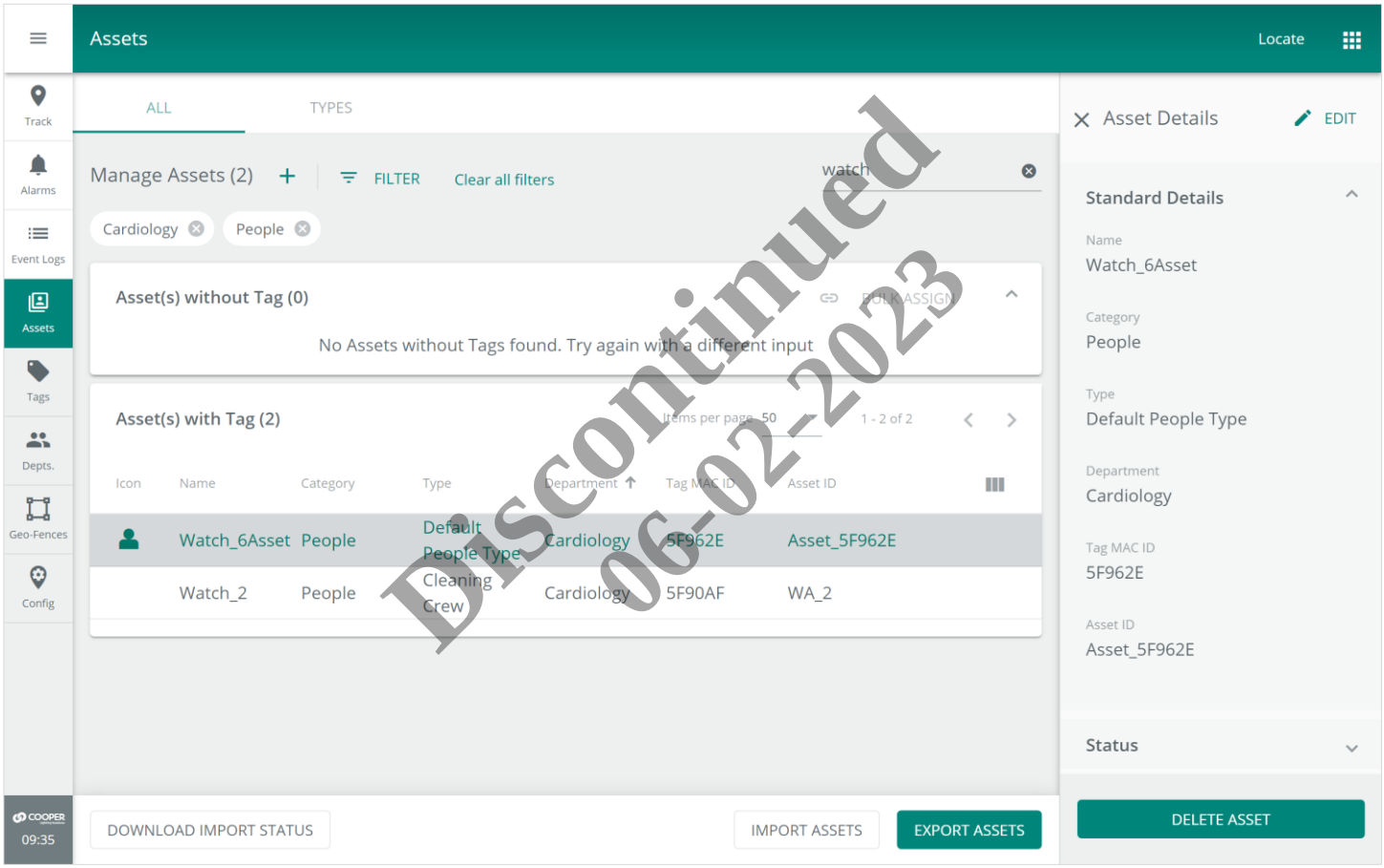
Locate User Manual **Trellix**

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

Important: Engage appropriate network security professionals to ensure all control system hardware and servers are secure for access.

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.



COOPER Lighting Solutions

⚠ WARNING

Read all the instructions thoroughly before installing this product.

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

The purpose of this document is to provide sufficient instructions for using the systems.

Contents

1 – About this Document

This document describes how to monitor the health of connected devices with the Trellix Locate platform and associated applications.

Important

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 the Trellix platform for the first time.

1.1 – Using This Manual

Use the table below to quickly identify the kinds of the tasks you need to perform.

If you are…	Then…
Installing Trellix for the first time	Refer to the *Trellix Core Quick Start Guide* and the *Trellix Lighting System Configuration Guide*
New to Trellix Locate	Begin with *Overview* and *Trellix Locate Login and Authentication,* and then follow the Walk-Throughs provided at the beginning of each chapter
Setting up and testing Sensors	See *Configuration Management*
Creating, editing, and working with Departments	See *Department Management*
Enabling, assigning, and editing Tags	See *Tag Management*
Creating, editing, and working with Assets	See *Asset Management*
Creating, editing, and working with Geo-Fences	See *Geo-Fence Management*
Working with Alarms and Events	See *Alarm and Event Management*
Tracking assets	See *Asset Tracking*

1.2 – 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
- **Asset** – A digital representation of a Tag, Object, or People, created when the system is set up and a Tag is assigned
- **Bluetooth Low Energy (BLE)** – A wireless personal area network technology aimed at novel applications in industries such as healthcare, fitness, security, and home entertainment
- **Department** – A collection of Assets and the data they generate
- **Departments of Responsibility (DOR)** – The departments assigned to a user to determine which Assets they can access
- **Event** – A notification, such as a cleared alarm or system event, that does not require any action
- **Geo-fence** – A digital representation of a physical space that detects Tags crossing into or out of its boundaries, and generates alarms and events based on those movements
- **Internet of Things (IoT)** – The extension of Internet connectivity into physical devices, enabling them to communicate and interact over the Internet for remote monitoring and control
- **Media Access Control (MAC) ID** – A unique identifier for a physical device (Tag)
- **Pyroelectric ("Passive") InfraRed (PIR) sensors** – A sensor that uses Infrared light to detect occupancy in a space
- **Received Signal Strength Indication (RSSI)** – Shows the relative strength of a Tag's signal as detected by a sensor
- **Tag** – A physical BLE device that broadcasts its location and includes properties such as MAC ID and Battery Level
- **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")

1.3 – Related Documentation

Document	Description
Trellix Core Quick Start Guide	Covers the initial installation and setup of the Trellix platform
Trellix Lighting System Configuration Guide	Covers the administration and configuration of the Trellix Smart Lighting IoT platform and associated applications
Tag Configuration Manager Manual	Covers the use of the TCM mobile app to configure BLE Tags for use in Trellix Locate
Trellix Locate API Reference Manual	Documents the API calls available to build applications that rely on the published Trellix Locate data
WaveLinx System Network/IT Planning Guide	Covers the planning, design, set up, and configuration of a WaveLinx System
Cyber Infrastructure Security Tips	Tips and advice about common security issues for non-technical computer users

1.4 – What's New in Locate 8.0

Change	Description
Support for more Assets	Trellix Locate now supports up to 5000 Tags
Increased Audit Log coverage	The Audit Log supports a wider variety of user and system activities (Refer to "Downloading Audit Logs" in the T*rellix Lighting System Configuration Guide* for details)
Improved location accuracy by incorporating occupancy data	It is now possible to combine PIR (Passive InfraRed) occupancy data with existing location sensor data for improved accuracy
Access to telemetry data	Temperature and humidity data can now be enabled and read for sensors that support it
Obtain Tag data without Asset Management	System integrators can save time and effort by obtaining Tag location and telemetry data with no Asset Management steps

2 – Overview

2.1 – Introduction

Trellix Locate is a smart IoT platform that offers real-time location sensing and monitoring. The Trellix platform accelerates insight around your building operations and business processes, unlocking efficiency and enabling more effective decision-making with apps from Trellix and our partners.

The platform manages a *trellis*, or network, of digital sensors, collecting the data gathered by the sensors and analyzing it to provide meaningful insights to users. The Trellix platform hosts the *Trellix Core Services*, *Trellix Locate API Services*, and *Trellix Apps* described in the topics that follow.

2.1.1 – Trellix Core Services

A set of microservices required for fully functional IoT solutions.

2.1.2 – Trellix Locate API Services

A set of REST APIs that enable third-party applications to unlock the value of the data gathered by the Locate system. Refer to the *Trellix Locate API Reference* for details.

2.1.3 – Trellix Admin

The Admin application lets users perform administrative tasks for managing the Trellix Core services, for example:

- Enabling/disabling interfaces
- Creating/editing/deleting users and roles
- Backing up and restoring configuration databases
- Upgrading the platform

2.1.4 – Trellix Locate

The Locate application lets users configure and monitor a wide array of digital sensors, collect, and analyze the data gathered by these sensors, and ultimately gain meaningful insight into their operations.

2.1.5 – Tag Configuration Manager

The Tag Configuration Manager is used to prepare and manage the Tags associated with Trellix Locate.

2.2 – Tags, Assets, and Asset Types

2.2.1 – Tags

Tags are BLE (Bluetooth Low Energy) devices that broadcast their location and perhaps other data, such as temperature or the status of a pushbutton. Each Tag has a unique and fixed identifier (e.g., “A14D85”) known as a MAC (Media Access Control) ID. When a Trellix Locate system is set up, a set of Tags are enabled for use at a site.

These Tags are assigned to people, using badges or wristbands for example, or attached to equipment such as electrocardiographs. The location and other data transmitted by the Tags is picked up by sensors, either standalone or embedded in the lighting system, that are installed throughout the site.

NOTE
Trellix Locate supports up to 5000 Tags in the current release.

2.2.2 – Assets

An Asset represents a physical item found on your premises in a Trellix Locate system. Unlike the MAC ID of a Tag, the Asset name and other properties can be configured and changed to suit their location and purpose.

Asset Categories
Assets are grouped into two categories, *Object* and *People*. These categories permit filtering and enable role-based permissions. For example, you might want a “Device Admin” role for managing equipment like vital signs monitors or patient wristbands, but not surgeons or nurses. To do this, you would grant the **Asset Management** (i.e., Object) permission to the “Device Admin” role, but not the **People Management** permission.

2.2.3 – Asset Types

Trellix Locate supports the concept of Asset Types, which enables additional information on an Asset beyond basic Tag data. Each Asset Type can have a name, icon, category (Object or People), supported Tag types, and additional custom fields. This creates a more rich and meaningful set of location data.

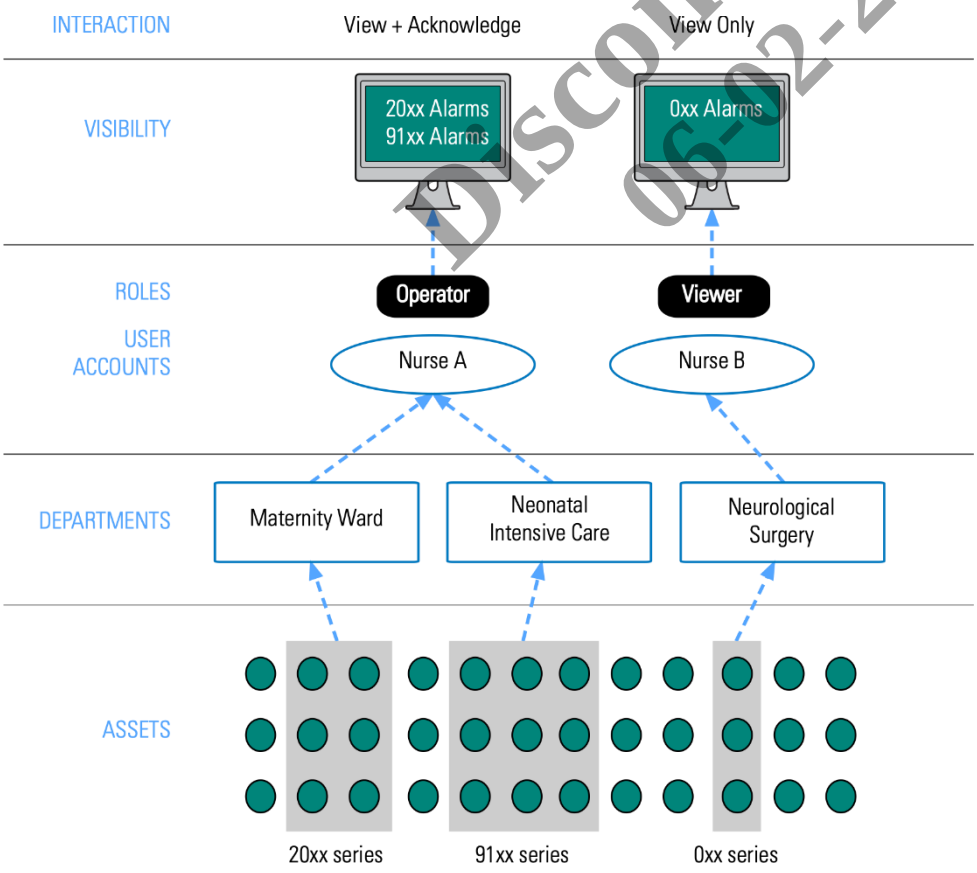
2.3 – System Access - Accounts, Roles, and Departments

The ability to manage user access to Trellix Locate is a key requirement. This is handled with a combination of the features described below.

Feature	Description
User Accounts	A login **account** with a strong password is required to access any Trellix Locate features or data.
Roles	To simplify the assignment of access permissions, Trellix Locate provides several predefined **Roles** that confer a set of permissions. A user can be assigned the "Viewer" Role, for example, and automatically gain view-only access to the Track, Alarms, Event Logs, and Departments sections. See *Default Accounts, Roles, and Permissions* for more information.
Departments	To give organizations further flexibility, Trellix Locate employ the concept of **Departments** to organize Assets. The set of Departments can be customized, and each asset is assigned to a Department. Users are granted access to one or more Departments according to their needs. These are known as DoR (Departments of Responsibility). ***EXAMPLE*** A nurse working in the Maternity Ward and Neonatal Intensive Care Unit is assigned those two Departments. When she looks at the Alarms page, only the Assets in those two Departments will appear.

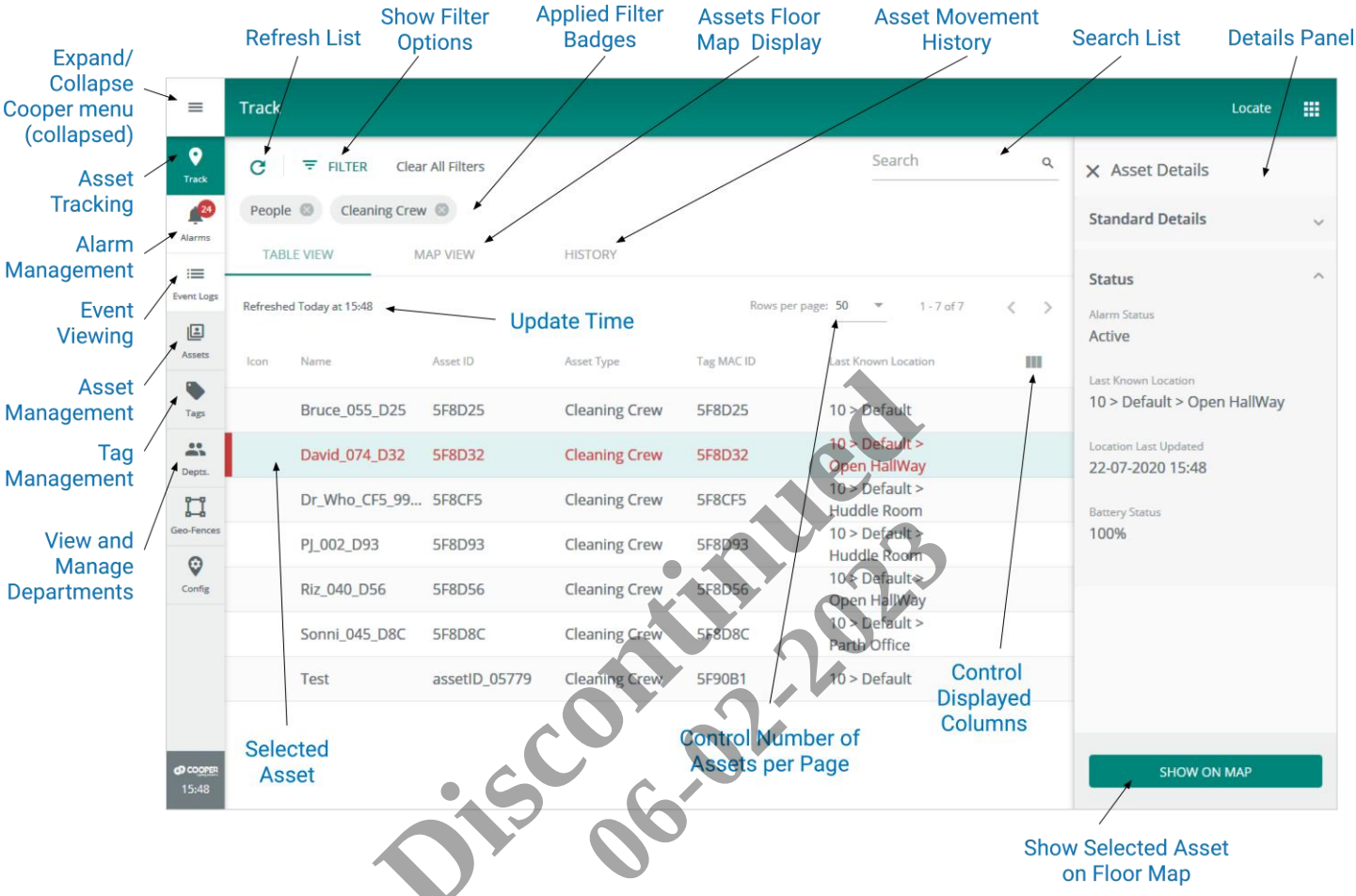
2.3.1 – Visibility and Interaction

The diagram below provides a simple illustration of access management in Trellix Locate. This determines which assets users able to see and how, if at all, they can interact with them.



2.4 – Web Interface

Trellix Locate can be accessed with a desktop or tablet Web browser from anywhere on the Trellix network. A desktop view of the Asset Tracking page is shown below.



2.5 – Key Features

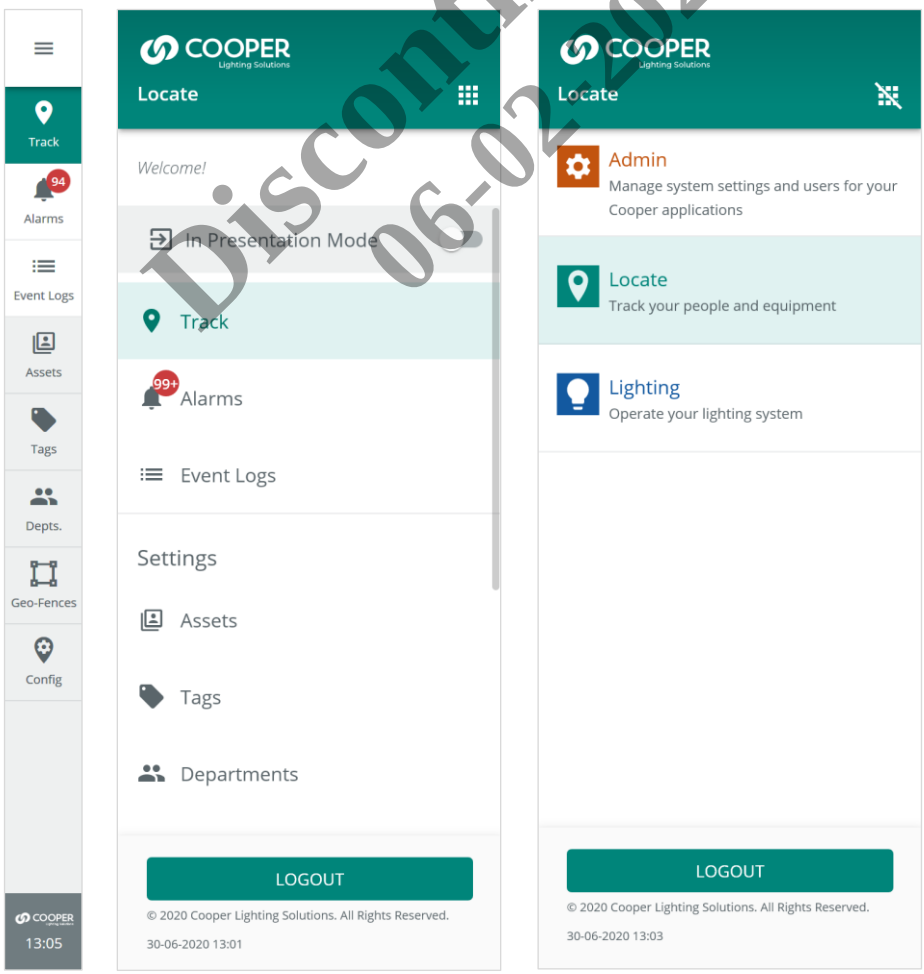
The key facility management features available in Trellix, grouped as they appear in the user interface shown above, are described in the following table.

Feature	Description
	The app menu ( ) lets you switch between the Admin and Locate apps. The System, Users, Clients, and License features appear in the Trellix Admin app, along with Admin Alarms and Events. ADMIN Manage system settings and users for your Cooper applications LOCATE Track your people and equipment LIGHTING Operate your lighting system
Track	Track and view Asset location details by Building, Floor, Department, Category, and search for Assets in table or floor plan views. View Asset movement history in floor plan view.

Feature	Description
Alarms	Monitor active Asset alarms to assess the health of your system and quickly address issues. Alarm notifications can also be emailed.
Event Logs	View all system notifications, including past alarms, and perform sequence of events analysis for a better understanding of system behavior.
Assets	View tagged Assets by Department, Category, and use search to find Assets. Create new Assets and assign them to Tags one at a time or in bulk. View Asset Types by Category and by searching. Edit, create, and delete Asset Types. Import and export Assets.
Tags	View Tags by Type, Status, and search for Tags. Enable discovered Tags. Edit, disable, delete, and export existing Tags.
Departments	View, edit, create, and delete Departments.

2.6 – Cooper Menu

The Cooper menu (below left) is collapsed by default and runs vertically along the left edge of every page. It provides access to the top-level feature sets such as Alarms and Tags. This menu can be expanded (below center) to display other options, including the software version, a link to this manual, and the **Logout** button. The ⠿ button appears inside the expanded Cooper menu to provide quick access to the installed Trellix apps (below right).



2.7 – Trellix Admin: System and User Management

The Admin application lets users perform administrative tasks to manage the Trellix Core services. These include the following:

- Enabling and disabling interfaces
- Creating, editing, and deleting users and roles
- Backing up and restoring the configuration databases
- Upgrading the platform

2.8 – Requirements

Trellix Locate has been tested with **Safari 11+** for iOS devices, **Chrome 53+** for Android devices, and **Chrome 53+** or **Edge** for Windows laptops/tablets.

The necessary Trellix Lighting setup must be complete, including the following:

- Trellix Core configuration is complete
- Tags have been enabled and associated with the appropriate Wireless Area Controllers (WACs)
- The Departments and Asset Types have been configured (if they will be different than the default sets provided)
- The Trellix Date/Time is stable and accurate (Latency and Historical reporting for Locate data depends on accurate time synchronization)

2.9 – Licensing

Trellix Locate is a licensed application. It cannot be used without a valid license, which specifies the maximum number of managed Tags and the expiry date. See *Adding and Updating a Trellix Locate License* for details.

2.9.1 – License Expiry

To help you manage your license and ensure smooth system operation, Trellix Locate will send progressive notifications to users as the license gets closer to expiry. These notifications will begin 15 days ahead of the expiry date and will be displayed to all users at login. The message will read as shown below, and the number of days will count down accordingly:

The application license will expire in 15 days. Please renew your license to ensure continued access to the application.

2.9.2 – License Renewal with Fewer Tags

If you renew your license with a limit that is below the number of Tags on your system, a grace period with be initiated. Like the license expiry situation described in the preceding topic, you will be notified that you only have X Tags licensed and after Y days you will be forced to upgrade the license or disable Tags.

3 – Trellix Locate Login and Authentication

Trellix Locate 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.

IMPORTANT
Changing the passwords provided for all default accounts is critical for the security of your system. See Changing Default Account Passwords *for details. Refer to the* Trellix Lighting System Configuration Guide *for complete user account setup documentation.*

3.1 – Logging into Trellix Locate

Follow the steps below to login to Trellix Locate. See *Default Accounts, Roles, and Permissions* for more information about the default accounts provided with Locate.

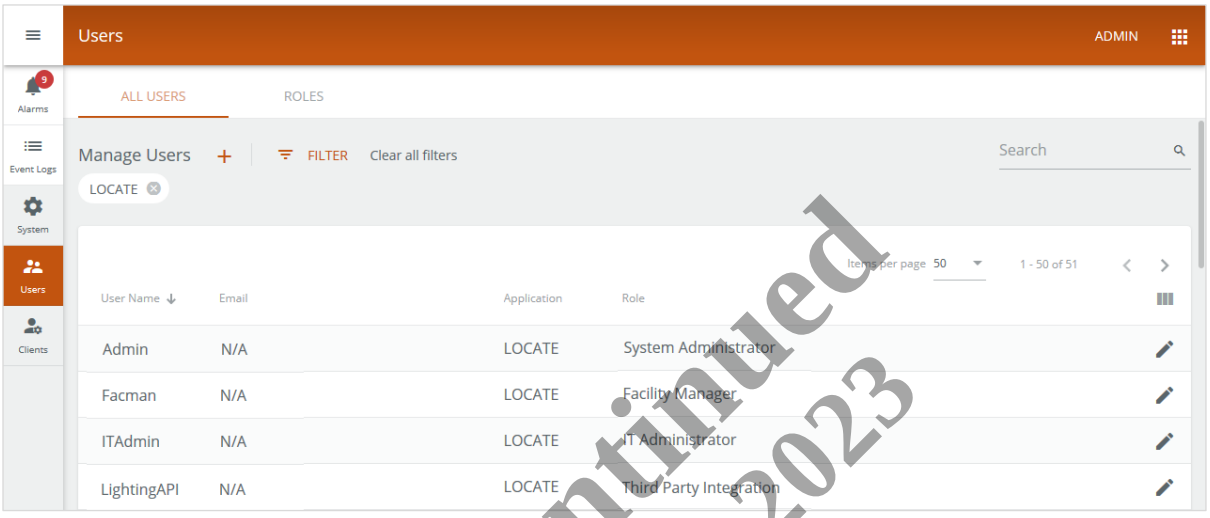
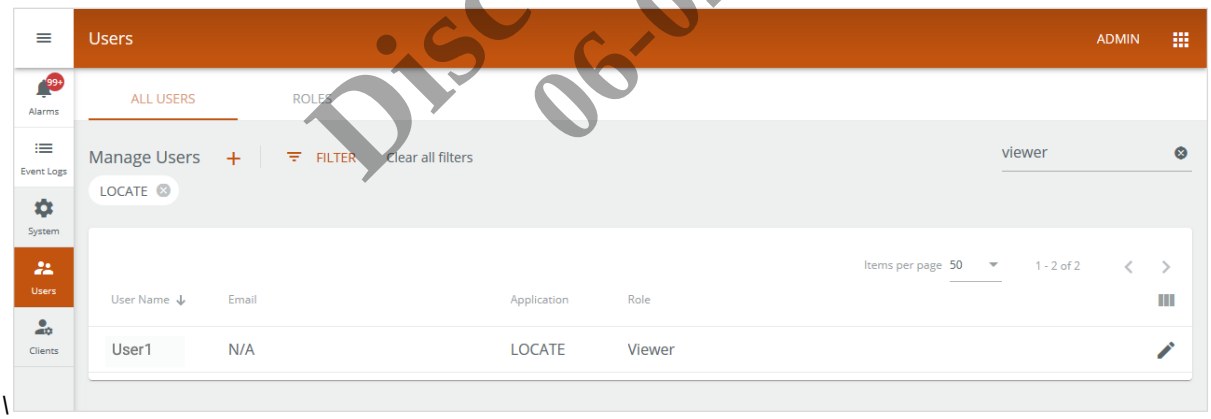
NOTE
The first time the Admin account is used to login to Trellix Core, a Setup Wizard guides the user through the initial system configuration. Refer to the Trellix Core Quick Start Guide for step-by-step instructions if you are installing Trellix for the first time.

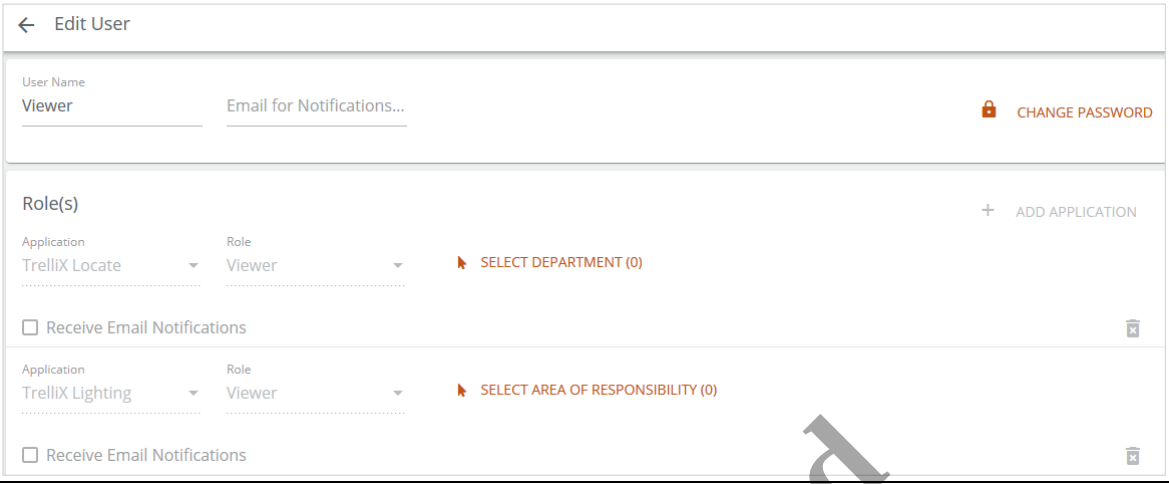
Step	Action
1	Browse to `https://<ipaddress>`, where `<ipaddress>` is the IP address of the Trellix Core host (`192.168.2.100`, by default). ***RESULT*** 
2	Enter your **Username** and **Password**, and then click **Login**. ***NOTES*** • After 10 failed attempts to log in, you will be locked out for 15 minutes. • If you cannot locate your username or password, contact your Facility Manager to reset the password.
3	To log out, click ≡ to expand the Cooper menu, and then click **Log Out**.

3.2 – Changing Default Account Passwords

Follow the steps below to change the default passwords of the predefined Trellix Locate user accounts.

NOTE
You will need the Trellix Core IP address and a login account with System Administrator permissions (e.g., "Admin") to follow this procedure. Trellix Locate will be hosted on Trellix Core (Enterprise or Virtual).

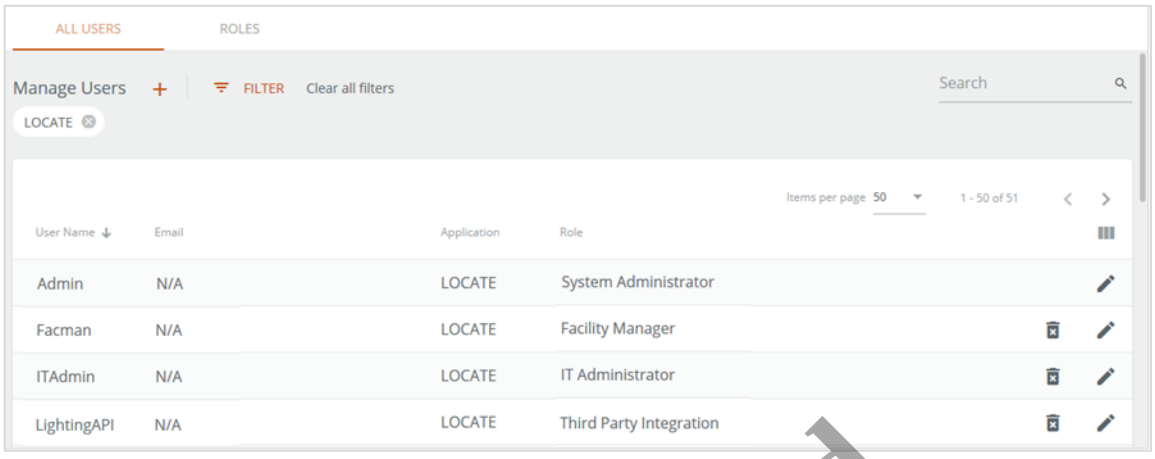
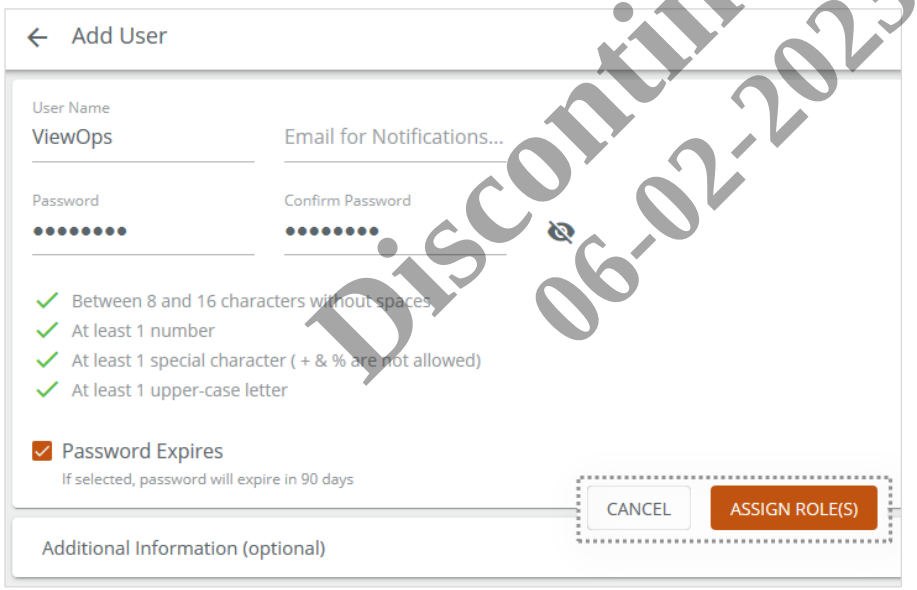
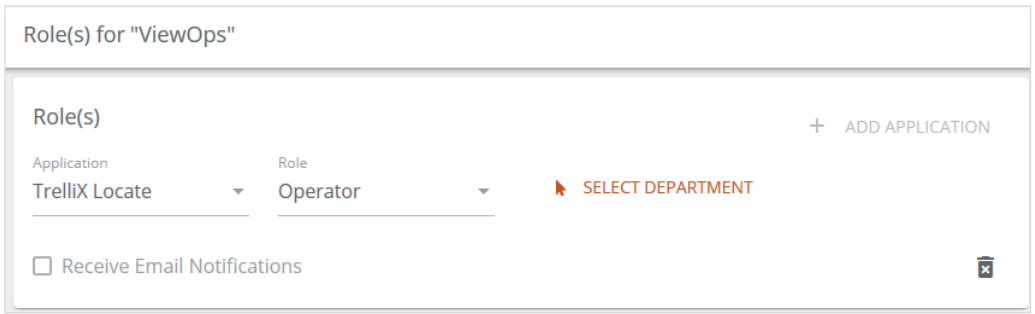
Step	Action
1	Click ⠿ to display the app menu, then click **Trellix Admin**, and then click **Users**. Click **Filter**, then select the **Trellix Locate** checkbox under Applications, and then click **Apply Filters**. ***EXAMPLE*** 
2	Type "Viewer" in the Search field, and then press Enter. ***EXAMPLE*** 

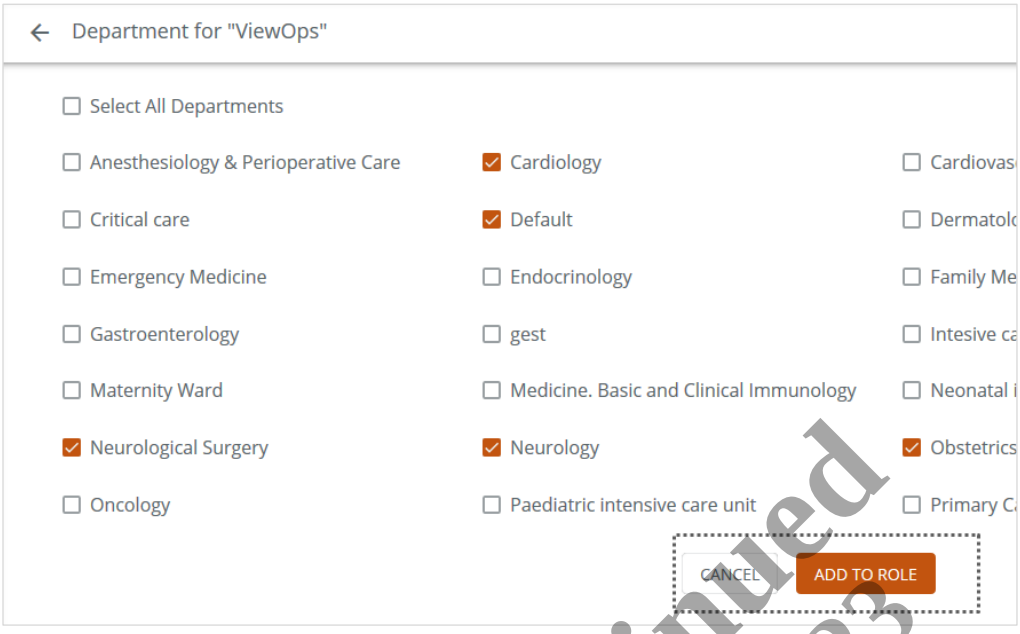
Step	Action
3	Click ✎ in the row for that account. ***EXAMPLE*** 
4	Click **Change Password**, and then enter and confirm the new **Password** value. ***TIP*** *Green check marks are displayed to reflect the password quality as you are entering and confirming it.* ***EXAMPLE*** 
5	Click **Save Password** (shown inset above) when complete. Repeat Steps 2-4 for each of the predefined Trellix accounts listed in *Default Accounts, Roles, and Permissions*.

3.3 – Creating a New Account

Follow the steps below to create a new Locate account.

NOTE
You will need the Trellix Core IP address and a login account with System Administrator permissions (e.g., "Admin") to follow this procedure. Trellix Locate will be hosted on Trellix Core (Enterprise or Virtual).

Step	Action
1	Click ⠿ to display the app menu, then click **Trellix Admin**, and then click **Users**. ***EXAMPLE*** 
2	Click **+** beside **Manage Users**. Enter the **User Name**, **Password**, and **Confirm Password** values. ***TIP*** *Green check marks are displayed to reflect the password quality as you are entering and confirming it.* ***EXAMPLE*** 
3	Click **Assign Roles** (show inset above). Select **Trellix Locate** from the **Application** list, and then select the appropriate Role in the **Role** list. ***EXAMPLE*** 

Step	Action
4	Click **Select Department**. Select the checkbox for each Department that a user with this Role will be able to access. ***EXAMPLE*** 
5	Click **Add to Role** (shown inset above), and then click **Create User**.

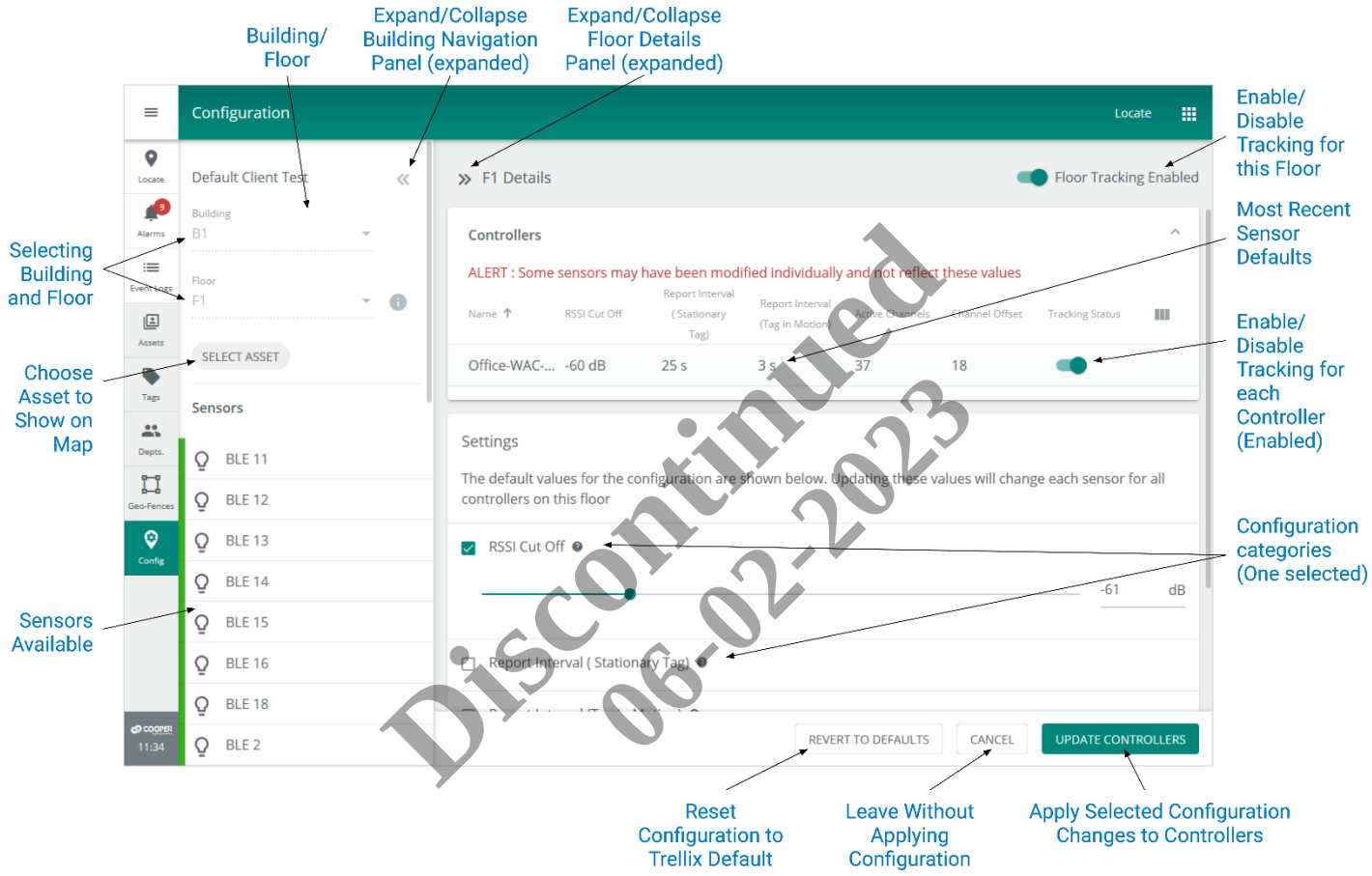
4 – Configuration Management

This chapter describes the features available under **Config** in the Cooper menu.

NOTE
You should have at least one Asset created and connected to a Tag before you begin any configuration.

4.1 – Configuration Page

The Configuration page is shown below with a Building and Floor selected.



4.2 – Configuration Features

The Configuration page provides access to range of Trellix Locate settings relating to Floors, Controllers, and sensors. These are described below.

