ADMIN'S GUIDE

DRAFT

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Welcome to VehicleTracker - the system for tracking your GPS *Devices*.

As an Administrator you can manage Operators, Event Rules and more. This manual covers both the common functionality as well as administrative tasks.

Recommended web browsers

We recommend that you use a major, updated, web browser for the best experience: Firefox 3 or later / Internet Explorer 7 or later. The system does, however, also support Internet Explorer 6, Opera 9, Safari 3.1 and Google Chrome.

Terminology

Device

The GPS tracker device(s) you're using with TrackForce Server.

Vehicle

Often we refer to a vehicle as the object you're using devices to track.
You can of course track anything, but for the purpose of this manual we use the term *vehicle*, or simply *device*.

Application

This is usually your organization or unit. If you have access to more than one *Application* you get to choose which to log in to after you've entered your username and password.

SiteAdmin

The TrackForce Server administrator has access to the SiteAdmin web site. This is the main administration site where for example *Applications*, *Plugins* and *Report templates* are managed.

Learn more:

- Overview 2
- Map view 4
- Reporting 29
- Admin 35

Overview

Main menu

At the top of the page you'll find the main menu, which contains some or all of the below (depending on your installation). Click to read more about each topic:

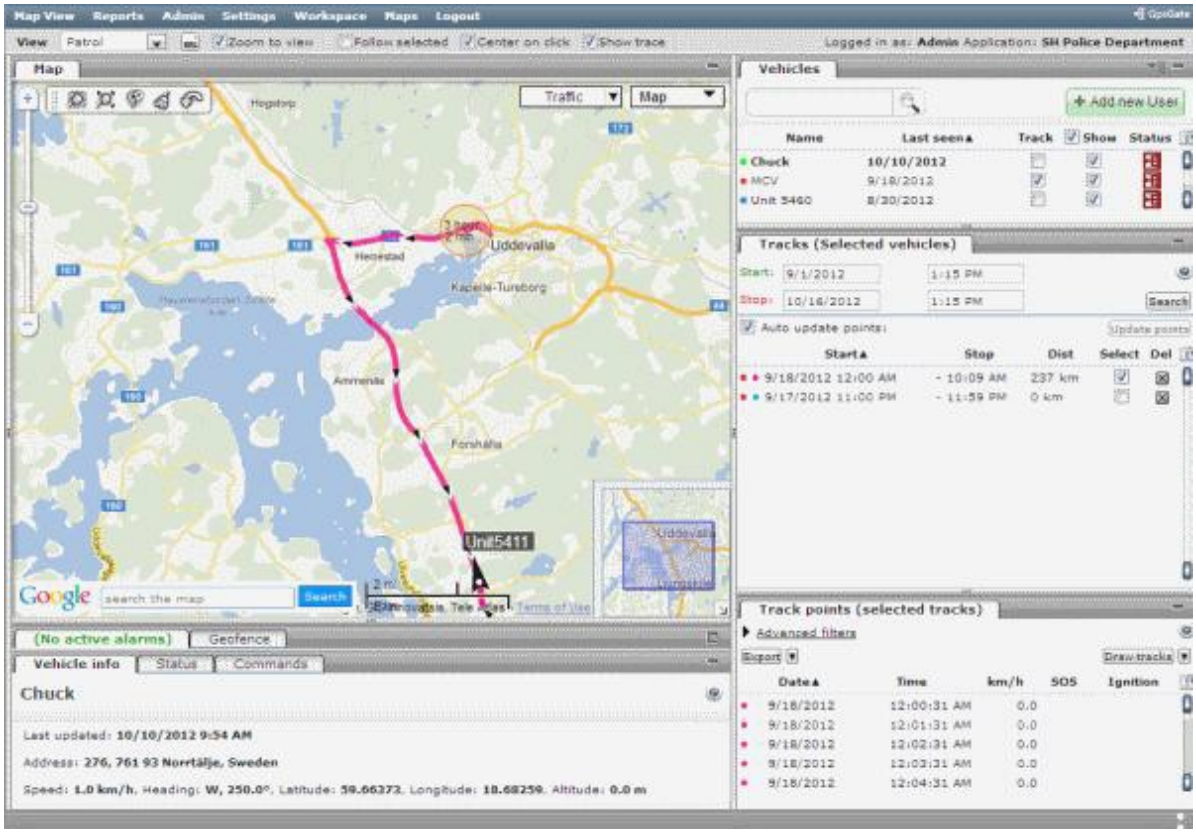
- ***Map view*** 4 - the start page
- ***Reports*** 29 - view and create reports for print / export / mail.
- ***Admin*** 35 - if you're an administrator, you can manage the *Application* here (such as *Users*).
- ***Settings*** 19 - change password and personal display settings
- ***Workspace*** 21 - change or create a *Workspace*
- ***Maps*** 23 - change map if you have more than one available
- ***Help*** - support options
- ***Logout*** - log out of the system

