SPOT
Mapping
USER GUIDE

SPOT MAPPING USER GUIDE

SPOT Mapping is an enhanced mapping interface that empowers users with the ability to track their progress while adventuring, send their waypoints, check in, message on their SPOT X device and maximize the value of their SPOT device(s) from anywhere in the world.

DOCUMENT CONTENTS

GENERAL PLATFORM USAGE

SPOT mapping puts all of the data in an ecosystem into a single, powerful, centralized hub that accommodates all participants, assets, and stakeholders. SPOT Mapping is a web based product which can be accessed from any device capable of operating a web browser. This means end users are not required to download any software in order to access their assets' data tracking platform. SPOT Mapping's cloud accessibility gives asset managers the flexibility to receive, analyze, and act upon data in near real time without being tethered to a local terminal or device running heavy software.

LEFT PANEL ICONOGRAPHY

Perhaps the best features you'll notice immediately about the panel interface is the color-coded iconography that serves as status indicators. Each of the colored indicators will appear in color or faded out depending on whether the asset has any of the 5 types of notifications.

Positions (green): SPOT messages with a GPS location that you can see on your map

Alerts (orange): SPOT alerts such as Help and S.O.S. messages, plus custom alerts created by the user

Heightened Alerts (ie S.O.S.) (red): If there has been an emergency alert triggered since last checked

Events (purple): SPOT events such as messages that show your Tracks and Check Ins

Status (yellow): SPOT status notifications such as low battery, powered on, powered off and movement alerts

Chat (blue): SPOT custom messages to and from your SPOT devices
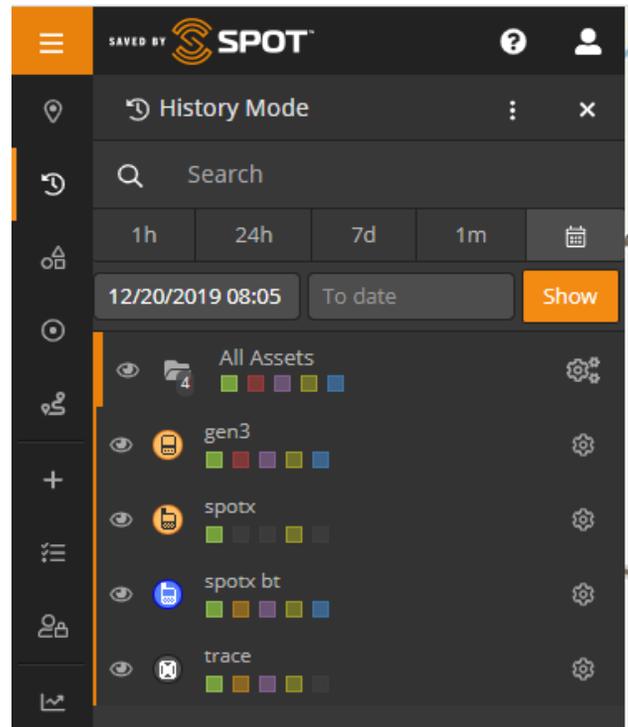
Other new iconography includes certain types of visual indicators to represent some of the more common alert or status types, like alerts, or distress-related icons.

POWERFUL ASSET MANAGEMENT TOOLS

Asset views can be customized to show both live and historic data transmission, and users can group assets in a number of ways through the map. Geofencing capabilities and configuration of field triggers further expand the monitoring and management of assets in the field.

STAY INFORMED WITH LIVE ALERTS

Alerts encompass a wide range of mostly trigger-based activity and behavioral monitoring, but can also be used to automate certain "checking" and "reminder" activities and processes associated with hardware assets. Beyond that, manual alerts can be transmitted between SPOT Mapping and any device in the primary user map that is part of the SPOT experience.

RUN AND VIEW DETAILED REPORTS

Reports from SPOT Mapping range from generic and high level activity reports to highly customized and specifically detailed reports at a granular level. Reports can be exported in PDF and XLS formats. Visual reports from the map dashboard are also readily available and can be customized by the user in order to help them aggregate the data they need to make decisions and act upon insights produced within their data.

SENDING AND RECEIVING MESSAGES WITH SPOT X

Custom messages sent from any SPOT device will be displayed on the SPOT Map interface for easy retrieval by anyone with access to the account. SPOT Maps also allows for messages to be sent back to the SPOT X for easy 2-way communication.

CUSTOMIZE PREFERENCES AND SETTINGS

SPOT Mapping comes prepared to accommodate a wide variety of clients with a diverse set of needs. Its default settings have been selected as the most commonly employed configuration for tracking purposes, but each of the parameters and preferences can be customized to suit the needs of the user. This includes views, permissions, behaviors, account settings, access/authentication requirements, security, and system reporting.

ADMINISTRATIVE TOOLS OVERVIEW

The administrator tools for SPOT Mapping can be found in the Config option of the main navigation panel. This menu will have fewer tools, settings, and functionality for non-administrator users.

Each of these options will give you additional control of your SPOT Mapping user experience and allows for customization and standardization of the map to suit your needs.

Other aspects of SPOT Mapping will be outfitted with additional functionality for administrators as well, but most of the control features can be found in this navigation section.

Note: User permissions are set when making users, but individual permissions can be edited at any time from this section of the SPOT Map.

ALERTS

Add new alerts or edit existing alerts from here. The following information will be used for creating or managing alerts:

- Name: How you want the alert to be identified in the map. Users often choose names that would be found on the subject line of an email
- Description: For standard alerts, this helps identify the nature of the problem, or gives insight as to the severity of the alert itself
- Resolution Procedure: For alerts that will potentially be acknowledged by any map operator, notes about how to respond to it can prove valuable in time-sensitive scenarios
- Photo: While not often used, some alerts might benefit from including a photo with instructions to supplement the resolution procedure
- Acknowledgment: Select yes if the alert is urgent and requires attention from an individual with map access
- Alert applies to: Use this to specify which assets or asset groups can trigger it (limit by inclusion)
- Exclude from Alert: Use this in conjunction with the above option if you wish to limit by exclusion
- Type: Related to the triggering criteria for the alert, as each triggering criteria can have multiple alerts
- Filters: Applies any of the selected filters to the alert triggering criteria, allowing managers to control when automated triggering occurs
  - Time: Restrict alert trigger according to time of day
  - Date Range: Restrict alert trigger to only a specific period of time
  - Day: Restrict alert trigger to specific days of the week
  - Date: Restrict alert trigger to specific dates in the year
  - Week: Restrict alert trigger to specific weeks of the year
  - Speed: Restrict alert trigger to being above a certain speed

  Note: Speed is not currently sent from a SPOT device but is calculated from a formula using your GPS locations.

  - Fence: Restrict alert based on whether it triggers inside or outside a geofence

- Notifications: Use this to determine the types of messaging to be sent for each alert, and who receives each type of message notification. This is typically only used for time-sensitive and safety-related alert triggers.

Cool-down Period: Time between sending an alert notification and resending the same alert notification

CONTACTS

The following information will be used to add, delete, or edit contacts available to users in SPOT Mapping:

- Name: Contact name
- Type: Email or SMS
- Email address: If email selected, the email address you wish to associate with this contact
- Phone information: If SMS selected, country code, number, and provider information
- Emergency contact: If the contact is to be used as an emergency contact in the system, click yes
- Emergency notification rate limit: Restricts message notifications to this contact to once every <select> minutes
- Rate limit: Restricts non-emergency message notifications to this contact to once every <select> minutes
- Notification language: Language to display for notification data details
- Notification speed display: Choice of units of measure

  Note: Speed is not currently sent from a SPOT device but is calculated from a formula using your GPS locations.

- Lat/Lng format: Choice of display method
- Fuel units: Choice of units of measure
- Timezone: Timestamps for events to appear in this timezone

In addition to managing contacts, administrators can also send test messages to contacts directly from the edit list.

CONFIGURATION

MY PROFILE

Your contact information, account login, preferences and security live here.

PREFERENCES

This is the page that manages all of the map's default settings for your account. Configurations made for each of the following can be altered on an individual basis, but the defaults will be configured according to your selections here.

