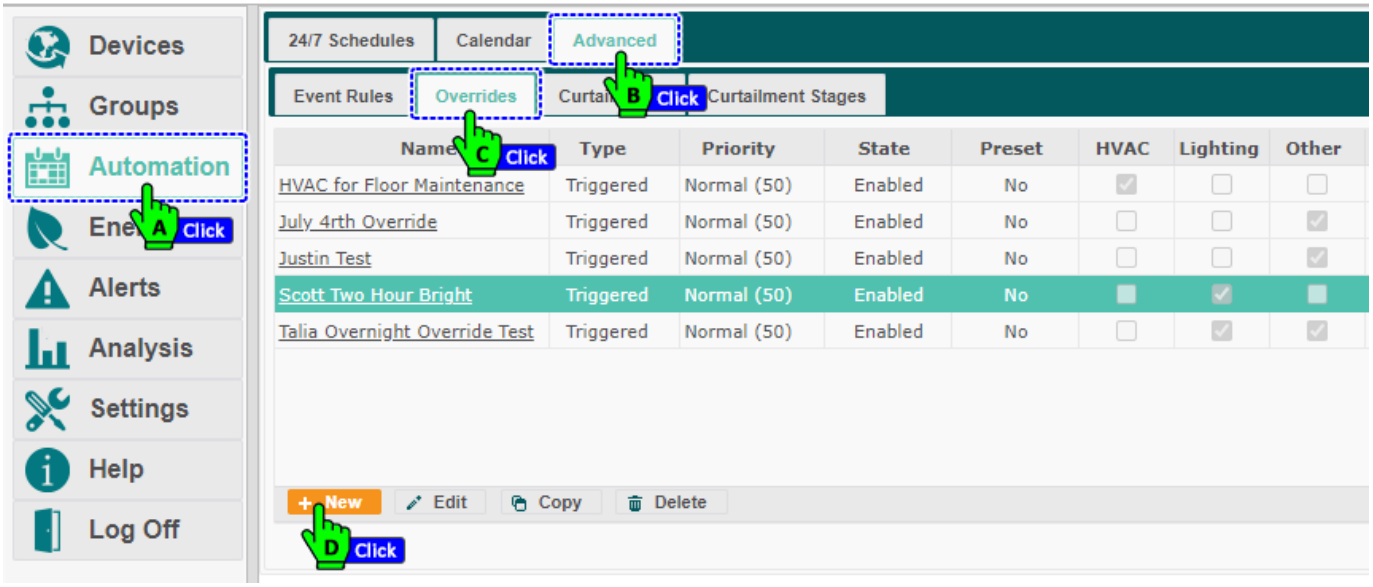
5. **NOTE**: The major advantage of an **event rule** is that they can be executed **on demand**. For example, if you have a facility with 100 devices and you want to turn ON all of them at the same time, you will build an event rule and then click **execute** to make an on-demand change.



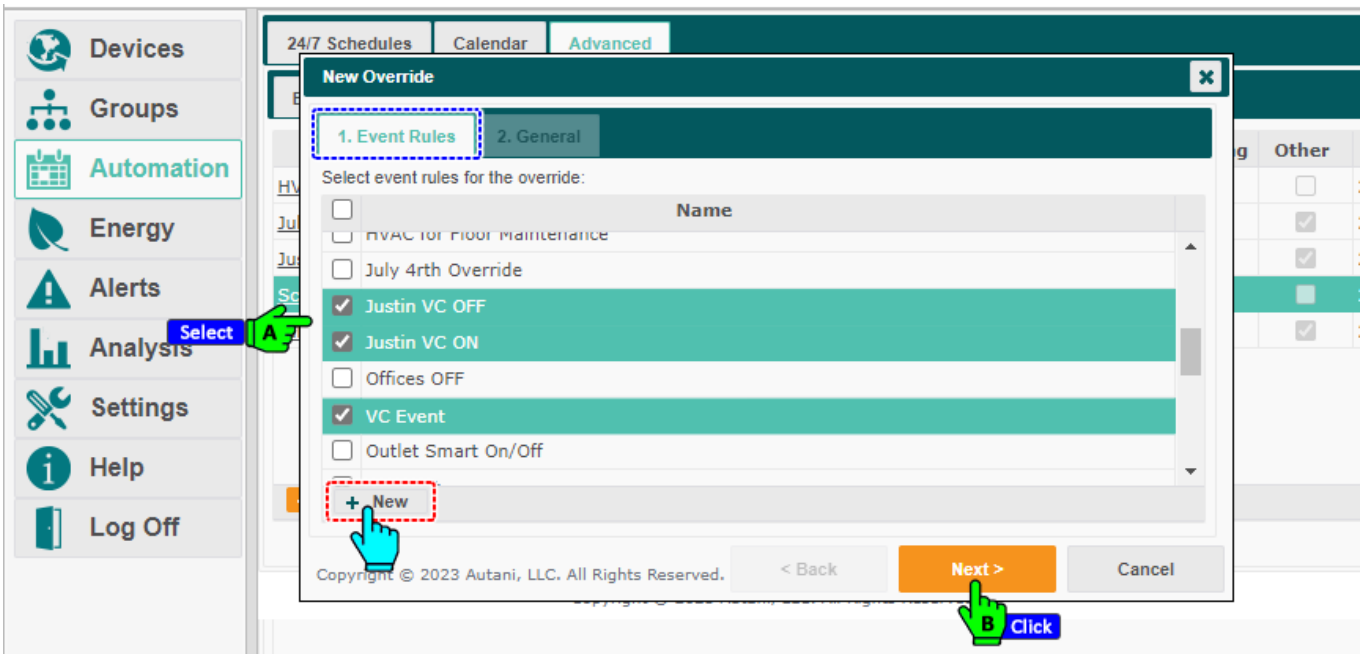
5.2.2. Create a New Override and Associate an Event Rule

A new override can be created from either the **Calendar** or **Advanced** tabs in the Automation section. The process will be the same for both.

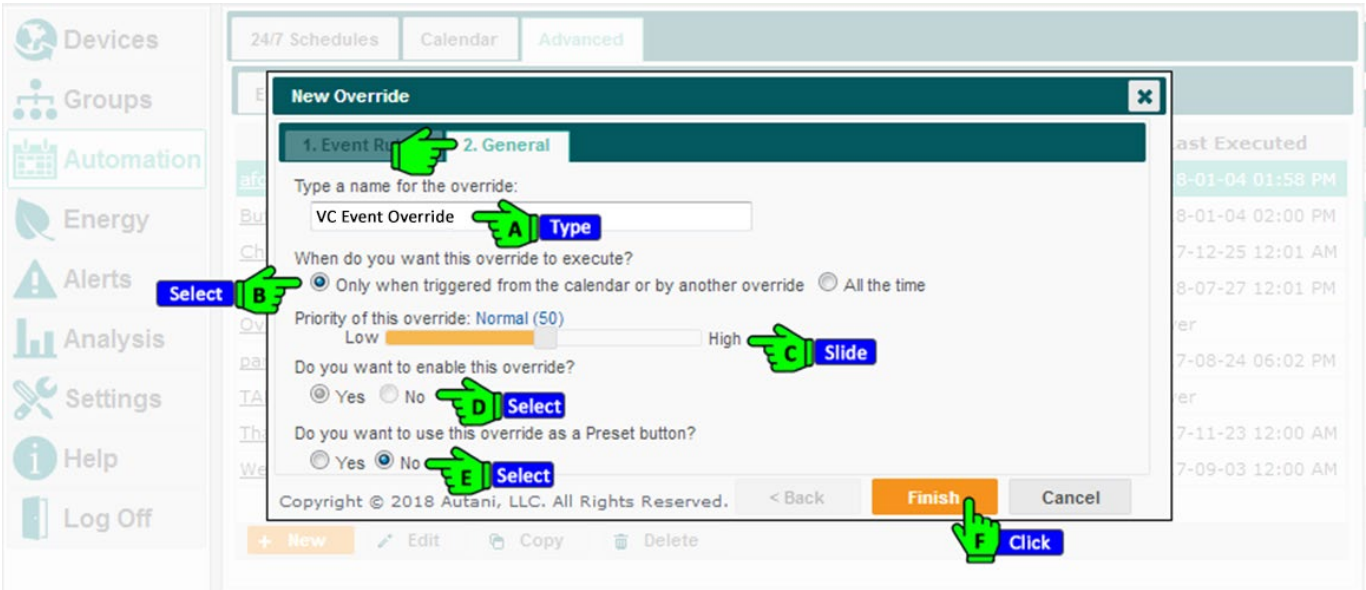
6. To create a new **override**, select **Automation** > **Advanced** > **Overrides**. The existing overrides are listed. Click **New**.



7. The **New Override** window appears with the **Event Rules** tab selected by default. The list of existing event rules is displayed. Select the event rule(s) to associate with the new override and click **Next**.
NOTE: There is an option to create a **New** event rule within this window, if one was not created earlier.

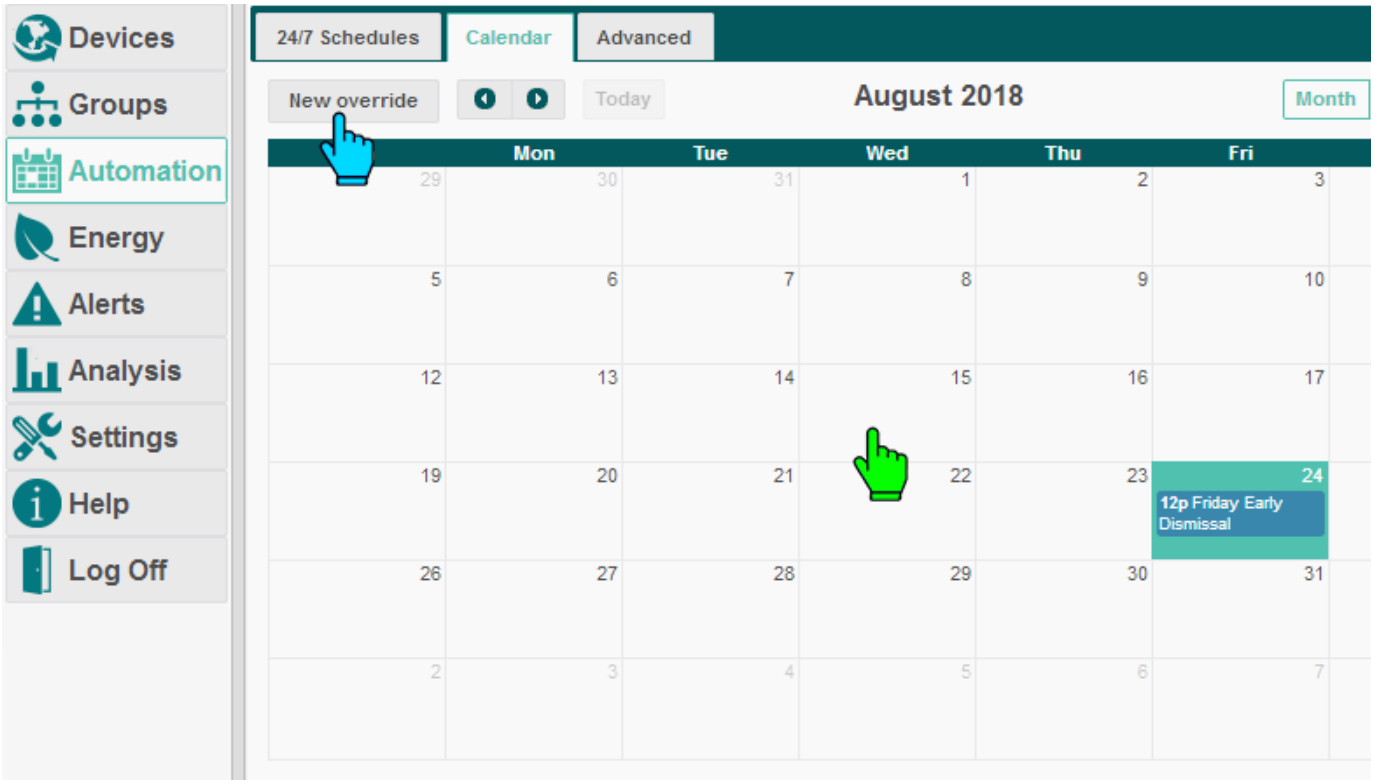


8. Select the next tab **General**, where the new override can be configured.
   - Enter a **name** for the new override.
   - Select the **condition** to execute the override (only when triggered, or all the time).
   - Set the **priority** for the override.
   - Choose whether to **enable or disenable** this override.
   - Choose whether to use this override as a **Preset** button. This preset button will be available inside **Settings** > **System** > **Presets**.
   - Click **Finish**.

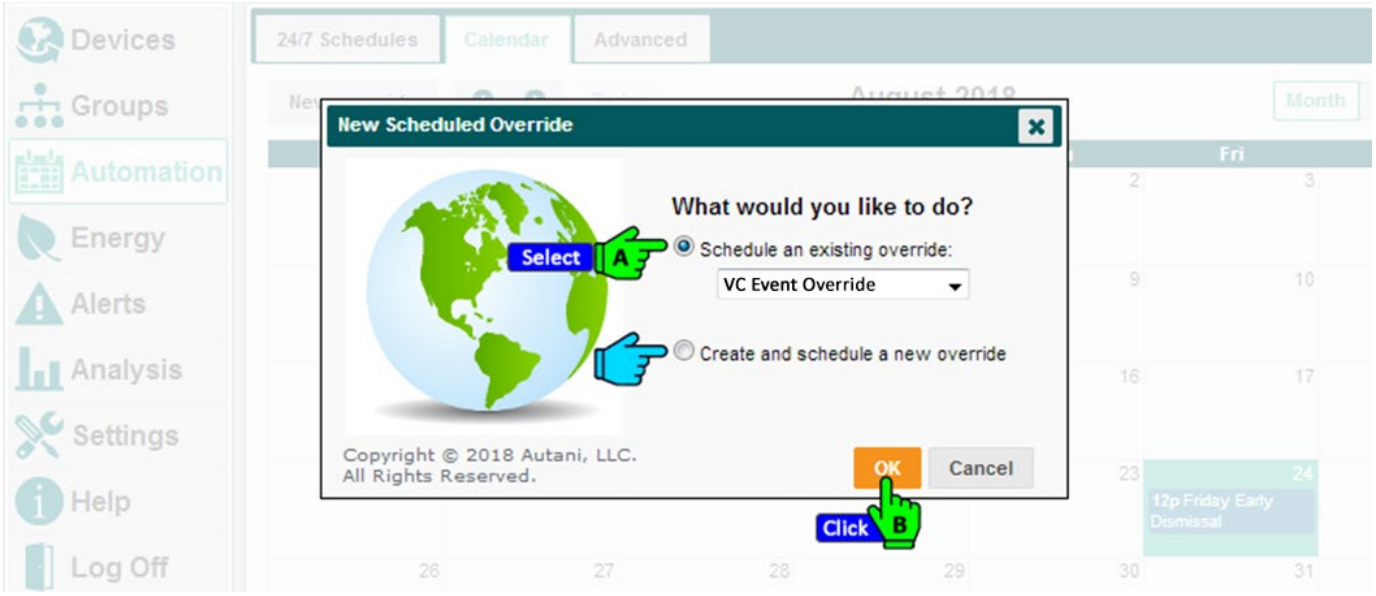


5.2.3. Schedule an Override in Calendar

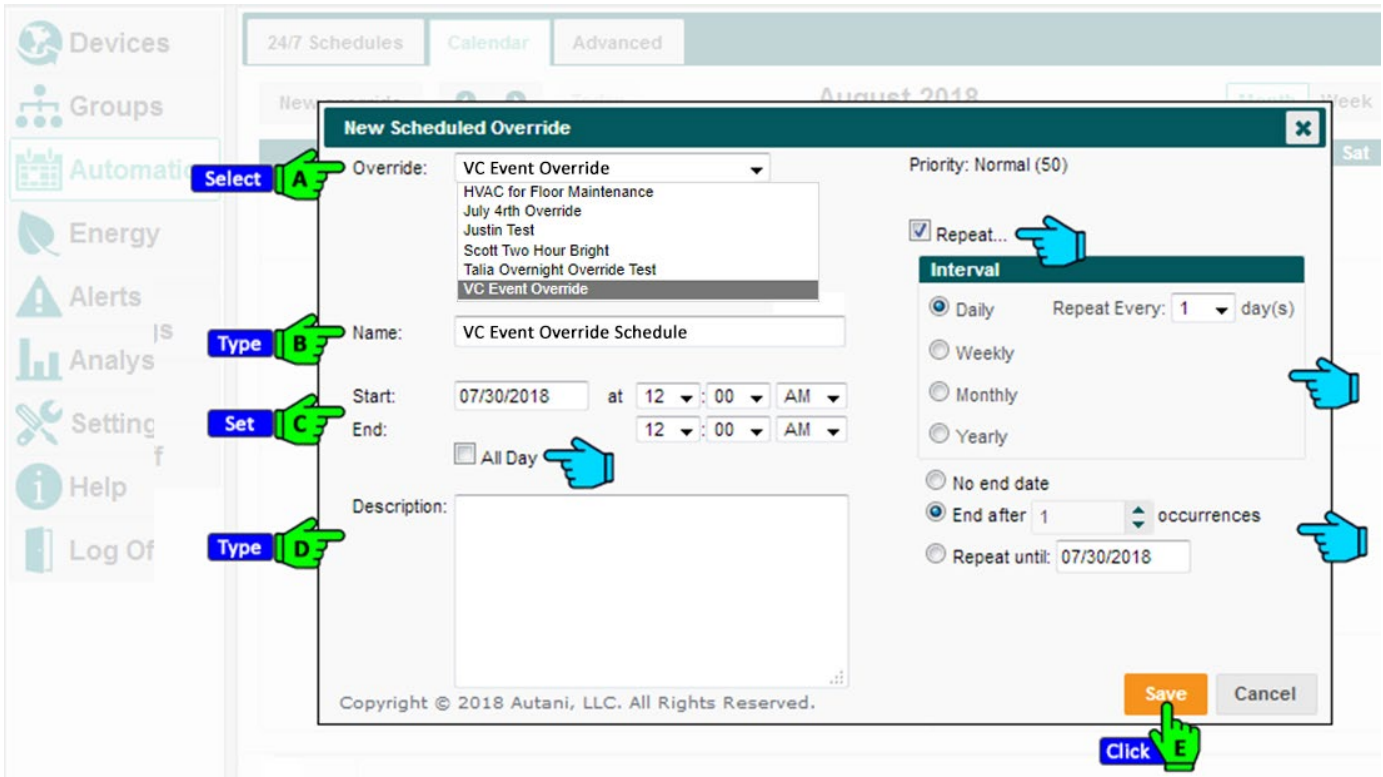
9. To schedule an override through the calendar, select **Automation** > **Calendar**. The calendar screen will load. Click on any **day** of the calendar or click the **New override** button above the calendar.



