This document is intended for installers, set-up technicians and IT professionals of Trellix products.

Important: Engage appropriate network security professionals to ensure all lighting control system hardware and servers are secure for access. Ensure IT professionals review the Trellix network architecture documentation referred to in this manual.

Network security is an important issue. Typically, the IT organization must approve configurations that expose networks to the Internet. Be sure to fully read and understand customer IT Compliance documentation.

SETUP MAP
LOWER RAISE
^
= FILTER
~



Read all the instructions thoroughly before installing this product.

This manual provided information on the installation and operation of Trellix Lighting. For proper operation it is important to follow the instructions.

The purpose of this document is to provide sufficient instructions for installation and basic troubleshooting.



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1 – About this Document

This document describes how to administer and configure the Trellix Smart Lighting IoT platform and associated applications.



This document does not cover the initial Trellix Core installation and setup. Please refer to the Trellix Core Quick Start Guide if you are installing Trellix platform for the first time.

1.1 – Assumptions

The information and procedures in this document assume the following:

- Trellix Core has been installed and set up as described in the Trellix Core Quick Start Guide
- One or more WaveLinx Wireless Area Controllers and/or WaveLinx Wired EGs have been installed and configured on your site
- You are familiar with the WaveLinx Mobile Application User Manual, WaveLinx Planning and Installation Guide, and if applicable the WaveLinx Wired Installation Guide
- You are familiar with the Trellix Lighting User Manual
- You know the Trellix Core IP address and have a login account with System Administrator, Facility Manager, or IT Administrator permissions

1.2 - Using This Manual

If you are	Then
Commissioning a Trellix Lighting installation	See Commissioning to continue where the Trellix Core Quick Start left off.
Administering the features of a Trellix Lighting installation	See System Administration to configure system features such as backups, language plugins, and software upgrades.
Managing Trellix client information and software licenses	See Software Licenses and Client Information for product licensing details and procedures.
Administering users and roles on a Trellix installation	See User and Role Administration to create, edit, and delete custom user accounts and roles.
Configuring new or existing Sites in Trellix	See <i>Sites Configuration</i> to configure Buildings, including Floors, Areas, Zones, Scenes, Occupancy Groups, Demand Response and Devices settings.
Discovering and associating Controllers or importing Controller data	See <i>Device Discovery, Import, and Configuration</i> to locate and synchronize WaveLinx Wireless Area Controllers and WaveLinx Wired Ethernet Gateways with Trellix Lighting.
Configuring or editing Schedules, Events and Actions	See <i>Schedule Configuration</i> to create Schedules that will automate your LCS based on date and regular or astronomical time
Troubleshooting a Trellix system	See <i>Troubleshooting</i> to understand and resolve error messages, status messages, and other situations you may encounter.

1.3 - Key Terms

The terms listed below are used in this document.

- Alarm An error notification that requires an action
- Application Programming Interface (API) A set of clearly defined methods of communication between various software components
- BACnet A communications protocol for Building Automation and Control (BAC) networks
- Drawing Exchange Format (DXF) A CAD data file format developed by Autodesk
- Ethernet Gateway (EG) An Ethernet Gateway is used to connect WaveLinx Wired to Trellix
- Event A notification, such as a cleared alarm or system event, that does not require any action
- EPICS File Electronic Protocol Implementation Conformance Statement that describes the BACnet device capabilities

- Internet of Things (IoT) The extension of Internet connectivity into physical devices, enabling them to communicate and interact with over the Internet for remote monitoring and control
- Lighting Control System (LCS) A computer-based control system installed in a building to control and monitor lighting equipment such as controllers, ballasts, drivers, keypads, and sensors (consists of hardware and software)
- WaveLinx Low Voltage Distributed Low Voltage power (formerly nDLVP)
- Trellix Core (TC) A gateway that aggregates Wireless Area Controller device data
- Wireless Area Controller (WAC) An application that coordinates the WaveLinx Mobile App with various WaveLinx devices to provide lighting zone configuration, monitoring, and control (also referred to as "Controller" or "Area Controller")

1.4 – Related Documentation

Document	Description
Trellix Core Quick Start Guide	This guide covers the initial installation and setup of Trellix platform.
Trellix Lighting User Guide	This manual covers the monitoring and controlling of a Trellix Lighting system.
Trellix Lighting API Reference	This manual describes the Trellix Lighting developer API.
WaveLinx System Network/IT Planning Guide	This guide covers the planning, design, set up, and configuration of a WaveLinx System.
WaveLinx Mobile Application User Manual	This manual covers the use of the WaveLinx Mobile Application to configure the Wireless Area Controllers.
WaveLinx Wired Installation Quick Guide	This guide covers the basic steps for installing WaveLinx Wired.
WaveLinx Wired Installation Instructions	This document provides detailed instructions for installing and setting up WaveLinx Wired and EG2.
Cyber Infrastructure Security Tips	Tips and advice about common security issues for non-technical computer users.
Cooper CCOE Cybersecurity Recommendations	Recommendations to complement your existing cybersecurity programs so the product is deployed and maintained in a way that minimizes cybersecurity risks.
1.5 - What's New	
Change Descript	tion
	Sites interface (formerly Buildings) now offers editing of WAC Area, Zone, ncy, Daylight, and Demand Response configuration.
	levant Building and Device elements are selected, such as Areas, Sensors, or ions, live data is prominently displayed in a separate card.

2 – Commissioning

This chapter contains the recommended stages to follow when commissioning a Trellix Lighting system, along with links to the relevant procedures.

2.1 – Before You Begin

This process assumes the Trellix Core Quick Start Guide tasks listed below are complete:

- Trellix Core IP address has been set to allow communication with the WaveLinx Controllers
- Trellix Core Time Zone has been set correctly
- All connected Controllers have been discovered and their data imported
- All Buildings and Floors have been created, and all Controllers have been associated with a Floor
- · All default account passwords have been changed

2.2 - Stages in the Commissioning Process

Follow the process below to complete the system setup that was initiated with the Trellix Quick Start Guide.

Stage	Description	Reference
1	Set up the Trellix Core host server to synchronize time with an external NTP server.	Setting Up the Trellix Core Date & Time
2	Set up the Time Zone for each Building.	Setting Building Date & Time
3	Set the baseline energy per Floor (required by the Energy dashboard).	Setting the Floor Baseline Energy Value
4	Set the power data for Type 3 Devices (required by the Energy dashboard).	Setting the Maximum Power for Type 3 Devices
5	Set up one or more Schedules for Areas for use time-based actions (e.g., turning lights on and off).	Setting Up Initial Schedules
6	Set up one or more Floor Maps (optional).	Setting Up Floor Maps (Optional)
7	Set up BACnet (optional for customers wanting to share data with a Building Automation System).	Setting Up BACnet
8	Set up Published API (optional, for customers wanting to share lighting or location data with a third-party system).	Setting Up the Published APIs (Optional)
9	Set up OpenADR (optional for customers who want to integrate with a utility company system).	Setting Up Open ADR
10	Set up the Email Server as required for Alarm Notification.	Setting Up the Email Server
11	Set up additional User Accounts and Roles (optional).	Setting Up Additional User Accounts and Roles (Optional)
12	Synchronize data with WACs and confirm site operation.	Synchronizing Data with WACs
13	Confirm that time on each WAC is synched with Trellix Core.	Confirming WACs are Using Trellix Core as NTP Server
14	Back up the database for Trellix and Controllers.	Backing Up the System

2.3 - Setting Up the Trellix Core Date & Time

Trellix Lighting lets you set up the way date and time is handled on the lighting system.

IMPORTANT

NTP Synchronization must be set up and enabled to obtain reliable data. The best and recommended option is NTP Server synchronization with time provided by the Stratum 1-14 NTP servers. Trellix time can only be as reliable as the designated time source.

There are two levels of time synchronization:

- How Trellix Core keeps time (e.g., IM host server, external NTP server)
- How the WACs keep time (e.g., WAC host server, IM as NTP server)

Νοτε

This following procedure applies to the date and time on Trellix Core/Trellix Lighting interface. There is a separate time zone configuration for each building in your Building hierarchy. This is required to manage multiple buildings located in in different time zones.

Step Action

1 Click III to display the app menu, then click **Admin**, then click **System**, and then click **Date & Time**.

RESU	LT			
=	System Management			Admin 🚺
Alarms	Backup & Restore	DATE AND TIME NTP SERVER		
:=	BACnet	Time Zone and Date Format		
Event Logs	Clear History	Time Zone	Date Format	EDIT
System	Date & Time	[UTC-04:00] America/New York	DD-MM-YYYY	
22 Users	Demand Response	Daylight Savings		
	Email Server	NTP Synchronization		
Clients	Factory Reset	151.110.126.15		NTP Status
	Firewall			
	GSA Warning			
	Language Plugin			
	Logs			V
	Published API			
	Software Upgrade			
ത ര <u>ാലങ</u> 09:59				04

2 Click Edit, then select a Time Zone from the list, and then select a Date format, the Daylight Savings check box if you want to enable this feature.

Νοτε

The settings on this tab determine how Trellix Core keeps time.

Time Zone [UTC-04:00] America/New York	Date Format DD-MM-YYYY	Ŧ	
✓ Daylight Savings			
O Set Date and Time Manually			
Synchronize with the NTP Server			
NTP Server 151.110.126.14			

3

- Select the **Date and Time** source that Trellix Lighting will use as a reference, as follows:
- Set Date and Time Manually Enter the current date and time using the selection lists
- Synchronize with the NTP Server Enter the IP address of an external NTP time server

Νοτε

If you change the **Set Date and Time Manually** or **Synchronize with the NTP Server** settings, the system will restart to apply your changes. A restart can take up to 15 minutes.

IMPORTANT

Each Building defined in the system will also have a clock, so you will have to set the Time and Time Zone for each building.

4	To enable this Trellix Core host as the NTP Server for connected WACs, click the NTP Server tab, and then click Enable.
5	Click 🇰 to display the app menu, then click Lighting, then click Devices, and then click Trellix Core.
6	Click Actions, and then select Sync Data with WAC.

Νοτε

This will send the NTP server data to all connected WACs. Allow five minutes for the changes to be applied before confirming the settings as described in the next topic.

2.4 - Setting Building Date & Time

Follow the steps below to configure the Building date and time.

Step Action

1 Click III to display the app menu, then click Lighting, and the click Sites in the main menu.

=	Sites			Lighting
A larms	Default Client 🚺 ≪	Client Details		🖍 EDIT
> Operate	Select Building Default Building	Default Client		
Dashboard	Select Floor Default Floor	Publicitd C1	Name Default Client	
: Event Logs			hust not exceed 32 characters 14/32 Address 2	
Sites	All Areas 28 Paired Devices	Address	Address 2	
5chedules	🕒 Collab 1	City	State/Province	
Q Devices	🕞 Collab 2	Postal Code	Country 👻	
	🕒 Kitchenette	Total Alarms	Source	
	Dpen Office	0	LXI	
	Private Office 1			
_	Private Office 2			
() COOPER				CANCEL SAVE

2

Select a **Building** in the Building navigation panel, and then click **Edit**.

Νοτε

A ① button indicates the selected component with details displayed. Clicking ① beside a component will select it.

General Properties	
Public Id B1	Name Default Building
Building Type Other	Must not exceed 32 characters 16/32 Building Superficies
Building Number	0/10 Address 1
Address 2	City
State/Province	Postal Code
Country	Timezone
Building Details	6
General Properties Public Id B1	Name Default Building
Building Type	Must not exceed 32 characters 16/32
Other	 Building Superficies
Other	Building Superficies
Building Number	Address 1 Torc-05.00 America/kio branco
Building Number	Address 1 Joine-vo.ovj America/Rio Branco
Building Number	Address 1 [UTC-03.00] America/Rio Branco [UTC-04:00] America/Thunder Bay
	Other Building Number Address 2 State/Province Country ect the desired zone. Building Details General Properties Public id

4

Enter the desired Latitude and Longitude values under Astronomical Details.

Νοτε

The Latitude and Longitude are used by the Schedules feature for actions that track the sunrise and sunset.

EXAMPLE

Address 2	City
State/Province	Postal Code
Country -	Timezone [UTC-04:00] America/Toronto 👻
Associated Schedule N/A	4
Astronomical Details Astronomical Setup - Latitude 43.6424847034509 N	Astropulitical Settle - Longitude 79.3869968797809 E
	Country - Associated Schedule N/A Astronomical Details Astronomical Setup - Latitude

2.5 – Setting the Floor Baseline Energy Value

Follow the steps below to set the Baseline Energy value. Baseline Energy is the kWh consumption by all devices on the floor for one hour, assuming 24/7 operation and no controlled reductions.

Step Action

1 Click **III** to display the app menu, then click **Lighting**, and the click **Sites** in the main menu.

=	Sites					Lighting
Alarms	Default Client	()	«	Floor Details		🖍 EDIT 🚺 SETUP MAP
> Operate	Select Building Default Building	* (i)	+	General Properties		
Dashboard	Select Floor Default Floor	• 0	+	Public Id F1	Name Default Floor	
Event Logs	All Areas			Floor Number	Baseline Energy (KWh)	
Sites	28 Paired Devices					
5chedules	🕒 Collab 1			Floorplan File Floor 1 - PO demo space LARGE	Capacity (# People) 84	
Q Devices	Collab 2			Total Alarms O	Square Footage	
	TA Kitchenette					

2

Select the Floor, and then click Edit.

Νοτε

A ① button indicates the selected component with details displayed. Clicking ① beside a component will select it.

EXAMPLE

Alarms	Default Client	()	«	Floor Details			n Edit
Operate	Select Building Default Building	Ť	+	General Properties			
Dashboard	Select Floor Default Floor	Ť O	+	Public Id F1	Name Default Floor		
Event Logs	All Areas			Floor Number	Baseline Energy (kWh) 0.5	14/32	
Sites	28 Paired Devices		_	0 / 10 Floorplan File	Capacity (# People)	3/10	
Schedules	Collab 1			Floor 1 - PO demo space LARGE	84		
Q Devices	Collab 2			Total Alarms O	Square Footage		
						0.7	-

3 Click **Baseline Energy**, enter the desired value in kWh, and then click **Save** (shown inset above).

2.6 - Setting the Maximum Power for Type 3 Devices

Follow the steps below to set the Maximum Power value for Type 3 Devices.

Step Action

1 Click **III** to display the app menu, then click **Lighting**, and the click **Devices** in the main menu.

≡	Devices			C V			Lighting
Alarms		9	ateway Details			/ EDIT	
Operate	Trellix Core 3 Controller(s)		Network Settings				^
	EG2 0 Device(s)		Configure IP 💿 Man	ual 🔘 DHCP			
Dashboard	PO-Demo-73-fe 19 Device(s)	~	MAC Address 54:B2:03:8B:79:EF	IP Address 10.130.162.254	Subnet Mask 255.255.254.0	Default Gateway 10.130.162.1	
Event Logs	PO-Demo-7e-7e 9 Device(s)	~	34.02.03.00.79.EI	10.130.102.234	233.233.234.0	10.130.102.1	
Sites							
			DNS Settings Preferred DNS Server	Alternate DNS Server			^
Schedules			N/A	N/A			
Q Devices							
() COOPER 15:11							

Step	Actio	n			
2	Click	View Type 3 Device	S .		
	Ехамя	Example			
	=	Devices			
	Alarms	← Type-3 Devices	BULK EDIT		

Alarms	← Type-3 Devices	BULK EDIT
> Operate	Only Buildings and Floors wit Device will appear below	h Type-3
Dashboard	Building	
Event Logs	Default Building	·
Sites	Default Floor	*
Schedules	347V Switchpack Dim	^
Q Devices	37-RSP CCI-CCT Collab	1
Devices	34-RSP CCI-CCT Collab	2

3 To set the power for one Device, select it from the list, then click **Edit**, and then expand the **Power** region. Go to Step 5.

Νοτε

You can limit the Devices displayed by selecting a Building and Floor.

L	Device will appear below		System Location	Stalus Blink to	Identify	
	Building Default Building	-	PO-Demo-73-fe-RS	Area Open Office		
	^{Floor} Default Floor		0.02180300	Operonite		
	347V Switchpack Dim		802,15.4 Network P Dimmable Properti			~
5			Contact Closure Inp			~
	RSP-CCI	-	Statistics			~
			Power			^
			Meter Type 🕖 Type 3	Max Power (Watt) 5		
R						CANCEL SAVE

4 To set the power for multiple Devices, click Bulk Edit, and then select the checkboxes for all Devices you want to modify.

EXAMPLE

A larms	← Type-3 Devices BULK	
D Operate	Only Buildings and Floors with Type Device will appear below	e-3 0
Dashboard	Building	
Event Logs	Default Building	·
Sites	Default Floor	
Schedules	347V Switchpack Dim	•
Q Devices	347V Switchpack Dim/CCI	*
	🗹 🧟 RSP-CCI	

5 Enter the Max Power (Watt) value for the Device(s), and then click Save,

2.7 - Setting Up Initial Schedules

Schedules allow Trellix Lighting to manage time-based actions, such as turning lights on and off according to the sunrise and sunset.

This section describes the creation of a schedule with a simple Event and Action. If you are unfamiliar with Schedules, or need help with other Events and Actions, see the *Schedule Configuration* chapter for more information.

2.7.1 - Procedure

Follow the steps below to create a Schedule.

Step Action

1

Click Schedules in the main menu, and then click Create a Schedule.

Νοτε

If no schedules exist, the Create Schedule window will appear automatically when the Schedules page is loaded.

RESULT



2 Enter a Schedule Name, then click a color to represent this Schedule in the calendar, and then click Add Events.

← PG1				
Events + ADD EVENT There are no events for this schedule.	Event Name			
	Recurrence Weekly	Ŧ	Repeat Every Week	*
			S M T	W T F S
	Event Trigger Custom Time	*	Start Time - HH:MN	Л (24
	SELECT INDIVIDU	JAL DATES		
	Start Date		End Date	
			O No End Date	
			O End after 5	occurrences

3

Enter an Event Name, then select Astronomical Time as the Event Trigger, with a Start Time of Sunset, and an offset Before Sunset of 30 Minutes.

Leave the **Recurrence** as **Weekly**, and then select Monday through Friday (**M**,**T**,**W**,**T**,**F**). Select or enter a **Start Date** and **End Date** in the future.

EXAMPLE

Events + ADD EVENT There are no events for this schedule.	Event Name Weekday Lights On 					
	Recurrence Weekly	Ŧ	Repeat Every Week	~		
	Event Trigger Astronomical Time	~	S M T Start Time Sunset	W T F S	Before Sunset	O After Sunset
	SELECT INDIVIDUAL I	DATES	End Date			
	01-05-2020		31-12-2020 No End Date			
			End after 5	occurrences		+ ADD ACTION

4 Click Add Action, and then select Set Zone Level as the Action Type.

Select the Building, Floor, and Area where this action will take place.
 Click Zone, then select All Zone Types, and then select All Zones. Set the Light Level to 85%, and the Fade Rate Seconds to 1.5.

← Add An Action				
Action Type Set Zone Level -				
Parameters Building Floor Default Building Default Floor	Area Test	· ·		🕅 VIEW MAP
● Zone(s) ○ Affected Zones By Area	0			
Zones				
✓ All Zones				SELECT ZONES (3)
Light Level	•	85 Percent	Fade Rate Seconds	CANCEL ADD TO EVENT
0	100			

6

Click Add to Event (shown inset above) to create the Event and return to the Schedule page.

EXAMPLE

Events + ADD EVENT	Weekly	~	Week	~			
There are no events for this schedule.			S M T	W	FS		
	Event Trigger		Start Time		Minutes		
	Astronomical Time	~	Sunset	*	30	Before Sunset	O After Sunset
	SELECT INDIVIDUAL	DATES					
	Start Date		End Date				
	01-05-2020	-	31-12-2020				
			🔿 No End Date				
			O End after 5	occurrences	5		
	Actions						+ ADD ACTION
	Zone Level: 85 %		Zones : Zone 2, Zo	one 3, Zone 1		2	ā 🖍

7 Click Save to apply your Event changes, and then click ← (upper left) to return to the Schedules page with the new schedule showing. Click Commit, and then click Confirm to send your changes to the Area Controllers.

J

Default Client Test	=	+ ADD SCHED		Aσ			Search	۹
Select Building 31		May 03 - 0	9, 2020			VIEW	🔿 Day 💿 Wee	k 🔿 Month
🖽 F1	~	Sun	Mon	Tue	Wed	Thu	Fri	Sat
		3	4	5	6	7	8	9
123			.: Weekday Li	.∴ Weekday Li	.∵ Weekday Li	.:^* Weekday Li	.::.: Weekday Li	
🖽 A		0	Đ	Ð	0	•	Ð	Đ
Schedules								
PG1	Ο							

2.8 - Setting Up Floor Maps (Optional)

See About Floor Maps, and the procedures that follow it, if you want to create one or more Floor Maps.

2.9 – Setting Up BACnet

Notes

The current version of Trellix Lighting supports a combined total of 10,000 published Area, Zone, Input Device, and Output Device objects. The Total Published Objects field will display the number of objects currently enabled after you have saved your configuration.

When modifying the Building or Device hierarchy (e.g., adding or removing a Building or Floor), the BACnet object list needs to be resynchronized. Any changes to the Building or Device hierarchy will cause BACnet to be disabled. See Synchronizing Changes to BACnet for instructions.

Step Action

1 Click **III** to display the app menu, then click **Admin**, then click **System**, and then click **BACnet**.

Result

≡	System Management		ADMIN
Alarms	Backup & Restore	BACnet Settings & Publish Options	n edit
:=	BACnet		
Event Logs	Clear History	BACnet/IP Disabled	
System	Date & Time		
22 Users	Demand Response		
20	Email Server		
Clients	Factory Reset		

2 Click Edit, and then set the BACnet/IP toggle to Enabled, and then click Save (shown inset below).

Νοτε

Wait for 5 minutes after BACnet/IP is enabled. This allows time for the EPICS (Electronic Protocol Implementation Conformance Statement) file to be generated.

RESULT BACnet Settings & Publish Option EDIT BACnet/IP Routed Network Number IPv4 address Port Enabled 47808 1 127.0.0.1 0 Unspecified Level 7 BACnet Id MAC Address Device Device Address 20:67:7C:DD:5C:18 Trellix Core 10.130.162.245 55555 . (0 Objects) 🥝 (0 Objects) Areas (0 Objects) 🥝 Zones (60 Objects) Disabled Disabled Disabled Disabled Output Devices (66 Objects) Daylight Sets (2 Objects) Input Devices (61 Objects) Occupancy Sets (22 Objects) 2 Disabled Disabled Disabled Disabled CANCEL Total Published Objects 213

Step	Action			N . I N I					
3	Enter the BAChet por	number from the Port	list, then enter a Routec	Network Number.					
	Note								
	The IPv4 address can	not be changed becaus	e it refers to the local BA	Chet publisher.					
4	To set the priority of I	BACnet commands, sel	ect the appropriate Higl	Priority Limit value.					
	action". Those equal t	o or lower will be mapp	ed to "high priority/overi	will be mapped to Trellix "normal privide" on Trellix. For example, with Uns vel 8 would be "normal priority/manu	specified Level 7				
5	Set the toggle for one	or more of the followi	ng to Enabled to expose	that type of BACnet data for the cor	nfigured gateway				
	Buildings								
	Floors								
	 Areas 								
	Zones								
	 Daylight Sets 			•					
	 Input Devices 								
	 Occupancy Sets 								
	 Output Devices 								
6	Click Save (shown ins	set below) to apply you	r configuration, or click	Cancel to discard it.					
	Example								
	BACnet Settings & Publis	h Options		EDIT					
	BACnet/IP	Port	Routed Network Number	IPv4 address					
	Enabled	47808	- 1	127.0.0.1					
	High Priority Limit								
	Unspecified Level 7								
	Device	Devize Address	BACnet.Id	MAC Address					
	Trellix Core 💻	192.168.1.20	55555	€ 80:30:E0:2E:90:6C					
	Buildings (0 Objects)	Floors (0 Objects)	Areas (102 Objects)	Zones (0 Objects)					
	Disabled	Disabled	Enabled	Disabled					
	Daylight Sets (0 Objects)	Input Devices (0 Objects)	Occupancy Sets (0 Objects) 🛛 🖉	Output Devices (0 Objects)					
	Disabled	Disabled	Disabled	Disabled					
	Total Published Objects 1	04		CANCEL SAVE					

2.10 - Setting Up the Trellix APIs (Optional)

Trellix data can be made available through two Published APIs, one for Lighting data a separate one for Locate data (if installed). This section explains how the Lighting API is enabled. If you want to enable the Locate API or are unfamiliar with the APIs, see *Configuring the Published APIs* for more details.

Procedure

Follow the steps below to configure the Published API for Lighting.

Step Action

1 Click **III** to display the app menu, then click **Admin**, then click **System**, and then click **Published API**.

2 Set the **Enabled/Disabled** toggle to **Enabled**.

RESULT

Backup & Restore	Locate	Light			
BACnet	Published API for	- Light			
Clear History		0			
Date & Time		e Published API for Light			
Demand Response		ation Programming Interfa Ilix lighting system with 3rd		integrators to	Enabled
Email Server	Server Configura	ation		N	
Factory Reset	Ū		server. Enable or disat	ole TCP server connection below.	
Firewall	Host	Port	Protocol	Certificate	ш
GSA Warning	192.168.1.20	53259	ТСР	CA_CRT_TCP.crt	± 🛑
Language Plugin	192.168.1.20	9004	WES	N/A	
Logs	192.108.1.20	5004			
Published API	Export Public ID				
Software Upgrade	Click export to de	ownload the public ID tem	plate to your local drive	2.	EXPORT
) Y (

OTHER **T**ASKS

- To download an XLSX file containing details about the devices exposed through the Published API, click Export
- To import an XLSX file containing the Published API device details, click Import, and then click Open

2.11 - Setting Up Open ADR

The OpenADR interface allows communication between WaveLinx and a utility company's Demand Response Automation Server (DRAS).

Νοτε

The WaveLinx system should be registered with the utility company before performing this task. The utility company will provide either a certificate, or a username and password, to authenticate the connection.

Follow the steps below to configure and enable Open ADR.

Step Action

1

Click **III** to display the app menu, then click **Admin**, then click **System**, and then click **Demand Response**, and then click **Open ADR**.

RESULT

BACnet BACnet Clear History Date & Time Demand Response Email Server	VTN Setup OpenADR is not setup.Click Edit to update OpenADR connection details.	EDIT
Clear History Date & Time Demand Response Email Server		EDIT
Clear History Date & Time Demand Response Email Server		EDIT
Image: Second		
Email Server		
ents		
Factory Reset	Demand Response Email Server Factory Reset It. D RESPONSE OPENADR UP Mmer/IP Address of the VTN P Password to connect	
VTN Setup Host Name/IP Address of the VTN Use Password to connect Username		
Password Use a Certificate to connect Building(s) Opted In Update to include one or more buildi	ng(s) to receive Open ADR.	

3 Enter the Host Name or IP Address of the VTN (remote ADR organization), and then enter the VEN ID that was assigned to them.

4 If the utility company DRAS server will use a password to authenticate, click **Use Password**, and then enter the **Username** and **Password** that were assigned to the ADR organization. Select the checkbox for each building that the ADR organization should respond to the Demand Response signal.

DEMAND RESPONSE	OPENADR				
		_			
TN Setup			/ EDIT		
ost Name/IP Address of the	• VTN	VEN ID			
Use Password to connec	t				
Username					
Password	Ø				
OUse a Certificate to conn	lect			$\mathbf{\lambda}$	
uilding(s) Opted In					
uilding(s) Opted In Ipdate to include one or mo	re building(s)	to receive Open ADR.			

5 If the utility company DRAS server will use a certificate to authenticate, click **Use a Certificate**, and then click the **Choose File**, and then select the ZIP archive file that contains the necessary certificate files.

Νοτε

The certificate will be issued by the utility company.

AMPLE			
DEMAND RESPONSE	OPENADR		
VTN Setup			EDIT
Host Name/IP Address o	f the VTN	VENID	
O Use Password to cor	nnect		
Use a Certificate to a	connect		
Choose a certificate	for the connection igvee	CHOOSE FILE	
Building(s) Opted In			
Update to include one or	r more building(s) to r	eceive Open ADR.	
MyBuilding			

See the Troubleshooting section if you get an unexpected result.

6 Select the checkbox for each **Buildings Opted In** that will participate in the Demand Response program, and then click **Save** (shown inset below).

EXAMPLE

VTN Setup	VENID	EDIT	
10.130.162.101	12341234	_	
Use Password to connect			
Username exampleuser			
Password			
O Use a Certificate to connect			
Building(s) Opted In		CANCEL	
Update to include one or more building	g(s) to receive Open ADR.		

2.12 - Setting Up the Email Server

Trellix Lighting lets you connect your Trellix Lighting to an email server, allowing notifications to be emailed when alarms are generated.

Νοτε

You will need the IP address and port number of an SMTP (Simple Mail Transfer Protocol) server to complete this procedure. Depending on your SMTP server, you may also need authentication account details.