- Language: Set to browser default, but can be changed
- Speed display: Choice of units of measure
- Lat/Lng format: Choice of display method
- Fuel units: Choice of units of measure
- Timezone: Timestamps for events to appear in this timezone
- Default map view: Choice between live or historical view
- Default map mode: Choice between road, satellite, terrain, open street map, or other custom tiles
- Default history view: Set the parameters by which historical view pulls its data

SECURITY

From here you can enable two-factor authentication for login. Your application of choice will either require a long authentication code or a QR code to be scanned. The app will display a 6-digit code, which will be used by SPOT Mapping to confirm the connection. Once complete, your two-factor authentication will be used for all future logins.

MANAGE

The Manage overview panel is the hub for controlling the organizational aspects of the platform that are available to users, as well as pre-determined messaging, operator forms, and templates. From the Manage Overview tab in the settings subnavigation, you will find the following features.

DRIVERS

Manage vessel operator data, including login credentials and personal information.

- First name: Driver first name
- Last name: Driver last name
- Username: Driver username for login
- Password: Driver password for login
- Duress Password: To be entered to alert managers of dangerous situation, such as hijacking
- Phone Number: Driver phone number
- Manager: Driver's manager
- Emergency Contact: Driver's emergency contact name
- Emergency Contact Number: Driver's emergency contact phone number
- Photo: Of the driver or documentation such as licenses

DRIVER STATUS TEMPLATES

Use this to create simple options for drivers to choose from the interface on their reporting devices. The most common status template options are active, off duty, resting, delayed, delivering, waylaid, and in distress.

JOURNEYS

Journeys are collections of Trips that allow users to interact with specified segments of Asset reporting history.

MAP LAYERS

Use this to add or change permissions for each available map layer. Currently available by default for upper tiers:

- Maritime
- US Weather Radar
- AUS Weather Radar
- World Satellite Infrared
- Traffic
- Weather Forecast
- Oil

With the Enterprise tier, administrators can also add custom map layers to the platform from this option and make them available for all users.

USER EMAIL TEMPLATES

Use this to pre-populate content for an email, leaving only form information to fill in.

USERS

Adding and managing users is perhaps the most critical component of the administrator's functionality group. User management allows for the creation of an organizational hierarchy within SPOT Mapping, outward reporting visibility, stakeholder controls, and more.

USER PROFILES AND CONFIGURATION

SPOT Mapping supports three user types in order to accommodate the needs of diverse teams. Administrator users have control of the SPOT Map, can manipulate permissions, settings, or configurations, and manage other users. Standard users are traditionally family, friends, or field operatives who may have some control over certain assets, and whose access to the SPOT Map is slightly more restricted. Anonymous users can be configured for the purpose of providing public information to interested parties outside of the your family or organization, as with embedded public data on a website, or for family members of tracked personnel.

USER PROFILE: ADMINISTRATOR

This is the first user type to be created within an account, as this user type has full control of all facets of the SPOT Mapping account. The administrator user type should be given only to users with an advanced understanding of the SPOT Map, including what they can do with their permission level. Administrators have the ability to control and modify the other user levels, including permissions, assets, settings, preferences, and all other configurable aspects of the SPOT Map. Understanding the power this user type has is important to the safekeeping of your SPOT Map data, and it is recommended that only a small number of users are administrators.

USER PROFILE: STANDARD

The standard user type will be the most common user, and is the most flexible type, allowing for full control of each individual's permissions, capabilities, and usage. Access to assets, places, geofences, alerts, and other aspects of SPOT Mapping can be configured by the administrator to be as open or restricted as desired with this user type. This user type is ideal for family, friends, field operatives, drivers, fishermen, or anyone in possession of a SPOT device reporting back to a central hub or (SPOT Map). It can also be configured to cater to a team leader, who is responsible for a number of assets or personnel in a given location or operation. This user has the ability to manage that team or asset group from an internet-enabled device that can access the map, and administrators above that user can monitor multiple sets of users like this, creating a chain of hierarchy.

USER PROFILE: ANONYMOUS

While this user type is not allowed to login to SPOT Mapping, this user type gives you the ability to make SPOT Mapping information (like the location and behavior of an asset or asset group) available to people outside of your group or organization through a link. The information can also be embedded on a website, for example, to track a race or other kind of travel activity of a person or group of people participating in an event. For private couriers, this can also be used as a form of tracking a shipment as long as the courier has a SPOT device with them reporting location data to SPOT Mapping.

FLEXIBILITY OF USER TYPES

Because permissions are customizable at any level, system administrators can essentially create subsets of the 3 primary levels that have certain defined permission sets, lending to the creation of multiple levels of administrators, standard users, and anonymous users within your group or organization. This extrapolation of the hierarchy can be beneficial to people or organizations that need to be able to create super-admins, admins, sub-admins, team leads, and other mid-hierarchy roles within the SPOT Map. Organizing the permissions offline and then creating the user profiles with those presets will allow for the development of a system of accountability that is as flexible as you need it to be.

CREATING USERS

The following information will be utilized for the creation and management of users for SPOT Mapping:

- First name: User's first name
- Last name: User's last name
- Username: This will be used for login purposes, most usernames are the user's email address
- Email address: User's email address
- Password: Give the user a password that they can change after their first login
- Confirm Password: Re-enter the password to ensure proper spelling and characters
- Type: Refer to user profiles above for user types
- Preferences: These will populate platform defaults, configurable in the admin panel, but can be changed at the user level to accommodate the needs of diverse organizations
- Permissions: Defaults to a subset of permissions for each user type, but can be customized to create flexibility in user types, allowing for more complex hierarchies
- Assets and Groups: Assign assets or asset groups to the user so that they can see and interact with them
- Geofences: Assign geofences to the user so that they can see and interact with them
- Places: Assign places to the user so that they can see and interact with them
- Contacts: Assign contacts to the user so that they can see and interact with them
- Drivers: Assign drivers to the user so that they can see and interact with them

PANEL COLLAPSE/EXPAND OPTIONS

FIGURE 1
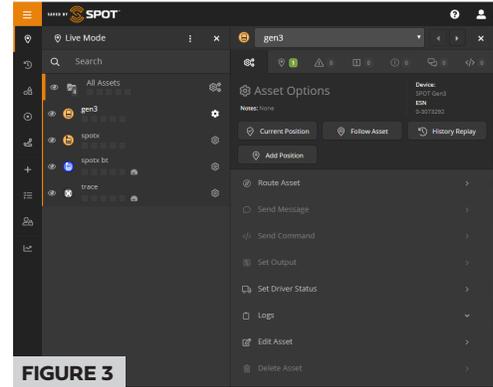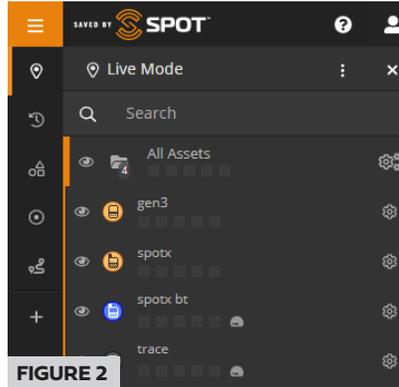
FIGURE 2

FIGURE 3

The main navigation panel can be accessed from the far left of the user interface, and collapses down to the size shown in figure 1. In total, there are 2 navigation panels in SPOT Mapping, and then the main viewport, which displays either the map view or the functional interface you've accessed (reports, journeys, and other features).

The first panel of the UI is the narrow icon panel on the far left. This panel is static, and its contents will not change no matter what interface you access, so it will serve as your home navigation.

Figure 2 above shows the second panel expanded with only the content from the first panel, and figure 3 shows the second panel adjusting to display the selected menu item. The contents of the second panel will change based on the menu item selected from the first panel, and the content in the second panel can be manipulated and used as a primary interactive interface.

USER ICON

In the upper right corner of an expanded second panel, users will see an icon that looks like the user avatar icon. This icon contains a submenu that allows users to log out, and contains a shortcut to preferences and preferences, where the user can adjust defaults.

Next to the User Icon you will see the Question Mark Icon. Here you can access the informative walk-through to guide you through the SPOT Mapping features.