4.2.1 – Trellix Lighting Building and Floor Configuration Required

Trellix Locate uses the Building and Floor configuration provided by Trellix Lighting. This includes the Floor Map images (DXF and SVG/PNG/JPG) that work with fixture and sensor locations. Refer to "Chapter 5 - Building Configuration" in the *Trellix Lighting System Configuration Guide* for more details. For specifics on Floor Maps, see "Section 5.6 - About Floor Maps", and the procedures that follow it.

4.2.2 – Floor Details Settings

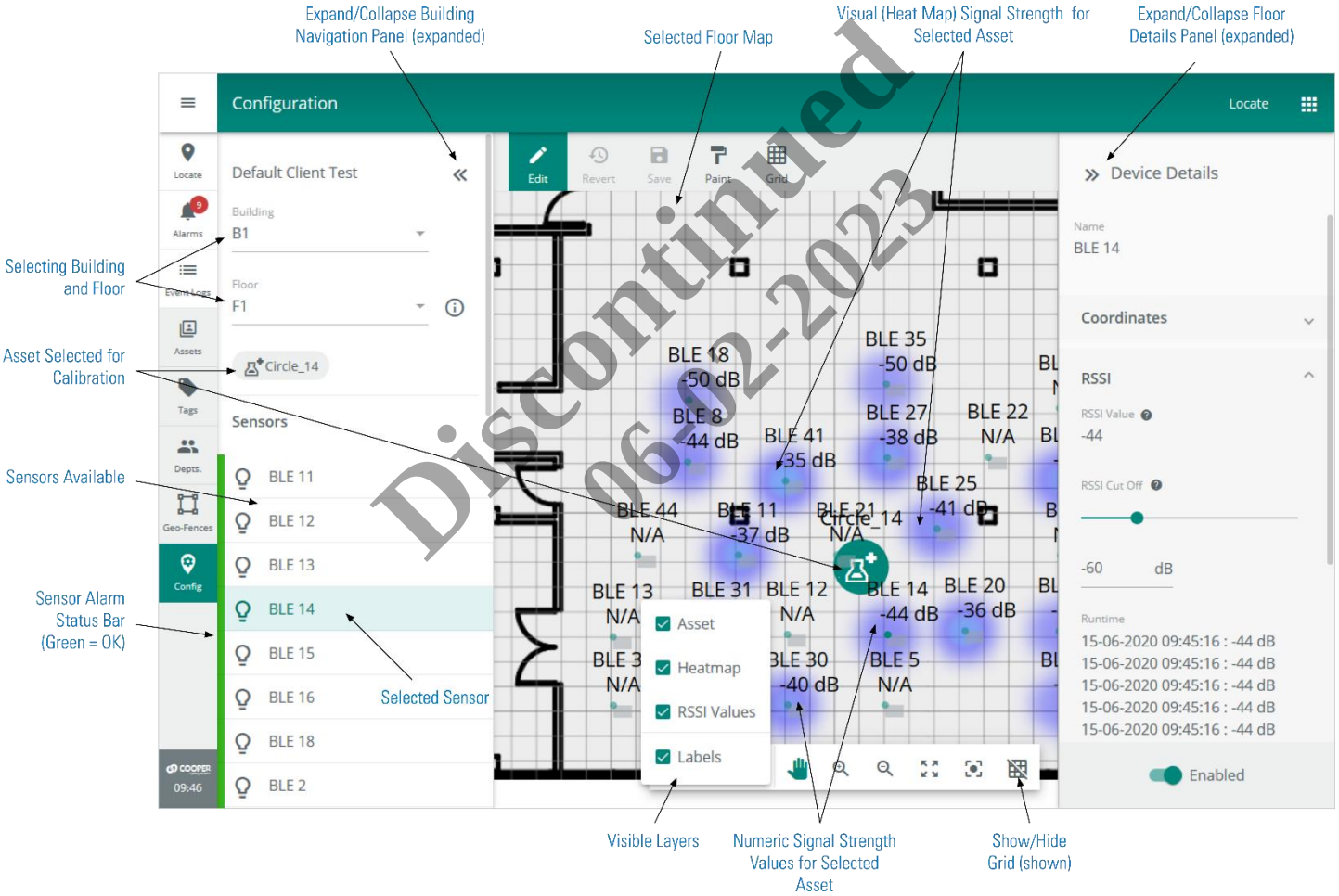
The Floor Details page provides access to the following configuration.

Feature	Description
Floor Tracking	You can enable and disable Asset location tracking on a Floor.
Controllers	You can enable and disable Asset location tracking by Controller.

Feature	Description
Floor Settings	You can configure and apply the following sensor settings to one or more Controllers associated with a Floor: • **RSSI Cut Off**: Tile Mount and Fixture Mount (default is -62 dB) • **Report Interval**: Stationary Tag (default is 7 seconds) • **Report Interval**: Tag in Motion (default is 2 seconds) • **Channel**: (default is All Channels) • **Channel Offset**: Fixture Mount (default is 0 dB) • **Channel Offset**: Tile Mount (default is -8 dB) • **Clear PIR Motion Filtering**
Trellix Default Floor Settings	Trellix maintains a collection of default sensor settings (e.g., RSSI Cut Off, Channel Offset) that you can apply to the Floor Settings. This is done using the Revert to Default feature.

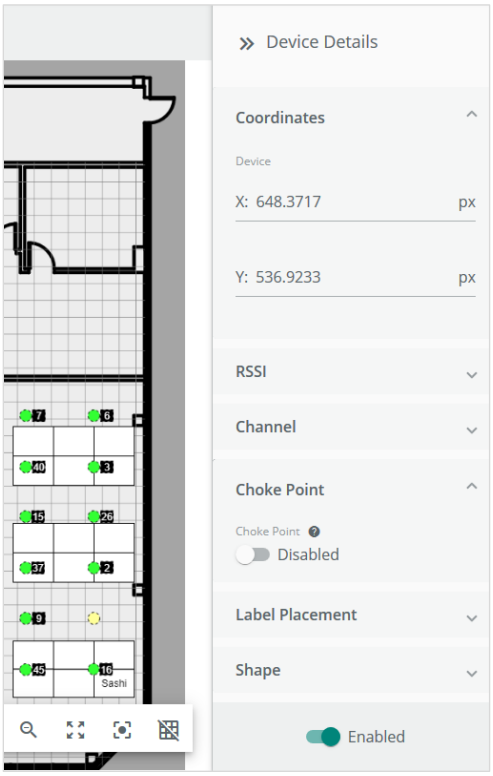
4.2.3 – Floor Map

The Floor Map view in Configuration displays sensor and Asset data, including signal strength in numeric and visual (Heat Map) format.



4.2.4 – Device Details

The settings for a sensor are available when it is selected on a Floor Map.



You can modify the following settings:

- Sensor Location (X and Y Coordinates)
- RSSI Cut Off
- Channel Offset
- Choke Point Status
- Map Label Placement
- Map Icon Shape
- Read Temperature & Humidity
- PIR Motion Filtering
- (Device) Enabled/Disabled

NOTE
*The **Choke Point Status** and **Read Temperature & Humidity** features are mutually exclusive. You cannot enable both on a single device.*

4.2.5 – RSSI Cut Off

The RSSI Cut Off setting of a sensor determines the minimum signal strength required from a Tag before its location will be reported. For example, if the RSSI value is set to -79 dB then only Tags at or above that level will be reported by that sensor.

4.2.6 – Choke Point Status

A Choke Point is a location where high traffic is likely, such as the entrances to buildings, hallway intersections, and doorways. Enabling Choke Point status will increase the sensor scan rate to provide better accuracy. This will generate more network traffic, however, so the number of sensors with Choke Point enabled should be kept to a minimum (e.g., 5 or less per WAC). An alert will be displayed if you attempt to enable more than 5.

4.2.7 – Read Temperature & Humidity

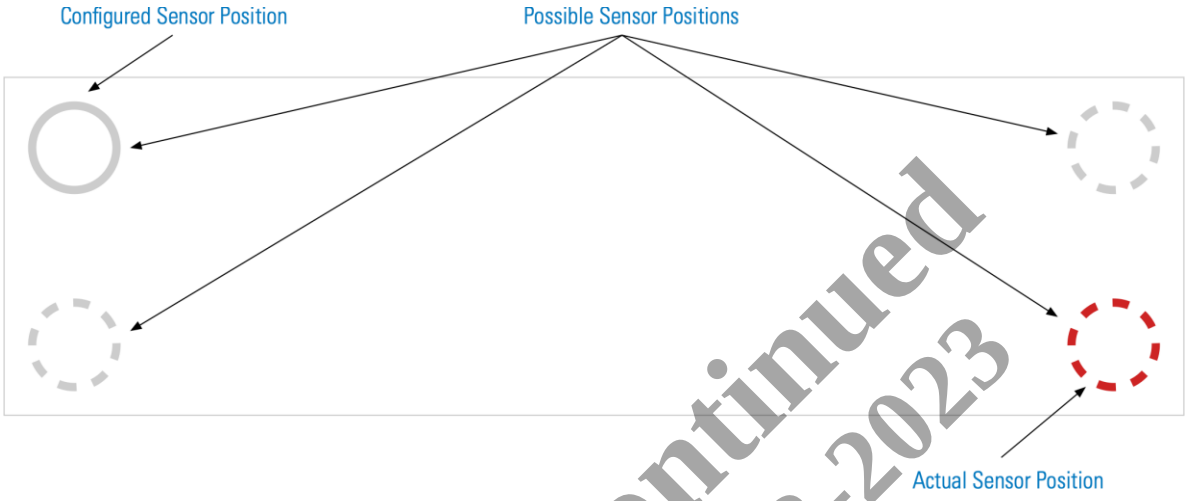
Telemetry data reading can be enabled in devices that support it. The temperature and humidity data provided will be reported as high priority, meaning every 5 seconds. A maximum of 10 devices per WAC may have this feature enabled. An alert will be displayed if you attempt to enable more than 10.

4.2.8 – PIR Motion Filtering

PIR occupancy data can be used to improve room-level accuracy. PIR Motion Filtering is helpful when motion activity occurs just *outside* a room but is incorrectly interpreted by a BLE sensor as being *inside* the room. PIR filtering works by comparing the room's occupancy data with the BLE sensor data. If the PIR sensor shows the room is unoccupied, the inaccurate BLE reading is filtered out (suppressed). The reading of PIR data must be enabled in Trellix Locate.

4.2.9 – Integrated Sensors – A Special Case

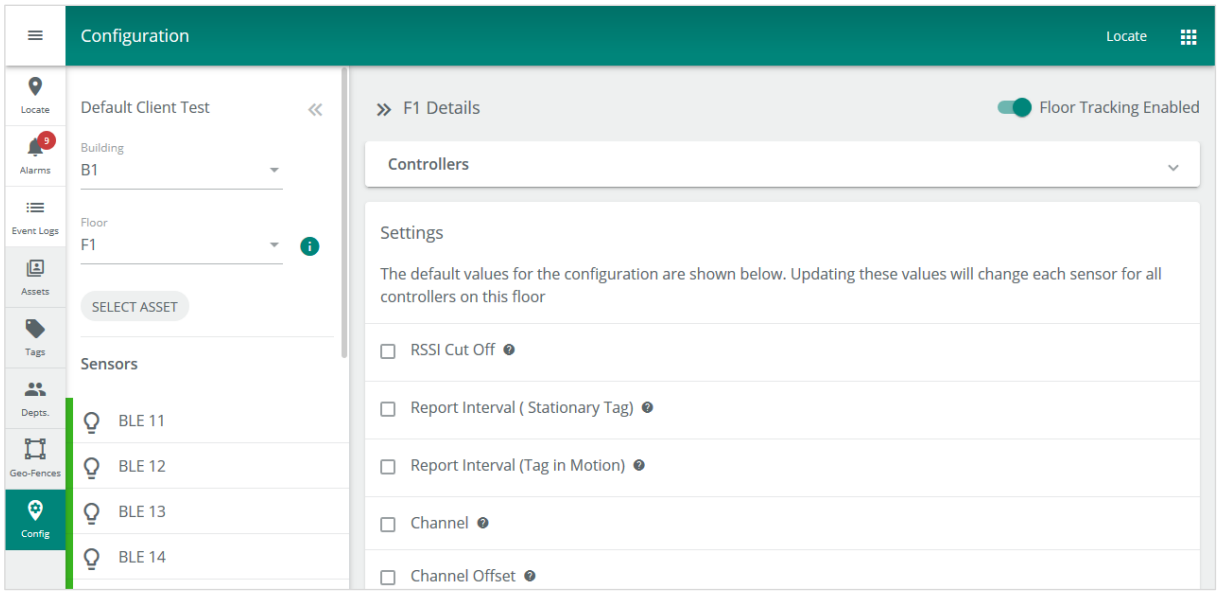
The exact position of BLE sensors is the key to reliable location data. By integrating sensors with light fixtures, the location data available is increased with no added installation cost. The size and placement of light fixtures on a Floor Map is specified in the DXF data files configured in Trellix Lighting. A sensor can be installed in various locations within a fixture, however, and the Trellix Locate configuration must match the actual sensor location to deliver accurate data. The diagram below illustrates possible sensor positions in a fixture, and shows a mismatch between the configured and actual sensor positions.

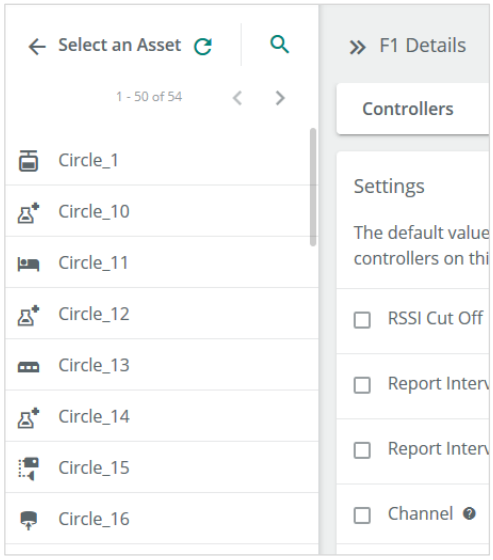
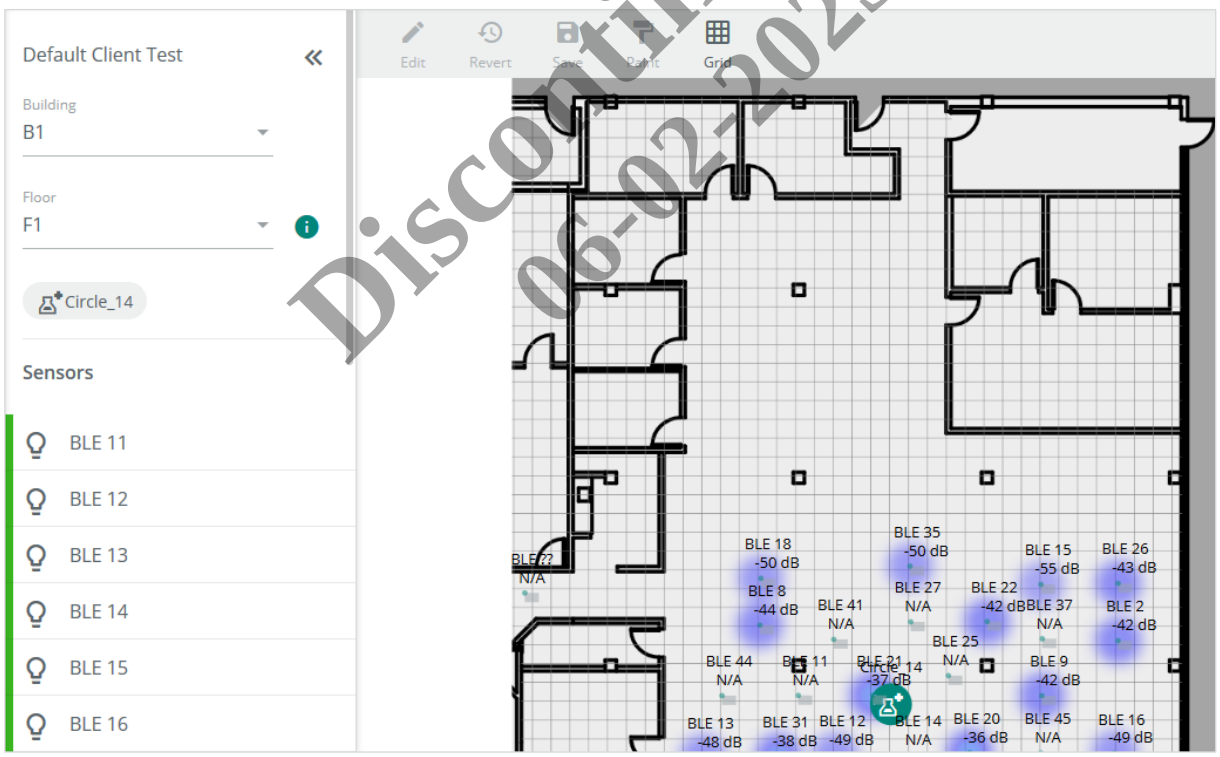


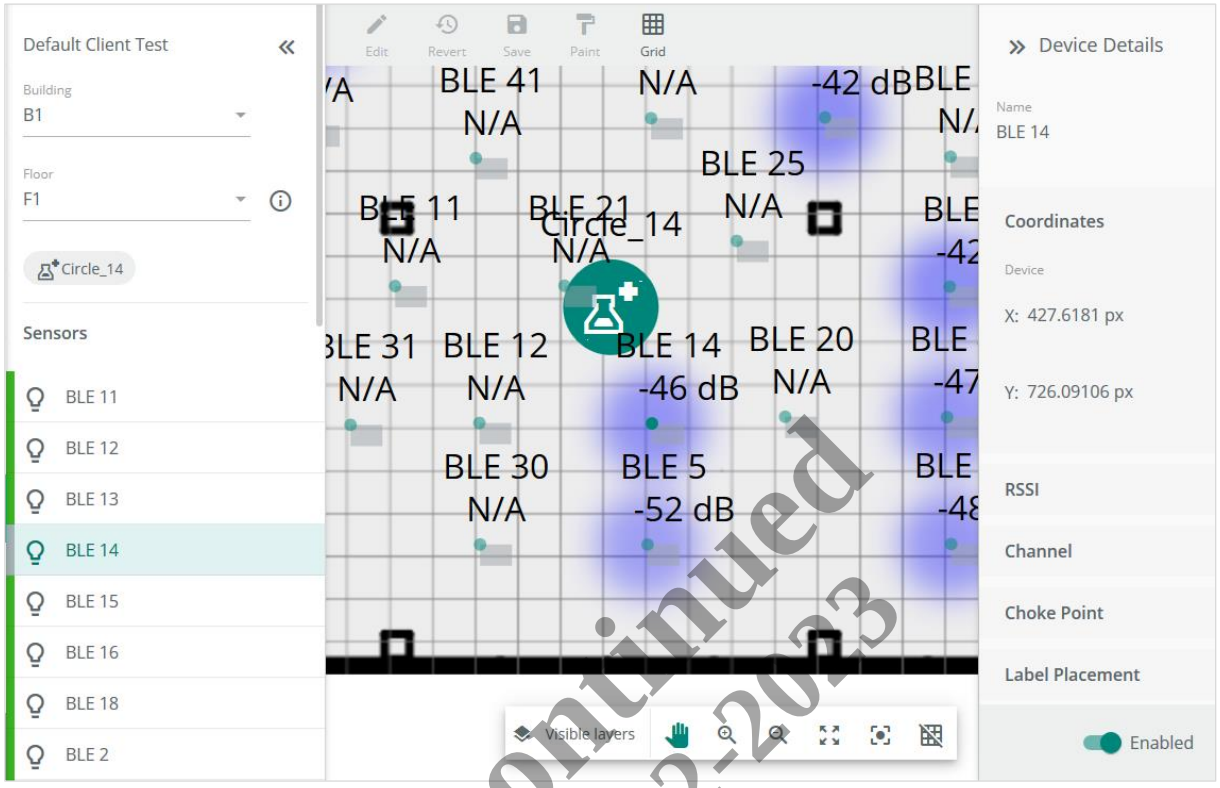
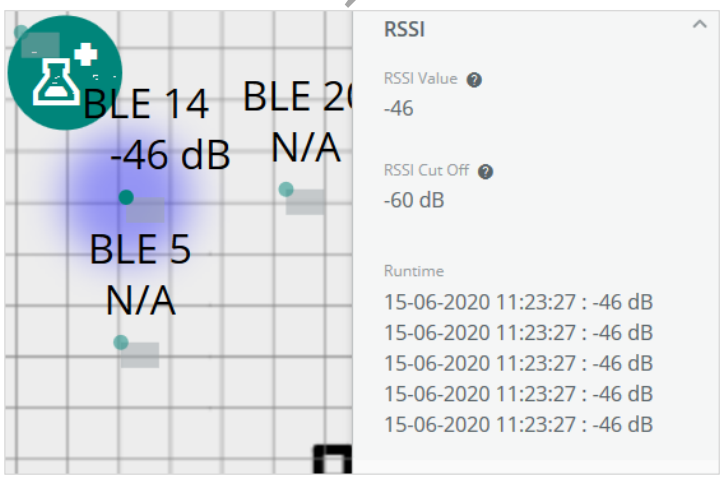
Trellix Locate lets you edit the Floor Map to align the configured sensor position with its actual position in the fixture.

4.3 – Configuration Management – A Walk-Through

This walk-through follows a fictional user, Sam, as he works with the Configuration page to check the RSSI for a Sensor with respect to a selected Asset.

Phase	Description
1	Sam navigates to the **Config** page, and then selects a Building and Floor. Trellix loads and displays the Floor Details, and a list of Sensors. ***RESULT*** 

Phase	Description
2	Sam clicks **Select Asset** to find an Asset for sensor signal strength testing. ***RESULT*** 
3	Sam clicks **Circle_14** in the Asset list, which displays a Floor Map showing the Asset location, and then clicks **Done**. ***RESULT*** 

Phase	Description
4	Sam selects the sensor he is interested in, **BLE 14**, and then clicks ⌖ to focus on it. ***RESULT*** 
5	By reviewing the Floor Map, Sam can see that BLE 14 has an RSSI of -46 dB for the Circle_14 Asset. With the Heat Map layer enabled, under **Visible Layers**, they can quickly see how the BLE 14 signal strength for this Asset compares to other nearby sensors (darker purple equals stronger signal).
6	To view a short history of the RSSI values over time, Sam expands the **RSSI** section in the Device Details panel and sees the **Runtime** values list. ***RESULT*** 

4.3.1 – Filters, Sorts, and Searches

There is an Asset search feature in the **Visible layers** menu of the Map Display Tools that searches the **Name** and **MAC ID** fields. The Configuration page does not support any other filtering or sorting.

4.4 – Configuration Procedures

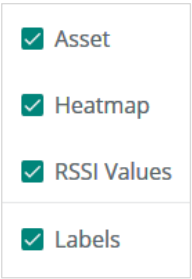
This section includes procedures for using the main Configuration page features.

4.4.1 – Using the Map Viewing Tools on a Floor Map

The Map Viewing Tools, as they appear on a Floor Map, are shown below. The Visible Layers menu options are shown separately.

Procedure

The table below describes the use of each Map Viewing tool.

Tool	Action
 Visible Layers	Enable or disable the display of the following Floor Map information: • **Asset**: Select and display an Asset, or hide Asset display • **Heatmap**: Show or hide visual signal strength map for sensors detecting the selected Asset • **RSSI Values:** Show or hide the numeric signal strength values for sensors detecting the selected Asset • **Labels**: Show or hide sensor labels
 Focus	Click to center the selected Asset and zoom in on it (available only when an Asset is selected)
 Show Entire Map	Click to fit the entire Floor Map into the display area
 Zoom Out	Click to Zoom Out
 Zoom In	Click to Zoom In
 Drag	Click to select and drag the map position

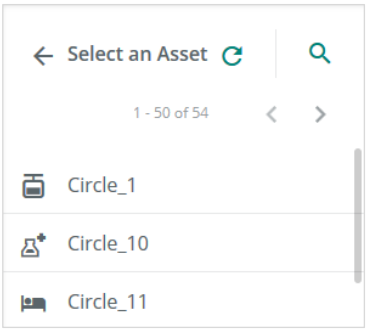
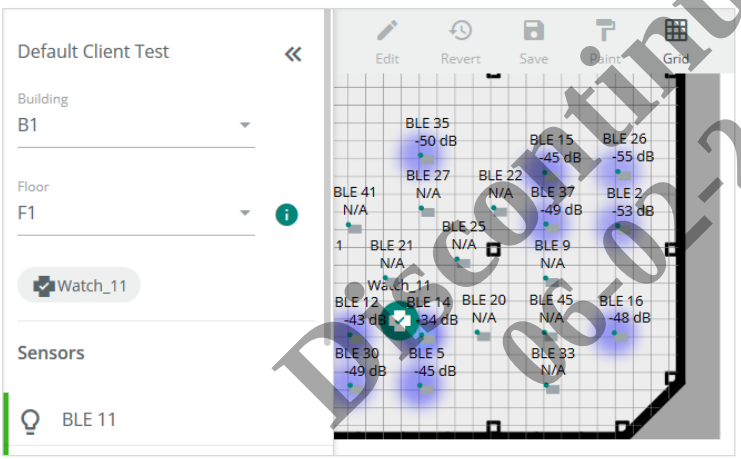
4.4.2 – Displaying a Sensor on a Floor Map

Follow the steps below to display a sensor on the Configuration page.

Step	Action
1	Click **Config**, then select a Building, and then select a Floor.
2	Scroll through the **Sensors** list to find the one you want.
3	Click the desired sensor in the list to display it on the Floor Map with its Device Details panel expanded.
4	Click  to focus the Floor Map on the selected sensor.

4.4.3 – Displaying an Asset on a Floor Map

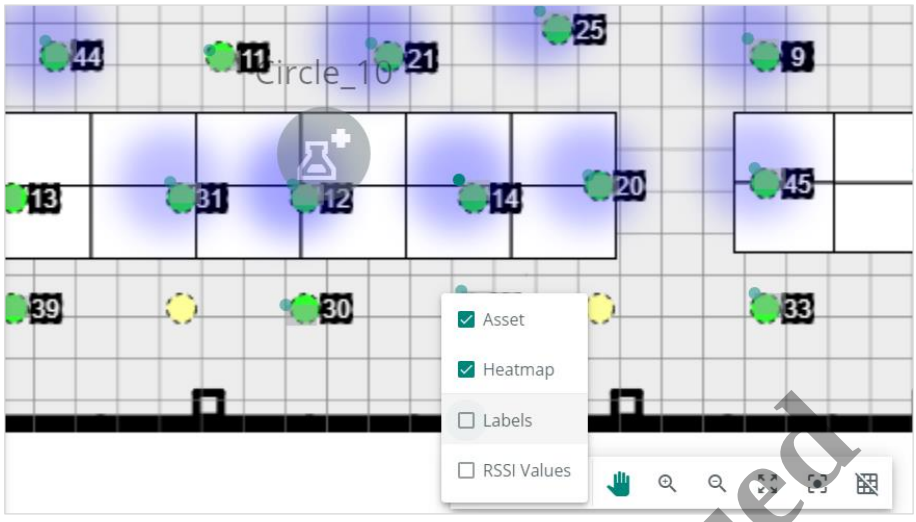
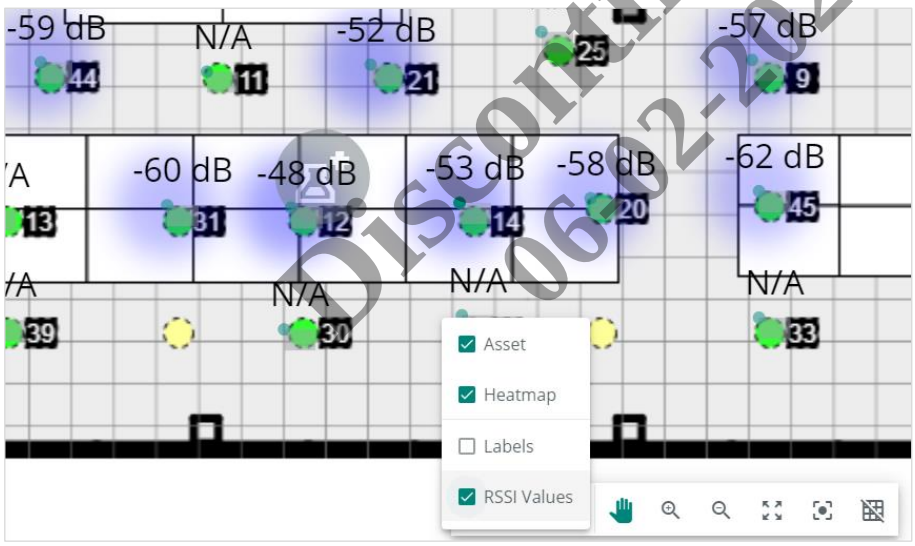
Follow the steps below to display an Asset on a Floor Map of the Configuration page.

Step	Action
1	Click **Config**, then select a Building, and then select a Floor.
2	Click **Select Asset** (above the list of sensors) to display the Asset selection panel. ***EXAMPLE*** 
3	Scroll through the list to locate the Asset you want, or click 🔍 to search for it by name. Select the Asset to display it on the Floor Map, and then click **Done**. ***EXAMPLE*** 
4	To choose a different Asset, click the current Asset button (above the sensors) to display the Asset selection panel.

4.4.4 – Displaying Heat Map and Relative Signal Strength

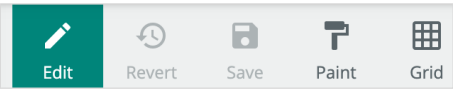
Follow the steps below to display the Heat Map and RSSI data on a Floor Map of the Configuration page.

Step	Action
1	Show the target Asset as described in *Displaying an Asset on a Floor Map*.
2	Click **Visible Layers** in the Map Viewing Tools.

Step	Action
3	To see a visual display of signal strength data for the sensors picking up the current Asset, select the **Heat Map** checkbox. ***EXAMPLE*** 
4	To view a numeric display of signal strength data for the sensors picking up the current Asset, select the **RSSI Values** checkbox. ***EXAMPLE*** 

4.4.5 – Using the Map Editing Tools on a Floor Map

The Map Editing Tools, as they appear a Floor Map, are shown below.



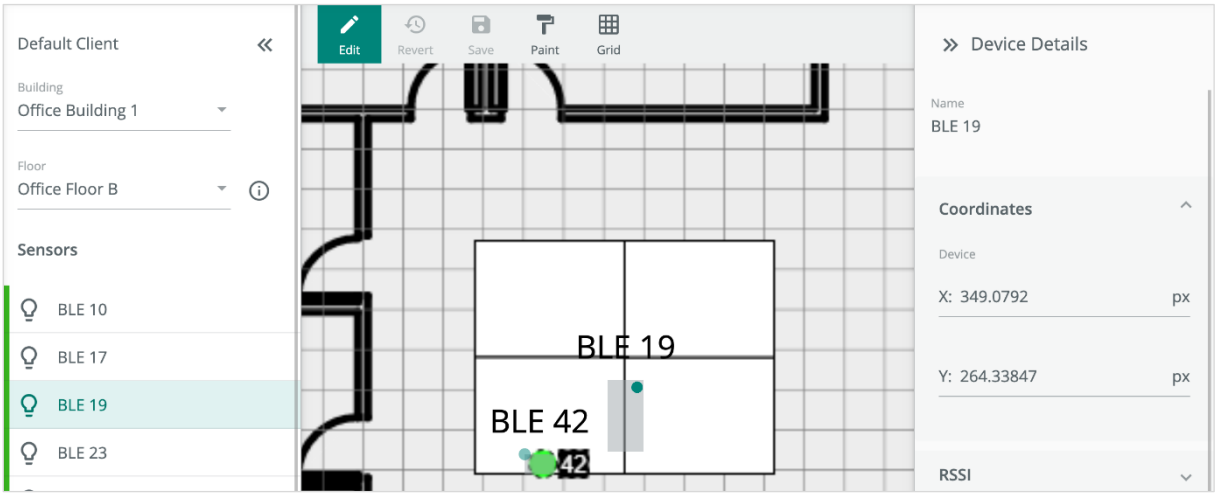
Procedure

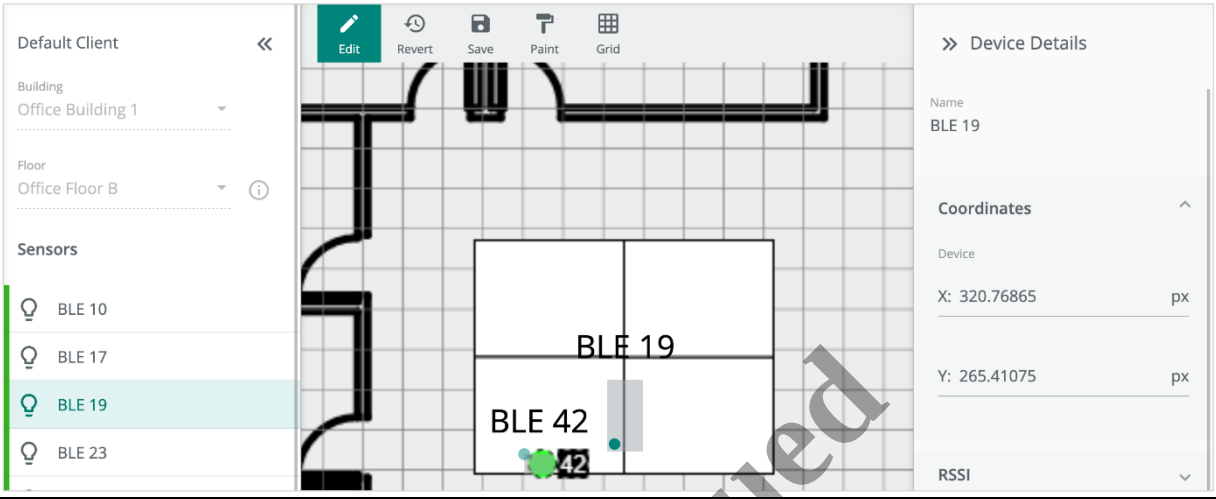
The table below describes the use of each Map Editing tool.

Tool	Action
	Click to begin a sensor location editing session.
	Click to discard the changes made in the current editing session.
	Click to save the changes made in the current editing session.
	Click to copy the selected sensor configuration, and then click on one or more sensors to apply the copied configuration to them.
	Click to show or hide a grid overlay.

4.4.6 – Relocating an Integrated Sensor on a Floor Map

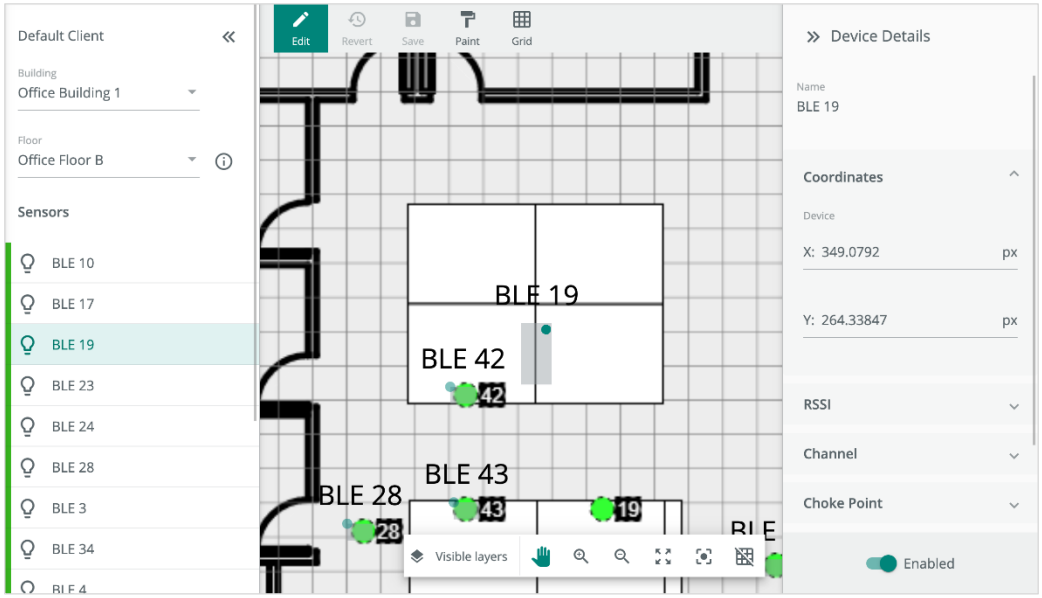
Follow the steps below to change the location of an integrated sensor in the Configuration page.

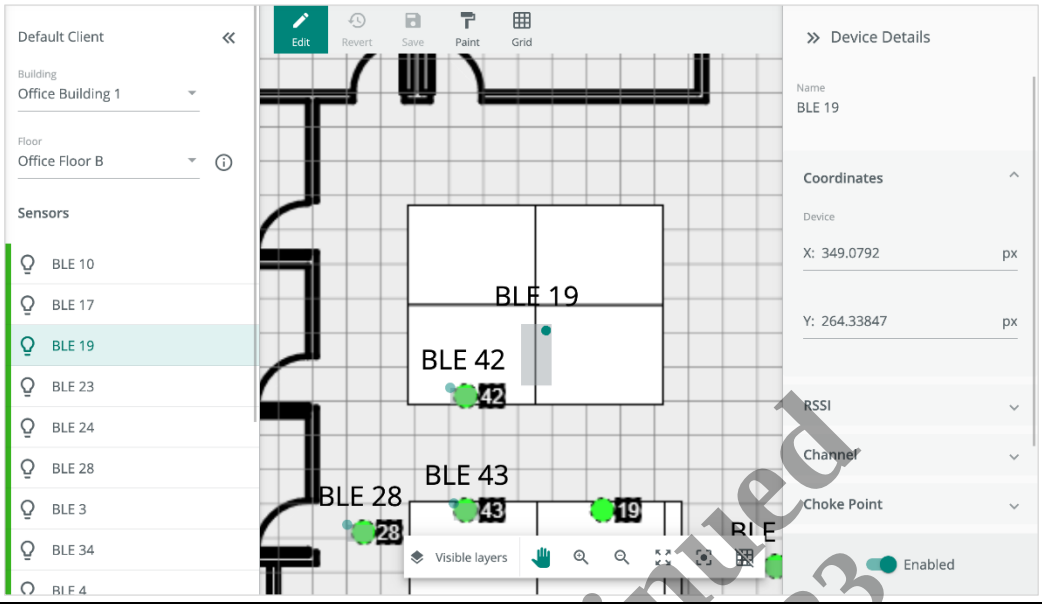
Step	Action
1	Click **Config**, then select a Building, and then select a Floor.
2	Scroll through the **Sensors** list to find the one you want.
3	Click the desired sensor in the list to display it on the Floor Map.
4	Click **Edit** in the Map Editing Tools. ***NOTE*** *An integrated sensor will appear as a green dot inside a grey light fixture shape.* ***EXAMPLE*** 

Step	Action
5	Drag the green sensor dot to the desired location in the light fixture. ***NOTE*** *You can also edit the **X** and **Y Coordinates** in the Device Details panel to change the sensor location.* ***EXAMPLE*** 
6	Click **Save** to apply your changes, or click **Revert** to discard them.

4.4.7 – Using the Paint Tool to Edit Multiple Sensors Quickly

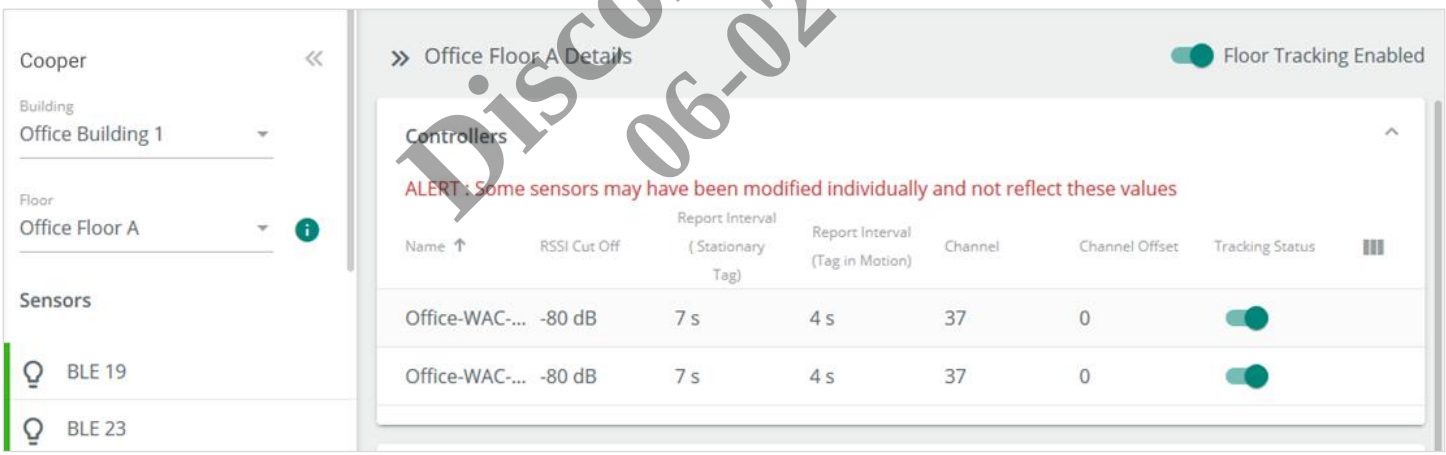
Follow the steps below to apply the configuration of a selected sensor to one or more other sensors.

Step	Action
1	Click **Config**, then select a Building, and then select a Floor.
2	Scroll through the **Sensors** list to find the one you want.
3	Click the desired sensor in the list to display it on the Floor Map. Use the Map Viewing Tools to scale the Floor Map so that all of the sensors you want to modify are visible. ***NOTE*** *You can edit the configuration of the selected sensor before using the Paint feature.* ***EXAMPLE*** 

Step	Action
4	With the sensor still selected, click **Paint** to copy the configuration of the selected sensor. Next, click one or more sensors to apply the copied settings to them. ***EXAMPLE*** 
5	Click **Paint** again to end the painting operation.

4.4.8 – Enabling and Disabling Asset Tracking by Floor or Controller

The Details for a selected Floor on the Configuration page are shown below.



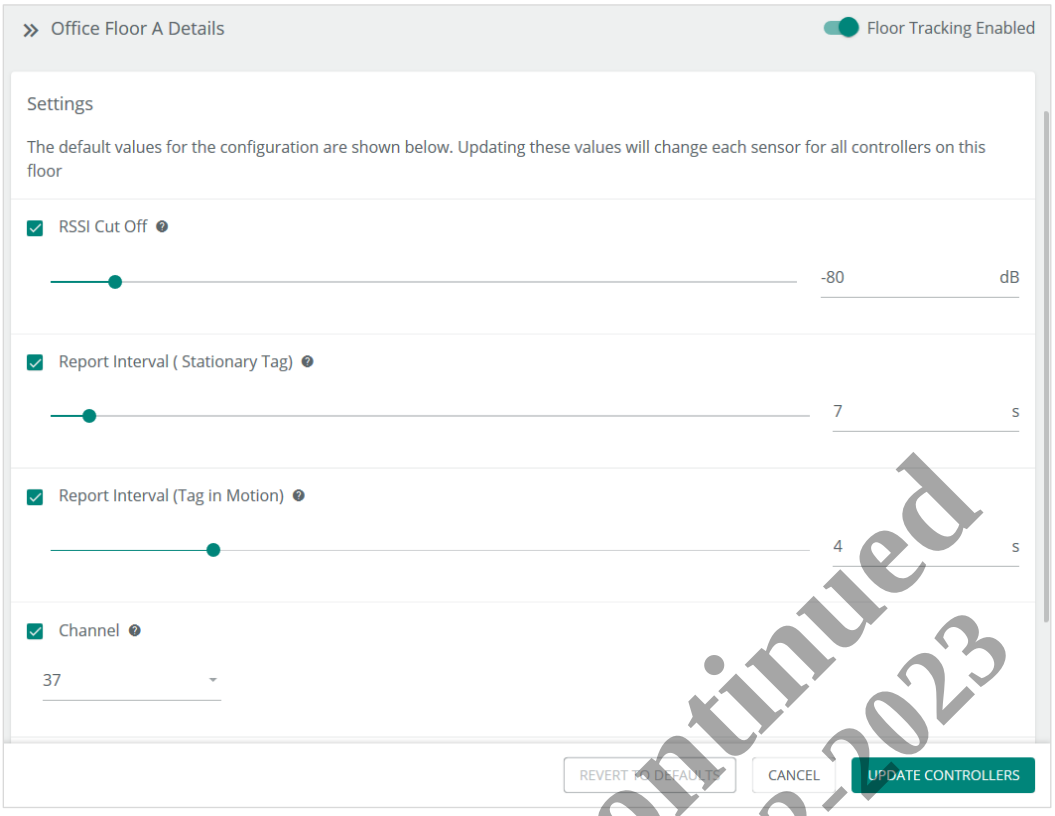
Procedure

Follow the steps below to enable or disable Asset tracking by Floor or Controller.