10. The **New Scheduled Override** window appears. Select **Schedule an existing override** and click **OK**.
    NOTE: There is another option, **Create and schedule a new override**, where new override can be created scheduled.

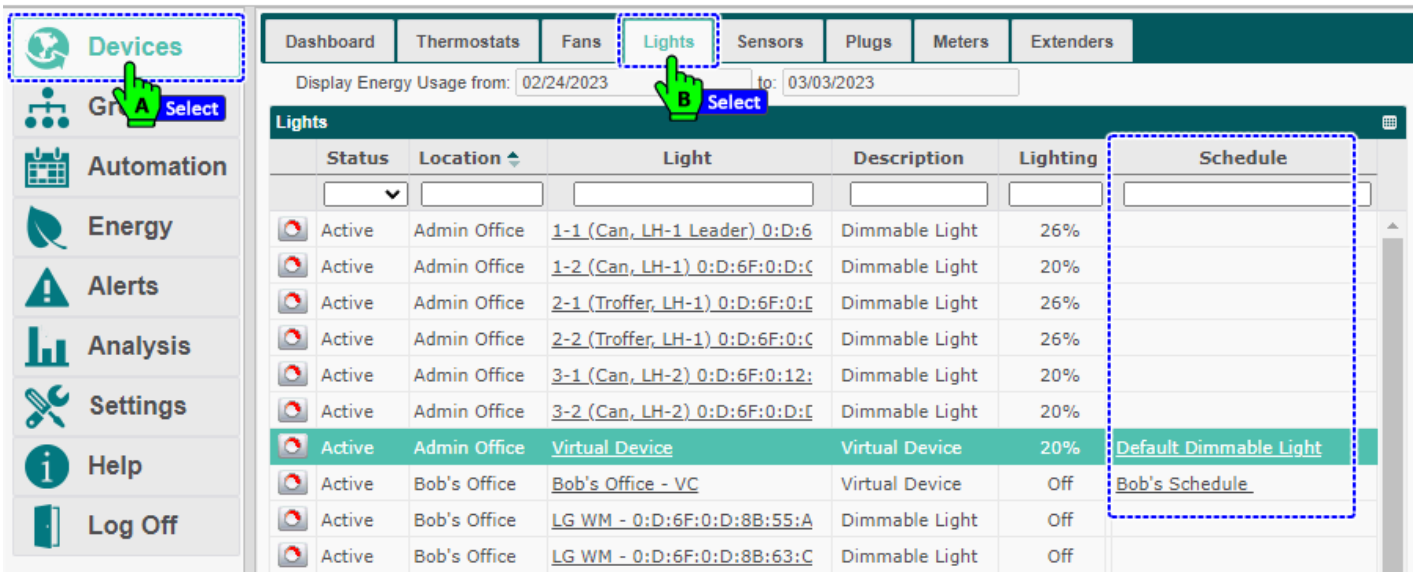


11. Another **New Scheduled Override** window appears.
    - Select an **Override** from the dropdown. (**NOTE**: The priority level set in the previous section is displayed here.)
    - Type a **Name** for the schedule override.
    - Set a **Start** and **End** time for a day or select **All Day**.
    - Type a **Description** of the scheduled override.
    - If required, select the **Repeat** option and the set the interval to repeat the schedule override. Overrides can also repeat for a set number of occurrences or until a specific date.



5.3. Verifying the Currently Assigned Schedule

The schedules assigned to a Virtual Circuits can be viewed/verified through the **Devices** > **Lights** section. From the **Schedule** column, click on any of the schedules to view and verify.



6. Setting Up Daylight Harvesting

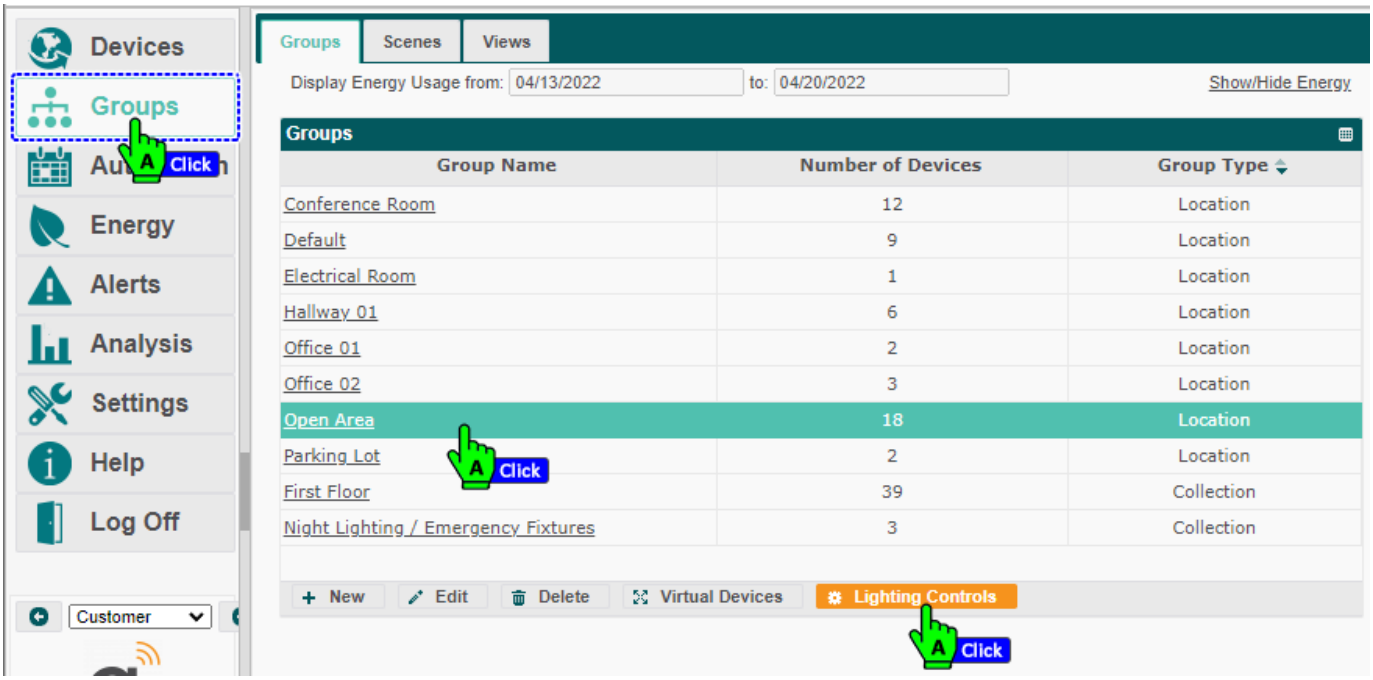
A Virtual Circuit can leverage additional energy savings through the light harvesting feature available in EnergyCenter®. Daylight Harvesting uses a photocell sensor to monitor and sense ambient light available in the surroundings.

And then reduce/adjust the illuminance of the lights in an area, which leads to energy savings on the system.

Light Harvesting

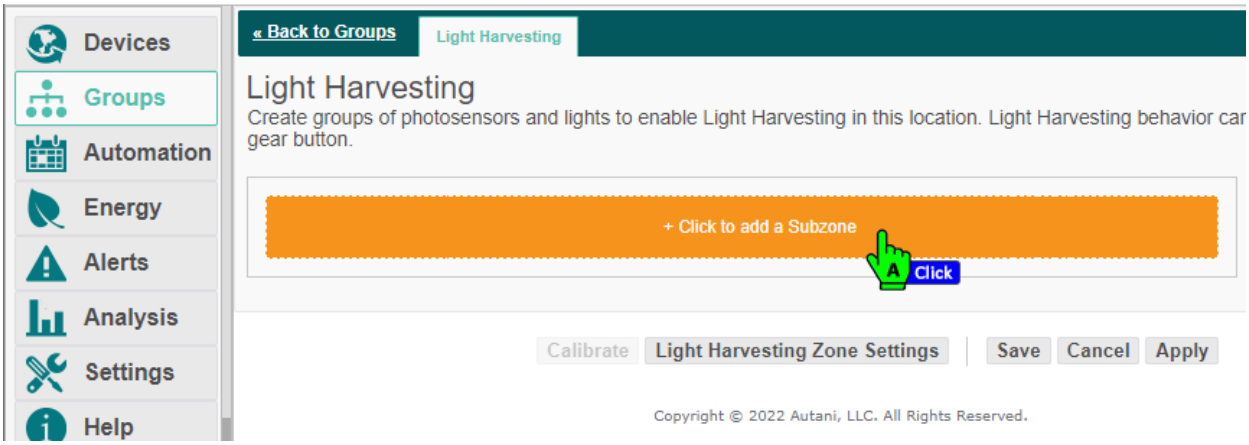
The following procedure gives information about the Virtual Circuit Configurations for Daylight Harvesting –

1. The first part is to define a subzone -
   - Make sure to create a Location group with required lights and Sensors. (See Section: 2).
   - Make sure to setup a Virtual circuit. (See Section: 3. & 4.).
   - To define Light Harvesting subzone for a Location Group with a Virtual Circuit -
     - Select **Groups** section on left side of EnergyCenter® application.
     - From the displayed list of groups, select a Location Group.
     - Then click on "Lighting Controls" button.

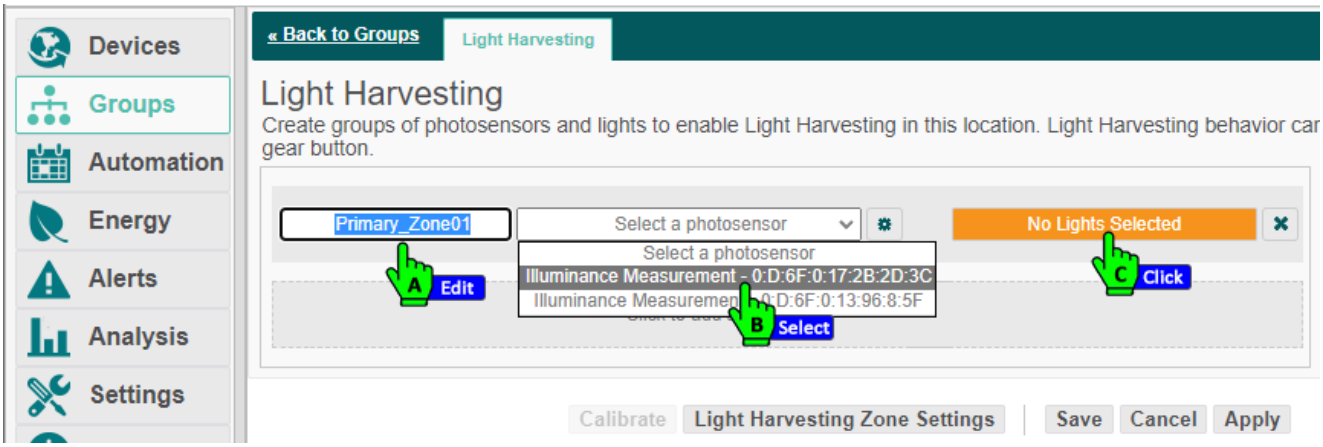


- The Light Harvesting page loads with a button on the page to configure the zone.
  - Click on the "**+ Click to add a Subzone**" to add a Subzone to the Group.

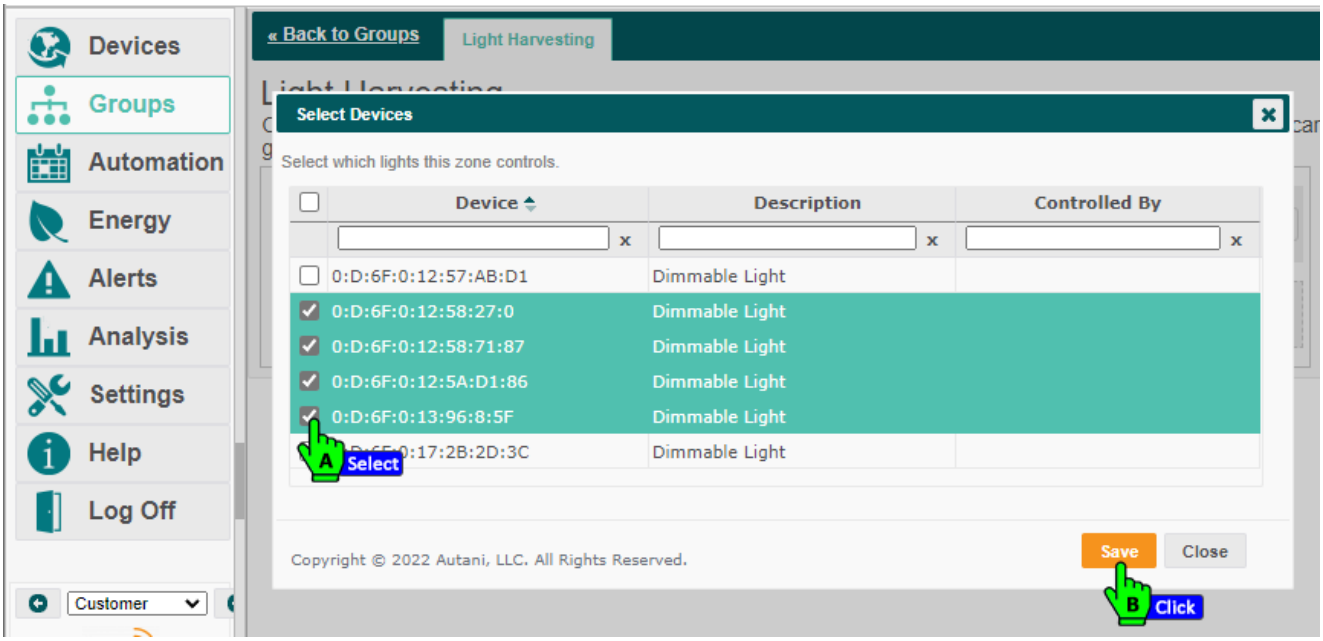
    NOTE: Add subzones as much as photosensors are available.



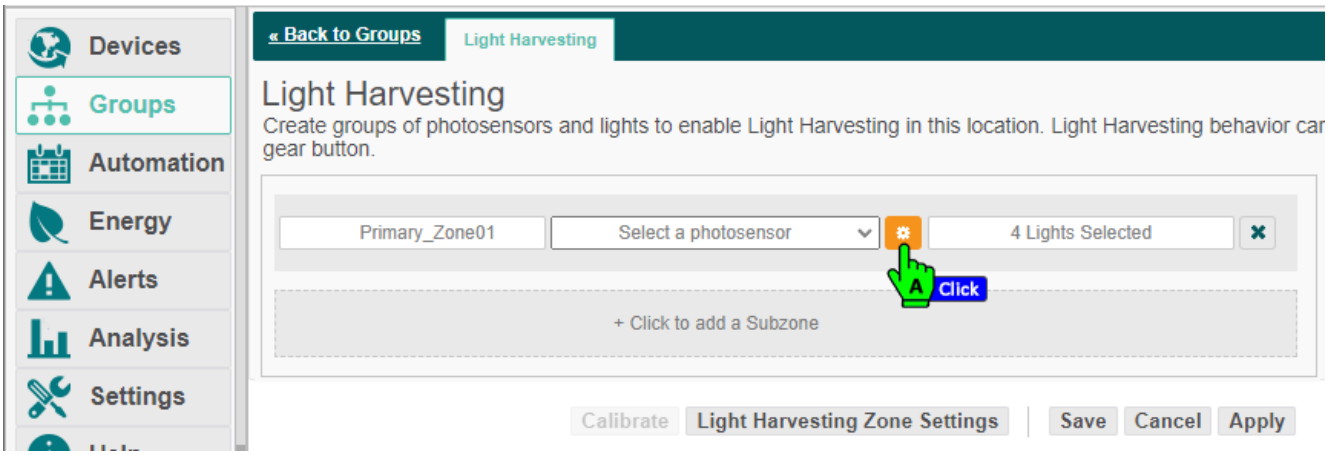
- The Subzone row is added to the group -
  - Edit the name filed to give a **Name** to the Subzone.
  - From **Select Photosensor** drop down, **select a photosensor** to associate to the zone.
  - Then click on the **No Lights Selected button** to select Lights for the zone.