Step Action

1 Click III to display the app menu, then click Admin, then click System, and then click Email Server.

RESULT

≡	System Management		ADMIN	
Alarms	Backup & Restore	Email Server Settings	1	EDIT
/ent Logs	BACnet Clear History	IP/Domain example.com		
System	Date & Time	Port Number 25		
211 Users	Demand Response	23 Requires Authentication		
Clientz	Email Server	Username		
Citerica	Factory Reset	smtp@example.com		
	Firewall	Password · · · · · · · · · · · · · · · · · · ·		
	GSA Warning			
	Language Plugin	Test Email 🛛		
	Published API	Email for Notifications (optio	X TE	ST
	Software Upgrade			

2 Click Edit, then enter the IP address or Domain name of your SMTP server, and then enter a valid Port Number (e.g., 25 or 587).

3 If your SMTP server requires authentication, select **Requires Authentication**, then enter the **Username** and **Password** credentials for the email account.

EXAMPLE

Username smtp@example.com		
Password		
~	CANCEL	

2.13 - Setting Up Additional User Accounts and Roles (Optional)

This topic describes the addition of user accounts and roles. If you are unfamiliar with Trellix accounts, roles, and permissions, or you need more information, see *User and Role Administration*.

2.13.1 - Adding User Accounts

Follow the steps below to create a new Trellix Lighting user account

Step Action

4 5

1 Click III to display the app menu, then click Admin, and then click Users.

=	Users						ADMIN	
Alarms	ALL USERS	ROLES						
Event Logs		+ ₹ FILTER	Ł Clear all 1	filters		Search		۹
\$ System	All Roles 💿 🛛 Li	IGHTING 💿						
22 Users	User Name 🕇	Email		Application	Role	Items per page 50 ▼ 1 - 50 of 53	<	>
20								
Clients	Admin	N/A		LIGHTING	System Administrator			
	Facman	N/A		LIGHTING	Facility Manager		×	
	ITAdmin	N/A		LIGHTING	IT Administrator		×	/
	LightingAPI	N/A		LIGHTING	Third Party Integration		×	-

Click + beside Manage Users. Enter the new User Name and (optionally) the Email for Notifications, then enter and confirm a Password, and then select Password Expires if you want to limit password validity to 90 days. If desired, expand and fill out the Additional Information fields.

← Add User			
User Name	Email for Notifications (option		
Joe	joe@example.com	_	
Password	Confirm Password		
•••••	•••••	Ø	
✓ At least 1 numbe	character (+ & % are not allowed)		
 At least 1 number At least 1 special At least 1 upper- Password Expire 	er character (+ & % are not allowed) case letter es		
 At least 1 number At least 1 special At least 1 upper- Password Expire 	er character (+ & % are not allowed) case letter		
 At least 1 number At least 1 special At least 1 upper- Password Expire 	er character (+ & % are not allowed) case letter es I will expire in 90 days	CANCEL ASSIGN ROLE(5)	
 At least 1 numbe At least 1 special At least 1 upper- Password Expire If selected, password 	er character (+ & % are not allowed) case letter es I will expire in 90 days	CANCEL ASSIGN ROLE(5)	

3 Click Assign Roles (shown inset above). Select a Role, then select the Receive Email Notifications check box if you want to send notifications to this user.

AMPLE						
Role(s) for "joe"			Y			
					+	
Role(s)					+	ADD APPLICATION
Application		Role				
LIGHTING	~	Tenant	~	SELECT AREA OF RESPONSIBILITY (1)		
Receive Email N	lotificat	tions				×

4 Click Select Area of Responsibility. Use the Search box or expand and collapse the building hierarchy to view and select one or more Areas this user can access. Click Add to Role (shown inset below) to continue.

← Area of Responsibility for "Joe"	Search Q	
Default Client Test	^	
B 1	^	
■ F1	~	
Default Building	CANCEL ADD TO ROLE	
5 Click Create User to add this user and ret	urn to the Users page.	
ALL USERS ROLES		
Manage Users + \Xi FILTER 🛓	Joe	8
	tem per page 50 - 1	- 1 of 1 🗸 🔉
User Name 个 Email	Application Role	
User Name ↑ Email Joe joe@example.com		

2.13.2 - Adding Roles

Follow the steps below to create a new Trellix Lighting role.

Step Action

1

- Click **III** to display the app menu, then click **Admin**, then click **Users**, and then click **Roles**.
- **EXAMPLE**

=	Users			ADMIN	
Alarms	ALL USERS	ROLES			
Event Logs	Manage User Roles	+			
System	TrelliX Lighting Roles				^
24 Users	Name ↓	Permissions	Items per page 5 v 1 - 5 of 13 Global Permissions	<	>
Clients	Viewer	View Only	View Only		
	Third Party Integration	View Only • Manual Action	View Only • Lighting API		
	TestRole1	View Only • Acknowledge Alarms	User Managemen • Demand Response • View Only	🖻 🧪	
	Tenant	View Only • Schedule • Manual Action	View Only		
	System Administrator	System Configuration • View Only • Schedule • Manual	User Management • User Role Management • System S		

Other Tasks

- To sort the list of roles, click a column heading (e.g., Name)
- econd time To reverse the sort order, click the same heading a second time

² To add a role, click + beside Manage User Roles. Enter the new Role Name, then select each Lighting Permission and Global Permission this role should have.

Νοτε

See Default Lighting Accounts, Roles, and Permissions for role permission details

_{Name} Viewer Plus	Application LIGHTING	-				
LIGHTING Permissions						
Select All						
Acknowledge Alarms		High Priority Override		lanual Action		
C Schedule		System Configuration	✓ V	iew Only		
Global Permissions						
Select All				O		
Demand Response		✓ Lighting API		ocate API		
System Settings		User Management		Jser Role Management		
View Only						
			0.		CANCEL	ADD ROLE
					CANCEL	ADD ROLL
lick Add Role .		<u> </u>	<u>S</u>		CANCEL	
lick Add Role . KAMPLE		5	6.01		CANCEL	
	ROLES	jts o	0.0		CANCEL	
KAMPLE			0		CANCEL	
ALL USERS					CANCEL	~
ALL USERS			Global Permissions	Items per page 5 🛛 💌	1 - 5 of 13	
XAMPLE ALL USERS Manage User Roles TrelliX Lighting Roles	+	e Alarms	Global Permissions View Only • Lighting AP	Items per page 5 🛛 💌		^ < >
XAMPLE ALL USERS Manage User Roles - TrelliX Lighting Roles Name ↓	+ Permissions	e Alarms		Items per page 5 🛛 💌	1 - 5 of 13	^ < >
XAMPLE ALL USERS Manage User Roles TrelliX Lighting Roles Name ↓ Viewer Plus Viewer	+ Permissions View Only • Acknowledge		View Only • Lighting AP	Items per page 5 💌	1 - 5 of 13	^ < >
XAMPLE ALL USERS Manage User Roles TrelliX Lighting Roles Name ↓ Viewer Plus Viewer	+ Permissions View Only • Acknowledge View Only	วก	View Only • Lighting AP View Only View Only • Lighting AP	Items per page 5 💌	1 - 5 of 13	^ < >

2.14 - Synchronizing Data with a WAC

Νοτε

You must be logged in with System Administrator permissions, such as the default Admin account, to perform this procedure. An account with Facility Manager permissions, such as the default Facman account, can use the **Actions menu** but cannot edit Trellix Core configuration.

Click I	Devices in the main menu, then select the target WAC, and then click the Actions menu.						
Ехамр	LE						
≡	Devices						Lighting
Alarms	₹ VIEW TYPE-3 DEVICES	Q	Controller Details				
> Operate	Trellix Core 3 Controller(s)	^	General Properties				Enable Discover Devices
	EG2 0 Device(s)		Device Type WAC	Public ID D41	Name PO-Demo-7e-7e	∾ V	Import Devices
Dashboard	PO-Demo-73-fe 19 Device(s)	~	Physical Location	System Location	Status	Fi	Push Data to Controller
Event Logs	PO-Demo-7e-7e 9 Device(s)	^	Default Client>Default	PO-Demo-7e-7e	On	8	Remove Controller
Sites	10-Relay Switchpack	¥	Identify Mode Off				Controller Log
Schedules	11-Integrated Sensor	¥				_	Reboot WAC
Schedules	4-BLE Integrated Sensor	¥	802.15.4 Network Prope	rties			

2 Click Push Data to Controller.

Νοτε

See Synchronizing Data with WACs to push data to more than one WAC at a time.

Wireless Ethernet Ma

2.15 - Confirming WACs are Using Trellix Core as NTP Server

5-BLE Integrated Sensor

To ensure the connected WACs are properly configured with Trellix Core as their NTP Server, you must connect to each WAC directly using your Web browser.

Prope

Νοτε

Refer to the WaveLinx User Manual if you require more information about WAC configuration.

On the WAC System screen (shown below), confirm the following:

- NTP Client is Enabled
- NTP Server 1 setting should match the Trellix Core IP address
- Timezone setting matches the Trellix Core Time Zone

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If any of the settings above are incorrect, click 🖍 for Time, then apply the proper settings, and then click Update.

≡	System	WaveLinx Configurator
\$ System		
O		
Update	Time	
	Current Date/Time	
Devices	2020-02-25 10:15	
(;		
Network	NTP Client	
*	Enabled	
Users		
	NTP Server 1	
	10.106.164.251	
	Timezone	
	America/Toronto	
	Antensa, Forence	
F:T-N 10:15	Custom Certificate	

2.16 – Backing Up the System

Follow the steps below to back up the Trellix system.

Νοτε

You must be logged in under an account with System Settings permission, such as the default Admin account, to back up.

Step Action

1 Click III to display the app menu, then click Admin, then click System, and then click Backup/Restore.

=	System Management		ADMIN	
Alarms	Backup & Restore	Backup and Restore		
:=	BACnet	Manual Backup 🚯 🗗	ACKUP NOW	
Event Logs	Clear History			
System	Date & Time	Schedule Automatic Backup	E A BACKUP	
Lesers Users	Demand Response	No Scheduled Backup Available		
Clients	Email Server	Backup History 🔘		

2	2 Click Backup Now and ensure that Configuration Data is selected.				
	Result				
	Manual Backup 🛛				
	Select a type and click Backup Now.				
	● Configuration Data ○ Historical Data				
	CANCEL BACKUP NOW				

Click Backup Now. You will see a progress message at the bottom of the screen, followed by a backup complete message.
 Note

Only one backup can be in progress at any time. If a second request to back up is made, it will be rejected.



3 – System Administration

Use this chapter to administer Trellix Lighting system functions. See the *Commissioning* chapter for administration procedures that are typically performed when a Trellix system is first set up, such as BACnet or Email Server configuration.

Notes

The system administration features available will depend on the account privileges for the logged-in user.

≡	System Management		ADMIN
Alarms	Backup & Restore	Email Server Settings	🖍 edit
:=	BACnet	IP/Domain	
Event Logs	Clear History	example.com	
System	Date & Time	Port Number 25	
Users	Demand Response	✓ Requires Authentication	
	Email Server	Username	
Clients	Factory Reset	smtp@example.com	
	Firewall	Password 🔊	
	GSA Warning		
	Language Plugin	Test Email 💿	
	Published API	Email for Notifications (optional) alerts@example.com	8 TEST
	Software Upgrade		
0 COOPER 10:50		CAN	NCEL SAVE

3.1 - Backing Up and Restoring

Follow the steps below to backup and restore a Trellix Lighting system. Trellix supports separate backups for configuration and historical data, allowing either one to be restored without affecting the other. Backups can be kept on Trellix Core as well as downloaded. Restore operations can be performed using backup files that reside on the Trellix Core or by uploading the files from another location.

Νοτε

You must be logged in under an account with System Settings permission, such as the default Admin account, to perform these tasks.

Step Action

1 Click III to display the app menu, then click Admin, then click System, and then click Backup/Restore.

Νοτε

The system will store and display the 5 most recent backups of each type.

RESULT

≡	System Management			ADMIN
Alarms	Backup & Restore	Backup and Restore		
:=	BACnet	Manual Backup		BACKUP NOW
Event Logs	Clear History			BACKOF NOW
System	Date & Time	Schedule Automatic Backup		SCHEDULE A BACKUP
22 Users	Demand Response	No Scheduled Backup Available		
Clients	Email Server	Backup History 🛛	N. N. N.	

2 Click **Backup Now**, and then either **Configuration Data** or **Historical Data** as the type of data you want to back up.



Click Backup Now. You will see a progress message at the bottom of the screen, followed by a backup complete message.
 Note

Only one backup can be in progress at any time. If a second request to back up is made, it will be rejected.

Δ

To schedule an automatic backup, click Schedule a Backup, then select a Recurrence of Weekly, Monthly, or Yearly, and then enter a Start Time.

Νοτε

A scheduled backup creates both Configuration and Historical backup files.

EXAMPLE

Recurrence Neekly	Ŧ	Start Time-HH:MM 23:00
Repeats Every Veek	~	Days of the Week S M T F S
art Date /2/2020		O End Date
		End after 52 occurences
		O No end date
		CANCEL SAVE

OTHER TASKS

- For a Weekly backup, select one or more Days of the Week on which a backup will occur, then select a Start Date on which this schedule will become active, and then specify when the schedule should stop with End Date, or End after N occurrences, or No end date. Click Save.
- For a Monthly backup, specify either the Date (1-31) or Day (1st to Last, Monday Sunday), and then the (1-12) Months between backups. Finally, specify when the schedule should stop with End Date, or End after N occurrences, or No end date. Click Save.
- For a Yearly backup, enter the Repeats every number of years, then specify either the Date (1-31 January through December) or 1st to Last, Monday - Sunday) of January - December. Finally, specify when the schedule should stop with End Date, or End after N occurrences, or No end date. Click Save.
- 5 To restore from a backup that was saved on the server, click **Restore** in the Backup History region, and then click **Yes** to confirm.

IMPORTANT

If you are restoring from a backup created on another Trellix network with different IP addresses, see Areas, Zones, And Devices Lost From Floor Plan before proceeding.

Notes

- You will have to manually reimport all Controller data after restoring (See Importing a WAC or WaveLinx Wired (EG) Database or Importing Multiple Controllers for details)
- The user passwords are reset to default after a restore, so you will have to be manually return them to their expected values (See Default Lighting Accounts, Roles, and Permissions for the default values)

OTHER TASKS

- To delete an existing backup from the server, click 🖬 beside the backup date in the Backup History region
- To download an existing backup from the server, click 보 beside the backup date in the Backup History region
- 6 To restore from a backup on your computer, click **Choose File**, then click **Choose File** again, then select the local backup file. Click **Upload** to send the file to the server, and then click **Restore** to complete the operation.

OTHER TASKS

To delete the uploaded backup file before without restoring, click 🖬 beside the file

3.2 - Clearing Utilization and Occupancy History

Follow the steps below to clear Utilization (Energy) or Location (Occupancy) historical data.

Νοτε

Clearing Location data will wipe out the data used by the Replay Asset Movement feature on sites with Trellix Locate installed.

Step Action

1 Click III to display the app menu, then click Admin, then click System, and then click Clear History.

RESULT

P Barms			
	Backup & Restore	Clear History	
: = B/	BACnet	Select a historical data from below to clear. 🛛	
	Clear History	☑ Utilization □ Location	
	Date & Time		CLEAR HISTORY
Jsers D	Demand Response		1

3 Click Clear History (shown inset above).

3.3 - Configuring Demand Response

Trellix Lighting lets you set up the interface used to participate in a Demand Response programs. The system can receive a Demand Response signal via BACnet/IP, Published API, and OpenADR. The Demand Response and OpenADR tabs are used to enable the Demand Response interface, send a test, and configure the OpenADR connection to a utility company's Demand Response Automatic Server (DRAS).

Νοτε

2

See Setting Up Open ADR in the Commissioning chapter for details on enabling Open ADR.

Procedure

Follow the steps below to configure and test the Demand Response

Step Action

1 Click III to display the app menu, then click Admin, then click System, and then click Demand Response.

=	System Management		Admin 👬
Alarms	Backup & Restore	DEMAND RESPONSE OPENADR	
:=	BACnet	Test Response	
Event Logs	Clear History	Send a test demand response signal by clicking the 'Test' button. Test will	S CANCEL RESPONSE TEST
System	Date & Time	automatically end after 30 minutes. Realtime Response	
Users	Demand Response	Allowing Lighting Gateway to receive real time demand response	S CANCEL RESPONSE Enabled
20	Email Server	Controller(s) DR Status	
Clients	Factory Reset	View controller(s) demand response status	CONTROLLER(S) DR STATUS

2 To test that the Demand Response function is working, click **Test**. To terminate the test, click **Cancel Response**.

Notes

- A test takes 10 seconds to reach the Demand Response level, can have a maximum duration of 30 minutes, and returns to the previous level immediately when it ends
- The test assumes the system has been configured with the WaveLinx mobile app and the test can be verified in the field
- · The Cancel Response button will cancel all active Demand Response commands, not just the test command

3

To enable Trellix Lighting to receive an external demand response request, toggle the **Realtime Response** to **Enabled**.

Νοτε

A Realtime response takes 400 seconds to reach the Demand Response level, has no maximum duration, and returns to the previous level immediately when it ends

4 To see the current Demand Response status of the connected WACs, click **Controllers DR Status**.

EXAMPLE

÷	CONTROLLER(S) DR	STATUS			_			
	C REFRESH TABLE				Sea	rch Controlle	ers	٩
			ltems per page	50	*	1 - 50 of 1	<	>
C	Controllers	Mode		Activ	e Sign	al Level		

Notes

- The Mode value will display Open ADR, Realtime, or Test if one of those is active, or N/A if none are active
- The Signal Level will display 0 when there is no active request, and 1 when there is an active request

OTHER **T**ASKS

- To find a specific device, type some or all of the WAC name in the search field, and then press Return
- To update the status information, click **Refresh Table**
- If there is more than one page of WACs listed, use the < and > links below the list to browse

5 Click Save to apply your changes.

3.4 – Resetting to Factory Configuration

Trellix Lighting lets you reset Trellix Core/Trellix Lighting to the factory default settings.

Νοτε

You must be logged in under an account with System Settings permission, such as the Admin account provided by default, to perform this task.

Step Action

1 Click III to display the app menu, then click Admin, then click System, and then click Factory Reset.

RESULT

=	System Management		ADMIN	
A larms	Backup & Restore	Factory Reset		
:=	BACnet	Factory Reset will erase the custom settings and all factory defaults will be restored. Please refer to the User Mar	nual for mo	re
Event Logs	Clear History	information.		
System	Date & Time			
22 Users	Demand Response			
	Email Server			
Clients	Factory Reset		TORY RESET	
	Firewall			
Click F	actory Reset, and	then click Yes, Reset Now to restore the original Trellix Lighting factory setting	js.	

2

3.5 – Configuring the Firewall

Follow the steps below to configure the Trellix firewall. The default port settings are as follows:

- PostgreSQL Disabled
- SSH Disabled
- Eureka Disabled
- System Service Enabled

Notes

- You must be logged in with an account with System Settings permission, such as the Admin account provided by default
- The ports described in this procedure are typically used by a Cooper specialist to troubleshoot the system

IMPORTANT

The PostgreSQL, SSH, and Eureka ports should only be enabled for troubleshooting and should after disabled as soon as the troubleshooting is complete.

Step Action

1 Click **III** to display the app menu, then click **Admin**, then click System, and then click **Firewall**.

RESULT System Management = 19 Backup & Restore Firewall 🖍 EDIT Alarms BACnet := Event Logs Description Status Clear History \$ Enabled System Service TCP Date & Time RabbitMQ Management Enabled * TCF Demand Response User: Published API TCP Server Enabled Email Server Client PostgreSQL Database Enabled 432 Factory Reset Eureka Server 8761 Enabled Firewall

- 2 Click Edit, and set the Status of one or more of the following firewall ports to Enable.
 - SSH
 - PostreSQL Database
 - Eureka Server

IMPORTANT

These ports should only be enabled for troubleshooting by Cooper Lighting Solutions. Do not enable any of these unless you clearly understand the consequences.

3.6 - Setting the GSA Warning

The GSA Warning is a standard U.S. General Services Administration computer system statement of use. When enabled, it will appear each time a user loads the Trellix Lighting login page.

EXAMPLE

В	Federal Government computer system that is FOR OFFICE USE ONLY. This system is subject to monitoring. Therefore, no expectation of privacy is to be assumed. Individuals found performing unauthorized activities are subject to disciplinary action including criminal presentation.	
	Warning This is a U.S. General Services Administration Federal Government computer system that is	

Click 🗰 to display the app menu, then click Admin, then click System, and then click the GSA Warning.

RESULT

=	System Management	
Alarms	Backup & Restore	GSA Warning
:=	BACnet	Enable or Disable GSA Warning
Event Logs	Clear History	Disabled
System	Date & Time	
22 Users	Demand Response	
20	Email Server	
Clients	Factory Reset	
	Firewall	
	GSA Warning	

2 Set the GSA Warning to Enabled to display the message for each login.

3.7 - Configuring the Language Plugin

Trellix Lighting supports localization of the interface with language plugins provided by Cooper Lighting Solutions. English and French are available in 7.0, while Spanish and other languages will be added over time.

Step Action

2

1 Click III to display the app menu, then click Admin, then click System, and then click Language Plugin.

≡	System Management			ADMIN 👬
Alarms	Backup & Restore	Language Plugin		
:=	BACnet	Import Language Plugir	1	
event Logs	Clear History	Click 'Import' to upload a	a language plugin	IMPORT
System	Date & Time			
Users	Demand Response	Installed Language plug		
20	Email Server	Language plugins that are cur		
Clients	Factory Reset	Language	Plugin file	
	Firewall	English	ETN_EN.lang	
	GSA Warning			
	Language Plugin			

3 To delete an unused plugin, click 🗈 beside the target language, and then confirm your action.

3.8 – Downloading Audit Logs

Trellix Lighting maintains a downloadable audit log of the activities listed below for a minimum of 30 days.

User sessions

• Login and logout - who and when

Command actions

- Lighting level
- High priority override
- Scene
- Blink to identify

Schedule details

- Status create, delete, enable, disable, change owner, change name
- Events name, recurrence, repeat, event trigger, start and end time, start and end date
- Actions- type, enable, disable, parameters

Procedure

Follow the steps below to download the log.

Step Action

1 Click III to display the app menu, then click Admin, then click System, and then click Language Plugin.

≡	System Management	Admin <u>:</u>
Alarms	Backup & Restore	Download Audit Log
≔	BACnet	Audit log contains records off user access and locale details so historical activity can be reviewed.
Event Logs	Clear History	
System	Date & Time	
Users	Demand Response	
	Email Server	
Clients	Factory Reset	
	Firewall	
	GSA Warning	
	Language Plugin	
	Logs	

2 Click Import to upload a valid Cooper language plugin. 3 To delete an unused plugin, click is beside the target language, and then confirm your action.

3.9 – Configuring the Published APIs

This procedure enables third-party access to Trellix data through two Published APIs, one for Lighting data a separate one for Locate data (if installed). Each API is enabled and configured individually. The exported Lighting object data represent Devices, while the Locate object data represent Assets and Tags.

Custom Object IDs

You can replace the default object IDs with custom values by exporting the Lighting or Locate Excel template file from Trellix, modifying the Published ID data it contains, and then importing it back into Trellix.

Network settings

- IP address change (Setup Wizard)
- DHCP status
 System changes
- Firmware updates who, when, status (initiated/completed)
- Data sync who, when, status (initiated/completed)
- Backup who, when, status (initiated/completed)

Data synchronization details

- Import from WAC
- Sync to WAC

This feature is useful when integrating Trellix Lighting with a third-party system, as follows:

- 1. The Trellix data, with default IDs, is exported to an Excel file.
- 2. The third-party system integrator modifies the exported file, replacing the default IDs with those used in the external system.
- 3. The modified file is imported into Trellix, making the Trellix data accessible using the external system IDs.

Notes

- Custom Device IDs are stored as part of the backup process
- When WAC devices are added, removed, or reassigned (e.g., moved to a different Zone), the custom IDs will have to be updated by exporting the Excel file, editing that file, and then re-importing its

3.9.1 - Published API for Lighting Data

Lighting ID Template

The exported Published ID template for Lighting data (e.g., "Export_PublishedId_20200415082608.xlsx") contains the following values for each configured lighting object:

- Object Type The type of object, such as "Zone" or "Occupancy Set"
- Name The name of the object as displayed to users, such as "Zone 3" or "Construction Area"
- Building Location The name of the Building where the object resides
- Floor location The name of the Floor where the object resides
- Area where it belongs The name of the Area where the object belongs
- Identifier Unique identifier of the object, such as "94bc6ed6-c40a-11e9-a1f3-001d054d2784"
- PublishedID The identifier assigned to the object, such as "Z825" or "S209"

Procedure

Follow the steps below to configure the Published API for Lighting.

Step Action

1 Click III to display the app menu, then click Admin, then click System, and then click Published API.

2 Set the Enabled/Disabled toggle to Enabled.

=	System Management	•				Admin 🚻			
Alarms	Backup & Restore	Locate	Light	0					
:=	BACnet	Published API for Ligh	nt	3					
Event Logs	Clear History								
System	Date & Time	Enable or Disable Pul	blished API for Light						
Pa Users	Demand Response	Published Application integrate the Trellix lig		ce (API) allows system integra I party systems	itors to	Enabled			
	Email Server	Somer Configuration							
Clients	Factory Reset	-	Server Configuration Download certificate to use Trellix as a TCP server. Enable or disable TCP server connection below.						
	Firewall	Host	Port	Protocol	Certificate				
	GSA Warning	10.130.162.245	53259	ТСР	CA_CRT_TCP.crt	± 🔎			
	Language Plugin	10.130.162.245	9004	WSS	 N/A				
	Logs	10.130.102.245	5004	112	1977				
	Published API	Export Public ID							
	Software Upgrade	Click export to downlo	oad the public ID temp	plate to your local drive.		EXPORT			
တ္ ငဝဝဇ္ဇာန္က 13:53		Import Public Ids Click import to select	and attach the public	device ID template from your	local drive.	IMPORT			

3 If Trellix will be acting as a Server for your TCP Client, enable the toggle to the far right of the Host IP address under **Server Configuration** (shown orange and enabled below).

XAMPLE				
Server Configuration				
Download certificate	to use Trellix as a serve	r. Enable or disable server c	onnection below.	
Host	Port	Protocol	Certificate	
10.130.162.245	53257	ТСР	CA_TCP.crt	± 🐠

4 To download an XLSX file containing details about the devices exposed through the Published API, click **Export**. To import an XLSX file containing the Published API device details, click **Import**, and then click **Open**.

Lighting XLSX Example

		icld_20200415082608.xlsx - E		1 Jala		- ⊞ –
ile Home	Insert Draw Page Layout	Formulas Data	Review View	Help		🖻 Share
66 - :	× √ <i>f</i> x S306					
	В		D	E		G
Object Type	Name	Building Location	Floor Location	Area where it belongs	Identifier	PublicID
Zone	Zone 3	C1B3	F5	A528	2eae0250-6485-11ea-8c7e-001d054d2784	Z819
Occupancy SET	Default Occupancy	C1B3	F5	A408	0a2535c4-aa37-11e9-b860-001d054d2784	OS9
Occupancy SET	Default Occupancy	C1B1	F1	A529	8fdba2e0-7519-11ea-8f5a-001d054d212a	OS21
Occupancy SET	Occupancy Set 1	C1B3	F5	A411	ccc1c944-4e8d-11ea-8c71-001d054d2784	OS13
Occupancy SET	Occupancy Set 1	C1B3	F5	A412	cf6693d2-4e8d-11ea-8f11-001d054d2784	OS14
Occupancy SET	Occupancy Set 1	C1B3	F5	A409	c6a83fd0-eaa0-11e9-bcc9-001d054d2784	OS11
Occupancy SET	Occupancy Set 1	C1B3	F5	A413	d22737ca-4e8d-11ea-a24c-001d054d2784	OS15
Occupancy SET	Occupancy Set 1	C1B3	F5	A528	2e297b8e-6485-11ea-b439-001d054d2784	OS20
Occupancy SET	Occupancy Set 1	C1B3	F5	A410	ca789492-4e8d-11ea-bda9-001d054d2784	OS12
Occupancy SET	Occupancy Set 1	C1B3	F5	A414	d49ddf2c-4e8d-11ea-9e45-001d054d2784	OS16
Occupancy SET	Occupancy Set 1	C1B1	F1	A530	a4ebd57c-75ed-11ea-b6c4-001d054d212a	OS22
Occupancy SET	Occupancy Set 2	C1B3	F5	A409	fb7d0b46-eaa0-11e9-8141-001d054d2784	OS10
DLS	OL Daylight Set 28	C1B3	F5	A409	12267db4-eaa1-11e9-a708-001d054d2784	DS4
DLS	OL Daylight Set 29	C1B3	F5	A409	19734cb4-eaa1-11e9-b0ea-001d054d2784	DS3

3.9.2 - Published API for Locate Data

When the Locate API is enabled, Trellix data can be made available to remote programs. This can be accomplished in three ways:

- Trellix acts as a server, sending real-time Locate data to specified TCP clients
- Trellix acts as a server, sending real-time Locate data to specified POST URLs
- Trellix acts as a client application, sending real-time Locate data to a remote TCP server

Locate ID Template

The exported Published ID template for Locate data (e.g., "Export_PublishedId_RTLS_20200415091734.xlsx") contains the following values for each configured device:

• UUID - The unique ID for the object, such as "6c52b439-b163-4c31-a6e9-d5c49eb29b74"

- Object Type The type of item, such as "Asset" or "Tag"
- Name The name of the item as displayed to users, such as "tag A14D87"
- Identifier The identifier assigned to the item, such as "assetID 543878"

Procedure

Follow the steps below to configure the Published API for Locate.

