Redtail Telematics On Track Routing Help Guide

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Introduction

Thank you for using Redtail Telematics, the premier web-based application for tracking and managing air, sea, and ground-based assets. Redtail provides street-level detail that enables dispatchers to precisely pinpoint an asset’s location anytime and anywhere on the planet. Dispatchers can view real-time data such as location and status to keep track of all their assets from one location.

Redtail Telematics Software is sold as Software as a Service. This means that the software is not installed but is picked up on the Web and used in its most recently published version by everyone. As we up-rev our software each new version comes with standard (free) upgrades. There are some versions with special modules that are premium services and will require a supplemental charge. As these upgrades occur, you will be notified in advance and training, if required, will be provided.

The Redtail Telematics Software is built with a Hierarchy that allows Redtail as an OEM to sell its products to both End Users, who will be trained to run their own system as well as Resellers who will provide the solution to their customers as required. Resellers do require more involved training as they will be the first point of contact to their customers.

About this Document

This document has been updated in September, 2016 and reflects Redtail Telematics version 4.7.1
This document is aimed at all Administrators who have access to the Beta On Track Routing Product

The documents essentially follow the flow from left to right on the Redtail menu bar, so although functionality is addressed, it does not necessarily follow the process flow for a particular task.

**On Track Routing (OTR) – Users Guide**

On Track Routing (OTR) is a module that allows Redtail Telematics users to create routes, schedule those routes, apply them to vehicles in the field and measure the driver’s progress along the route in real-time while the vehicle is in use. OTR will allow you to track whether a vehicle is on-time, on route, running late or critically late giving you the lead time to make adjustments, call customers etc as required.

To access the OTR system, you first need to ensure you have the module made available to your account by your Redtail Telematics administrator. Once it is available you should see two new buttons (Route Scheduler and Root Builder) in the Support/Admin/Devices path from the Redtail Telematics Navigation Bar.
**Naming Conventions:**
Several key terms are used throughout the OTR module. They are as follows:

1. **Asset**
   any vehicle (car, truck, airplane, etc.) in your fleet

2. **Route**
   a time-independent series of locations

3. **Scheduled Route**
   a route that has been assigned to an asset and given a starting time

4. **Route Template**
   A route assembled in the Route Builder and saved. Scheduled routes are built from these “Route Templates” and then become a “Scheduled Route”

5. **Stop**
   a location on a scheduled route where an asset remains at for a specified duration (the 'Stop Time' for a stop is greater than zero minutes)

6. **Checkpoint**
   a location on a scheduled route that an asset passes through without stopping (the 'Stop Time' for a checkpoint is zero minutes)

7. **Saved Location**
   a reusable location that can be added to any route

8. **Arrival Radius**
   a circular buffer around a location within which an asset will be deemed to have visited the location

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**Building a Route**

Typical workflow with building a route and scheduling can be accomplished several ways.

1) Route Builder: The first time you build a route there will not be any existing routes to edit, so you will have to build one from scratch. There is a “Create New Route” button
to select. After you have some routes built, you can load them and edit or create new routes from them.

2) Locations: The first time you build a route you won’t have any “Saved Locations” so you will need to author some locations. Reading on in this User Guide you will see a number of options. It’s easy.

3) Assemble a Route: Your assembled route from the Locations you made appears in sequence in the Route Pane, lower half of the Route Builder window. You can reorder, delete, add more locations and checkpoints.

4) Save as Route Template: The all-important SAVE button ensures the route is available to be scheduled. Until scheduled, the route just built is a TEMPLATE for a scheduled route. The Save Route function is the only link between routes and Scheduled routes.

5) Schedule a Route: This is a separate TAB under the PLAN Tab of the Redtail Telematics web application. You can use common or daily routes over and over with little effort simply picking the Route Template you want to use.

6) Run the Scheduled Route: Once the steps above are completed you can run your first Scheduled Route and be notified in the event of deviances from the route. Very powerful.

The Route Builder

![Route Builder Image]

The image shows the interface of the Route Builder with various options and controls for selecting, editing, and scheduling routes.
To start, you will need to select the Route Builder Tab by clicking on Route Builder from the Support/Admin/Devices page. When you get to the screen, on the upper left hand side, you will need to either create a route by selecting the 'Create New Route' button or by selecting an existing route from, the 'Select Route' drop down.

Enter a name and description (optional) for the new route you will create. Selecting a template from the 'Select Route' option will import the locations for the selected route. To begin with a blank route (a route without locations), leave this option set to 'No Template.'
Alternatively, you can upload a route and/or multiple routes from an XLS file.

Adding Locations

Once you have selected or created a route you will need to begin adding locations to the route. There are multiple ways to do this:

1. By Address
   a. If you know the address of the location, you want you can type it in to the search box at the bottom right below the map. Hit enter and a red marker will show up on the map. If the location is correct, click on the selection tool (the 'i' in the toolbar above the map), and then left click on the marker and a pop-up will ask if you want that point added to the route. Click on Create. The point will be added to the route with default information. You can click on most of the fields to change the default values (most of which come from your preferences).