- The Select Lights window appears -
  - Select the required lights.
  - Click Save button to associate the lights to the Zone.

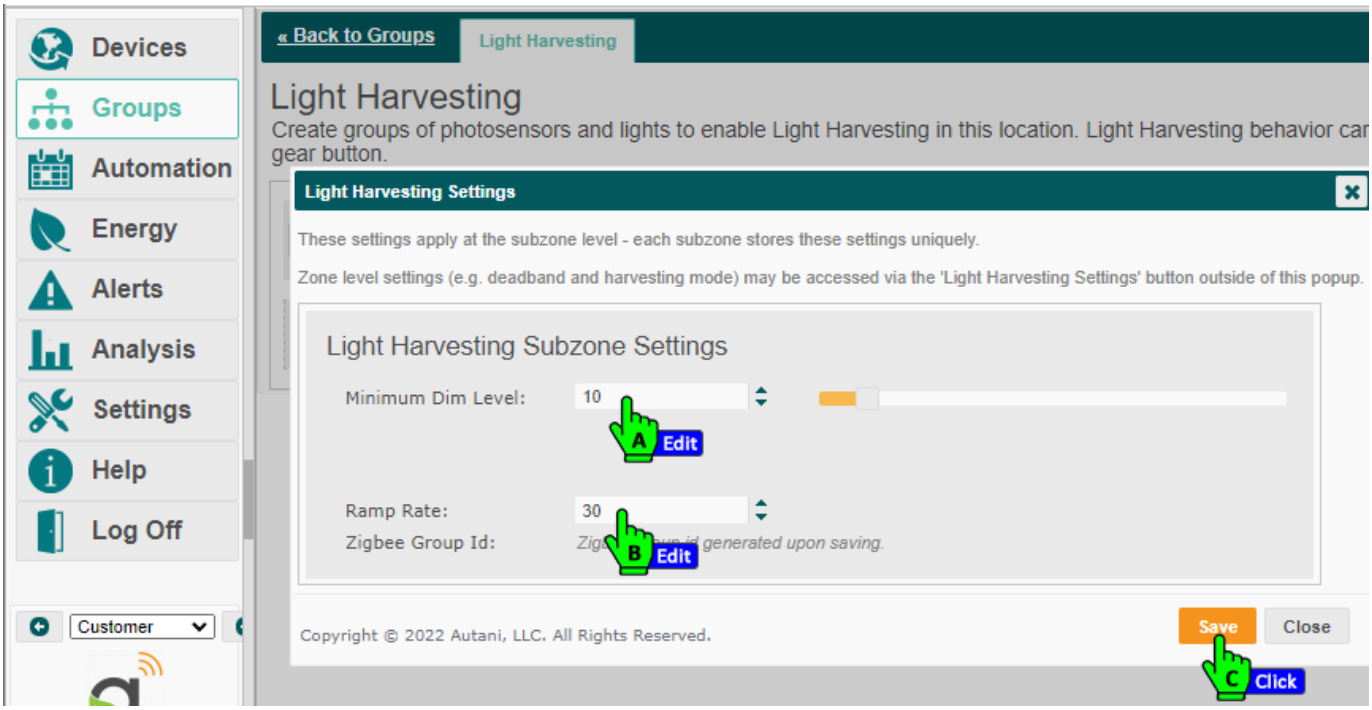


- Select the gear button to edit the settings (Dim settings) for the zone.



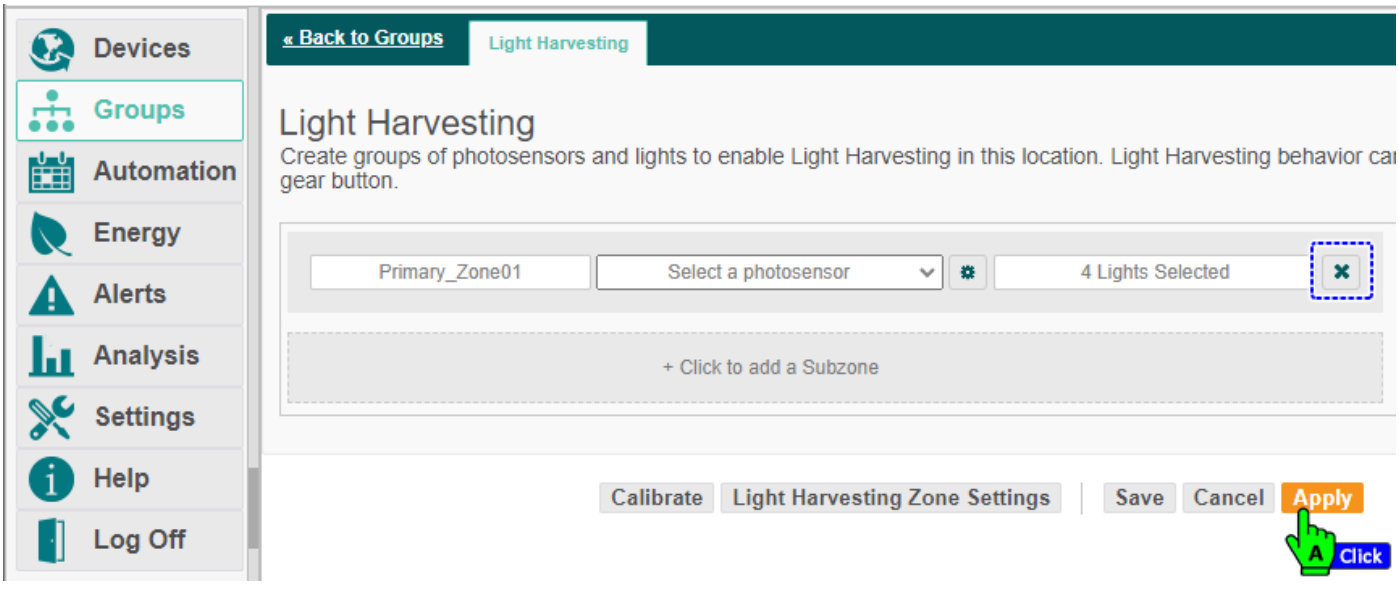
- The **Light Harvesting Settings** window appears.
  - Set **Dim Level** for the selected lights.
  - Set **Ramp Rate** for the Dim level transition to take place.

    NOTE: The **Zigbee Group ID** is auto generated by the system, once the zone is saved.



- Now click on **Apply** button to save the Zone to the group.

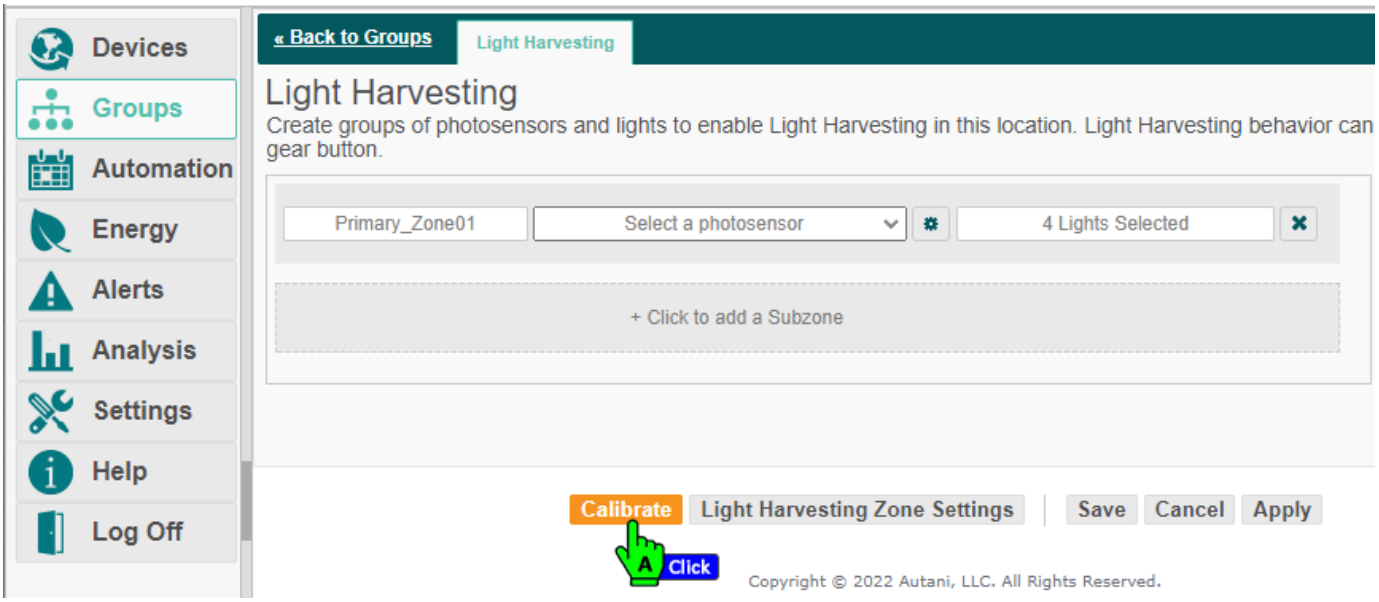
  NOTE: There is a button to delete the Zone on the top right corner.



- Create new Zone for another photosensor and associate the lights to it.
- Repeat Steps 3-9 to setup another day light harvesting zone.

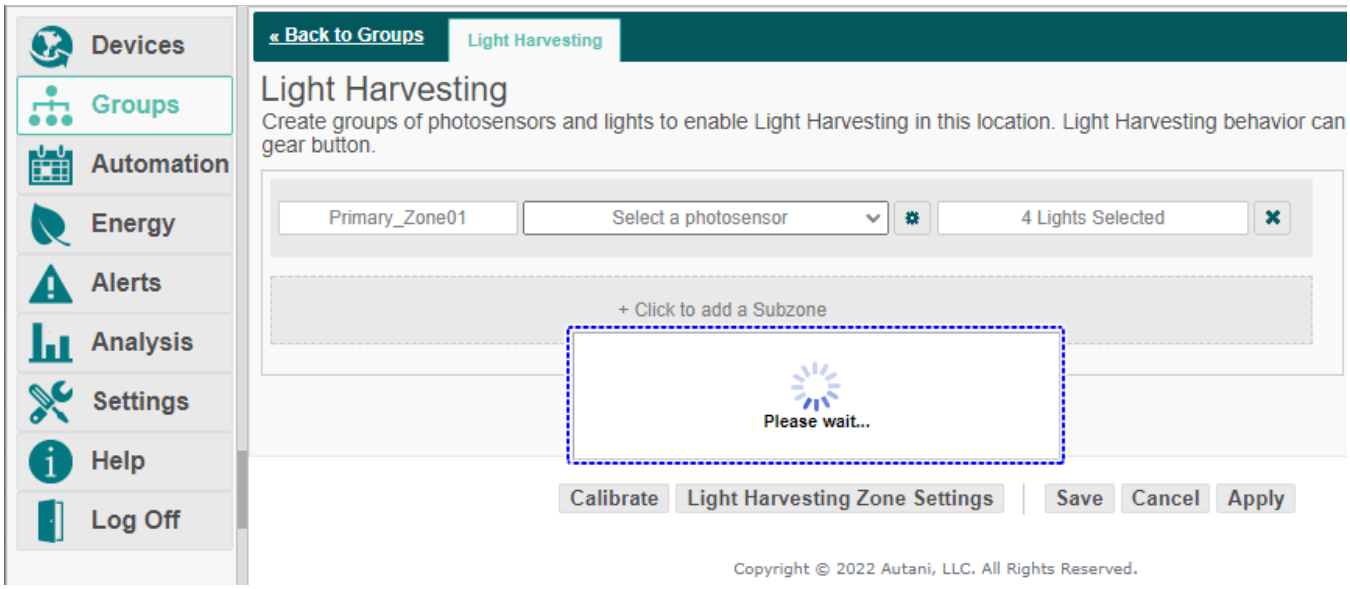
2. The second part is to **Calibrate** Daylight Harvesting the area (For effective Daylight Harvesting).
   - The second part of the light harvesting is **Calibration**.
     - Make sure you are still on the Light Harvesting page.
     - Click on the **Calibrate** button.

       NOTE: The calibration will occur when photosensor detection is consistent or stable.

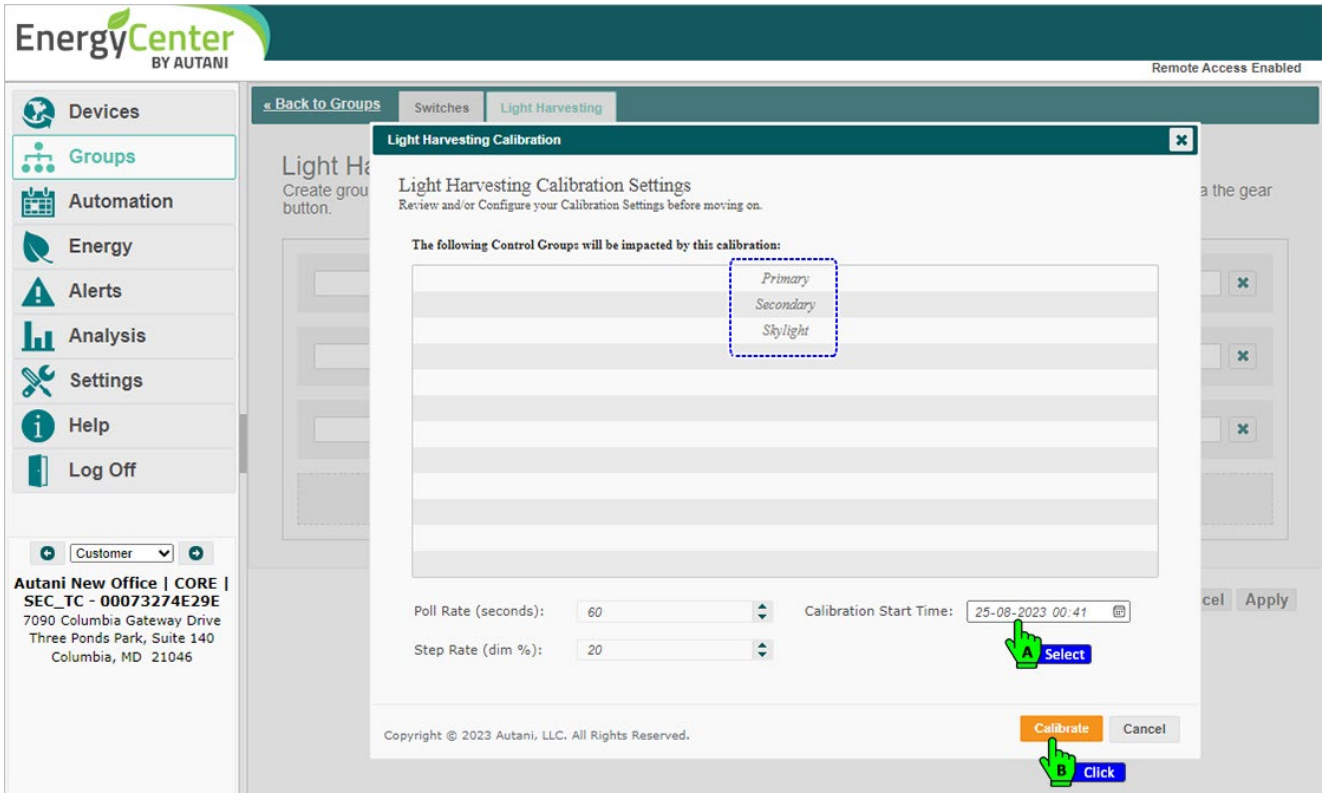


   - The Calibration starts and is carried out in the background.

     NOTE: The time of calibration depends on the system and devices on the location group.



- The Calibration can run immediately or can be **Scheduled**.
  - The Groups visible in the window at the time of **calibration** can get Impacted.