Step Action

1 Click III to display the app menu, then click Admin, then click System, and then click Published API.

2 Click Locate, and then set the Enabled/Disabled toggle to

EXAMPLE

≡	System Management					ADMIN
Alarms	Backup & Restore	LOCATE	LIGHT			
Event Logs	BACnet	Published API for	Locate			
\$	Clear History					
System	Date & Time		e Published API for Locat	-		^
22 Users	Demand Response		11	g Interface (API) allows system stem with non-Eaton system	m	enabled
20	Email Server	Server Configura	ation			
Clients	Factory Reset	0		ver. Enable or disable server	connection below.	
	Firewall	Host	Port	Protocol	Certificate	
	GSA Warning	10.130.162.245	53257	ТСР	CA_TCP.crt	± 🔘
	Language Plugin			0		
	Published API	Client Configura	tion +			
	Software Upgrade		TCP CLIENT(1)		POST URL(1)	
)		tems per page 50	1-1 of 1 < >
0 COOPER 08:48		Host 个	Port	Protoca	Certificate	
08:48		192 168 0 13	5/67	ТСР	NI/A	亩 2

- 3 To download an XLSX file containing the Published ID details, click **Export**, and then confirm the operation.
- 4 If Trellix will be acting as a Server for your TCP Client or POST URL client, enable the toggle to the far right of the Host IP address under **Server Configuration** (shown orange and enabled below).

EXAMPLE				
Server Configuration				
Download certificate to	o use Trellix as a serv	er. Enable or disable serve	er connection below.	
Host	Port	Protocol	Certificate	
10.130.162.245	53257	ТСР	CA_TCP.crt	± 🛑

5 If you will be setting up a secure Client connection, click 보 to download the Trellix certificate.

Νοτε

Secure communication using the Trellix certificate is not required but is highly recommended if the client application is outside the building firewall.

6

add a client application, click Client Configuration +.			
AMPLE			
← Configure Client for Locate			
Configuration Type			
TCP Client 👻			
TCP Client			
Host	Port		
Certificate for the connection			

7 To add a TCP Client, select that from the **Configuration Type**, and then enter the **Host** IP address and **Port** number.

Example		
← Configure Client for Loc	te	
Configuration Type		
TCP Client 👻		
TCP Client		
Host	Port	
192.168.0.123	8080	
Certificate for the connectio	- cC - O	

8 If the TCP Client will be using a secure connection, click **Attach File**, then locate and upload the Trellix certificate file (downloaded in Step 5).

EXAMPLE

← Configure Client for	Locate	
Configuration Type TCP Client -		
TCP Client		
Host	Port	
192.168.0.123	8080	
Certificate for the conne Certificate Name CA_TCP.zip	ction	

LIGHT	LOCATE		connection perotit	
Host	Port	Protocol	Certificate	
10.130.162.245	53257	ТСР	CA_TCP.crt	<u>+</u> ()
	TCP CLIENT(1)		POST URL(0)	
			ltems per page 50 💌 1	1 of 1 < 💙
Host ↑	Port	Protocol	Certificate	
192.168.0.123	8080	ТСР	N/A	茵 🏾

To add a POST URL client, click Client Configuration +, and then select as Configuration Type of POST URL.

11 Enter the **Post URL**, then select one or both **Path** check boxes, then enter the corresponding **Path** values.

Configure Client	for Locate	
Configuration Type Post URL	r 	
Post URL Post URL example.com/trellix		Note: Only CA certificates are accepted
✓ Locate Alarms	Path /locate/alarms	00
Asset Location	Path /asset/locations	CANCEL SAVE

12 Click **Save** to complete the client configuration.

3.10 – Upgrading the Software

The Trellix Core and WAC system software can be upgraded as new releases are provided by Cooper Lighting Solutions.

Νοτε

10

You must be logged in under an account with System Settings permission, such as the Admin account provided by default.

Action Step

1

Click 🇱 to display the app menu, then click Admin, then click System, and then click Software Upgrade.

=	System Management				ADMIN
Alarms	Backup & Restore	Software Upgrade			
:=	BACnet	Click 'Upgrade Now' to initi	ate a software upgrade		UPGRADE NOW
Event Logs	Clear History		10		
System	Date & Time	Upgrade History			
2 Users	Demand Response	Software	Version	Date	
20	Email Server	TrelliX Core	Version 7.0.0.109	Last upgrade 30-03-2020 12:21	
Clients	Factory Reset	TrelliX Core	Version 7.0.0.104	16-03-2020 19:58	
	Firewall	TrelliX Core	Version 7.0.0.100	27-02-2020 11:53	
	GSA Warning				
	Language Plugin	Firmware Files			
	Published API	File name	Date		
	Software Upgrade	WVX-ReleasePackage- 7.0.0.245.tar.gz	17-12-2019 09:50	N h	⊠ ≛
		WVX-ReleasePackage- 7.0.0.253.tar.gz	23-12-2019 10:17		<u> </u>
() COOPER					

Click Upgrade Now, then choose the target system to upgrade in the Select list. 2

RESULT

ESULT		
Upgrade Now		
Select a system 🔹		
○ Select Firmware ●	Choose a firmware from your local drive	
	CHOOSE FILE UPLOAD	
	CANCEL UPGRADE NOW	

3

To update Trellix Core, select it from the **Select a system** list, and then go to Step 5.

ELLIX CORE EXAM	PLE
Upgrade Now	
Select a system Trellix Core	v
O Select Firmware	Choose a firmware from your local driv
	CHOOSE FILE UPLOAD

Upgrade Now			
opgrade Now			
Select a system			
WAC -			
Select System			
RTLS-Hallway-Offices			
RTLSCubicles-53-c6			
_			
🔘 Select Firmware 🔘 Ch	oose a firmware from your local drive		
	CHOOSE FILE UPLOAD		

- 5 To upgrade using a file that is already on Trellix Core, click **Select Firmware**, then select the target file from the **Choose firmware file** list, and then click **Upgrade Now**.
- 6 To upgrade using a file from your local computer, click **Choose Firmware File from Local Drive**, then select the target file, then click **Upload**, and then click **Upgrade Now**.

Νοτε

The upgrade file must have a ". tar.gz" file extension to be accepted.

7 Click Upgrade Now, and then click Yes for confirm the upgrade operation.

Notes

- · Everyone who is using Trellix Lighting at this time will be disconnected so the upgrade can be applied
- Upgrade operations are logged as an event
- See the Trellix Lighting User Manual for details on alarm and event display

4 – Software Licenses and Client Information

This chapter describes how to manage the Trellix product licenses and configure Trellix Client information.

=	Client Profile				ADMIN 🗰
Alarms	Client Details System ID : 1dfaae95-6fd5-3dc4	4-8d2e-7bc5e5c6e964	COPY ID		EDIT
Event Logs	Client Name Default Client Test	Industry HealthCare	0		
Users	Additional Information (optional)			^
Clients	Working Hours Days of the Week S M T W Building Address	T F S	Start Time - HH:MM 8:30	End Time - HH:MM 16:30	
	Address Line 1 123	Address Line 2	_{City} Example		
	State/Province/Region	Zip/PostalCode N5W 1E6	Country Canada		
	Application Details				+ ADD LICENSE
() COOPER 10:16	LIGHTING 10000 Devices Expiry Date: 18-09-2025	. Ć	LOCATE 1000 Tags Expiry Da	te: 01-09-2025	n
)	

4.1 – About Licenses

Trellix has two licensed products, Trellix Lighting and Trellix Locate. Licenses for each product are obtained by sending your System ID to Cooper Lighting Solutions with the number of Lighting devices or Locate tags you want to manage. Cooper generates the corresponding JSON license file and sends it to you as a file that you can upload (add) to your Trellix system.

Trellix Lighting comes with a default license, while Trellix Locate is disabled and has no default license. During the Discovery phase of the Trellix Core setup, the number of Lighting devices is determined and compared against the license. For example, the default license might be 300 devices and 250 are discovered.

Grace Period

If the number of connected devices exceeds the license limit, a 30-day grace period is triggered. Unless the license is upgraded, a warning message will be displayed at each login, starting 5 days before the end of the grace period. If the grace period expires, Trellix will only permit login by an administrator, and the only available functions will be upgrading a license or removing a Controller. All other features will not unavailable.

4.2 – Updating a Trellix Lighting License

Follow the steps below to use update the Trellix Lighting license.

Νοτε

You must be logged in under an account with System Configuration permission, such as the Admin account provided by default.

Step	Action
1	Click 🗰, and then click Clients.
2	Click Copy ID beside System ID.

Step	Action
3	Submit your Trellix Lighting license request to Cooper Lighting Solutions, including the System ID and the number of Tags required. Cooper will provide a JSON (.json) license file that is specific to your System ID.
4	When the license file arrives, click + Add License . Locate and select the JSON license file, and then click Open to upload it.
5	When the file has uploaded, the new license settings are applied to your system.

4.3 – Editing the Client Information

Follow the steps below to edit the Trellix client information.

Νοτε

You must be logged in under an account with System Configuration permission, such as the Admin account provided by default.

IMPORTANT

1

Changing the Industry value will cause existing Trellix Locate configuration data to be lost.

Action Step



2 Edit the Client Name, and then select the Industry.

Νοτε

The Industry setting is used to provided default Categories (Asset Types, Asset Icons, and Departments) for a Trellix Locate system.

3	Select the Days of the Week that have working hours, and then specify the Start Time and End Time for those days.
4	Enter the Building Address details, and then click Save .

5 – User and Role Administration

This chapter describes how to view, edit, add, and remove Trellix Lighting Users and Roles for effective and secure access to the system.

Users	Panel	Ro	les Panel	List F	lters	L	ist Search					
		Users		/						ADMIN		
Add User ~	Alarms	ALL USER	s ROLES						× User Details	1	EDIT	
	Event Logs	Manage User	rs + ₹ FILTER	±			example.com	0	Standard Details		~	
Users List ~	System	User Name ↑	Email	Application	Role	ltems per page 50	▼ 1-3 of 3	< >	User Name Joe			Details Panel
	Users	DRUser	dr@example.com	LIGHTING	Demand R	Response			Account Status Unlocked	*		T dilot
0 - 1	Clients	Joe	joe@example.com	LIGHTING	Tenant				Account Expiry 04/06/2020			
Selected User		Operator	ops@example.com	LOCATE	Operator		4		Roles LIGHTING : Tenant			
								\mathbf{O}	Notification None			
								0	Additional Informat	ion	~	
									CHANGE PAS	SWORD		
	0 coores 10:30								DELETE U	ISER		

5.1 – Default Lighting Accounts, Roles, and Permissions

Trellix Lighting provides a standard set of user accounts, roles, and permissions. Each role has a specific set of permissions, and each user account is assigned to one role. New user accounts, and new roles with custom permissions, can be created when logged into the Trellix Admin app under the System Administrator role. The Facility Manager role allows the creation new user accounts and the assignment of existing roles.

Νοτε

Refer to the Trellix Locate User Manual for information about Locate accounts, roles, and permissions.

The default user accounts, roles, and permissions provided with Trellix Lighting are described below.

Username	Password	Role Assigned	Permissions
Viewer	BXLinx!1	Viewer	 The Viewer user has view-only access to the following: Lighting app: Alarms, Operate, Event Log, and Dashboard features Admin app: Alarms, Event Logs
Tenant	BXLinx!2	Tenant	The Tenant user has view and operate access to the Alarms, Operate, Event Log, and Dashboard features.
Facman	BXLinx!3	Facility Manager	The Facility Manager user has view, operate, and administer access to all features except the following: Manage Roles; Backup/Restore, Factory Reset; Firewall; GSA Warning; Language Plugin; and Software Upgrade.
ITAdmin	BXLinx!4	IT Administrator	 The IT/Network Administrator has view, operate, and administer access to the following: Lighting app: Alarm, Operate, Event Log Admin app: System – Backup/Restore; BACnet, Email Server; Factory Reset; Firewall; GSA Warning; Language Plugin; Published API; and Software Upgrade
Admin	BXLinx!5	System Administrator	The Trellix Lighting Administrator has full access to all features.

Username	Password	Role Assigned	Permissions
DRUser	BXLinx!6	Demand Response	The Demand Response User has access to the Demand Response and OpenADR interfaces.
Public	BXLinx!7	Third Party Integration	The Third-Party Integration User has access to the Published API.

5.2 – Admin Password Change Requirements

There are two situations when the Admin user will have to provide a new password:

- When the Admin password is the default value when a Trellix update is applied
- When the database is restored

5.3 - Adding and Removing User Accounts

Follow the steps below to create or remove Trellix Lighting user accounts.

Step Action

1 Click **III** to display the app menu, then click **Admin**, and then click **Users**.



Click + beside Manage Users. Enter the new User Name and (optionally) the Email for Notifications, then enter and confirm a Password, and then select Password Expires if you want to limit password validity to 90 days. If desired, expand and fill out the Additional Information fields.

User Name Joe	Email for Notifications (option. joe@example.com		
Password	Confirm Password	Q	
At least 1 numberAt least 1 special	character (+ & % are not allowed)		
 At least 1 number At least 1 special At least 1 upper- 	r character (+ & % are not allowed) case letter		
 At least 1 numbe At least 1 special At least 1 upper- 	r character (+ & % are not allowed) case letter		
 At least 1 numbe At least 1 special At least 1 upper- 	er character (+ & % are not allowed) case letter es will expire in 90 days	CANCEL ASSIGN ROLE(5)	

3 Click Assign Roles (shown inset above). Select a Role, then select the Receive Email Notifications check box if you want to send notifications to this user.

AMPLE						
ole(s) for "joe"						
					-	
Role(s)					Ŧ	ADD APPLICATION
Application		Role				
LIGHTING	~	Tenant	~	SELECT AREA OF RESPONSIBILITY (1)		
Receive Email No						

4

Click **Select Area of Responsibility**. Use the **Search** box or expand and collapse the building hierarchy to view and select Areas this user can access. Click **Add to Role** (shown inset below) to continue.

EXAMPLE

← Area of Responsibility for "Joe"	Search	۵.	
Default Client Test		^	
B 1		^	
■ F1		~	
Default Building	CANCEL ADD TO RO		
Hick Create User to add this user and XAMPLE ALL USERS ROLES Manage Users + FILTER			8
XAMPLE ALL USERS ROLES	d return to the Users page.		

6 To remove a user that you created, click 🛢 beside that user, or select the user to reveal the Role Details sidebar, and then click **Delete**.

Νοτε

The built-in user accounts provided with Trellix Lighting cannot be deleted.

5.4 – Viewing and Editing User Accounts

Follow the steps below to view and edit the existing Trellix Lighting user accounts.

Step Action

1

Click **III** to display the app menu, then click **Admin**, and then click **Users**.

Ехамр	LE						
=	Users					ADMIN	
Alarms	ALL USERS	ROLES					
Event Logs		+ ╤ Filter Ighting ⊗	Lear all filters		Search		۹
System	User Name 个	Email	Application	ltems per paj	ge 50 ▼ 1 - 50 of 53	<	>
Clients	Admin	N/A	LIGHTING	System Administrator			/
	Facman	N/A	LIGHTING	Facility Manager		×	/
	ITAdmin	N/A	LIGHTING	IT Administrator		×	1

Other Tasks

- To search the list of users, enter the name of user in the **Search** box, and then press Enter or click ${\sf Q}$
- To filter the list, click Filter, choose the type of filter (e.g., Role), and then click Apply
- To sort the list of users, click a column heading (e.g., User Name)
- To reverse the sort order, click the same heading a second time
- 2 Click a user row to display the User Details sidebar.

/lanage Users	+ 〒 FILTER	\sim	example.com	X User Details 🖌 EDIT
User Name 个		Application	Items per page 50 • 1 - 3 of 3 < >	Standard Details ^ User Name Joe
DRUser	dr@example.com	LIGHTING	Demand Response	Account Status Unlocked
Joe	joe@example.com	LIGHTING	Tenant	Account Expiry 04/06/2020
Operator	ops@example.com	LOCATE	Operator	Roles LIGHTING : Tenant Notification None
				Additional Information $~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~~$
				CHANGE PASSWORD
				DELETE USER

X

3

To change the account password, click **Change Password** in the User Details panel, and then enter and confirm the new **Password** value. Edit the **Password Expires** setting as desired.

ΤιΡ

The New Password rules update as you type to save time when creating passwords.

EXAMPLE

Change Password		
New Password	Confirm New Password	ø
— Between 8 and 16 character	s without spaces	
 Atleast 1 number 		
 Atleast 1 special character (+ & % are not allowed)	
 Atleast 1 upper-case letter 		
Password Expires		
If selected, password will expire in	90 days	

4 To modify the account details, click Edit in the User Details panel. Edit the User Name and Email for Notifications settings.

EXAMPLE

← Edit User			
User Name Joe	Email for Notifications (option joe@example.com	11.201	CHANGE PASSWORD
Role(s) Application LIGHTING	Role Tenant	SELECT AREA OF RESPONSIBILITY (1)	+ ADD APPLICATION
Receive Email Notificat		12 06	Î
Additional Information (o	optional)		
First Name	Last Name	Phone	
Joe	Example	+1 = 519-222-4444	CANCEL

Other Tasks

- · Click Change Password to modify the password
- · Add another Application (e.g., Trellix Locate) to this account
- Edit the Application and Role settings
- · Click Select Area of Responsibility to view or modify the Areas this user can access
- Edit the Receive Email Notifications selection
- Edit the First Name, Last Name, and Phone settings under Additional Information
- 5 Click Update (shown inset above) to apply the user configuration changes.

5.5 - Adding and Removing Roles

Follow the steps below to create or remove Trellix Lighting roles.

Step Action

1 Click 🗰 to display the app menu, then click Admin, then click Users, and then click Roles.

EXAMPLE

=	Users			ADMIN	
Alarms	ALL USERS	ROLES			
Event Logs	Manage User Roles -	+			
\$ System	TrelliX Lighting Roles				^
22. Users	Name 🦆	Permissions	Items per page 5 T-5 of 13 Global Permissions	<	>
Clients	Viewer	View Only	View Only		
	Third Party Integration	View Only • Manual Action	View Only • Lighting API		
	TestRole1	View Only • Acknowledge Alarms	User Management • Demand Response • View Only	🗵 🧪	
	Tenant	View Only • Schedule • Manual Action	View Only		
	System Administrator	System Configuration • View Only • Schedule • Manual	User Management • User Role Management • System S		

Other Tasks

- To sort the list of roles, click a column heading (e.g., Name)
- To sort the list of roles, click a column heading (e.g., Name).
 To reverse the sort order, click the same heading a second time

² To add a role, click + beside Manage User Roles. Enter the new Role Name, then select each Lighting Permission and Global Permission this role should have.

Νοτε

See Default Lighting Accounts, Roles, and Permissions for role permission details

EXAMPLE

^{ame} iewer Plus	Application LIGHTING	Ŧ				
LIGHTING Permissions						
Select All						
Acknowledge Alarms		High Priority Override		Manual Action		
Schedule		System Configuration		View Only		
Global Permissions						
Select All						
Demand Response		✓ Lighting API		Locate API		
System Settings		User Management		User Role Management		
View Only						
		.0			CANCEL	ADD ROLE
ick Add Role.					CANCEL	ADD ROLE
ick Add Role. AMPLE		SCO	6.01		CANCEL	ADD ROLE
	ROLES	is of	6.01		CANCEL	ADD ROLE
ALL USERS	ROLES		6.01		CANCEL	ADD ROLE
ALL USERS			6.0.		CANCEL	ADD ROLE
AMPLE ALL USERS Manage User Roles			Global Permissions	Items per page 5	CANCEL	
AMPLE ALL USERS Annage User Roles TrelliX Lighting Roles	+	ge Alarms	Global Permissions View Only • Lighting A	Items per page 5 🛛 💌		^ < >
AMPLE ALL USERS Manage User Roles TrelliX Lighting Roles	+ Permissions	ge Alarms		Items per page 5 🛛 💌	1 - 5 of 13	^ < >
AMPLE ALL USERS Anage User Roles TrelliX Lighting Roles Name ↓ Viewer Plus Viewer	+ Permissions View Only • Acknowledg	-	View Only • Lighting A	Items per page 5 💌	1 - 5 of 13	^ < >
AMPLE ALL USERS Anage User Roles TrelliX Lighting Roles Name ↓ Viewer Plus Viewer	+ Permissions View Only • Acknowledg View Only	ion	View Only • Lighting A View Only View Only • Lighting A	Items per page 5 💌	1 - 5 of 13	< >

4 To remove a role, click 📋 beside that role in the list.

ΤιΡ

If a role is selected and the Role Details sidebar is open, click the **Delete** button that appears there.

Νοτε

The built-in user roles provided with Trellix Lighting cannot be deleted.

3

5.6 - Viewing and Editing Roles

1

2

Follow the steps below to view the existing Trellix Lighting roles and permissions.

Step Action

Click 🇰 to display the app menu, then click **Admin**, then click **Users**, and then click **Roles**.

Users									ADMI		
ALL US	SERS	ROLES									
Manage Us	ser Roles 🚽	÷									
TrelliX Lig	ghting Roles										^
						lter	ns per page 5	▼ 1 - 5 of	13 🔇)	>
Name 🕁		Permissions			Global Permissions						
Viewer		View Only			View Only						
Third Pa	rty Integration	View Only • Manual Acti	ion		View Only • Ligh	nting API					
TestRole	1	View Only • Acknowledg	ge Alarms		User Managem	ent • Deman	Response • V	iew Only	× 4		
Tenant		View Only • Schedule • I	Manual Action		View Only						
System A	Administrator	System Configuration •	View Only • Sch	edule • Manual	. User Managem	ent • User Ro	le Managemer	it • System S.			
reverse th a role to o PLE	ne sort or	s, click a column der, click the sai e Role Details s	me headir								
reverse th	ne sort ord display th ROLE	der, click the same e Role Details s	me headir				× Role Name Viewer P		1	EDI	т
reverse th a role to o PLE ALL USERS ge User Role	ROLES ROLES ROLES	der, click the same e Role Details s	me headir sidebar.	ng a second	d time		Name	us		EDI	T
reverse th a role to o PLE ALL USERS ge User Role IIX Lighting Ro	ROLES ROLES ROLES	der, click the same e Role Details s	me headir sidebar.				Name Viewer P Application LIGHTIN	lus	1	EDI	Т
reverse th a role to o PLE ALL USERS ge User Role iX Lighting Ro	ROLE: vs + Permissions	der, click the same e Role Details s	me headir sidebar.	ng a second	d time		Name Viewer P Application LIGHTIN	lus G edge Alarms		EDI	Т
reverse th a role to o PLE WILL USERS ge User Role iX Lighting Ro e ↓ wer Plus	ROLE: vs + Permissions	der, click the same e Role Details s	me headir sidebar.	ng a second ns per page 50 hal Permissions	d time		Name Viewer P Application LIGHTIN Permission Acknowl View On	lus 5 edge Alarms y		EDI	T
reverse th a role to o PLE ALL USERS ge User Role iX Lighting Ro wer Plus wer	e sort ord display th ROLE s + oles Permissions View Only •	der, click the same e Role Details s	me headir sidebar. Ite Gio Vie	ng a second second ns per page 50 sal Permissions w Only • Lighting	1-13 of 13		Name Viewer P Application LIGHTIN Permission Acknowl View Oni	lus 5 edge Alarms y iissions API		EDI	Т
reverse th a role to o PLE ALL USERS ge User Role iX Lighting Ro e ↓ wer Plus wer d Party Inte	Roles Permissions View Only • View Only •	der, click the same e Role Details s	me headir sidebar. Gio Vie Vie	ns per page 50 w Only • Lighting w Only	d time 1-13 of 13 g API		Name Viewer P Application LIGHTIN Permission Acknowi View Oni Global Perr Lighting	lus 5 edge Alarms y iissions API		EDI	T
reverse the a role to o PLE ALL USERS ge User Role liX Lighting Ro wer Plus wer	ROLE: ROLE: ROLE: Permissions View Only • View Only • N/A	der, click the same e Role Details s	me headir sidebar. Gio Vie Vie	ng a second ns per page 50 hal Permissions w Only • Lighting w Only • Lighting	d time 1-13 of 13 g API		Name Viewer P Application LIGHTIN Permission Acknowi View Oni Global Perr Lighting	lus 5 edge Alarms y iissions API		EDI	T

To edit the role, clic	k Edit in the [Details panel.	
Noтe See Default Lighting	g Accounts, R	oles, and Permissions for role p	ermission details
Example			
← Update Role			
Name	Application		
Viewer Plus	LIGHTING	Ψ	
LIGHTING Permissions			
Select All			
Acknowledge Alarms		High Priority Override	Manual Action

System Configuration

Lighting API

User Management

4 Edit the Name. Select Lighting as the Application, and then edit Lighting Permissions and Global Permissions, and then click Update Role (shown inset above).

View Only

ocate API

Management

5.7 - Adding a Building

Schedule

Global Permissions

Demand Response

System Settings

View Only

Follow the steps below to add a new building

Step Action

1 Click Sites in the main menu, then click 🕕 beside the Client name (e.g., Cooper Lighting Solutions), and then click Add Building. Enter a Building Name, then select the Building Type.

Example

Add Building 1-3	
Building Name F12	
Max 32 Characters Building Type	3/32
Manufacturing	~
Manufacturing	 Ŧ

Other Tasks

To add more information about this building, select **Additional Info** check box, and then fill out one or more of the fields provided.

2 Click Save. The Create Floor process will be started automatically for this new building. Enter the Floor Name.

Add Floor 1-2	
Enter Floor Name	
Warehouse	
Max 32 Characters	9/3

3 Click Add Floor, then select an Area Controller, and then choose a Building/Floor to associate that floor with the Area Controller.

EXAMPLE

Add Floor 2-2 Associate Area Contro	oller(s)	6
Area Controllers	Building/Floor	
Office-WAC-RTLS-1 10.130.160.112	F12, Warehouse	
	SKIP, ADD LATER FINISH	
 ner Tasks ck Skip, Add Later i	f you are not ready to associate an Area Contr	oller yet.

EXAMPLE

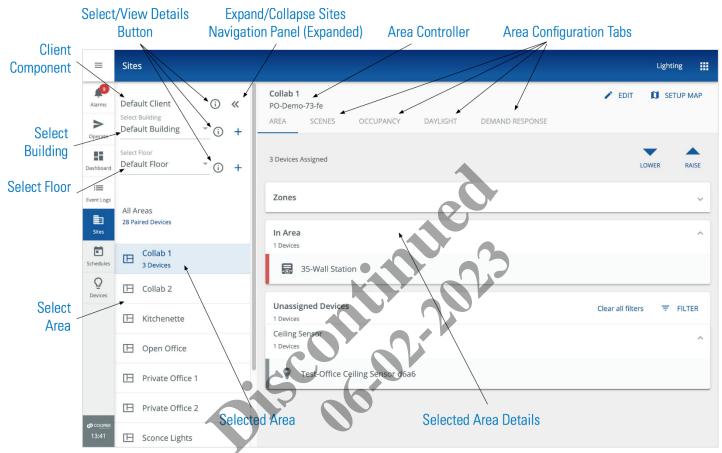
Default Client Test 🕻 🕊	Floor Details		DELETE	EDIT	SETUP MAP
· · · · · · · · · · · · · · · · · · ·	General Properties				
loor Warehouse Ti +	Public Id	Name			
• • •	F13	Warehouse			
No Controllers associated to	Floor Number	Baseline Energy (kWh) 👩			
loor	N/A	N/A			
	Floorplan File	Capacity (# People)			
	N/A	N/A			
	Associated Schedule	Total Alarms			
	N/A	0			
	Associate Area Controllers				
	Controller				
	Office-WAC-RTLS-1		2		
		<u> </u>			
	isco.				

6 – Sites Configuration

This chapter describes how to configure Trellix Lighting Buildings, including Floors, Areas, Zones, Scenes, Occupancy Groups, Demand Response and Devices settings.

6.1 – Sites Page

The default Sites page is shown below.



Νοτε

The ability to configure Controller data from Trellix is a new feature, and it assumes you are familiar with WaveLinx Wireless or WaveLinx Wired configuration. If not, please refer to the WaveLinx Mobile Application User Manual or WaveLinx Wired Installation Instructions if you need more detail.

Νοτε

Any change to the Site or Device hierarchy will cause BACnet to be disabled.

6.2 - Buildings and Floors

6.2.1 - Viewing and Editing a Building

Follow the steps below to view a Building and edit its details.

Action Step

Click Sites in the main menu, and then select a Building in the Building navigation panel to view the Building Details on the right.