Step	Action
1	Click **Config**, then select a Building, and then select a Floor.
2	To enable or disable tracking for the Floor, click **Floor Tracking Enabled** in the upper right corner to toggle its current status.
3	To enable or disable tracking for a Controller, click **Controllers** to show the available Controllers, and then click **Tracking Status** for the desired Controller.

4.4.9 – Changing the Settings for All Sensors on a Floor

The Sensor Settings for a selected Floor, which appear on the Floor Details page, are shown below.



Procedure

Follow the steps below to modify one or more configuration values for all sensors on a Floor.

NOTE

The Settings form is automatically loaded with the Trellix default values for each setting.

Step	Action
1	Click **Config**, then select a Building, and then select a Floor.
2	To change the **RSSI Cut Off**, select the checkbox beside it, and then either drag the slider or edit the **dB** value directly.
3	To change the **Report Interval (Stationary Tag)**, select the checkbox beside it, and then either drag the slider or edit the **s** (seconds) value directly.
4	To change the **Report Interval (Tag in Motion)**, select the checkbox beside it, and then either drag the slider or edit the **s** (seconds) value directly.
5	To change the **Channel**, select a different value from the list.
6	To **Clear PIR Motion Filtering**, select the the checkbox beside it.
7	• To change the settings you modified back to their Trellix default values, click **Revert to Defaults**. • To exit without making any changes, click **Cancel**. • To apply your changes, click **Update Controllers**.

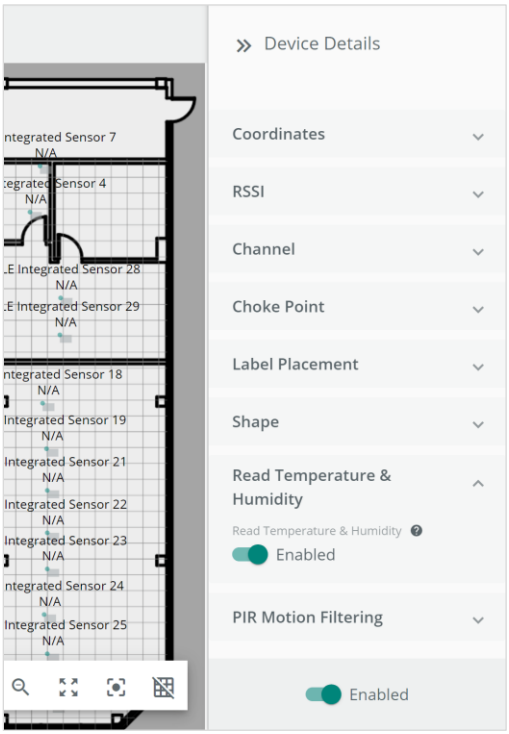
4.4.10 – Reverting All Sensor Settings on a Floor to Trellix Defaults

Follow the steps below to apply one or more of the Trellix default settings to all sensors on a Floor.

Step	Action
1	Click **Config**, then select a Building, and then select a Floor.
2	Select the checkbox for each Setting you want to set to its Trellix default value.
3	Click **Update Controllers** at the bottom of the page.

4.4.11 – Enabling, Disabling, and Changing the Individual Sensor Settings

The sensor settings appear in the Details panel when a sensor is selected.

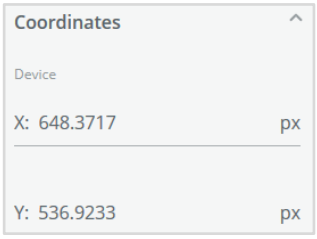


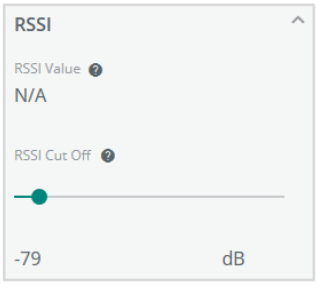
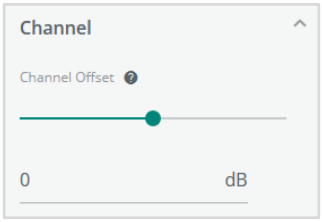
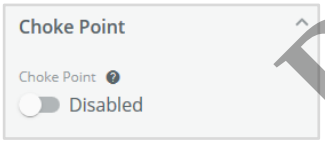
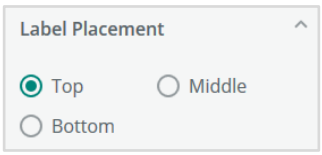
Procedure

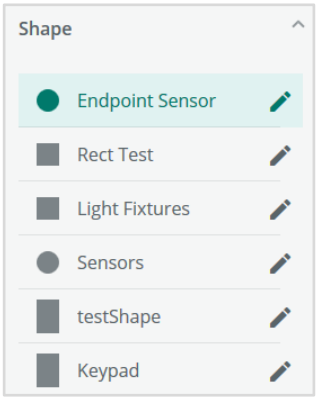
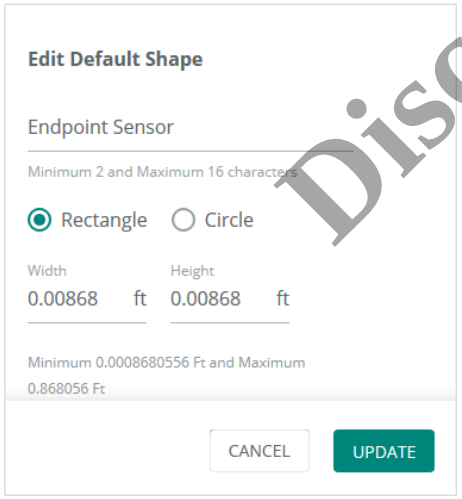
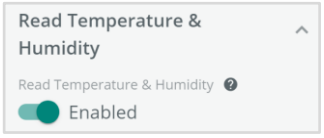
Follow the steps below to enable, disable, or modify sensor settings.

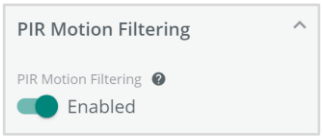
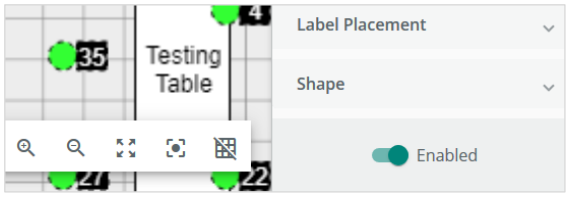
IMPORTANT

Cooper Lighting Solutions recommends that you do not change the Channel or Choke Point settings unless you fully understand the potential impact of a change.

Step	Action
1	Click **Config**, then select a Building, and then select a Floor.
2	Click a sensor in the **Sensors** list for the selected Floor to display the Details panel.
3	To change the sensor location on the Floor Map: 1. Click **Coordinates** to expand that section. 2. Edit the **X** and **Y** values, or drag it on the Floor Map. ***EXAMPLE*** 

Step	Action
4	To change sensor signal strength settings: 1. Click **RSSI** to expand that section. 2. Drag the **RSSI Cut Off** slider or enter the **dB** value directly. ***EXAMPLE*** 
5	To change the sensor communication channel (not recommended unless you fully understand the potential impact): 1. Click **Channel** to expand that section 2. Drag the **Channel Offset** slider or edit the **dB** value directly. ***EXAMPLE*** 
6	To enable or disable the sensor as a choke point (not recommended unless you fully understand the potential impact): 1. Click **Choke Point** to expand that section. 2. Toggle the **Choke Point** button to the desired state. ***EXAMPLE*** 
7	To change where the sensor label appears on the Floor Map: 1. Click **Label Settings** to expand that section. 2. Click the desired placement of the label (with respect to the sensor icon). ***EXAMPLE*** 

Step	Action
8	To change the shape of the sensor icon on the Floor Map: 1. Click **Shape** to expand that section. 2. Click the desired shape. ***EXAMPLE*** 
9	To change the default sensor shape settings: 1. Click ✎ beside the shape. 2. Edit the name. 3. Click **Rectangle** or **Circle**. 4. Edit the **Width** and **Height**. 5. Click **Update** to apply the shape settings. ***EXAMPLE*** 
10	To enable or disable the sensor for Temperature and Humidity reading: 1. Click **Read Temperature & Humidity** to expand that section. 2. Toggle the **Enabled** button to the desired state. ***EXAMPLE*** 

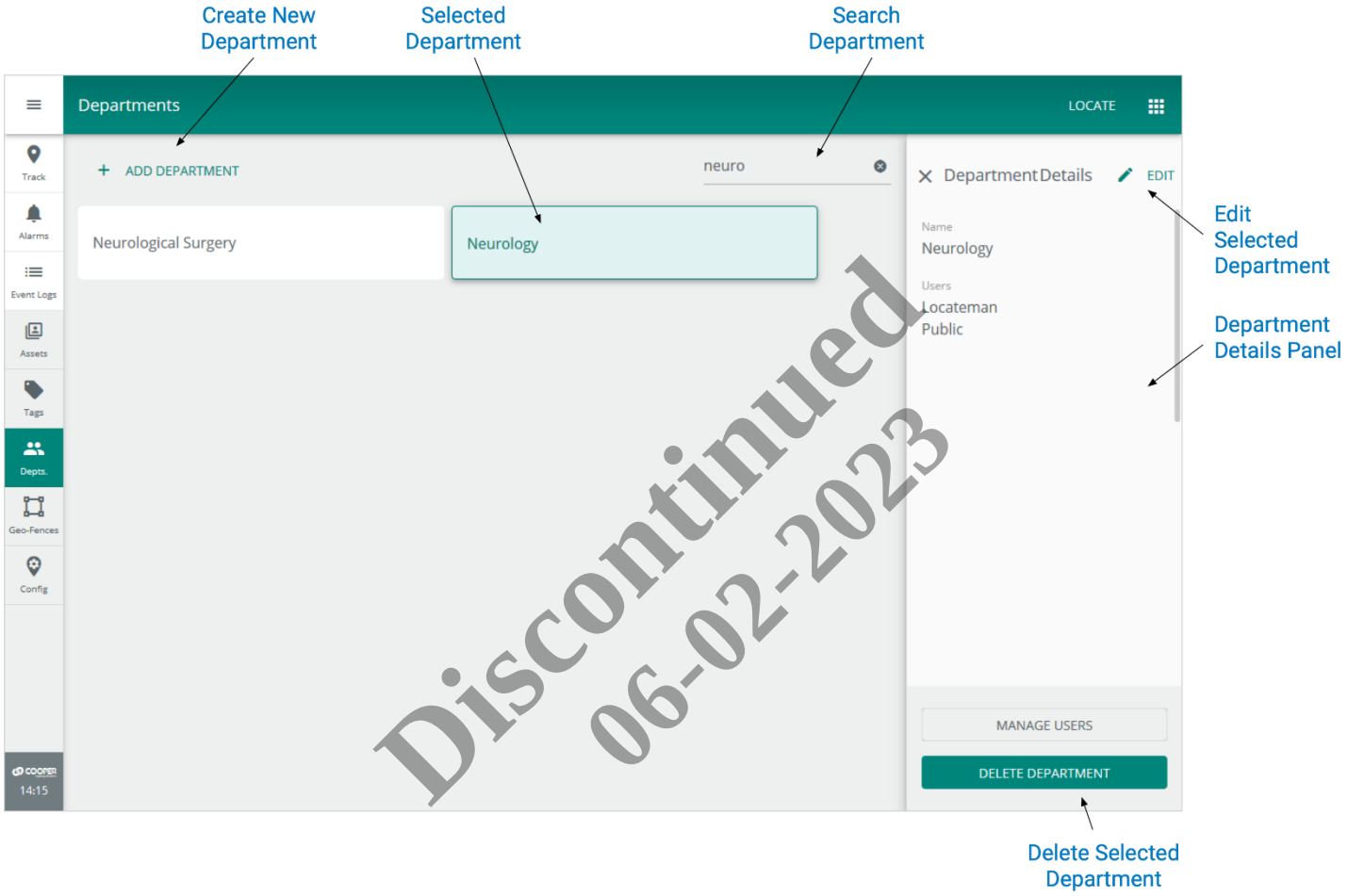
Step	Action
11	To enable or disable the PIR Motion Filtering: 1. Click **PIR Motion Filtering** to expand that section. 2. Toggle the **Enabled** button to the desired state. ***EXAMPLE*** 
12	To enable or disable the sensor, toggle the **Enabled** button at the bottom of the Device Details panel to the desired state. ***EXAMPLE*** 

5 – Department Management

This chapter describes the features available under **Depts** in the Cooper menu.

5.1 – The Departments Page

The Departments page is shown below with a filtered list of Departments. A search string has been applied (“neuro”) and the Neurology Departments has been selected, causing the Details panel to appear.

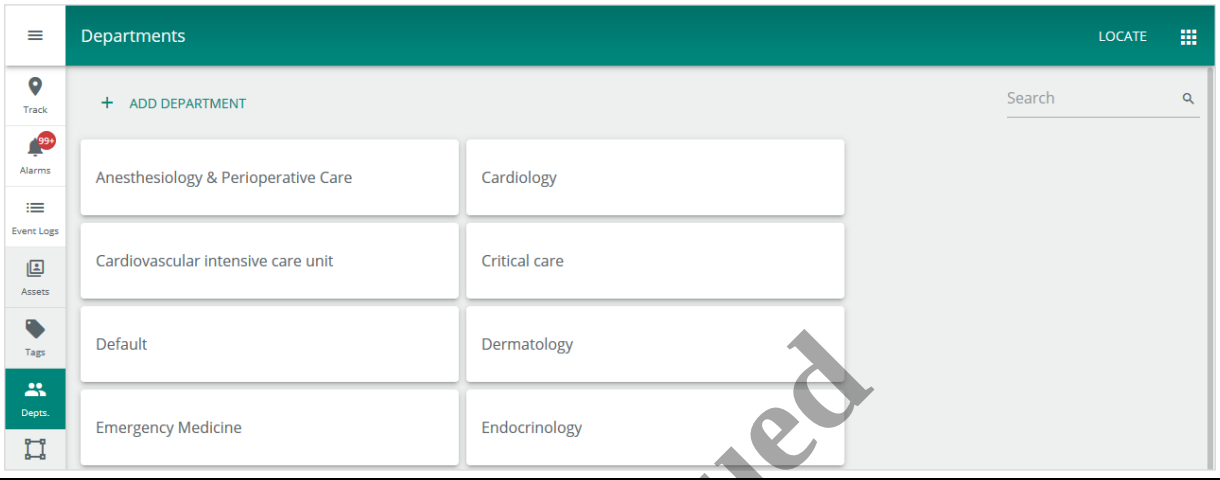
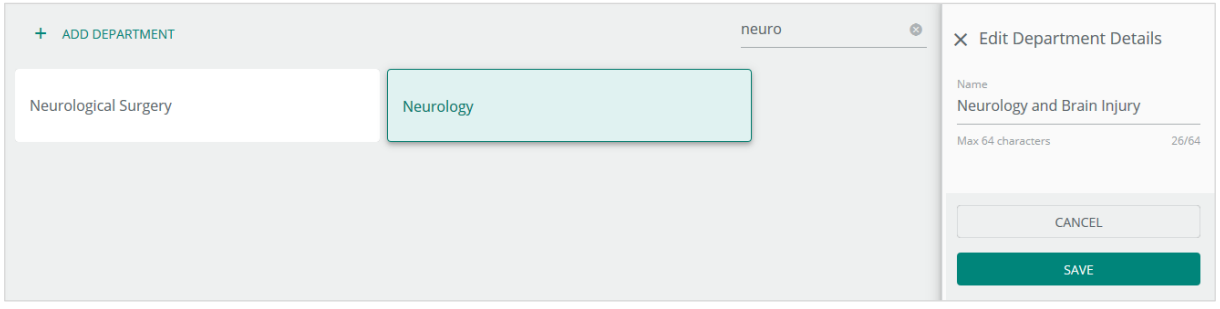


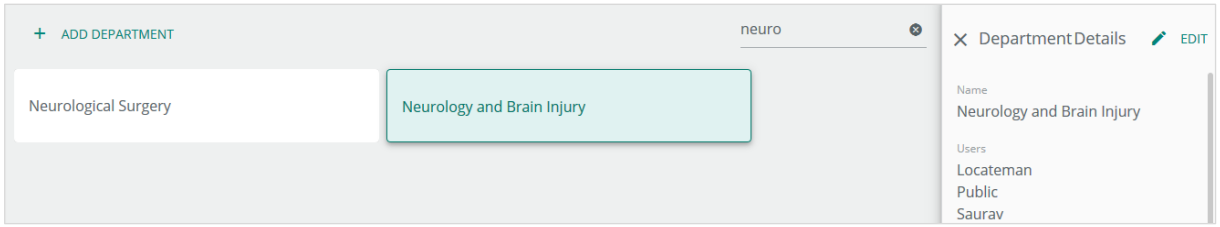
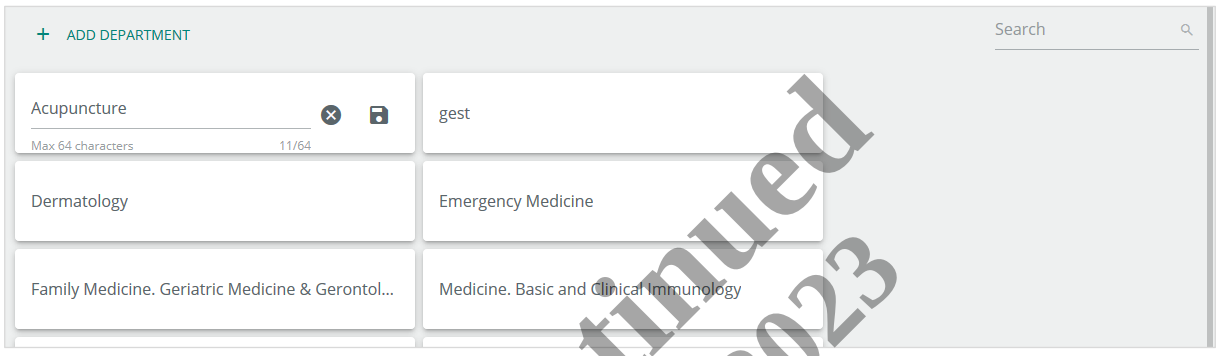
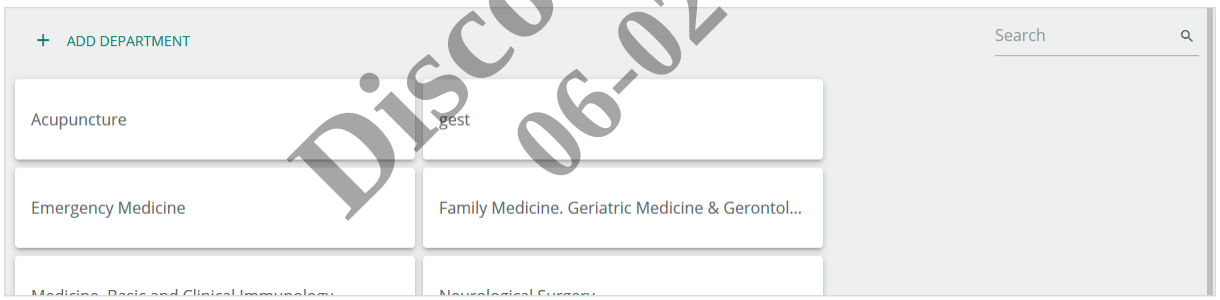
5.2 – Filtering and Searching

When viewing the Departments page, you can use a search to limit the Departments shown.

5.3 – Department Management – A Walk-Through

This walk-through follows a fictional user, Josef, as he works with the Depts page to create and edit Departments.

Phase	Description
1	Josef navigates to the Depts page and sees the grid of configured Departments. ***RESULT*** 
2	The first change Josef wants to make is to change the name of the Neurology Department, so he searches for “neuro”. This reduces the grid to just two items, and he clicks **Neurology** to open the Details panel. ***RESULT*** 
3	Josef clicks **Edit** to continue, and then changes the Department name to “Neurology and Brain Injury”. ***RESULT*** 

Phase	Description
4	Josef clicks **Save** to apply his change and sees that the Department name has been modified. ***RESULT*** 
5	Next, Josef needs to add a new Department. He clicks **+ Add Department**, and then enters “Acupuncture” as the Department name. ***RESULT*** 
6	Josef clicks 💾 to create the new Department, which then appears in the grid. ***RESULT*** 
7	Josef clicks ☰ to expand the Cooper menu, and clicks **Logout** to end his Trellix Locate session.

5.4 – Department Procedures

This section includes procedures for using the main features of the Departments page.

5.4.1 – Editing a Department Name

Follow the steps below to edit the name of a Department.

Step	Action
1	Click **Depts**, then select a Department to display the Details panel.
2	Click **Edit**, and then edit the Name field.
3	Click **Save**.

5.4.2 – Adding a New Department

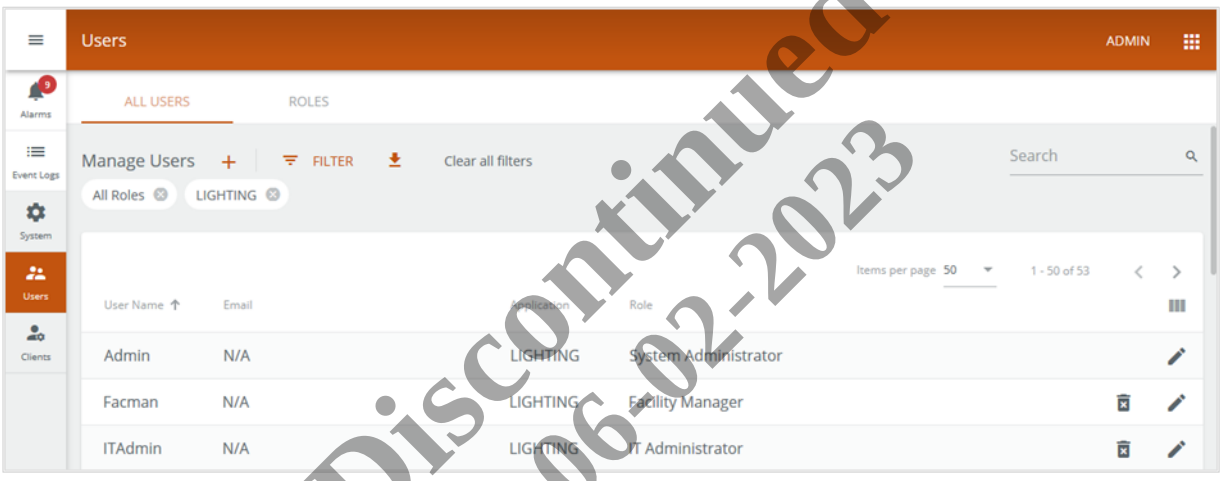
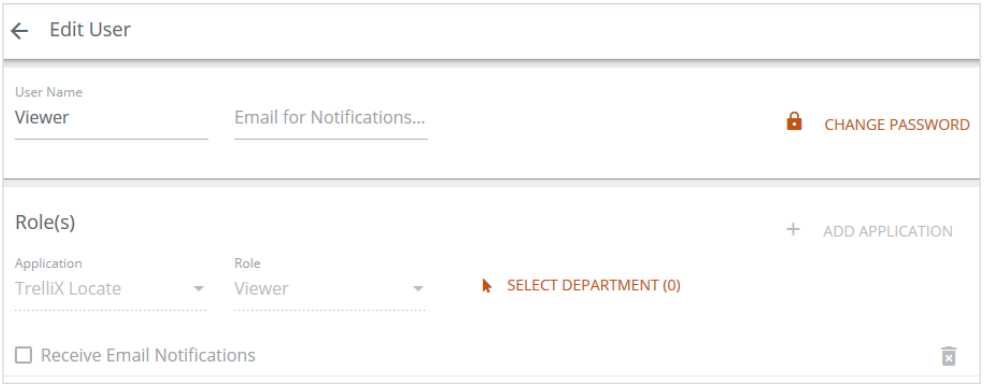
Follow the steps below to add a new Department.

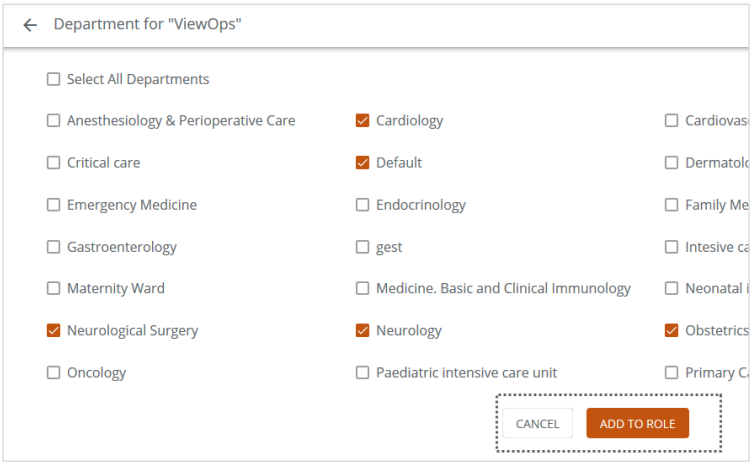
Step	Action
1	Click **Depts**, and then click **+ Add Department**.
2	Edit the Department name, and then click to create the new Department, or click to cancel.

5.4.3 – Assigning Departments of Responsibility

As described in *System Access - Accounts, Roles, and Departments*, the Assets visible to a user depend in part on the Departments assigned to them. Follow the steps below to view and modify the Departments assigned to a user.

NOTE
You must have System Administrator privileges to perform this procedure.

Step	Action
1	Click to display the app menu, then click **Trellix Admin**, and then click **Users**. Click **Filter**, then select the **Trellix Locate** checkbox under Applications, and then click **Apply Filters**. ***EXAMPLE*** 
2	Click beside the user account you want to access. ***EXAMPLE*** 

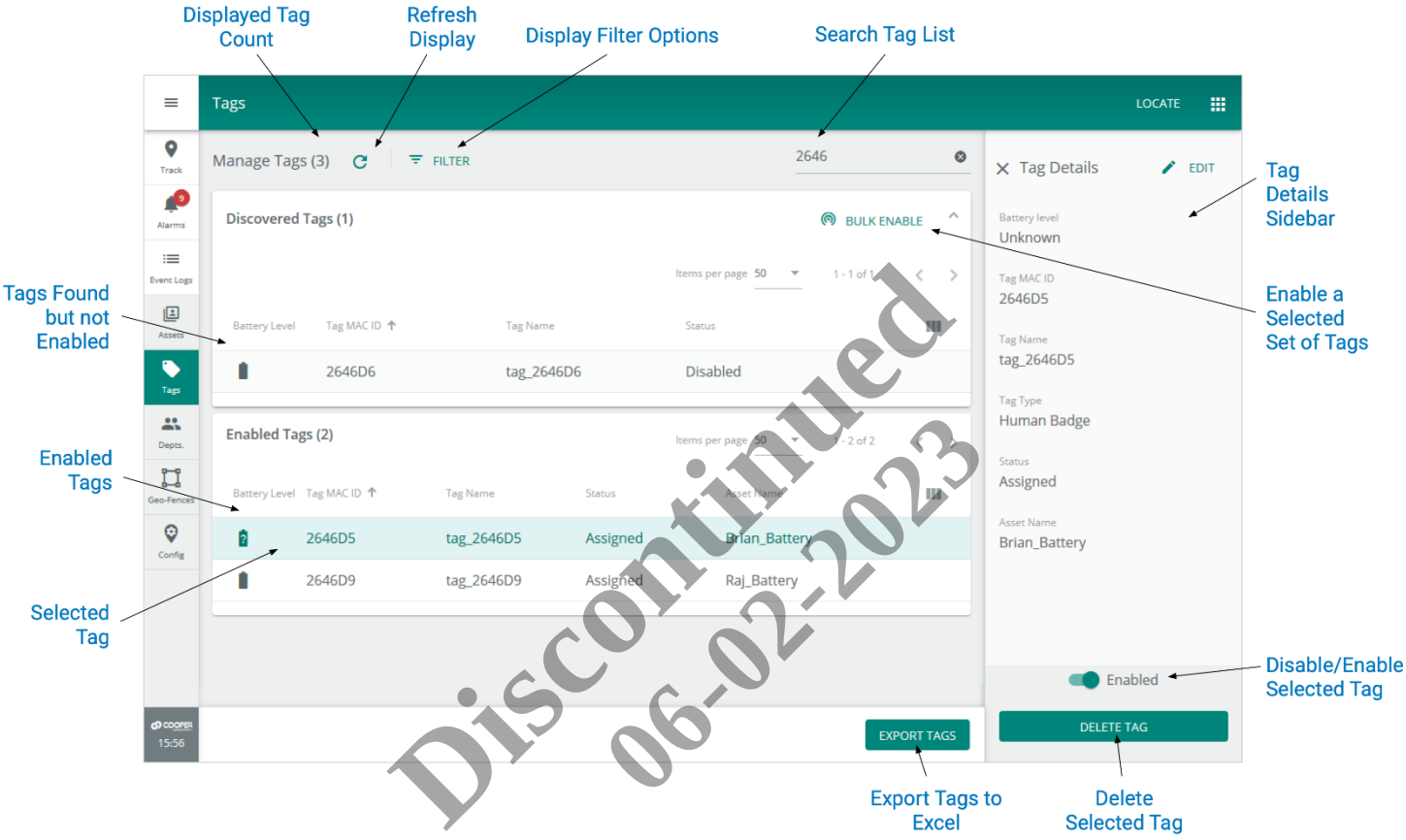
Step	Action
3	Click **Select Department**, and then select all Departments that this user will be able to view. ***EXAMPLE*** 
4	Click **Add to Role** (shown inset above), and then click **Update**.

6 – Tag Management

This chapter describes the features available under **Tags** in the Cooper menu.

6.1 – The Tags Page

The Tags page is shown below. A search string has been applied (“2646”) and one of the matching Tags has been selected, causing the Details panel to appear.

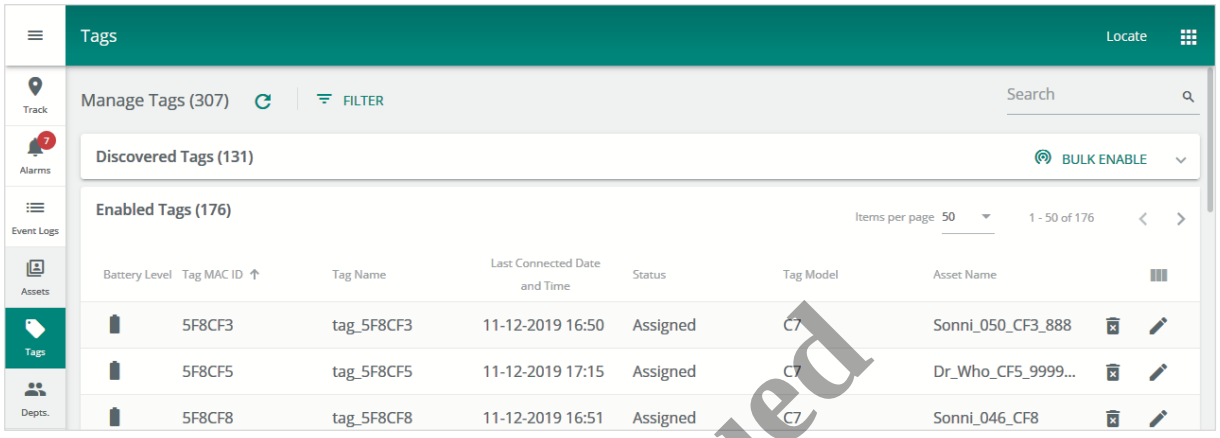
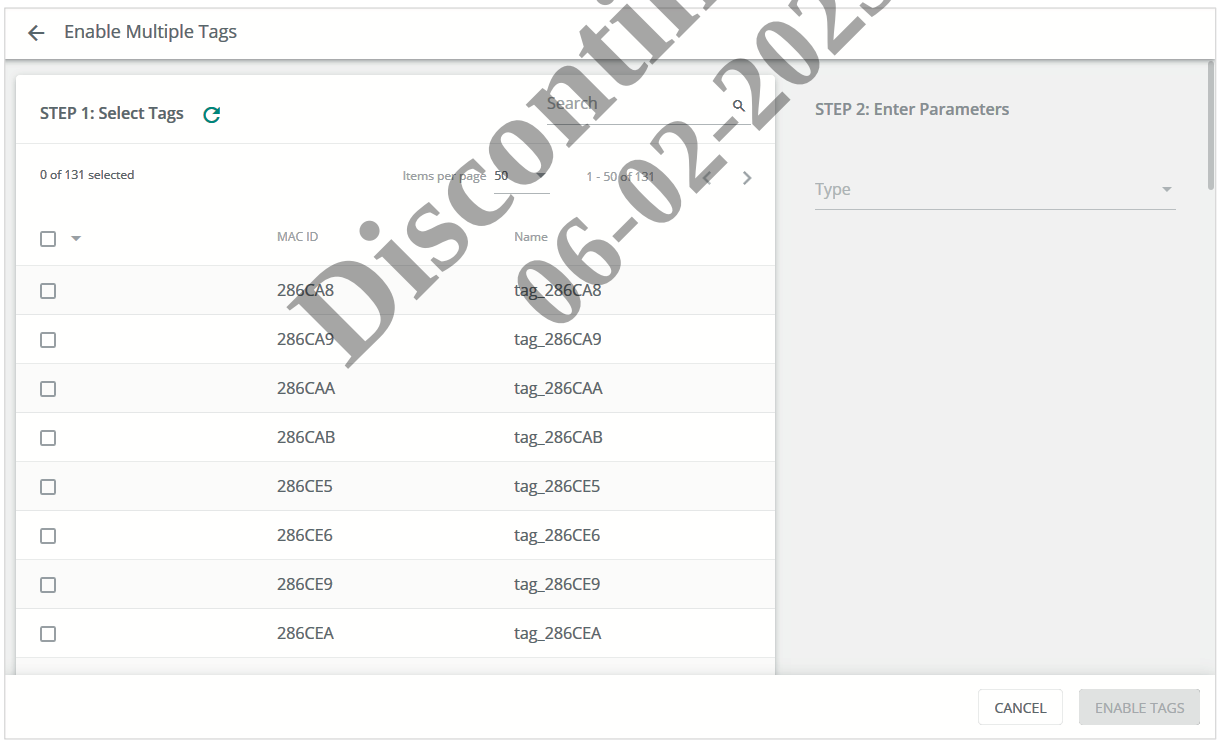


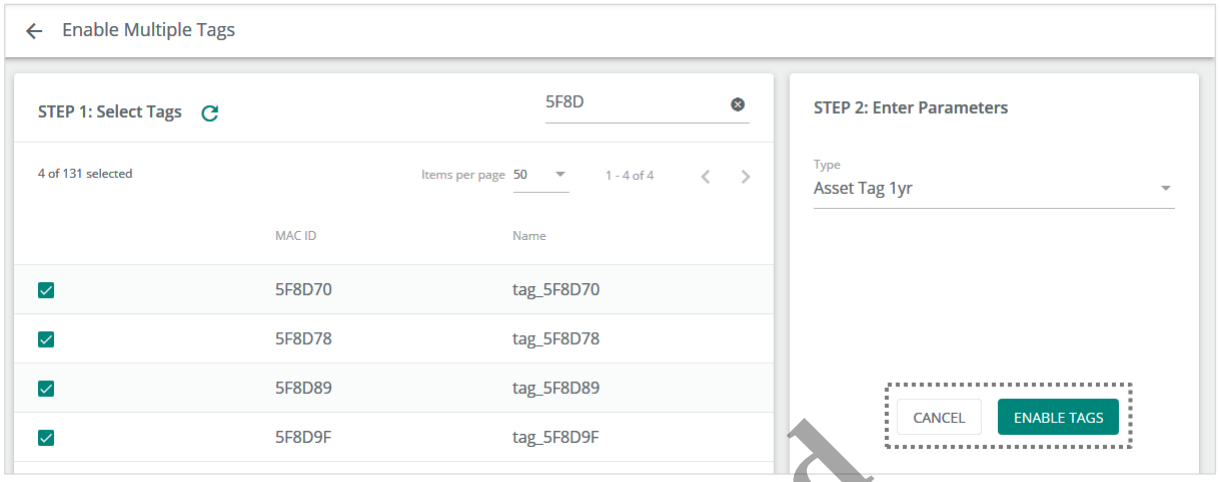
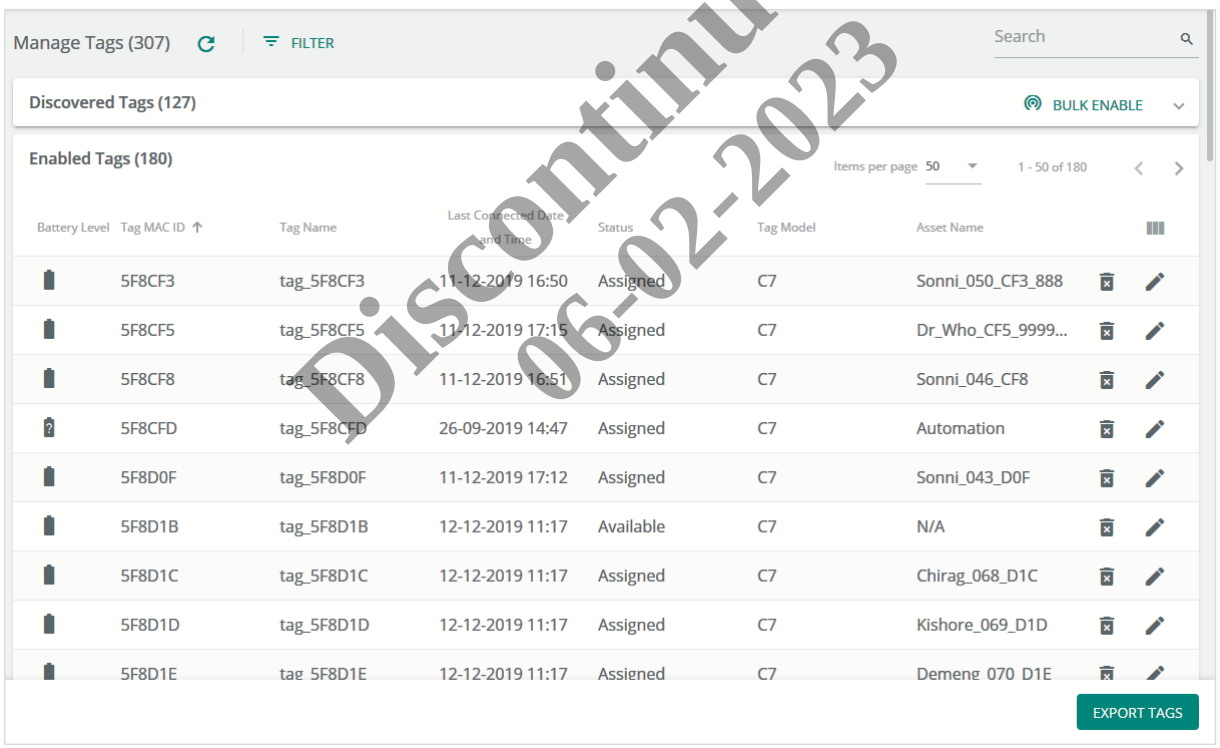
6.2 – Departments and Asset Visibility

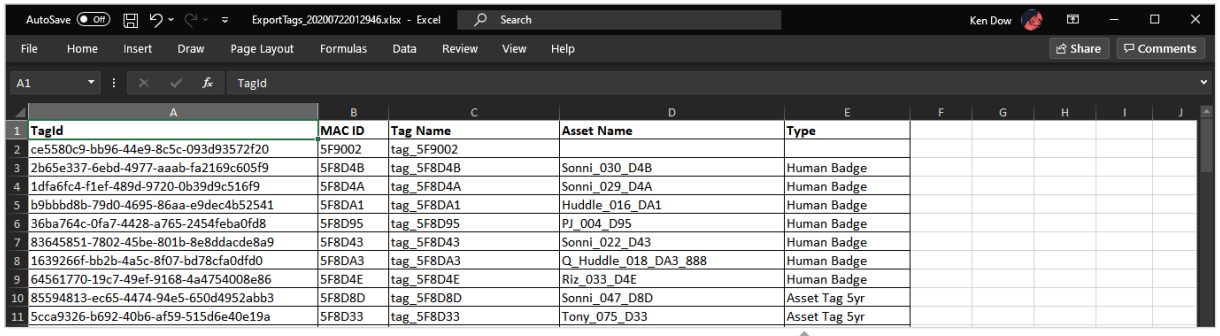
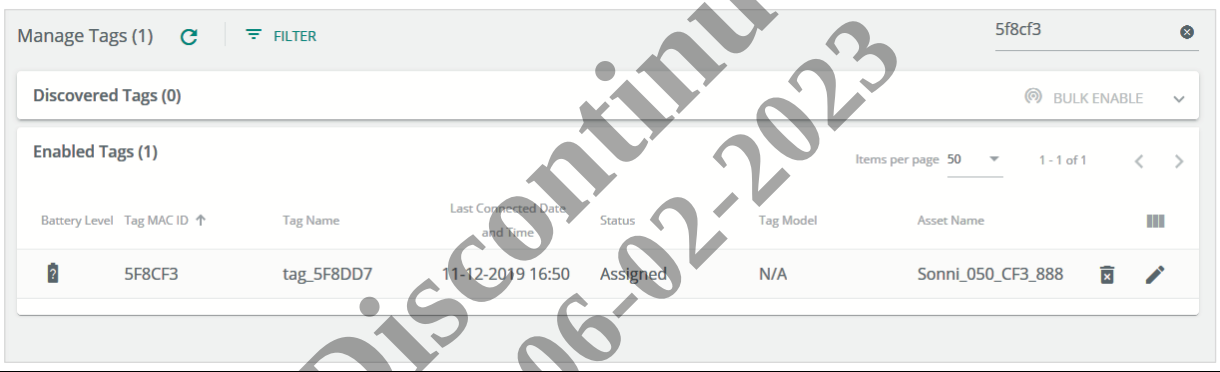
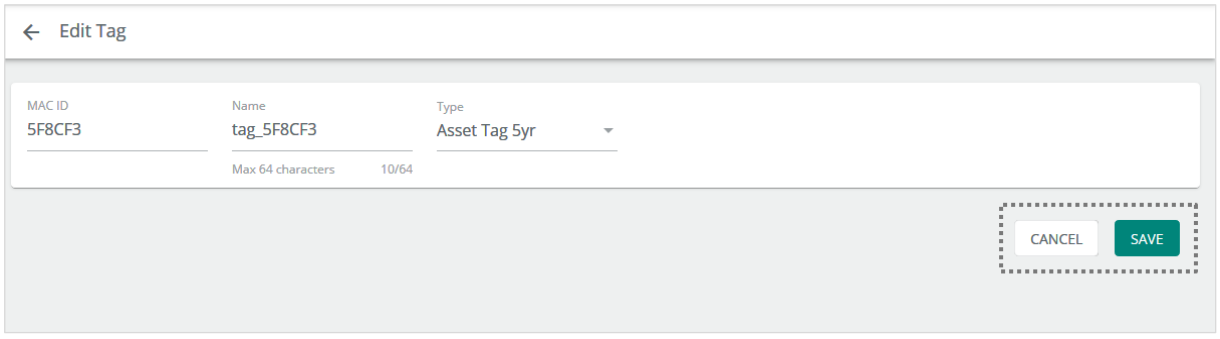
When viewing the Tags page, the displayed Tags assigned to Assets are always limited to those in Departments that are assigned to you. Tag display assumes the Tags have been set up using the Tag Configuration App, are powered on, and are in the vicinity of sensors with location enabled.