Map View and Workspace

When logging in to the system, the default ***Map view*** is displayed.

The *Map view* interface is made up of a map surrounded by multiple lists that can be freely moved around and re-sized. Any set of lists can be saved as a custom ***Workspace***. The *Workspace* that shows includes several lists:

- ***Vehicles*** 7 - a list of all your vehicles, connected or not.
- ***Tracks*** 9 - when a vehicle i selected (*Track* check box in *Vehicles*) a list of tracks are shown here
- ***Track points*** 9 will give you a breakdown of any selected track.
- ***Vehicle Info*** 15 , by default shown below the map, displays details about the selected vehicle



Note: multiple workspaces can be created where lists are moved and re-sized. Therefore your actual user interface might differ from the pictures in is manual.

Learn more:

Introductio

- Map view[4]

The first thing you see when logging in is the ***Map view***. Let's take a look at how to work with the map.

Map context menu

There is also a context menu in the map, that appears when you right click on any location:

Map context menu

- ***Zoom to street / city*** or ***region*** level will give you a better overview of the selected area.
- ***Draw today's tracks***, only appears when you right click on a *vehicle* and will display the vehicle's path.

Map Display Options

Between the main menu and the map you find the following options:

- ***View*** - change active View 18.
- ***Zoom to view*** - changing View will zoom the map to show all vehicles in that View.
- ***Follow selected*** - the map will automatically center on the position of the vehicle selected in the Vehicle list 7 .
- ***KML*** icon - used to generate a KML feed which can be used in for example Google Earth.
- ***Center on click*** - like *Follow selected*, but when you click on a vehicle.
- ***Show trace*** - this option will show a short red line after the vehicle you have selected in the Vehicle list , the line represents the last 10 position updates for the vehicle.

Learn more:

- Vehicles list 7
- Track lists 9
- Alarms 12
- Status tab 14
- Vehicle info 15
- Commands 16
- Tags and Views 18
- Settings 19
- Workspaces 21
- Maps 23

Points of Interest

Points of Interest is a VehicleTracker Plugin (the Administrator can install it), enabling you to view and add POI's on the map. Depending on your configuration POI's may also cause alarms 12 when vehicles enter or leave them.

POI's on the map

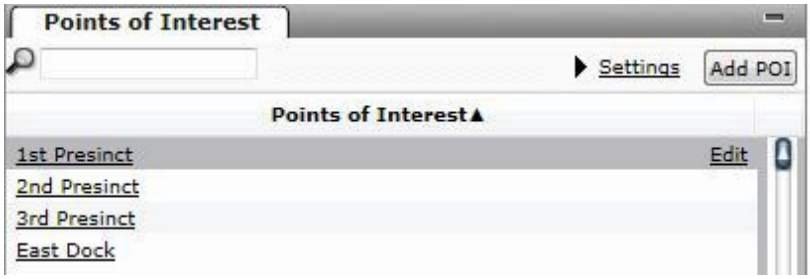
Add POI on location

POI location are commonly imported to the system, rather than added manually. But you can however right click on the map and add a POI at the current location:

The Add POI window is shown and you can give it a ***Title***, ***Description*** (optional) and ***Category***. Choose ***New....*** to add a category, if needed.