Νοτε

1

A 🕕 button indicates the selected Client, Building or Floor with details displayed. Clicking 🛈 will select that one.

EXAMPLE

≡	Client Details				Lighting
Å Alarms	Default Client	(i) «	Building Details		🖍 EDIT
> Operate	Select Building Default Building	• 0 +	Default Building		
Dashboard	Select Floor Default Floor	· (i) +	Public Id B1	Name Default Building	
: E vent Logs			Building Type	Building Superfixies	
Sites	All Areas 28 Paired Devices		Other Building Number	N/A	

2 Click Edit to change the details of the selected building, and then edit one or more of the fields with grey bottom borders.

IMPORTANT

uilding Details	D DELETE P	DIT
General Properties		
Public Id	Name	
B3	B1	
	Must not exceed 32 characters 2/32	
Building Type	Building Superficies	
Office	▼ 0	
Building Number	Address 1	
0	123 Jump	
	1/10	
	City	
Address 2	Downtown	
State/Province	Postal Code	
NY	1231233	
Country	Timezone	
Canada		

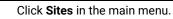
Click Save. 3

6.2.2 – Adding a Building

Follow the steps below to add a new Building.

Step Action

1



Example

≡	Sites	
Alarms	Default Client	(i) «
D Operate	Select Building Default Building	• i) +
Dashboard	Select Floor Default Floor	• • +

2 Click + beside the Select Building field (shown above), then enter the Building Name, and then choose a Building Type.

CANCEL SAVE
012 00

3

Click Additional Information, then enter the details you want to store with this Building, and then click Save.

IMPORTANT

Ensure the **Timezone** is configured.

EXAMPLE

Additional Information		^
Building Number 1123		
Building Superficies	4)	/10
Address 1		
Address 2		
City	State/Province/Region	
Zip/PostalCode	Countar	-
limezone		-

6.2.3 - Viewing and Editing a Floor

Follow the steps below to view a Floor and edit its details.

Step Action

1

Click **Sites** in the main menu, then select a **Building** in the Building navigation panel, and then select a **Floor** to view the **Floor Details** on the right.

EXAMPLE

=	Floor Details									Lighting
) Alarms	Default Client	i	«	Floor Details				/ EDIT	a	SETUP MAP
> Operate	Select Building Default Building	· (j	+	General Properties						
Dashboard	Select Floor Default Floor	()	+	Public Id F1		Name Default Floor				
:=							14 / 32			
Event Logs				Floor Number		Baseline Energy (kWh)				
-	All Areas			1		0.5				
Sites	28 Paired Devices				1/10		3/10			
Sinces				Planation Plan		Passale (11 Passala)				

2 Click **Edit** to change the details of the selected Floor, and then edit one or more of the fields with grey bottom borders.

Notes

- Fields without a bottom border cannot be modified.
- The Baseline Energy value is the kWh consumption by all devices on the floor for one hour, assuming 24/7 operation and no controlled reductions.

or Details		EDIT SETUP MAP	
General Properties			
Public Id	Name		
F1	Default Floor		
	14/32		
Floor Number	Baseline Energy (kWh)		
1	50		
1/10	3/10		
Floorplan File	Capacity (# People)		
Floor 1 - PO demo space LARGE	84		
Total Alarms			
0	Square Footage		
	0/2		
Associate Area Controllers			
Controllers		0.5	
PO-Demo-73-fe			
10.130.162.221			
		CANCEL SAVE	
Save.			

6.2.4 - Adding a Floor

This topic describes the requirements for adding a new floor and the specific steps to take.

New Floors, Wireless Area Controllers, and Ethernet Gateways

A Controller must be associated with a Floor, which typically happens during the Setup Wizard that is triggered on the first Trellix Core login. In construction projects with multiple phases, new Wireless Area Controllers, Ethernet Gateways, and Floors may be commissioned after the initial Trellix Core configuration. In these situations, the system administrator will need to create new Floors, and then associate a Wireless Area Controller or WaveLinx Wired EG with each one.

WaveLinx

A WaveLinx Wireless Area Controller must be associated with a Floor, which typically happens during the Setup Wizard that is triggered on the first Trellix Core login.

WaveLinx Wired

The devices in WaveLinx Wired are organized into Areas and Zones, but do not have the concept of a Floor. When adding a new EG, the Areas can be mapped to Floors either in bulk or one at a time.

Procedure

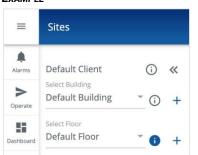
1

Follow the steps below to add a new Floor to an existing Building.

Step Action

Click Sites in the main menu, then choose a Building in the Select Buildin	g list.
--	---------

EXAMPLE



2 Click + beside the Select Floor field (shown above), then enter a Floor Name and the Square Footage.

Square Footage
0/7
0101
SKIP, ADD LATER SAVE

- **3** Do you want to associate a Controller with this Floor?
 - If yes, select the checkbox beside one or more of the listed Controllers, and then click Save.
 - If no, click Skip, Add Later.
 - 4 If you associated a Controller, you will be prompted to synchronize your changes as described in *Synchronizing Data with WACs*.

EXAMPLE

=	Sites										Lighting	
	There are items a	re out of	f sync w	ith area controller(s). Go to Mana	ge Controllers and push affected cont	rollers.	GO TO I	MANAC	GE CONT	ROLLEF	۲S	
Alarms	Default Client	(j	«	Floor Details		Î	DELETE	1	EDIT	a	SETUP MAP	
> Operate	Select Building Central Warehouse	* ()	+	General Properties								
Dashboard	Select Floor Main	. 0	+	Public Id F6	Name Main							

6.3 - Areas and Zones

This topic describes the viewing and editing options for Areas and Zones.

6.3.1 - Viewing and Editing Area Settings

Quick Reference

- Fade time Time to transition from one light level to another
- Off to scene fade time Time to transition from OFF to the selected scene or level
- Scene fade time Time to transition from already ON to the selected scene or level
- Manual Override Timer Used for automated shutoff when occupancy sensors are not available

Νοτε

See "Modifying Areas, Zones, and Devices" in the WaveLinx User and Programming Manual for more details. Be aware that in this release, Areas and Zones can only be created, moved, and deleted using the WaveLinx Mobile App, and not in Trellix Lighting.

Procedure

Follow the steps below to view and edit details that apply to the whole Area, such as the Zones assigned or the Scene Fade Time.

Step	Action
1	Click Sites in the main menu, then select a Building in the Building navigation panel, and then select a Floor . Select an Area to view the Area Details on the right.

Νοτε

The **N Devices Assigned** value is total number of Devices, assigned to a Zone or not, in the selected Area.

EXAMPLE

≡	Sites				Lighting
Alarms Operate	Default Client Select Building Default Building	(j) • (j)	« +	Collab 1 PO-Demo-73-fe AREA SCENES OCCUPANCI DAYLIGHT OPMAN	✓ EDIT
Dashboard	Select Floor Default Floor	Ť (i)	+	3 Devices Assigned	LOWER RAISE
Event Logs	All Areas 28 Paired Devices			Zones Zone 1	^
5chedules	Collab 1 3 Devices			In Area	~
Q	🕒 Collab 2			1 Devices	· •

2 To change the lighting level in the selected Area, click Lower or Raise.

3	To see the Zones assigned to the selected Area, click Zones .	

EXAMPLE

Collab					🖍 EDIT 🚺	SETUP MAP
PO-Dem	no-73-fe					
AREA	SCENES	OCCUPANCY	DAYLIGHT	DEMAND RESPONSE		
Douisor	s Assigned				-	
Devices	Assigned				LOWER	RAISE
Zones						^
₽ Zo	one 1					
In Are	a					~
1 Device	s					
	igned Devices	5			-	FILTER
Unass						
Unass 1 Device	s					
1 Device	s Sensor					

4 To see a list of the Devices in the selected Area that are not assigned to a Zone, click **In Area**.

EXAMPLE Sites ≡ Lighting CNPARCY PAYLIGHT === 2 Collab 1 / EDIT SETUP MAP Default Client (i) « PO-Demo-73-fe Alarms Select Building AREA SCENES DEMAND RESPONSE > Default Building (i) + Operate Select Floor 3 De Default Floor LOWER RAISE · (i) + Dashboar := ~ Zor Event Logs All Areas 28 Paired Devices Zone 1 Sites Collab 1 E 3 Devices In Area \vee 1 Devices Q E Collab 2 Devices

5 To modify the details of the selected Area, click 🖍 Edit, and then edit one or more of the Name, Off to Scene Fade Time, Scene Fade Time, Capacity, Department, Category, Description and Manual Override Timer fields.

EXAMPLE

← Edit Area				
Enter Area Name Collab 1				
Off to Scene Fade Time(s) 1.5	Scene Fade Time(s) 1.5		Capacity (# People) 2	
Department	Category Other	*	Description 1	Description 2
🗌 Manual Override Tir	ner Ø			CANCEL

Step Action 6 Click Save to apply your changes, and then click ← to return to the Area page.

6.3.2 – Viewing and Editing Zone Settings

Quick Reference

- Operation Mode Used for Zone types other than White Tuning to adjust switching behavior of a load in response to dimming
- Minimum Level The lowest permitted light level in response to a dimming command
- Maximum Level The highest permitted light level in response to a dimming command

Νοτε

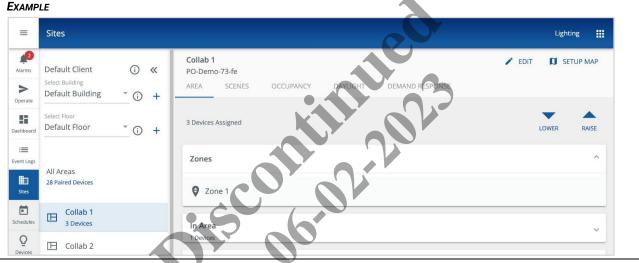
See "Modifying Areas, Zones, and Devices" in the WaveLinx User and Programming Manual for more details. Be aware that in this release, Areas and Zones cannot be created, moved, and deleted in Trellix Lighting. These task can be performed with the WaveLinx Mobile App.

Procedure

1

Step Action

Click **Sites** in the main menu, then select a **Building** in the Building navigation panel, and then select a **Floor**. Select an Area to view the **Area Details** on the right.



2 Click a Zone to access its settings.

EXAMPLE

← Zone 1	1	EDIT
Min: 0 % Max: 90 %	100	%
Devices in Zone		^
17-BLE Integrated Sensor		¥
18-BLE Integrated Sensor		۷
In Area		^
No zone-compatible devices found. Assign devices from unassigned		
	_	

3

Click 🧨 Edit, and then modify the Zone Name, Operation Mode, Minimum Light Level, and Maximum Light Level.

EXAMPLE

Name		Select Zone Type				
Zone 1		DimmableLight				
Operation Mode		Minimum Level in %		Maximum Level in %		
First On; Last Off	*	0	%	90	%	

4 Click **Save**, and then click \leftarrow to return to the Area page.

6.4 - Scenes

This topic describes the viewing and editing of Scenes.

6.4.1 - Viewing and Editing Scenes

Each WaveLinx WAC supports sixteen Scenes per Area, labeled Scene0 through Scene15. A Scene can be configured with the desired light levels, ON/OFF responses, and white tuning levels, and can be employed by Schedules, occupancy sensors, wallstations, and contact closure inputs.

Quick Reference

- Fade time Time to transition from one light level to another
- Off to scene fade time Time to transition from OFF to the selected scene or level
- Scene fade time Time to transition from already ON to the selected scene or level
- Manual Override Timer Used for automated shutoff when occupancy sensors are not available

Νοτε

See "Modifying Scene Settings and Responses" in the WaveLinx User and Programming Manual for more details and configuration options.

6.4.2 - Procedure

Follow the steps below to view and edit the Scene configurations in an Area.

Step Action

1

Click **Sites** in the main menu, then select a **Building** in the Building navigation panel, and then select a **Floor**. Select an Area, and then click **Scenes**.

EXAMPLE

≡	Sites					Lighting
Alarms	Default Client Select Building	(j)	«	Collab 1 PO-Demo-73-fe AREA SCENES OCCUPANCY DAYLIGHT DEMAND RESPONSE	EDIT	SETUP MAP
Operate	Select Floor Default Floor	* (i)		All Scenes (16)		
Dashboard			+	Scene0		۵
Event Logs	All Areas 28 Paired Devices			Scene1		۵
Sites	Collab 1			Scene2		٠
Schedules	3 Devices			Scene3		٠
Devices				Scene4		\$

2 To apply the Scene settings to the Devices it controls in the selected Area, click the Scene name (e.g., Scene6).

.

Example

AMFLE				· · · ·	
Collab 1 PO-Demo-73-fe				EDIT	SETUP MAP
AREA SCENES	OCCUPANCY	DAYLIGHT	DEMAND RESPONSE		
ll Scenes (16)		- 5	6		
Scene0					\$
Scene1		Y			\$
Scene2					\$
Scene3					۵
Scene4					\$
Scene5					\$
Scene6					\$

3

To modify the settings of a Scene, click ᡭ in that row, and the edit the Name, Preview, and Visibility values.

EXAMPLE

← Collab 1	
Name Scene6	
Preview Static	Visibility

4 Enable each Zone this Scene will affect, and set the target light level it will apply to each one (percentage for dimmable Zones, ON/OFF for non-dimmable and receptacle zones). If applicable, adjust the color temperature for tunable white Zones.

EXAMPLE

ame cene6	
review	Visibility
tatic	- Hide
Zone 1	
lin: 0%	
	CAMPEL

5 Click Save (shown inset above) to apply your changes, and then click \leftarrow to return to the Scenes page.

6.5 – Occupancy Sets

This topic describes the viewing and editing options for Occupancy Sets.

6.5.1 - Viewing and Editing Occupancy Sets

An Occupancy Set defines the response for a group of Integrated Sensors and Ceiling Sensors that are connected to Dimming Switchpacks.

Quick Reference

- Occupancy Mode Configured actions are triggered when occupancy is detected, then transition back to unoccupied state when motion is no longer detected
- Vacancy Mode No actions are triggered when occupancy is detected (must be done manually by occupants), but automatically
 transition back to unoccupied state when motion is no longer detected
- Hold time Time to wait after last motion is detected before transitioning to the unoccupied state
- Test mode Puts all Integrated and Tilemount Sensors into test mode for 10 minutes during which they operate with a 10-second hold time
- Occupied Action Scene level, Zone level, or last lighting level action to apply (hidden when Vacancy Mode selected)
- Unoccupied Action Scene or Zone level to apply

Νοτε

See "Adjusting Occupancy Set Settings" in the WaveLinx User and Programming Manual for more details and configuration options.

Procedure

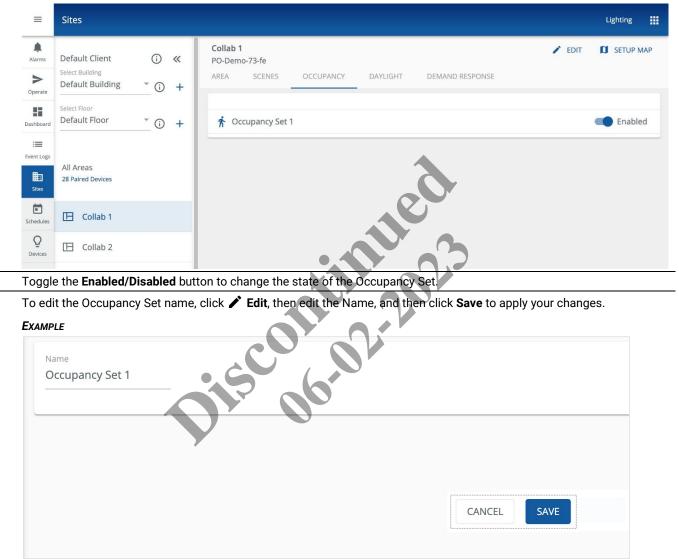
1

2 3

Follow the steps below to view and edit the Occupancy Set configurations in an Area.

Step Action

- Click **Sites** in the main menu, then select a **Building** in the Building navigation panel, and then select a **Floor**. Select an Area, and then click **Occupancy**.
- EXAMPLE



Step	Action
------	--------

4

KAMPLE							
← Occupancy Se	et 1		P EDIT				
SETTINGS	ZONES	SENSOR					
			1				
Current Status							
Mode Occupancy			-				
Hold Time (minutes) 10	Ψ						
Test Mode							
Occupied Action Select Scene			·				
Unoccupied Action Select Scene			· ·				

5 Click 🖍 on the Settings tab (shown above), then edit the Mode, Hold Time, Test Mode, Occupied Action, and Unoccupied Action values.

SETTINGS	ZONES	SENSOR		
Current Status				
Mode Occupancy			00	
Hold Time (minutes) UserDefined	Minutes ▼ 15	\mathbf{V}'		
Test Mode		·		
Occupied Action		Scene1		^
Action Select Scene	Target Area✓ Collab 1	Scene2		
Fade Rate - in seconds		Scene4		
Overriding Area's Default Fa	ide Rate	Scene5		

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6.5.2 - Viewing the Zones Controlled by an Occupancy Set

Follow the steps below to view the Zones controlled by an Occupancy Set.

Νοτε

See "Adjusting Occupancy Set Controlled Zones" in the WaveLinx User and Programming Manual for more details and configuration options.

Ston	Action
Step	ACTION

1 Click Sites in the main menu, then select a Building in the Building navigation panel, and then select a Floor. Select an Area, and then click Occupancy.

EXAMPLE \equiv Sites Lighting Collab 1 EDIT SETUP MAP Default Client (~ Alarms PO-Demo-73-fe Select Building AREA OCCUPANCY DAYLIGHT DEMAND RESPONSE SCENES > Default Building G + Operate Select Floor Default Floor r Occupancy Set 1 Enabled $(\hat{})$ + Dashboar := Event Log All Areas 28 Paired Devices Sites E Collab 1 Schedule Q E Collab 2 Device Click an Occupancy Set, and then click Zones. 2 EXAMPLE ← Occupancy Set 1 / EDIT SETTINGS ZONES Assigned Zones O Zone 1 Available Zones There are no zones available to assign 3

To return to the Occupancy Set page, click \leftarrow .

6.5.3 - Viewing the Sensors Controlled by an Occupancy Set

Follow the steps below to view the Sensors controlled by an Occupancy Set.

Νοτε

See "Adjusting Occupancy Set Assigned Sensors" in the WaveLinx User and Programming Manual for more details and configuration options.

Step Action

1 Click **Sites** in the main menu, then select a **Building** in the Building navigation panel, and then select a **Floor**. Select an Area, and then click **Occupancy**.

EXAMPLE \equiv Sites Lighting Collab 1 EDIT SETUP MAP Default Client (<< Alarms PO-Demo-73-fe Select Building DEM DEM DIR OCCUPANCY DAYLIGHT DEMAND RESPONSE AREA SCENES > Default Building G Operate Select Floor Default Floor * Occupancy Set 1 Enabled $\widehat{}$ + Dashboar := Event Log All Areas 28 Paired Devices Sites E Collab 1 Schedule Q E Collab 2 Device Click an Occupancy Set, and then click Sensor. 2 EXAMPLE SETTINGS > Operate 55 Assigned Sensors Dashboar := 17-BLE Integrated Sensor Ŵ Event Logs 18-BLE Integrated Sensor ¥ ▦ Ē Associated Occupancy Sets There are no associated occupancy sets, click ADD to associate Q Available Sensors 3 To return to the Occupancy Set page, click \leftarrow .

Release 8.0

6.6 - Daylight Sets

This topic describes the viewing and editing options for Daylight Sets assigned to an Area.

Quick Reference

- Closed Loop The Sensor controls only its connected light fixture based on light level detected, which includes the light emitted by the fixture. Sensor types used in Closed Loop daylighting include Ambient, Industrial, and Outdoor Integrated, Low-Voltage Fixture Integrated, and Tilemount.
- Open Loop A WaveLinx Ceiling Sensor is carefully positioned to detect daylight while minimizing the electric light it detects. The Ceiling Sensor works in combination with a WaveLinx Outdoor Lighting Control Module to control multiple Zones and manage the light level with varying daylight contribution.

6.6.1 - Identifying the Daylight Set for a Specific Device

Follow the steps below to identify the Daylight Set that is controlling a specific device.

Step Action

1 Click Sites in the main menu, then select a **Building** in the Building navigation panel, and then select a **Floor**.

≡					Lighting
Alarms	Default Client Select Building Default Building	(j) • (j)	« +	Collab 1 PO-Demo-73-fe AREA SCENES OCCUPANCY DAYLIGHT REMAND RESPONSE	EDIT SETUP MAP
Operate Dashboard	Select Floor Default Floor	0	+	3 Devices Assigned	LOWER RAISE
Event Logs	All Areas 28 Paired Devices			Zones In Area	~
5chedules	Collab 1 3 Devices			1 Devices	
Q Devices	🕒 Collab 2			Unassigned Devices	= FII TFR

Step Ad	ction
---------	-------

2

EXAMPLE

Collab 1 PO-Demo					🖍 EDIT 🚺 SI	TUP MA
REA	SCENES	OCCUPANCY	DAYLIGHT	DEMAND RESPONSE		
Devices	Assigned					
					LOWER	RAISE
Zones						
201103						
Zor	ne 1					
1 Devices						`
Unassig 1 Devices	gned Devices	5				FILTER
Ceiling S 1 Devices						,
						-

3 Click the Zone where the Device is located, and then identify using the appropriate method (e.g., blink a light fixture).

AMPLE		
← Zone 1	🖬 DELETE 🖌	EDIT
Ain: 0 %	Max: 90 %	
Devices in Zone		^
Select All		
😰 🏺 64-BLE Integrated Sensor		0
□ 🖗 69-BLE Integrated Sensor	í¥	•
Devices in Area		^
Select All		
21-Relay Switch Pack CCI		Đ

4

5

Click the Device name to display its configuration page and confirm the **Daylight Set** value.

Example

C 04-BLE IIILES	grated Sensor			DELETE	1	EDIT
DIMMABLE	OCCUPANCY SENSOR	DAYLIGHT SENSOR				
tual Level						
	•				30	%
ctual Level 0%						
ccupancy Set						
Office 101 Occ Set						>
aylight Set						
L Daylight Set 1						>
lentify						
link device to ident	ify					¥
eplace						
eplace device		1				\$
o rename the D	aylight Set, click > o	n the Daylight Set r	row.			
		n the Daylight Set r	row	DELETE		EDIT
AMPLE		n the Daylight Set r	row	DELETE		EDIT
AMPLE ← 64-BLE Integ	grated Sensor	col	row	DELETE		
AMPLE ← 64-BLE Integ DIMMABLE	grated Sensor	col	row	DELETE	30	EDIT %
AMPLE ← 64-BLE Integ DIMMABLE	grated Sensor	col	row	DELETE		
AMPLE	grated Sensor	col	row	DELETE		
AMPLE	grated Sensor	col	row	DELETE		
AMPLE	grated Sensor	col	row	DELETE		%
AMPLE	grated Sensor	col	row	DELETE		%
AMPLE	grated Sensor	col	row	DELETE		% > >
AMPLE ← 64-BLE Integ DIMMABLE ctual Level ctual Level 0% ccupancy Set Diffice 101 Occ Set aylight Set L Daylight Set 1	grated Sensor	col	row			%
AMPLE	grated Sensor	col	row			% > >

Action

6.6.2 - Viewing and Editing a Closed Loop Daylight Set

Follow the steps below to view and edit a closed loop Daylight Set.

Νοτε

Step

See "Modifying Closed Loop Daylighting Control" in the WaveLinx User and Programming Manual for more details and configuration options.

=				Lighting
	Default Client	(i) «	Collab 1 PO-Demo-73-fe	🖍 EDIT 🚺 SETUP MAP
and the second se	Select Building Default Building	* (i) +	AREA SCENES OCCUPANCY DAYLIGHT DEMAND RESPONSE	
20	Select Floor Default Floor	* (i) +	3 Devices Assigned	LOWER RAISE
Event Logs			Zones	~
Sites	All Areas 28 Paired Devices		In Area	^
Schedules	Collab 1 3 Devices		1 Devices	

2 Select an Area, and then click **Daylight** to view the available open loop and closed loop daylight sets.

XAMPLE						
Collab 1 PO-Demo-73-fe					/ EDIT	SETUP MAP
AREA SCENES	OCCUPANCY	DAYLIGHT	DEMAND RESPONSE			
Open Loop (1)			0	7		
OL Daylight Set 1						
Closed Loop (4)						
Closed Loop (4)					DISABLE ALL	CALIBRATE ALL
Closed Loop (4) 101 A1 Daylight Set					DISABLE ALL	CALIBRATE ALL
					DISABLE ALL	
					DISABLE ALL	CALIBRATE ALL

Action				
Toggle the on/off button for a closed loop Daylight Set to enable or o	disable i	t.		
Example				
Collab 1	/ EDIT	SETUP MAP		
PO-Demo-73-fe				
AREA SCENES OCCUPANCY DAYLIGHT DEMAND RESPONSE				
Open Loop (1)				
OL Daylight Set 1				
Closed Loop (4)		^		
DIS	SABLE ALL	CALIBRATE ALL		
101 A1 Daylight Set		-		
101 A2 Daylight Set				
101 B1 Daylight Set				
101 B2 Daylight Set				
OL Daylight Set 1 CANCEL SAVE Click Outputs to view the available and assigned output Zones for th				
Example		Jin Sei.		
			EDIT	
← OL Daylight Set 1			e con	
CALIBRATE OUTPUTS SENSORS				
Assigned Outputs			^	
Zone 1				
Available Outputs			^	
There are no available outputs to assign				

Available Sensors

Step	Action	
6	Click Sensors to view the available and assigned Sens	ors for this Daylight set.
	Example	
	← OL Daylight Set 1	EDIT
	CALIBRATE OUTPUTS SENSORS	
	Assigned Sensors	^
	No Sensors found. Assign sensors from unassigned	

6.6.3 - Viewing and Editing Open Loop Daylight Sets

There are no available sensors to assign

Νοτε

See "Configuring Open Loop Daylighting Control" in the WaveLinx User and Programming Manual for more details and configuration options.

1 Click **Sites** in the main menu, then select a **Building** in the Building navigation panel, and then select a **Floor**.

Ξ				K	C V	Lij	ghting 🗰
Alarms	Default Client	i	Collab 1 PO-Demo-73-fe			🖍 EDIT 🚺	SETUP MAP
> Operate	Select Building Default Building	* (j	AREA SCENES OC	CUPANCY DAYLIGHT	DEMAND RESPONSE		
Dashboard	Select Floor Default Floor	Ť ()	3 Devices Assigned			LOWER	RAISE
i m Event Logs			Zones				~
Sites	All Areas 28 Paired Devices		In Area				~
5chedules	Collab 1 3 Devices		1 Devices				
Q Devices	🕒 Collab 2						
			Unassigned Devices				EII TER

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Action Step

2

Select the Area to be controlled an open loop Daylight Set, and then click Daylight to view the available open loop and closed loop Daylight Sets.

EXAMPLE

Collab 1 PO-Demo-	-73-fe				EDIT	SETUP MAP
AREA	SCENES	OCCUPANCY	DAYLIGHT	DEMAND RESPONSE		
Open Looj	p (1)					
OL Daylig	ht Set 1					
Closed Loc	op (4)					^
					DISABLE ALL	CALIBRATE ALL
101 A1 Da	aylight Set					-
101 A2 Da	aylight Set					
101 B1 Da	aylight Set					
101 B2 Da	aylight Set					

3 Click an open loop Daylight Set, and then click Outputs to view the assigned Zones.

Ε

EXAMPLE	
← OL Daylight Set 1	EDIT
CALIBRATE OUTPUTS SENSORS	
Assigned Outputs	^
Zone 1	
Available Outputs	^
• 41-Integrated Sensor	¥
42-Integrated Sensor	¥

6

6.6.4 - Calibrating Open and Closed Loop Daylight Sets

To calibrate open or closed loop Daylight Sets, please refer to the following procedures in the WaveLinx Programming and User Manual:

- · Calibrating all Closed Loop Daylight Sensors in an Area
- Calibrating a Single Daylight Sensor
- Calibrating the Open Loop Daylight Sensor

6.7 - Demand Response

This topic describes the viewing and editing options for Demand Response feature.

About Demand Response

By default, a Demand Response request will reduce the light level of dimmable loads by 20%. Subsequent commands from other controls are limited to this reduced range until the Demand Response request is cleared. The Demand Response feature does not affect switched loads, receptacles, or tunable white zones/devices.

6.7.1 - Viewing and Editing the Demand Response Configuration

Νοτε

See "Modifying and Testing Demand Response Behavior" in the WaveLinx User and Programming Manual for more details and configuration options.

	PLE		
≡			Lighting
Alarms Operate	Default Client () « Select Building () () + Select Floor	Collab 1 PO-Demo-73-fe AREA SCENES OCCUPANCY DAYLIGHT DEMAND RESPONSE 3 Devices Assigned	EDIT SETUP MAP
EXAMF Colla PO-D	b 1 emo-73-fe	Zones In Area 1 Devices 35-Wall Station Unassigned Devices the configuration.	LOWER RAISE
	scenes occupancy in the second	DAVEIGHT OF DEMAND RESPONSE	
	cel Signals cel demand response signals	CANCEL RESPONSE	
Can			

3

Click 🖍 , and then adjust the slider to enter a number value to modify the percentage by the load is reduced when a Demand Response request is received.