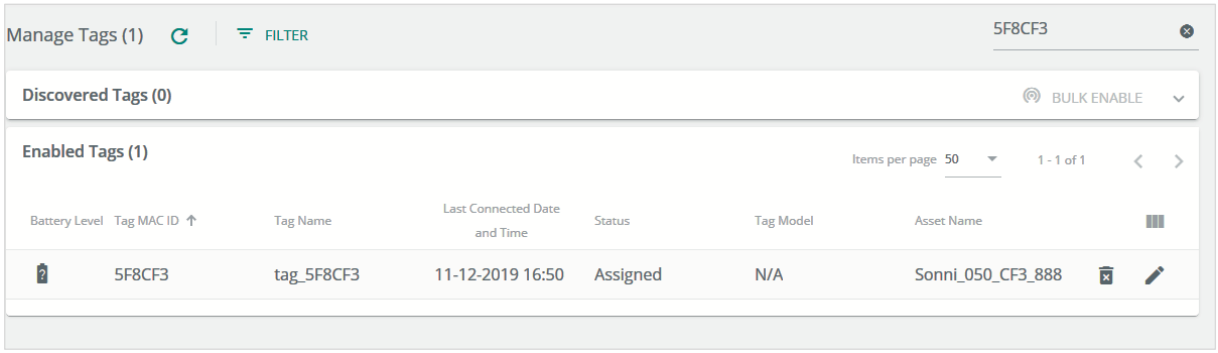
6.3 – Tag Management – A Walk-Through

This walk-through follows a fictional user, Lena, as she works with the Tags page to enable new Tags that have been discovered,

Phase	Description
1	Lena navigates to the Tags page and sees the list of 307 Tags, divided into 176 **Enabled Tags** and 131 **Discovered Tags** (not enabled). ***RESULT*** 
2	Lena has been given a list of **Discovered Tags** to enable, so she clicks **Bulk Enable**. ***RESULT*** 

Phase	Description
3	Lena selects all but one of the Tags, and then she selects **Asset Tag 1yr** for the Type (of Tag). ***RESULT*** 
4	Lena clicks **Enable Tags** (shown inset above), and the selected Tags are enabled. ***RESULT*** 

Phase	Description
5	A third-party request has been approved to receive a complete list of the Tags for application development. Lena clicks **Export Tags** on the Tags page, which generates a file named “ExportTags_20190929073224.xlsx”. Lena chooses to open the exported file in Excel when prompted and reviews the spreadsheet content before sending it to the third-party developers. ***RESULT***  AutoSave Off ExportTags_20200722012946.xlsx - Excel Search Ken Dow File Home Insert Draw Page Layout Formulas Data Review View Help Share Comments A1 TagId TagId, MAC ID, Tag Name, Asset Name, Type ce5580c9-bb96-44e9-8c5c-093d93572f20, 5F9002, tag_5F9002, 2b65e337-6ebd-4977-aaab-fa2169c605f9, 5F8D4B, tag_5F8D4B, Sonni_030_D4B, Human Badge 1dfa6fc4-f1ef-489d-9720-0b39d9c516f9, 5F8D4A, tag_5F8D4A, Sonni_029_D4A, Human Badge b9bbbd8b-79d0-4695-86aa-e9dec4b52541, 5F8DA1, tag_5F8DA1, Huddle_016_DA1, Human Badge 36ba764c-0fa7-4428-a765-2454feba0fd8, 5F8D95, tag_5F8D95, PJ_004_D95, Human Badge 83645851-7802-45be-801b-8e8ddacde8a9, 5F8D43, tag_5F8D43, Sonni_022_D43, Human Badge 1639266f-bb2b-4a5c-8f07-bd78cfa0dfd0, 5F8DA3, tag_5F8DA3, Q_Huddle_018_DA3_888, Human Badge 64561770-19c7-49ef-9168-4a4754008e86, 5F8D4E, tag_5F8D4E, Riz_033_D4E, Human Badge 85594813-ec65-4474-94e5-650d4952abb3, 5F8D8D, tag_5F8D8D, Sonni_047_D8D, Asset Tag 5yr 5cca9326-b692-40b6-af59-515d6e40e19a, 5F8D33, tag_5F8D33, Tony_075_D33, Asset Tag 5yr
6	Lena has another request to correct the name of an unassigned Tag that was set up incorrectly. She searches for the MAC ID provided (“5F8CF3”) and quickly finds the Tag. Lena notes that the **Tag Name** does not correspond to the **Tag MAC ID** as required by site policy. ***RESULT***  Manage Tags (1) FILTER 5f8cf3 Discovered Tags (0) BULK ENABLE Enabled Tags (1) Items per page 50 1 - 1 of 1 Battery Level, Tag MAC ID, Tag Name, Last Connected Date and Time, Status, Tag Model, Asset Name 5F8CF3, tag_5F8DD7, 11-12-2019 16:50, Assigned, N/A, Sonni_050_CF3_888
7	To edit the Tag, Lena clicks ✎, then edits the **Name** to “tag_5F8CF3” to align with the MAC ID. ***RESULT***  Edit Tag MAC ID 5F8CF3 Name tag_5F8CF3 Max 64 characters 10/64 Type Asset Tag 5yr CANCEL SAVE

Phase	Description
8	Lena clicks **Save** (shown inset above) and then searches the Tags again to confirm the change. ***RESULT*** 
9	Lena clicks ☰ to expand the Cooper menu, and clicks **Logout** to end her Trellix Locate session.

6.4 – Tag Procedures

This section includes procedures for using the main features of the Tags page.

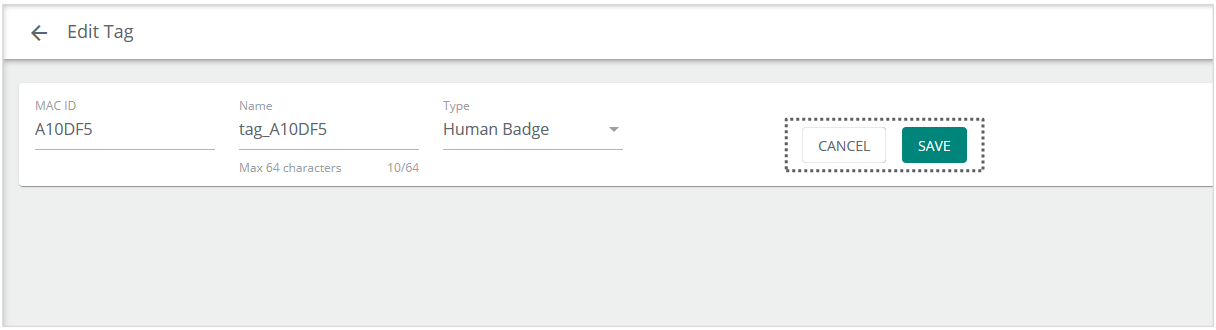
6.4.1 – Filters, Sorts, and Searches

The features that apply specifically to the Tags page are listed and described below.

Feature	Description
Filtering	The Asset Management filters support the standard Building, Floor, Department, Category (Object or People), and Category Type filters.
Sorting	• The Discovered Tags list supports sorting by **Tag MAC ID** and **Tag Name**. • The Enabled Tags list supports searching of the **Name**, **Asset ID**, **Asset Type**, and **Tag MAC ID** fields.
Simultaneous Search	A search returns results for both the **Discovered Tags** and **Enabled Tags** lists.

6.4.2 – Editing a Tag

Follow the steps below to edit the Tag data.

Step	Action
1	Click **Tags**, and then apply the necessary combination of filters and search to find the Tag you want edit.
2	Click ✎ for the Tag. ***EXAMPLE*** 
3	Edit the **Name**, then select the **Type**, and click **Save** (shown inset above).

6.4.3 – Enabling and Disabling a Tag

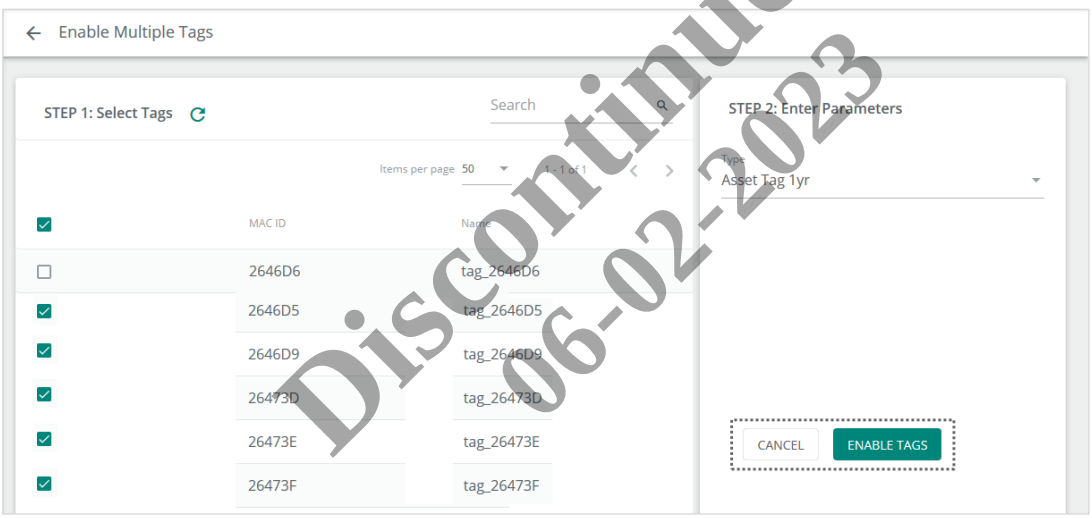
Follow the steps below to enable or disable a Tag.

NOTE
The number of Tags that can be enabled is limited by your license. You will be prompted if you try to exceed that limit.

Step	Action
1	Click **Tags**, and then apply the necessary combination of filters and search to find the Tag you want edit.
2	Click the Tag row to display the Tag Details panel, and then toggle the **Enabled** button to the desired state**.**

6.4.4 – Bulk Enabling a Set of Tags

Follow the steps below to bulk enable a set of Tags.

Step	Action
1	Click **Tags**, and then click **Bulk Enable**. ***NOTE*** *The **Bulk Enable** button will be unavailable if there are no Discovered Tags.*
2	Apply any filters or search needed to limit the number of Discovered Tags displayed, and then select the checkbox for each Tag you want to enable. Select the Type that will apply to all the Tags you are about to enable. ***EXAMPLE*** 
3	Click **Enable Tags** (shown inset above).

6.4.5 – Exporting Tag Data

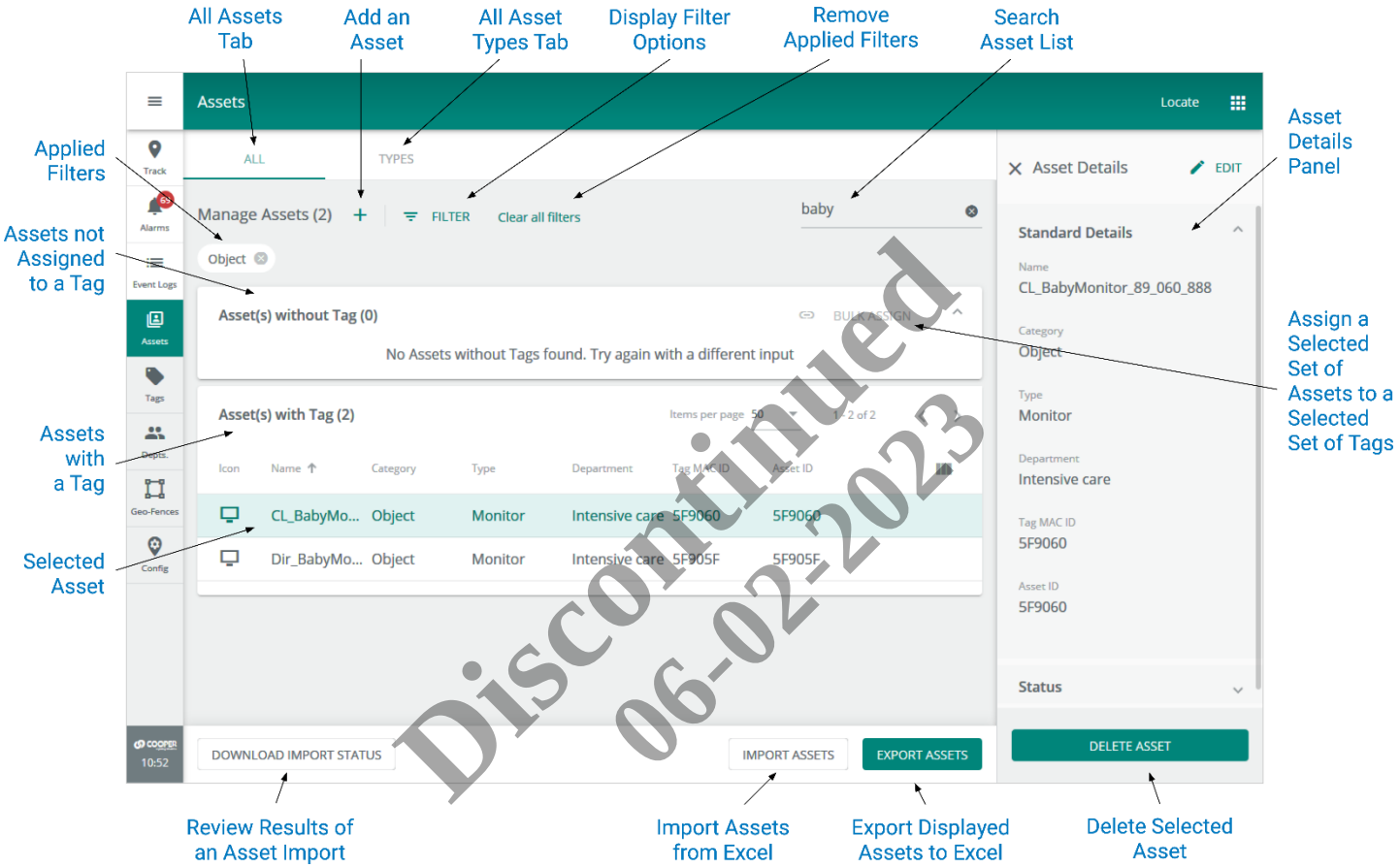
To export Tag data to an Excel file, click **Tags**, then click **Export Tags**, and then save the file.

7 – Asset Management

This chapter describes the features available under **Assets** in the Cooper menu.

7.1 – The Assets Page

The All tab of the Assets page is shown below with a filtered list of Assets. The list is divided into two groups: Assets that have Tags assigned; and Assets that do not. A search string has been applied (“Office”) and one of the listed Assets has been selected, causing the Asset Details panel to appear.

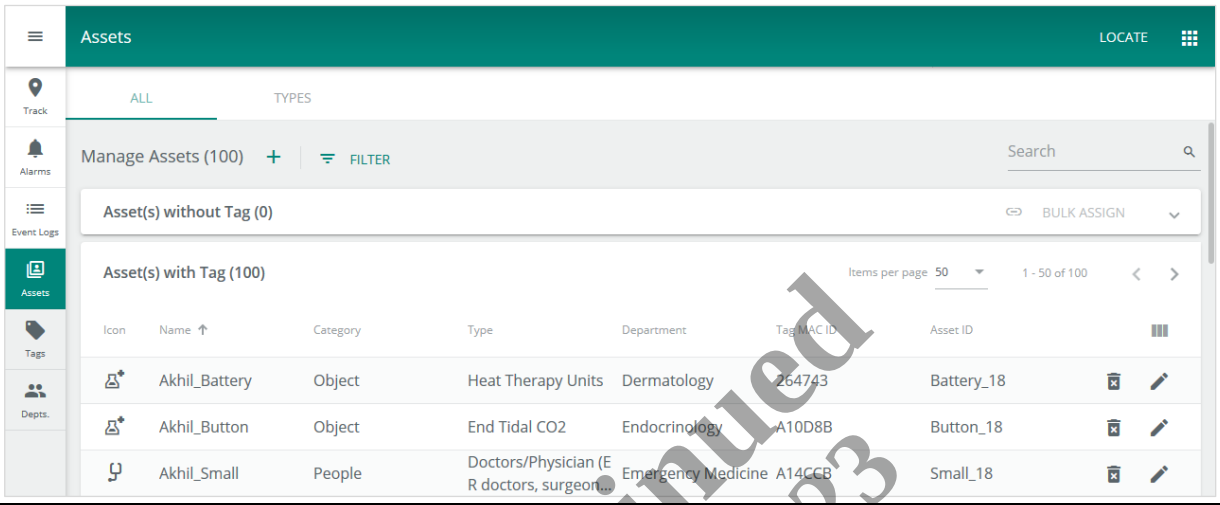


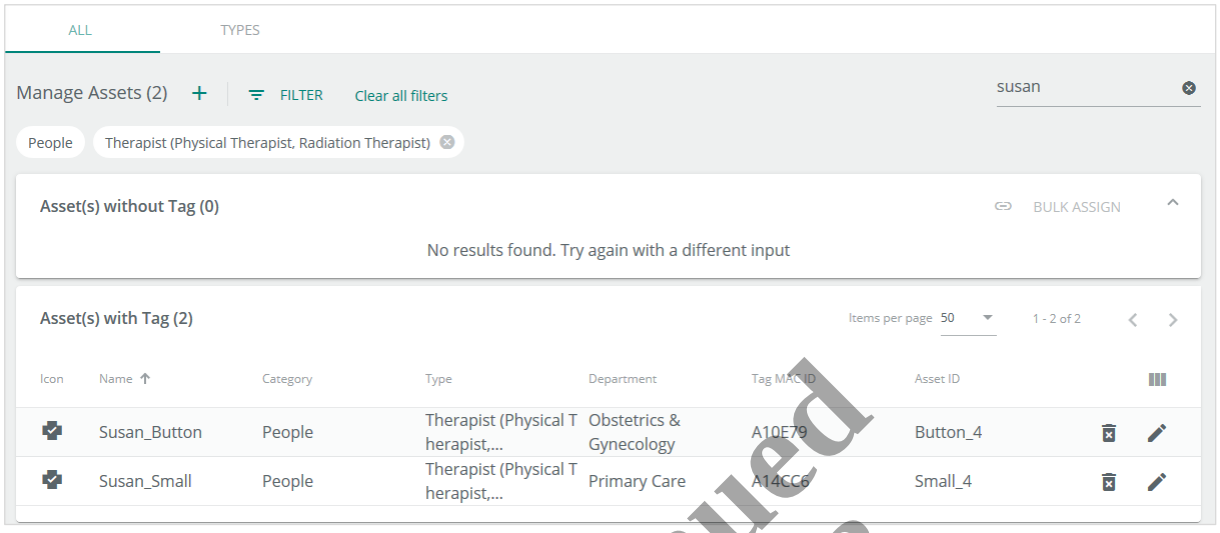
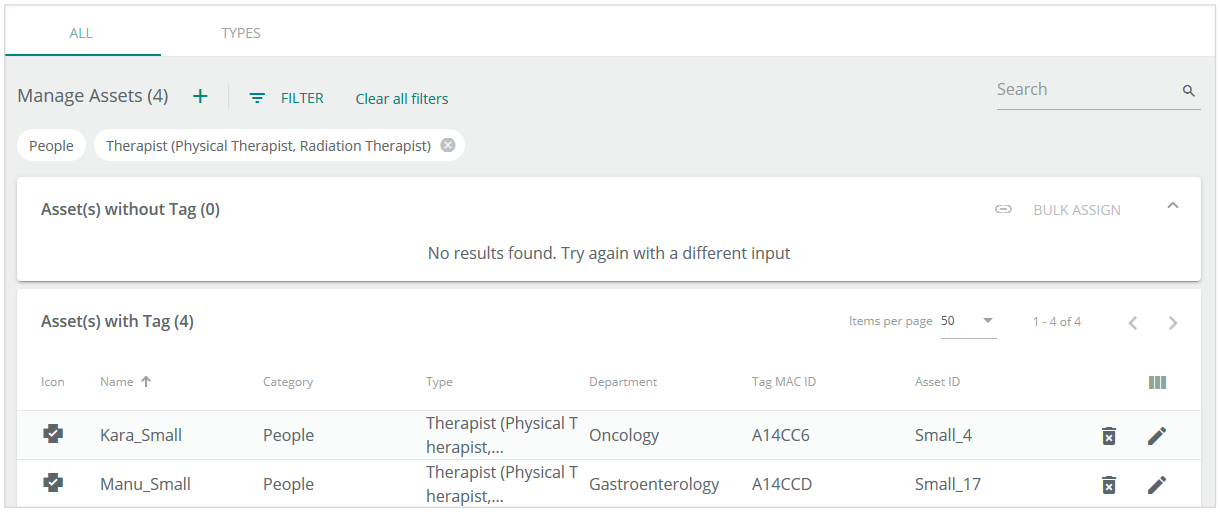
7.2 – Departments and Asset Visibility

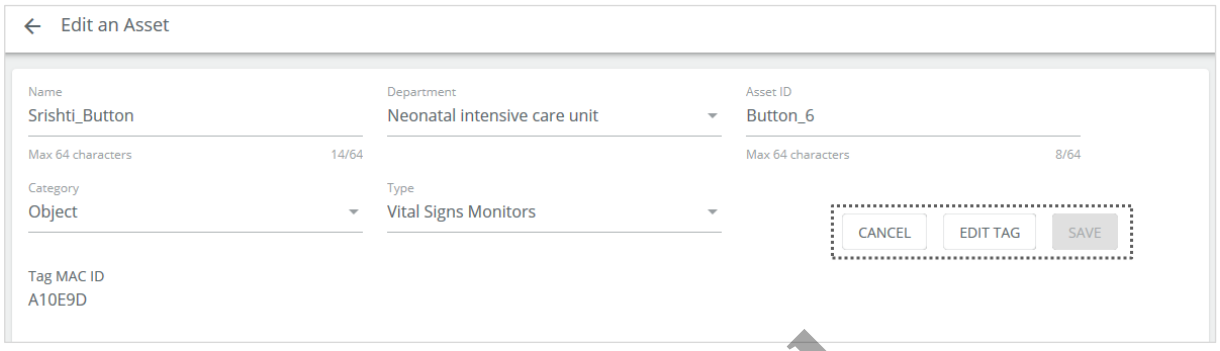
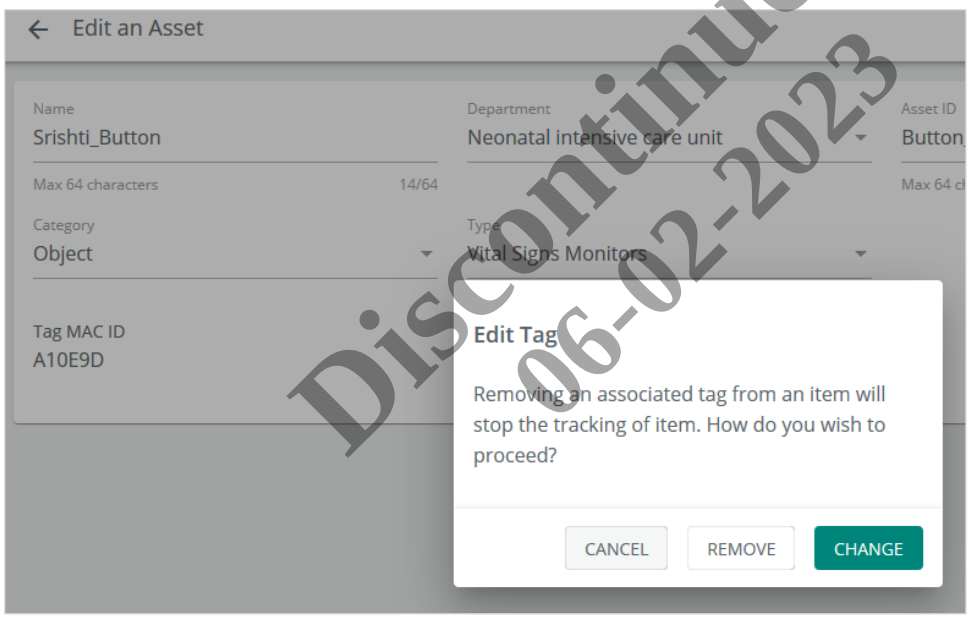
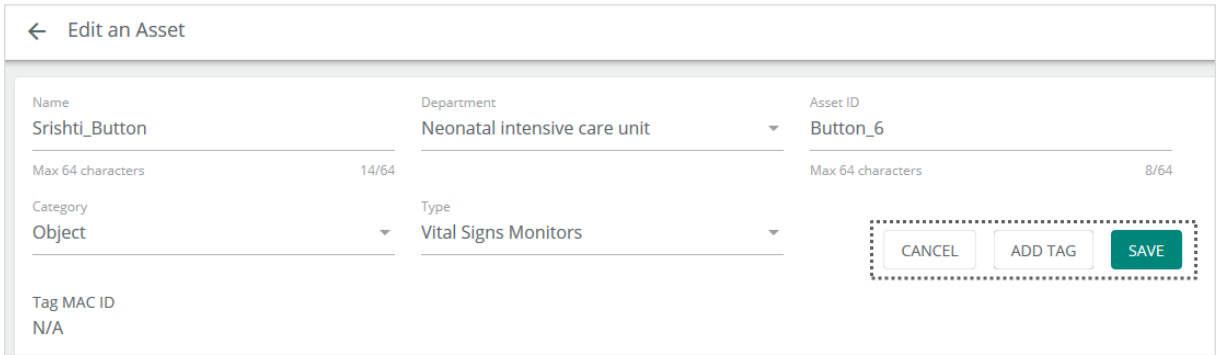
When viewing the Assets page, the Assets shown are always limited to those in Departments that are assigned to you. In addition, you can apply a combination of filters and a search to narrow down the displayed Assets.

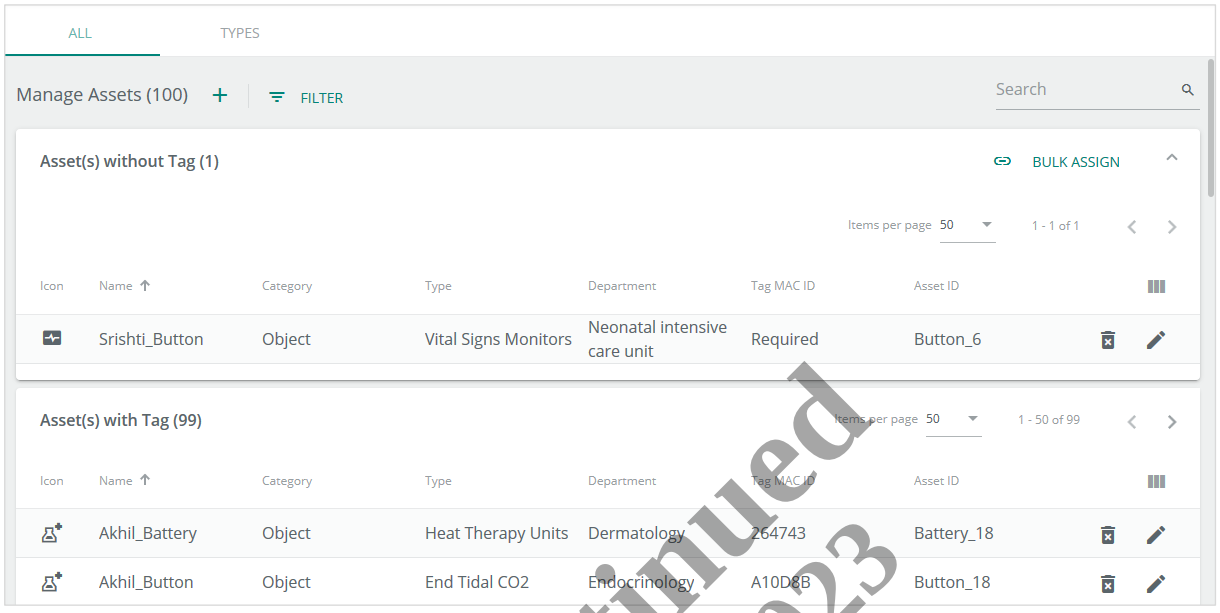
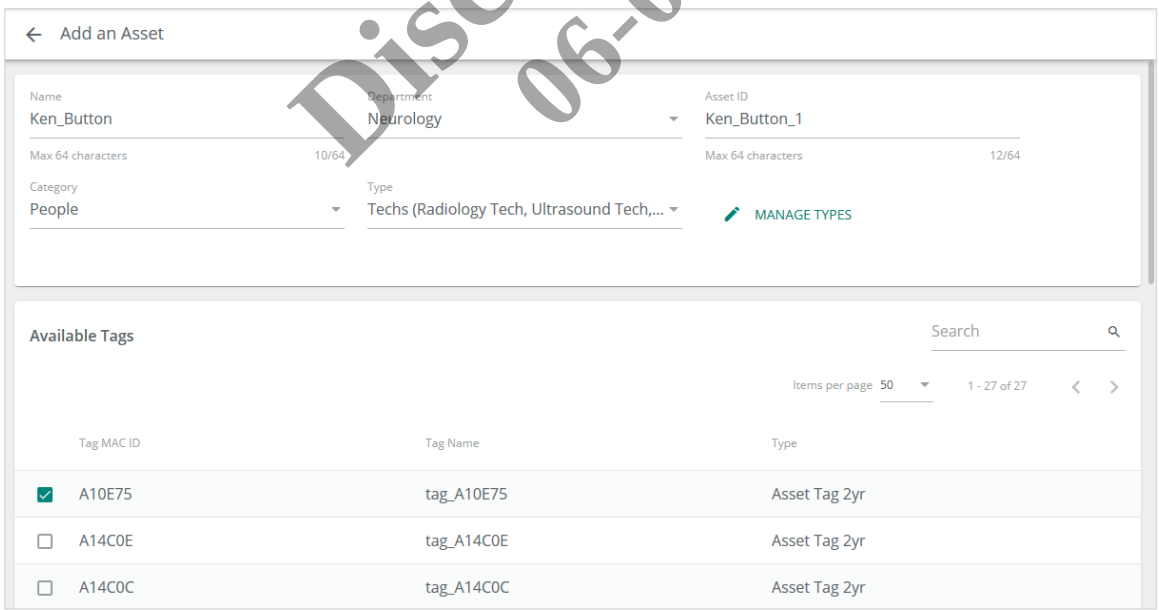
7.3 – Asset Management – A Walk-Through

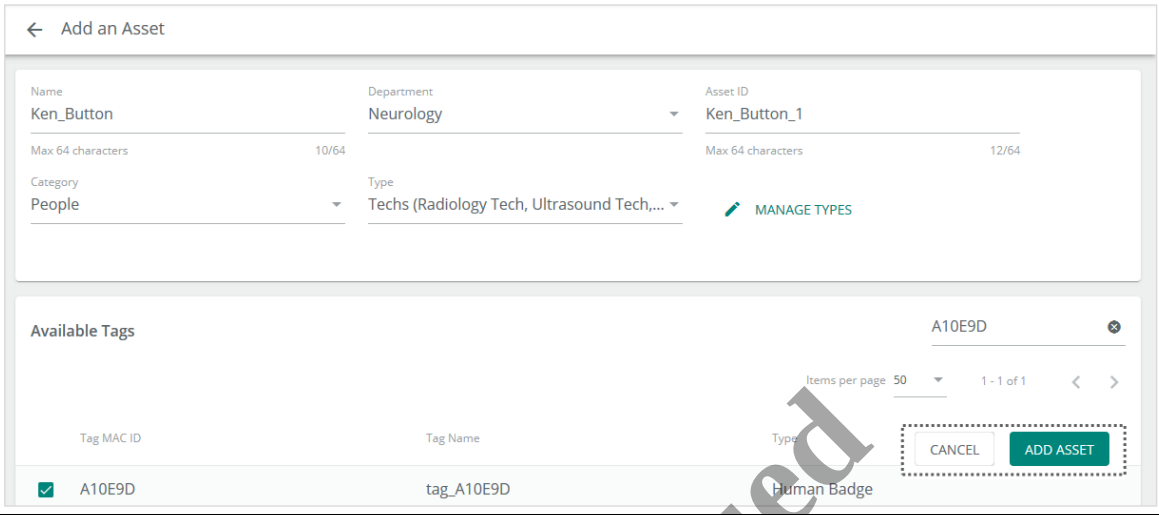
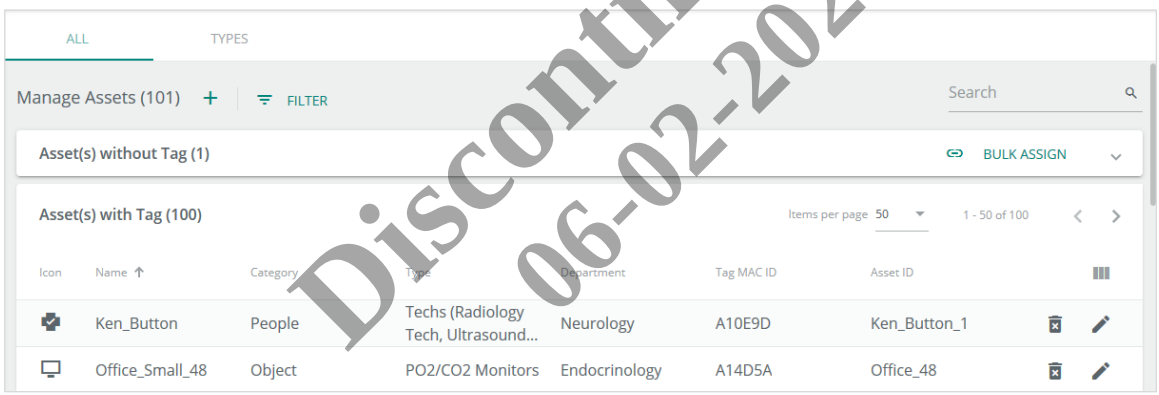
This walk-through follows a fictional user, Sam, as he works with the Assets page to edit an existing Asset, create a new Asset, and transfer a Tag from an Asset that no longer needs to be tracked.

Phase	Description
1	Sam navigates to the Assets page and sees the list of Assets, grouped according to whether they have Tags assigned or not. ***RESULT*** 
2	To limit the number of assets shown, Sam clicks **Filters**, then selects **People** from the Category list, and then clicks the **Therapist** checkbox. ***RESULT*** 

Phase	Description
3	Sam clicks **Apply Filters** but finds there are still too many matching Assets, so he enters “susan” in the Search box and clicks 🔍. The Assets with Tag list now only shows those containing “susan” in the Name, Tag MAC ID, or Asset ID fields. Sam now sees the “Susan_Small” asset he was trying to find. ***RESULT*** 
4	To rename this asset, Sam clicks ✎. When the editing form appears, he changes the **Name** to “Kara_Small” and selects **Oncology** in the Departments list. ***RESULT*** 
5	Sam clicks **Save** (shown inset above) and is returned to the Assets page. He applies the **Therapists** filter again and finds “Kara_Small” at the top of the list, as expected. ***RESULT*** 

Phase	Description
6	The next task for Sam is to remove a button Tag from someone who no longer needs it, and then assign it to a new person. Transferring a Tag between Assets instead of enabling a new one helps keep the organization within their 1000 Tag license limit. Sam searches the Assets list and sees the Tag is currently assigned to the “Srishti_Button” Asset. He clicks ✎ in that row and, knowing he will need the Tag MAC ID later (“A10E9D”), makes a note of it. ***RESULT*** 
7	Sam clicks **Edit Tag** (shown inset above) and sees the prompt below. The default option is **Change**, which permits editing the Tag settings while keeping it assigned to the current person (Asset). ***RESULT*** 
8	Sam wants to stop tracking the current “Srishti_Button” Asset, so he clicks **Remove**. When the operation is complete, the **Tag MAC ID** field shows “N/A”, and the **Edit Tag** button has changed to **Add Tag** (shown inset below). ***RESULT*** 

Phase	Description
9	Sam clicks **Save** to apply the Tag removal change. The Assets page now shows “Srishti_Button” under **Assets without Tag**, confirming the first step of his Tag transfer operation. Sam notes that the **Bulk Assign** link is now active because at least one Asset does not have a Tag assigned. ***RESULT*** 
10	To create the new Asset that will assume the unassigned Tag, Sam clicks **+** beside **Manage Assets**. He enters the **Name**, selects **Neurology** from the **Department** list, and then enters an **Asset ID**. Finally, he selects **People** from the **Category** list, and selects **Techs (Radiology)** from the **Type** list. At that point, the **Available Tags** list appears with a list of the Tags that can be assigned to this new Asset. By default, the first Tag is selected but Sam wants to use the one he just removed. ***RESULT*** 

Phase	Description
11	Sam enters the MAC ID he noted earlier ("A10E9D") in the **Search** box, and then clicks 🔍. When the search completes, he selects the checkbox beside the matching Tag. ***RESULT*** 
12	When Sam clicks **Add Asset**, the Assets page loads and the new "Ken_Button" Asset appears in the **Assets with Tags** list. He notes that there is still one Asset without a Tag, as expected. ***RESULT*** 
13	Sam clicks ☰ to expand the Cooper menu, and clicks **Logout** to end his Trellix Locate session.

7.4 – Asset Procedures

This section includes procedures for using the main features of the Assets page.

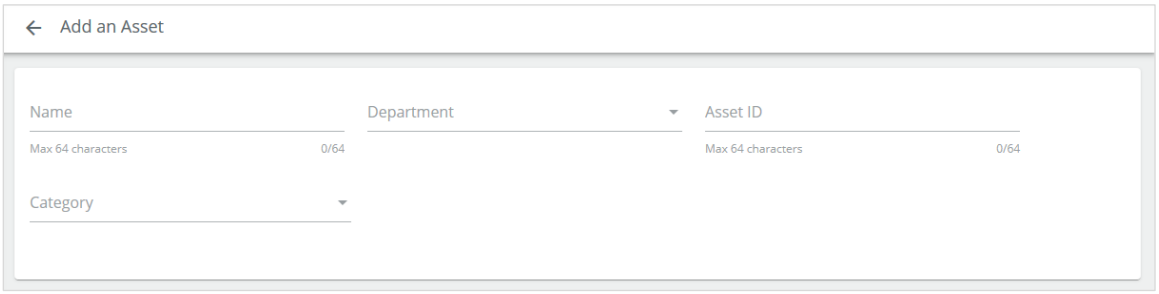
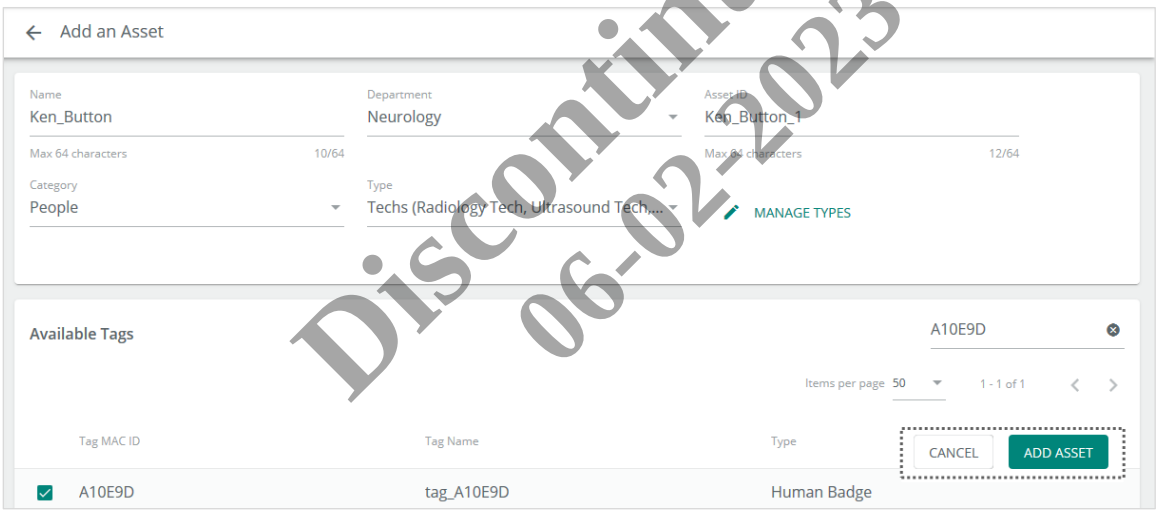
7.4.1 – Filters, Sorts, and Searches

The features that apply specifically to the Assets page are listed and described below.

Feature	Description
Filtering	The Asset Management filters support the standard Building, Floor, Department, Category (Object or People), and Category Type filters.
Sorting	The Assets with Tag and Assets without Tag lists both support searching of the Name, Asset ID, Asset Type, and Tag MAC ID fields.
Simultaneous Search	A search operation returns results for both the Assets with Tag and Assets without Tag lists.

7.4.2 – Adding an Asset

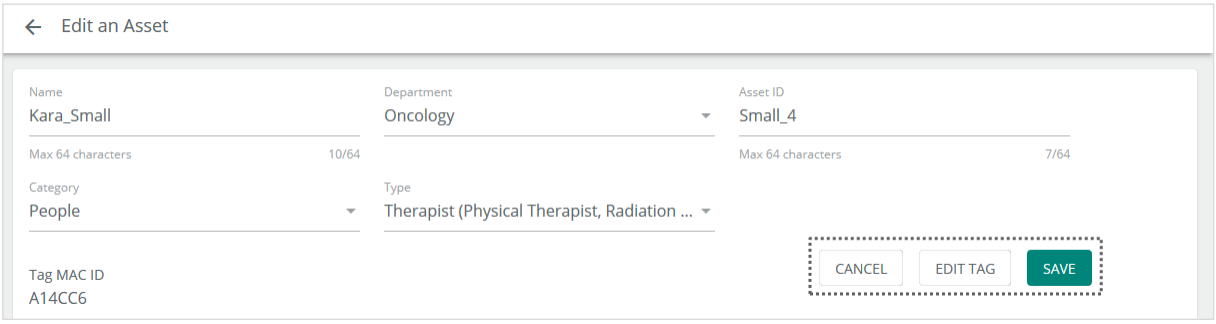
Follow the steps below to add an Asset.

Step	Action
1	Click **Assets**, and then click **+** beside **Manage Assets**. ***RESULT*** 
2	Do the following: • Enter a Name. • Select a Department from the list. • Enter an Asset ID. • Select a Category (**Object** or **People**), and then select a Type. ***RESULT*** 
3	The **Available Tags** list will display Tags that can be assigned to this new Asset. By default, the first Tag is selected. Do the following: • If necessary, apply a search to find the Tag you want to assign. • Select the checkbox for the desired Tag. • Click **Add Asset** (shown inset above).