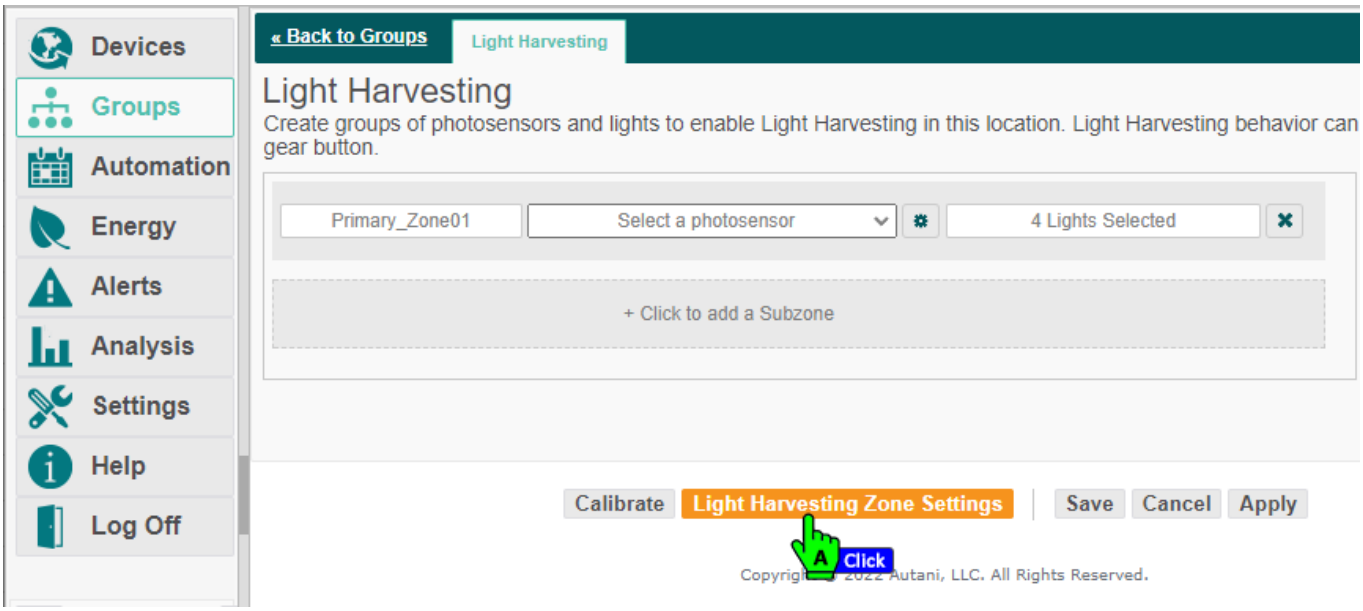


- The main reason to run **calibration** is to keep Light Value stable. And when the area is dark, Light Value will be most stable.

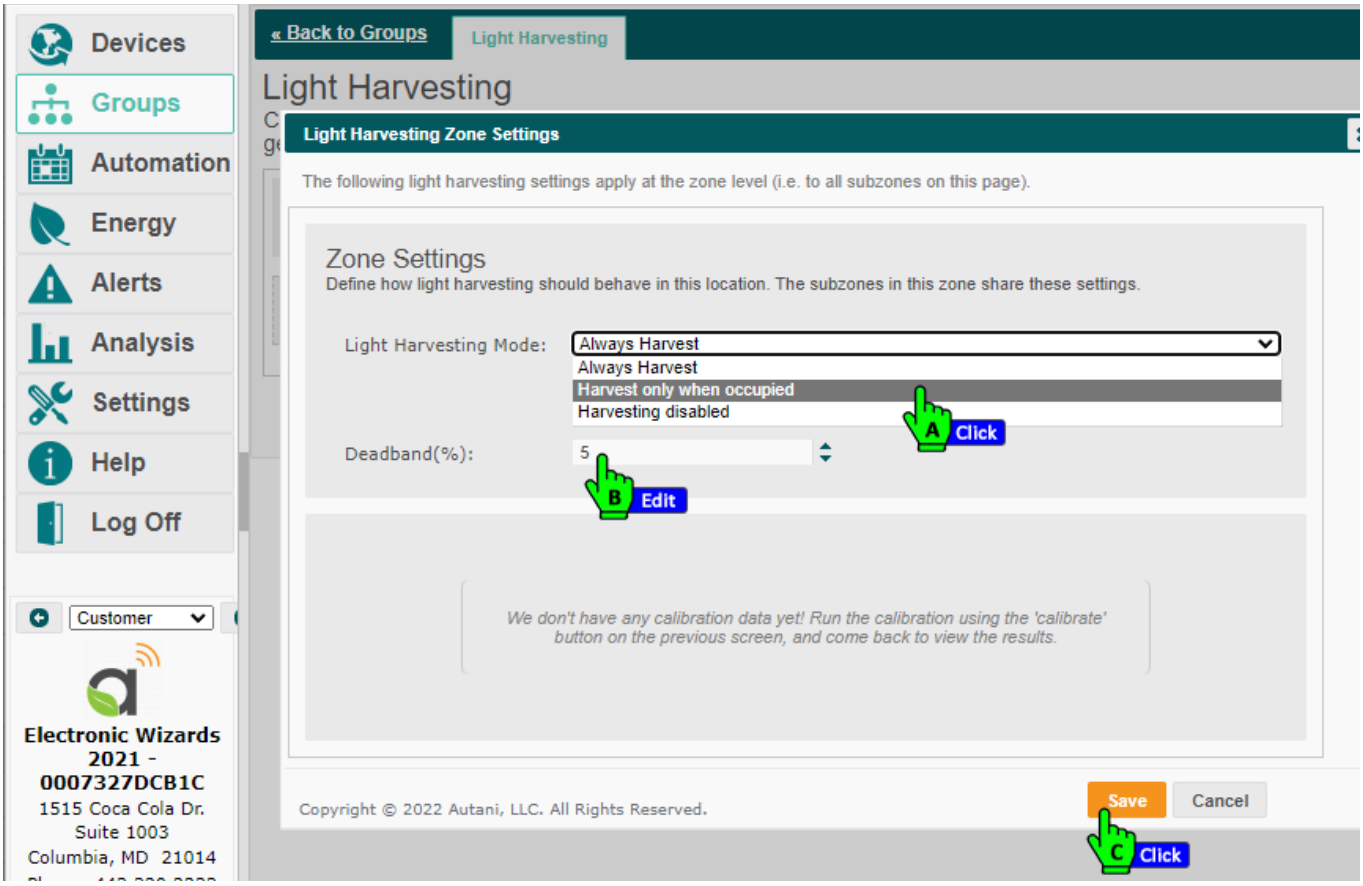
  Note: If the ambient light in the area is not going to change much, we can run the **calibration** at that time as well.

  Note: It is strongly Recommended to run calibration at nighttime, when the lights are off and there is no too much ambient light.

- The last setting in the Light Harvesting page is "**Light Harvesting Zone Settings**" button.
  - Click on "**Light Harvesting Zone Settings**" button.



- The Light Harvesting Zone Settings window appears.
  - Select **Light Harvesting Mode** and **Deadband (%)** field**.**
  - Click on save button.



7. Configuring Switch Control Groups

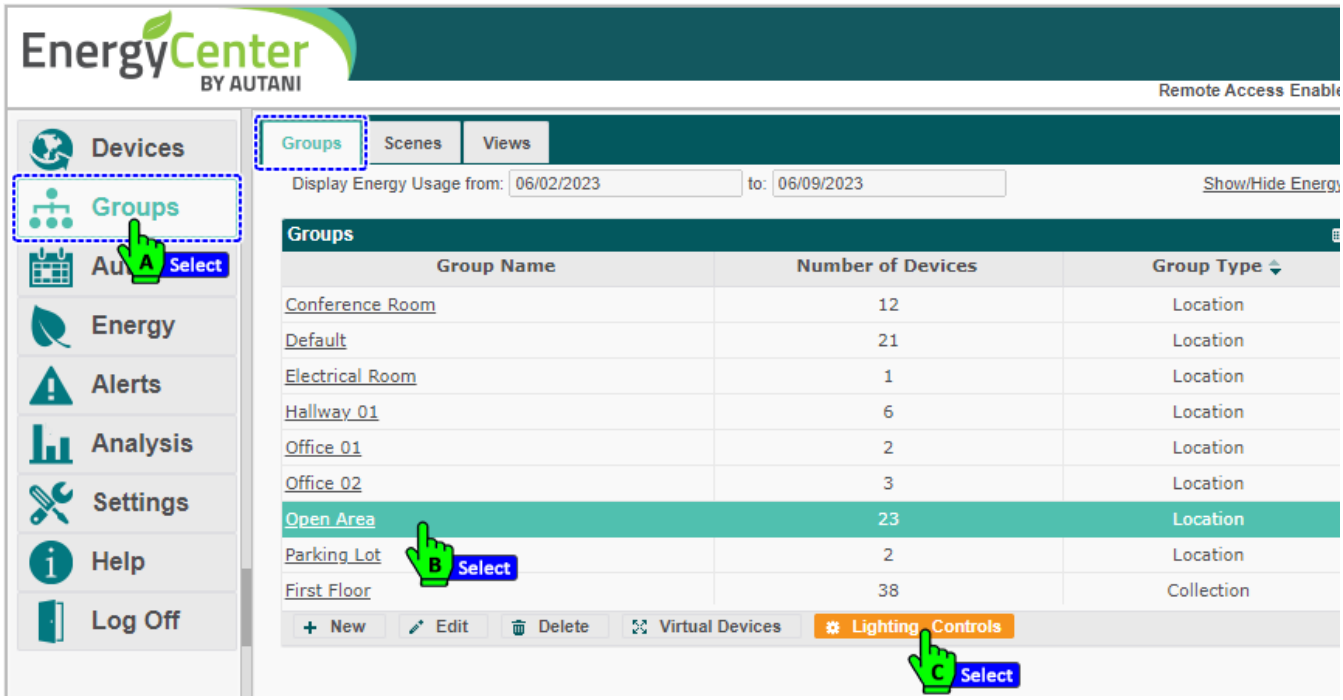
A **Switch Control Group** is a method of creating a zone within a group which is already configured as Virtual Circuit.

Every zone will be assigned with a switch(s), and then the switch(s) will have their own lights associated to it.

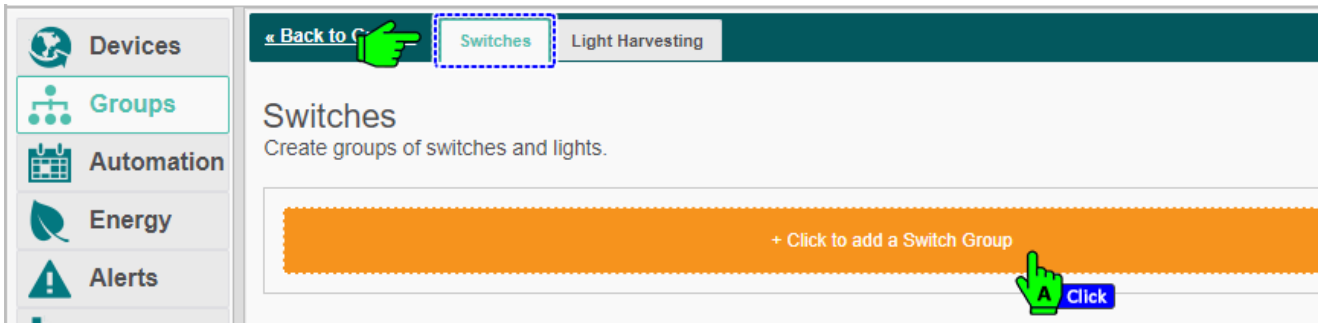
NOTE: Ensure to remove the switches associated inside Virtual Circuit of the group, before associating them to the Switch Control Group. Switch Control Groups are only required for complex sequences of operations that require many physical switches. To replicate single-pole or three-way functionality continue with switch associations at the Virtual Circuit under 'Details'.

Follow the below instructions to configure a Switch Control Group for a group with Virtual Circuit.

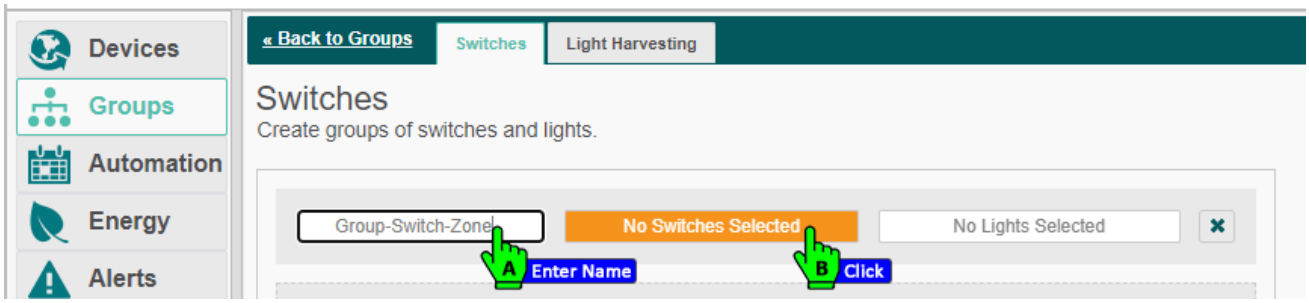
1. Select **Groups** section, the Groups tab is selected by default with list of groups. Then select a group from the list which is already configured with Virtual Circuit.



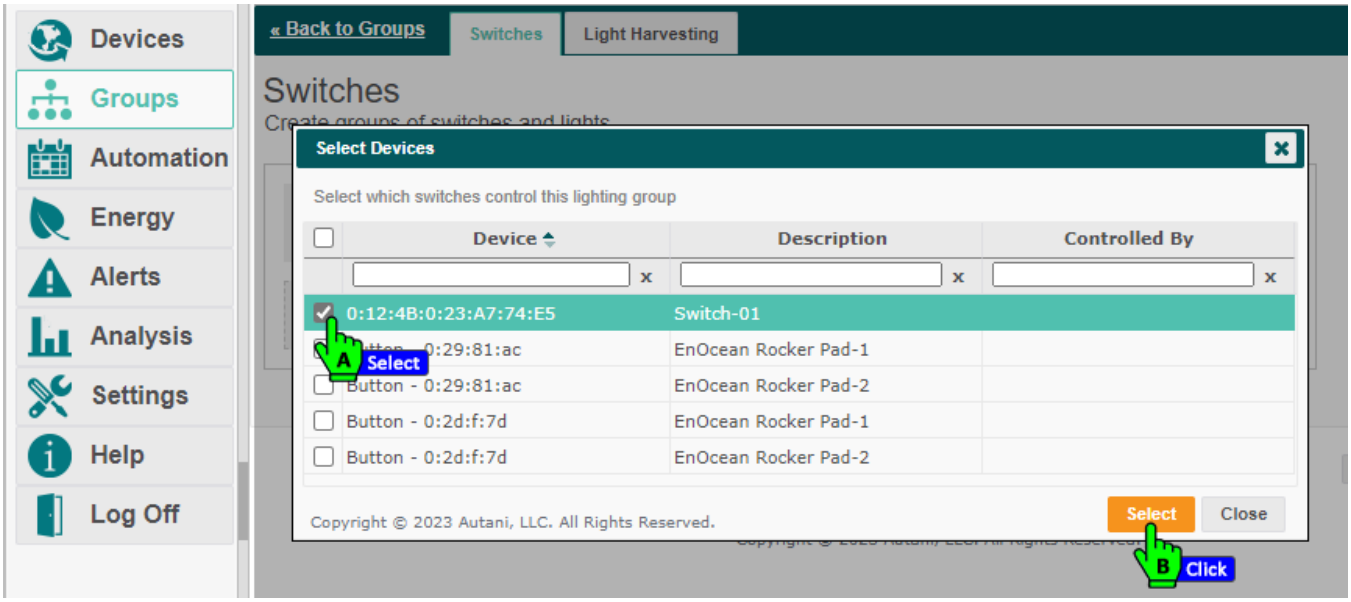
2. The Switches window is selected by default, click on "**+ Click to add a Switch Group**" button to create a Switch group.



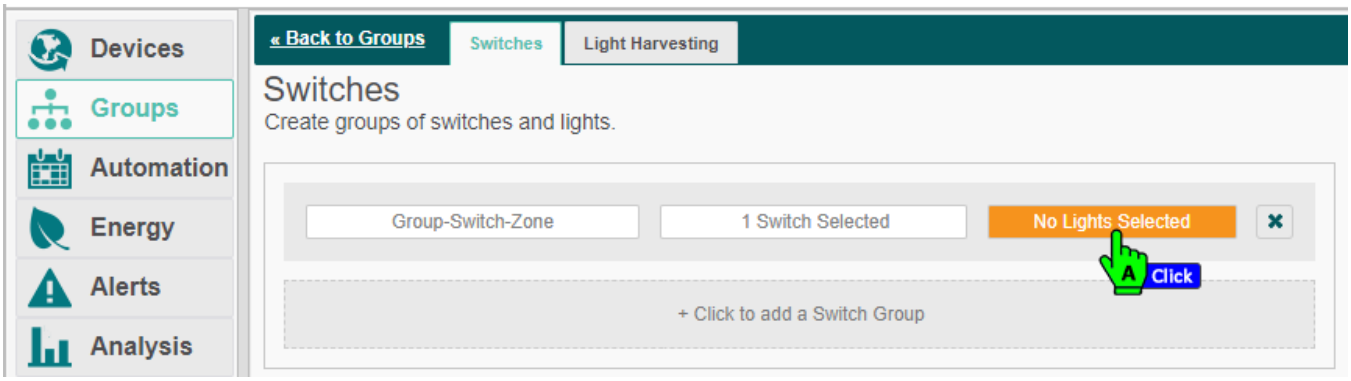
3. The new Group appears with three fields. In the first filed Enter a Name for the group, and then click on second field.