EXAMPLE

Collab 1 PO-Demo-73-fe				/ EDIT	SETUP MAP
REA SCENES	OCCUPANCY	DAYLIGHT	DEMAND RESPONSE		
Signal 1					
DR Reduction					
	-				
20	%			CANCEL	SAVE

4 Click **Save** (shown inset above) to apply the new setting.

5 To modify the Zones that are controlled by a Demand Response request, use \bigcirc to remove an Assigned Zone and \bigoplus to add an Available Zone.

Example	
Collab 1 PO-Demo-73-fe	EDIT SETUP MAP
AREA SCENES OCCUPANCY DAY	LIGHT DEMAND RESPONSE
Test Signals	
Signal - 25%	Test
Cancel Signals Cancel demand response signals	CANCEL RESPONSE
Assigned Zones	^
Zone 2	•
Available Zones	^
Zone 1	¢

6 To test the Demand Response behavior, click **Test** to apply the configured reduction. The test will last for 30 minutes or can be cancelled by clicking **Cancel Response**.

6.8 - White Tuning

This topic describes the viewing and editing options for White Tuning feature.

About White Tuning

A WaveLinx WAC can control the color temperature of the emitted light in fixtures that feature VividTune. This is accomplished by using a separate WaveLinx Universal Voltage Dimming Switchpack.

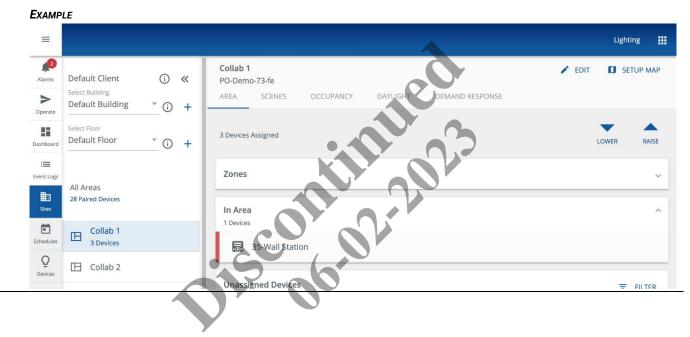
6.8.1 - Viewing and Editing the White Tuning Configuration

Νοτε

See "Practical Implementation of White Tuning Control" in the WaveLinx User and Programming Manual for more details and configuration options.

Step Action

1 Click **Sites** in the main menu, then select a **Building** in the Building navigation panel, and then select a **Floor**. Select an Area.



Action

Step

ab 1			EDIT	🕽 SET	TUP MAP
PO-Demo-73-fe					
AREA SCENES OCCUPA					
3 Devices Assigned				LOWER	RAISE
Zones					^
Zone 1					
Zone 2					
Zone 3 Receptacles				X	
Q Zone 4 White Tuning			R		
In Area				0	v
1 Devices Unassigned Devices		K		V.	FILTER
ick the Zone name to vie	ew its White Tuning	configuration.			
(AMPLE		O Y			
← Edit Zone Details					
_{Name} Zone 4 White Tuning	Select Zone Type TunableWhite	00			
Minimum Level in k	Maximum Level in k				
2700 k	5000	k			

Action

Step

ollab 1 O-Demo-73-fe				/ EDIT	D SE	TUP MAP
AREA SCENES	OCCUPANCY	DAYLIGHT	DEMAND RESPONSE			
2 Devices Assigned					-	
3 Devices Assigned					LOWER	RAISE
Zones in Area						~
Devices in Area						^
Select All						
56-Relay Swi	tchpack					
	ack to see its	White Tuni	ing configuration.	~		
AMPLE	ack to see its	White Tuni	ing configuration.	J.		
	ack to see its	White Tuni	ing configuration.		ĘLETE	EDIT
AMPLE	ack to see its	White Tuni	ing configuration.		RELETE	EDIT
Collab 1	ack to see its	White Tuni				еріт 500 к
AMPLE Collab 1 tual Level	ack to see its	White Tuni				
Collab 1	ack to see its	White Tuni	ing configuration.			
Collab 1 Collab 1 Cual Level Cual Level Collab Level Cual Level Collab	ack to see its	White Tuni			35	
Collab 1 Collab 1 Cual Level Cual Level Cual Level Cuancy Set Ione Uppe	ack to see its	White Tuni			35	500 К
AMPLE Collab 1 Collab 1	ack to see its	White Tuni			35	500 К

6 Click \leftarrow to return to the Area page.

Replace device

\$

6.9 - Wallstations

This topic describes the viewing and editing options for Wallstations assigned to an Area.

6.9.1 - Viewing and Editing Wallstations

Νοτε

See "Modifying Wallstation Button Response" in the WaveLinx User and Programming Manual for more details and configuration options.

Step Action

1 Click **Sites** in the main menu, then select a **Building** in the Building navigation panel, and then select a **Floor**. Select an Area, and then expand the In Area section.

EXAMPLE

≡			Lighting 👯
Alarms	Default Client (i) «	Collab 1 PO-Demo-73-fe AREA SCENES OCCUPANCY DAYLIGHT DEMAND RESPONSE	🖍 EDIT 🚺 SETUP MAP
Operate	Default Building (i) +		× •
Dashboard	Default Floor T () +	3 Devices Assigned	LOWER RAISE
Event Logs	All Areas 28 Paired Devices	Zones	~
Sites	Collab 1	In Area 1 Devices	^
Schedules Q Devices	3 Devices	35-Wall Station	
Devices		Unassigned Devices	= FII TER

2 Click a Wallstation to view the Wallstation Type, Battery Status (if applicable), and Faceplate (Button) layout.

Example	
← 35-Wall Station	🖬 delete 🖌 edit
Wallstation type W3L – 3 Large Buttons	
Battery Status	
Button 1	
Button 2	
Button 3	
Replace Device	¢

Νοτε

Refer to "Replacing and Syncing WaveLinx Devices" in the WaveLinx Programming and User Manual for details on using the Replace Device feature.

Action Step

3

FYAMDIE

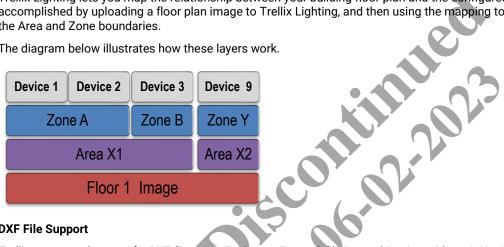
← Edit	
COPY FROM WALLSTATION	
Name	
35-Wall Station	
	CANCEL SAV

6.10 – Floor Maps

6.10.1 - Overview

Trellix Lighting lets you map the relationship between your building floor plan and the configured Areas, Zones, and Devices. This is accomplished by uploading a floor plan image to Trellix Lighting, and then using the mapping tools to place individual Devices and draw the Area and Zone boundaries.

The diagram below illustrates how these layers work.



DXF File Support

Trellix supports the use of a DXF (Drawing Exchange Format) file in combination with an SVG, JPG, or PNG file. For accurate fixture and sensor location data, DXF files are required to implement Trellix Locate, our real-time location sensing application for tracking people and assets.

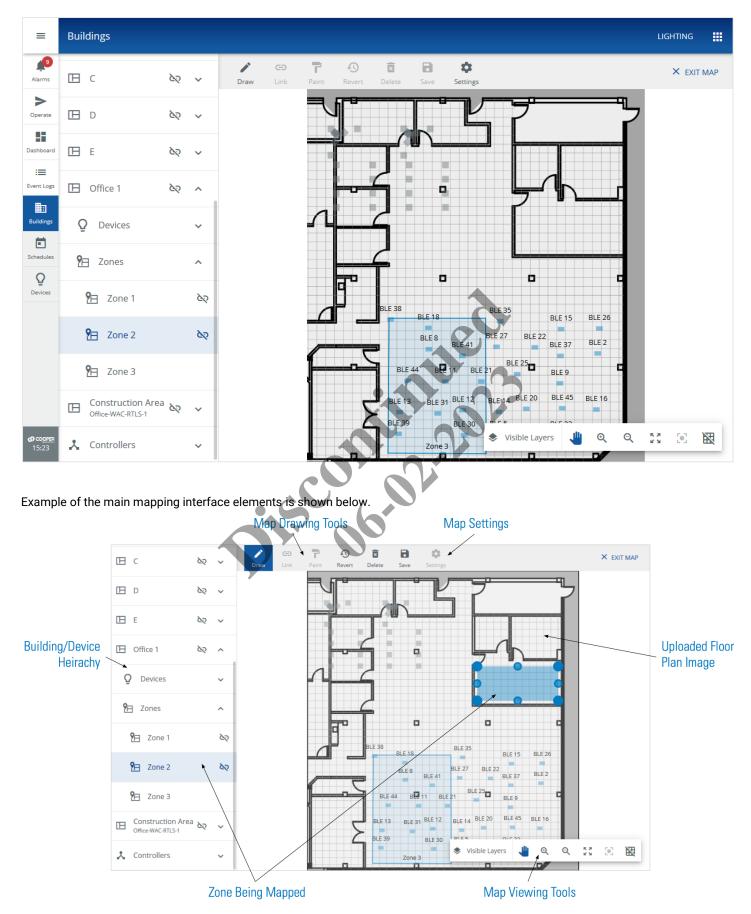
Cooper recommends the use of DXF files even if Trellix Locate is not currently installed on your site, as they are required should you decide to add Locate functionality later.

Floor Map Edit Mode Example

The image below shows the configured Areas, Zones, and Devices that have been mapped onto an uploaded floor plan image. The mapping process creates an interactive connection between the floor plan and the lighting system. As a result, clicking Zone 3 on the map selects it in the Building navigation panel on the left. Selecting an Area in the Building navigation panel will highlight it on the map. This interactive connection is true for all Areas, Zones, and Devices that have been linked to the map.

Trellix Lighting System Configuration Guide

6 - Sites Configuration



6.10.2 - Viewing a Floor Map in Edit Mode

Follow the steps below to view a floor map in edit mode.

Step Action

1

Click Sites in the main menu, then select a Building in the Building navigation panel, and then select a Floor.

Νοτε

A **①** button indicates the selected component with details displayed. Clicking **①** beside a component will make it active (selected).

EXAMPLE



Step	Action
3	The view of the floor plan can be adjusted as follows:
	 To enable of disable the types of information displayed, click Visible Layers, and then select the check boxes as desired to show Areas, Zones, Devices, and Labels
	• To zoom in , click ^Q , or double-click the background image, or use your computers scroll-to-zoom feature with the cursor over the map
	• To zoom out , click ^Q , or hold down the Shift key while double-clicking the image, or use your computers scroll-to-zoom feature with the cursor over the map
	• To fit the image to the window, click 🖉
	• To center the floor map in a new location, click $ ilde{ heta}$, and then click and drag the background image

6.10.3 – Configuring the Floor Map Image Settings

Follow the steps below to upload a single JPG, PNG, or SVG image for the floor, and optionally combine that with a second DXF image file, as the Floor Map image.

Click Sites in the main menu, then select a Building in the Building navigation panel, and then select a Floor							Floor		
1				_					
2	Click Setup Map, and then click 🍄 to open the map settings for Image, Grid, and Text.								
	Example								
	С	62	✓ Image	Grid	A Text	B Save	EXIT SETTINGS		
	🖽 D	69	~		J				
	E	çõ	~		Ī				
3		nd DXF (Device Blo			Id image only for the Floor Map, or else select a comb t and upload a background image. If enabled, select, a			
Ū	Background a	nd DXF (Device Blo						
C	Background and corresponding	nd DXF (DXF file	Device Blo						
	Background an corresponding EXAMPLE	nd DXF () DXF file tings	Device Blo	cks) fi	le. Selec				
	Background an corresponding EXAMPLE ← Image Set	nd DXF () DXF file tings of file you w	Device Blo	cks) fi	le. Selec				
	Background an corresponding EXAMPLE ← Image Sett Select the type of	nd DXF () DXF file tings of file you w	Device Blo	cks) fi	le. Selec	t and upload a background image. If enabled, select, a			
	Background an corresponding EXAMPLE ← Image Sett Select the type of	nd DXF () DXF file tings of file you w	Device Blo	cks) fi	le. Selec				
	Background an corresponding EXAMPLE ← Image Sett Select the type of	nd DXF () DXF file tings of file you w	Device Blo	cks) fi	le. Selec	t and upload a background image. If enabled, select, a			

Background Image(png,jpg,svg) OfficeMap_BLEpositions.png Background Image(png,jpg,svg) SELECT Background Image(png,jpg,svg) Device Blocks(dxf) Test_DXF_2_LAYER_2013a.dxf BACK

Notes

- Cooper recommends the SVG (Scalable Vector Graphic) format for best Background Image display quality, however JPEG or PNG image formats can also be used.
- Maximum file size is 1 Mb.

4

Click Next (shown inset above). Enter the Image Scale pixel quantity, and then select the unit of measurement (Feet or Meters).

EXAMPLE

← Image Settings			
Select the type of file you would like to import fo Background Image only			
	V File Upload	2 Scale Update	3 Block Listing
STEP 2: Verify the image scale			
Image Scale <u>12 px = 1</u> Feet O Meters	s		BACK NEXT

Click Next (shown inset above). Select the checkbox for each Block Name you want to import, and then click Apply 5 (shown inset below).

E

XAMPLE				
← Image Settings				
Select the type of file you wou	uld like to import for this floor Background and dxf 	St. St.		
STEP 3: Specify which bloc	File Uplo		3 Block Listing	
	Block Name	Count	Shape	Shape Size(meters)
	REG_BLOCK	36	Double Fixture	▼ W:1.5 H:3
	SENSOR	6	Sensors	- R:0.8
	SENSOR_1	23	Endpoint Sensor	▼ R:0.3
				BACK

OTHER TASKS

- To change the shape used for a Block Name, click the Shape value. (e.g., Sensors)
- To create a custom shape, click the Shape value, and then click +

6.10.4 - Configuring the Floor Map Grid and Text Settings

Follow the steps below to specify the default unit of measurement for the Floor Map, and the font size and positioning of Area and Zone labels.

	Click Sites in the main menu, then select a Building in the Building navigation panel, and then select a Floor . Click Setup Map , and then click 🌣 to open the map settings for Image , Grid , and Text .									
	⊡ c	<u>k</u> y ~	Image Grid	A Dave		× exit setting:				
	🖽 D	65 ~								
	🖽 E	65 ~								
3	To set the mea	asurement un	its, click Grid .							
	RESULT									
	Image Grid	A Text	Save		eor	× EXIT SETTINGS				
	Squa 1	are Size	Meters	Pixels						
-	Fintan tha Cause	···· ··· · · · · · ·	the number of	units per squar	e on the grid), and then select Fe	eet, Meters, or Pixels. For				
4	example, if you	u enter "2" an	d select Feet , e	each square wi	l be 2 feet by 2 feet in size.					
4 5	example, if you To set the font	u enter "2" an	d select Feet, e							
	example, if you	u enter "2" an	d select Feet, e							
	example, if you To set the font	u enter "2" an t size and pla	d select Feet, e			× EXIT SETTINGS				
	example, if you To set the font RESULT	u enter "2" an t size and pla d Text	d select Feet , e		els, click Text.					
	example, if you To set the font RESULT	u enter "2" an t size and place d Text Trellix Lig	d select Feet , e cement of Are _{Save}	a and Zone lab	els, click Text.	× EXIT SETTINGS				
	example, if you To set the font RESULT	u enter "2" an t size and pla A d Text Trellix Lig	d select Feet , e cement of Are _{Save}	a and Zone lab	els, click Text.					

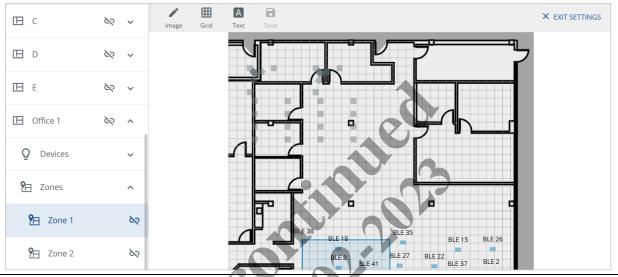
6.10.5 - Viewing and Selecting Unlinked Areas, Zones, and Devices

The Trellix Lighting mapping interface provides two ways to view all the lighting system components that have not yet been linked (i.e., added to the floorplan).

Follow the steps below to view unlinked components using the Building navigation panel or the View All Unlinked feature.

Step	Action
1	Click Sites in the main menu, then select a Building in the Building navigation panel, and then select a Floor. Click Setup
	Map

EXAMPLE



3 To see unlinked components, click View All Unlinked below the selected Floor. Deselect Areas, Zones, or Devices as needed to limit the displayed components.

Unlinked Areas, Zones an	d Devices
Filter by 🗌 Areas 🗹 Zone:	s 🗌 Devices
Zone 3	
Zone 2	
Zone 2	
Zone 2	
Zone 3	
Zone 1	
Dimmable	
Receptacle	

4 To choose a component for mapping, click it in the list, and then click Select.

6.10.6 - Linking Areas and Zones to a Floor Map

Follow the steps below to link, unlink, or edit an Area or Zone on a floor map.

Step Action

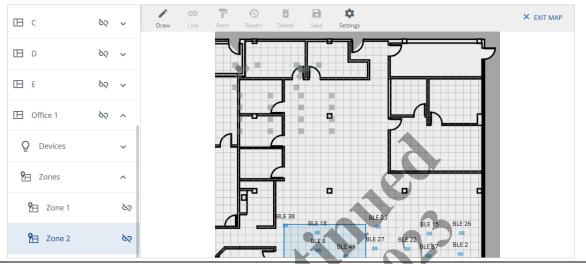
1

Choose the Area or Zone you want to map (See Viewing and Selecting Unlinked Areas, Zones, and Devices for details.)

Νοτε

The floor plan image is scaled to fit the viewing window when you begin mapping.

EXAMPLE

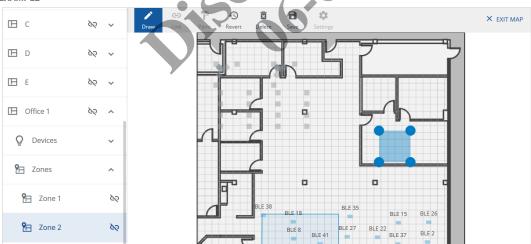


2 With an unlinked component selected (**Zone 2**, in this example), and the **Draw** button in the Drawing Tools bar active, click the approximate location of this component on the map to create a new mapping shape.

Νοτε

The Revert, Delete, and Save buttons in Drawing Tools become enabled.

EXAMPLE



DRAWING TASKS

- · Click Revert to undo all the changes since the last save or from when the current editing session began
- Click **Delete** to remove the selected shape
- · Click Save to apply the changes since the last save or from when the current editing session began
- Click **View** to show or hide mapped Areas, Zones, Devices, or Labels on the map
- Click **Draw** to continue working with shapes

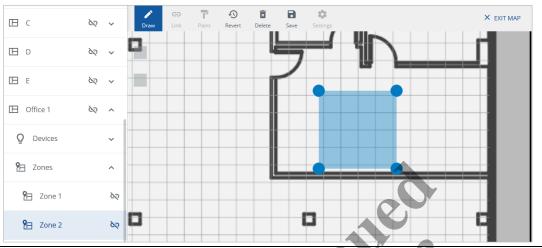
3

Click 🔍 in the Viewing Tools to zoom in, and with 🖑 active, click and drag the background image (not the mapping shape) until you can see the location you want to map clearly.

Νοτε

The circular "handles" for resizing the shape are visible at the corners of the rectangular shape.

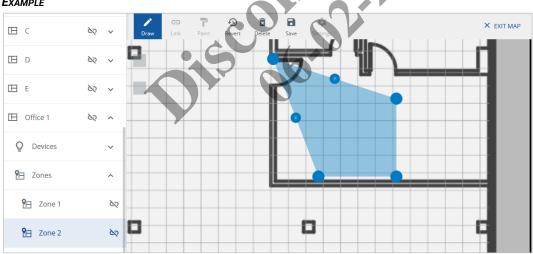
EXAMPLE



4 Click the top left handle and drag it to the upper left corner of the location you want to map.

Νοτε

New, smaller handles will appear between the original ones after dragging. These can be used to change the shape for locations that are not rectangular. Each time you drag a handle, a new one appears along that axis.

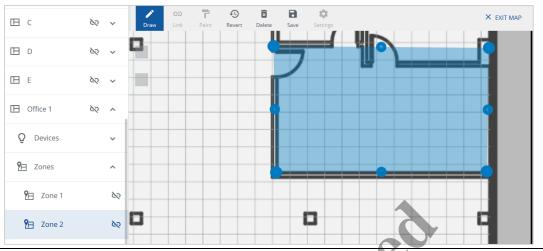


EXAMPLE

5

Repeat the click-and-drag operation for each of the remaining three corners until you have a rectangle that matches the dimensions of the location you want to map.

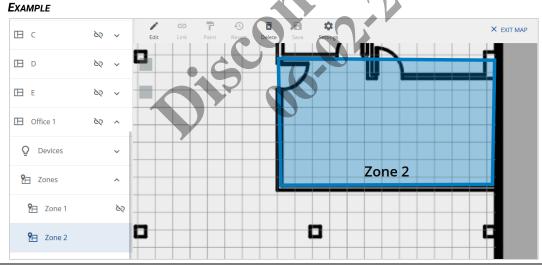
EXAMPLE



6 Click Save to apply your changes.

Notes

- The ∾ no longer appears beside the component (**Zone 2**, in this example) because it is now linked
- The **Revert** and **Save** buttons are disabled
- The Delete button is active because the Zone 2 component is selected, and the shape can be removed



7 Click **Exit Map** to end this session, or select another component to add to the map.

Νοτε

You will be warned if there are unsaved changes when you click Exit Map.

6.10.7 - Linking Devices to a Floor Map

Follow the steps below to link, unlink, and edit Devices on a floor map.

Step Action

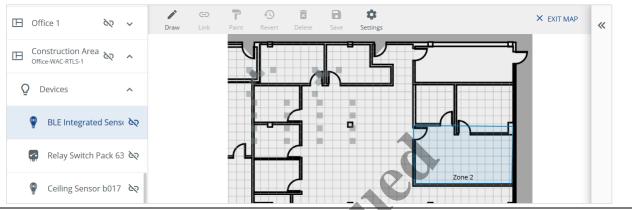
1

Choose the Device you want to map (See Viewing and Selecting Unlinked Areas, Zones, and Devices for details.)

Νοτε

The floor plan image is scaled to fit the viewing window when you begin mapping.

EXAMPLE

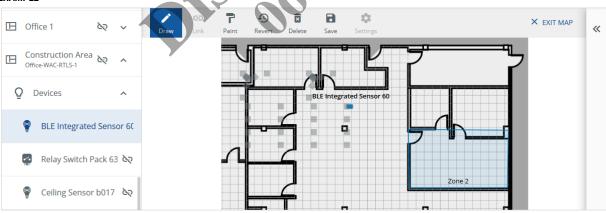


- 2 Click \mathfrak{A} in the Viewing Tools to zoom in, and with \clubsuit active, click and drag the background image (not the mapping shape) until you can see the location where the device will be placed.
- 3 With an unlinked component selected (**BLE Integrated Sensor 60**, in this example), and the **Draw** button in the Drawing Tools bar active, click the location of this component on the map to add it.

Notes

- · The Draw button label will change to Edit when the selected devices is already linked
- If the Draw button is not active, select a different component, and then reselect the one you want
- The Revert, Delete, Save, and View buttons in the Drawing Tools bar become enabled

EXAMPLE



DRAWING TASKS

- · Click Revert to undo all the changes since the last save or from when the current editing session began
- · Click Delete to remove the selected shape
- · Click Save to apply the changes since the last save or from when the current editing session began
- Click View to show or hide mapped Areas, Zones, Devices, or Labels on the map
- Click **Draw** to continue working with shapes

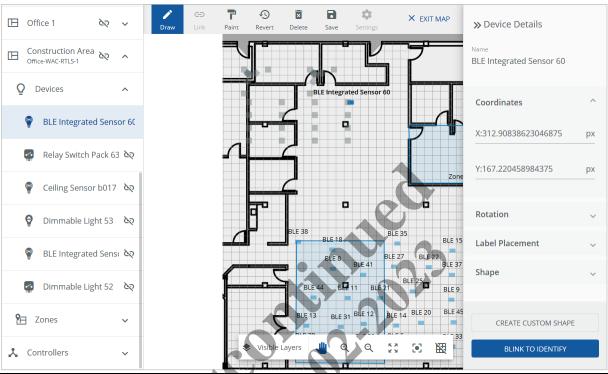
4

Click the Device shape on the map a second time to open the Device Details panel on the right.

Νοτε

The default shape that corresponds to the device you added (**Sensors** in the example below) is highlighted in the Device Details panel.

EXAMPLE



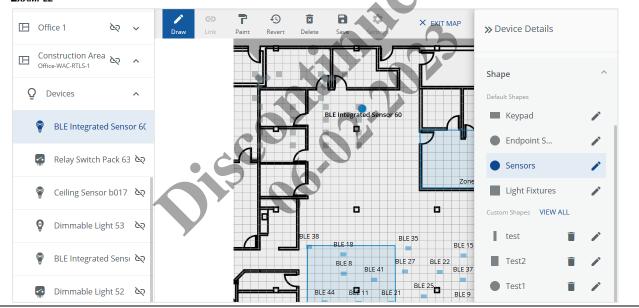
5 Click Rotation to expand that section, then drag the slider or enter the value to 90 Degrees.

EXAMPLE					
🖽 Office 1 🏼 🗞 🗸	Draw Draw Paint	Revert Delete Save Setting	S EXIT MAP	» Device Details	
日 Construction Area み へ		L. L. F		_{Name} BLE Integrated Sensor 60)
O Devices		BLE Integrated Sens	or 60	Coordinates	~
PLE Integrated Sensor 60			<u>L</u>	Rotation	~
Relay Switch Pack 63 🗞	Л			•	
Sensor b017 &			Zone	90 Degrees	

Office 1	<u>6</u> 2 ~	♪ Draw	C) Link	Paint	Revert Dele	_	Settings	× EXIT MAP	» Device Details	
Construction A Office-WAC-RTLS-1	Area à 🔨 🔺	Diaw	LIIIK	J				7	Name BLE Integrated Sensor 60	
Q Devices	^						ated Sensor 60		Coordinates	~
P BLE Integ	rated Sensor 60			F		C		La	Rotation	~
Relay Swi	tch Pack 63 🔌			л					Label Placement	^
P Ceiling Se	ensor b017 🏼 🗞				╧			Zone	🔿 Тор	
Dimmable	e Light 53 🔌					1	3		O Middle 💿 Botto	om

7 Click **Shape** to expand that section, and then select the desired Device shape.

EXAMPLE



8

To edit the Device shape, click 🖍 beside the shape in the Device Details panel. Edit the **Name**, and then enter the dimensions for the selected shape (**Radius** in the example below). Click **Update Shape** to apply your changes.

Νοτε

Editing a default shape will affects all mapped Devices, including those added before and after this one.

EXAMPLE

Edit Default Shane
Edit Default Shape
Sensors Embed
Minimum 2 and Maximum 16 characters
Shape
O Rectangle O Circle
Radius
1.5 ft
Minimum 0.1 and Maximum 1000
CANCEL UPDATE SHAPE

9 To add a new custom shape, click **Create Shape**, then edit the **Name**, then click **Rectangle** or **Circle** as the **Shape**, and then enter the dimensions for the selected shape (**Radius in** the example below). Click **Save Shape** to add the new shape.

Νοτε

A custom shape can be applied to one or more devices without changing the default shape used by other devices.

EXAMPLE

Create Custom Shape Name Redundant Sensor	• •			
Minimum 2 and Maximum 16 char	acters			
Shape		<u> </u>		
 Rectangle Circle 				
Radius				
1 ft				
Minimum 0.1 and Maximum 1000				
CANCEL	SAVE SHAPE			

10

To apply a custom shape, select a Device, and then click the shape in the **Custom Shapes** list.

Νοτε

The available shapes depend on the device type (e.g., sensors are limited to circular shapes).

EXAMPLE



11 When you have finished adding Devices to the map, click Save to apply your changes.

Notes

- The 🔯 no longer appears beside the component (BLE Integrated Sensor 60, in this example) because it is now linked
- The Revert and Save buttons are disabled
- The **Delete** button is active because the **BLE Integrated Sensor 60** component is selected and can be removed from the floor map
- 12 Click **Exit Map** (top right, not shown above) to end this session.

Νοτε

You will be warned if there are unsaved changes when you click Exit Map.

7 – Device Discovery, Import, and Configuration

This chapter contains information and procedures for locating and synchronizing WaveLinx Wireless Area Controllers and WaveLinx Wired data with Trellix Lighting.

7.1 – Actions Menu

The **Actions** menu appears on the right side of the Devices page when Trellix Core, a WAC, or an EG is selected. This menu provides a range of commands, depending on the context and your account permissions.