7.4.3 – Editing the Basic Asset Data

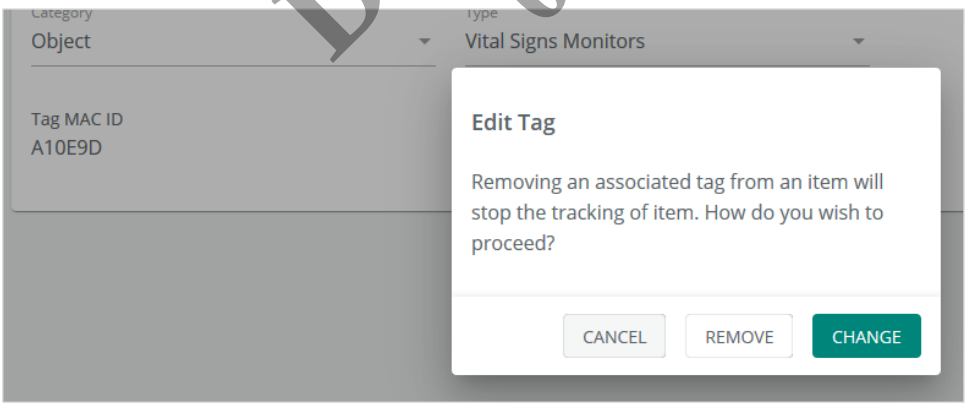
Follow the steps below to edit the basic Asset data.

Step	Action
1	Click **Assets**, and then apply the necessary combination of filters and search to find the Asset you want edit.

Step	Action
2	Click ✎ for the Asset. ***EXAMPLE*** 
3	Do one or more of the following: • Edit the Name. • Select a Department from the list. • Edit the Asset ID. • Select a Category (**Object** or **People**) from the list. • Select a Type from the list. When you have finished your editing, click **Save** (shown inset above).
4	If you modified the Department or Type, the associated Tag will be removed. Edit the Asset again to select the Tag you want to assign.

7.4.4 – Removing a Tag from an Asset

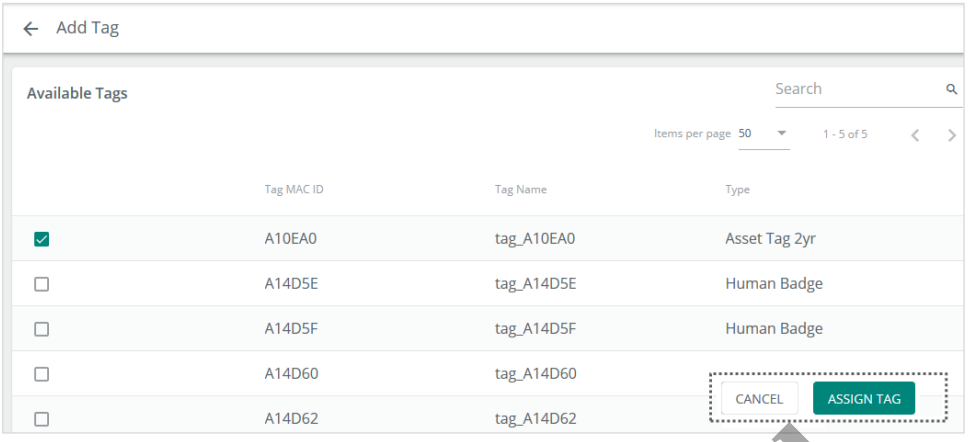
Follow the steps below to remove a Tag from an Asset.

Step	Action
1	Click **Assets**, and then apply the necessary combination of filters and search to find the Tag you want edit.
2	Click ✎ for the Asset, and then click **Edit Tag**. You will be prompted to **Cancel**, **Remove**, or **Change** the Tag assigned to this Asset. ***EXAMPLE*** 
3	Click **Remove**, then confirm that the **Tag MAC ID** shows **N/A**, and then click **Save.**

7.4.5 – Assigning a Tag to an Asset

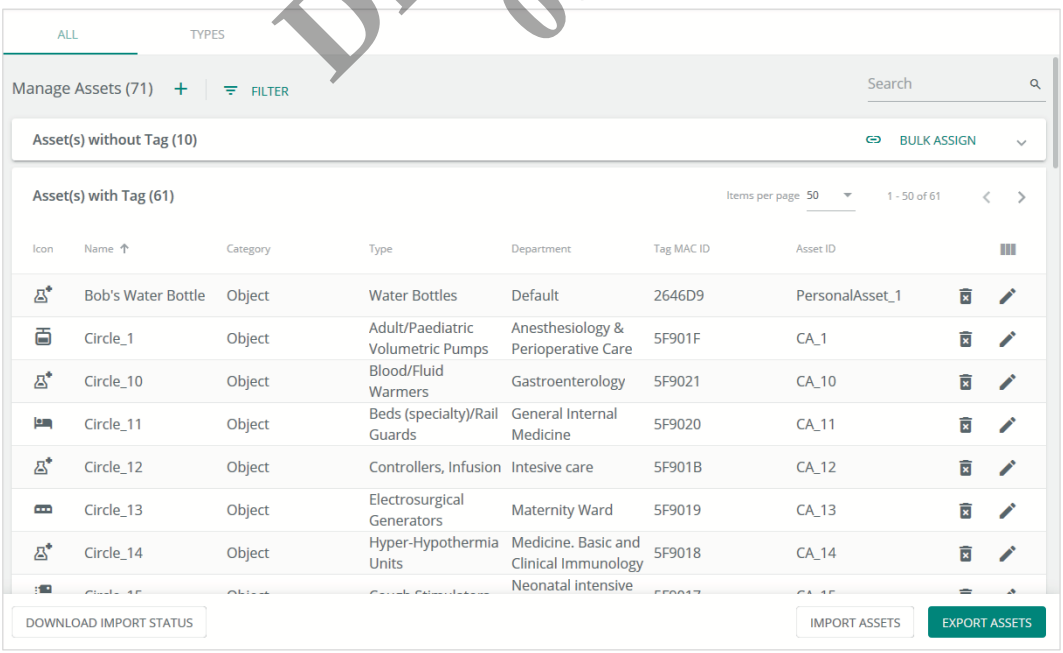
Follow the steps below to assign a Tag to an Asset.

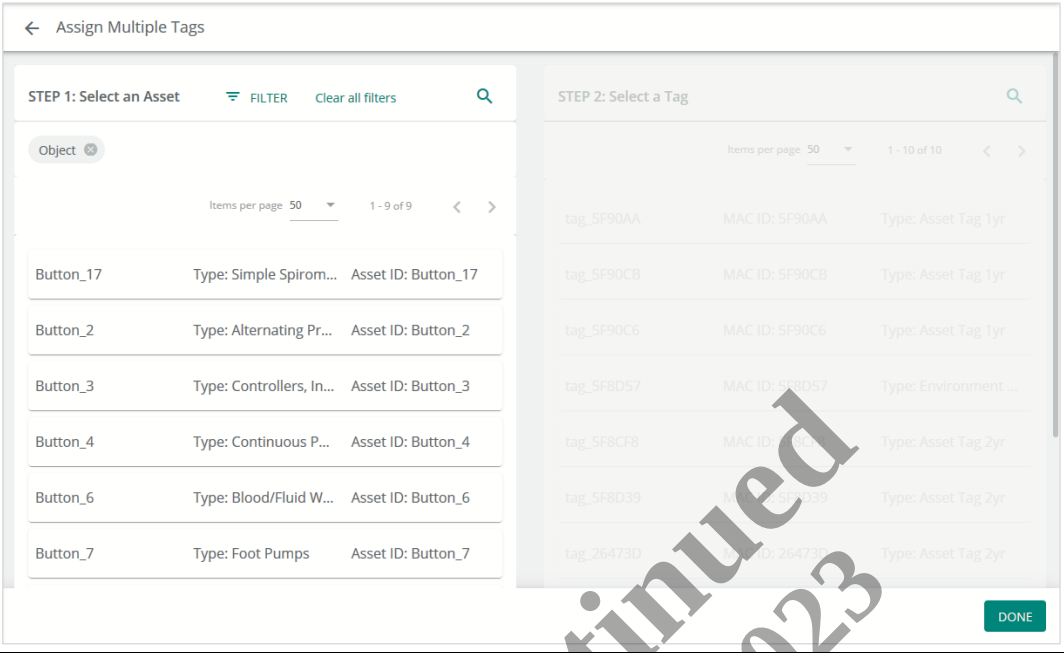
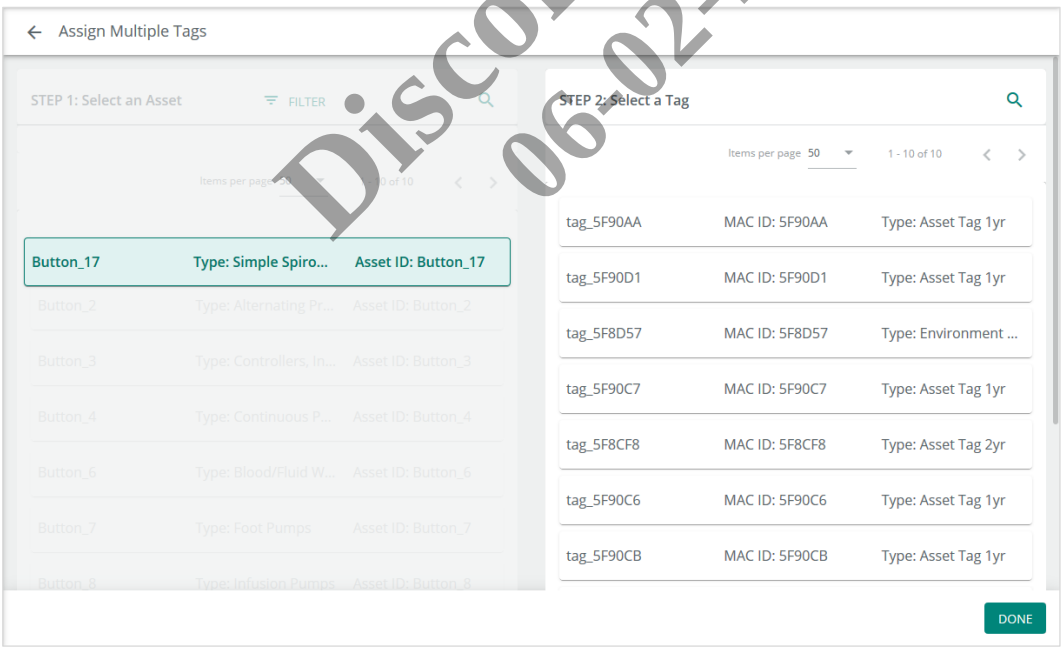
Step	Action
1	Click **Assets**, and then expand the Assets without Tags section of the Manage Assets list. ***TIP*** *You can apply combination of filters and search to limit the number of Assets displayed.*

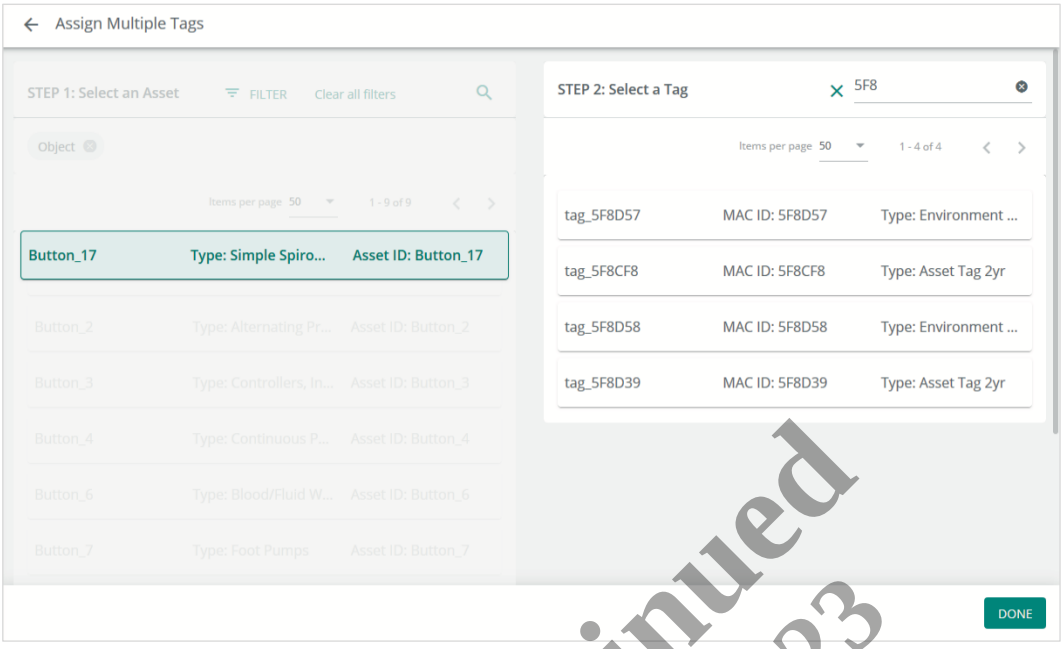
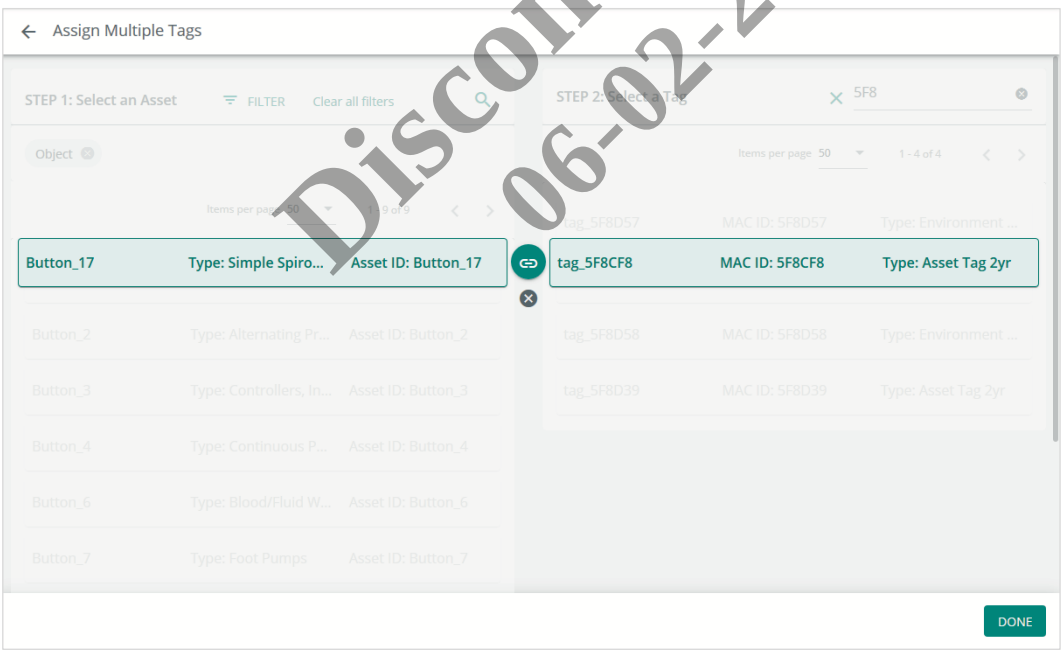
Step	Action
2	Click the **Asset**, then click **Edit**, and then click **Add Tag.** ***EXAMPLE*** 
3	The **Available Tags** list will display the Tags that can be assigned to this Asset. By default, the first Tag is selected. Do the following: • If necessary, apply a search to find the Tag you want to assign. • Select the checkbox for the desired Tag. • Click **Assign Tag** (shown inset above).

7.4.6 – Bulk Assigning Tags to Assets

Follow the steps below to bulk assign a set of Tags to Assets.

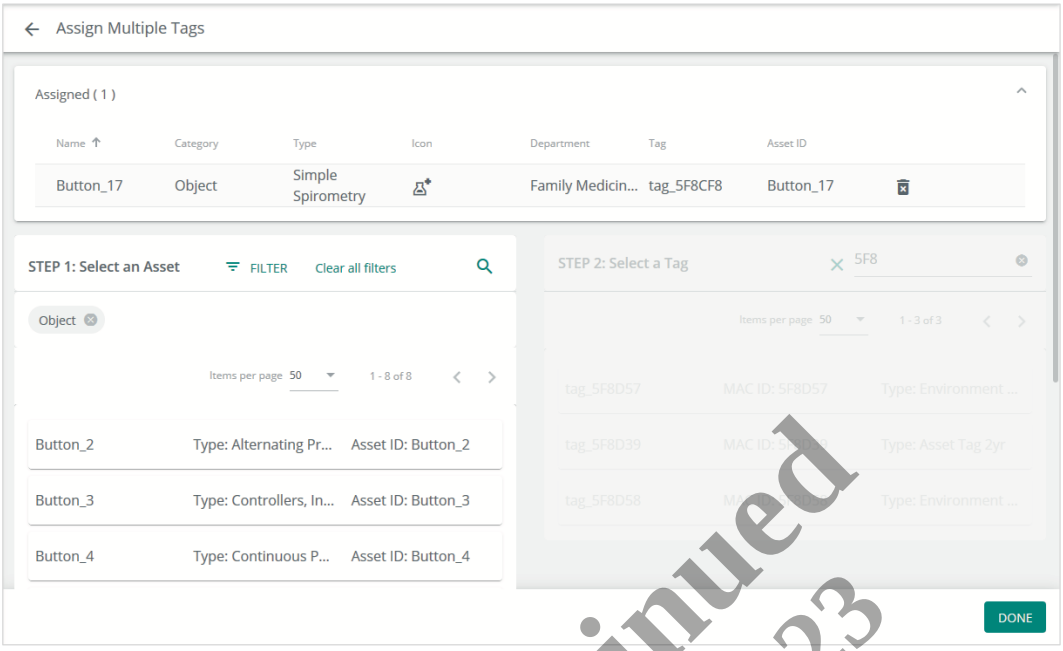
Step	Action
1	Click **Assets**. ***NOTE*** *The Bulk Assign link will be unavailable if there are no Assets without a Tag assigned.* ***EXAMPLE*** 

Step	Action
2	Click **Bulk Assign**. If necessary, apply the appropriate combination of Filters and Search to find the Assets you are interested in. ***EXAMPLE*** 
3	Select an Asset on the left. ***EXAMPLE*** 

Step	Action
4	If necessary, enter a Search string to limit the Tags displayed on the right. ***EXAMPLE*** 
5	Select the target Tag on the right. ***EXAMPLE*** 

Step	Action
6	Click to assign the Tag. Each Asset-Tag assignment you create will appear in an **Assigned** section near the top.

EXAMPLE



7	Repeat Steps 3 to 6 until you have completed all the assignments, and then click **Done**.

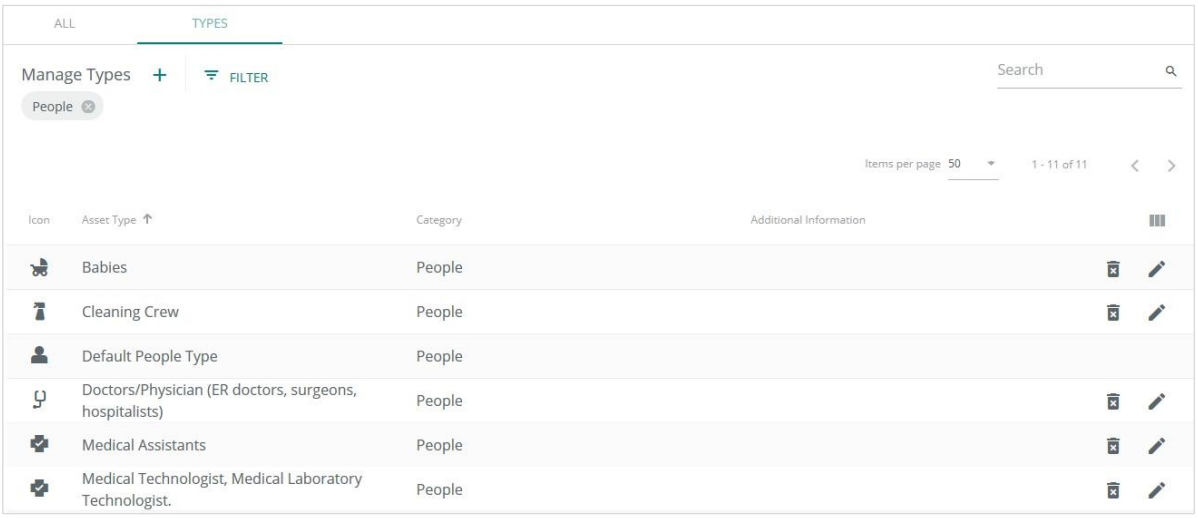
7.4.7 – Modifying the Asset Types

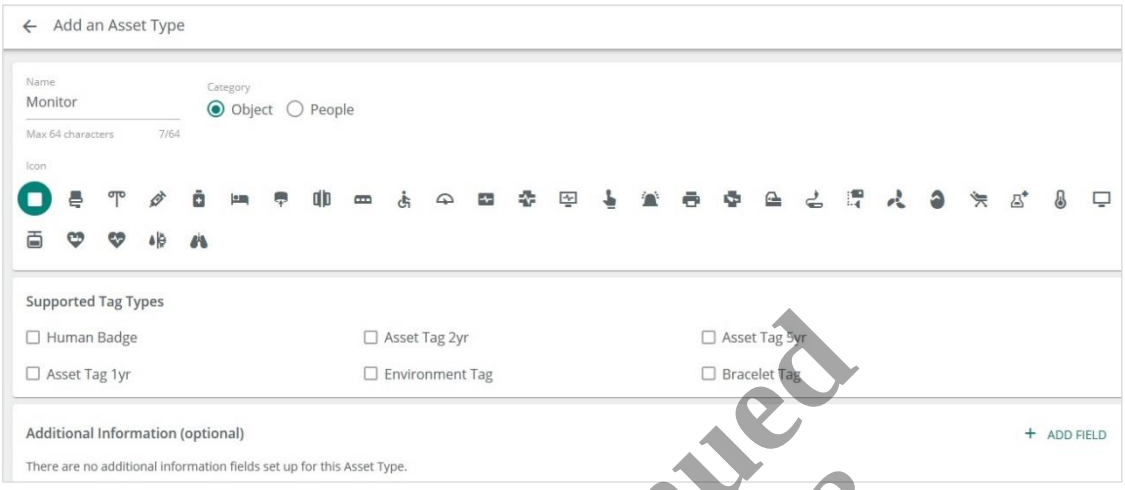
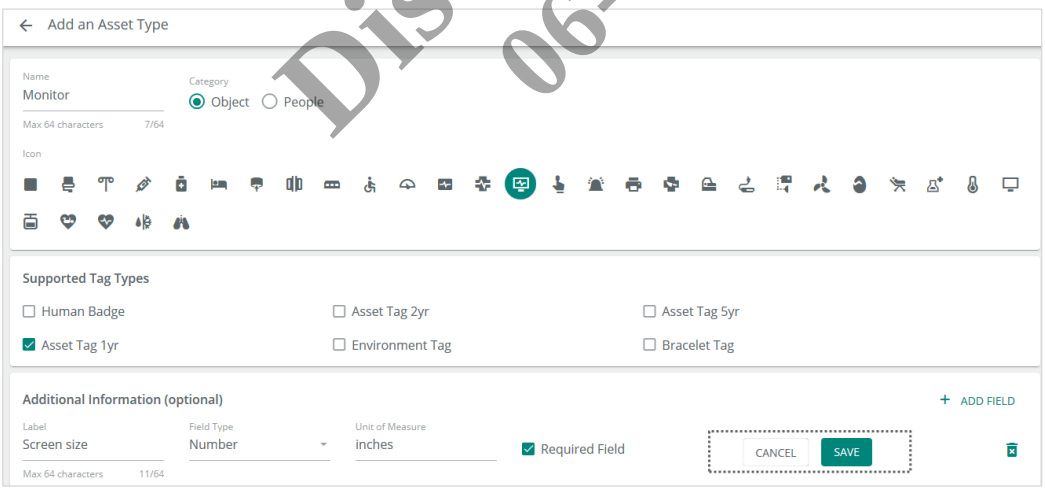
Follow the steps below to add or edit the available Asset Types.

NOTE
*You can also modify the Asset Types list using the **Manage Types** link. It will appear beside the Type list on screens such as Add An Asset.*

Step	Action
1	Click **Assets**, and then click **Types**.

EXAMPLE



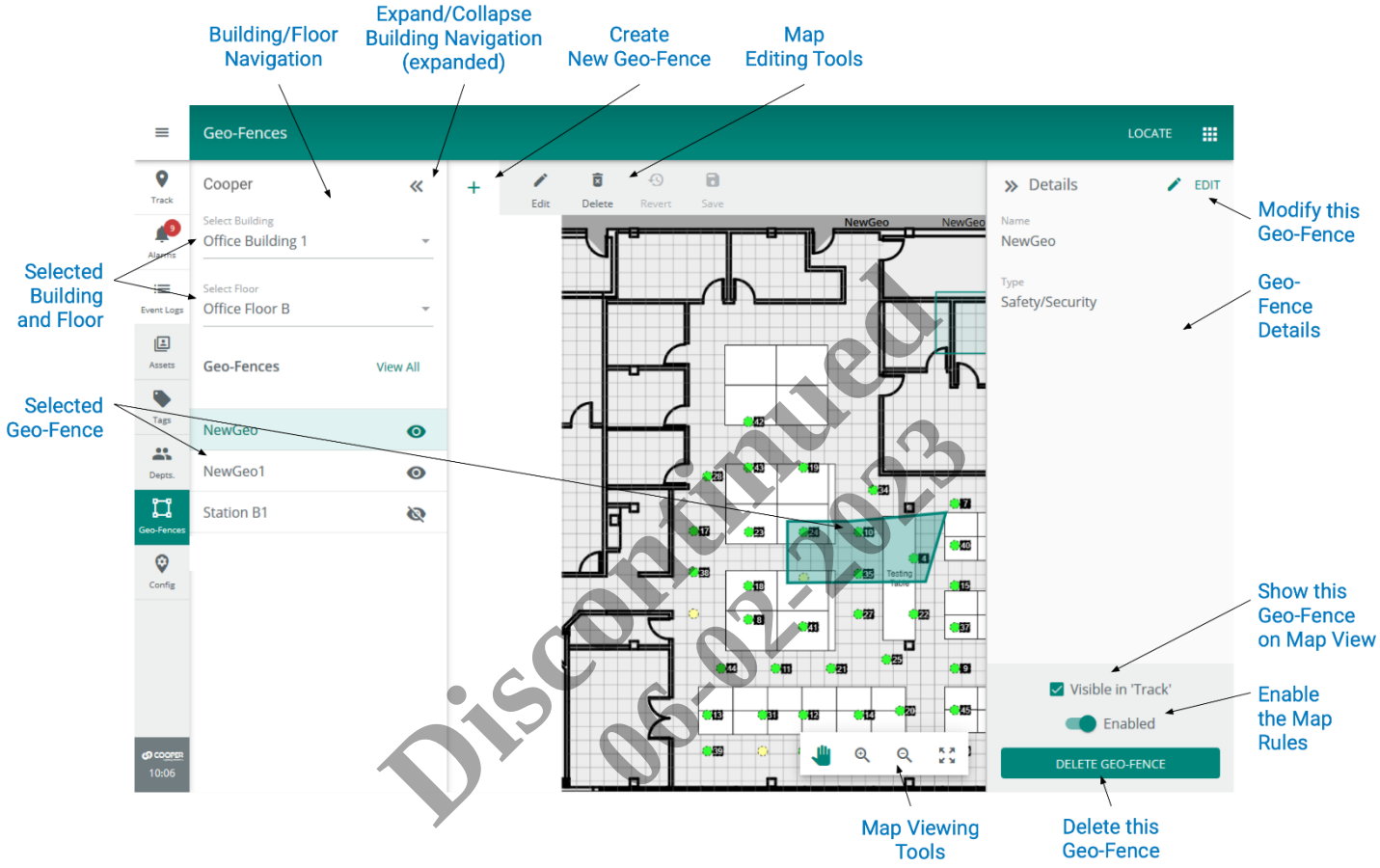
Step	Action
2	If you want to: • Add a new Asset: Click **+** • Edit an existing Asset: Apply a combination of filters and search to find the one you want, and then click ✎
3	Edit the Name, select a Category, and then select the Icon that will be used for Assets of the type. ***EXAMPLE*** 
4	Select the checkbox for each Supported Tag Type that can be associated with this Asset.
5	To add a custom field for Additional Information, click **+ Add Field**.
6	Enter the Label for this new field, the Field Type (Date, Number, Paragraph, Short Text, or Time), and then select the Required Field checkbox if you want to make this information mandatory. ***NOTE*** You will have to provide an additional Units of Measure value for a Number field. ***EXAMPLE*** 
7	Click **Save** to apply your changes.

8 – Geo-Fence Management

This chapter describes the features available under **Geo-Fences** in the Cooper menu.

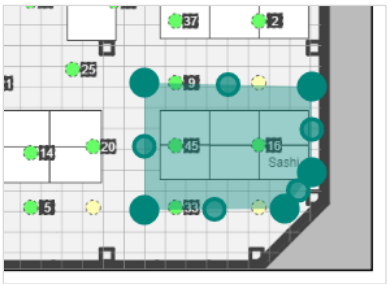
8.1 – The Geo-Fences Page

The Geo-Fences page is shown below with a filtered list of Geo-Fences. One of the listed Geo-Fences has been selected, causing the Details panel to appear.



8.2 – Geo-Fences

A Geo-Fence is a named virtual boundary that defines a region within a Floor. A Geo-Fence can be created as a simple rectangle or a more complex polygon with many sides. The image below shows a Geo-Fence in the process of being drawn. Each dark circle is a handle that can be dragged to extend the shape or increases the number of sides that comprise it.



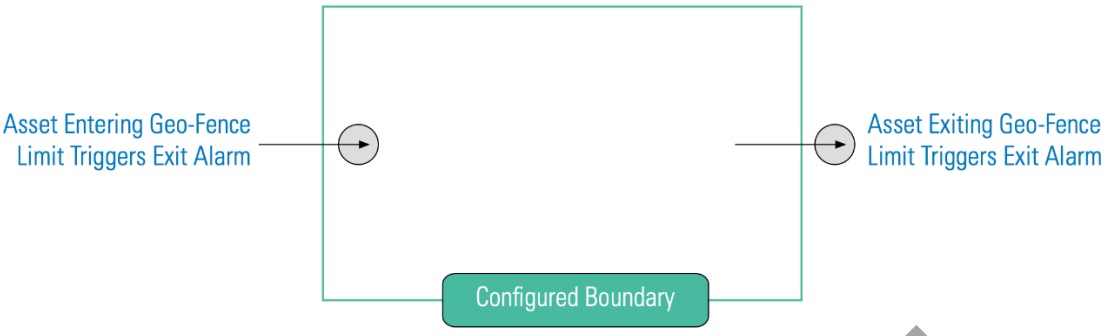
Other features:

- Geo-Fences can overlap
- If a Geo-Fence is deleted, all data associated with it is also deleted
- Geo-Fence data is stored with an Asset and not the Tag assigned to it, so if a Tag is reassigned to a different Asset, the Geo-Fence data will stay with the original Asset

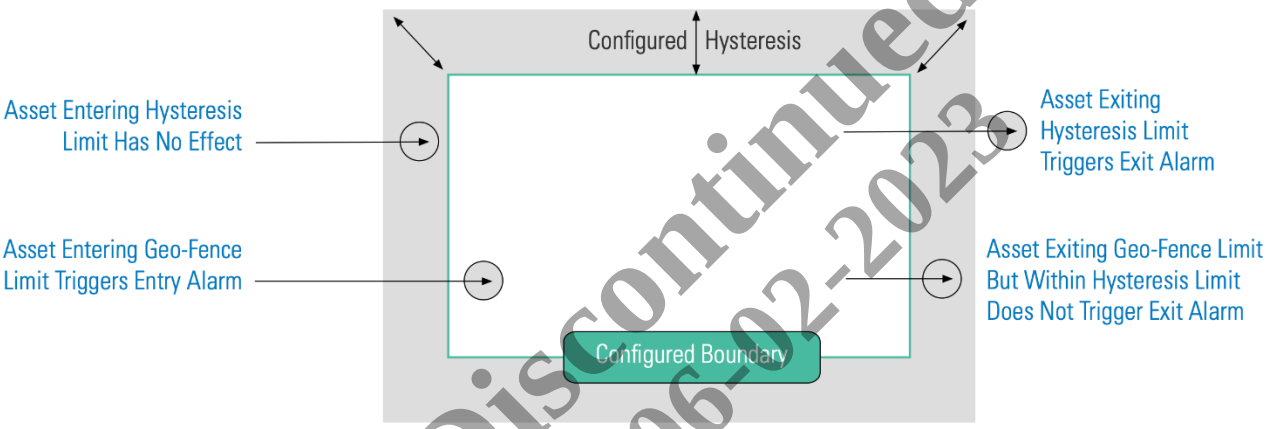
8.2.1 – Hysteresis

You can specify an optional hysteresis (lagging) value when creating or editing a Geo-Fence. Hysteresis applies only to exit notifications and has the effect of making the boundary "thicker". For example, if a hysteresis of two feet is specified and an exit alarm is configured, the notification will only occur if the Asset crosses the Geo-Fence boundary as drawn and goes two feet or more beyond it. The diagram below illustrates the difference between entry and exit alarms, with and without hysteresis.

Entry and Exit Alarms (No Hysteresis Configured)



Entry and Exit Alarms (Hysteresis Configured)



8.2.2 – Geo-Fence Types

Trellix Locate provides a default set of Geo-Fence Types:

- Safety/Security
- Analytics
- Boundary

You can create new custom Types as needed.

8.3 – Rules

A Rule can be attached to a Geo-Fence to define if and how an Alarm or Event will be triggered when an Asset crosses the Geo-Fence boundary. For example, a Rule could have the following configuration:

- **Entry**: Notify when any Asset goes within the boundary of this Geo-Fence
- **Create alarm**: Generate an alarm when any Asset exits this Geo-Fence
- **Individual assets**: Only notify if a member of a designated list of Assets enters

Rules are optional, so you can create a Geo-Fence without one.

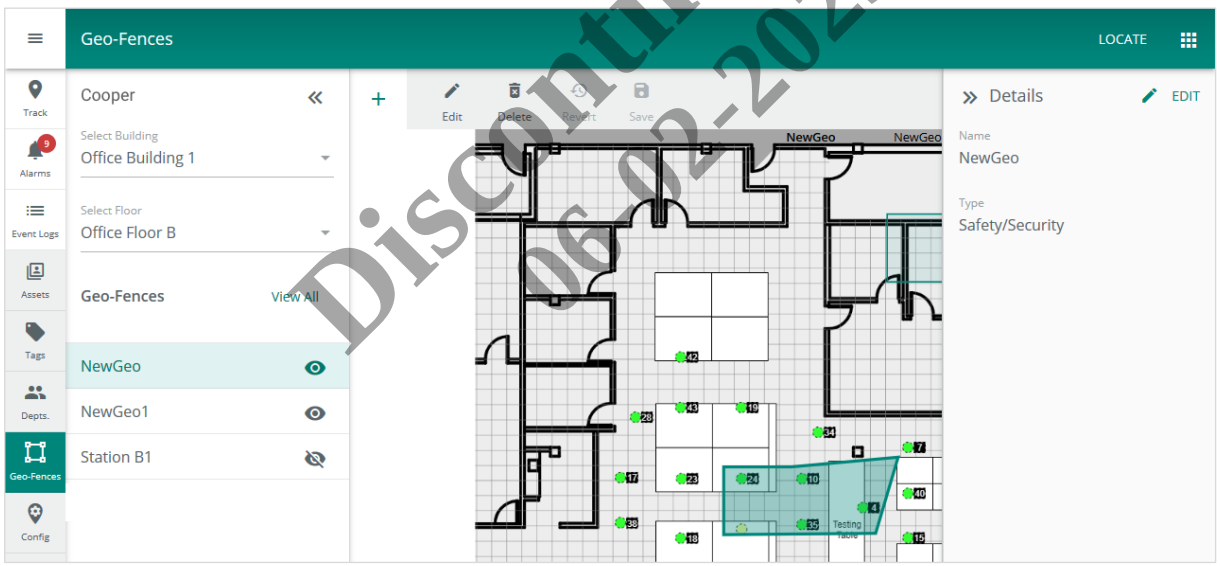
8.3.1 – Rule Settings

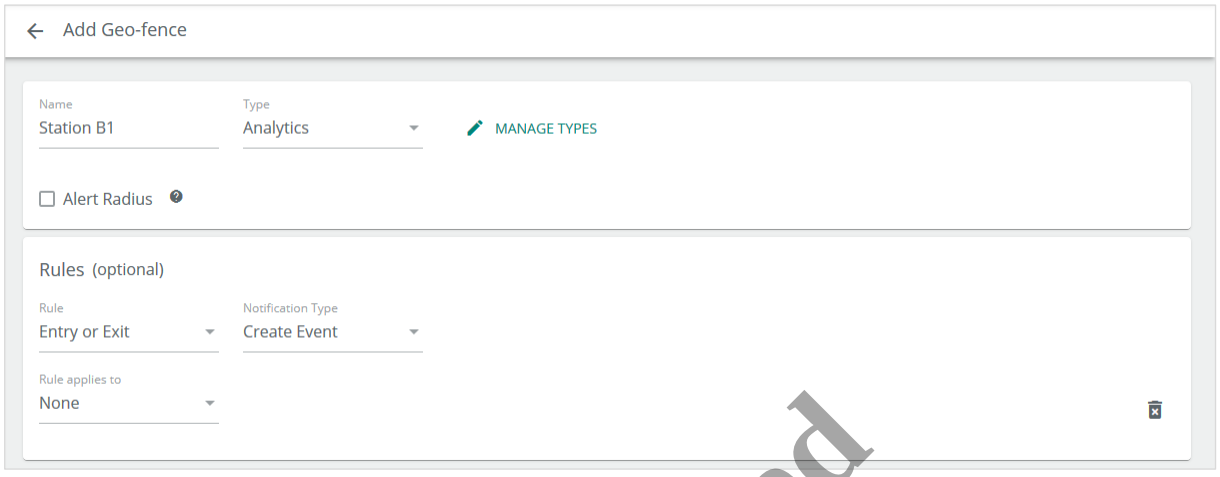
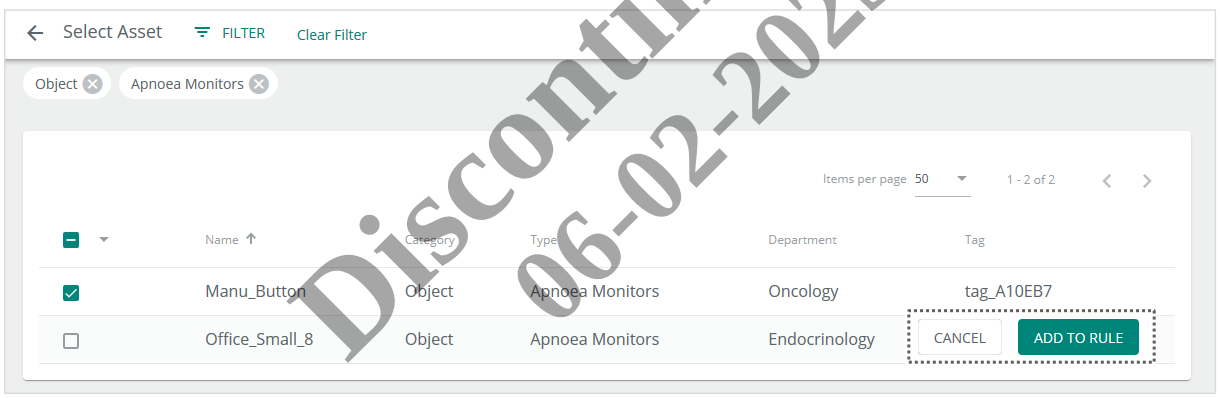
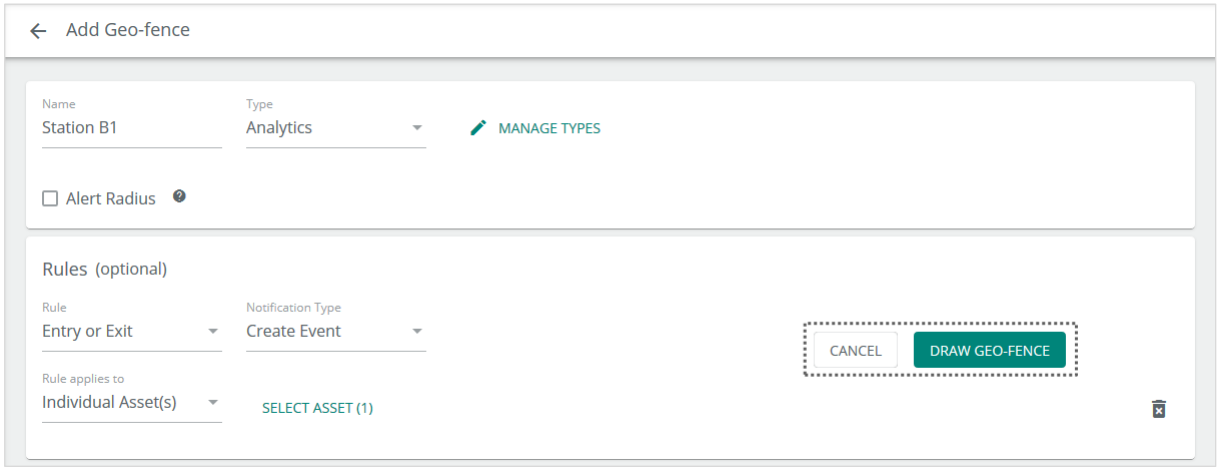
The Rule settings available are described below.