2. By Map Click 📍
   a. If you know the location but not the address you can use the Pin icon at the top left above the map. First zoom in on the map to the area you are interested in. Then click on the Pin icon. Then left click on the map at the

Map Behaving Odd?
If at any time you notice that the map is not behaving the way you expect it to: the ruler is popping up or it keeps wanting to make a new Location, check that you haven’t inadvertently left one of the tools selected.
location you want to add to the route. A pop-up will appear with the address and lat/long information. Select 'Add to Route' to add the location to your route.

3. By Saved Location

   a. If the location already exists as a saved location, you can either double click on it in the Saved Locations panel or drag and drop the location to the locations panel at the bottom of the screen. Note: you can also drag and drop multiple locations to the route.

4. By Dialog

   a. Finally, you can use the 'Add New Route Location' dialog by selecting the icon on the locations grid at the bottom of the screen. In the Address field type the address of the location and then click on the magnifying glass. Default information from your preferences will be added to the other fields. You can edit this information as needed and when done click 'Save' to add the location to your route. If you would also like to reuse this location at a later date, you can click on the 'Add to Saved Locations list?' checkbox to add the location the saved locations list at the same time.

   ![Add New Location Dialog]

   **Google Street Routing**

   If you wish to have the actual street route and travel times automatically added to the route you can do so at any time by clicking on the 'Draw Google Street Routing' button. The
Google Street Routing button is located on the bottom right below the map. Click on the button and a pop-up will verify you want to update route and travel times. Note: As locations are added the estimated travel time is automatically applied to the travel time field. You can edit these values at any time.

**Delete a point on a route**

To delete a location, or multiple locations, on a route, highlight the row(s), then click on the Trash Can on the Icons bar below the map. Note: you can also drag and drop the selected rows onto the trash can to delete them.

**Re-ordering Locations**

To change the order of the locations within the route drag the locations up or down in the list.

**Changing appearance**

You can alter the appearance of the map by changing the base layers. There are several choices available by clicking on the 'Change Base Layer' button.

**Creating a Saved Location**

Sometimes you will need to re-use points. In the event you create a point that you know will be re-used you can save it to the Saved Locations in several ways.

1. By Dialog

   1. As mentioned previously, you can add a location to the Saved Locations list by clicking on the checkbox in the 'Add New Route Location' dialog.

2. Drag and Drop

   1. Locations in your current route can be added to the saved location list by dragging and dropping them from the route locations list (at the bottom of the screen) to the saved locations list. Note: multiple locations can be selected and dragged at once.

Once you have the route locations in order, you will probably want to edit some of the details. Click on any cell to edit its contents. Tab will move you across a selected row, and the enter key will move you down a selected column. Note: numeric fields will only accept numeric input and will not accept negative values.

**Importing an XLS route description**


**Radius of Checkpoints and Stops**

Checkpoints will generally need a larger radius than stops, because the device is likely reporting periodically and the odds of being at a checkpoint when the device checks in is smaller. Checkpoints on highways should be larger as because at higher speeds the odds of
checking into a small area is quite low. The following table shows minimum recommended arrival radii for a device that reports at two minute intervals.

<table>
<thead>
<tr>
<th>Driving Speed</th>
<th>Checkpoint Radius (metres)</th>
<th>Stop Radius (metres)</th>
</tr>
</thead>
<tbody>
<tr>
<td>120km/h</td>
<td>4100</td>
<td>200</td>
</tr>
<tr>
<td>100km/h</td>
<td>3400</td>
<td>200</td>
</tr>
<tr>
<td>80km/h</td>
<td>2800</td>
<td>200</td>
</tr>
<tr>
<td>60km/h</td>
<td>2100</td>
<td>200</td>
</tr>
<tr>
<td>40km/h</td>
<td>1500</td>
<td>200</td>
</tr>
</tbody>
</table>

Scheduling a Route

Now that you’ve built a route, you need to assign the route to an asset and provide a start date and time. Click on Route Scheduler from the Support/Admin/Device path from the Navigation bar.

Viewing Scheduled Routes
Select an asset from the Select Asset box in the upper left hand side of the Route Scheduler tab. All assets that you have permission to access will be listed here. If the selected asset has any scheduled routes within the last seven days, they will appear in the Scheduled Routes panel and will be listed chronologically. To view older scheduled routes, use the Select Date box located directly below the Select Asset box. All scheduled routes for the week preceding the selected date will be shown for the selected asset.

Select any scheduled route shown for the selected asset to view its locations and processing status. Note: once a scheduled route has started its locations cannot be edited.

By default, scheduled routes for the preceding and following week will be displayed. To view routes at a different time, change either the date or change the days before/after fields.