	=	Devices						Lighting
	Alarms	Ţ VIEW TY	YPE-3 DEVICES	Q Gateway Details	Т	rellix Core	🖍 EDIT	
	Operate	Trellin 3 Contr	coller(s)	 Network Setting 	Ac.	tion Menu	M	anage Controller
		L EG	2 vice(s)	Configure IP 🔘	Manual O DHCP		S	nc to BACnet
	Dashboard :	PO- 19 D	-Demo-73-fe evice(s)	 MAC Address 54·R2·03·88·79·F 	IP Address F 10 130 162 254	Subnet Mask 255 255 254 0	10.13	erver Logs
	Devices					Lighting		/stem Reboot
ŝ	■ VIEW TYPE-3 DEVICES	Q	Controller Details				E	kport Device List
	Trellix Core 3 Controller(s)	^	General Properties			Enable Discover Devices		
	EG2 0 Device(s)		Device Type	Public ID D41	Name PO-Demo-7e-7e	Import Devices		
d	PO-Demo-73-fe 19 Device(s)	~	Physical Location	System Location	Status	Push Data to Controller		C Astism
s	PO-Demo-7e-7e 9 Device(s)	^	Default Client>Default.	PO-Demo-7e-7e	Op 8	Remove Controller	VVA Me	AC Action
	10-Relay Switchpack	¥	Identify Mode Off			Controller Log	IVIE	IIU
	11-Integrated Sensor	¥			0.1	Reboot WAC		
is	4-BLE Integrated Sense	sor 👻	802.15.4 Network Pro	perties		~		
s	5-BLE Integrated Sense	sor 👻	Wireless Ethernet Mas	ster Network Properties		~		

Action Menu Commands

The list of commands is described briefly below.

Trellix Core

- Manage Controllers Search the entire network for WACs or WaveLinx Wired EGs
- Sync to BACnet Repeat the synchronization of WAC or EG data to BACnet
- Server Logs Download the Trellix Core server logs (Admin access only)
- System Reboot Restart Trellix Core (Admin access only)
- Export Device List Export a list of Devices to an Excel file (Admin or Facility Manager access only)

WAC or EG

- Enable Discover Devices Turn on WAC pairing mode to discover Devices ready to be paired
- Import Devices Synchronize the selected WAC or EG data to Trellix Core
- Remove Controller Remove selected WAC or EG from Trellix Core
- Sync data with WAC Send Trellix Core data to the selected WAC or EG
- Controller Log Download WAC logs (Admin access only)

7.2 - Discovering WACs Automatically

When Trellix Lighting is installed, the Setup Wizard will automatically scan and import the configured LCS devices from the WaveLinx LMS, as well as all configured Areas, Zones, Occupancy Sets, and Daylight Sets.

IMPORTANT

You must manually synchronize the Trellix Lighting database each time a WAC or WaveLinx Wired EG configuration is modified (or after restoring from a backup). Configuration examples include the following: adding or removing Devices; adding new Areas; moving Devices from one Zone or Area to another.

Step Action

1 Click **Devices** in the main menu, then select Trellix Core. Click the **Actions** menu.



=	Devices							ighting	
) Alarms	∀IEW TYPE-3 DEVICES	c	C Gateway Details			/ E	dit I		5
> Operate	Trellix Core 3 Controller(s)		Network Settings					Controllers	5
55	EG2 0 Device(s)		Configure IP 🔘 Man	ual O DHCP			Sync to E	BACnet	
Dashboard	PO-Demo-73-fe 19 Device(s)	8	MAC Address 54:B2:03:8B:79:EF	IP Address 10.130.162.254	Subnet Mask 255,255,254,0	Default 10.13	Server L		
Event Logs	PO-Demo-7e-7e 9 Device(s)		~				System F		
Sites			DNS Settings	-			Export D	evice List	
5chedules			Preferred DNS Server	Alternate DNS Server					
Q			N/A	N/A					
Devices									
	Manage Controllers	in the	Actions menu.		2				
		in the	Actions menu.						
Click Exami		in the	Actions menu.	0					
Click Exami ← ♪	PLE Manage Controllers			6.07					
Choo	PLE Manage Controllers ose to discover controllers automa			6.07					
Choo Choo	PLE Manage Controllers ose to discover controllers automa sutomatic O Manual			6.07					
Choo () A	PLE Manage Controllers ose to discover controllers automa			10.07					
	PLE Manage Controllers ose to discover controllers automa sutomatic O Manual			100					
	PLE Manage Controllers use to discover controllers automa utomatic O Manual COVER NOW			Push Status	Configuration				

EXAMPLE



IMPORTANT

It will typically take from 5 to 20 minutes to complete the discovery, depending on the size of the database. Please remain on this page until a notification message appears. If you close the browser window or navigate to another Trellix Lighting section, you will not know if the Discover operation succeeded.

the con

EXAMPLE SYNC MESSAGE

ľ	
l	Controllers Not Found
e t	No controllers found. Please check the network and try again.
	ОК

Τιρ

TIP See the Troubleshooting section if you get an unexpected result.

7.3 - Discovering WACs or WaveLinx Wired EGs Manually

To discover an WaveLinx Wired EG, or when you want to discover a specific WAC instead of searching the whole network, you can use the Manual method outlined in the steps below.

Step Action

1 Click Devices in the main menu, then select Trellix Core.

=	Devices	an an an an					Lighting
Alarms		م	Gateway Details			🖍 EI	DIT 🖸 ACTIONS
D perate	Trellix Core 3 Controller(s)	^	Network Settings				Manage Controllers
	EG2 0 Device(s)		Configure IP 🔘 Man	ual 🔘 DHCP			Sync to BACnet
Dashboard	PO-Demo-73-fe 19 Device(s)	~	MAC Address 54:B2:03:8B:79:EF	IP Address 10.130.162.254	Subnet Mask 255.255.254.0	Default 10.13	Server Logs
Event Logs	PO-Demo-7e-7e 9 Device(s)	~	54.02.05.05.75.21	10.150.102.254	233,233,234,0	10.13	System Reboot
Sites							Export Device List
Ē			DNS Settings				^
Schedules			Preferred DNS Server	Alternate DNS Server			
Q Devices			N/A	N/A			

2 Click Actions, and then click **Manage Controllers**. Select the **System** type, and then:

- If you chose WaveLinx Wired, enter the IP Address and Password of the EG, and leave the Protocol at its default value
 - If you chose WaveLinx, enter the IP Address of the WAC, and leave the Port and Protocol at their default values

EXAMPLE

3

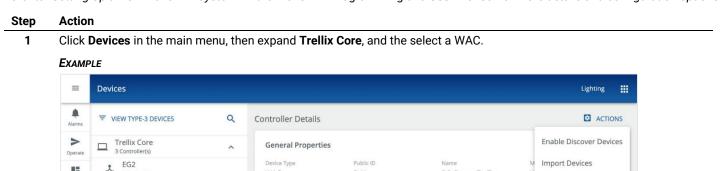
	ontrollers automatically	/ or manually		
🔿 Automatic 🔘 N	Appual			
-	nanuar			
_{System} Wavelinx Wired	~			
P Address	Password	Protocol	T	
DISCOVER NOW				
Lighting (3 Controlle	rs)		•	
28 of 500 Devices	(3)			
ck Discover N	ow and wait for	the search to co	nplete.	
ck Discover N	ow and wait for	the search to co	nplete.	
ck Discover N	ow and wait for	the search to co	nplete.	
ck Discover N	ow and wait for	the search to co	nplete.	
ck Discover N	ow and wait for	the search to co	nplete.	
	,	the search to con	nplete.	
Discovery in p	Jrogress. This may]	nplete.	
Discovery in p	,]	nplete.	
Discovery in p	Jrogress. This may]	nplete.	
Discovery in p take upto 5 mir	rogress. This may nutes. Please wait]		

7.4 - Pairing Devices with a WAC

When one or more WaveLinx Wireless Devices have been placed in pairing mode, they can be discovered by putting the WAC into pairing mode.

Νοτε

Refer to "Setting Up a New WaveLinx System" in the WaveLinx Programming and User Manual for more details and configuration options.



Operate		Controller(s)	^	General Properties				
- 53		EG2		Device Type	Public ID	Name	M	Import Devices
Dashboard	^	0 Device(s)		WAC	D41	PO-Demo-7e-7e	N	
	2	PO-Demo-73-fe 19 Device(s)	~	Physical Location	System Location	Status	Fi	Push Data to Controller
Event Logs	X	PO-Demo-7e-7e 9 Device(s)	^	Default Client>Default	PO-Demo-7e-7e	On	8	Remove Controller
Sites	R	10-Relay Switchpack	¥	Identify Mode Off				Controller Log
ē	(*	11-Integrated Sensor	¥					Reboot WAC
Schedules	Ŷ	4-BLE Integrated Sensor	¥	802.15.4 Network Prope	erties			~
Devices	ę	5-BLE Integrated Sensor	¥	Wireless Ethernet Maste	er Network Properties			~

2 Click Actions, then select Enable Discover Devices (shown above). Wait for a few minutes as Devices pair and messages are displayed.

= (Devices				Lighting
Pairing C	Dn				
Alarms	₹ VIEW TYPE-3 DEVICES	Daylight Sensor Prop	perties		~
>		Enable/Disable	Reading	Daylight Set	
Operate	29-Wall Station	Disabled	1 lux	CL Daylight Set 9	
55					
lashboard	💡 31-BLE Integrated Sensor 🍟				
=	32-BLE Integrated Sensor 🝟	Date/Time Propertie	S		^
vent Logs	•	Device Date	Device Time		
	33-BLE Integrated Sensor ¥	N/A	N/A		
Sites	🜠 34-RSP CCI-CCT Collab2 🍟				
ichedules	35-Wall Station				
	35-Wall Station	Dimmable Propertie	s		^
Q Devices	🚭 37-RSP CCI-CCT Collab1 🍟	Zone	Daylight Set	Minimum Level	
	Private Office 1 WS 1	N/A	CL Daylight Set 9	0%	
	Frivate Office 1 ws 1	Maximum Level	Preset Maximum Level	Preset Minimum Level	
	Private Office 2 WS 1	100%	100%	0%	
	🛃 RSP-CCI 🙀	Requested Level	Actual Level	High Priority Override Level	
		0%	0%	0%	
	Test-Office Ceiling Sensor d6a6				
COOPER	🛃 WT Relay Switchpack 🍟		Device Joined : 76-BLE grated Sensor	×	
15:50	• PO-Demo-7e-7e				

7.5 - Importing a WAC or WaveLinx Wired (EG) Database

You will need to import a WAC or WaveLinx Wired (EG) database when devices connected to the Controller are added or removed. You can do that using the Controller's **Import Devices** command.

Νοτε

For WaveLinx Wired, it is also necessary to upload a new data file to Trellix before importing. See Importing a WaveLinx Wired Database for details.

Step Action

1

Click **Devices** in the main menu, then expand **Trellix Core**, and the select a controller.

≡	Devices				Lighting
A larms	∀IEW TYPE-3 DEVICES	۹	Controller Details		
> Operate	Trellix Core 3 Controller(s)	^	General Properties		Enable Discover Devices
	EG2 0 Device(s)		Device Type Public ID Name WAC D41 Po-Demo-7e-7e	N	Import Devices
Dashboard	PO-Demo-73-fe 19 Device(s)	~	Physical Location System Location Status	F	Push Data to Controller
int Logs	PO-Demo-7e-7e	^	Default Client>Default PO-Demo-7e-7e	8	Remove Controller
Sites	10-Relay Switchpack	¥	Identify Mode Off		Controller Log
	11-Integrated Sensor	¥			Reboot WAC
Schedules	4-BLE Integrated Sensor	¥	802.15.4 Network Properties		~
= Devices	5-BLE Integrated Sensor	¥	Wireless Ethernet Master Network Properties		~

Select Import Devices from the Actions menu to import all device data.

Τιρ

See the Troubleshooting section if you get an unexpected result.

7.6 - Importing Multiple Controllers

This procedure allows you to import up to 10 Controllers with a single command. The Controller Actions menu can be used to import a single Controller.

Νοτε

2

You must be logged in with System Administrator permissions, such as the default Admin account, to perform this procedure. An account with Facility Manager permissions, such as the default Facman account, can use the **Actions** menu but cannot edit Trellix Core configuration.

1

2

Click Devices in the main menu, then select Trellix Core. Click the Actions menu.

EXAMPLE

Alarms VIEW TYPE-3 DEVICES	۹	Gateway Details			/ E	
	^	Network Settings				Manage Controllers
EG2 0 Device(s)		Configure IP 🔘 Man	ual 🔘 DHCP			Sync to BACnet
PO-Demo-73-fe	~	MAC Address 54:B2:03:8B:79:EF	IP Address 10.130.162.254	Subnet Mask 255.255.254.0	Default 10.13	Server Logs
PO-Demo-7e-7e 9 Device(s)	~					System Reboot
E Sites		DNS Settings				Export Device List
		Preferred DNS Server	Alternate DNS Server			
Q		N/A	N/A			
Devices						
ick Manage Controllers.						
AMPLE						
■ Devices						Lighting
← Manage Controllers)				
> Choose to discover controllers a	utomatical					
Automatic Manual						
ent Logs						

3 Select one or more Controllers, and then click **Import Controllers**.

Sync Status

0

19

9

TIPS

Ē

Q

Schedul

-

 \checkmark

CANCEL

Controller Name 1

10.130.163.16 PO-Demo-73-fe

10.130.162.221 PO-Demo-7e-7e

10.130.162.220

EG2

• The Devices count (e.g., "28 of 500 Devices") will appear in red if the license limit is exceeded (e.g., "650 of 500 Devices")

Push Status

Imported at 10-12-2020 13:11 Push at 18-02-2021 17:38

Imported at 24-02-2021 16:34 Push at 03-03-2021 10:11

Imported at 24-02-2021 16:34 Push Required

• See Discovering WACs Automatically or Discovering WACs or WaveLinx Wired EGs Manually if the Controllers you want are not shown

Configuration

N/A

N/A

IMPORT CONTROLLER(S)

LambeauField-Sho...

🛛 REF 🕱

PUSH DATA TO CONTROLLER(S)

×

×

7.7 - Importing a WaveLinx Wired Database

You will need to import an WaveLinx Wired database when devices connected to it are added or removed.

Νοτε

Because WaveLinx Wired data is transferred to Trellix with a text file, you must first export the new data to file as described in the WaveLinx Wired Installation Instructions document before carrying out the steps below.

Step Action

1 Click **Devices** in the main menu, then select **Trellix Core**, and then click **Actions**.

Image Controllers. Example Image Controllers. Image Controllers. Image Con		Devices					Lighting
Image: Source (a) Image: Source (a) Sync to BACnet Image: Source (a) Image: Source (a) Sync to BACnet Image: Source (a) Image: Source (a) Sync to BACnet Image: Source (a) Image: Source (a) Sync to BACnet Image: Source (a) Image: Source (a) Image: Source (a) Sync to BACnet Image: Source (a) Image: Source (a) Image: Source (a) Sync to BACnet Image: Source (a) Image: Source (a) Image: Source (a) Sync to BACnet Image: Source (a) Image: Source (a) Image: Source (a) Sync to BACnet Image: Source (a) Image: Source (a) Image: Source (a) Sync to BACnet Image: Source (a) Image: Source (a) Image: Source (a) Sync to BACnet Image: Source (a) Image: Source (a) Image: Source (a) Sync to BACnet Image: Source (a) Image: Source (a) Image: Source (a) Sync to BACnet Image: Source (a) Image: Source (a) Image: Source (a) Image: Source (a) Sync to BACnet Image: Source (a) Image			٩	Gateway Details			
Image Controllers. Example Image Controllers. Image C		Trellix Core 3 Controller(s)	^	Network Settings			Manage Controllers
MAX Address PO-Demo-73-re Junce Address Detected Set veh togs Status PO-Demo-76-7e Junce Address Detected Set veh togs System Rebot Example Po-Demo-76-7e Vehoceted DNS Settings Set veh togs System Rebot Example Preferred Dis Server N/A Remaining to the controllers Example Example Click Manage Controllers. Example N/A N/A Example Example Vehoceted Manage Controllers Example Vehoceted Status Configuration Example Vehoceted Manage Controllers Example Vehoceted Example Vehoceted Manage Controllers Example Vehoceted Example Example Vehoceted Manage Controllers Example Vehoceted Example Example Example Example Vehoceted Manage Controllers Example Pub Status Configuration Example	Dashboard			Configure IP 🔘 Manu	al O DHCP		Sync to BACnet
Image: Problemo-7e-7e System Rebot Image: System Rebot Export Device List Image: System Rebot Image: System Rebot Image: System Rebot Image: System Rebot <tr< td=""><td></td><td>~</td><td></td><td></td><td></td><td>erault</td></tr<>			~				erault
DNS Settings Preferred DNS Server N/A			~	5102105105175121			System Reboot
Preferred DNS Sever Atternate this Sever N/A N/A				DNS Settings	K)	Export Device List
N/A N/A N/A N/A Click Manage Controllers. Example Manage Controllers automatically or manually Automatic Manual Discover controllers) B of 500 Devices Controllers) B of 500 Devices Controllers S of 500 Devices S of 500 Devices Imported at 10-12-2020 13:11 Push at 18-02-2021 17:38 LambeauField-Sho REF T Dir Devices Dir Devices Manual Dir Devices Manual Dir Devices Manual Dir Devices Dir Devices					Alternate DN S Server		
Click Manage Controllers. Example				N/A	N/A	5.0	
EXAMPLE Manage Controllers Choose to discover controllers automatically or manually Automatic Manual Decice Controller Name Decice Controller Name Decice Controller Name Decice Controller Name Decice D	Devices						
← Manage Controllers Choose to discover controllers automatically or matually ④ Automatic Manual Discover NoW Lighting (3 Controllers) 28 of 500 Devices □ Controller Name ↑ Device Syme Status Controller Name ↑ Device Syme Status Push Status Configuration EG2 0 10.130.163.16 0 PO-Demo-73.fe 19 Imported at 24-02-2021 16:34 Push at 03-03-2021 10:11 PO-Demo-73.re 0 Montone the text file that contains the latest EG data.	Click I	Manage Controllers.					
Choose to discover controllers automatically or manually	Ехамр	PLE			0.4		
• Automatic ● Manual • Manual • Minual • Mission	← !	Manage Controllers					
Automatic ∩ Manual Discover NoW Discover NoW Discover NoW Device Controller Name ↑ Device Sync Status Push Status Configuration EG2 10.130.163.16 0 Imported at 10-12-2020 13:11 Push at 18-02-2021 17:38 LambeauField-Sho ® REF PO-Demo-73-fe 10.130.162.221 19 Imported at 24-02-2021 16:34 Push at 03-03-2021 10:11 N/A Device Device Device Device Device Configuration Device Sync Status Push Status Configuration Device Sync Status Device Sync Status Device Sync Status Push status Configuration Device Sync Status Sync Status Device Sync Status Sync Sta							
Discover NOW Lighting (3 Controllers) 28 of 500 Devices Controller Name ↑ Device Count Sync Status Push Status Configuration EG2 0 Imported at 10-12-2020 13:11 Push at 18-02-2021 17:38 LambeauField-Sho REF T PO-Demo-73-fe 19 Imported at 24-02-2021 16:34 Push at 03-03-2021 10:11 N/A T PD-Demo-7a-7e 19 Imported at 24-02-2021 16:34 Push at 03-03-2021 10:11 N/A T				anually			
Lighting (3 Controllers) 28 of 500 Devices Controller Name ↑ Device Sync Status Push Status Configuration EG2 0 10.130.163.16 0 Imported at 10-12-2020 13:11 Push at 18-02-2021 17:38 LambeauField-Sho PO-Demo-73-fe 19 Imported at 24-02-2021 16:34 Push at 03-03-2021 10:11 N/A DOL Nemo-7e-7e Total Status Contains the latest EG data. Click () , and then attach the text file that contains the latest EG data.	Choo	ose to discover controllers auton	latically of ma				
28 of 500 Devices Controller Name ↑ Device Count Sync Status Push Status Configuration EG2 10.130.163.16 0 Imported at 10-12-2020 13:11 Push at 18-02-2021 17:38 Lambeau Field-Sho REF The second seco				\mathbf{Y}			
28 of 500 Devices Controller Name ↑ Device Count Sync Status Push Status Configuration EG2 10.130.163.16 0 Imported at 10-12-2020 13:11 Push at 18-02-2021 17:38 Lambeau Field-Sho REF The second seco	() A	utomatic 🔿 Manual					
Controller Name ↑ Symc Status Push Status Configuration EG2 0 Imported at 10-12-2020 13:11 Push at 18-02-2021 17:38 LambeauField-Sho ® REF T PO-Demo-73-fe 19 Imported at 24-02-2021 16:34 Push at 03-03-2021 10:11 N/A T PO-Demo-7a-7e-7a-7e 19 Imported at 24-02-2021 16:34 Push at 03-03-2021 10:11 N/A T		utomatic () Manual					
Introduction Imported at 10-12-2020 13:11 Push at 18-02-2021 17:38 LambeauField-Sno Imported at 10-12-2020 13:11 PO-Demo-73-fe 19 Imported at 24-02-2021 16:34 Push at 03-03-2021 10:11 N/A Imported at 24-02-2021 16:34 PO-Demo-73-fe 19 Imported at 24-02-2021 16:34 Push at 03-03-2021 10:11 N/A Imported at 24-02-2021 16:34 PO-Demo-7a-re Imported at 24-02-2021 16:34 Push at 03-03-2021 10:11 N/A Imported at 24-02-2021 16:34 PO-Demo-7a-re Imported at 24-02-2021 16:34 Push at 03-03-2021 10:11 N/A Imported at 24-02-2021 16:34 PO-Demo-7a-re Imported at 24-02-2021 16:34 Push at 03-03-2021 10:11 N/A Imported at 24-02-2021 16:34 PO-Demo-7a-re Imported at 24-02-2021 16:34 Push at 03-03-2021 10:11 N/A Imported at 24-02-2021 16:34 PO-Demo-7a-re Imported at 24-02-2021 16:34 Push at 03-03-2021 10:11 N/A Imported at 24-02-2021 16:34 PO-Demo-7a-re Imported at 24-02-2021 16:34 Push at 03-03-2021 10:11 N/A Imported at 24-02-2021 16:34 PO-Demo-7a-re Imported at 24-02-2021 16:34 Push at 03-03-2021 10:11 N/A Imported at 24-02-2021 16:34 PO-Demo-7a-re<	O A DIS	COVER NOW					_
Click U, and then attach the text file that contains the latest EG data.	A DIS Light 28 of 3	ting (3 Controllers)	Device St	nr: Status	Push Status	Configuration	_
Click $ {iglet}$, and then attach the text file that contains the latest EG data.	C A	Automatic () Manual COVER NOW Ting (3 Controllers) 500 Devices Controller Name ↑ EG2	Device Count Sy				REF 🗖
	A Light 28 of:	ting (3 Controllers) 500 Devices Controller Name ↑ EG2 10.130.163.16 PO-Demo-73-fe	Device Count Sy 0 In	nported at 10-12-2020 13:11	Push at 18-02-2021 17:38	LambeauField-Sho	
Click Save to upload the data file.	A DIS Light 28 of:	Automatic ○ Manual COVER NOW Sources Controller Name ↑ EG2 10.130.163.16 PO-Demo-73-fe 10.130.162.221 PO-Demo-7e-7e	Device count sy 0 In 19 In	nported at 10-12-2020 13:11 nported at 24-02-2021 16:34	Push at 18-02-2021 17:38 Push at 03-03-2021 10:11	LambeauField-Sho	
	A A DIS Light 28 of	Automatic ○ Manual COVER NOW Sources Controller Name ↑ EG2 10.130.163.16 PO-Demo-73-fe 10.130.162.221 PO-Demo-7e-7e	Device count sy 0 In 19 In	nported at 10-12-2020 13:11 nported at 24-02-2021 16:34	Push at 18-02-2021 17:38 Push at 03-03-2021 10:11	LambeauField-Sho	

6

Select the target EG, then click **Actions**, and then select **Import Devices**.

EXAMPLE

VIEW TYPE-3 DEVICES	Q	Adapter Details				ACTIONS
Trellix Core 3 Controller(s)	^	General Properties				Import Devices
• EG2		Device Type	Public ID	Name	Model	Remove Controller
O Device(s)		EG2	D60	EG2	N/A	
PO-Demo-73-fe 19 Device(s)	~	Physical Location	System Location	Status	Firmware	Version
PO-Demo-7e-7e 9 Device(s)	~	Default Client>Default	EG2	On	N/A	
		Identify Mode	Device Reachable	Network Cnx		
		Off	On	Connected		

ΤιΡ

See the "Troubleshooting" section if you get an unexpected result.

7.8 - Pushing Data to One or More WACs

This procedure allows you to push data to one or multiple WACs. The Controller Actions menu can be used to push data to a single WAC.

Νοτε

You must be logged in with System Administrator permissions, such as the default Admin account, to perform this procedure. An account with Facility Manager permissions, such as the default Facman account, can use the **Actions** menu but cannot edit Trellix Core configuration.

Step Action

1 Click **Devices** in the main menu, then select **Trellix Core**.

=	Devices		C V			LIGHTING
Alarms	▼ VIEW TYPE-3 DEVICES	Gateway Details			/ EC	
Operate	Trellix Core 2 Controller(s)	Network Settings				Manage Controllers
Dashboard	Coffice-WAC-RTLS-1 33 Device(s)	Configure IP Manu	IP Address	Subnet Mask	Default	Sync to BACnet
Event Logs		20:67:7C:DD:5C:18	10.130.162.245	255.255.254.0	10.13	System Reboot
Buildings		DNS Settings				
5chedules		Preferred DNS Server	Alternate DNS Server			
Q Devices			IWA			

2

Click Actions, and then click Manage Controllers. Select one or more WACs.

Example

	utomatic 🔿 Manual	utomatically or				
DIS	SCOVER NOW					
-	t ing (3 Controllers) 500 Devices					
	Controller Name 🕇	Device Count	Sync Status	Push Status	Configuration	
	EG2 10.130.163.16	0	Imported at 10-12-2020 13:11	Push at 18-02-2021 17:38	LambeauField-Sho	🕅 REF 🕱
	PO-Demo-73-fe 10.130.162.221	19	Imported at 24-02-2021 16:34	Push at 03-03-2021 10 :11	N/A	×
\checkmark	PO-Demo-7e-7e 10.130.162.220	9	Imported at 24-02-2021 16:34	Push Required	N/A	Ī

7.9 – Synchronizing Changes to BACnet

Νοτε

1

You must be logged in with System Administrator permissions, such as the default Admin account, to perform this procedure. An account with Facility Manager permissions, such as the default Facman account, can use the **Actions menu** but cannot edit Trellix Core configuration.

Step Action

Click **Devices** in the main menu, then select **Trellix Core**.

EXAMPLE

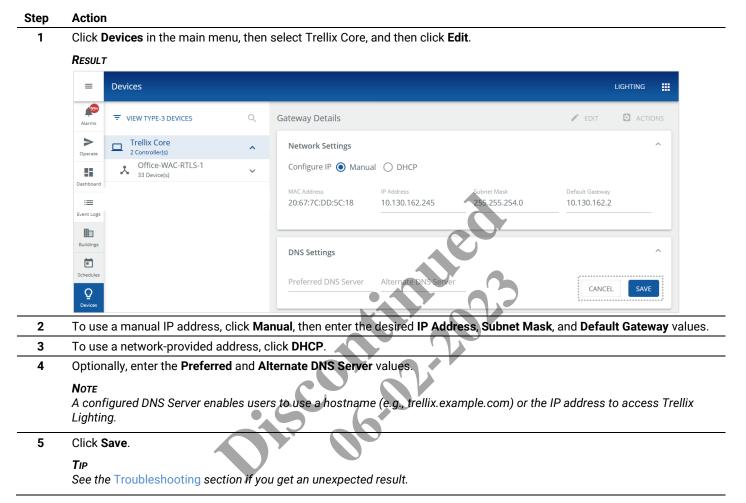
Alarms	▼ VIEW TYPE-3 DEVICES	٩	Gateway Details			/ El	
> Operate	Trellix Core 3 Controller(s)	^	Network Settings				Manage Controllers
5	EG2 0 Device(s)		Configure IP 💿 Manu	al O DHCP			Sync to BACnet
Dashboard	PO-Demo-73-fe 19 Device(s)	~	MAC Address 54:B2:03:8B:79:EF	IP Address 10.130.162.254	Subnet Mask 255,255,254,0	Default	Server Logs
Event Logs	PO-Demo-7e-7e 9 Device(s)	~	54.02.03.00.73.21	10.150.102.254	235.235.254.0	10.15	System Reboot
Sites							Export Device List
Ē			DNS Settings				~
Schedules			Preferred DNS Server	Alternate DNS Server			
Q Devices			N/A	N/A			

2

7.10 – Editing Trellix Core Configuration

Νοτε

You must be logged in with System Administrator permissions, such as the default Admin account, to perform this procedure. An account with Facility Manager permissions, such as the default Facman account, can use the **Actions menu** but cannot edit Trellix Core configuration.