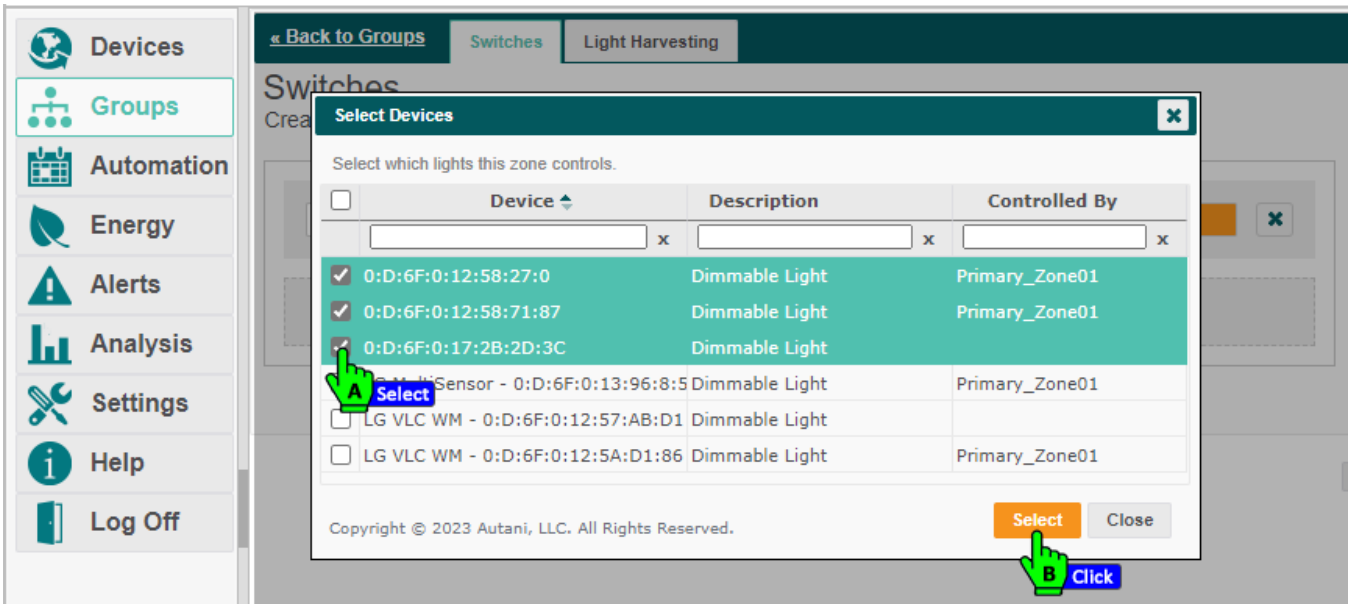
4. The “Select Devices” window opens. Select a switch(s) and click the select button.



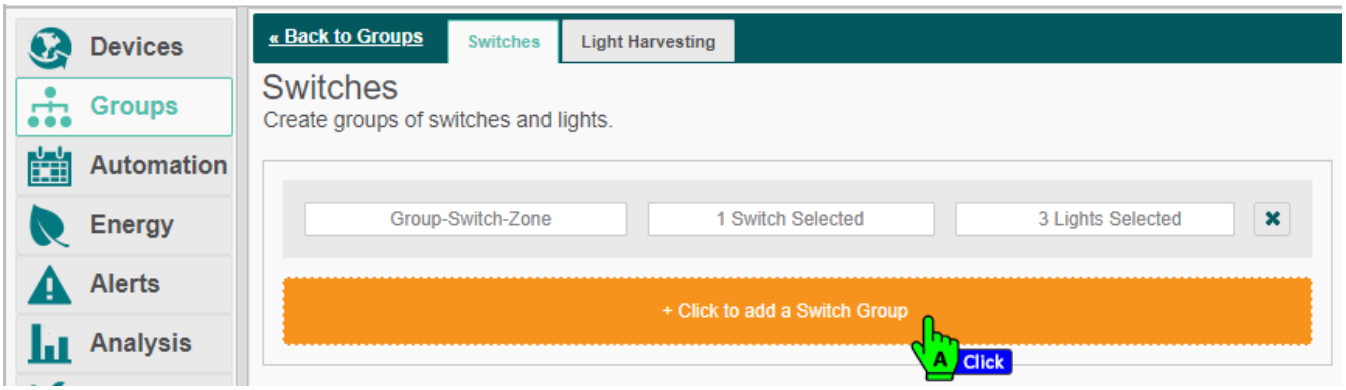
5. Now click on “No Light Selected” button to select lights for the switch(s).



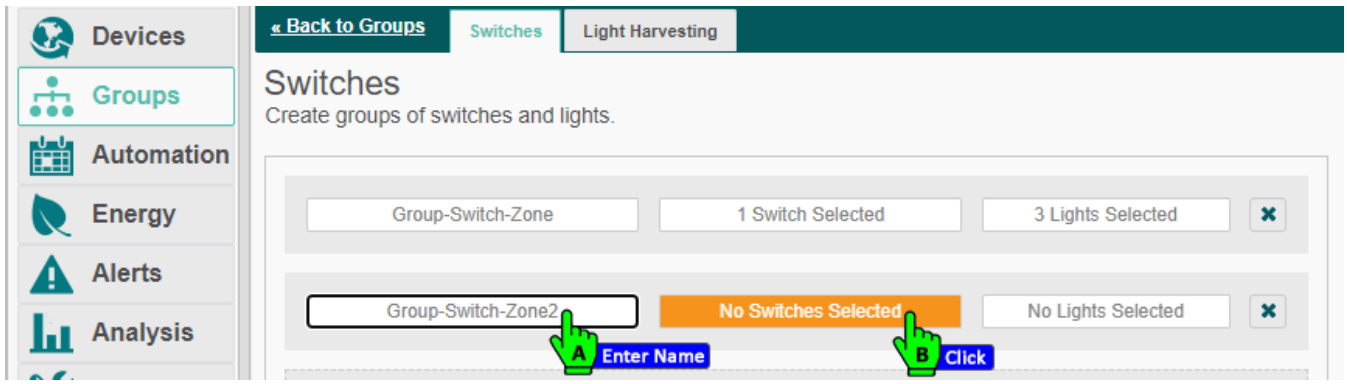
6. The “**Select Devices**” window opens select the lights for the selected switch(s), and then click “**Select**” button.



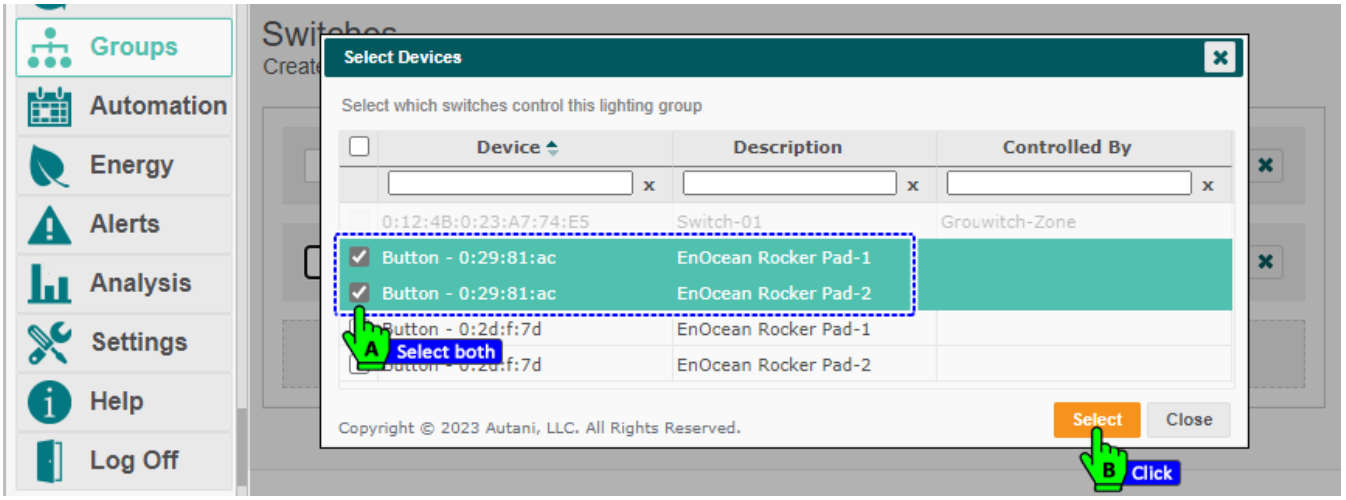
7. Create another Switch Group for a Dimmer switch. Click on “Click to add a Switch Group” button.



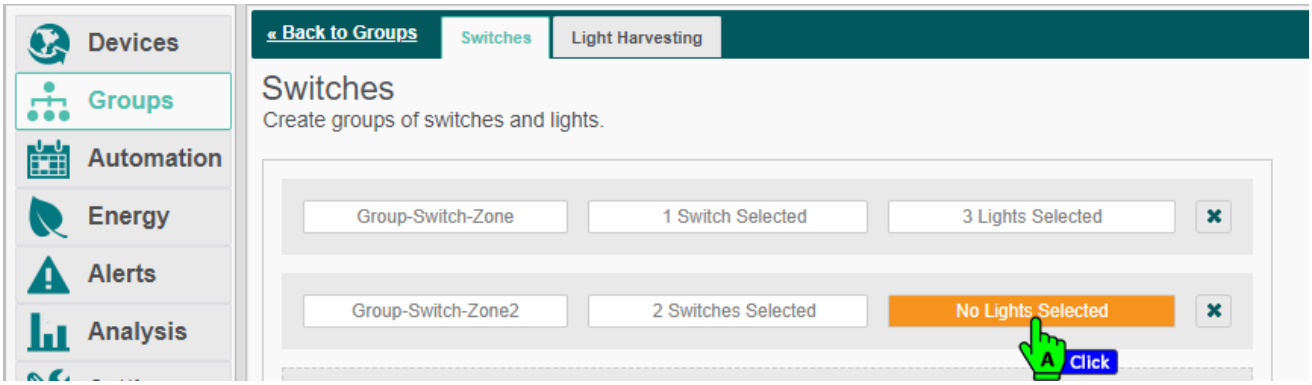
8. Another witch group row appears. Enter the name in the first filed, and then click on the second filed to select switches.



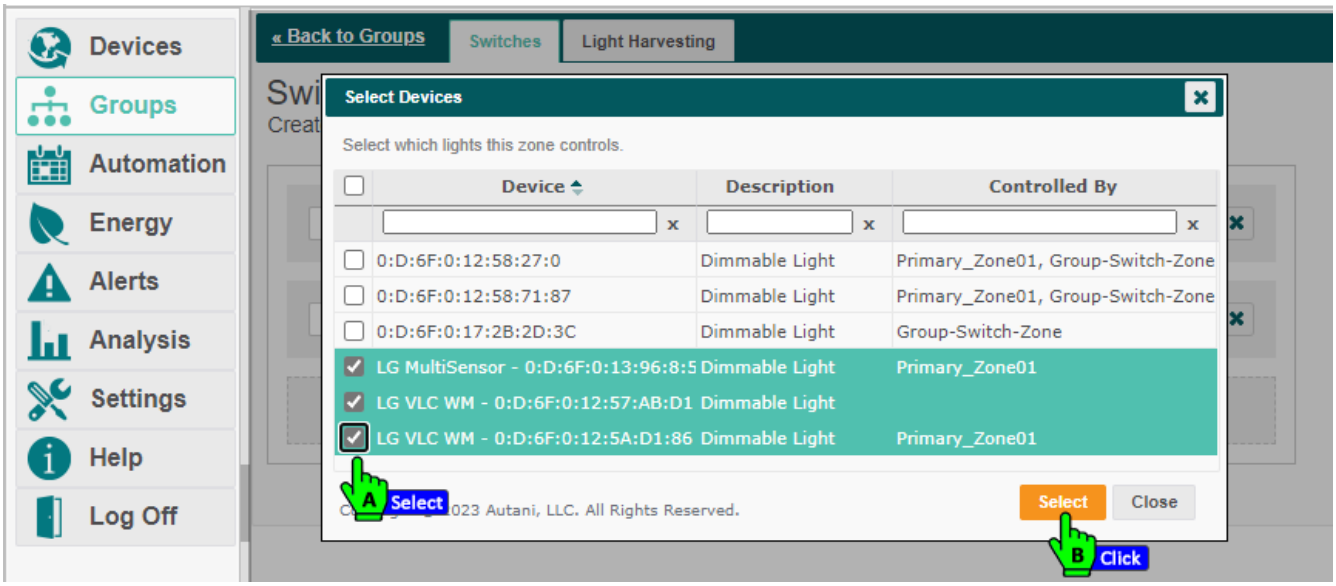
9. The select Devices window opens. Select the switch (in case of dimmer select two switches with same ID) and click “Select” button.



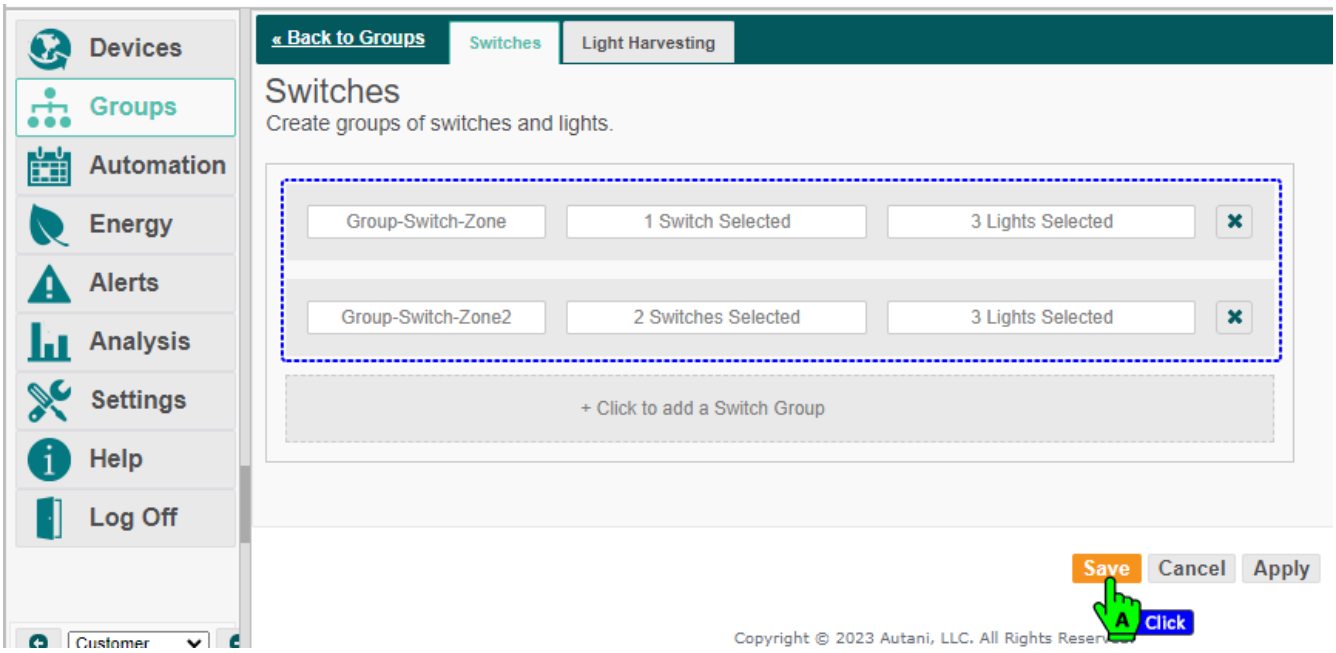
10. Now click on “No Light Selected” button to select lights for the dimmer switch(s).



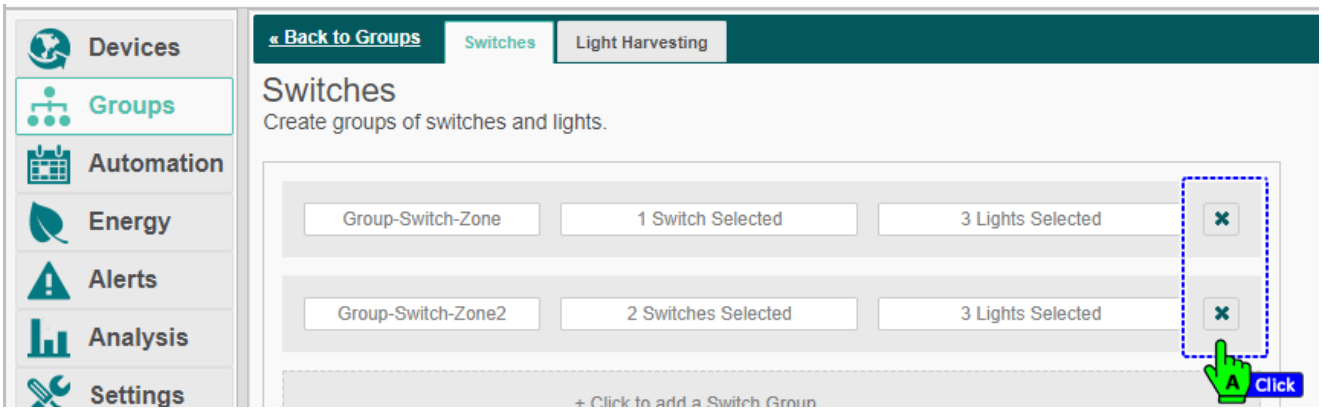
11. The “**Select Devices**” window opens select the lights for the selected dimmer switch(s), and then click “**Select**” button.