LIVE VIEW

Live view shows the map in the main viewport, with only the most recently reported SPOT location(s). The live view updates and refreshes in near real time, so there is no need to constantly refresh the browser to display the most recent GPS locations.

From the live view, users will see the asset groups in the first panel, and will have the ability to interact with them from that list, or directly on the map itself.

For more information about the usage of the live view, see section titled Main Viewport

HISTORY

Historical view is the interface that gives users the ability to trace the path(s) of assets in SPOT Maps over a defined period of time. It shows the map in the main viewport, with SPOT track points as reported during the date range defined by the user (default range is most recent 48 hours). Like Live View, the historical view also updates and refreshes in near real time, so there is no need to constantly refresh the browser to display the most recent data. From the historical view, users will see the asset groups in the second panel, and will have the ability to interact with them from that list, or directly on the map itself. The users will also see path lines on the map, connecting the dots of location reports to allow for a more accurate understanding of the movement of SPOT devices on the map.

For more information about the usage of the live view, see section titled Main Viewport

GEOFENCES

Displays all active/visible geofences in the main viewport as colored overlays on the map, allowing users to interact with them according to the permission levels determined by the SPOT Map administrators. Geofences are also listed in the second panel similarly to the way in which SPOT devices appear in the live and historical views. Users can see notifications, configure alerts, and otherwise manage geofence activity from both the main viewport and the first panel.

PLACES

Displays all enabled/visible places in the main viewport as colored icons on the SPOT Map, allowing users to interact with them according to the permission levels determined by the SPOT Map administrators. Places are also listed in the second panel similarly to the way in which SPOT Devices appear in the live and historical views. Users can view places, route assets, and otherwise manage their places from both the main viewport and the first panel.

JOURNEYS

Displays all enabled Journeys and their Trip segments in the main viewport as collections of position report data. Journeys appear and function similarly to Asset Groups, and can be collapsed, expanded, hidden, edited, and deleted from the first panel.

ADD ITEM

From here, users can create any reference point, or component of the SPOT Map, with the most common items listed at the top of the add menu.

For more information about how to add each entity, see section titled First and Second Panel

REPORTS

By default, SPOT Mapping supports 14 of the most commonly used report types. The reports available through the reports tab will open the actual report content in the main viewport.

For more information about the usage of the reporting tools, see section titled Main Viewport

CONFIG

The administrator tools for SPOT Mapping can be found in the Config option of the main navigation panel. This menu will have fewer tools, settings, and functionality for non-administrator users. Each of these options will give you additional control of your SPOT Mapping user experience and allows for customization and standardization of the map to suit your needs.

For more information about the usage of the config tools, see section titled Administrative Features

FIRST AND SECOND PANEL

The first and second panels have management and interactive tools. For the most part, the first panel serves as a list of the entities in the SPOT Map for the selected entity type (SPOT Devices, places, geofences), and the second panel serves as the primary interactive feature menu. Some of the interactive features will open in the second panel, and others will open a form in the main viewport.

ASSETS

To view the assets in the SPOT Map, open either the live view or history view from the main navigation panel. The default for SPOT Mapping is to open the live view, which displays the most recently reported location and status of each SPOT device. The list in the first panel will be sorted by asset group(s), but if the map does not have any groups created, all assets will be displayed in the default group (All Assets). If the group is collapsed, click the folder to expand it.

INTERACTING WITH ASSETS- FIRST PANEL

VIEWING ASSET STATUS
By default, assets that are open will display the following characteristics in their status updates (if the data is available)

- Asset Name
- Date and Time of most recent report
- Coordinates of location
- Altitude: With relation to sea level
- Source: How the data was moved to the map (GSM, Satellite, etc.)
- Extra: Often displays battery life, can be programmed to display another data point
- Geofences
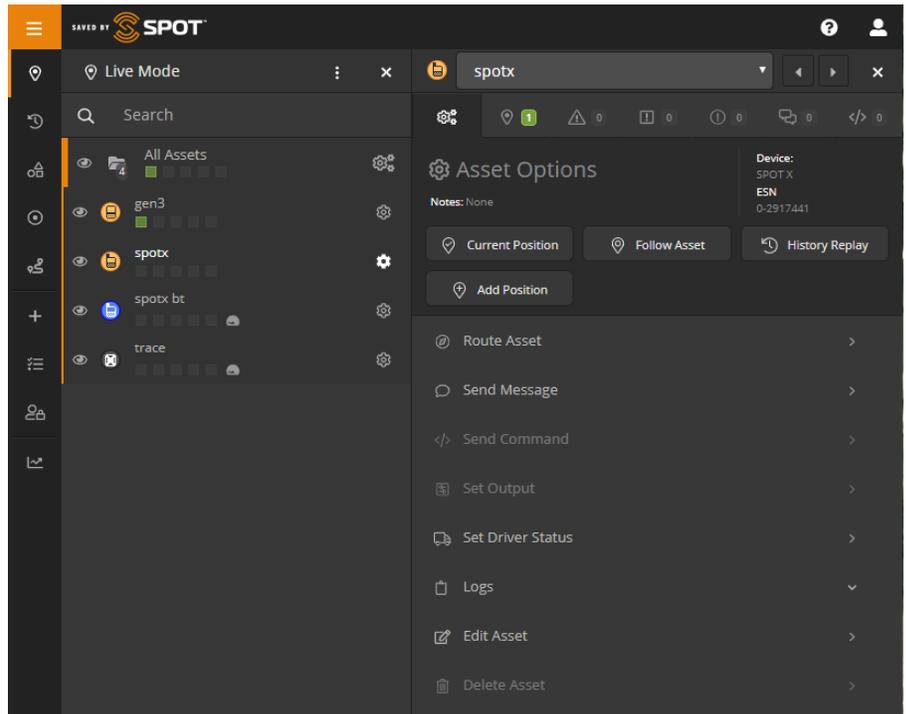
When in the first panel, notifications will be present for the types of un-viewed reports that exist for the asset. These notifications are:

- **Positions (green):** SPOT messages with a GPS location that you can see on your map
- **Alerts (orange):** SPOT alerts such as Help and S.O.S. messages, plus custom alerts created by the user
- **Heightened Alerts (ie S.O.S.) (red):** If there has been an emergency alert triggered since last checked
- **Events (purple):** SPOT events such as messages that show your Tracks and Check Ins
- **Status (yellow):** SPOT status notifications such as low battery, powered on, powered off and movement alerts
- **Chat (blue):** SPOT custom messages to and from your SPOT devices

INTERACTING WITH ASSETS

- Clicking the gear icon for any asset will open the second panel with options either available or grayed out based on whether the your mapping tier includes the feature/functionality.
- Current Position: Closes the second panel and snaps the map interface to be centered on the SPOT's most recently reported location
- Follow Asset: Closes the second panel and snaps the map interface to be centered on the SPOT's most recently reported location with a dialogue box at the top of the map interface stating that the SPOT is being "followed," which will report status and position changes as they come in
- Stop Following Asset: Re-opening the second panel will allow users to stop following the SPOT device they've followed
- History Replay: Snaps the user to history view, with the default 48 hour window displayed for the device
- Users can change these parameters to view extended history or correlate with other devices

The following are other options for interacting with devices, each of which will also be grayed out if unavailable to a particular user or device type.

ROUTE ASSET

Opens the same route asset form that users will find in the Places navigation tab. Users will be shown options of Places programmed into the SPOT Map, and then will choose between direct (air) routes or road-based routes. Once calculated, users will have the option to create a geofence of a specified size around the entire route path, which they can then configure for alerts and other forms of management. The geofence can be managed in the Geofence tab of the main navigation.

SEND MESSAGE

SPOT X supports two-way messaging. This gives map users the ability to send messages directly from the SPOT map over the air to any SPOT X in the SPOT aacount. For example, these messages can include instructions, notifications, or routing and navigation support.

See the SPOT X User Guide for message limitations.