**Determining Early, Late and Critically Late Thresholds**

You can pre-set your preferences for early, late and critical thresholds using the preferences dialog. Critical thresholds must be higher than the late threshold. These defaults will automatically be applied to any location you create, however if you want to manually edit these values you can do so by clicking on the appropriate cells in the locations panel at the bottom of the screen. When you are building your route or scheduling a route. These values are not editable once the route has started.

Note: Thresholds should not overlap, which means that the travel time between any two locations should be longer (in minutes) than any of the threshold values. The OTR system will automatically check your threshold values for you and offer to correct them based on the travel times between locations. If you choose to automatically correct the thresholds, the system will apply the largest possible values to the early and critically late thresholds and will make the late threshold value half of the critically late threshold value.

**Creating a New Scheduled Route**

Click on the ‘Create new scheduled route' button just below where you selected the asset and the dialog shown below will appear. Fill in the data and add to create a new scheduled route for the asset you have selected. Reverse route locations option will reverse the order of the locations for the route (useful for a route that goes back and forth between two destinations, such as work and home).
Editing a Scheduled Route
All the location editing options provided on the Route Builder tab are also available here. Consider the route you created in the Route Builder as a template that can be adjusted, if needed, for any particular instance that it is scheduled.

Scheduling a Recurring Route

Select any scheduled route from the Scheduled Routes window and then select the 'Multiple Scheduled Route' button. Select the period of days on which the scheduled route will be scheduled and the final date that the scheduled route will be run.
Monitoring a Scheduled Route

All scheduled routes can be viewed by selecting the Mapping/Routes tab from the Navigation Bar.

Map Legend

Each location for a scheduled route is drawn with a graphic indicating the status and progress for that location. Visited locations are drawn with diamond shaped sign graphics and locations that have not been visited are drawn with rounded pin graphics.
Selecting Map Objects

The scheduled route viewing map is interactive. Assets, location pins, and GPS reporting arrows can all be selected by using the 'Feature Select' tool and then a simple left-click on the graphic. Clicking on any graphic will open a dialog box containing information relevant to the selected object.

Getting Route Information

Right-clicking on any scheduled route in the panel at the bottom of the screen will open a context menu.

- **Zoom to route** zooms the map to show the entire length of the route
- **Zoom to Asset** centers the map on the asset for the selected scheduled route
- **View Route Table** opens a dialog that displays location by location information for the scheduled route in an easy to understand format

![Route Table Example](image-url)
Filtering Routes

By default, all scheduled routes for the selected day (see below) appear on the map. You can choose to limit which scheduled routes appear by toggling the status buttons to display only those scheduled routes which match the selected status options. Click 'Show All' to return to the default view.

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Route Display Options

These options control which information for the displayed scheduled route is drawn on the map.

- **Show Route** draws the scheduled route and its locations.
- **Arrival Radius** toggles the perimeter circles within which an asset will be deemed to have visited the location
- **GPS Locations** toggles the directional arrows that are drawn at the map at the locations where the device reported

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Date Options

Scheduled Routes are displayed for a single day. Select any day here to view either scheduled routes that are currently being processed, or select a date in the past to review historical scheduled routes. Note that the route start and end times are based on user preferences. The times are set to display on your current time zone by default, however, you can choose to display in any time zone you wish by setting this in the preferences.
Administrative Options

In some instances, scheduled routes may not be completed because locations have been skipped or due to an error in device reporting. A scheduled route is deemed completed only once all locations on the route have been visited. However, it is possible that some locations, may not correctly be marked as visited (e.g. the arrival radius may be too small, the device may have failed). The 'Mark Closed' option allows an administrator to manually close off the route to correct this problem. Any routes closed with this option will be labeled as 'Closed' as opposed to 'Completed' which is assigned to routes that complete correctly.

Asset Display Options

This option controls which assets are displayed on the map

- All Assets display all assets in your fleet
- Scheduled display only assets that have scheduled routes for the selected day
- Selected display only the asset for the scheduled route that is selected in the panel at the bottom of the screen

Preferences

You may wish to set the default values for some of the auto-populating route related elements. You simply go to the Preferences selector, in Support, then select OTR Preferences. The values are self-explanatory after you have used the service.
### Preferences

#### Device Display
- Preferences

#### Route Tracking
- Preferences

#### Dashboards
- Preferences

#### Map
- Global Preferences

#### Mobile Application
- Preferences

#### Reports
- Preferences

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### Route Tracking

<table>
<thead>
<tr>
<th>Default Preferences</th>
<th>Tenant Preferences</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>General</strong></td>
<td></td>
</tr>
<tr>
<td>Default asset display</td>
<td>No default *</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Default Threshold Settings</th>
</tr>
</thead>
<tbody>
<tr>
<td>Early Threshold (min)</td>
</tr>
<tr>
<td>Late Threshold (min)</td>
</tr>
<tr>
<td>Critical Threshold (min)</td>
</tr>
</tbody>
</table>

**NOTE:** Critical threshold must be higher than Late threshold

| Arrival Radius (m) | 3000 |

[Apply  Back]