12. Both switch groups are created, click save to add them to the selected main group.



13. If necessary to delete any of the Switch Group select the “X” button, the respective switch will get deleted.



8. Background Level

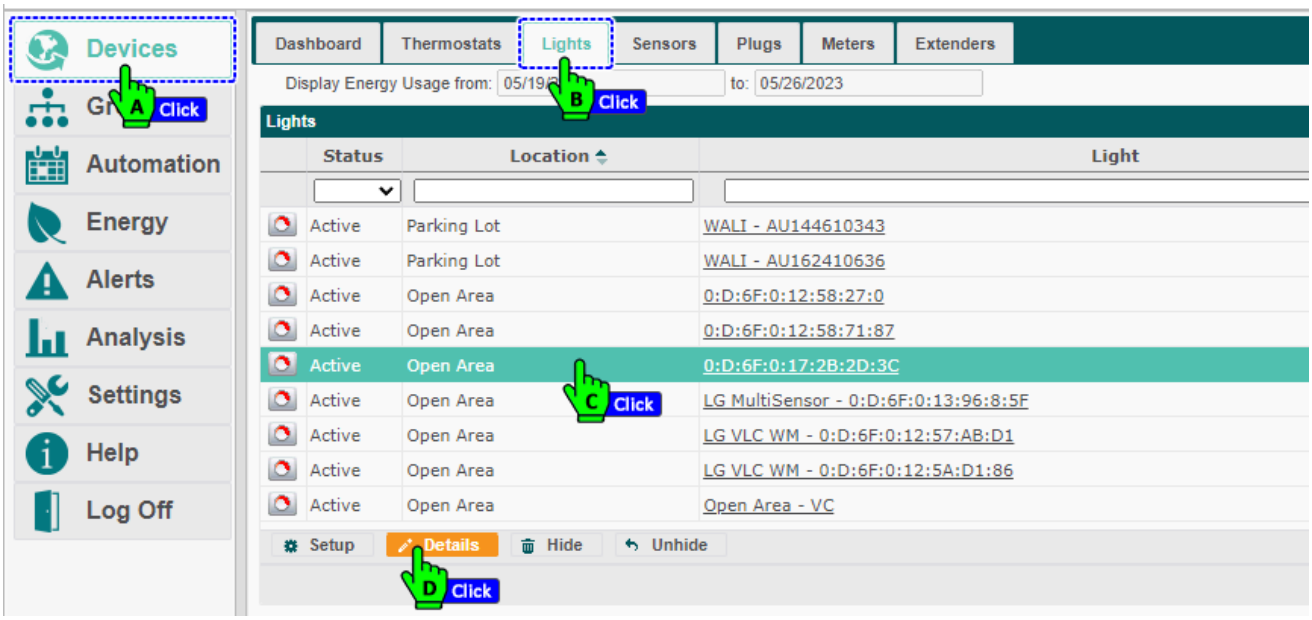
Background level is another functionality in EnergyCenter to save additional energy and increase bit of efficiency. Background Level provides three levels of occupancy lighting control: unoccupied, background, and task lighting. It works on both Group association to occupancy sensor and Individual lights.

The way it works is when occupancy is detected in a room each individual fixture may now be set to a different level depending upon whether there is occupancy in the area of the fixture. If a fixture's motion sensors detect occupancy it will be moved to the task level, say 100%. Alternatively, if a fixture's sensors do not detect occupancy the lighting will be set to the background level, say 50%.

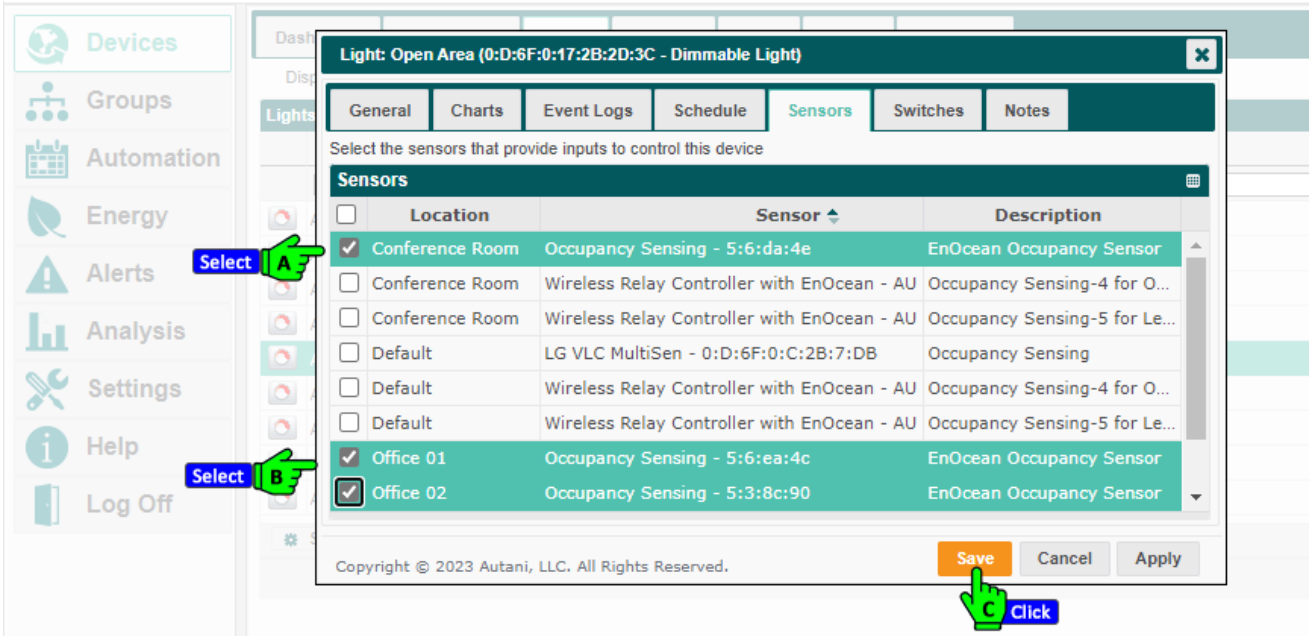
Light levels will continue to be adjusted accordingly until the room is completely unoccupied at which point all lights are transitioned to the unoccupied level.

This section will explain how Autani EnergyCenter will be enhanced to support Background Level.

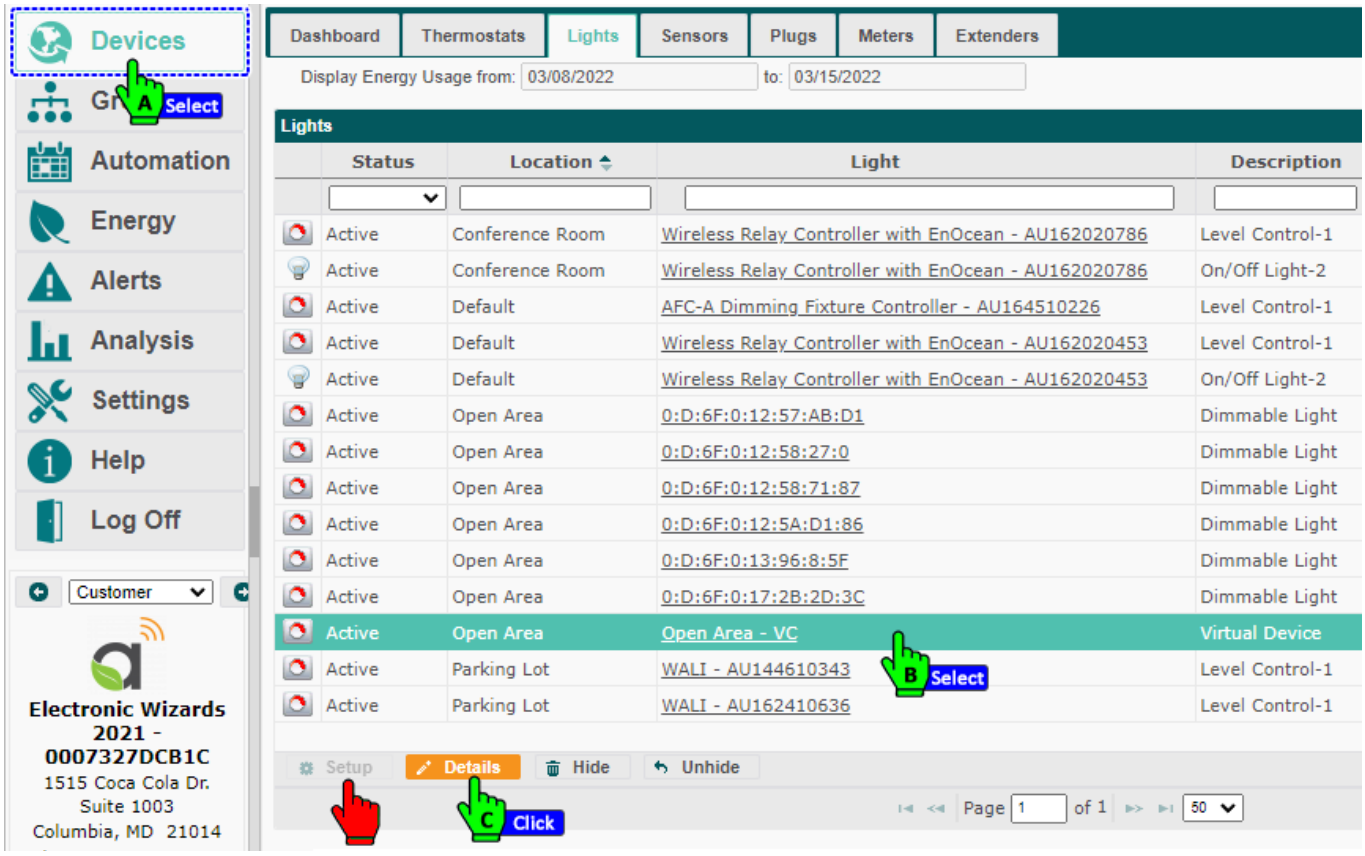
1. Ensure that each of the individual lights (which are part of your Virtual Circuit) are associated with their own occupancy sensor/s, most of the times it would be physical/wired occupancy sensor/s.
    - Go to lights tab (**Devices**>**Lights**), and then select a **Light** and click on the **Details** button for the that light.



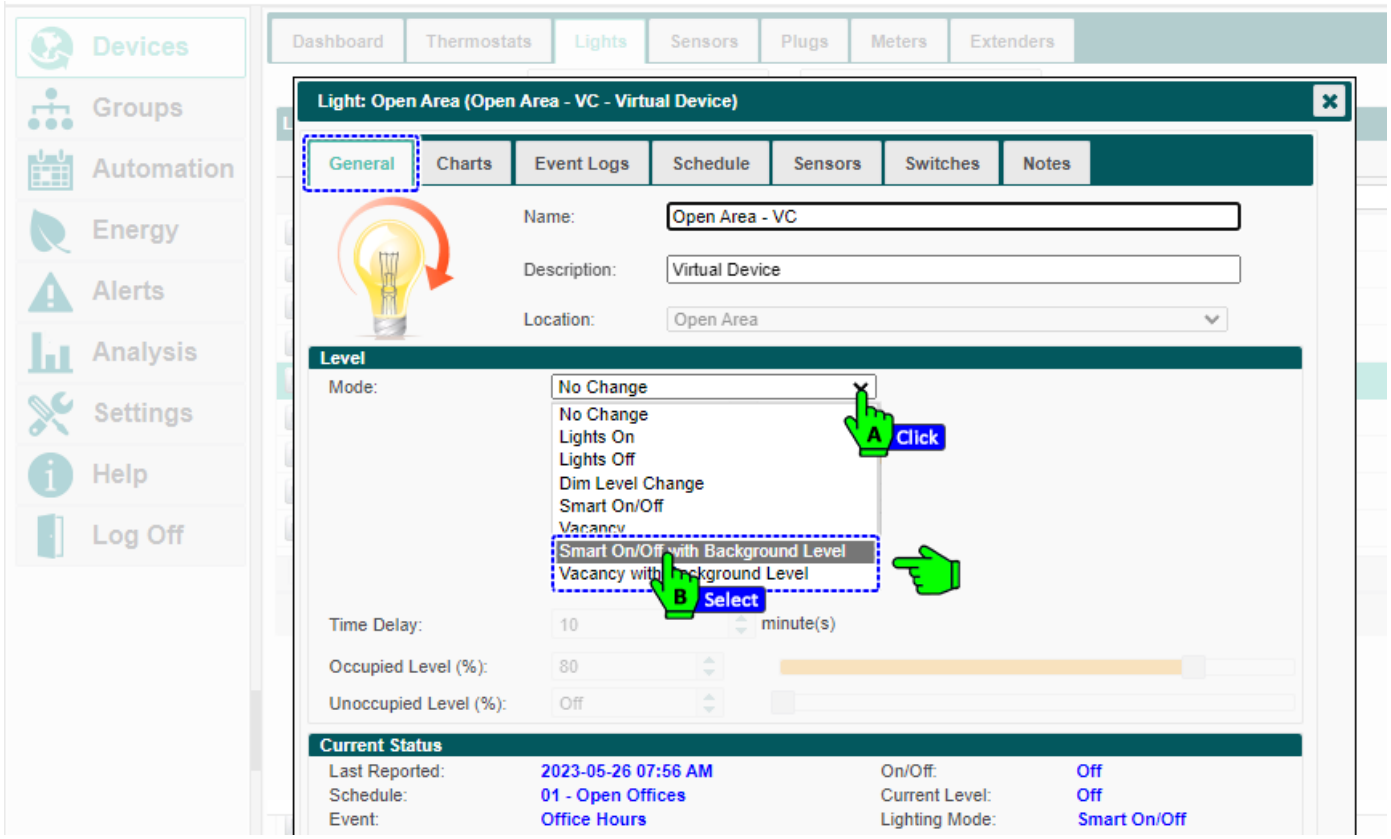
    - Select the sensors tab and associate the occupancy sensor/s to the light.



2. Now select your Virtual Circuit and click on Details button to configure the Background Level settings.



3. The Light Detail window open with General tab selected by default. Select the Level Mode drop down button, to see different level models, where in there are to Background Level configuration listed in the drop down.
    - Select the first option “Smart On/Off with Background Level” to configure.



4. The settings for the for the “Smart On/Off with Background Level” is listed below the drop down. Change the settings accordingly per the requirement and click save. Each setting is explained below.

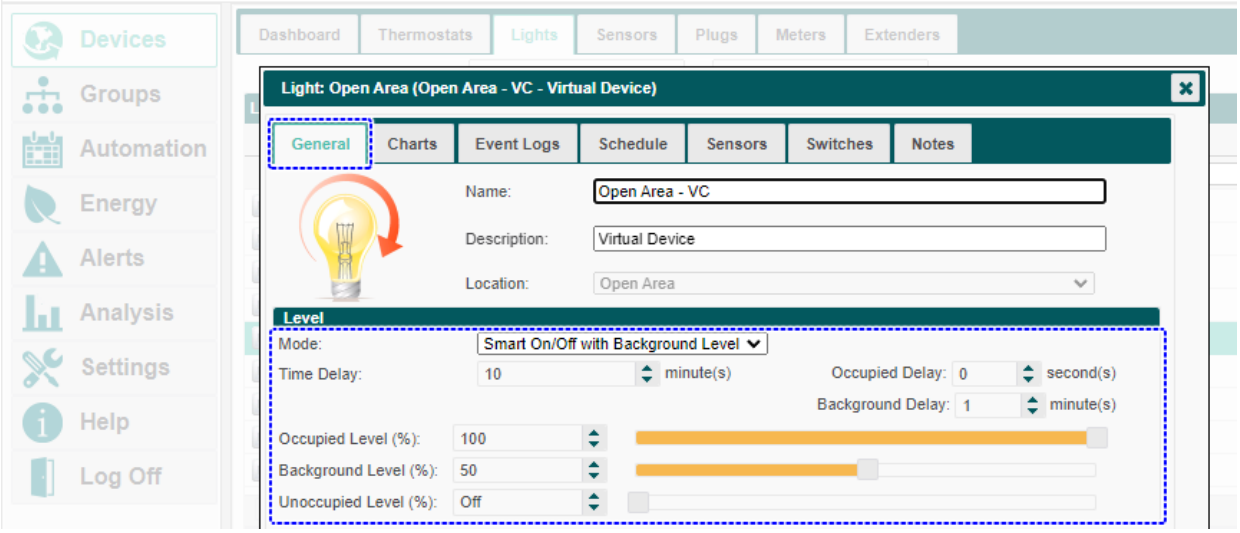


Table 3: Level settings for the Smart On/Off

Setting	Used To	Options
Mode (Displayed for manual dimming controllers)	Used to change light behaviour.	▪ No Change ▪ Lights On ▪ Lights Off ▪ Dim Level Change ▪ Smart On/Off ▪ Vacancy ▪ Smart On/Off with Background Level ▪ Vacancy with Background Level
Off Delay/Time Delay (Not displayed for manual dimming controllers)	Define the delay interval to be used before turning off lights when a space becomes unoccupied.	▪ Available only when Lights OFF, Smart ON/OFF, Vacancy or Background Level Modes is selected. ▪ 1-1440 minutes (24 hours)
Occupied Delay	Delay in transitioning from background to task state. This could be 0 seconds (immediate) in which case there is no delay.	▪ Available only when Background Level Modes is selected. ▪ 0-60 seconds
Background Delay	Transition from task to background state if no motion is detected for this amount of time	▪ Available only when Background Level Modes is selected. ▪ 1-1440 minutes (24 hours)
Occupied Level (%)	Used to change light intensity during Occupancy. NOTE: A scroll bar is provided to quickly change the level setting.	Zero to 100%
Background Level (%)	Used to change light intensity during Occupancy. NOTE: A scroll bar is provided to quickly change the level setting.	Zero to 100%
Unoccupied Level (%)	Used to change light intensity during NO Occupancy. NOTE: A scroll bar is provided to quickly change the level setting.	Zero to 100%