SET DRIVER

Manually track drivers by entering the data in the SPOT Map. This information will be displayed in the appropriate reports.
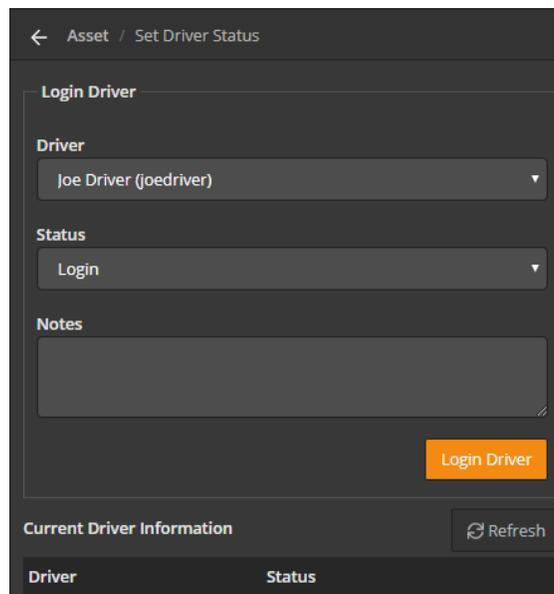
LOGS

There are a few logs available for each SPOT device which have different interactive elements in the second panel. Each log displays information about the asset and can be manipulated according to the permissions granted to the user.

- **Message Log :** Tabbed into three separate categories (Incoming, Outgoing, Alerts), the message log allows asset managers to see the message summary, date and time of transmission, and options for interacting with each, including the ability to delete an item or filter the list.
- **Driver log :** Runs a mini driver report for the asset, displaying the driver login and logout information
- **Refueling log :** Data input form; users can record the date, time, amount of fuel, and odometer reading

EDIT ASSET

Gives users complete control over the SPOT map information for the asset, and allows users to make changes to a number of different categories of characteristics for each device in the SPOT Map. Categories and functionality listed below.

- **Main**
  - Name: Device Name
  - Device: Type of SPOT device
  - Serial Number: ESN; Electronic Serial Number
  - Sensitivity: Position grouping factor, with a default value of 50. SPOT Mapping will group positions that are near one another to present a clean map interface. Set this value to 0 to disable position grouping.
  - Icon: What the device's icon will look like on the main map interface
  - Color: The color the device's icon will appear on the main map interface
- **Groups:** Lists the groups in which the device has been included
- **Users :** Lists the users that have access to view and interact with the device, can be toggled to enable/disable
- **Extra**
  - Driver information
    * Mission: Name of the reason to log trips
    * Driver: Driver's name
    * Phone Number: Contact info for the driver
  - Vehicle information
    * Fuel efficiency: Data entry by the user
    * Make/model: Make refers to the manufacturer, model refers to the product line
    * Purchase date: Date the organization acquired the asset
    * VIN: Seventeen alphanumeric characters that identify the specific vehicle
    * Plate number: License plate number(s) associated with the vehicle

- ○ Vessel information
  - * Name: Vessel name
  - * Call Sign: Radio broadcast identity
  - * Flag of registry: Used to identify the ship's origin country
  - * IMO number: Format is usually IMO followed by seven digits
  - * MMSI: Maritime Mobile Service Identity
  - * Tonnage: Weight
  - * Class: Type of vessel
  - * Skipper: Captain's information
- **Settings:** Allows users to manage the ways in which the device operates or interacts with the map.
  - ○ **Out of service:** Toggle yes/no. This does not deactivate the device. It will visually gray out the name in your asset list.

- ○ **Draw lines between positions:** Visualization in map views; toggle yes/no
- ○ **Snap lines to roads:** Visualization in map views; toggle yes/no
- ○ **Popup incoming text messages:** Toggle yes/no. This will pop up all custom messages on the map.
- ○ **Hide information:** Options to the user whether or not to hide the following information
  - * Accuracy
  - * Address
  - * Altitude
  - * Heading
  - * Speed
  - * History flag icons
- ○ **Spatial reference system:** Select from a drop-down list of the sources of geolocation data
- ○ **Clear asset history:** Users can clear tracking information reported by the SPOT device
- ○ **Current status information:** Displays yes, no, or unknown as a status indication for each of the following pieces of information
  - * Moving
  - * Engine on
  - * Speeding
  - * Idling
  - * Towing
  - * Dwelling
  - * In low power mode
  - * Backup power
  - * Antenna cut
  - * GPS jammed
  - * Cell jammed
- **Driver:** Users can also set the driver for the device from this menu option, and they can view the current driver information and status (if any)
- **Alerts:** Displays a list of alerts that have been assigned to the device

PLACES

SAVED BY SPOT

To view all of the places in SPOT Mapping, open the Places option from the main navigation panel. This will open the first panel over the map with the places that are visible to the user displayed in the first panel as a list, and places will be displayed on the map with icons. From this interface, users will have the ability (based on permissions assigned by the map administrator) to edit Place information, view and interact with Places, and toggle the visibility of each place on or off.
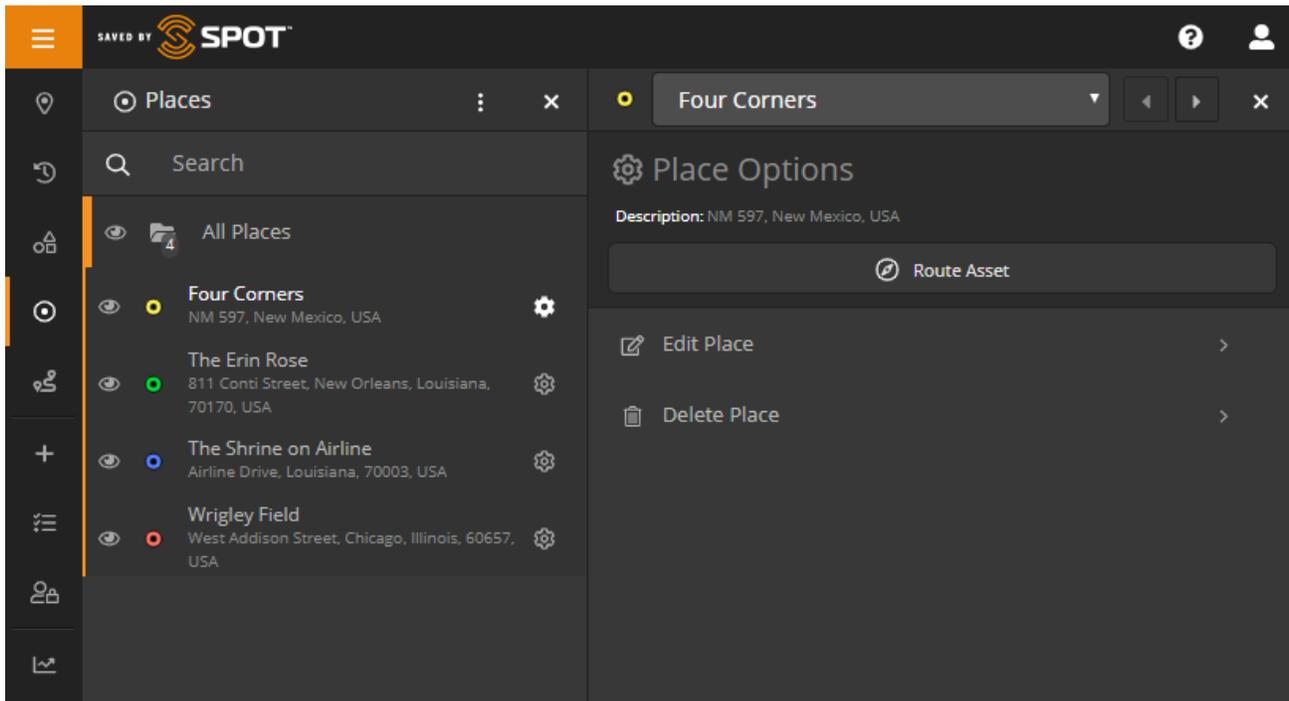
INTERACTING WITH PLACES

EDIT PLACE

Click the gear icon to open the second panel, then choose edit place from the options in the menu. From here, users will be able to change the properties of the place they've selected, including the name, description, and icon color.

Contact: Open field for customer utilization

Unique Key: Open field for customer utilization

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ROUTE ASSET

Click the gear icon to open the second panel, then choose the route asset button on the top of the menu. The third panel will give users options of which asset they would like to route to the selected Place, and then they will choose between direct (air) routes or road-based routes.