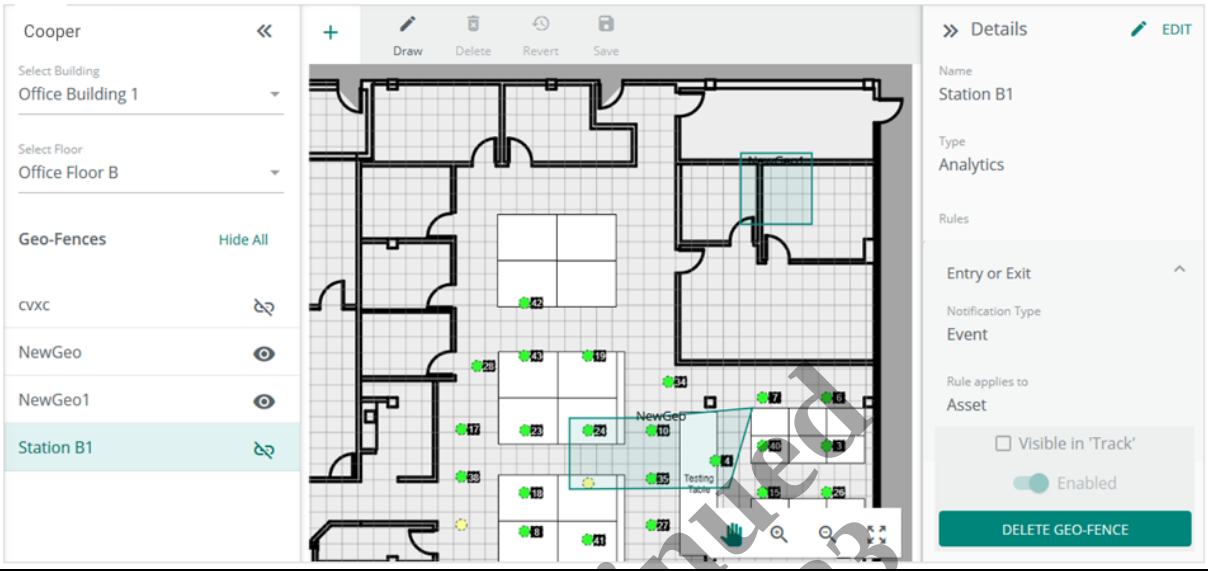
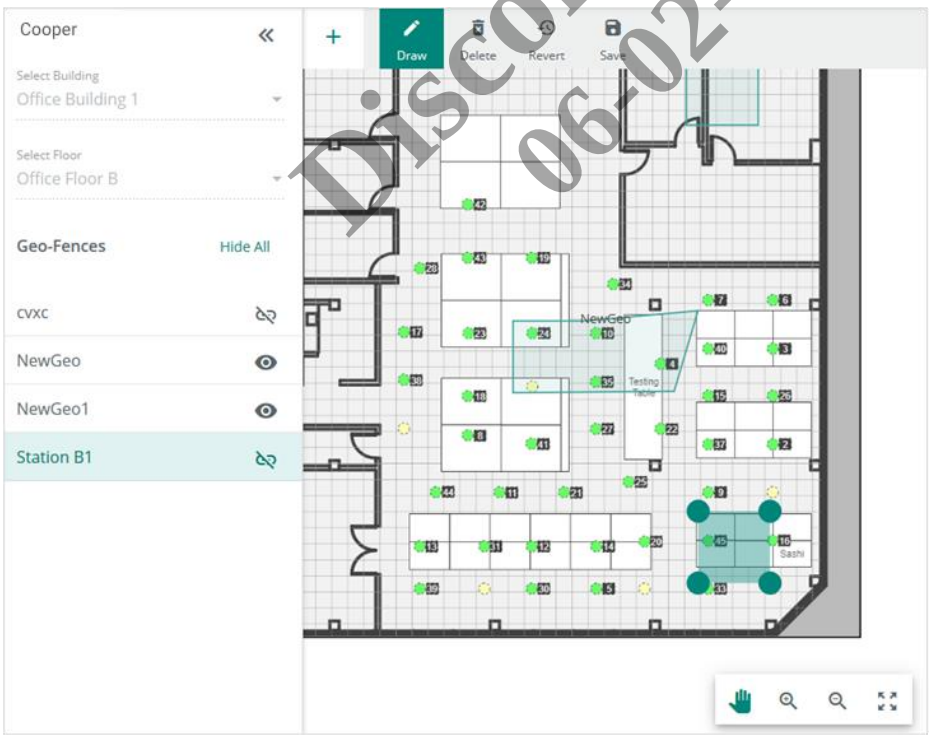
Setting	Options
Rule type	• Entry • Exit • Entry and Exit
Notification type	• Create event • Create alarm
Rule applies to	• One or more selected Assets • All Assets of a selected Asset Type (e.g., Vital Signs Monitors) • All Assets of one or more selected Category Types (e.g., Object, People) • All Assets of one or more selected Departments (e.g., Cardiology, Critical Care)

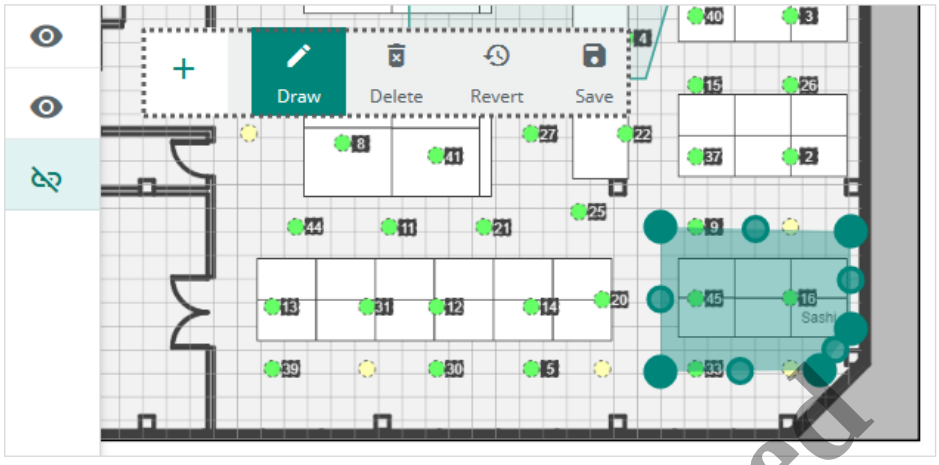
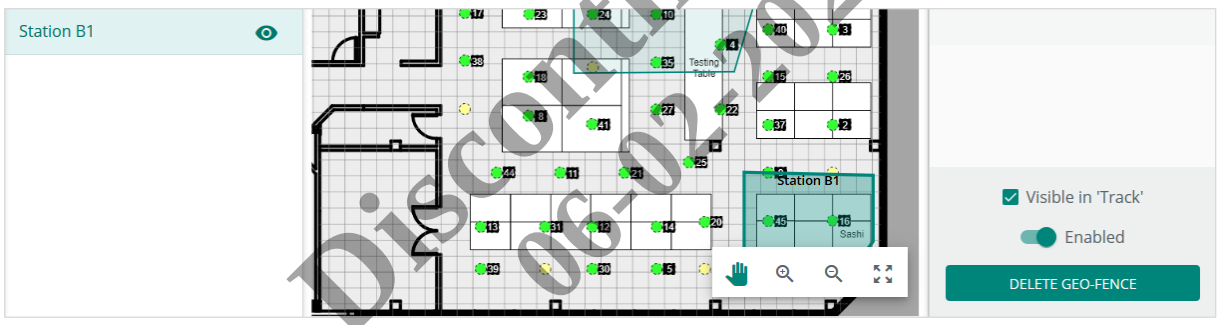
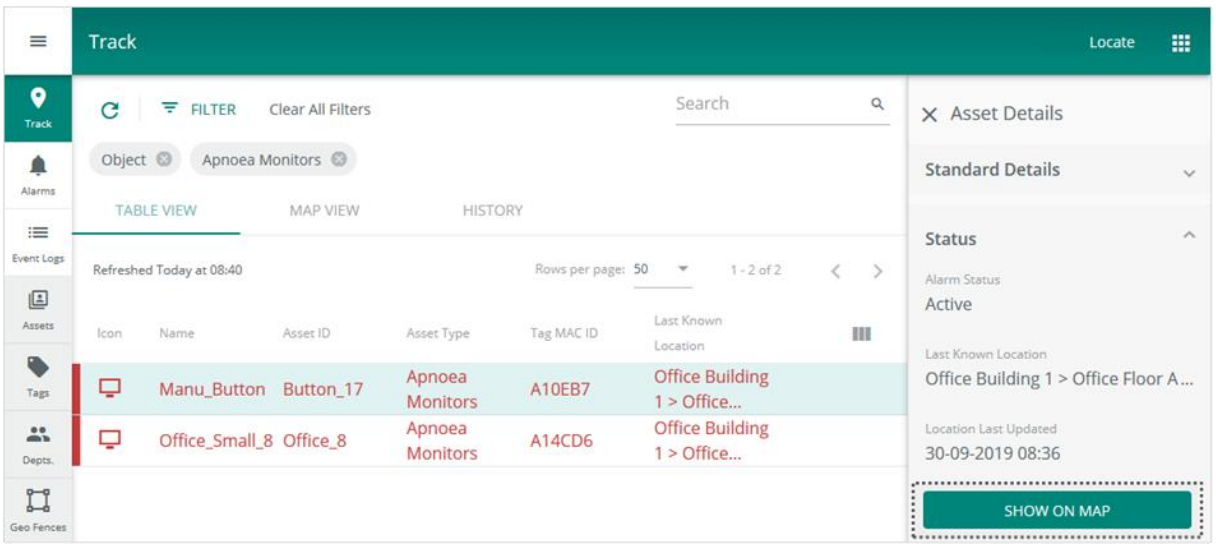
8.4 – Geo-Fence Management – A Walk-Through

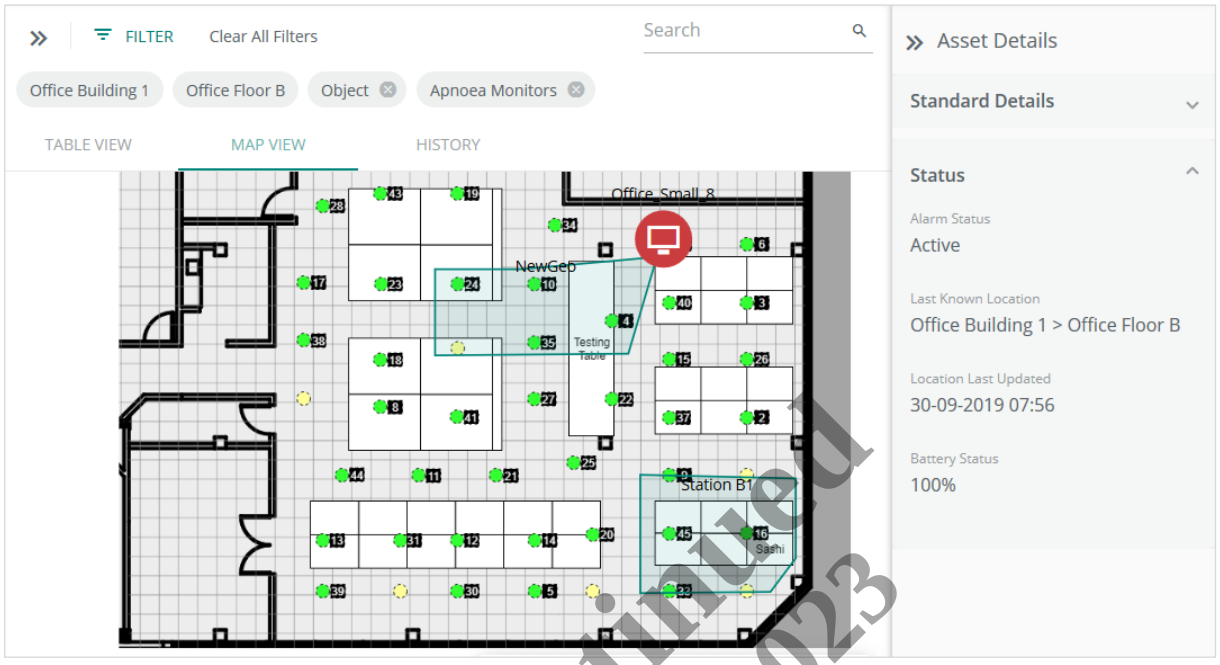
This walk-through follows a fictional user, Maya, as she works with the Geo-Fences page to create a new Geo-Fence and Rule.

Phase	Description
1	Maya navigates to the Geo-Fences page and selects the Building and Floor she is interested in. ***RESULT*** 

Phase	Description
2	Maya clicks **+** to add a new Geo-Fence to the selected Floor. She enters “Station B1” as the Name, then selects **Analytics** as the Type. In the Rules (optional)section, she selects an **Entry or Exit** Rule, and **Create Event** as the **Notification Type**. ***RESULT*** 
3	Maya wants this Rule to apply to a single Asset, so she selects **Individual Assets** in the Rule applies to list, which brings up an Asset selection list. Maya clicks **Filter**, and then applies the **Object** and **Apnoea Monitor** filters. This brings the “Manu_Button” Asset into view, which she selects with the corresponding checkbox. ***RESULT*** 
4	To complete the configuration of this Rule, Maya clicks **Add to Rule** (shown inset above). This enables the next step, which is to draw the Geo-Fence on the Floor Map. ***RESULT*** 

Phase	Description
5	Maya clicks **Draw Geo-Fence** (shown inset above) to bring up the Floor Plan display in drawing mode. She notes the 🔗 beside **Station B1**, the new Geo-Fence she is creating. This indicates that **Station B1** has not been linked to a Floor Map yet. ***RESULT*** 
6	To draw the Geo-Fence on the Floor Map, Maya uses the 🔍 and ✋ tools to zoom in on the section of the map where the fence is required. Next, she clicks **Draw**, and then clicks on the Floor Map near where the Geo-Fence is required. A green bounding box with dark green round handles appears. ***RESULT*** 

Phase	Description
7	Maya clicks the upper-right handle to drag it to the right. This causes a new handle to appear between the two upper corners. These “magic” handles make it easy to create Geo-Fences with irregular shapes. Maya uses this feature to deal with the bottom right boundary, which has two 45-degree bends instead of a 90-degree corner. ***RESULT*** 
8	Maya clicks (shown inset above) to apply the Geo-Fence to this Floor Map. The selected **Station B1** now has beside it, confirming that the new Geo-Fence was added. Maya clicks the Visible in Track checkbox so this Geo-Fence will appear on the Map View tab of the Track page. ***RESULT*** 
9	To check the Track display of her new Geo-Fence, Maya clicks **Track**, and then applies the **Object** and **Apnoea Monitors** filters. Finally, she selects the “Manu_Button” Asset to display the Asset Details panel. ***RESULT*** 

Phase	Description
10	Maya clicks **Show on Map** (shown inset above) to bring up the Map View with Building and Floor taken the **Last Known Location**. She sees the current Asset location and the Station B1 Geo-Fence map, as expected. ***RESULT*** 
11	Maya clicks ☰ to expand the Cooper menu, and then clicks **Logout** to end her Trellix Locate session.

8.5 – Geo-Fence Procedures

This section includes procedures for using the main features of the Geo-Fences page.

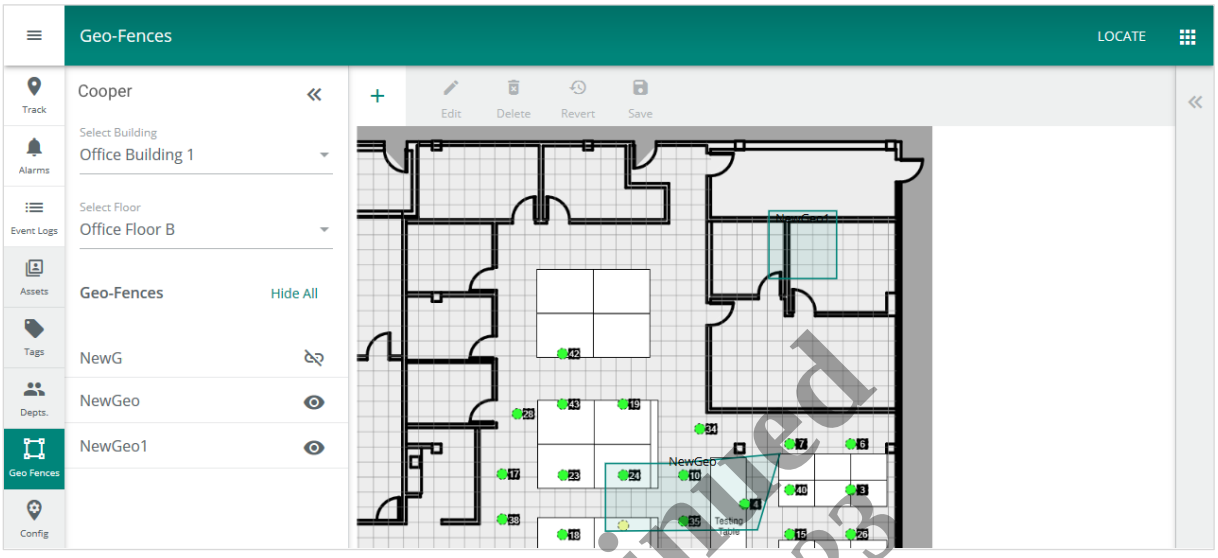
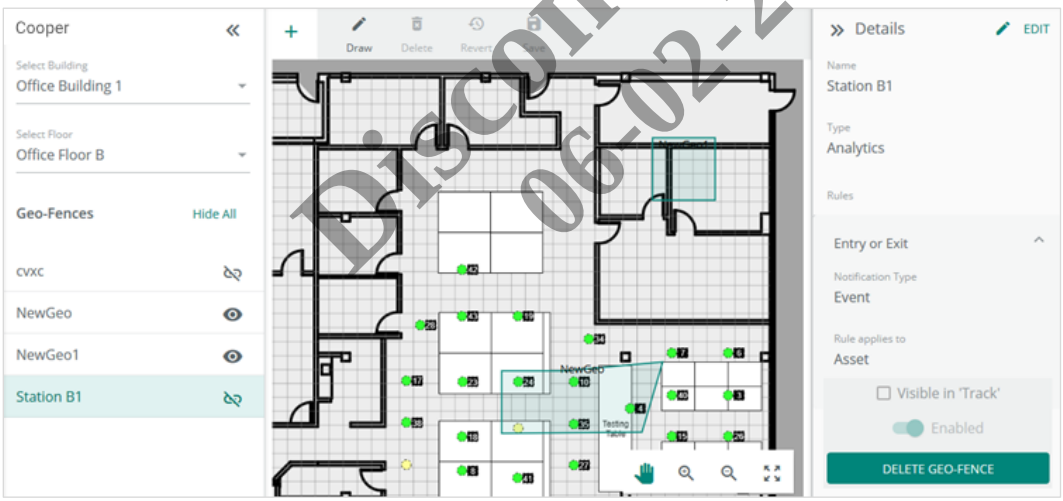
8.5.1 – Filters, Sorts, and Searches

The features that apply specifically to the Geo-Fences page are listed and described below.

Feature	Description
Filtering	• The filters available on the Geo-Fence page are Building and Floor, since a Geo-Fence can only be found on a Floor Map • The Rule configuration includes filters for Category (Object or People), Category Type (e.g., “Cardiographs”), and Assets

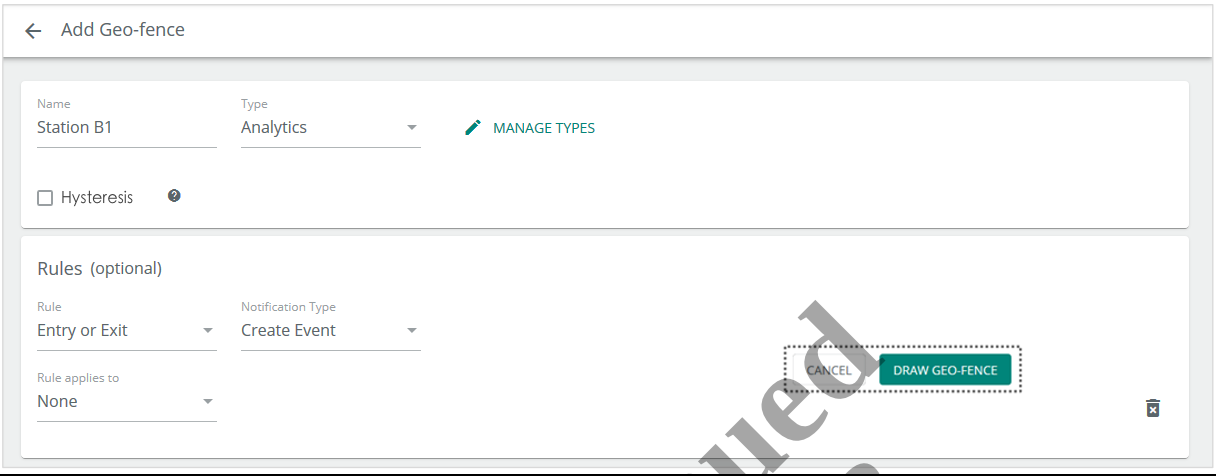
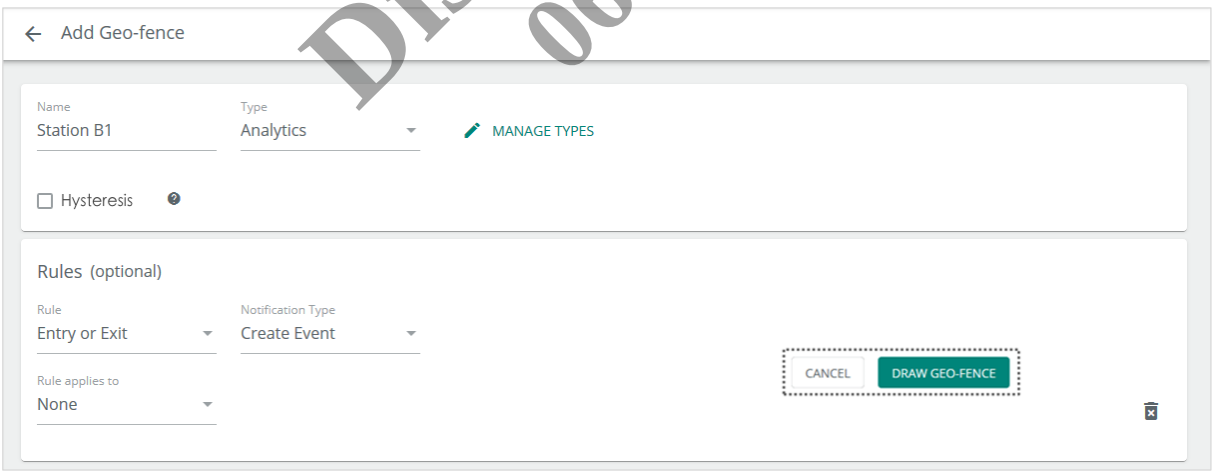
8.5.2 – Viewing Geo-Fences

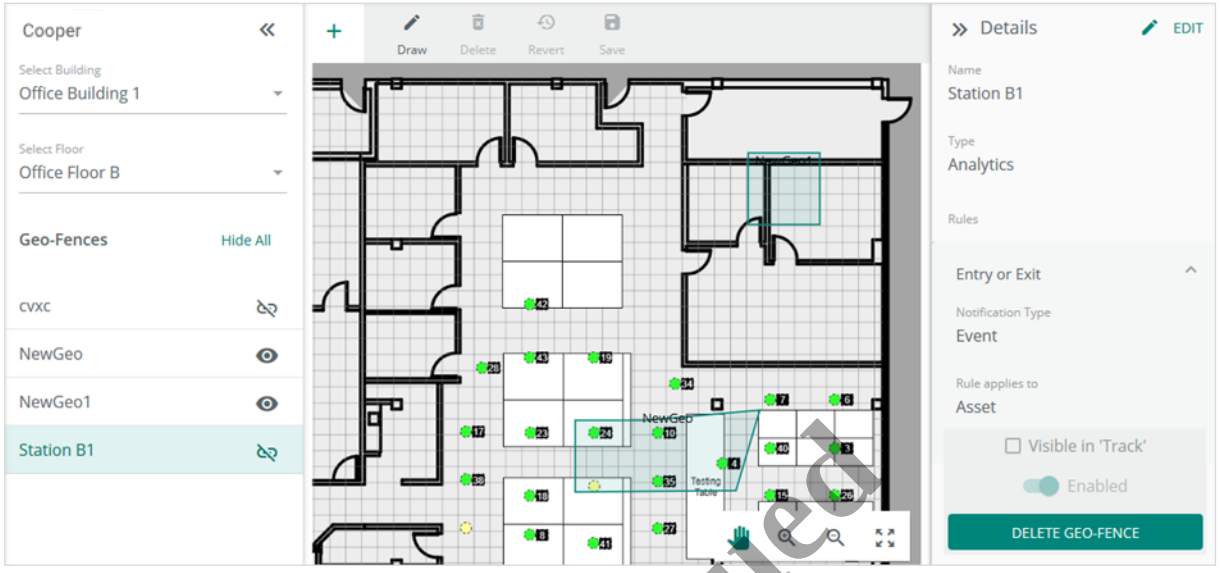
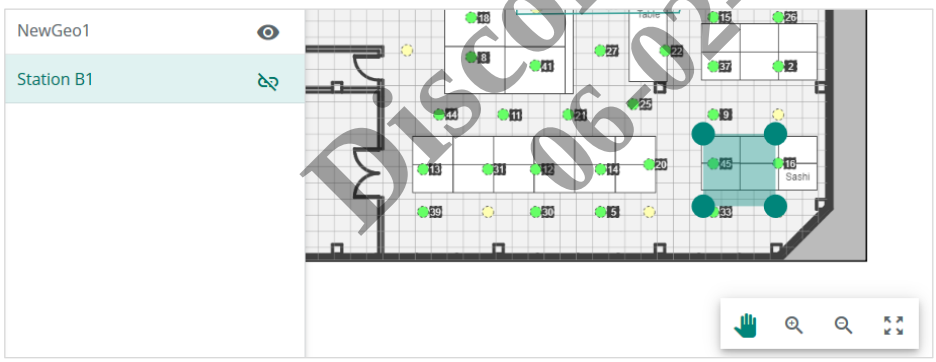
Follow the steps below to view the Geo-Fences on a Floor.

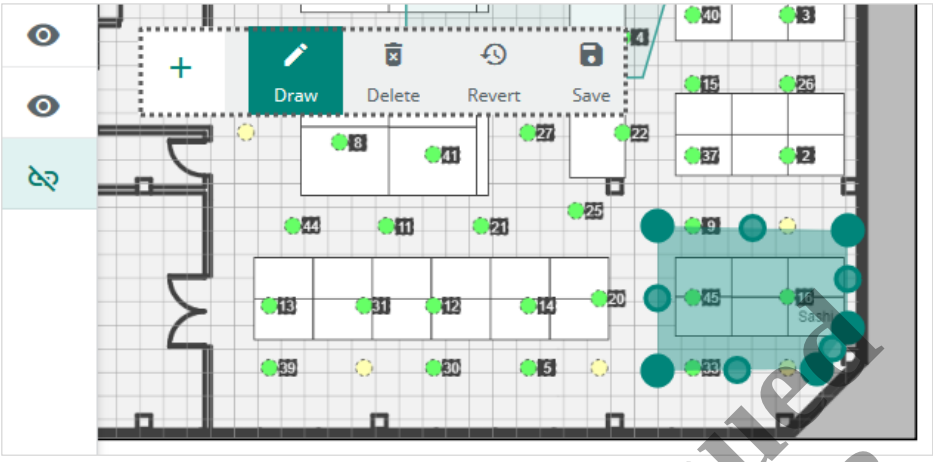
Step	Action
1	Click **Geo-Fences**, then choose a Building from the **Select Building** list, and then choose a Floor from the **Select Floor** list. ***EXAMPLE*** 
2	Click a Geo-Fence from the ones listed to display the Geo-Fence Details panel. ***EXAMPLE*** 

8.5.3 – Adding a Geo-Fence

Follow the steps below to add a Geo-Fence to a Floor.

Step	Action
1	Click **Geo-Fences**, then choose a Building from the **Select Building** list, and then choose a Floor from the **Select Floor** list. Click **+** above the Floor Map. ***EXAMPLE*** 
2	Do the following: • Enter the Name. • Select the Geo-Fence Type. • Select the **Hysteresis** check box and enter a value ***NOTES*** • *The Hysteresis setting is optional, supports a maximum of 23 feet (7 meters), and applies only to exit notifications* • *See the Adding a Rule procedure below to use that option* ***EXAMPLE*** 

Step	Action
3	Click **Draw Geo-Fence**. Your new Geo-Fence will be listed with a ⛓ to indicate it has not been linked to a Floor Map yet. ***EXAMPLE*** 
4	Use 🔍 and ✋ in the Map Editing Tools to zoom in on the map region where the fence is required. Click **Draw** in the Map Editing Tools (shown above), and then click a location on the Floor Map. ***NOTE*** ***EXAMPLE*** 

Step	Action
5	To create the desired Geo-Fence shape: • Click one of the four default handles that needs to be moved and drag it to the new location. • Notice that one or two new, smaller handles appear between the one you dragged and the corners to which it connects. • These “magic” handles appear any time you drag a handle to make it easy to create Geo-Fences with irregular shapes. • Continue dragging the handles until you have the shape you want. ***EXAMPLE*** 
6	Do the following: • If you are satisfied with the Geo-Fence shape, click in the Map Editing tools (shown inset above). • If you want to undo the changes you made, click , and then continue. • If you want to start over, click , and then continue.
7	When you have successfully saved your changes, your new shape will show . With the Geo-Fence selected, you can do the following in the Details panel: • Select or deselect the **Visible in Track** checkbox to determine whether it appears on Asset tracking Floor Maps. • Toggle the **Enabled** button to control whether it generates notifications.

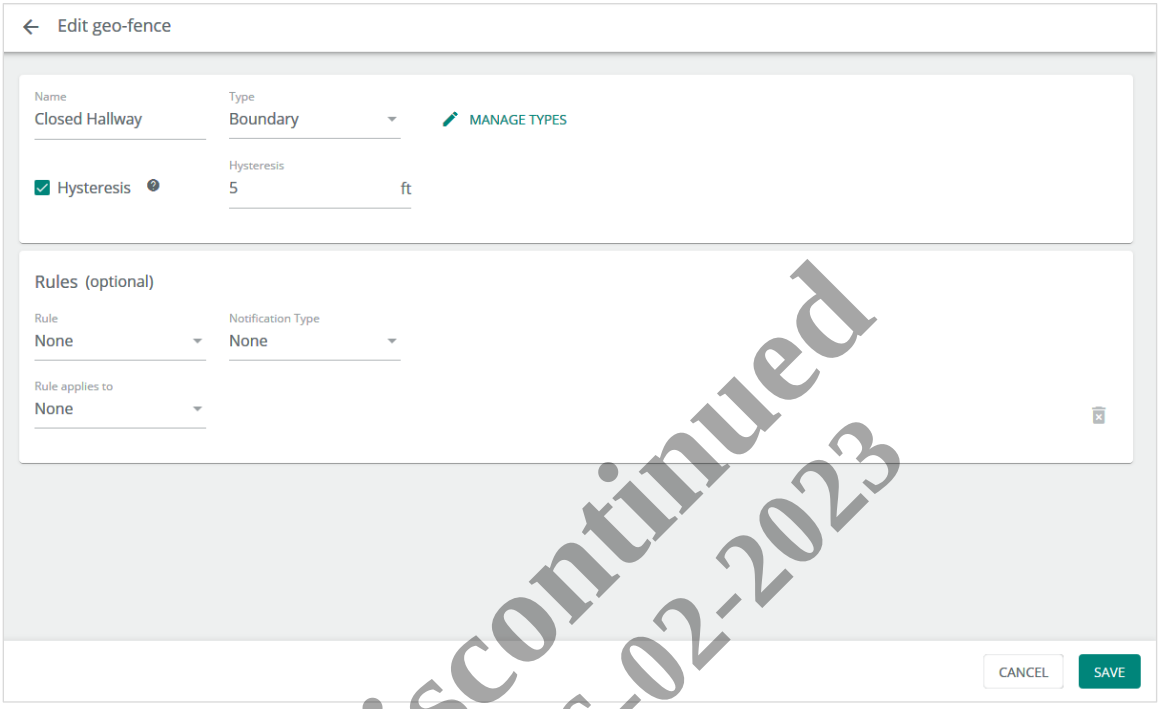
8.5.4 – Removing a Geo-Fence

To remove a Geo-Fence, select the desired Building and Floor, then select the Geo-Fence, and then click **Edit** in the Details panel. Click **Delete Geo-Fence**.

8.5.5 – Managing Geo-Fence Types

Follow the steps below to manage the Geo-Fence Types.

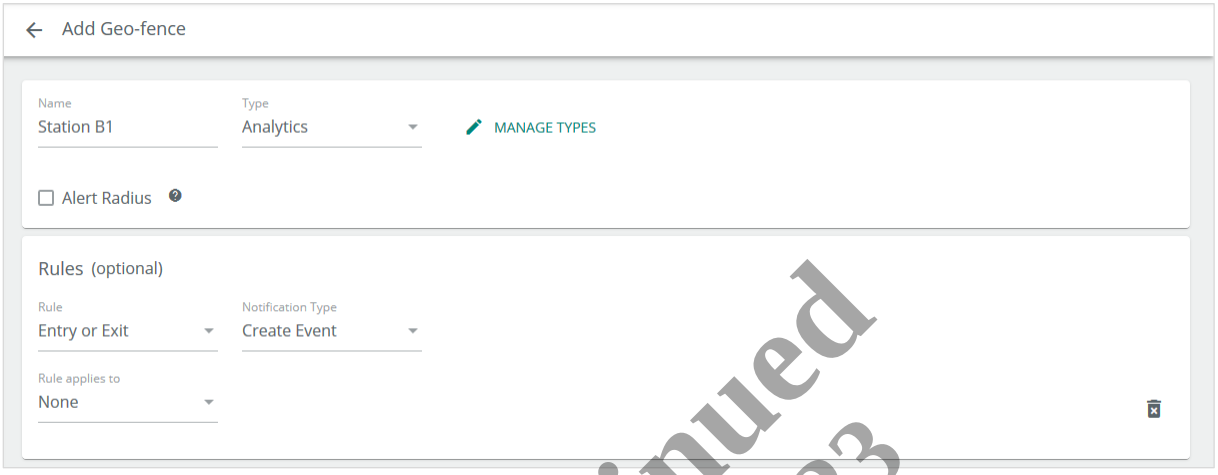
NOTE
See the earlier procedure, Adding a Geo-Fence, if you are creating a new Geo-Fence.

Step	Action
1	Click **Geo-Fences**, then choose the desired Building and Floor. Click the desired Geo-Fence, and then click **Edit**. ***EXAMPLE*** 
2	Click **Manage Types** on the Add a Geo-Fence page when you want to create, edit, or delete a Geo-Fence Type.
3	Click **Save**.

8.5.6 – Adding a Rule

Follow the steps below to add a Rule to a Geo-Fence.

NOTE
See the earlier procedure, Adding a Geo-Fence, if you are creating a new Geo-Fence.

Step	Action
1	Click **Geo-Fences**, then choose the desired Building and Floor. Click the desired Geo-Fence, and then click **Edit**. ***EXAMPLE*** 
2	To change the effective notification perimeter of the Geo-Fence (on exit only), click **Hysteresis**, and then specify a distance. ***NOTE*** *See Hysteresis for more information.*
3	Choose a Rule type to determine the conditions under which a notification will trigger. ***NOTE*** *See Rule Settings for more information.*
4	Choose a Notification Type to determine whether Alarms or Events are generated.
5	Choose Assets in Rule applies to list.
6	Provide details for each option in the Rule applies to list.

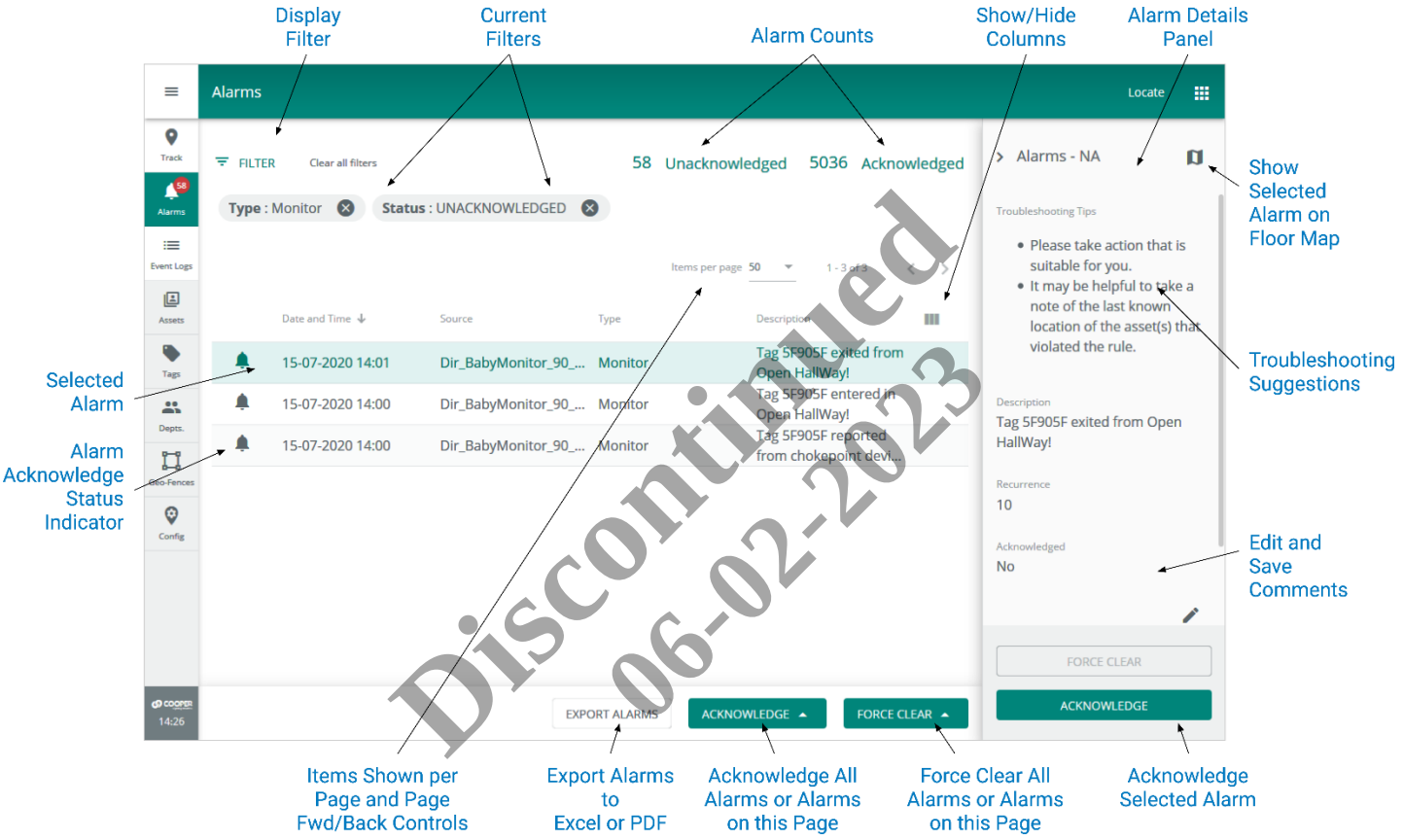
9 – Alarm and Event Management

This chapter describes the features available under the **Alarms** and **Events** items in the Cooper menu.

NOTE
System-wide alarms and events are reported in the Trellix Admin application. Refer to the Trellix Lighting System Configuration Guide for more information.

9.1 – Alarms Page

The layout of the Trellix Locate Alarms page is shown below. The Events page is similar but does not include a Details panel or provide acknowledgement features.



9.2 – Alarm States

A Trellix Locate alarm can be in one of the following three states:

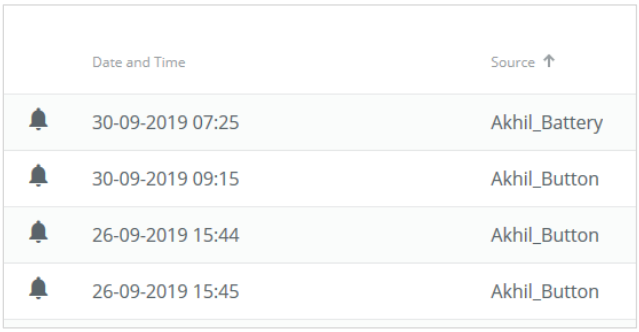
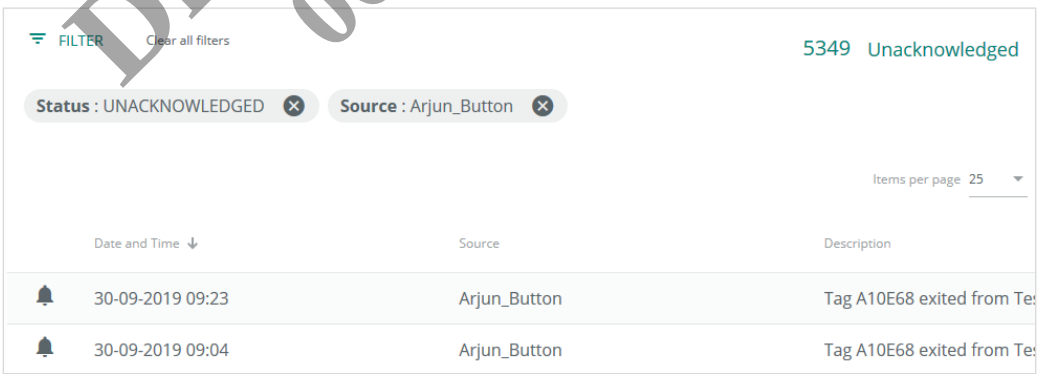
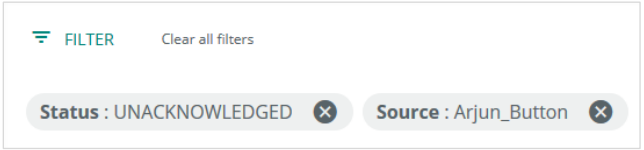
- **Unacknowledged Alarm**: An error notification that has not been acknowledged
- **Acknowledged Alarm**: An error notification that has been acknowledged but is still in the error state and has not yet been moved to the Events list
- **Pre-Cleared Alarm**: An error notification that has returned to normal before being acknowledged

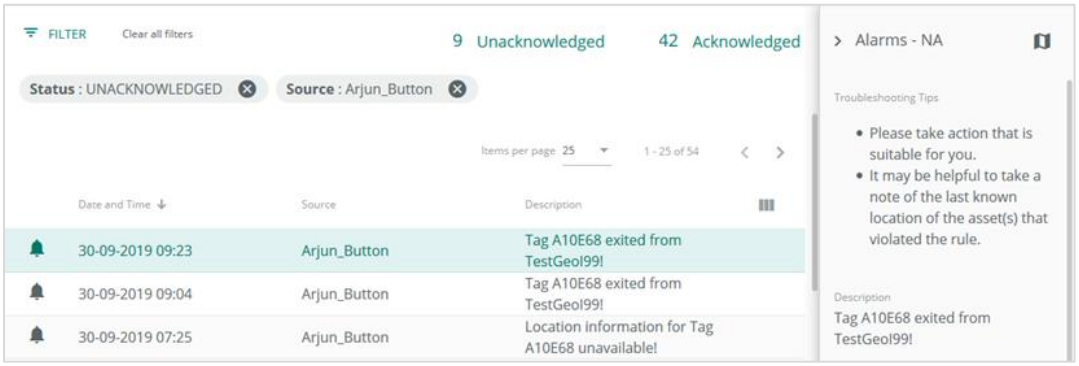
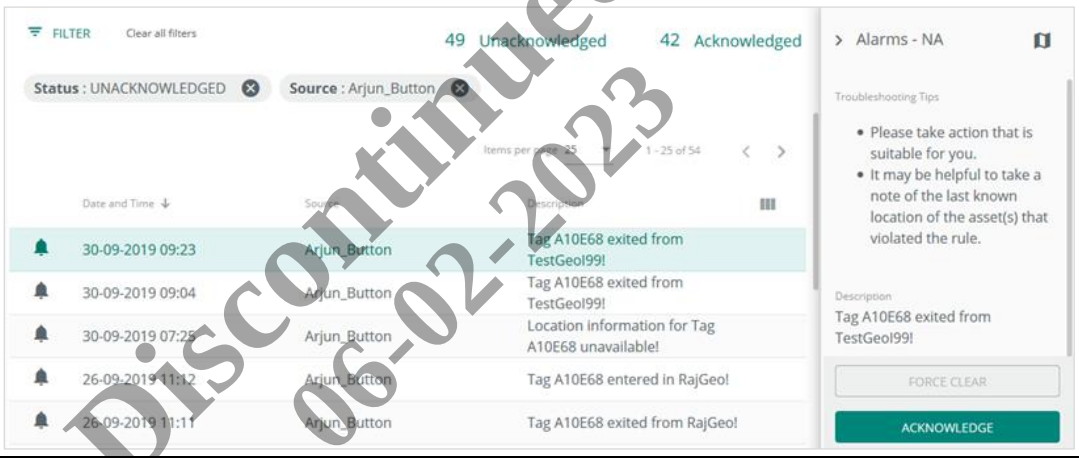
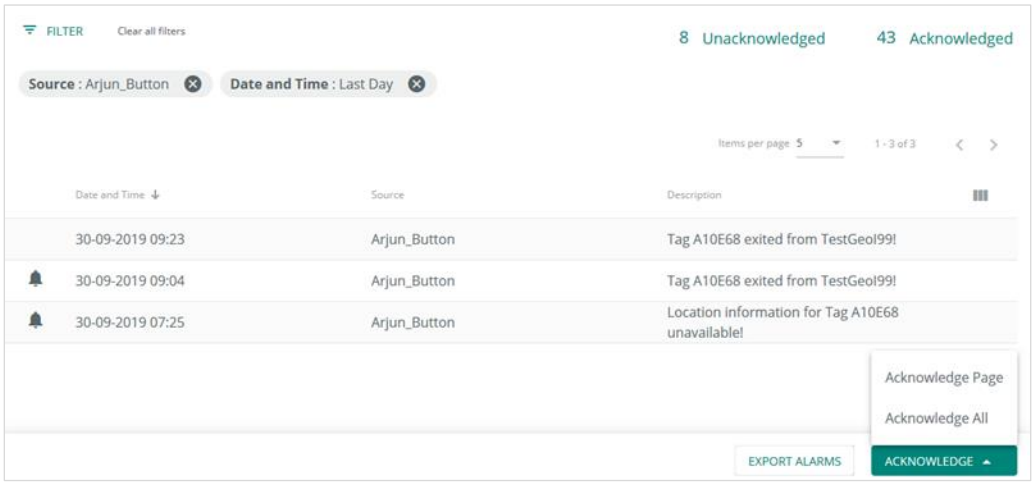
NOTE
Trellix Locate does not maintain Tag locations when it goes offline, for example when restarting after a system upgrade. When the restart is complete, new alarms will be generated for Tags found inside a Geo-Fence, even if they were already there before the restart.