5. The Current Status of for the Background Level are as detailed below.

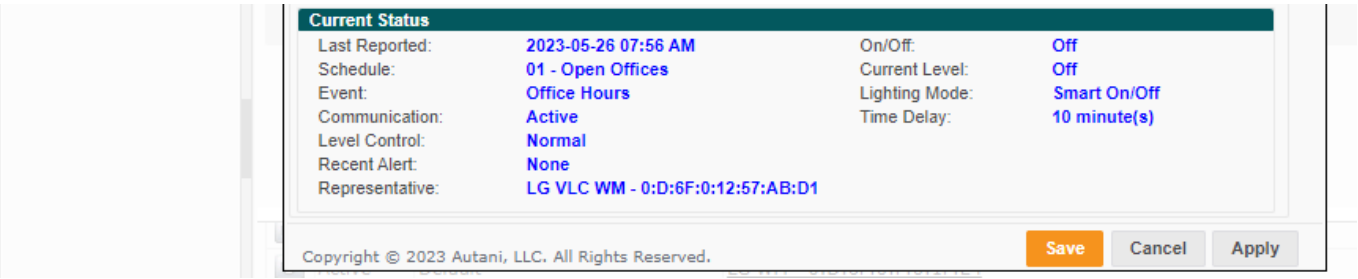


Table 4: Status for the Smart On/Off

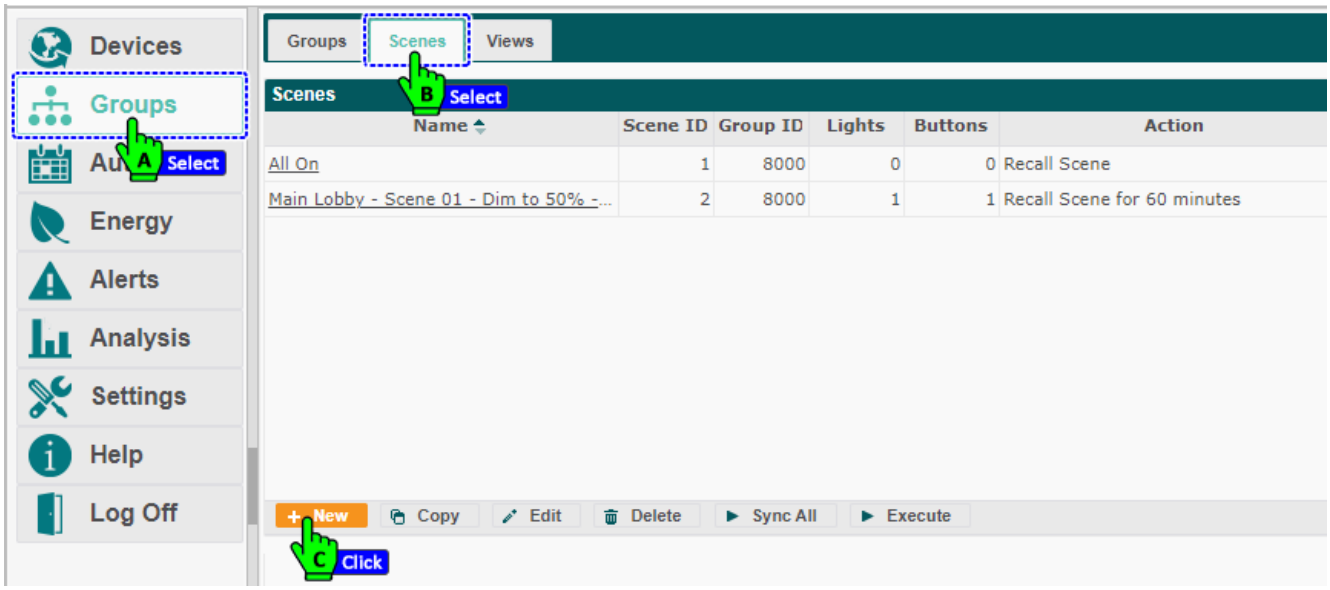
Setting	Used To	Options
Last Reported	Display time/date stamp of the last communication between the light and the Autani CORE/Manager	In the following format: yyyy-mm-dd hh:mm AM/PM
Schedule	Identify schedule currently applied to the light	User-defined schedule names Alphanumeric characters
Event	Identify schedule event currently applied to the light. NOTE: If the schedule is disabled, then this setting displays “Not applicable”.	▪ User-defined schedule events ▪ Alphanumeric characters ▪ If the schedule is disabled or no schedule has been applied to the light, then this field will display “Not applicable”.
Communication	Indicate the communication status of the light	▪ Active: Light controller is reporting data. ▪ Error: Light controller is not communicating with the Autani CORE/Manager over the autaniNet network. ▪ Removed: Light was removed from the autaniNet network.
Level Control	Displays the current status of Level Control	▪ Normal / Unknown
Recent Alert	Display the condition that triggered a light warning or error	▪ None ▪ Error: Light is not communicating with the Autani CORE/Manager over the autaniNet network. ▪ Warning: Specific light error status message
Representative		▪
ON/OFF	Displays the current status of light.	▪ ON ▪ OFF
Current Level	The Current Level of the Light in percentage.	▪ ~~0-100%~~ ON/OFF
Lighting Mode	Displays the light mode chosen in light section.	▪ Lights ON ▪ Lights OFF ▪ Smart ON/OFF ▪ Vacancy ▪ Dim Level Change
Off Delay/Time Delay	Displays the Time Delay for a Mode, set in Level section	▪ Not Applicable
* Dimmer Position	The dimmer position is shown here if a wired physical dimmer is connected.	▪ 0-100% / Not Reported

9. Scene Station Configuration

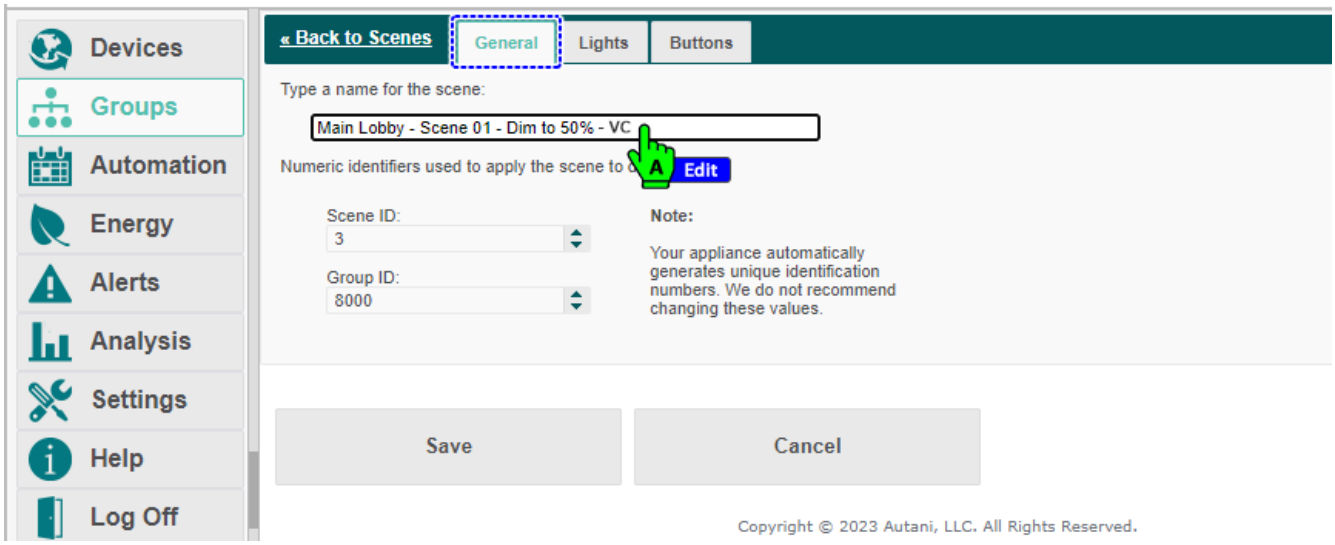
Create scenes for group of lights or individual lights, that are connected to radio or controllers or Virtual Circuits, and then control all those connected lights to a specific light level and keep them that way for certain duration of time.

Define scenes by associating lights or Virtual Circuits to a scenes as follows:

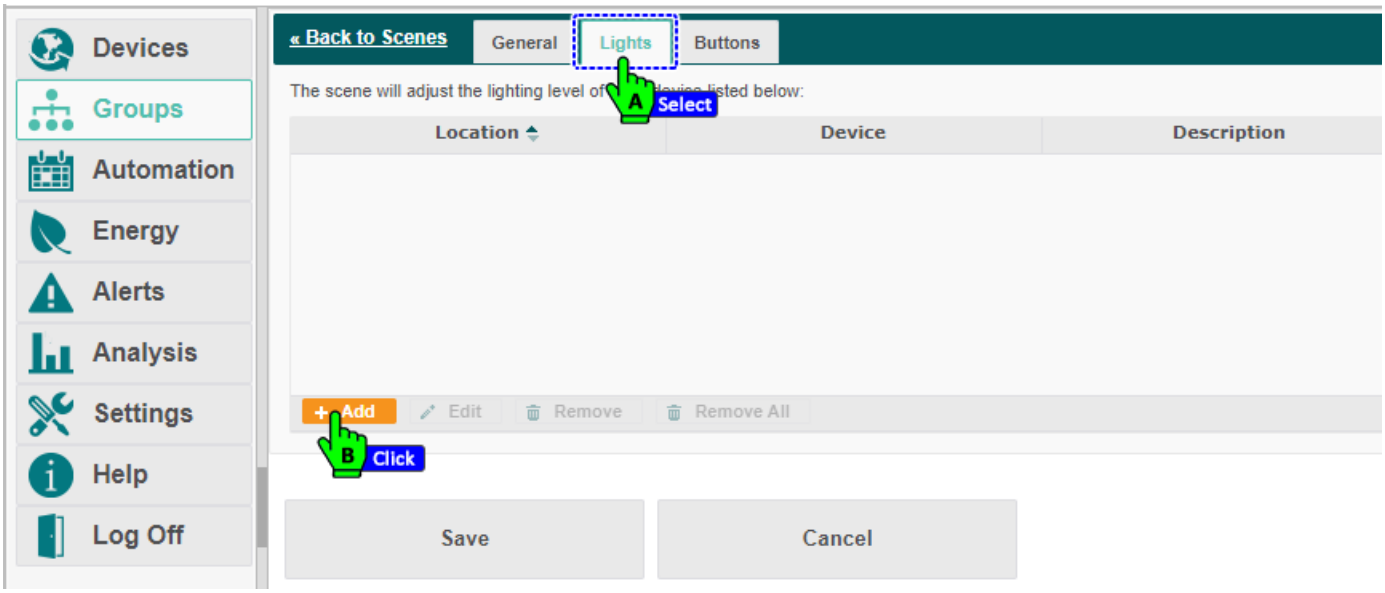
1. On the EnergeyCenter navigate to **Groups** section and select **Scenes** tab, and then click on **New** button to create a new scene for a Virtual Circuit.



2. The New Scene creation screen appears with General tab selected by default. Enter a descriptive name for the scene in the Name field. (Note the Scene ID and Group ID are generated automatically, recommendations are not to change them).



3. Now click on **Lights** tab, and then click the **Add** button tab to select the lights for the scene.



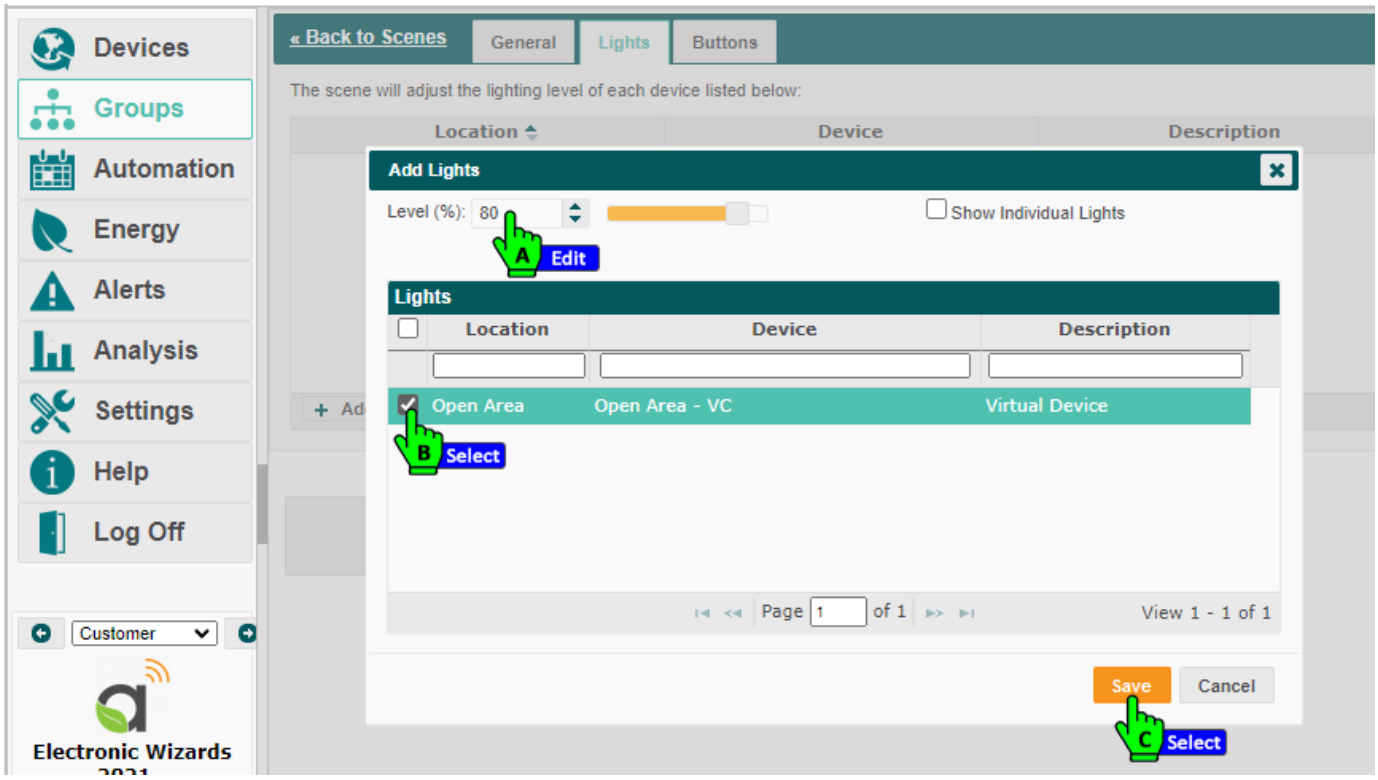
4. The Add light screen opens.

   There are two ways to add lights in the scenes, Group of VCs, and Individual Lights.

   By default, tab will select VC (Virtual Circuits) but you can choose 'Individual Lights' also.

   a. Virtual Circuits

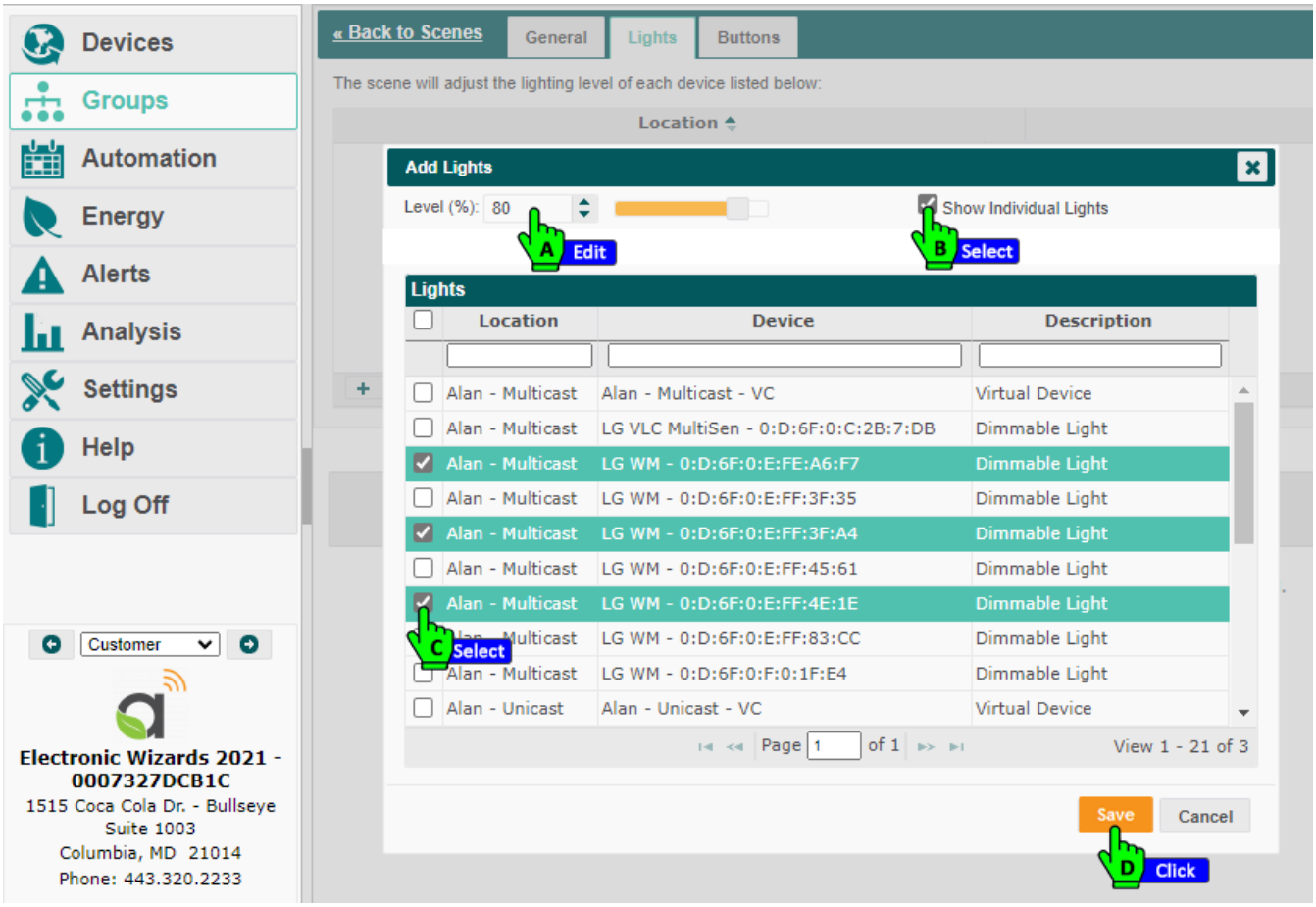
      Enter/Edit the Dim Level (%) and select a VC (Virtual Circuits) and save.