Once calculated, users will have the option to create a geofence of a specified size around the entire route path, which they can then configure for alerts and other forms of management. The geofence can be managed in the Geofence tab of the main navigation.

DELETE PLACE

Users with the proper permissions can delete places from the map. This will delete all data related to that place. *Place deletion is permanent*

GEOFENCES

To view all of the geofences, open the Geofences tab from the main navigation panel. This will open the first panel over the map with the geofences that are visible to the user displayed in the second panel as a list, and geofences will also be displayed on the map as colored overlays. From this interface, users will have the ability (based on permissions assigned by the SPOT Map administrator) to edit geofence information, view and interact with geofences, and toggle the visibility of each geofence on or off.
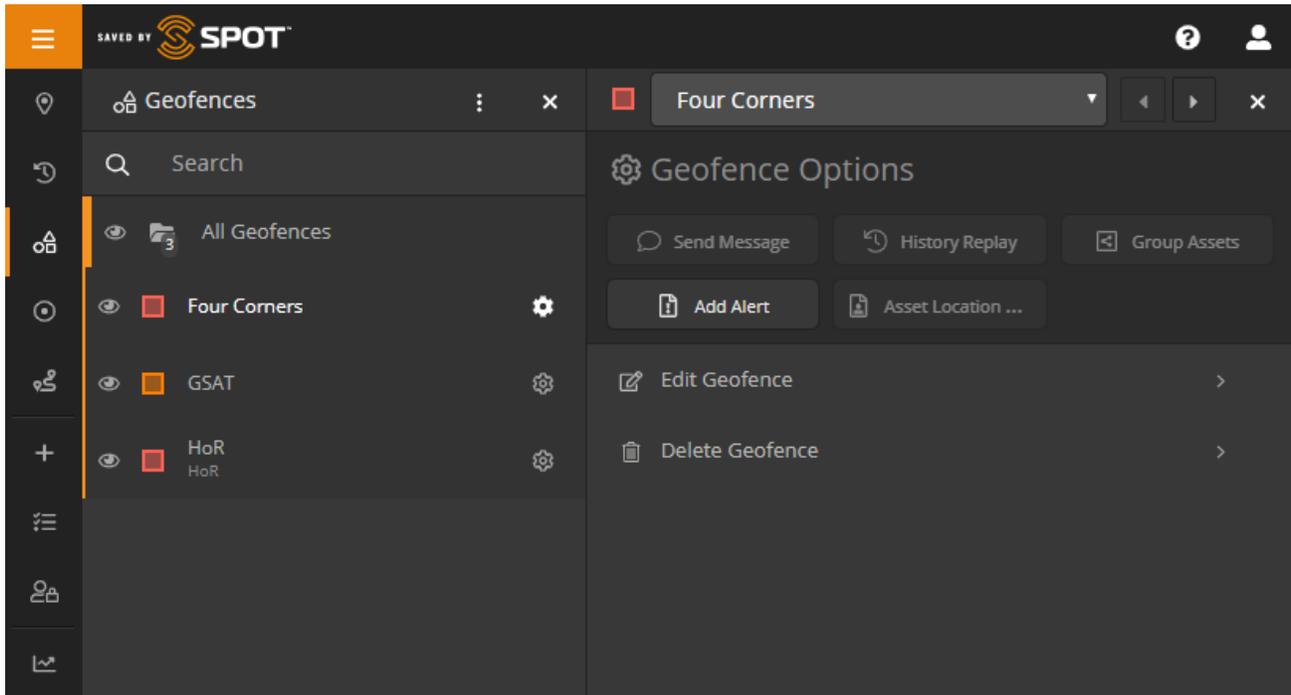
INTERACTING WITH GEOFENCES

From the first panel display list, geofences offer a visibility toggle, the ability to drag and drop to re-order, and a gear button to open the second panel and interact. Based on user permissions and capabilities of each geofence, asset type, and map account, users will have any of the following capabilities.

SEND MESSAGE TO A SPOT X

This option gives users the ability to message all SPOT X devices in a selected geofence. Users will be given the option to select and limit by selection to specific assets, but most of the time, users will be employing this feature to notify device owners when they are in a dangerous area, or when there is a geographically relevant event that device operators need to know about.

HISTORY REPLAY

This option gives users the ability to watch the event and notification history of all activity inside a selected geofence for a period of time determined by the user.

GROUP ASSETS

This option gives asset managers the ability to create a group of assets according to their location, essentially snapshotting the location of assets and tying those assets to a group for monitoring. This can be particularly useful when managers want to follow working status of vehicles recently trapped in a severe weather event, for example.

ADD ALERT

Opens the standard Add Alert form from the Add Item navigation, but with the selected geofence included as a filter for the alert. Benefits to using a geofence as a filtering condition for alerts is the ability to apply alert notifications to entire groups of assets as long as they meet the condition of being in the designated area. For more information, see Add Alert in the Add Item section of this manual.

ASSET LOCATION REPORT

Opens the standard Asset Location Report from the Reports navigation, but with the selected geofence included as a filter for the report. For more information, see Main Viewport Tools: Reports > Asset Location Report in this manual.

EDIT GEOFENCE

Editing geofences gives users the ability to change and manage any characteristics they may have assigned to the geofence when first created.

- **Main category**
  - Name : Users can edit the name of the geofence
  - Description : Users can edit the description of the geofence
  - Color : Users can edit the display color of the overlay from the geofence
  - Add segment/shape : Adds an additional segment and map area to the existing geofence.
  - Segments : List of existing geofence area(s) and the ability to delete those shapes
- **Users:** Opens a drop-down menu with a list of map users and their access to the geofence.
- **Extra:** Allows users to add a photo to the geofence.

DELETE GEOFENCE

Users with the proper permissions can delete geofences from the map. This will delete all data related to that geofence. *Geofence deletion is permanent.*

The Journeys feature gives users the ability to save segments of their SPOT devices' position report history as a viewable element that can be displayed on the Live and History views as well. Journeys are collections of Trips, which are individual reporting history segments that are defined by the user. Journeys can be collections of as many Trips as the user wants, and the number of data points in each Trip can be as little as one or the entire reporting history for the asset (though we can't think of a reason to choose the latter).
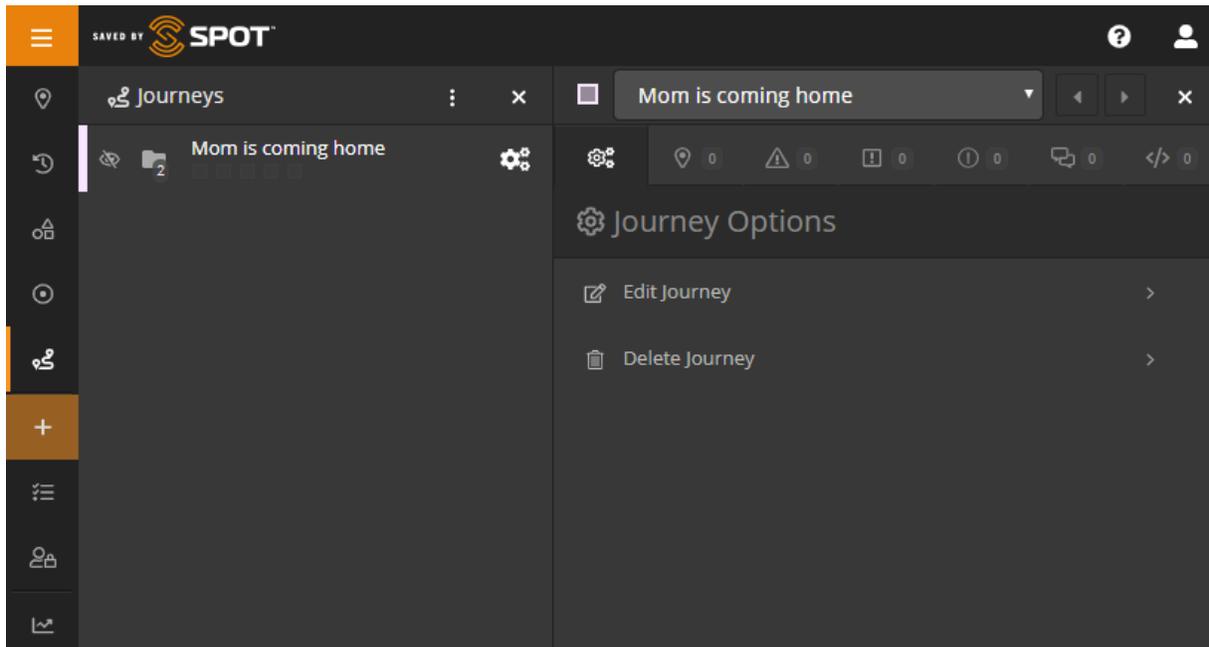
The Journeys feature gives users the ability to display significant segments of a device's reporting history while simultaneously viewing live or historical data outside of the date range of those Journeys. Further, as this feature moves through the development cycle, Journeys will become a manipulable entity within SPOT Mapping, and users will eventually be able to interact with them in ways similar to those available for Assets, Places, and Geofences.