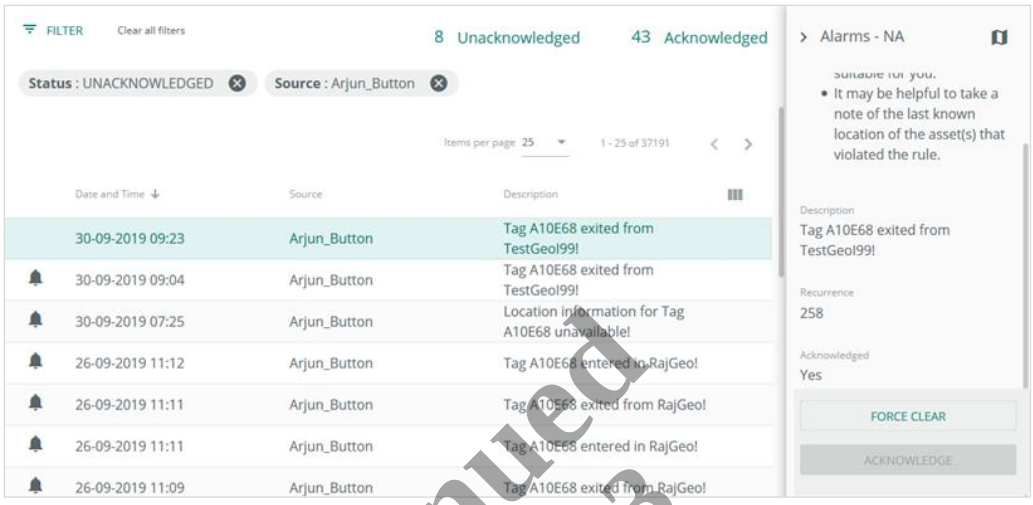
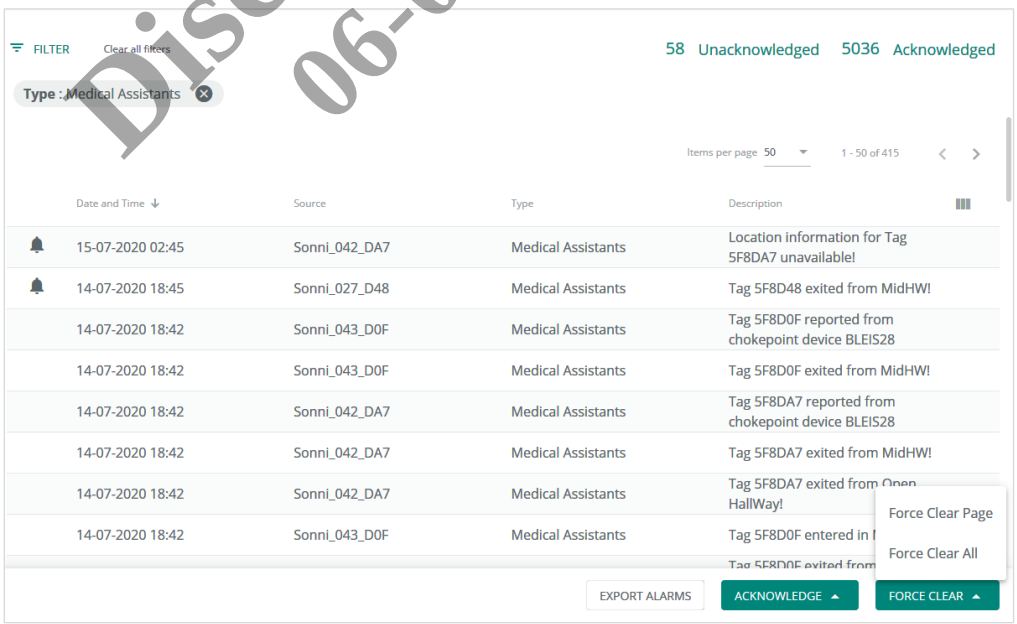
9.3 – Alarm and Event Procedures

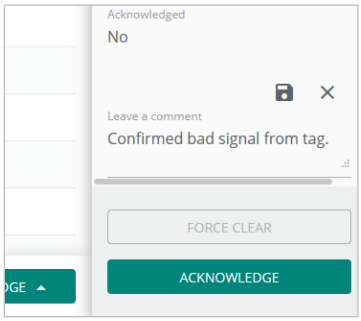
The following procedure describes how to view and filter alarms and events, and how to acknowledge, force clear, comment on, and display the details of alarms.

If you want to…	Then…
Display the Alarms page	Click **Alarms** in the Cooper menu.
Display the Events page	Click **Events** in the Cooper menu.

If you want to…	Then…
Sort alarm or event data	1. Click the column header you want to sort on. 2. To reverse the order, click the column header again. ***EXAMPLE – DESCENDING SORT BY SOURCE*** 
Filter alarm or event data	1. Click **Filter**, then click **Filter Type**, and then choose a specific filter (e.g., **Source**). 2. Select or enter a value to limit the list to rows containing that value (e.g., "Arjun_Button"). ***EXAMPLE – FILTER BY SOURCE SUBTYPE***  3. View the list of alarms or events that correspond to the selected filter. ***EXAMPLE – ALARMS FILTERED BY SOURCE SUBTYPE "ARJUN_BUTTON"*** 
Add another filter	Repeat Steps 1 to 3 in the preceding procedure.
Remove a filter	Click **X** to the right of the filter value. ***EXAMPLE*** 

If you want to…	Then…
View alarm details	Click an alarm row to display a panel containing the Troubleshooting details, a Description, and any Comments that have been saved. ***EXAMPLE*** 
Acknowledge a single alarm	1. Select the row of an unacknowledged alarm. 2. Click **Acknowledge** in the Alarm Details panel. ***EXAMPLE*** 
Acknowledge multiple alarms	1. To acknowledge the alarms on the current page, click **Acknowledge** below the list of alarms, and then click **Acknowledge Page**. 2. To acknowledge all alarms, click **Acknowledge** below the list of alarms, and then click **Acknowledge All**. ***EXAMPLE*** 

If you want to…	Then…
Force clear an alarm	1. Select the row of an acknowledged alarm. 2. Click **Force Clear** in the Alarm Details panel. ***NOTE*** *You must be logged in with System Administrator permissions for this action.* ***EXAMPLE*** 
Force clear multiple alarms	1. To force clear the alarms on the current page, click **Force Clear** below the list of alarms, and then click **Acknowledge Page**. 2. To force clear all alarms, click **Force Clear** below the list of alarms, and then click **Force Clear All**. ***NOTE*** *You must be logged in with System Administrator permissions for this action.* ***EXAMPLE*** 

If you want to…	Then…
Add a comment to an alarm	1. Select an unacknowledged alarm to reveal the Alarm Details panel. 2. Scroll down in the panel to reveal the Leave a Comment field. 3. Click **Edit**. 4. Enter your comment text, and then click 💾 to save it or click **X** to cancel. ***EXAMPLE*** 
Hide alarm or event details	Click **>** in the upper left corner of the panel.
Show or hide columns in the alarms or events list	1. Click ▮▮▮ at the right end of the column headings. 2. Select and deselect column checkboxes to determine which columns are displayed. 3. Click **Apply**. ***EXAMPLE*** 
Load new alarms	Click **Reload** when it appears at the top of the Alarms tab. ***NOTE*** *Be sure to use the **Reload** button provided in the message area. The Web browser's refresh feature, by design, will send you back to the login screen.*
View an alarm on the Floor Map	Click 📍 beside a listed Alarm or click 🗺 in the Alarm Details panel.

9.4 – Alarms

The Asset alarms reported by Trellix Locate are described below.

Alarm	Description
Battery low	Battery at 20%, or Battery at <nn>% for Tag MAC ID <mac-id>
Asset not reporting	<asset-name> is not reporting location information
Asset entering Geo-Fence	<asset-name> entered <geo-fence-name>
Asset left Geo-Fence	<asset-name> left <geo-fence-name>
Asset entered/left Geo-Fence	<asset-name> entered/left <geo-fence-name>
Choke point	<asset-name> reported from choke point device <sensor-name>
Button pressed	Button pressed on Tag <mac-id> assigned to <asset-name>
Sensor location not reported	Location information is not being reported by <ble-sensor-name>

IMPORTANT

The Trellix system does not save or track Tag locations when it is offline, e.g., when rebooting after a system upgrade. When the system recovers after reboot, it will generate new alarms for Tags located inside Geo-Fences, even if those Tags were already inside that Geo-Fence before the reboot.

10 – Asset Tracking

This chapter describes the features available under **Track** in the Cooper menu.

10.1 – Table View, Map View, and History

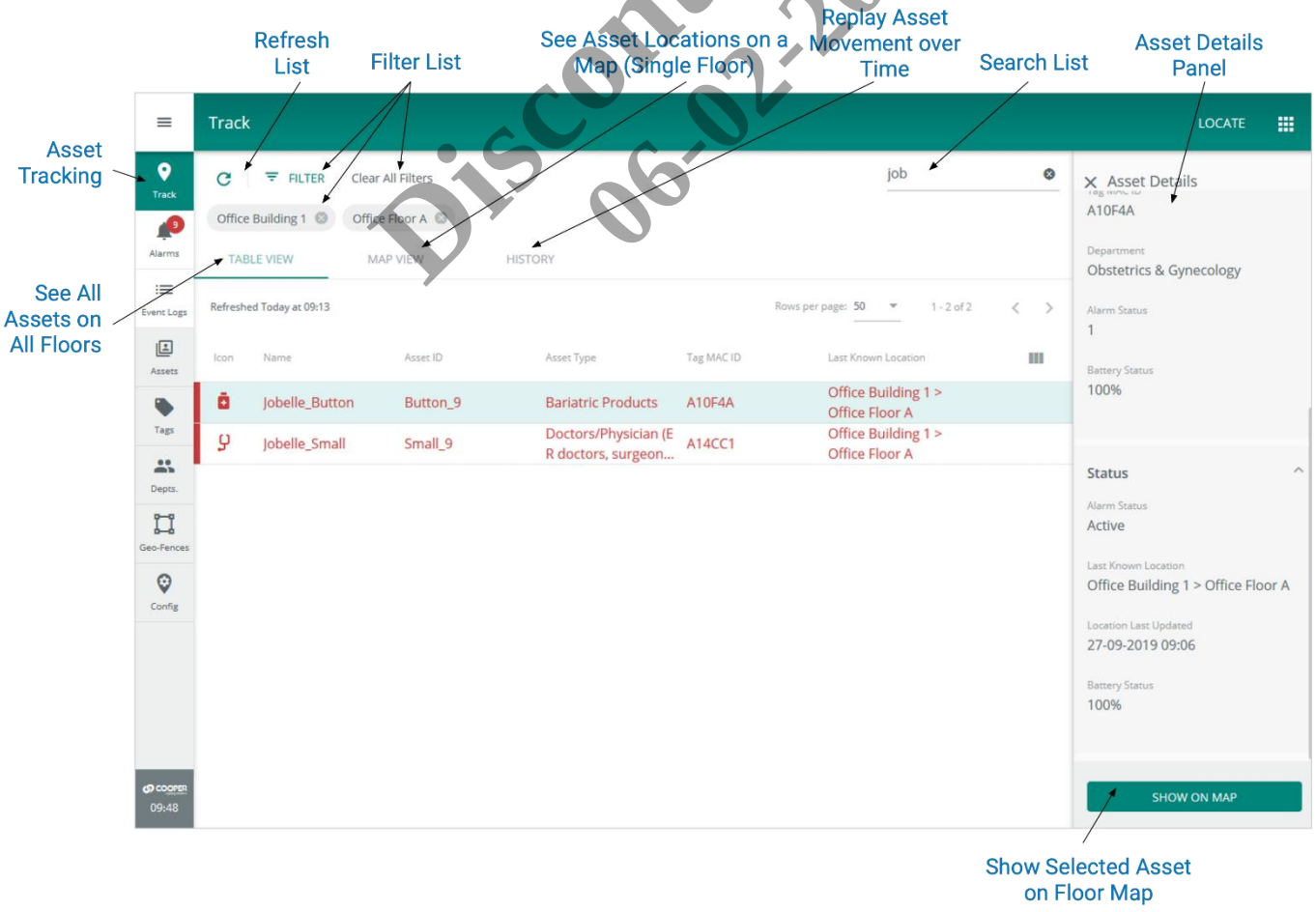
The Track page has three tabs that provide different views of Asset location data: Table View, Map View, and History. These tabs are described below.

NOTE
All three tabs support the same Filtering, Search, and Asset Detail panel features.

Tab	Description	When to Use
Table View	Displays, in a tabular form, all Assets for any Building or Floor that belong your assigned Departments and match any applied Filters and Search criteria.	• When you want to view Assets across multiple floors • When the Last Known Location is the only spatial information you need • When you need a detailed list of Assets and their data
Map View	Displays, in map form, the Assets for a selected Building and Floor that belong to your assigned Departments.	• When you need a visual representation of Asset location, especially when you are interested in more than one • When you need to see sensor locations
History	Replays the movement of a single Asset, up to 7 days prior to the current date, using the same criteria as the Map View.	When you need to review the dynamic location of an Asset over time, up to 7 days prior, and the current day.

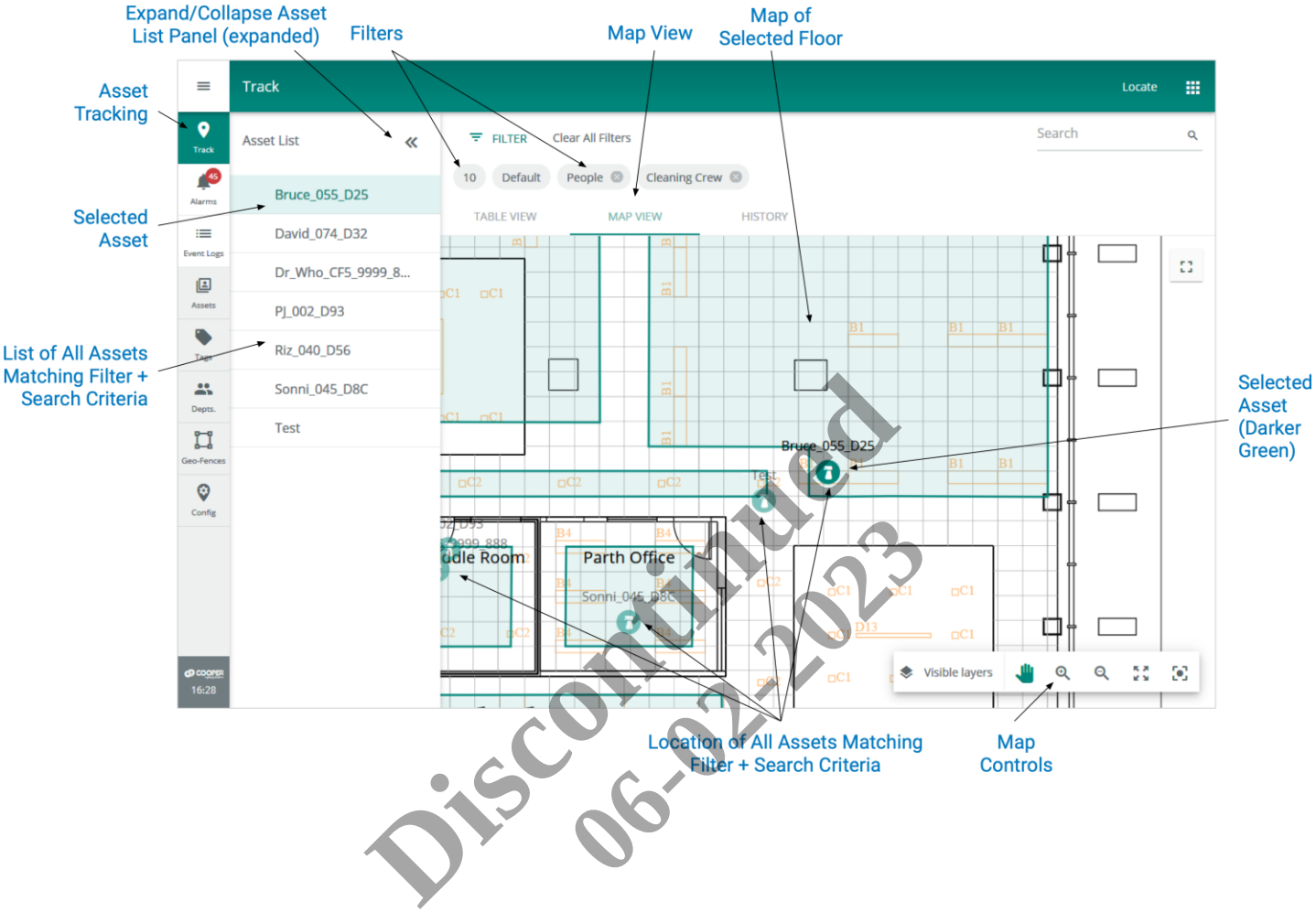
10.2 – Table View

The Table View tab is shown below with a filtered list of Assets. A "job" search string has been applied and an Asset is selected, causing the Details panel to appear. Active alarms appear in red, Cleared and Acknowledged alarms in green.



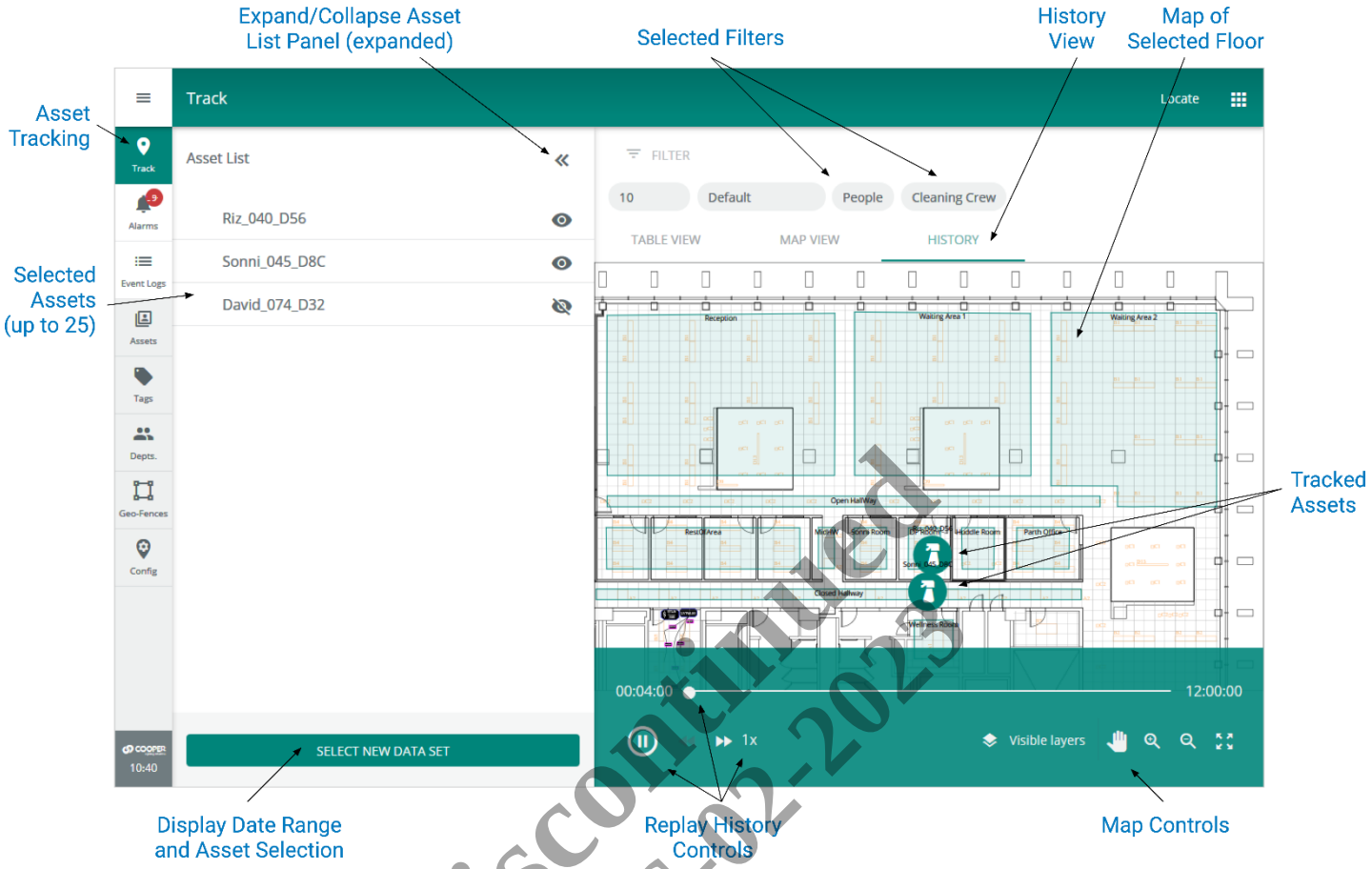
10.3 – Map View

The Map View tab, shown below, displays Assets that match any applied filter and search criteria. Assets in active alarm appear in red.



10.4 – History

The History tab, shown below, displays the replayed movement of selected Assets (up to 25). Active alarms appear in red.



10.5 – Departments and Asset Visibility

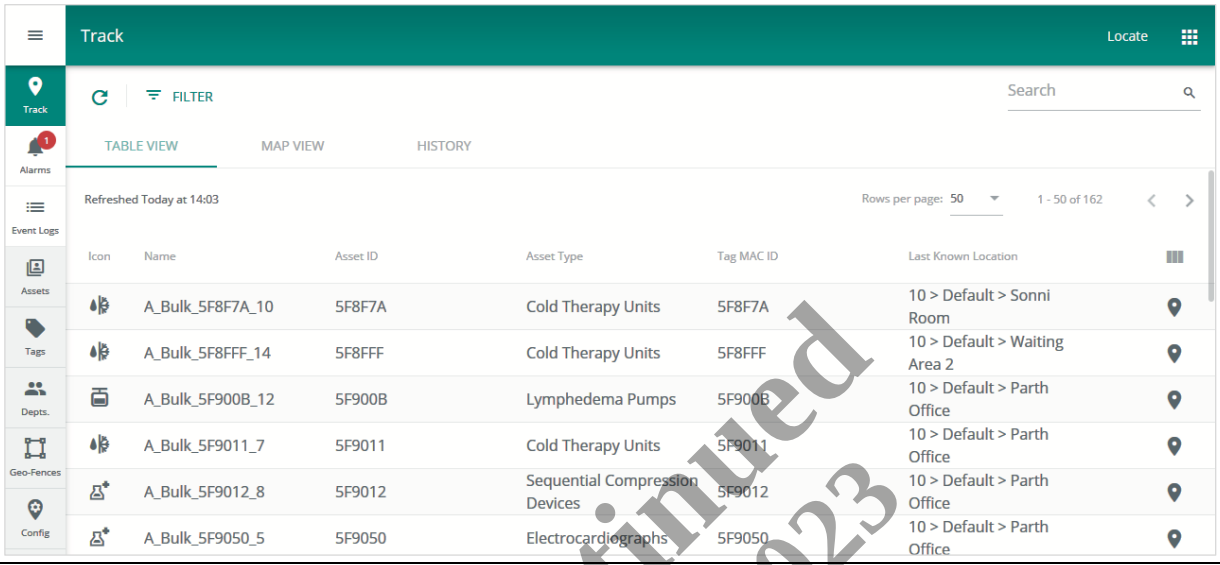
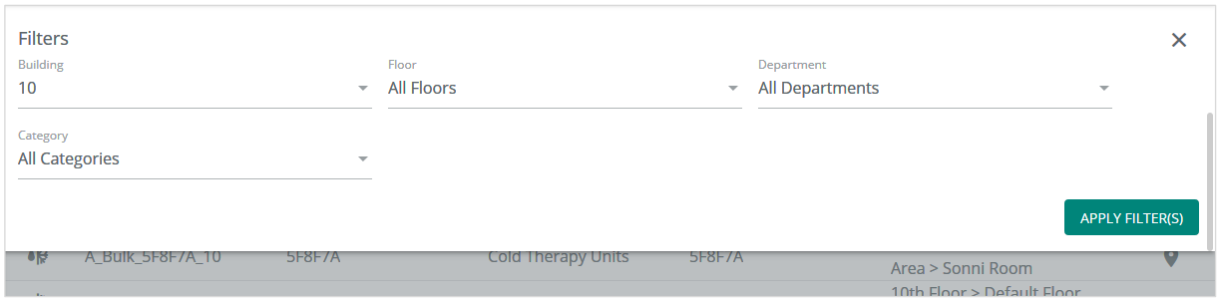
When viewing any of the tabs on the Track page, the Assets shown are always limited to those in your Departments.

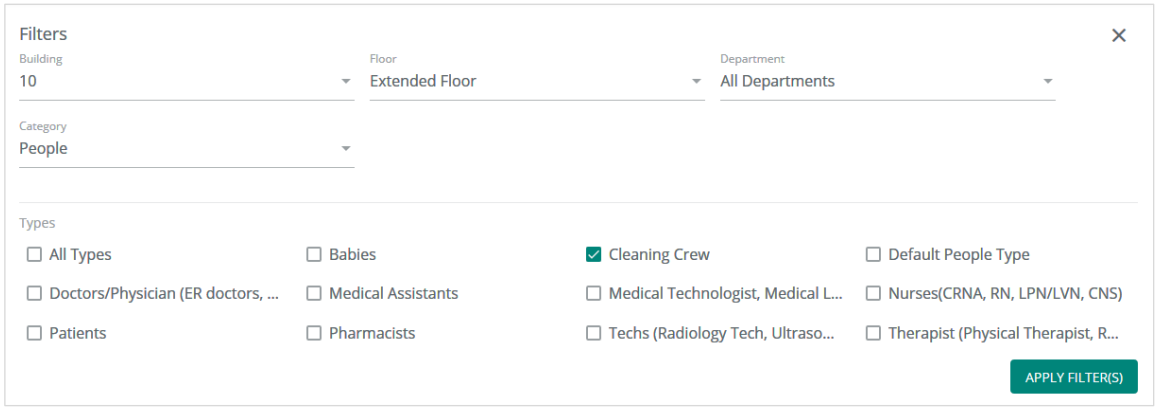
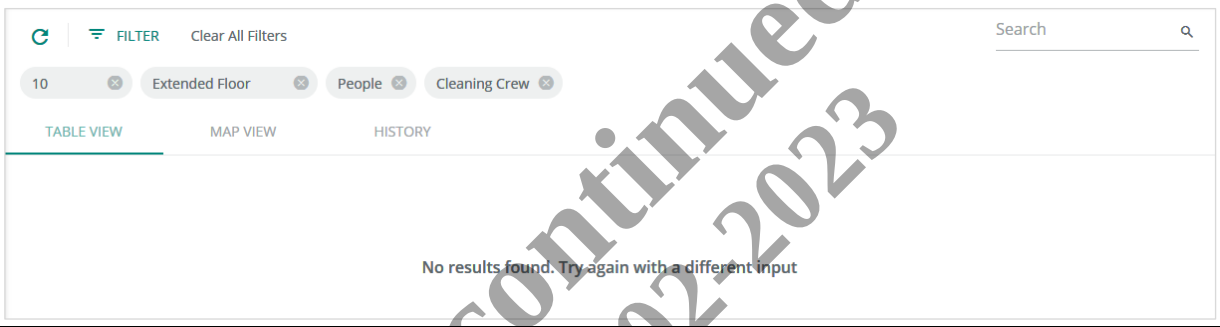
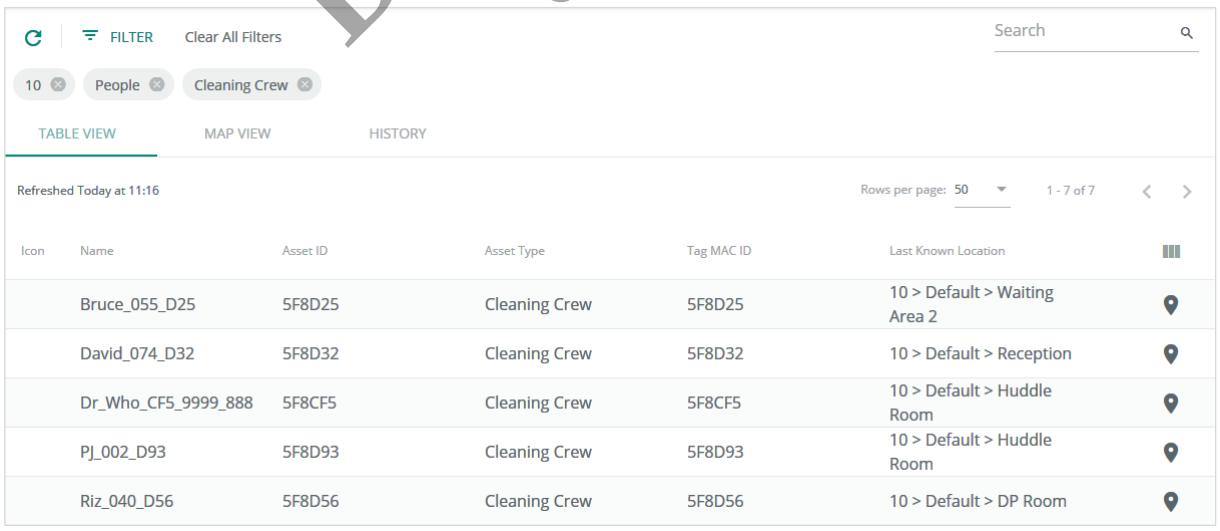
10.6 – Asset Out of Range (Not Reporting)

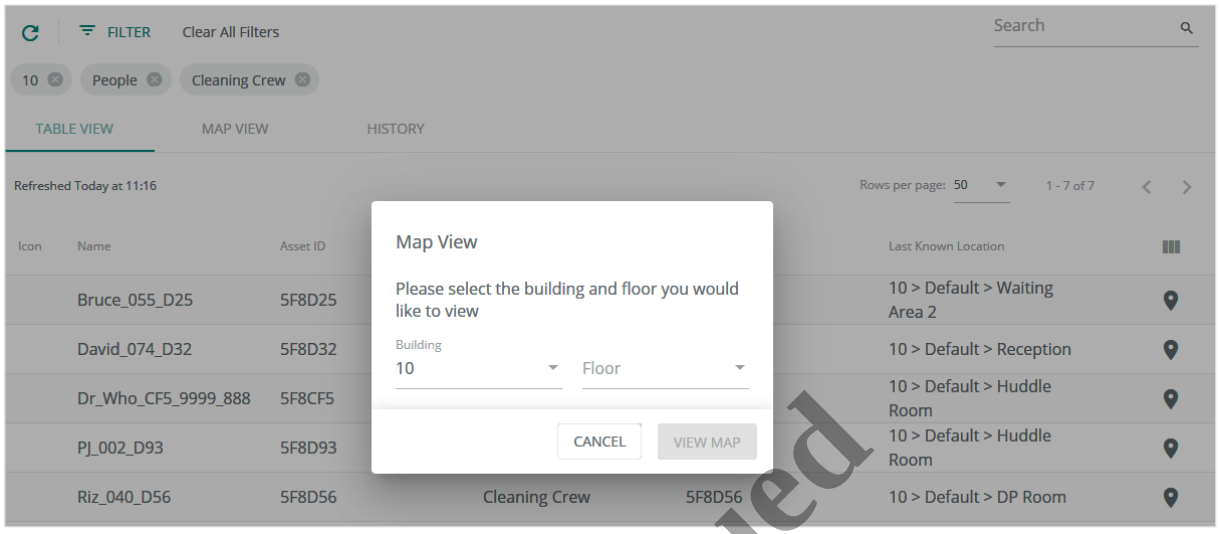
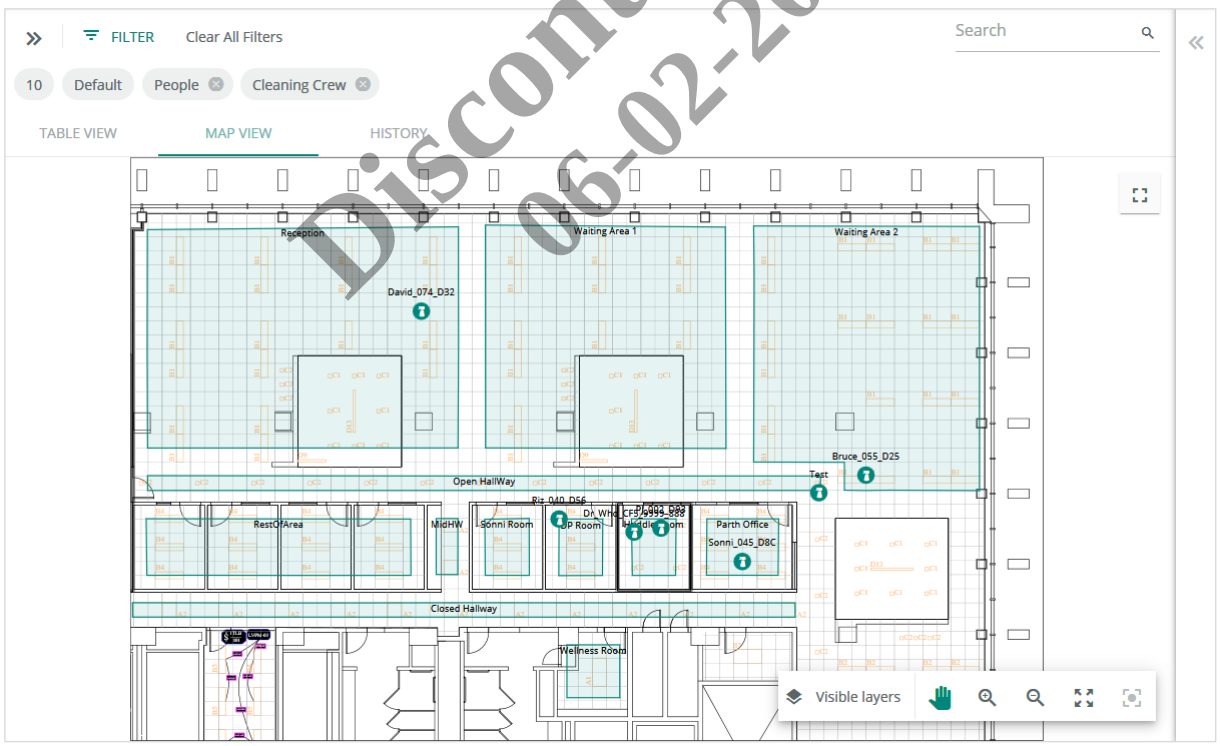
When an Asset moves outside the BLE sensor network for 15 minutes, it will have a “Presence Unknown” status on the Table View and it will appear at its last known location on the Map View. If it remains outside the network for 1 hour, an alarm will indicate that the asset is not reporting location information.

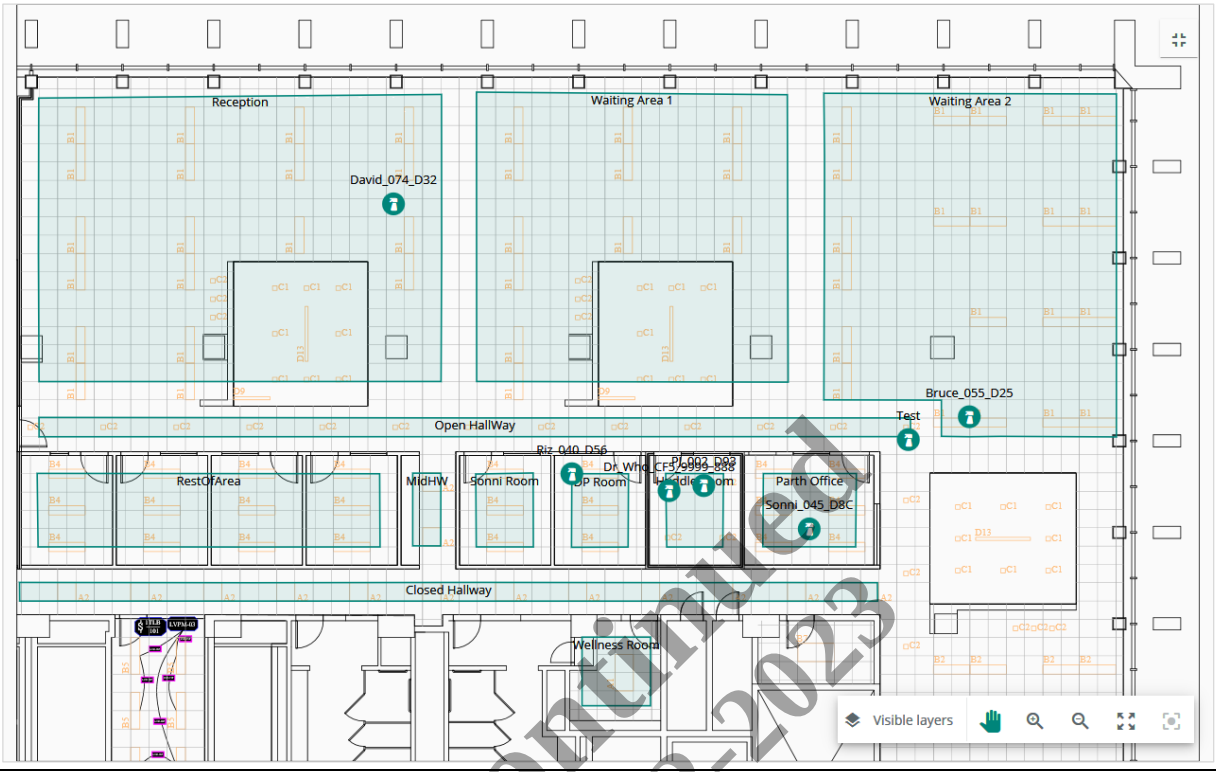
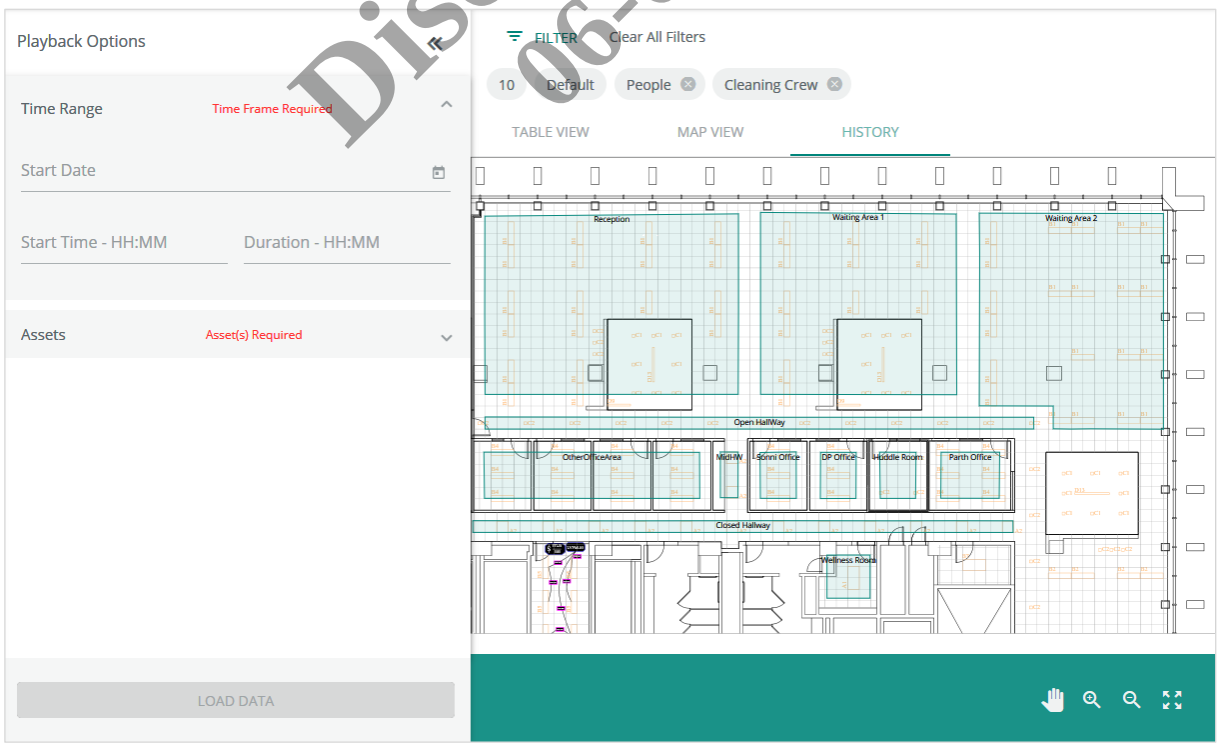
10.7 – Asset Tracking – A Walk-Through

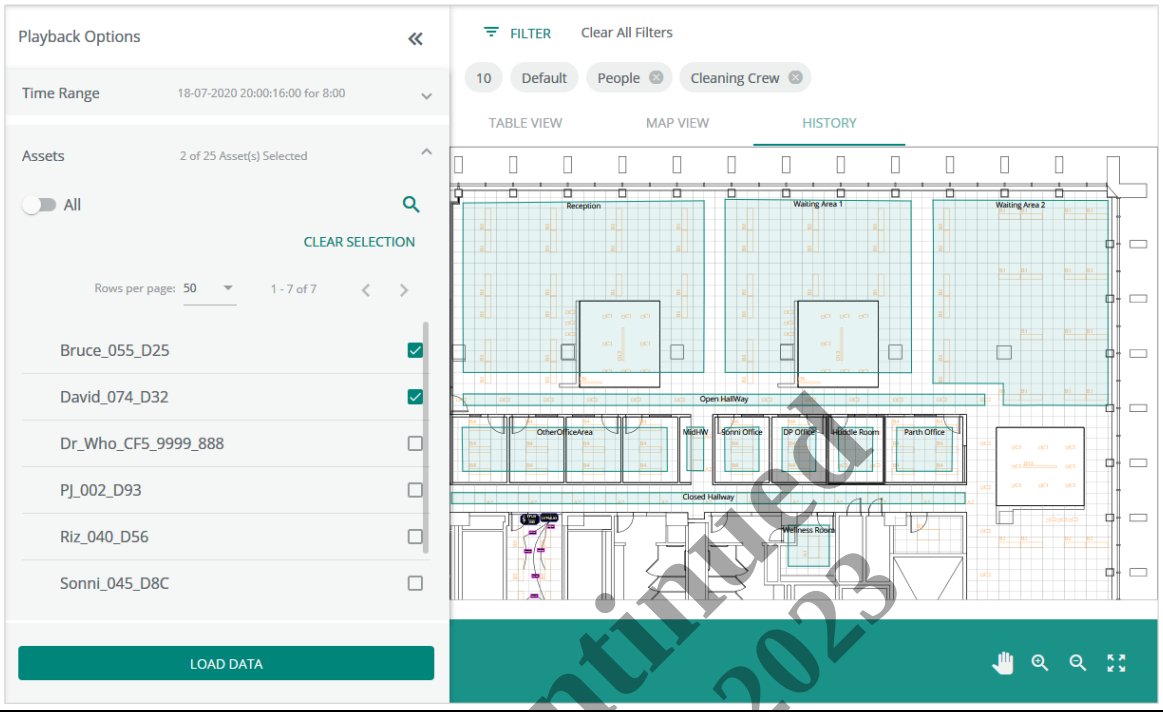
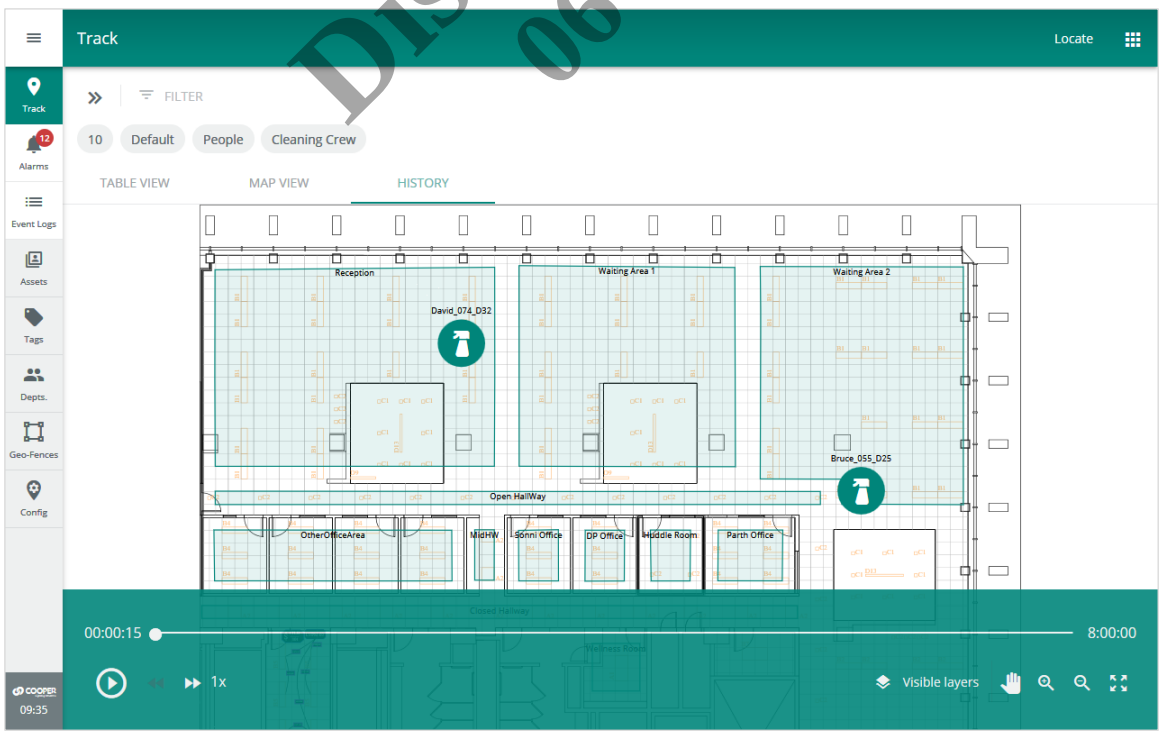
This walk-through follows a fictional user, Maya, as she works with the Table View, Map View, and History tabs to examine the location and recent movement of a cleaning crew.