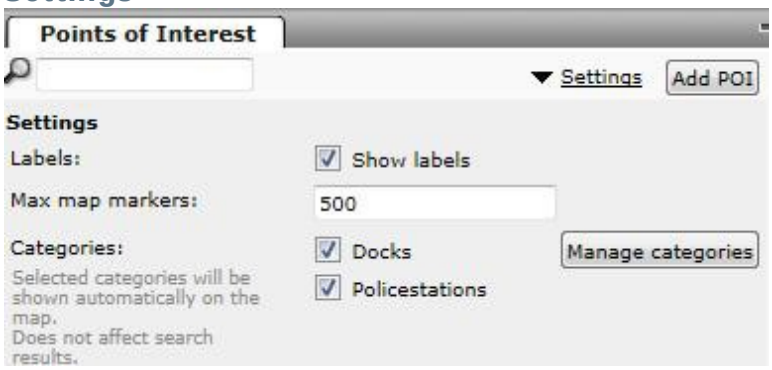
Points of Interest list

By default (with the POI module installed), there should be a *Points of Interest* list in the bottom right of the *Map view*. Here you are able to search, and ***Add POI*** (see above).



If this list is empty or no POI's show up on the map, click the ***Settings*** link to the left of *Add poi:*

Settings



- ***Show labels -*** makes the POI labels always visible, as oppose to only appearing on mouse over.
- ***Max map markers*** - limit how many POI markers are shown on the map
- ***Categories*** - choose what categories to display on the list and on the map.

By default no categories are chosen. Make sure to select the appropriate categories and save these settings in your ***Workspace*** 21. If you are not allowed to make changes in the Workspace, contact your VehicleTracker administrator.

Vehicles

A key part of the system is the ***Vehicle list***. There you see the *Users* and *Vehicles* in the current view. By default it shows the ***Name***, the time it was last seen, one check box for ***Tracks*** and one for ***Show***.

You select a vehicle either by clicking on it on the map, or in the Vehicle list in the Vehicles list. A selected vehicle will be marked in green on the map and highlighted in bold in the *Vehicle list*.

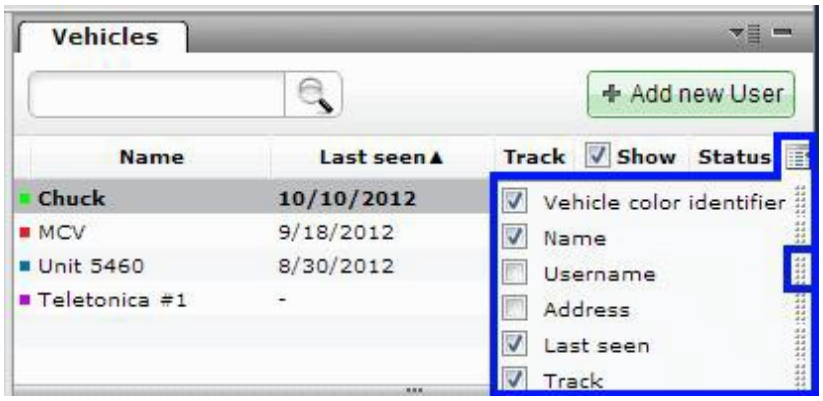
Search user

In the top of the *Vehicle list* there is a ***Search*** function where you can make free text searches for your Operators and Vehicles.

Sometimes the vehicle isn't included in the current view and the below message appears. Click ***Show*** to include all users.

List Settings

In the list's upper right corner you'll find the column selector icon. Left click on this icon to choose what columns to display.



You can also reorder the columns using the right edge handle (dots).