Journeys have been added to the main navigation panel and can be managed in the same ways as Assets, Places, and Geofences.

INTERACTING WITH JOURNEYS

From the Journeys tab, users can view, expand, toggle visibility, and edit their Trips and Journeys. Each Journey will appear in the Journeys list tab in the same way Asset Groups appear in the Live and History views. Because Journeys are collections of Trips, they function similarly to Groups in this way. Each Trip's visibility can be toggled by clicking the eyeball icon to the left of its name, and the entire Journey can be toggled on or off by clicking the eyeball next to its name.

Expanding Journeys will show all Trips within that Journey, and expanding Trips will show all position reports within that Trip. Users will be able to interact with those position reports just like they would with an Asset in the Live or History view.

THE GEAR ICON

The gear icon for Journeys and Trips functions identically, as both offer users the ability to edit or delete the Journey or Trip directly from the list. If the user elects to edit the entity, they will be taken to the same form they used to create the Journey, and all aspects of that Journey or Trip can be edited from there.

SHARED VIEW

Share your messages and locations with friends, family and coworkers by creating a Shared View. Anyone with a link to your Shared View can see your GPS location and messages online in near real-time. Make your page public or private by password protecting it, and create or delete pages at any time.
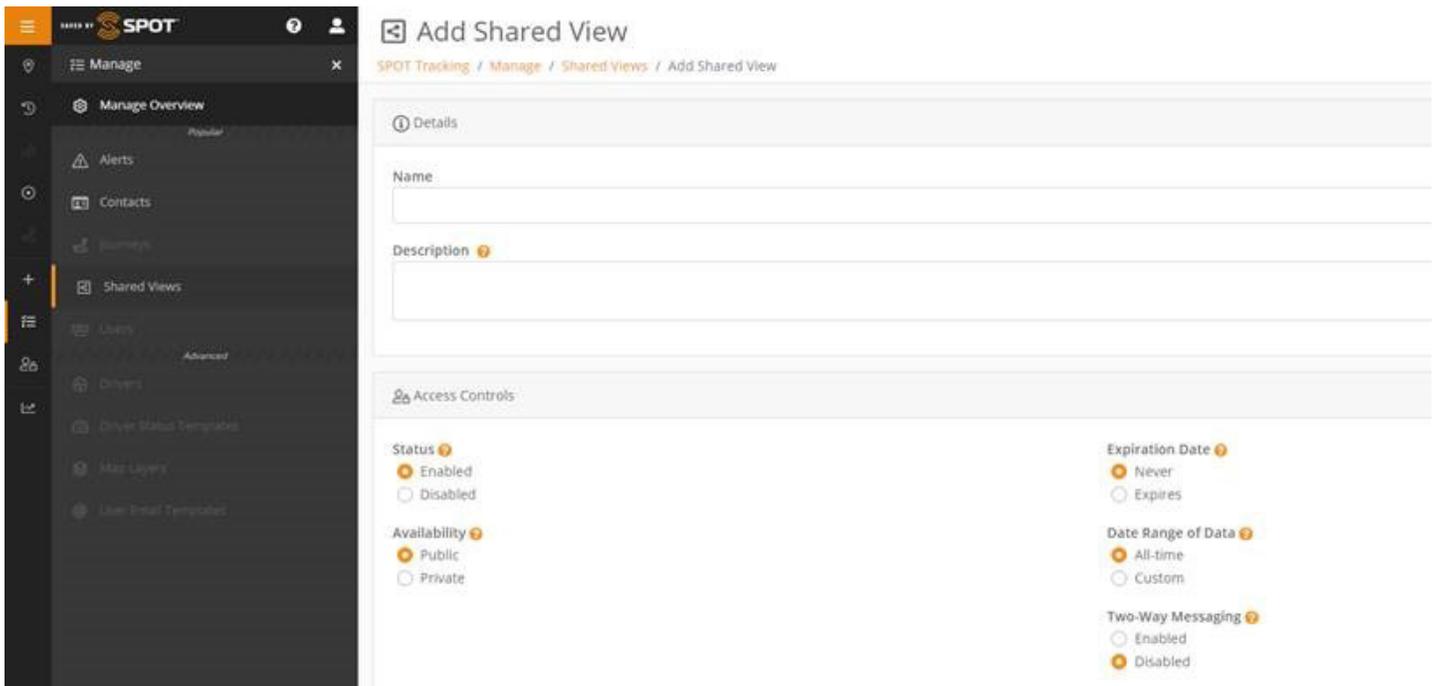
ADD ITEM

Users will be able to create anything within the bounds of their permission set using this single navigation link. Users will see a varying degree of list items according to their account permission level, with up to a total of 12 creation options available to administrator permissioned users. Because there is a varying degree of permissions, popular options will appear at the top of the create item panel in order to ease the use patterns for power users.
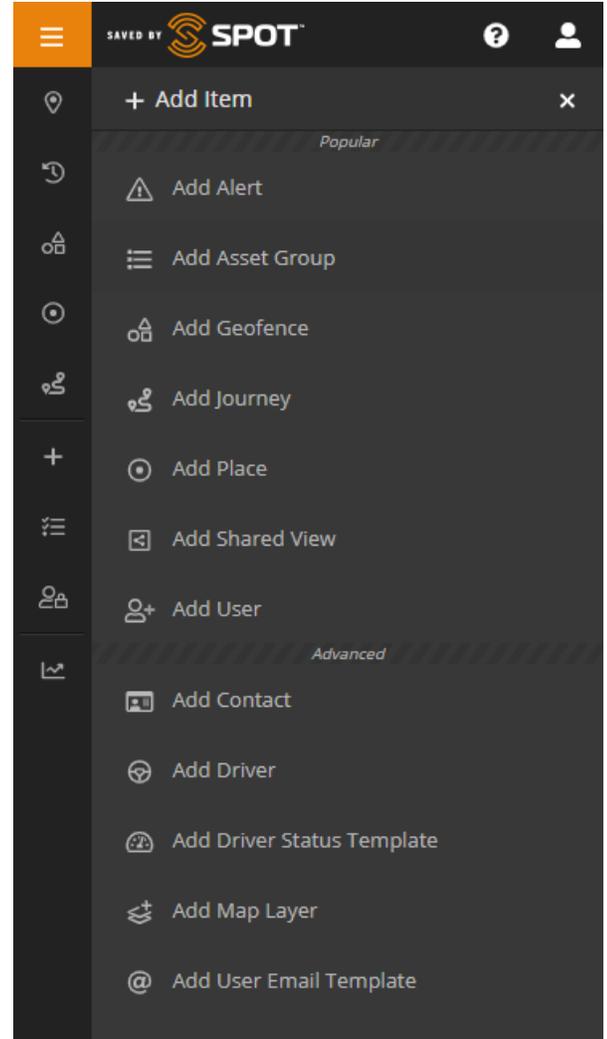
ADD ALERT

Users will be asked to provide the following information when creating an alert:

- Name: How you want the alert to be identified in the map. Users often choose names that would be found on the subject line of an email
- Description: For standard alerts, this helps identify the nature of the problem, or gives insight as to the severity of the alert itself
- Resolution Procedure: For alerts that will potentially be acknowledged by a SPOT Map operator, notes about how to respond to it can prove valuable in time-sensitive scenarios
- Photo: While not often used, some alerts might benefit from including a photo with instructions to supplement the resolution procedure
- Acknowledgement: Select yes if the alert is urgent and requires attention from an individual with SPOT Map access
- Alert applies to: Use this to specify which assets or asset groups can trigger it (limit by inclusion)
- Exclude from Alert: Use this in conjunction with the above option if you wish to limit by exclusion
- Type: Related to the triggering criteria for the alert, as each triggering criteria can have multiple alerts
- Filters: Applies any of the selected filters to the alert triggering criteria, allowing managers to control when automated triggering occurs
  - Time: Restrict alert trigger according to time of day
  - Date Range: Restrict alert trigger to only a specific period of time
  - Day: Restrict alert trigger to specific days of the week
  - Date: Restrict alert trigger to specific dates in the year
  - Week: Restrict alert trigger to specific weeks of the year
  - Speed: Restrict alert trigger to being above a certain note about speed calculation
  - Fence: Restrict alert based on whether it triggers inside or outside a geofence
- Notifications: Use this to determine the types of messaging to be sent for each alert, and who receives each type of message notification. This is typically only used for time-sensitive and safety-related alert triggers
- Cooldown Period: Time between sending an alert notification and resending the same alert notification
- The following are other options for interacting with assets, each of which will also be grayed out if unavailable to a particular user or asset type.

ADD ASSET GROUP

Users will be asked to provide the following information when creating a group:

- **Main**
  - **Name:** Set the asset group name
  - **Color:** Set the display color for the asset group
  - **Parent**: If the group is a subgroup, select the parent group

ADD CONTACT

Users will be asked to provide the following information when creating a contact:

- Name: Contact name
- Type: Email or SMS
- Email address: If email selected, the email address you wish to associate with this contact
- Phone information: If SMS selected, country code, number, and provider information
- Emergency contact: If the contact is to be used as an emergency contact in the system, click yes
- Emergency notification rate limit: Restricts message notifications to this contact to once every <select> minutes
- Rate limit: Restricts non-emergency message notifications to this contact to once every <select> minutes
- Notification language: Language to display for notification data details
- Notification speed display: Choice of units of measure
- Lat/Lng format: Choice of display method
- Fuel units: Choice of units of measure
- Timezone: Timestamps for events to appear in this timezone

ADD DRIVER

- Users will be asked to provide the following information when creating a driver:
- First name: Driver first name
- Last name: Driver last name
- Username: Driver username for login
- Password: Driver password for login
- Duress Password: To be entered to alert managers of dangerous situation, such as hijacking
- Phone Number: Driver phone number
- Manager: Driver's manager
- Emergency Contact: Driver's emergency contact name
- Emergency Contact Number: Driver's emergency contact phone number
- Photo: Of the driver or documentation such as licenses

ADD GEOFENCE

Users will be asked to provide the following information when creating a geofence:

- **Main category**
    - ○ **Name:** Name the geofence
    - ○ **Description:** Description of the geofence
    - ○ **Color:** Set the display color of the overlay for the geofence
    - ○ **Add segment/shape:** Click the map to create the geofence
    - ○ **Segments:** List of existing geofence area(s) and the ability to delete those shapes
- **Users:** Opens a drop-down menu with a list of map users and their access to the geofence.
- **Extra:** Allows users to add a photo to the geofence.

ADD A JOURNEY

To create a Journey, click the Add Item (+) button from the main navigation panel, then select Add Journey. A form will open in the main viewport, prompting users for the following information:

- Name: the name to be assigned to the Journey, will be displayed in the Journeys interface
- Asset: choose the device that will be providing the data for the Journey
- Description: optional, will not be displayed in the interface
- Color: select a color for the Journey to be displayed in the list panel
- Status: enabled/disabled toggles the Journey's viewability in the list panel; Disabled Journeys will not appear in the Journeys UI or anywhere in the map

As part of creating a Journey, users will be prompted to add Trips to them, and each Trip is a collection of position history for the Asset selected above. Each Trip may include any number of position reports greater than 0, and there is no limit on the number of Trips a user can include in a Journey. Users may opt to add multiple Trips that do not have sequential start or end points, and they will be displayed without a connecting line between them. The Add Trip section of the form will prompt users for the following information:

- Name: the name to be assigned to the Trip, will be displayed in the Journeys interface
- Date Range of Data: Begin references the earlier of the two endpoints in the date range and End references the more recent of the two endpoints in the date range for the trip. Date Range can be as little as minutes, and as long as the user chooses.
- Display Options; users will choose whether to show the Trip as a single segment with only start and end points, or if they wish to display all of the individual points between the start and end points
- Status: enabled/disabled toggles the Trip's viewability in the list panel; Disabled Trips will not appear in the Journeys UI or anywhere in the map

After Trips have been added to a Journey, they will be listed in the bottom section of the Add Journey form. From here, users can manage these Trips if they feel they've made any errors, and can edit them by selecting the pencil icon on the left, or delete them by selecting the trash can icon on the right.

ADD MAP LAYER

Users will be asked to provide the following information when creating a map layer:

- Name: Name the map tile
- Type: Select the type of map file from a drop-down options list
- Keyhole Markup Language (KML)
- Tile layer
- GeoJSON
- GPS exchange format (GPX)
- Image overlay
- Web Map Service (WMS)
- File: Upload the map file
- Enabled by Default: Should this map layer be available to all users

Preview: Unique to this add functionality is the ability to test the new map layer before adding it to the map.

Add Map Layer: When finished, clicking this button will push the map layer to the SPOT Map

ADD PLACE

To create a place, users must first find the place and identify it to the map (either by clicking a location on the map, looking up the address, or inputting the location coordinates), and then users will be asked to provide the following information when creating a place:

- Name: Default name is the address
- Description: Add a description of the place
- Color: Set the display color for the icon on the map and the text in the second panel
- Users: Assign the place to users so it is visible to those users
- Extra: Contact (attach a contact to the place)
- Extra: Photo (upload a photo)

ADD NEW USER

Users will be asked to provide the following information when creating a user:

- First name: User's first name
- Last name: User's last name
- Username: This will be used for login purposes, most usernames are the user's email address
- Email address: User's email address
- Password: Give the user a password that they can change after their first login
- Confirm Password: Re-enter the password to ensure proper spelling and characters
- Two-factor authentication: Set up by default or allow users to set it up themselves
- Type: Refer to user profiles above for user types
- Preferences: These will populate platform defaults, configurable in the admin panel, but can be changed at the user level to accommodate the needs of diverse organizations
- Permissions: Defaults to a subset of permissions for each user type, but can be customized to create flexibility in user types, allowing for more complex hierarchies
- Assets and Groups: Assign assets or asset groups to the user so that they can see and interact with them
- Geofences: Assign geofences to the user so that they can see and interact with them
- Places: Assign places to the user so that they can see and interact with them
- Contacts: Assign contacts to the user so that they can see and interact with them
- Drivers: Assign drivers to the user so that they can see and interact with them

ADD USER EMAIL TEMPLATE

Users will be asked to provide the following information when creating an email template:

- Name: Name of the email template
- Subject: Subject line for the email
- Body: Content of the email

Variables can be used for templates through SPOT Mapping, those available variables are:

Variable	Example
{ProductTitle}	SPOT Mapping
{FirstName}	john
{LastName}	smith
{Username}	jsmith
{Email}	jsmith@example.com
{Password}	jSm1tH
{AssetList}	Asset One Asset Two Asset Three
{AssetGroupList}	Group One Group Two Group Three
{FenceList}	Fence One Fence Two Fence Three
{PlaceList}	Place One Place Two Place Three
{PermissionsList}	Can add/edit/delete authorized assets Can add/edit/delete alerts Can add/edit/delete geofences
{SiteUrl}	www.FindMeSPOT.com

MAIN VIEWPORT TOOLS: ASSET VIEW

MAP OPTIONS

The live tracking map options can be adjusted to reflect the visualization priorities of the organization or user, and include traditional map (with light and dark schemes), satellite, open street, and terrain options by default. Note that some map tiles will affect the performance of SPOT Mapping, and that the traditional maps will have the best performance for when viewing lots of data (longer periods or time or larger number of devices).