7.11 - Associating a WAC with a Building and Floor

To make devices available to Areas, Zones, Occupancy Sets, and Dimming Sets, the WAC that is connected to those devices must be associated with a specific Building and Floor.

Follow the steps below to associate a WAC with a floor.

Step Action

1 Click **Sites** in the main menu, then use the Building navigation panel to select the desired Building and Floor, and then click **Edit** (top right of page, not shown below).

EXAMPLE

Default Client Test	() «	Floor Details	🗑 DELETE 🧪 EDIT 🔲 SETUP MAP
B1 •	i) +	General Properties	
Floor F1	0 +	Public Id F5	Name F1
123	~	Floor Number 0	2732 Baseline Energy (kWh
🖽 A	~	1 / 10 Floorplan File	Capacity (# People)
В	~	Office_FloorPlan.PNG	80
шc	~	Associated Schedule meeting, schedule 1, TestSc, tes	Total Alarma 54
🖽 D	~		
E E	~	Associate Area Controllers	
Dffice 1	~	Office-WAC-RTL5-1 10.130.162.155	Ø V
Construction Area Office-WAC-RTLS-1	~		CANCEL SAVE
Select a WAC from	the Ass	ociate Area Controllers listed,	and then click Save.

Τιρ

2

See the Troubleshooting section if you get an unexpected result.

7.12 – Associating WaveLinx Wired Areas with a Building and Floor

Because WaveLinx Wired does have the concept of Floors, its Areas are assigned to the default Building and Floor when the EG data is imported. You can associate WaveLinx Wired Areas with other Trellix Buildings or Floors by following the steps below.

Νοτε

The default Building and Floor refer to those provided with Trellix, which may have been renamed during or after installation. If you are unsure, check to see if the Building or Floor can be deleted. If so, it was added and is not the default. The default Building or Floor cannot be deleted.

Step Action

1 Click **Sites** in the main menu, then select the Default Building, and then select the Default Floor.

Example

=	Buildings		Trellix LIGHTING
Alarms	Default Client	• •	Area Details
Operate	Select Building Default Building	• 0 +	Details
Dashboard	Select Floor Default Floor	· 0 +	Label Label Text Text
Event Logs	🕒 Area Name	~	Label Label Text Text
Buildings	🕒 Area Name	^	Location Default Client>Default Building>Default Floor
Schedule	Zones	~	
Devices	🕒 Area Name	~	

- 2 Do you want to associate a one Area or multiple Areas?
 - For <u>one Area</u>, go to Step 3.
 - For multiple Areas, go to Step 4.
- 3 Select the Area you wish to associate, then click **Edit**. Select the desired Building and Floor, and then click **Save**. Stop here if you are only associating a single Area.

≡	Buildings					TrelliX LIGHTING	
Alarms	Default Client	• «	Area Details				
Operate	Select Building Default Building	• 0 +	Details				^
Dashboard	Select Floor Default Floor	• • +	Label Text		Label Text		
Event Logs	🕒 Area Name	~	Label Text		Label Text		
Buildings	Area Name	^	Location South Building	*			
Schedule	Zones	~	Select Floor Default Floor	•			
날 Devices	🗄 Area Name	~	Default Floor				
	🕒 Area Name	~	Floor A				

ep	Actio	า			
	Click	Bulk Assig	gn.		
	Ехамя	LE			
	=	Buildings			TrelliX LIGHTING
	Alarms ⁶	← Assign	Multiple Area	s to a Floor	
	Operate	STEP 1: S	elect Areas	Find Q	STEP 2: Select Building and Floor
	Dashboard			Rows per page: 50 ▼ 1-4 of 4 < >	Select Building 🗸 🗸
	Event Logs	Ar Ar	rea Name	Current Location	Select Floor
	Buildings		rea Name 1	Default Building>Default Floor	Steernoon
	Schedule		rea Name 2	Default Building>Default Floor	
	Q		rea Name 3	Default Building>Default Floor	
			rea Name 5	Default Building>Default Floor	
					CANCEL

5 Select the Areas you wish to associate, then select the Building and Floor they will be associate with, and then click Assign.

EXAMPLE

MPLI	E Buildings		Trelix LIGHTING
6 ns	← Assign Multiple Areas	to a Floor	
te	STEP 1: Select Areas		STEP 2: Select Building and Floor
bard		Rows per page: 50 + 4 of 4	Building New Building
ogs	Area Name	Current Location	Select Floor
gs	 Area Name 1 	Default Building>Default Floor	Floor A 👻
le.	Area Name 2	Default Building>Default Floor	
s	Area Name 3	Default Building>Default Floor	
	Area Name 5	Default Building>Default Floor	
•N			CANCEL

Τιρ

See the "Troubleshooting" section if you get an unexpected result.

7.13 - Editing the Maximum Power for Type 3 Devices

Follow the steps below to view Type 3 Devices and edit the Maximum Power value.

Step Action

- Click 🇰 to display the app menu, then click **Lighting**, and the click **Devices** in the main menu.
 - EXAMPLE

1

2

=	Devices						Lighting
Alarms	■ VIEW TYPE-3 DEVICES	۹	Gateway Details			🖍 EDIT	ACTIONS
> Operate	Trellix Core 3 Controller(s)	^	Network Settings				^
Dashboard	EG2 0 Device(s)		Configure IP 🔘 Manual	O DHCP			
:=	PO-Demo-73-fe 19 Device(s) PO-Demo-7e-7e	~	MAC Address 54:B2:03:8B:79:EF	IP Address 10.130.162.254	Subnet Mask 255.255.254.0	Default Gateway 10.130.162.1	
Event Logs	9 Device(s)	~					
Sites Schedules			DNS Settings Preferred DNS Server N/A	Alternate DNS Server N/A	65		^
					23		
15:11 Click \	View Type 3 Devices.		Scon	02-7			
15:11 Click \			E ON				
15:11 Click \ Examp	LE Devices	S EDIT					
15:11 Click V Examp =	LE Devices CType-3 Devices BULK Only Buildings and Floors with Type						
Click C Example Example Alarms Operate Dashboard E	LE Devices ← Type-3 Devices BULK Only Buildings and Floors with Type Device will appear below Building Default Building		scon				
15:11 Click V EXAMP EXAMP Alarms Operate Dashboard i=	LE Devices						
15:11 Click V EXAMP Alarms Operate Dashboard Event Logs Etter	LE Devices				e select a device.		
15:11 Click V EXAMP Alarms Operate Dashboard Event Logs Sites Sites	LE Devices Type-3 Devices Buildings and Floors with Type Device will appear below Building Default Building Floor Default Floor	e-3					

3

To set the power for one Device, select it from the list, then click Edit, and then expand the Power region. Go to Step 5.

Νοτε

You can limit the Devices displayed by selecting a Building and Floor.

EXAMPLE

-	Device will appear below		System Location	Status	Blink to Identify	
Dashboard	Building	Ţ	PO-Demo-73-fe>RSP	Good	Off	
IEE	Default Building		0x2180560	Open Office		
Sites	Default Floor	*				
Ē			802.15.4 Network Prope	erties		~
Schedules	347V Switchpack Dim	~	Dimmable Properties			~
날 Devices	347V Switchpack Dim/CCI	^	Contact Closure Input P	roperties		
	RSP-CCI		Statistics			~
			Power Meter Type 💿 Type 3	Max Power (Watt)		
			Type 5			
© COOPER 15:14					22	CANCEL SAVE

To set the power for multiple Devices, click Bulk Edit, and then select the checkbox for all Devices you want to modify. 4

FYAMDIE

Alarms	← Type-3 Devices BULK E	EDIT Bulk Edit
> Operate	Only Buildings and Floors with Type- Device will appear below	3 Maximower (Watt)
shboard	Building	
:=	Default Building	
event Logs	Floor Default Floor	7
Sites		
ichedules	347V Switchpack Dim	*
Q	S47V Switchpack Dim/CCI	^
Devices	🔽 🧖 RSP-CCI	

5 Enter the Max Power (Watt) value for the Device(s), and then click Save.

7.14 - Viewing and Exporting the Paired Devices List

Follow the steps below to view and export the list of Devices associated with all Areas.

Step Action

1 Click **Sites** in the main menu, then select a **Building** in the Building navigation panel, and then select a **Floor**. Note the number of paired devices (e.g., **28 Paired Devices**) below All Areas in the Building navigation panel.

EXAMPLE

≡	Sites			Lighting
Alarms	Default Client	() «	Collab 1 PO-Demo-73-fe	🖍 EDIT 🚺 SETUP MAP
> Operate	Select Building Default Building	· () +	AREA SCENES OCCUPANCY DAYLIGHT DEMAND RESPONSE	
Dashboard	Select Floor Default Floor	· (i) +	3 Devices Assigned	LOWER RAISE
Event Logs			Zones	^
Sites	All Areas 28 Paired Devices		Zone 1	
Schedules	Collab 1 3 Devices		In Area	~
Q Devices	Collab 2		1 Devices	

2 Click N Paired Devices (e.g., 28 Paired Devices) to display a list of the Devices, by WAC and type, associated with all Areas.

← Paired Devices	DOWNLOAD
19 Devices Paired PO-Demo-73-fe	
347V Relay Switch Pack	3
Ceiling Sensor	1
Relay Switch Pack	1
Wallstation	4
9 Devices Paired PO-Demo-7e-7e	
Ceiling Sensor	2
P Integrated Sensor	3

3

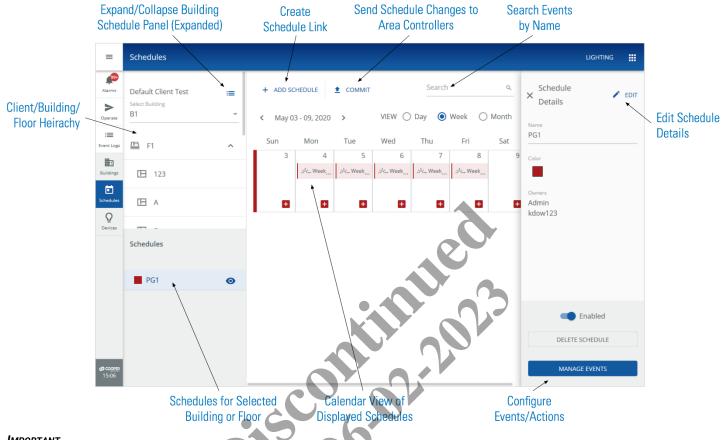
4

Click **Download** to export a list of the paired Devices in XLSX format.

А	В	с	D	Е	F
DEVICE	Count				
Trellix					
PO-Demo-73-fe					
Integrated Lighting, Occ Sensor, Daylight Sensor & BLE Sensor	10				
Integrated Occ Sensor & Daylight Sensor	1				
Relay Switchpack	4				
Wall Station	4				
PO-Demo-7e-7e					
Integrated Lighting, Occ Sensor & Daylight Sensor	1				
Integrated Lighting, Occ Sensor, Daylight Sensor & BLE Sensor	2				
Integrated Occ Sensor & Daylight Sensor	2				
Relay Switchpack	2				
Wall Station	2				
ck \leftarrow Paired Devices to return to the Sites page.					
01					
con	2				
con	02				
	0				

8 - Schedule Configuration

Use this chapter to learn the basic concepts of Trellix Lighting Schedules, and find out how to create Schedules that will automate your LCS based on date and regular or astronomical time. The main Schedule interface is shown below.



IMPORTANT

The Time Zone must be configured for each building so that Schedules will work properly. See Buildings and Floors

Viewing and Editing a Building for details.

8.1 - Schedules, Events, and Actions

Trellix Lighting lets you create schedules using these three levels of organization:

- Schedule Names a collection of one or more events
- Event Specifies the dates, times, and frequency at which one or more actions will occur
- Actions Performs a designated action on a selected Building, Floor, Area, and Zone

IMPORTANT

WaveLinx Wired does not support the use of End Dates in a Schedule.

When a Schedule is enabled, and the date and time conditions of an Event are met, the Event is triggered and the Actions it contains are executed.

EXAMPLE

The diagram below shows two Schedules, PG (Parking Garage) with two Events, and ATR (Atrium) with one Event.

Schedule	Event	Action
	Lights On: Every Weekday at 15 minutes before sunset	All Zones – Lights to 85%
PG	Lights Off: Every Weekday at 15 minutes after sunrise	All Zones – Lights to 0%
ATR	Maintenance Special: Sun, Jan 27, 2019, 9 AM to 5 PM	Area 1 Wallstations Enabled

Referring to the diagram above, the PG schedule controls the lights in the parking garage as follows:

- When the PG Schedule is enabled, and
- It is a Weekday (Monday to Friday), and
- The local sunset will occur 15 minutes from the current time, then
- The Lights On Event is triggered, and
- The Action that sets All Zones Lights to 85% is executed

The ATR Schedule manages wallstations in the atrium, as follows

- When the ATR Schedule is enabled, and
- It is Sunday, January 27, 2019 at 9 AM, then
- The Maintenance Special Event is triggered, and
- The Action that sets Area 1 Wallstations Enabled is executed

The power of Trellix Lighting scheduling is that by configuring the right mix of Schedules, Events, and Actions, you can create sophisticated lighting system control strategies that save time and energy by minimizing repetitive manual procedures.

Schedule and Event Names

It is worth considering how to choose consistent and meaningful names for your Schedules and Events. The **Schedules** page has a location browser on the left that lets you filter the calendar by **Client**, **Building**, and **Floor**. That means that your Schedule names do not necessarily have to include that information. If there are multiple floors, however, including a floor identifier can make it easier to scan all the Schedules in a selected Building. Depending on your application, you might name your Schedules by season (e.g., "Winter", "Summer", "All"), by use ("Holiday", "Maintenance"), or by general equipment type (e.g., "Lighting", "Receptacles").

A A A A A A

An Event is a collection of one or more actions, and so it makes sense to describe the result of those actions. Examples might include "Parking Garage Lights On", "Parking Garage Lights Off", or "Occupancy Fade Off".

Νοτε

You cannot name Actions.

8.2 - Creating a New Schedule

Follow the steps below to create a Schedule.

Νοτε

We will use a simple Event and Action for this procedure. Other configuration options for Events and Actions are explained in more detail in the topics that follow.

Step Action 1 Click Schedules in the main menu, and then click Create a Schedule.

Νοτε

If no schedules exist, the **Create Schedule** window will appear automatically when the Schedules page is loaded.

RESULT

Name				
PG1				
Color				
Owners				
Facman	Tenant	Admin		
				CANCEL ADD EVENT

2 Enter a **Schedule Name**, then (optionally) select the check box for one or more Owners for this Schedule, and then (optionally) click a color to represent this Schedule in the calendar, and then click **Add Events** (shown inset above).

← PG1				
Events + ADD EVENT				
There are no events for this schedule.	Event Name			
	Recurrence Weekly	~	Repeat Every Week	Ŧ
			S M T	W T F S
	Event Trigger Custom Time	Ŧ	Start Time - HH:M	M (24
	SELECT INDIVID	UAL DATES		
	Start Date		End Date	Ē
			O No End Date	
			○ End after 5	occurrences

3

Enter an **Event Name**, then select **Astronomical Time** as the **Event Trigger**, with a **Start Time** of **Sunset**, and an offset **Before Sunset** of **30 Minutes.**

Leave the **Recurrence** as **Weekly**, and then select Monday through Friday (**M**,**T**,**W**,**T**,**F**). Select or enter a **Start Date** and **End Date** in the future.

Νοτε

Other Event configuration options, such as **Selecting Individual Dates**, using **Custom Time** as an **Event Trigger**, and different types of **Recurrence**, covered in more detail later in this section.

EXAMPLE

Events + ADD EVENT There are no events for this schedule.	Event Name Weekday Lights On	
	Recurrence Weekly	Repeat Every Week
	Event Trigger Astronomical Time	S M T W T F S Start Time Sunset 30 Before Sunset After Sunse
	SELECT INDIVIDUAL DATES	Store P
	01-05-2020	 ○ 31.12-2020 ○ No End Pate
		End after 5 occurrences + ADD ACTION

4

Select the **Building**, **Floor**, and **Area** where this action will take place. Click **Zone**, then select **All Zone Types**, and then select **All Zones**. Set the **Light Level** to **85%**, and the **Fade Rate Seconds** to **1.5**.

Νοτε

5

Other Action types and configuration options, such as an **Action Type** of **Select Scene** or **Select Occupancy**, **Action**, and limiting the scope with **Select Zone Types** or **Select Zones**, are covered later in this section.

EXAMPLE

← Add An Action						
Action Type Set Zone Level						
Parameters						🚺 VIEW MAP
^{Building} Default Building	Floor ▼ Default Floor	Area Test				
	ted Zones By Area 👔			60	7	
Zones						
🖌 All Zones						SELECT ZONES (3)
Light Level		85	Fac Percent 1.5	de Rate Seconds		
0		100			CANCEL	ADD TO EVENT

6 Click Add to Event (shown inset above) to create the Event and return to the Schedule page.

Events + ADD EVENT	Weekiy	Week	.		
There are no events for this schedule.	Y	S M T W	T F S		
	Event Trigger Astronomical Time	Start Time Sunset	Minutes - 30	Before Sunset	O After Sunset
	SELECT INDIVIDUAL DATES				
	Start Date 01-05-2020	End Date 31-12-2020			
		🔘 No End Date			
		End after 5 occurr	rences		
	Actions				+ ADD ACTION
	Zone Level: 85 %	Zones : Zone 2, Zone 3, Z	Zone 1		ā 🖍

7

Click Save to apply your Event changes, and then click - (upper left) to return to the Schedules page with the new schedule showing. Click Commit, and then click Confirm to send your changes to the Area Controllers.

EXAMPLE

Default Client Test	=	+ ADD SCHED	ULE 🛓 COMN	1IT			Search	۹
Select Building B1		< May 03 - 0	9, 2020 >			VIEW	🔿 Day 🌘 Week	Month
🖽 F1	^	Sun	Mon	Tue	Wed	Thu	Fri	Sat
		3	4	5	6	7	8	9
123			.:☆_ Weekday Li	.:๙ Weekday Li	.:: Weekday Li	.:: Weekday Li	.::Weekday Li	
A E			Đ	Ð	٥	٥	Đ	Đ
Schedules								
PG1	Ο							

8.3 - Enabling, Disabling, Configuring, and Deleting Schedules

DELETE SCHEDULE

MANAGE EVENTS

Follow the steps below to set the status, color coding, or ownership of the schedule, or to delete it.

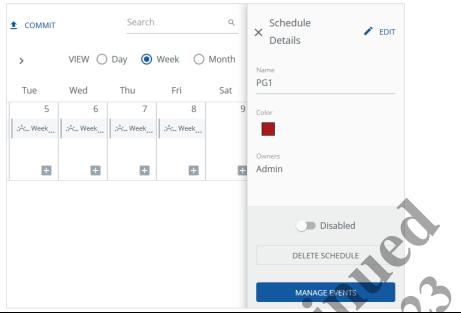
Step Action

Click Schedules in the main menu, then click a Schedule in the Schedules list, and look at the Schedule Details panel. 1 ine schei EXAMPLE Schedule 🖍 EDIT × Details Name PG1 Owners Admin Enabled

2

To change the status of the Schedule, click the **Enabled/Disabled** toggle (shown grey and Disabled below). A disabled Schedule will appear greyed out in the **Schedules** list and calendar view.

EXAMPLE



3 To change the Schedule color or the Owners, click **Edit**. Select the desired color, and then select one or more owners, and then click **Save**.

Νοτε

By default, a Schedule is owned by the account that created it. For example, if the Admin user adds a Schedule, then it will be owned by Admin.

EXAMPLE

LAAMPLE				
× Schedule Details		0		
Name				
PG1				
Color				
<	>			
Owners				
🗌 Facman				
Tenant				
🗌 manu				
CANCEL				
CANCEL				
SAVE				
To delete the Schedule, clic	Delete Schedule	and then confirm	the operation	
is aciete the boneaule, che	· Beiele Gonedule,		and operation.	

4

8.4 - Searching for Scheduled Events

Follow the steps below to search for an existing Event.

Step Action

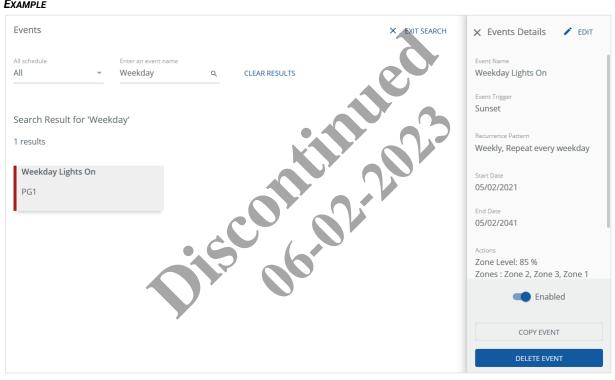
1

On the Schedules page, enter all of part of the Event name ("weekday" in the example below) in the Search Events field.

EXAMPLE weekday Q + ADD SCHEDULE Default Client Test := Select Building B1 VIEW 🔘 Day 🔿 Week 🔿 Month April 16, 2020 > Thursday <u></u>F1

2 Press Enter or click \mathbf{Q} to run the Search.

EXAMPLE



SEARCH RESULT TASKS

- · Click All (upper left) to select a Schedule and limit the search results
- · Click the desired Event to display the Event Details panel
- Scroll down to view more details, including Actions in the selected Event
- · Click Clear Results to return to the Schedules page

8.5 - Editing, Enabling, Adding, Deleting, and Copying Scheduled Events

Follow the steps below to edit, enable, add, delete, or copy Events in an existing schedule.

Νοτε

This is a general procedure. Specific Event and Action configuration details for each are covered later in this section.

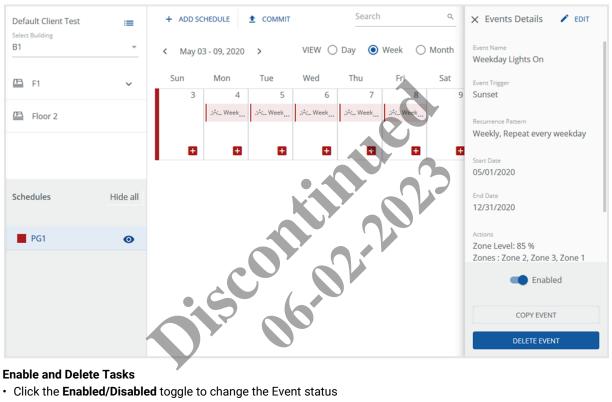
Step Action

1 Display the target Event Details panel by clicking the Event label in the Calendar of the Schedules page (shown below) or in the Search Results list (see Searching for Scheduled Events for details on searching).

Νοτε

You can add a new Event by clicking 🛨 in the Calendar view

EXAMPLE



Enable and Delete Tasks

- · Click the Enabled/Disabled toggle to change the Event status
- · Click Delete Event, and then confirm your action to remove the Event

2

If you want to modify an Event, click **Edit** (upper right in the Event Details panel).

EXAMPLE

← PG1								
Events +	ADD EVENT	Weekly	~	Week	•			
Weekday Lights (Dn 🔽			S M T	W	FS		
		Event Trigger Astronomical Time	~	Start Time Sunset	~	Minutes 30	Before Sunset	O After Sunset
		SELECT INDIVIDUAL	DATES					
		Start Date 01-05-2020		End Date 02-01-2021	Ē			
				O No End Date				
				O End after 5	occurrence: 			
		Actions			~		~	+ ADD ACTION
		Zone Level: 85 %		Zones : Zo ne 2, Z	one 3, Zone 1			Ē /
		<u>n</u>						CANCEL
EDITING TASKS					A /			

- To edit the Event, modify the settings in the upper panel, and then click Save
- To create a new Event, click Add Event
- To edit an Action, click 🖍 beside it in the Actions list in the lower panel
- To remove an Action, click 🗵
- To create a new Action, click Add Action

Νοτε

When you create or edit Actions, click Save when you return to the Events page to apply your changes.

3

If you want to duplicate an Event, click **Copy** (bottom of the Event Details panel), and then edit and save the new Event.

Νοτε

The copied Event will be added to the same Schedule as the original, with the name beginning "Copy of...".

EXAMPLE

Events + ADD EVENT	Event Name Copy Of Weekday Lig	hts Oı						
	Recurrence Weekly	~	Repeat Every Week	Ŧ				
			S M T	T	FS			- 1
	Event Trigger Astronomical Time	*	Start Time Sunset	•	Minutes 00	Before Sunset	O After Sunset	
	SELECT INDIVIDUAL	DATES						
	Start Date 01-05-2020		End Date 31-12-2020		C			
			O No End Date			3		
			End after 5	occurrence	es			

4 If you want to work with all Events and Actions in a single Schedule, click **Manage Events** in the Schedule Details panel.

X Schedule Details				
	7			
Name PG1				
Color				
Owners				
Admin				
Enabled				
DELETE SCHEDULE				

5 After saving any Event changes or additions, click **Commit**, and then click **Confirm** to send your changes to the Area Controllers.

8.6 - Event Editing: Choosing Active Dates

Follow the steps below to choose specific dates on which this event will be active.

Notes

- You must commit your changes to apply them to the Area Controllers
- WaveLinx Wired does not support the use of End Dates in a Schedule

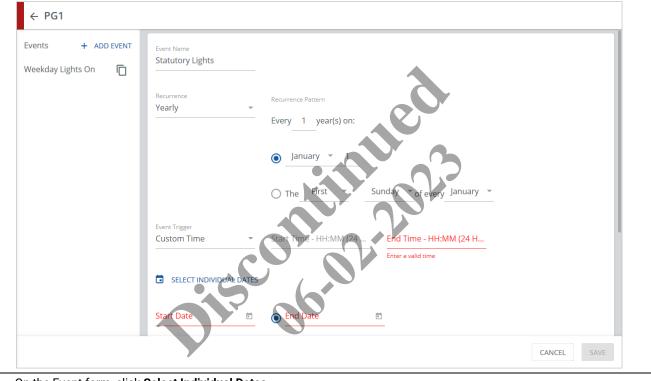
Step Action

1 Display the desired Event as described in *Searching for Scheduled Events* or *Editing, Enabling, Adding, Deleting, and Copying Scheduled* Events.

Νοτε

The Select Individual Dates option, shown below, is only available with Recurrence: Once or Yearly selected.

EXAMPLE



2 On the Event form, click Select Individual Dates.

3

To add local statutory holidays to your selected dates, click **Include National Holidays** and then select the **Country** that applies to this Event. Click other dates to add them. Click any selected date a second time to remove it.

EXAMPLE

← Select N	Multipl	e Dat	es/ F	lolida	ays																			
Select the d					Select	ove a ^{Countr}	y	ick on	it aga	iin.														
											<	2020) >											
				Janua	ry						F	ebru	ary							Marc	:h			
	29	30	31	1	2	3	4		26	27	28	29	30	31	1		1	2	3	4	5	6	7	
	5	6	7	8	9	10	11		2	3	4	5	6	7	8		8	9	10	11	12	13	14	
	12	13	14	15	16	17	18		9	10	11	12	13	14	15		15	16	17	18	19	20	21	
	19	20	21	22	23	24	25		16	17	18	19	20	21	22		22	23	24	25	26	27	28	
	26	27	28	29	30	31	1		23	24	25	26	27	28	29		29	30	31	1	2	3	4	
	2	3	4	5	6	7	8		1	2	3	4	5	8	7	7	5	8	7	8	9	10	11	
				Apri	I							Мау						2		June	9			
	29	30	31	1	2	3	4		26	27	28	29	30	1	2		31	1	2	з	4	5	6	
																	y				CAN	ICEL	AD	рт

Other Individual Date Tasks

- Scroll to see more dates in the current year
- Use the < and > links at the top to display a different year
- 4 Click Add to Event when you have selected all the desired dates, and then click Save to apply your changes.

8.7 - Event Editing: Choosing the Active Time Range

Follow the steps below to set a standard or astronomical time range during which this event will be active.

Notes

- You must commit your changes to apply them to the Area Controllers
- WaveLinx Wired does not support the use of End Dates in a Schedule

Step Action

1 Display the desired Event as described in *Searching for Scheduled Events* or *Editing, Enabling, Adding, Deleting, and Copying Scheduled* Events.

Events + ADD EVENT	E wet Manage
There are no events for this schedule.	Event Name
	Recurrence Repeat Every Weekly Week
	S M T W T R B
	Event Trigger Custom Time Start Time - HH:MM (24
	SELECT INDIVIDUAL DATES
	Start Date 2
	No End Date End after 5 occurrences

2

Select **Custom Time** as the **Event Trigger** on the Event form if you want to specify a standard clock time. Enter the **Start Time** in the HH:MM format (e.g., 09:30, 17:00).

Νοτε

If Recurrence:Once is chosen, you will also need to provide an End Time as described later in Step 5.

RESULT

← PG1		
Events + ADD EVENT	Weekday Lights On	
Statutory Lights On	Recurrence	Repeat Every
Weekday Lights On 🛛 🔽	Weekly -	Week -
		S M T W T F S
	Event Trigger Custom Time	Start Time - HH:MM (24 Hour) 17:30
	SELECT INDIVIDUAL DATES	
	Start Date 01-05-2020	End Date 31-12-2020
		C No End Date

3 Select Astronomical Time as the Event Trigger on the Event form if you want your event to be active relative to the rising and setting of the sun.