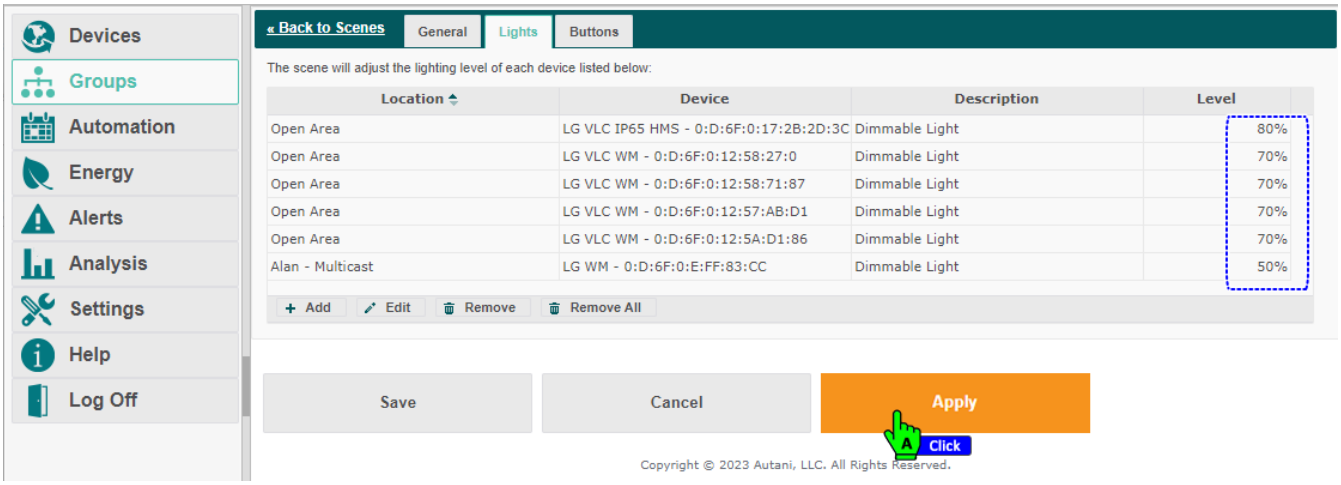
b. Individual Lights

Enter/Edit the Dim Level (%), Select the "**Show Individual Lights**" check box, and select your preferred light Locations and save.

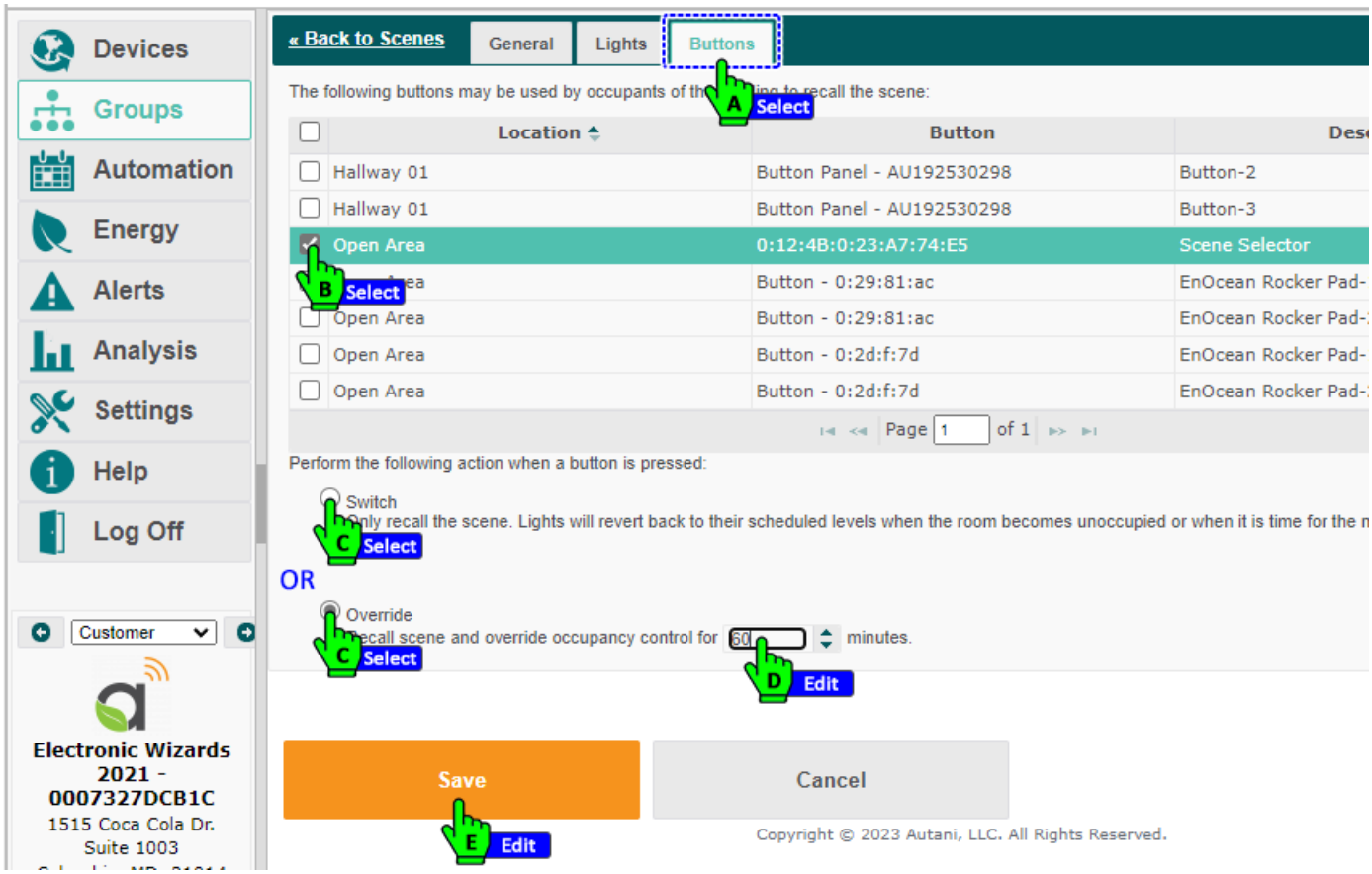
NOTE: The other physical lights in the system are listed here, those lights can be selected along with VC for the scene, with the same light dimming percentage. OR You can just select the lights from your preferred locations and create own group.



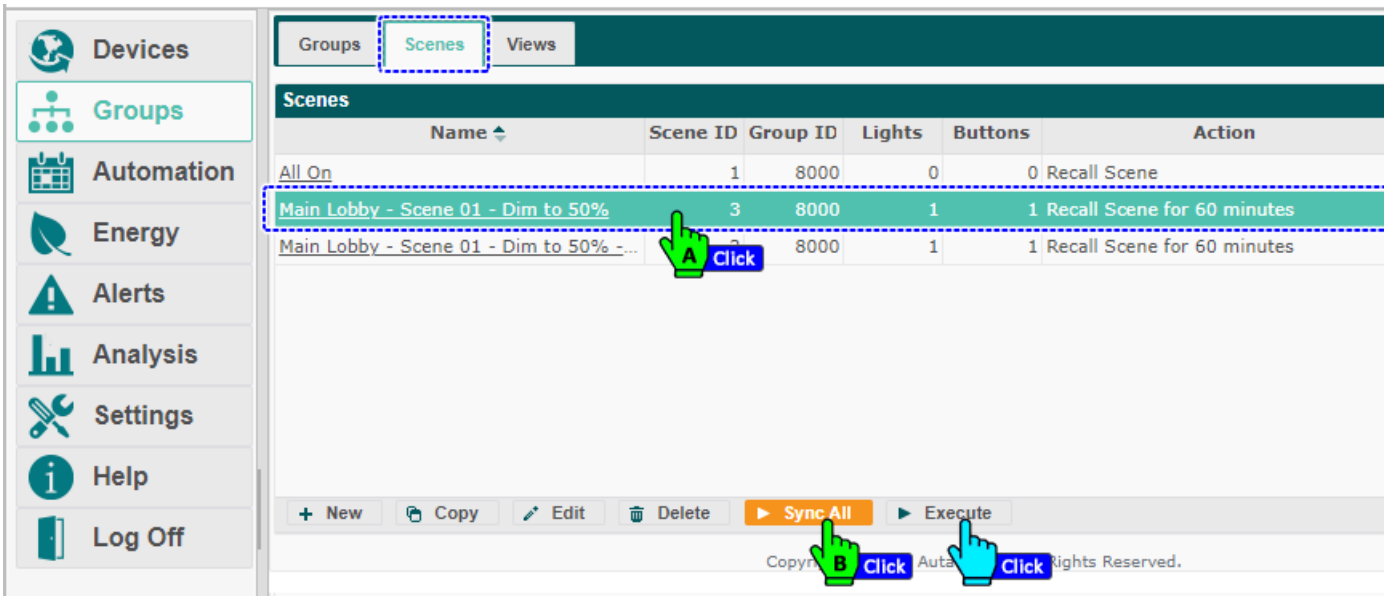
NOTE: Similarly, you can add the lights from your preferred locations, with different dimness Level and create own group/Scene.



5. Click on the **Buttons** tab and select button for the scene. Select Switch/Override options for the selected button to perform the action when it is pressed (if Override is selected, enter the duration in minutes). Click save to save the scene.



6. The new Scene is added to the Scenes tab. Now Click on the '**Sync All**' button to push the scene programming to all the controllers, And then click the 'Execute' button to perform the Scene settings.



10. Troubleshooting

10.1. Energy Consumption Data Does Not Appear

The software uses data entered during commissioning to estimate total lighting consumption, costs, and the related carbon footprint. It is likely that rates were not entered during commissioning.

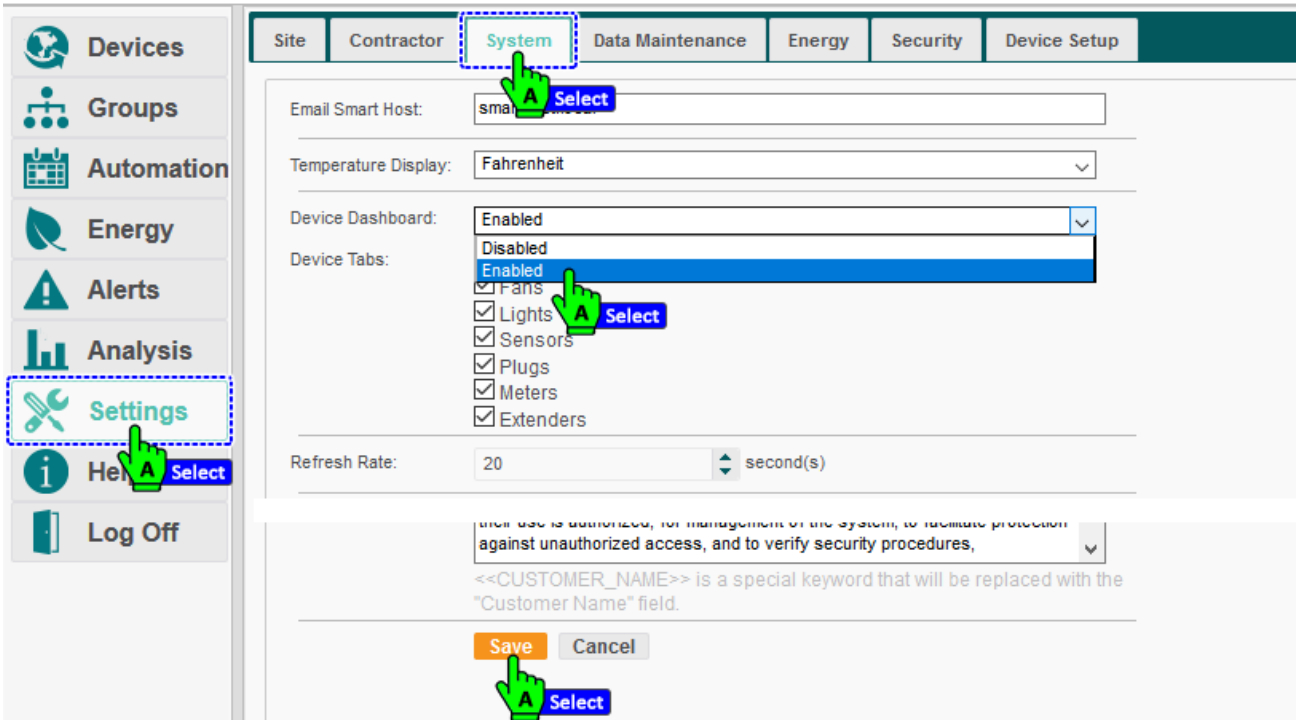
For information on entering:

- Light specific data, see Entering Data on Light Fixtures and Related Energy Use.
- Rates charged by your utility, see the User's Guide module entitled *Tasks Common to All Applications* in the help section of EnergyCenter® software.

10.2. Dashboard Does Not Appear

To enable the dashboard:

1. On the left navigation bar, click **Settings**.
2. Click the **System** tab.
3. From the **System Device** drop-down list, select **Enabled**. Click **Save**.



10.3. Events are Not Occurring as Scheduled

There are several reasons why it may appear that scheduled events are not occurring as expected. They include:

- Two events cannot start at the same time on the same day.
- The light is in an error state indicating that it is not communicating with the Autani CORE/Manager over the autaniNet network.
- The event was superseded by a scheduled override or by a curtailment. For more information, refer to the User's Guide module entitled *Tasks Common to All Applications* in the help section of EnergyCenter® software.
- Programmed delays may be affected if the system includes third-party sensors that have their own delay schedules. For more information, refer to the documentation that came with the sensor.
- A light or level controller was added to a group after a Schedule Template was copied to each controller in a group.
- A Schedule Template may have been changed. Schedule template changes are not automatically copied to a light or level controller.

10.4. Event Log Contains Data Outside the Selected Date Range

Event logs include events that began before the selected date range when those events continued during the date range.

The software is programmed to include all data collected during the date range. To ensure that only data collected during a specified period is included in Event Logs, events cannot straddle the specified date range.

10.5. Error Message when Selecting a Date Range

If the desired start date is later than the default start date, set the end date before setting the start date to avoid receiving an error message.

10.6. Contacting Customer Support

For assistance after following the steps in Troubleshooting, contact Customer Support at:

- **Autani Support**

  Phone: 443.320.2233 x2

  Address: 7001 Columbia Gateway Drive, Suite 210, Columbia, MD 21046, USA

  Support/Commissioning Services: support@autani.com

- **Autani Sales**

  Phone: 443.320.2233 x1

  Sales/Quotations: sales@autani.com, quotes@autani.com

  General Inquiries: information@autani.com

Hours of Operation: Monday to Friday, 9am to 5pm, Eastern Standard Time

11. Glossary

Table 5: Glossary

Term	Description
Associated sensors	▪ Sensors must be wired to a device or associated with the device in the software in order for the motion data they report to be used in software control decisions for that device. The software determines a space to be occupied if any of the sensors wired to or associated with the device in an area reports motion.
Carbon Footprint	▪ Total greenhouse gases emissions during production of the energy used by an organization or to produce a product ▪ In EnergyCenter®, greenhouse gas emissions associated with an event estimated for in pounds of carbon dioxide emitted
Curtailment	▪ Used to immediately implement an Event Rule(s) to supersede a regularly scheduled Event or Override
Event	▪ Setting or group of settings used to set the state on a single controllable point of a device at a certain time
Event Rule	Setting or group of settings used to set the state on a single controllable point of a device, or multiple points of the same type, triggered by an event defined in an override or curtailment
Kilowatt Hour (kWh)	▪ Unit of energy equivalent to one kilowatt of power expended for one hour billing unit by electric utility company for energy delivered to its consumers
Override	Used to schedule an Event Rule(s) to supersede a regularly scheduled Event
Schedule	▪ Used to implement Events at a specific time, on a recurring basis, or based on conditions reported by sensors
Schedule Template	Schedule that that is used as a pattern to quickly and easily apply the same setting(s) to multiple devices of the same type
Therms	Unit of measurement for energy content a gas or liquid gives off in the form of heat when burned

12. Index

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