TOOLS PANEL

The tools panel by default lives in the upper right corner of the map interface, and houses the majority of the view controls for the map and the main viewport.

ZOOM

Buttons to zoom in or zoom out of the current map view.

RULER

Toggle to display or hide the map ruler tool, which allows users to measure segments on the map by clicking on endpoints to determine the total distance in the default base unit.

SHOW LOCATION

This button will enact a 'snap-to' that brings the map to a centered position around the location of the device viewing the map.

UPLOAD FILE

You can upload a KML (Keyhole Markup Language) file to quickly add geofences or places. A KML file can be generated from Google Earth, ArcGIS, or other geographic information systems. Once uploaded, you will be able to confirm the Places and Geofences you would like to import.

GET ROUTE

From this menu, opens a third panel interface allowing you to select a number of points on the map and generate a route between them.

LAYERS

Brings up the list of default map overlays that can be added to the current map to augment the data available to users. Most popular map overlays are those that provide weather and traffic data.

MAP

Toggles between the map options mentioned above in the map options description.

ASSETS

Any asset in the SPOT Mapping can be opened from the map interface just as easily as in the first panel asset list. To view asset details, make edits, view statuses, and otherwise interact with an asset from the map, simply click the asset's icon once. Doing so will open the details summary box overlaid on the map. From there, users will see basic asset data and can click the vertical dots icon to open the configuration and advanced features toolset in the second panel.

PLACES

Any place visible to the user in SPOT Mapping can be opened from the map interface just as easily as in the first panel Places list. To view and edit the place details, simply click the place's icon on the map once. Doing so will open the details summary box overlaid on the map. From there, users will see basic place information and can click the vertical dots icon to open the configuration toolset in the third panel.

GEOFENCES

Any geofence in SPOT Mapping can be opened from the map interface just as easily as in the first panel asset list. To view geofence details, set alerts, view statuses, and otherwise interact with a geofence from the map, simply click the geofence's icon once. Doing so will open the details summary box overlaid on the map. From there, users will see basic geofence information and can click the vertical dots icon to open the configuration and advanced features toolset in the second panel.

HISTORY PATHS

When in historical view, an asset's location reports will be traced with a line from point to point in chronological order over the desired time frame. Users can hover over the path, hover over any reporting interval, and interact with any reported location and status. Clicking on an individual report will overlay a box on the map, which will display the reported details for that update.

ACTIVITY REPORT

Summary view of positions and events reported by selected assets over a user-specified time span. Users can opt to add details to the report, which will show each individual reported event. In the creation of this report, users will be prompted to fill in the following information:

- Asset or asset groups to add to the report
- Begin date/time
- End date/time
- Show Details: Allows users to include more granular data in the report
- Run or Schedule: Choose whether to run the report on demand or at a predetermined time

ALERT SUMMARY REPORT

Summary view of asset trips, with numerical counts for each alert that occurs over a user-specified time span. Alerts are grouped on the report by name. In the creation of this report, users will be prompted to fill in the following information:

- Asset or asset groups to add to the report
- Begin date/time
- End date/time
- Run or Schedule: Choose whether to run the report on demand or at a predetermined time

ASSET LOCATION REPORT

Snapshot view of each asset's current location, sortable or filterable according to whether or not assets are near a selected Place or Geofence. In the creation of this report, users will be prompted to fill in the following information:

- Geofence: Inside or outside (filter report to only include assets that meet this criteria)
- Place: Near or far (filter report to only include assets that meet this criteria
- Filter: This report is a live data pull
- Print: Print the current page
- Export to excel: Creates a .xls file with the report data
- Export to PDF: Creates a .pdf file that displays the current page

ASSET MOVEMENT REPORT

Summary report that primarily displays (color-coded) whether assets have moved in a user-specified time span (set to days, hours, minutes), sortable or filterable according to whether or not assets are near a selected Place or Geofence. In the creation of this report, users will be prompted to fill in the following information:

- Geofence: Inside or outside (filter report to only include assets that meet this criteria)
- Place: Near or far (filter report to only include assets that meet this criteria
- Timeframe: Days, hours, minutes, seconds backward from the time the report is run
- Filter: This report is a live data pull
- Print: Print the current page
- Export to excel: Creates a .xls file with the report data
- Export to PDF: Creates a .pdf file that displays the current page

DRIVER SUMMARY REPORT

Summary view of a driver's logins, distance, and duration with each vehicle over a user-specified time span. In the creation of this report, users will be prompted to fill in the following information:

- Driver(s) to add to the report
- Begin date/time
- End date/time
- Run or Schedule: Choose whether to run the report on demand or at a predetermined time

EVENT DETAIL REPORT

Shows date and specific location of each event reported by selected assets in a user-specified time span, as well as the type of event. In the creation of this report, users will be prompted to fill in the following information:

- Asset or asset groups to add to the report
- Begin date/time
- End date/time
- Run or Schedule: Choose whether to run the report on demand or at a predetermined time

EVENT SUMMARY REPORT

Shows the names of selected assets and the number of events of each type that occurred in a user-specified time span. In the creation of this report, users will be prompted to fill in the following information:

- Asset or asset groups to add to the report
- Begin date/time
- End date/time
- Run or Schedule: Choose whether to run the report on demand or at a predetermined time

FUEL CONSUMPTION REPORT

For devices that can send fuel usage data, assets will log fuel efficiency, cost, and loss, according to dollar amounts input by the user, for a user-specified time span. In the creation of this report, users will be prompted to fill in the following information:

- Asset or asset groups to add to the report
- Begin date/time
- End date/time
- Fuel cost per unit
- Run: This report can only be run on demand

GEOFENCE DWELL REPORT

Shows duration, visit, and asset presence summaries for each selected Geofence, and provides details for each enter/exit visit during a user-specified time span. In the creation of this report, users will be prompted to fill in the following information:

- Geofence(s) to add to the report
- Begin date/time
- End date/time
- Run or Schedule: Choose whether to run the report on demand or at a predetermined time

RAW LOG REPORT

In the creation of this report, users will be prompted to fill in the following information:

- Asset or asset groups to add to the report
- Begin date/time
- End date/time
- Run: This report can only be run on demand

MAX SPEED REPORT

Visual representation of each asset's maximum reported speed over 10-minute intervals for a user-specified time span. Details can be added to the report, which show data for each interval in numerical form. Users can filter according to whether or not the asset is near a selected Geofence. In the creation of this report, users will be prompted to fill in the following information:

- Asset or asset groups to add to the report
- Begin date/time
- End date/time
- Geofence: Limit report to only activity inside or outside selected geofence
- Run or Schedule: Choose whether to run the report on demand or at a predetermined time

POSITION REPORT

Detailed report of asset's reported positions over a user-specified time span, including specific location, coordinates, speed, heading, altitude, and relevant Geofence proximity. In the creation of this report, users will be prompted to fill in the following information:

- Asset or asset groups to add to the report
- Begin date/time
- End date/time
- Run or Schedule: Choose whether to run the report on demand or at a predetermined time

FLEET TRIP REPORT

Detailed report of an asset's start/stop activity over a user-specified time span, including distance, duration, start and end points, average and maximum speeds, idle/stop time, and number of positions reported for each trip. In the creation of this report, users will be prompted to fill in the following information:

- Asset or asset groups to add to the report
- Begin date/time
- End date/time
- Run or Schedule: Choose whether to run the report on demand or at a predetermined time

USER ACTIVITY REPORT

SPOT Mapping activity log by user over a user-specified time span, including IP address, date, and the type of action taken in the map. Where available, details pertaining to the activity logged will be present in the report. In the creation of this report, users will be prompted to fill in the following information:

- User(s) to include in the report
- Begin date/time
- End date/time

SCHEDULED REPORTS

Use this interface to manage recurring reports that run automatically or which have been scheduled to run automatically. Previously run automated reports can also be accessed in the history portion of this interface.