Νοτε

A common application for astronomical time is outdoor parking, where the lights should be turned on at sunset and turned off at sunrise.

4

To activate your event relative to when the sun comes up, select **Sunrise** as the **Start Time**, then enter the number of **Minutes** away from the sunrise, and then select **Before Sunrise** or **After Sunrise**. To activate your event relative to sunset, choose **Sunset** as the **Start Time** instead.

Note

If Recurrence:Once is chosen, you will also need to provide an End Time as described later in Step 5.

EXAMPLE

Weekday Lights On					
Recurrence Weekly	Ŧ	Repeat Every Week	~		
		S M T	T W	FS	
Event Trigger		Start Time		Minutes	
Astronomical Time	~	Sunset	Ŧ	30	Before Sunset O After Suns
SELECT INDIVIDUAL	DATES				eo
Start Date		End Date			
01-05-2020	-	31-12-2020	Ē		
		O No End Date			
		○ End after 5 d	occurrences		

5 If the Recurrence is set to Once, meaning the Event will not repeat, you must specify when it will end. To end the Event relative to when the sun comes up, select Sunrise as the End Time, then enter the number of Minutes away from the sunrise, and then select Before Sunrise or After Sunrise. To end your event relative to sunset, choose Sunset as the Start Time instead.

Νοτε

The **Start Time** and **End Time** cannot be the same time and must be in chronological order. For example, you cannot activate an event **After Sunrise** and then make it inactive **Before Sunrise**.

6 Click **Save** to apply your changes.

8.8 - Event Editing: Choosing to Repeat an Event

Follow the steps below to set whether an Event will repeat, and if so, at what interval.

Notes

- You must commit your changes to apply them to the Area Controllers
- WaveLinx Wired does not support the use of End Dates in a Schedule

Step Action

1	Display the desired Event as described in Searching for Scheduled Events or Editing, Enabling, Adding, Deleting, and
	Copying Scheduled Events.

2

← PG1							
Events + ADD EVENT Weekday Lights On 🔽	Event Name Statutory Lights On						
Statutory Lights On	Recurrence Once	*					
	Event Trigger Astronomical Time		Start Time Sunset	Ŧ	Minutes 45	O Before Sunset	• After Sunset
			End Time Sunrise	Ŧ	Minutes 30	Before Sunrise	O After Sunrise
	🖍 DATES SELECTED 😨	Ī				8	
	Actions				S		+ ADD ACTION
	Zone Level: 70 %		Zones : Zone 3	Zone 1, Zone	2		ā 🖍

3 If your Event will be activated at an interval of one or more weeks, select a Recurrence of Weekly.

Event Name Weekday Lights Off		• ¢			
Recurrence Weekly	Ŧ	Repeat Every Week			
Event Trigger Custom Time	Ŧ	S M T	(24		
SELECT INDIVIDU	AL DATES				
Start Date	-	End Date			
		O No End Date			
		○ End after 5 d	occurrences		

4 Select a **Repeat Every** (i.e., the number of weeks between repetitions) from **1 Week** to **4 Weeks**, and then select the days of the week (**S-M-T-W-T-F-S**) on which your Event will repeat.

5

- Select the Start Date after which the Event will be activated, and then select when it will stop being activated, as follows:
- Select an End Date after which no more activations will occur
- · Select No End Date to let the event activate indefinitely
- · Select End After, and then enter a fixed number of repetitions after which the event will stop activating

Weekday Lights Off							
Recurrence Weekly	Ŧ	Repeat Every Week	Ŧ				
		S M T W	Т	FS			
Event Trigger Astronomical Time	•	Start Time Sunrise	*	Minutes 00	O Before Sunrise	After Sunrise	
SELECT INDIVIDUAL	. DATES				60	7	
Start Date 01-05-2020		O End Date	Ē				
		O No End Date					
		End after 52 oc	currence	5			
Click Save to apply	your ch	anges.					-
		:5		6.0			

8.9 - Action Editing: Adding a Zone Level Action

Follow the steps below to add a Zone Level Action to your Event.

Notes

- A common application for a zone level action is turning on a corridor, or sets of corridors, to a specific light level
- You must commit your changes to apply them to the Area Controllers

Step Action

1 Display the desired Event as described in Searching for Scheduled Events or Editing, Enabling, Adding, Deleting, and Copying Scheduled Events.

EXAMPLE

← PG1		
Events + ADD EVENT	Weekly	Week -
Weekday Lights On		S M T W T F S
Statutory Lights On 📋	Event Trigger Astronomical Time SELECT INDIVIDUAL DATES	Start Time Minutes Sunset - 30 O Before Sunset O After Sunset
	Start Date 03-05-2020	Old Date Old Date Old Date
		 No End Date End after 52 occurrences
	Actions	+ ADDAPTION
	Zone Level: 85 %	Zones : Zone 3, Zone 1, Zone 2

2 Click Add Action, and then select Zone Level as the Action Type.

SULT			y	N	
🔶 Add An Act	ion	• •			
ction Type et Zone Level			2	>	
Parameters					
Building	Floor All	Area All		Ŧ	
Zone(s)	Affected Zones By A	rea 🕐			
Zones					
Zones					
All Zones					
					Fade Rate Second
All Zones			0	Percent	

Step Action

3

Select the **Building**, then the **Floor**, and then the **Area** that your action will affect.

Νοτε

You can choose All Floors and All Areas.

RESULT

Parameters					VIEW MAP
Building Falcon Building	Floor Ground Floor	Area West Area	▼		
● Zone	d Zone By Area 🛛 👔				
Zone Type					
All zone Types					SELECT ZONE TYPES
Zones					
Select Zone					SELECT ZONES
Light Level					
0		0	Percent	Fade Rate Seconds 1	
0		100			

- 4 Click **View Map** to display the Building Floor Map (if configured). See the *Trellix Lighting User Manual* for details on displaying Floor Maps.
- 5 If you want to target your action by the zone type or name, click **Zone**, and then
 - To limit the targeted zones by type, click Select Zone Types, then select one or more Zone Types, and then click Add to Action
 - To limit the target zones by name, click Select Zones, then select one or more Zones, and then click Add to Action

Example				
Parameters				VIEW MAP
Building Floor	Area		9	
B1 - F1				
Zone(s) Affected Zones By Area	0			
	7			
Zones	7			
				SELECT ZONES
🗌 All Zones	Y			SELECT ZONES
	Y		Fade Rate Seconds	SELECT ZONES
All Zones	0	Percent	Fade Rate Seconds 1.5	SELECT ZONES

Step Action

6

If you want to target your action by the Areas containing Zones, click **Affected Zone by Area**, then click **Select Areas**, then select one or more **Areas**.

Νοτε

WaveLinx Wired does not support the Affected Zone by Area option.

EXAMPLE

Parameters									VIEW MAP
Building		Floor		Area					
B1	~	F1	~	E		~			
🔵 Zone(s) 🧕	Affected	Zones By Area	?						
Affected Zones E	By Area								
✓ Select All Are	eas								SELECT AREAS (1)
Light Level							Fade Rate Seconds		
			•		75	Percent	1.5	CANCEL	ADD TO EVENT
0				100					

7 Click Add to Event (shown inset above), and then click Save to apply your changes.

8.10 - Action Editing: Adding a Scene Action

Follow the steps below to add a Scene Action to your Event.

Notes

- A common application for a Scene Action is to turn on a conference room to a specific Scene, e.g., All On Scene
- You must push any changes to the Area Controllers

Step Action

1 Display the desired Event as described in Searching for Scheduled Events or Editing, Enabling, Adding, Deleting, and Copying Scheduled Events.

Events + AD	D EVENT	Weekly	Ŧ	Week	*			
Weekday Lights On	Ō			S M T	T	FS		
Statutory Lights On	D	Event Trigger Astronomical Time	Ŧ	Start Time Sunset	Ŧ	Minutes 30	Before Sunset	O After Sunset
		SELECT INDIVIDUAL DA	TES					
		Start Date 03-05-2020	Ē	End Date 01-05-2021	÷			
				O No End Date				
				O End after 52 o	occurrence	S		
		Actions						+ ADD ACTI
		Zone Level: 85 %		Zones : Zone 3, Zor	a 1 Zone	2		Ī

Droug			he as the Action Type .		
RESULT					
← Add An Ac	tion				
Action Type					
Select Scene		•			
Parameters					
Building	Ŧ	Floor	✓ Area	~	
Scene	Ŧ	Fade Rate Seconds		$\mathbf{\lambda}$	
Select the Building Click View Map to Select the Scene t	display the	building floor pla		vill affect.	
Select the Scene t	o appiy, the	n enter a raue k a	ate.		
RESULT ← Add An Action					
Result	•		0102		
RESULT ← Add An Action Action Type	Floor	Are D			VIEW MA

8.11 - Action Editing: Adding a White Tuning Level Action

Follow the steps below to add a White Tuning Level Action to your Event.

Νοτε

You must commit your changes to apply them to the Area Controllers.

Step Action

1 Display the desired Event as described in Searching for Scheduled Events or Editing, Enabling, Adding, Deleting, and Copying Scheduled Events.

Events + ADD	EVENT	Weekly -	Week	Ŧ			
Weekday Lights On	6		S M T W	Т	FS		
Statutory Lights On	Ō	Event Trigger Astronomical Time	Start Time Sunset	Ŧ	Minutes 30	Before Sunset	O After Sunset
		SELECT INDIVIDUAL DATES					
		Start Date 03-05-2020	End Date 01-05-2021	(in)			
			O No End Date				
			O End after 52 or	currence	5		
		Actions					+ ADD ACT
		Zone Level: 85 %	Zones : Zone 3, Zone	1, Zone 2	2		Ē

2 Click Add Action, and then choose Set White Tuning Level as the Action Type.

		Floor Area	Floor	Parameters Building
			✓ F1	B1
				Zones
SELECT ZOI			uning Zones	All White Tu
			evel	White Tuning Le
		4100 Kelvin		
CEL ADD TO EVENT	CANCEL	Max 7000	0	Min 2000
+	·····		Duildin a t	
	rea that your action will affe		Building t	

Step Action

5	Select All Wh									
	EXAMPLE									
	Parameters									VIEW I
	Building		Floor		Area					
	B1	*	F1	~	D					
	Zones									
	All White T	uning Zone	es							SELECT ZO
	White Tuning L	evel			Fac	e Rate Seconds				
		0		410	0 Kelvin 1.5					
	Min 2000		1	Max 7000					CANCEL	ADD TO EVENT
6	Click Add to I	-vent (sh	own inset a	hove) an	d then click Sa	ve to apply y	our changes			
<u> </u>			iowin moet u	1907c), un				•		
llow tl <i>te</i>	he steps below	to add ar		y Action t	-		e con			
llow tl TE u mus	st commit your o	to add ar changes to esired Ev	n Occupancy to apply ther rent as desc	y Action t m to the A	-		nts or Editing	, Enabling	g, Adding, [Deleting, and
llow tl ote ou mus Step	st commit your o Action Display the do	to add ar changes to esired Ev	n Occupancy to apply ther rent as desc	y Action t m to the A	rea Controllers		nts or Editing	, Enabling	g, Adding, I	Deleting, and
llow tl ote u mus S tep	st commit your of Action Display the de Copying Sche	to add ar changes to esired Ev	n Occupancy to apply ther rent as desc	y Action t m to the A	rea Controllers		nts or Editing	, Enabling	g, Adding, I	Deleting, and
llow tl ote u mus S tep	at commit your of Action Display the do Copying Sche	to add an changes to esired Ev	n Occupancy to apply ther rent as desc	y Action t m to the A	rea Controllers		nts or Editing	, Enabling	g, Adding, L	Deleting, and
llow tl ote u mus S tep	at commit your of Action Display the du Copying Sche ExampLe ♦ PG1	to add an changes to esired Ev	n Occupancy to apply ther rent as desc ents.	y Action t m to the A ribed in S	rea Controllers		nts or Editing	, Enabling	g, Adding, I	Deleting, and
llow tl TE u mus tep	Action Display the de Copying Sche Example C PG1 Events + AD	to add an changes to essired Ev duled Ev	n Occupancy to apply ther rent as descr ents. ekly	y Action t m to the A ribed in S	rea Controllers	hepuled Even	nts or Editing	, Enabling	g, Adding, [Deleting, and
llow tl ote u mus S tep	Action Display the de Copying Sche Example C PG1 Events + ADC Weekday Lights On	to add an changes a esired Ev duled Ev	n Occupancy to apply ther rent as descr ents. ekly	y Action t m to the A ribed in S	rea Controllers	hepuled Even		, Enabling	g, Adding, L	Deleting, and
llow tl ote u mus S tep	Action Display the de Copying Sche Example C PG1 Events + ADC Weekday Lights On	to add an changes i esired Ev duled Ev	n Occupancy to apply ther rent as descr ents. ekly	y Action t m to the A ribed in S week week week week week week week wee	rea Controllers	hepuled Even		, Enabling	g, Adding, I	Deleting, and
llow tl TE u mus tep	Action Display the de Copying Sche Example C PG1 Events + ADC Weekday Lights On	to add an changes i esired Ev duled Ev	n Occupancy to apply ther rent as descr ents. ekly ** Trigger ronomical time SELECT INDIVIDUAL DA	y Action t m to the A ribed in S week week week sunset	rea Controllers	hepuled Even		, Enabling	g, Adding, [Deleting, and
llow tl ote u mus S tep	Action Display the de Copying Sche Example C PG1 Events + ADC Weekday Lights On	to add an changes i esired Ev duled Ev	n Occupancy to apply ther rent as descr ents. ekly ** Trigger ronomical time SELECT INDIVIDUAL DA	y Action t m to the A ribed in S Week Week Week Sunset	rea Controllers	hepuled Even		, Enabling	g, Adding, [Deleting, and
llow tl ote ou mus Step	Action Display the de Copying Sche Example C PG1 Events + ADC Weekday Lights On	to add an changes i esired Ev duled Ev	n Occupancy to apply ther rent as descr ents. ekly ** Trigger ronomical time SELECT INDIVIDUAL DA	y Action t m to the A ribed in S Week Week Week Sunset	rea Controllers	hepuled Even		, Enabling	g, Adding, L	Deleting, and

Action Step

2

3 4 5

Click Add Action, then choose Select Occupancy Action as the Action Type, and then click Occupied or Unoccupied as the state that will trigger this action.

RESULT

← Add An Action			
Action Type Select Occupancy Action	Occupied 🔿 Unoccupied	1	
Parameters			
Building - Floor	← Area	.	
Occupancy Sets			
Select All Occupancy Sets		\sim	
elect the Building , then the Floor ,	and then the Area that y	our action will affect.	
lick View Map to display the build	ling floor plan (if configu	red).	
hoose Select All Occupancy Sets nen select Scene or Set Zone Lev XAMPLE		ets, or click Select Occupan	cy Sets to choose specific sets, a
Parameters			VIEW MAP
Building Floor B1 - F1	- Area D		
Occupancy Sets		S V	
Select All Occupancy Sets			SELECT OCCUPANCY SETS (1)
Occupancy Set Parameter			

Scene Set Zone Level

If you selected Scene as the Action Type, select a specific Scene, and then enter a Fade Rate Seconds value. 6

Parameters						VIEW MAP
Building		Floor		Area		
B1	~	F1	~	D	v	
Occupancy Sets						
Select All Oc	cupancy Se	ts				SELECT OCCUPANCY SETS (1)
Occupancy Set P	arameter					
Action Type		Scene		Fade Rate Seconds		CANCEL ADD TO EVENT
Scene	~	Scene 11	Ŧ	3.5		

7

8.13 – Action Editing: Adding an Enable/Disable Wallstation Action

Follow the steps below to add an Enable/Disable Wallstation Action to your Event.

Notes

- A common application for a wallstation action is to disable a wallstation station in an open space during normal operating hours, and then enable it in the evening to facilitate the cleaning staff activity
- You must commit your changes to apply them to the Area Controllers

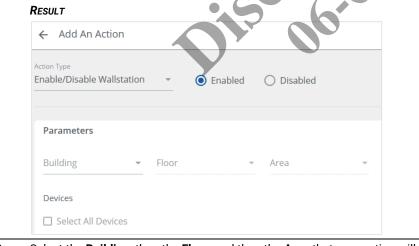
Step Action

1 Display the desired Event as described in Searching for Scheduled Events or Editing, Enabling, Adding, Deleting, and Copying Scheduled Events.



← PG1								
Events + AD	D EVENT	Weekly	Ŧ	Week	~			
Weekday Lights On	Ō			S M T	T	FS		
Statutory Lights On	ē	Event Trigger Astronomical Time	Ŧ	Start Time Sunset	Ŧ	Minutes 30	Before Sunset	O After St
		SELECT INDIVIDUAL DA						
		Start Date 03-05-2020	÷	End Date 01-05-2021				
				O No End Date				
				O End after 52 o	occurrence	s		
		Actions				K		
		Zone Level: 85 %		Zones : Zone 3, Zor	ne 1, Zone :	2		

2 Click Add Action, then choose Enable/Disable Wallstation as the Action Type, and then click Enabled or Disabled as the state that will trigger this action.



- 3 Select the **Building**, then the **Floor**, and then the **Area** that your action will affect.
- 4 Click View Map to display the building floor plan (if configured). See the Trellix Lighting User Manual details.

Step	Action							
5	Choose Select All Devices to target all available wallstations, or click Select Devices to choose specific wallstations. EXAMPLE							
		Building	Floor		Area			
	B1	▼ F1		▼ D	$\overline{\mathbf{v}}$			
	Devices							
	Select All Devi	ices				SELECT DEVICE (12)		
						CANCEL ADD TO EVENT		
						L		

6 Click Add to Event (shown inset above), and then click Save to apply your changes.



9 – Troubleshooting

This chapter describes error messages, status messages, and other situations you may encounter while using Trellix Lighting. There are suggested actions provided for each one.

Νοτε

If an alarm is shown with a device name of "NA", the WAC and IM databases are out of sync and should be synchronized.

9.1 - Console Menu Options

Trellix Core provides a CLI (Command Line Interface) when a USB keyboard and HDMI monitor are connected directly to it. This makes features available that are not found in the standard UI, such as Tier 2/3 troubleshooting. It is mainly used for the following:

- · Checking the health of the system
- Checking the application service status and logs in real time
- · Accessing the system for troubleshooting if the standard UI services are malfunctioning or inaccessible
- · Resetting the system to its original factory values

The following menu options provided through the console when connected to a screen (HDMI) and keypad (USB):

- Reset to Defaults Reset Trellix Core to original factory settings
- Network configuration and status Change the network IP and the IP status
- Shutdown / Reboot Shutdown or reboot the entire system
- Service Control Start and stop services (once logged in)
- Linux command prompt Access the Linux command prompt

9.2 - Invalid Password

Description

When editing an account password, this error indicates that the password you provided does not meet a system requirement.

Suggested Action

· Confirm that the new password is not the same as any of the previous 10 passwords used for this account

9.3 - No Controllers Found

Description

When attempting to discover devices, this message indicates that there were no connected devices found.

Suggested Action

• If you believe a controller is connected, and you know its IP address, try the **Discover using IP Address** command in the **Choose an** action menu

9.4 - No New Controllers Found

Description

When discovering devices, this message indicates that all connected devices have already been discovered, so there are no new ones to add to the system

Suggested Action

• If you expect to see a controller that does not appear on the Devices page, try the **Discover using IP Address** command in the **Choose an action** menu

9.5 – Error While Discovering Controllers

Description

While attempting to discover controllers, this error indicates an issue with the IM system services that prevented the operation from completing.

Suggested Actions

• Try the discovery operation again

9.6 - Error While discovering The Controller Using The IP Address

Description

While attempting to discover a controller by specifying its IP address, this error indicates a problem connecting to a controller at that IP address.

Suggested Actions

Check that the IP address you provided matches the controller you are trying to discover

9.7 - The Area Controller With The IP Address Has Already Been Discovered

Description

While attempting to discover a controller by specifying its IP address, this error indicates that a controller with that IP address has already been added to the system.

Suggested Actions

Check that the IP address you provided matches for the controller you are trying to discover

9.8 - No Devices Found

Description

While importing devices on a controller, this message indicates that no connected devices were found.

Suggested Actions

Confirm that the network is properly connected and then repeat the import operation

9.9 - No New Devices Found

Description

While importing devices on a controller, this message indicates that all connected devices that were found have already been imported.

9.10 – Error Importing Devices

Description

While attempting to import devices on a controller, this error indicates an issue with the IM system services that prevented the operation from completing.

Suggested Actions

• Try the import operation again

9.11 - Total BACnet Object Count Exceeds Maximum

Description

While saving BACnet configuration, this error indicates that the number of BACnet objects in the connected controllers exceeds the maximum number supported by Trellix Lighting at this time (10,000).

Suggested Actions

• Disable Areas, Zones, Input Devices, and/or Output Devices until the number of BACnet objects is less than 10,000

9.12 - Error Syncing The Imported Devices With BACnet

Description

While importing device data, Trellix Lighting attempted to synchronize the data but BACnet was disabled.

Νοτε

Any change to the Building or Device hierarchy will cause BACnet to be disabled.

Suggested Action

- 1. Enable BACnet as described in *Configuring BACnet*.
- 2. Return to Devices, select Trellix Core, and then click Sync to BACnet in the Choose an action menu.

9.13 - Invalid File Format (During Backup)

Description

When restoring the system from a local backup file (i.e., a file from your computer), this error indicates that it does not appear to be a valid system backup file.

Suggested Action

• Confirm that the file extension is ".tar.gz" (e.g., "Trellix-Backup-2018-03-07-092937.tar.gz")

9.14 - Invalid Update File Name (During Upgrade)

Description

While attempting to upgrade the Trellix Lighting software with a file on your local computer, this error indicates that it does not appear to be a valid upgrade file.

Suggested Action

• Check that the file extension is ".tar.gz" (e.g., "Trellix-Backup-2018-03-07-092937.tar.gz")

9.15 - Error Loading The System Setup

Description

After logging in to Trellix Lighting, the error states that one or more Trellix Core system services are not running.

Suggested Actions

- · Wait for a few minutes and then try again
- Reboot Trellix Core

9.16 - Invalid Open ADR Certificate Files

Description

After uploading an Open ADR certificate zip file, an error indicates one or more files are missing.

Required Files

The following files are required for an Open ADR certificate:

- keystore.ks
- truststore.ks
- config.properties

Νοτε

The config.properties file should contain the following lines:

keystorePassword=<clientProvidedPassword> truststorePassword=<clientProvidedPassword>

Suggested Actions

- · Compare the files you provided with those listed above
- · Upload a new zip file that contains the required files

9.17 - Areas, Zones, And Devices Lost From Floor Plan

Description

Two possible causes for are as following:

- A Trellix backup from another network with different IP addresses was restored
- Controllers were removed from Trellix for some reason

Suggested Actions

You can preserve the Areas, Zones and Devices drawn on a floor plan by doing the following:

- · Re-discover each controller on the new Trellix network to obtain the correct IP address
- Import all devices on each controller

See Device Discovery, Import, and Configuration for details.

9.18 - No Building Schedules Are Working

Description

If no schedules are working on a Building, the time zone for that Building may not be configured.

Suggested Action

• Configure the Building time zone

See Buildings and Floors

Viewing and Editing a Building for details.

9.19 - Invalid Backup File Name

Description

Trellix will not accept a backup file that is being uploaded.

Special characters, such as "(" and ")", are not supported in a backup file name. Some operating systems will append these characters to the file name when a backup file is downloaded more than once to the same directory. For example, BackupFile (1), BackupFile (2).

Suggested Action

Ensure that no special characters, such as "("or ")", are part of the file name before attempting to restore with it.

9.20 - Invalid Upgrade File Name

Description

Trellix will not accept a system upgrade file that is being uploaded.

Suggested Action

Ensure that no special characters, such as "("or ")", are part of the file name before attempting to upgrade with it.

9.21 - Trellix Time Drifting Out Of Sync

Description

Trellix time has drifted away from the current clock time after being synchronized.

Suggested Action

Trellix time can only be as reliable as the designated time source. The best and recommended option is NTP Server synchronization using the Stratum 1-14 NTP servers.

If the Stratum 1-14 NTP servers are not accessible, time will be obtained from BIOS (hardware time). Trellix will check the ntp.conf (ntpd client/server) configuration. If ntpd is not set, Trellix will get time from external resources by executing the hwclock -su command, which means "set the system time from the hardware clock and keep the hardware clock in UTC".

Notes

- If the hardware clock is incorrect, do not expect system time to be equal to geographical time
- Hardware time can be checked from the console by executing the hwclock -ru command
- Hardware time can be adjusted with BIOS configuration or from console by executing the hwclock -wu command (providing the system time is set to geographical time)
- Setting BIOS time is not a Trellix task and must be done in advance

10 – Appendix

This appendix contains supporting information for Trellix Lighting.

10.1 - Setup Wizard

The first time the Admin account is used to login to Trellix Core, the Setup Wizard shown below will guide the user through the initial system configuration.

Νοτε

Refer to the *Trellix Core Quick Start Guide* for step-by-step instructions if you are installing Trellix Lighting for the first time.

1	2			6	6	0	
Network	Date Time	Client	Discover	Import	Building	Floor	Area Contro
Configure TrelliX Co	ore IP Settings						
Vote: Update to the IP S	ettings requires re-login. 'M	IAC Address 54:B2:03:0E	::9F:79'				
Configure IP Mail	nually 🔿 Configure	IP using DHCP					
IP Address 10.130.162.105	Subnet Mask 255.255.254.0	Default 0 10.130		J.			
Preferred DNS Serve	er Alternate DNS	Server	1				
			<u> </u>				
		•					

The Wizard steps are described below, including links to relevant information in this document.

- Network Configure the network address this Trellix Core host will use. See Device Discovery, Import, and Configuration for details.
- Date Time Configure how this Trellix Core host will handle date and time. See Setting Up the Trellix Core Date & Time for details.
- Client Configure the product license, and the client whose Buildings will be managed with this Trellix Core.
- Discover Discover the WACs and WaveLinx Wired EGs connected to this Trellix Core. See Discovering WACs for details.
- Import Synchronize Trellix Core with data from the discovered controllers. See Pairing Devices with a WAC for details.
- the Setup Wizard.
- Building Configure one or more Buildings to manage with this Trellix Core. See Adding a Building for details.
- Floor Configure one or more Floors to manage with this Trellix Core. See Adding a Building
- for details.
- Area Controller Assigning each WAC to a client, building and floor. See Associating a WAC with a Building and Floor for details.

The Trellix Lighting Alarm page will display when the Wizard has completed. You will be prompted if a reboot is required (e.g., Date Time configuration was changed.)

10.2 - Account Permissions

The access provided by each Trellix Lighting permission is listed below.

Permission	Description		
View Only	View-only access to assigned Areas.		
User Management	Create, view, modify, and delete user accounts.		
User Role Management	Management of user roles and permissions.		
System Settings	 Modify the system and subsystem networking settings 		
	 Backup and restore system configuration 		
	Backup and restore the database		
	 Update and manage system and subsystem software versions 		
	View diagnostic logs components and features		
System Configuration	Manage system configuration such as Buildings, Devices, and Floorplans.		
Schedule	View and manage schedules in assigned Areas.		
Acknowledge Alarms	Acknowledge alarms.		
Normal Priority Override	Send a Normal Priority override.		
High Priority Override	Send a High Priority override.		
Demand Response	Access demand response components and features (can only be assigned Demand Response role).		
Interface Settings	Access integrated interface settings components and features (can only be assigned Third Party Integration role).		
Alarms and Events View	View-only access to Alarms and Events.		

10.3 – WaveLinx Alarms

The WaveLinx alarms reported by Trellix Lighting are listed and described below.

Alarm	Description
Device not reachable	Unable to communicate with device
Battery low	Device is battery-powered, and the battery will soon need replacement
Battery very low	Device is battery-powered, and will go offline very soon unless the battery is replaced
Device failed to update	The WAC failed to update its firmware or that of a paired device
Voltage out of range	DC power bus voltage is out of its specified range
Lamp error	Occupancy sensor has signaled that the lamp voltage or current is out of the specified range

10.4 – WaveLinx Wired Alarms

The WaveLinx Wired alarms reported by Trellix Lighting are listed and described below.

Alarm	Description
Device not reachable	Unable to communicate with device

FCC Statement

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions:

- (1) This device may not cause harmful interference.
- (2) This device must accept any interference received, including interference that may cause undesired operation.

Note: The grantee is not responsible for any changes or modifications not expressly approved by the party responsible for compliance. Such modifications could void the user's authority to operate the equipment.

Note: The equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

Reorient or relocate the receiving antenna.

Increase the separation between the equipment and receiver.

Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.

Consult the dealer or an experienced radio/TV technician for help.

This device complies with FCC radiation exposure limits set forth for an uncontrolled environment. This equipment must be installed and operated in accordance with provided instructions and the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons.

Warranties and Limitation of Liability

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