Phase	Description
1	Maya navigates to the Track page and sees all Assets matching her assigned Departments. ***RESULT*** 
2	To limit the number of assets, Maya clicks **Filters** to reveal the filter options. ***RESULT*** 
3	Maya clicks **All Buildings** and selects the Building she is interested in, which loads all the Floors for that Building. ***RESULT*** 

Phase	Description
4	When the Floors have loaded, Maya selects a Floor, then selects **People** as the Category and **Cleaning Crew** as the Type. ***RESULT*** 
5	When Maya clicks **Apply Filters**, the Table View refreshes but no results are found. ***RESULT*** 
6	Maya scans below the **Filter** button to review the filters she selected and realizes the Assets she is looking for may be on a different floor. She clicks **X** beside **Extended Floor**, which causes the results list to refresh. The Cleaning Crew members she was searching for are now listed, and the Last Known Location confirms they are on a different floor, named Default. ***RESULT*** 

Phase	Description
7	When Maya clicks **Map View**, Trellix prompts her to select a Floor. Because she removed the Floor filter earlier, a map cannot be displayed until she applies a new Floor filter. ***RESULT*** 
8	Maya selects **Default** for the Floor, and then clicks **View Map**. The Floor Map appears with the Cleaning Crew assets shown at their last known locations. She notes that the filters applied now include the Default floor. ***RESULT*** 

Phase	Description
9	To get a larger map view, Maya clicks ⛶. ***RESULT*** 
10	Maya clicks ⛶ to restore the standard view, and then clicks **History** to review yesterday's Cleaning Crew movements. ***RESULT*** 

Phase	Description
11	Maya specifies the Time Range she wants to review under Playback Options, and then selects Cleaning Crew members **Bruce_055-D25** and **David_074_D32** under Assets. ***RESULT*** 
12	Maya clicks **Load Data** and the map loads in replay mode. She watches the Assets moving around the floor at real-time speed, beginning at the start time she specified. To get a better look, she collapses the Asset List panel and increases the icon size. To reduce her review time, she clicks ▶▶ to increase the playback speed. ***RESULT*** 
13	Maya clicks ☰ to expand the Cooper menu, and clicks **Logout** to end her Trellix Locate session.

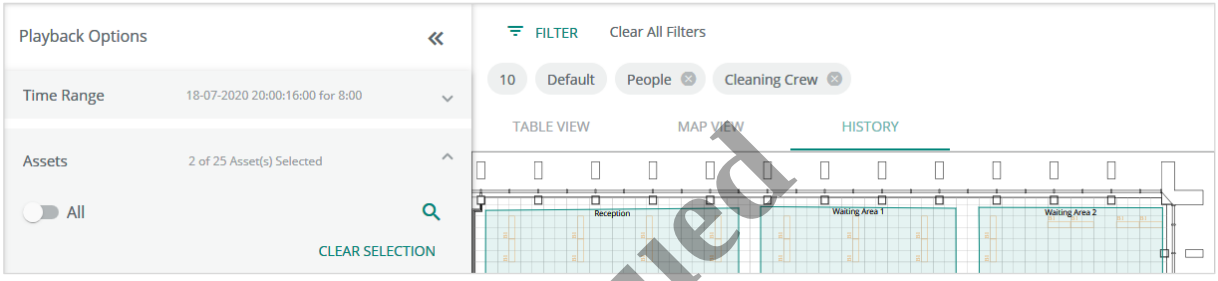
10.8 – Asset Tracking Procedures

This section includes procedures for using the main features of the Track page.

NOTE
See Filtering, Sorting, Paging, and Column Control (Track, Alarms, Events, Assets, Tags Displays) for detailed description of these features. Only the differences from those standard procedures are noted here.

10.8.1 – Filters, Sorts, and Searches

The features that apply specifically to the Track page are listed and described below.

Feature	Description
Filters on Map View and History	The Map View and History tabs require a Building and a Floor filter. Those two filters can be changed to a new Building or Floor but cannot be cleared. Note the lack of **X** icons on the **10** (Building) filter and **Default** (Floor) filter in the example below. 
Moving from Table View tab to Map View or History tabs	On the Table View tab, if you • Click **Map View** or **History**, you will be prompted to provide a Building and Floor • Click or **Show on Map** (for a selected Asset) the Building and Floor from the Last Known Location for the selected Asset are applied as filters before loading the Map View
Table View Sorts	The Table View tab supports sorting by Name, Asset ID, Asset Type, and Tag MAC ID.
Table View Search	The Table View tab supports searching of the Name, Asset ID, and MAC ID fields.
Map View Search	The Map View tab supports searching of the Name, Asset ID, and MAC ID fields.
Partial and Exact Matches on Map View Search	The Search feature on Map View tab has two modes: *partial* and *exact*. These are explained in the two examples below. ***PARTIAL EXAMPLE*** You search for "susan" on the Map View tab when it is displaying Assets on Floor 1 of Building A. The search completes by showing two *partial matches* on Floor 1: "Susan_button", and "Susan_small". ***EXACT EXAMPLE*** You search for "susan_button" on the Map View of Building A, Floor 1. There is no match on Floor 1, so the search expands to all Floors in the current Building, but now it is looking for an *exact match* for "susan_button". If none are found, the search completes with no results. If an exact match is found, you are prompted to change Floors in the Map View. If you accept, the new Floor is loaded in Map View and it displays the location of the matching Asset.

10.8.2 – Locating a Specific Asset on Table View

There is more than one way to locate an Asset. The procedure below works well for most situations.

TIP
You can apply similar steps on the Map View or History tabs.

Step	Action
1	Click **Track**. Do you know the Name, Asset ID, or MAC ID value? • If yes, perform a search with the known value. • If no, apply the most specific filter or combination of filters.

Step	Action
2	Do you see the Asset you want? • If yes, click it to display the Asset Details. • If no, go to Step 3.
3	Do one or more of the following until you see the Asset: • Sort the list, or • Adjust your filters, or • Page through the results.
4	Click the Asset to display the Details.

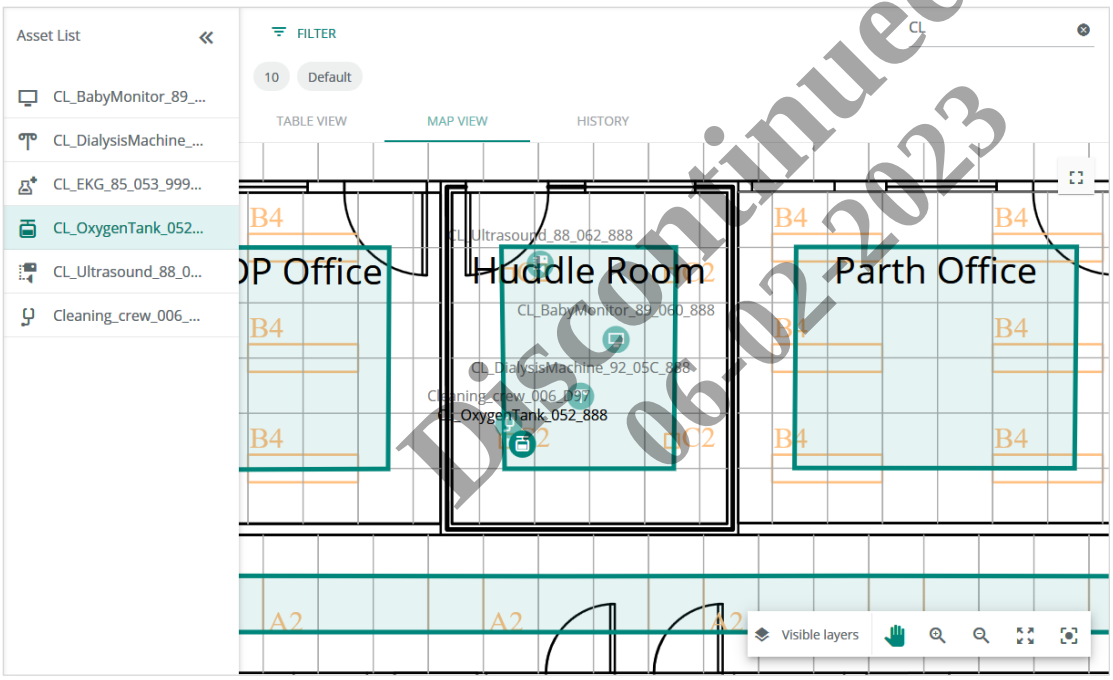
10.8.3 – Displaying a Specific Asset on Map View

Follow the steps in the previous topic, and then click in the list or click **Show on Map** in the Asset Details panel.

10.8.4 – Locating and Displaying a Group of Assets on Map View

An example Map View tab is shown below with the Asset List expanded, a "CL" text search applied, and an Asset selected.

NOTE
The Asset Details panel will not appear on the right when the Asset List panel is open on the left.



Procedure

Follow the steps below to locate and display a group of Assets on the Map View tab.

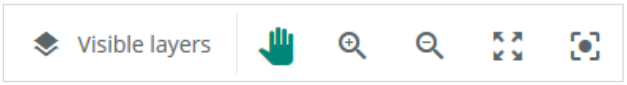
NOTE
It may not always be possible to get exactly the set of Assets you want and nothing else, but you can usually get close.

Step	Action
1	Click **Track**, and then click **Map View**. When prompted, select the Building and Floor you want when prompted, and then click **View Map**.
2	If there are too many Assets being displayed, click **Filter**.
3	If the target Assets all belong to a common Department (e.g., Cardiology), select it from the **Department** list.
4	If the target Assets all fall under one or more Types (e.g., Medical Assistants, Techs), select the applicable Type checkboxes under **Object** or **People**. ***NOTE*** *You can filter with multiple Object Types, or multiple People Types, but you cannot combine Object and People Types.*

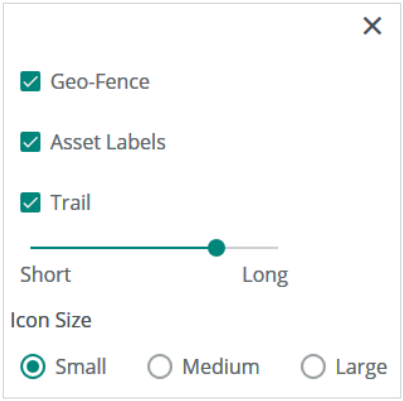
Step	Action
5	If you apply the Filters and there are still too many Assets displayed, see if you can add a Search for a common but unique string that the target Assets share (e.g., Asset IDs all contain with “XLT77”).
6	To display the list of Assets, click >> in the upper left.
7	To view more information about an Asset, click it to open the Details panel. ***NOTE*** *The Asset Details panel will not appear on the right if the Asset List panel is open on the left.* ***TIP*** *Click the selected Asset a second time to deselect it.*

10.8.5 – Working with the Map Viewing Tools

The Map Viewing Tools, as they appear the Map View tab, are shown below. The ⛶ Full Screen tool that appears to the upper right of the map is also described. The Visible Layers menu options are shown separately.



VISIBLE LAYERS MENU



Procedure

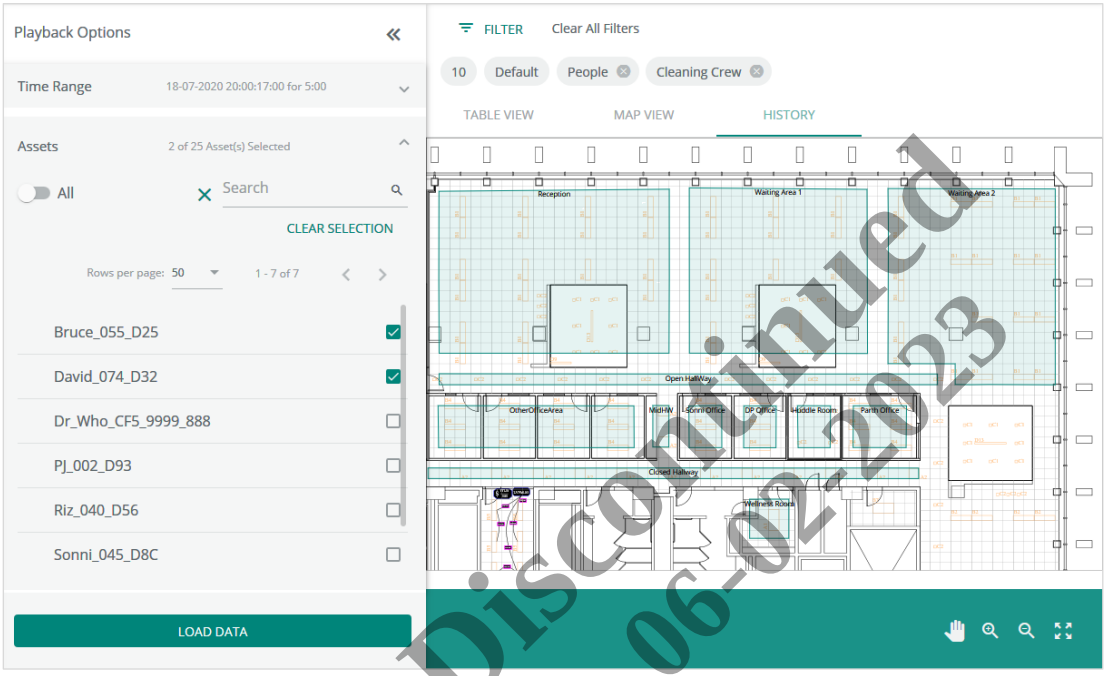
Follow the steps below to work with the Map Viewing Tools.

Tool	Action
 Focus	Click to center the selected Asset and zoom in on it (unavailable until an Asset is selected).
 Show Entire Map	Click to fit the entire Floor Map into the display area.
 Zoom Out	Click to Zoom Out.
 Zoom In	Click to Zoom In.
 Drag	Click to select and drag the map position.

Tool	Action
Visible layers	Click to • Show or hide Geo-Fences • Show or hide Asset Labels • Change the size of the Asset icons • Show or hide Asset Trail (disabled for multiple Assets)
⛶	• Click to expand the map to fill the entire screen • Click ⛶ to restore the standard map size

10.8.6 – Locating and Displaying Assets on the History Tab

An example History tab is shown below. Two Assets selected for replay over a 5-hour period.



TIP

*Click the Asset to display the Details panel, and then check the **Location Last Updated** value. You will be able to replay the movement of an Asset for up to 7 days prior to the current date, depending on how long the Asset has been broadcasting its location.*

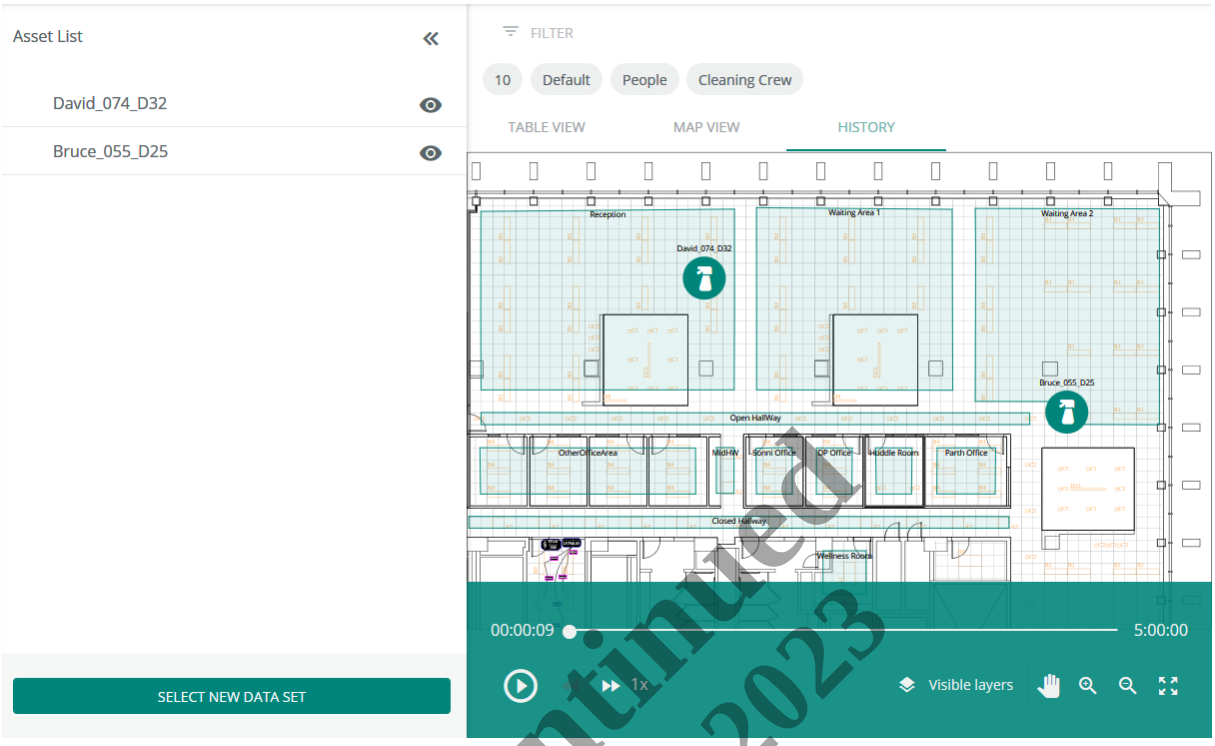
Procedure

Follow the steps below to locate and display a group of Assets on the History tab.

Step	Action
1	Click **Track**, and then click **History**. When prompted, select the Building and Floor you want, and then click **Go to Replay**.
2	Select a Start Date, then enter the Start Time and Duration for the replay.
3	Select one or more Assets in the Playback Options panel. ***TIP*** *If there are too many assets listed, use a combination of Filters and Search to reduce the count.*

Step	Action
4	Click Load Data to start the replay.

EXAMPLE



10.8.7 – Replaying Asset Movement on the History Tab

The Replay controls that appear during playback of Asset movement are shown below.

Replay History Limits

The following limits apply to the History replay Parameters:

- The earliest Start Date can be 7 days before the current date (e.g., if today is September 30th, then September 23rd is the earliest date)
- The Duration cannot exceed 23 hours and 59 minutes
- The Maximum playback speed is 16x the real-time speed
- An Asset cannot be displayed if it moves off the current Floor, but you will be notified when that happens

NOTE
Backing up and clearing historical location data is managed in Trellix Admin. See "Backing Up and Restoring" *and* "Clearing Utilization and Occupancy History" *in the Trellix Lighting System Configuration Guide.*

Procedure

Follow the steps below to replay the movement of an Asset on the History tab.

Step	Action
1	Select a Start Date, then enter a Start Time and Duration, and then click **Load Data**.

Step	Action
2	Click one or more Assets from the Playback Options list on the left. ***TIP*** *If there are too many assets listed, use a combination of Filters and Search to reduce the number shown.*
3	Use the following controls to manipulate the playback: • To pause the replay, click ⏸ • To continue the replay, click ▶ • To increase the replay speed, click ▶▶ • To decrease the replay speed, click ◀◀ • To move to a specific time, drag the time slider
4	Use the Map Controls to drag, zoom in, zoom out, and reset the Floor Map size. ***TIPS*** • *Collapse the left-side Playback Options or Asset List panel if you want to access the Asset Details on the right* • *The History tab does not have the Focus or Full Screen tools* • *See Working with the Map Viewing Tools for map control details*

11 – Appendix

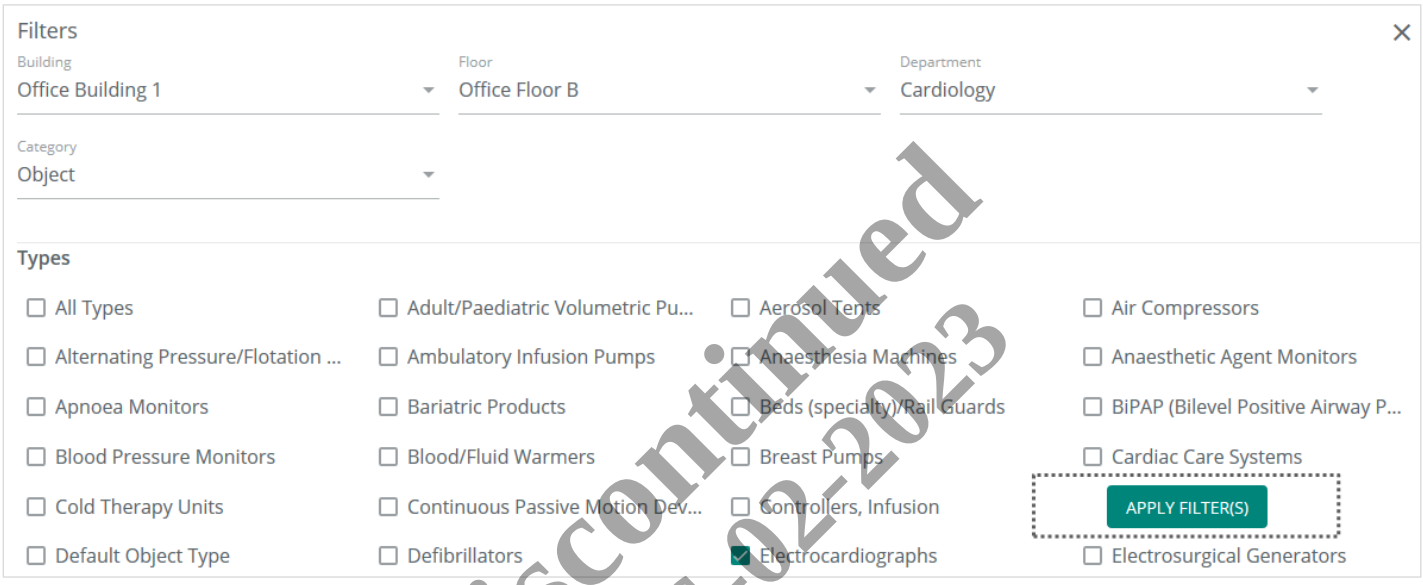
This chapter contains supporting information for Trellix Locate.

11.1 – Filtering, Sorting, Paging, and Column Control (Track, Alarms, Events, Assets, and Tags Pages)

Several Trellix Locate pages use the same basic methods for filtering, sorting, paging, and column control. This section describes how these work. Any notable differences, such as the need for Building and Floor filters on the Map View tab, are called out in the appropriate chapter.

11.1.1 – Find by Filtering – A Track > Table View Tab Example

An example Filter panel for the Table View tab is shown below, with filters that limit the displayed Assets to the following: Office Building 1, Office Floor B, Cardiology (Department), a single Type in the Object Category (Electrocardiographs).



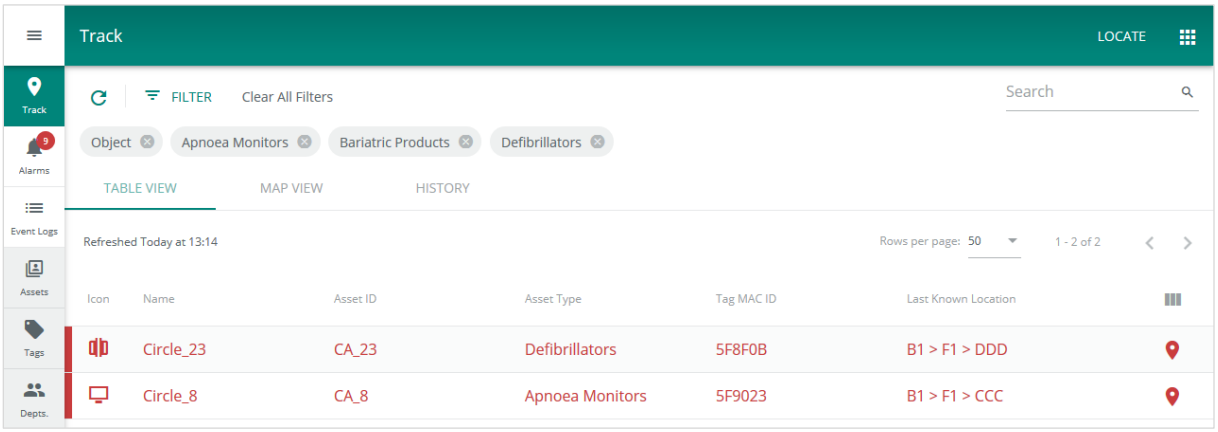
Procedure

Follow these steps below to use Filters on the Table View tab. Other Locate pages will behave similarly, though some filters may vary.

Step	Action
1	Click **Filters**.
2	To filter by Building and Floor: 1. Click **All Buildings**, and then select a specific Building. 2. When the Floors have been loaded, click **All Floors**, and then select a specific Floor.
3	To filter by Department, click **All Departments**, and then select a specific Department.
4	To filter by Asset Category, click **All Categories**, and then select **Object** or **People**.
5	To limit the selected **Types** under Object or People (the default is **All Types**), select the checkbox beside one or more **Types**.
6	Click **Apply Filters**. ***TIP*** *When filtering by Object or People Types, you may need to scroll to see the **Apply Filters** button (shown inset in the example above).*
7	To clear one or more filters: • Click **X** beside the filter name that appears above the listed Assets • Click **Clear all Filters** to eliminate any filtering

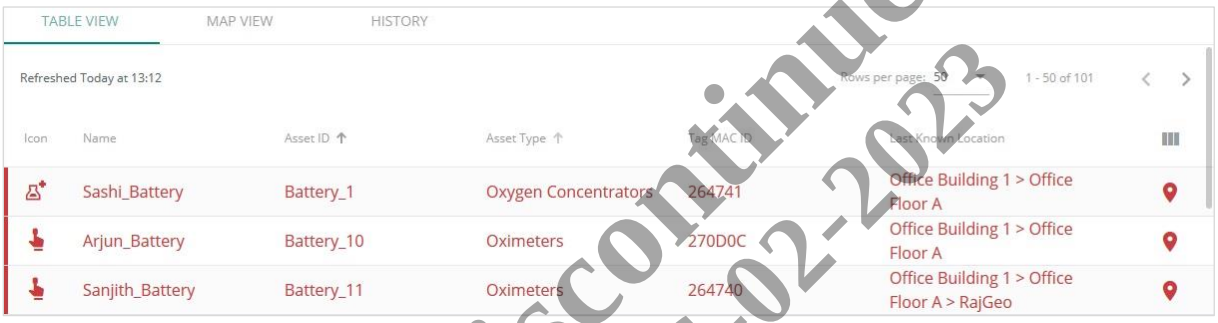
Example

An example of filtered results on the Table View tab is shown below, including the **X** buttons used to quickly clear a specific filter.



11.1.2 – Sorting - A Table View Tab Example

The Table View tab supports sorting the Asset list, in ascending or descending order, by Name, Asset ID, Asset Type, and Tag MAC ID. An example, sorted by ascending Asset ID, is shown below.



Procedure

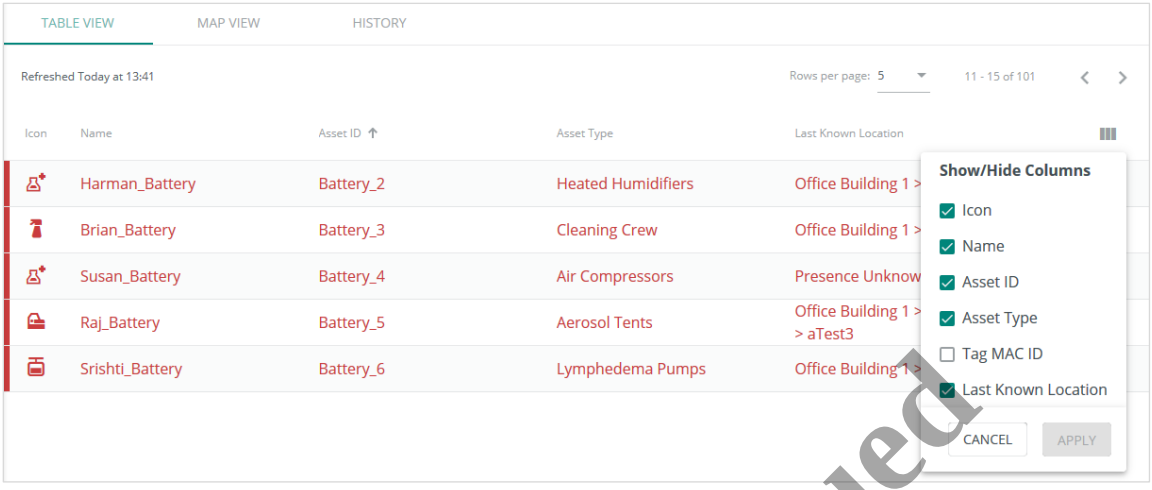
Follow the steps below to sort the Assets listed on the Table View tab.

Step	Action
1	Hover over the column name. If it is sortable, a ↑ will appear.
2	Click once to sort ascending. A ↑ will appear beside the column name.
3	Click the column name a second time to sort descending. A ↓ to appear beside the column name.

11.1.3 – Paging and Column Control – A Track > Table View Tab Example

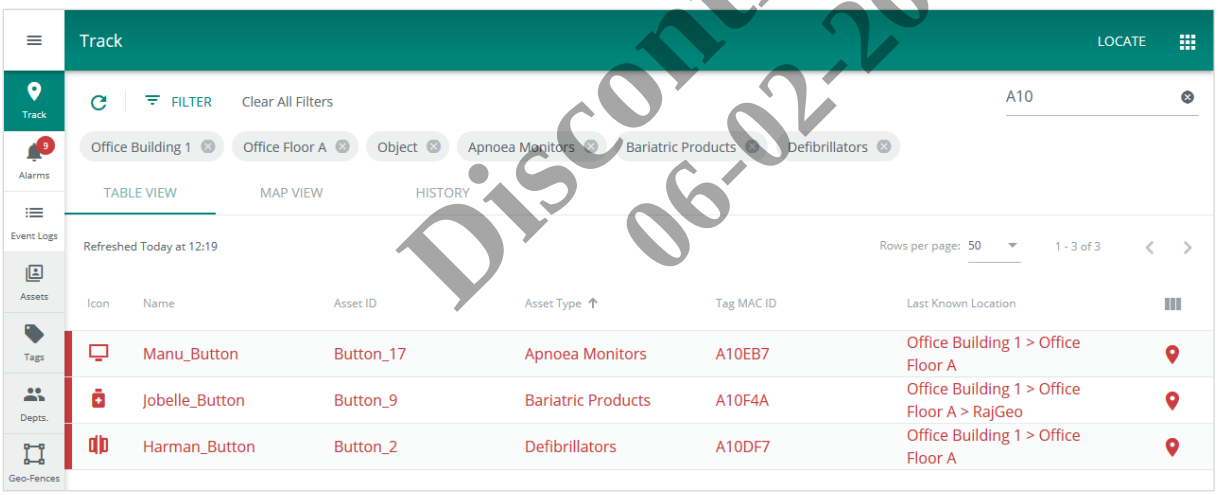
The way Assets are listed on the Table View tab can modified. The number of Assets that appear per page can be customized, and the columns that appear can be enabled and disabled.

The example below shows a list with 5 Assets per page, currently displaying Assets 11-15 out of 101 Assets total, and with the Tag MAC ID column hidden.



11.1.4 – Searching – Track > Table View Tab Example

EXAMPLE
An example search on the Table View tab is shown below, selected for Assets that match "A10".



The Search function works by entering text in the Search box, and then clicking 🔍 or pressing Enter. The following considerations apply:

- Only the Name, Asset ID, and MAC ID fields are searched
- The matching is not case-sensitive, so "apnoea" will match "Apnoea" and "APNOEA"
- Partial matches will be found, so "A10" will match "A10EB7" and "FD4A10"
- The whole search string must match, so "Apnoea Devices" will not match "Apnoea Monitors"

11.2 – Default Accounts, Roles, and Permissions

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

Username	Password	Role Assigned	Permissions
`Viewer`	`BXLinx!1`	Viewer	The Viewer user has view-only access to the Track, Alarms, Event Logs, and Departments features. The View user also as view-only access to the system-wide Alarms and Events that are visible in Trellix Admin.
`Operator`	`BXRtls!2`	Operator	The Operator user has all Viewer access and can also • Create, edit, and delete Object Assets and Departments • Create, edit, and delete People Assets and Departments • Manage and configure Tags • Acknowledge alarms
`Locateman`	`BXRtls!3`	Locate Manager	The Locate Manager user has all Operator access and can also • Configure and manage Geo-Fences • Set up Rules
`Admin`	`BXLinx!5`	System Administrator	The System Administrator has full access to all features.
`Public`	`BXLinx!7`	Third-Party Integration	The Third-Party Integration user has access to the Published API. ***NOTE*** *It is not possible to login to the Web user interface with this account.*

11.3 – Account Permissions

11.3.1 – Locate Permissions

The Locate permissions are listed and described below.

Permission	Description
Acknowledge Alarms	Acknowledge Locate alarms
Asset Management	Create, read, update, and delete Object Assets and Departments
Locate Configuration	• Configure and manage Geo-Fences • Set up Rules • RTLS configuration (nodes/engine)
People Management	Create, read, update, and delete People Assets and Departments
Tag Management	Enable, disable, assign, and edit Tags
View Only	• View assigned Alarms and Events • View Track page (including Map View and History tabs)

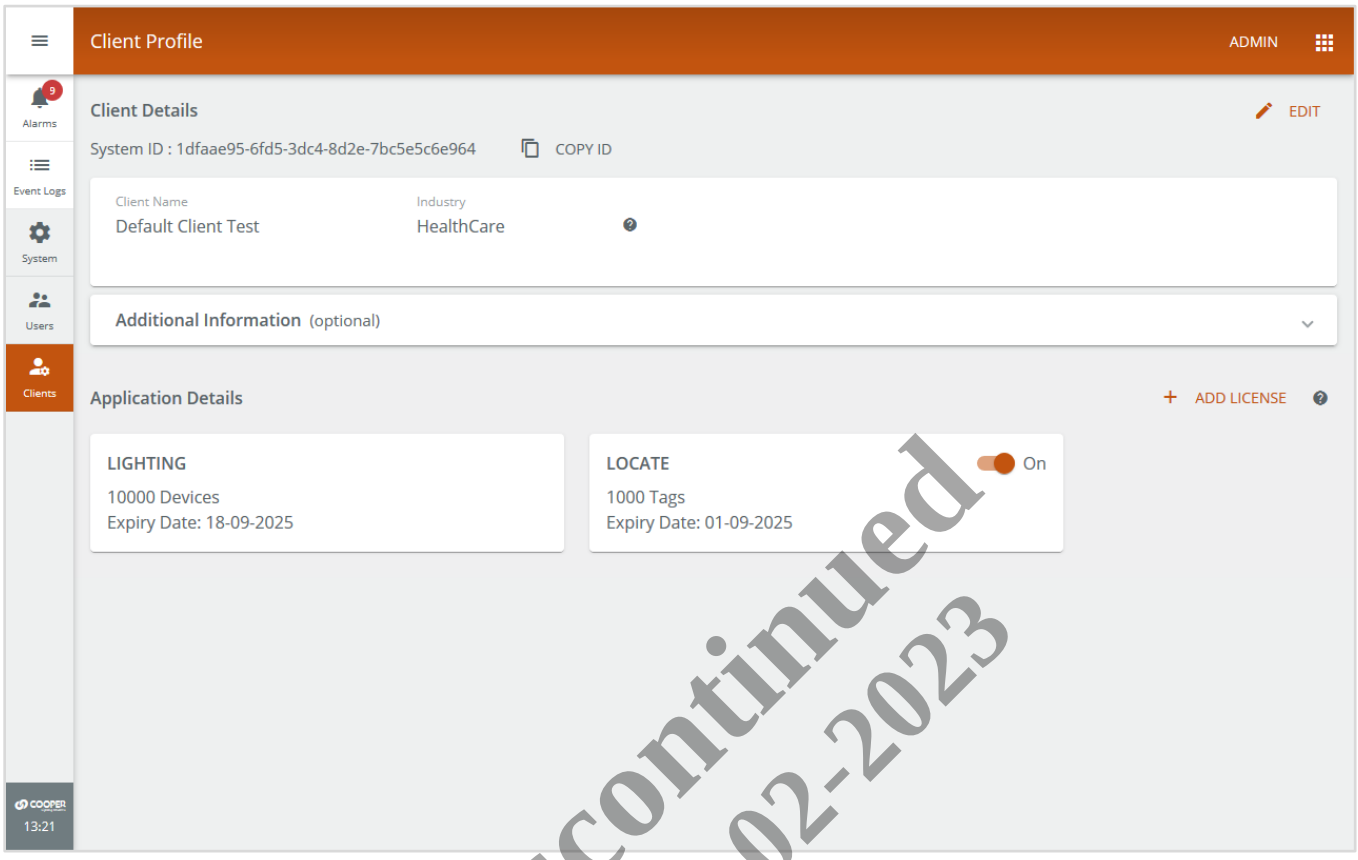
11.3.2 – Global Permissions

The global Trellix permissions that pertain to Locate are listed and described below.

Permission	Description
Locate API	Access Locate published data using the Application Programming Interface
User Management	Create, view, modify, and delete user accounts
User Role Management	Manage 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 the system and subsystem software versions • View diagnostic logs components and features

11.4 – Adding and Updating a Trellix Locate License

An example of the Clients page in Trellix Admin is shown below, with the default Lighting license of 1000 devices and a Locate license for 1000 Tags.



Procedure

Follow the steps below to add or update a Trellix Locate License.

NOTE

To perform this procedure, you must have System Administrator access to Trellix Lighting (Note this is a Lighting permission, and not a Locate one).

Step	Action
1	Log into Trellix Core with System Administrator access for Trellix Lighting.
2	Click ⠿, and then click **Clients**.
3	Click **Copy ID** beside **System ID**.
4	Submit your Trellix Locate license request to Cooper, 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.
5	When the license file arrives, click **+ Add License**, then select the JSON license file on your computer, and then click **Open** to upload it.
6	When the file has uploaded, the new license settings will be applied to your system. If this is the first license submitted, Trellix Locate will also be enabled.

11.5 – Troubleshooting

11.5.1 – Location Reporting is Slow or Inaccurate

Problem

One potential cause for slow or inaccurate location data is network congestion. Review the Events Log in the Trellix Admin app to see if there are “Zigbee network experiencing backlog” entries. If these are being reported often, it indicates that one or more sensors are detecting more Tags than they can report.

Solution

Increase the individual RSSI Cut-Off settings for the identified sensors as described in *Enabling, Disabling, and Changing the Individual Sensor Settings*.

11.5.2 – Duplicate Geo-Fence Alarms

Problem

Duplicate Geo-Fence alarms are generated for Assets that were already inside a Geo-Fence.

Solution

The Trellix system does not save or track Tag locations when it is offline, for example, when rebooting after a system upgrade. When the system recovers after reboot, it will generate new alarms for Tags located inside Geo-Fences, even if those Tags were already inside the Geo-Fence before rebooting. This is expected behavior for Locate 7.0, 7.1, and 8.0.

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

Please refer to www.cooperlighting.com/WarrantyTerms for our terms and conditions.

Garanties et limitation de responsabilité

Veuillez consulter le site www.cooperlighting.com/WarrantyTerms pour obtenir les conditions générales.

Garantías y Limitación de Responsabilidad

Visite www.cooperlighting.com/WarrantyTerms para conocer nuestros términos y condiciones.

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