The available columns are:

- ***Vehicle color identifier*** – identifies the vehicle in the track list
- ***Vehicle Name*** – the name of the vehicle
- ***Login ID*** – the vehicle login id
- ***Last seen*** – time stamp for the last valid position update
- ***Track*** – the check-box for selecting tracks for a vehicle
- ***Show vehicle on map*** – the check-box for showing a vehicle
- ***Status*** – the vehicle connection status icons:
  - Connected and sending position
  - Connected but not sending position (it may take a while to get GPS fix)
  - Not connected (no data for at least 10 minutes caused by for example sleep mode or ignition off)
  - Never been seen
- ***Last connection*** – time stamp for the last server connection

- ***Protocol*** – the protocol used by the device (HTTP, TCP, SMS,...)
- ***Speed*** – vehicle speed at last update
- ***Tag*** - tag(s) associated with this vehicle
- ***Description*** – vehicle description

Learn more:

- Tracks lists 9
- Alarms 12
- Status 14
- Vehicle info 15
- Commands 16
- Tags and Views 18
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Drawing tracks

In this chapter we will look at the Track lists and how they're used to display vehicle tracks - both in the lists and on the map.

Selecting tracks - Tracks list

You can show multiple tracks for multiple Operators/Vehicles at the same time on the map. First you select the desired Operators/Vehicles by checking the Track box next to the name in the *Vehicle list*. This will populate the ***Tracks list*** with the tracks of the selected Operators/Vehicles.

The default sort order is with the newest track first, you can sort the lists in another order by clicking the column headers. You can limit the tracks you wish to show by narrowing the start and stop time stamps. By doing so you will only display Tracks that have Track points inside the selected time period.

To view a Track click on the check-box in the ***Select*** column in the track list. This will open the ***Track points*** list and fill the track points list with all the track points from the selected track.

You can also delete tracks in this list by clicking the delete icon (⊠) to the right of a track.
If you have selected the ***Auto update points*** option all you changes in the *Tracks* list will instantly take effect in the *Track Points* list. If you are working with many tracks and *Track Points* at the same time you can disable this function by clearing the check box. This will speed up load time. If you have done this then use the ***Update*** button to load the track points into the *Track Points* list.

List Settings

In the upper right corner of the *Tracks* list you'll find the column selector icon. Left click on this icon to choose what columns to display.

- ***Vehicle Color identifier*** - this will display a square to the left of each track matching the vehicle color (see *Vehicles* list).
- ***Track Color identifiers*** - adds a circle to the left of each track matching the track segment color on map.
- ***Name*** - vehicle name
- ***Start*** - date and time the track began
- ***Stop*** - date and time the track ended
- ***Dist*** - track travel distance
- ***Select*** - populates the *Track points* list
- ***Del*** - shows the delete button (see above)

Drawing tracks - Track points list

When you select a track in the *Tracks* list it is opened the ***Track points*** list, where you see the individual positions in the track.

Clicking on the ***Draw Tracks*** button will draw the chosen tracks on the map in different colors for each track. There is also a button here for clearing all tracks from the map.

You can select an individual track point in a track either by clicking on it on the map, or by clicking on it in the *Track point* list. You remove the tracks drawn on the map by clicking the clear tracks icon.

Track Settings

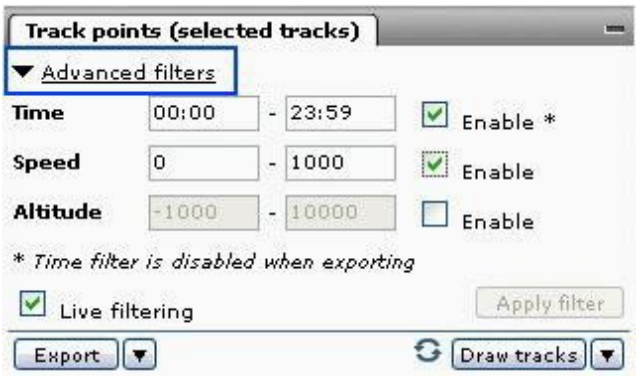
Next to the ***Draw tracks*** button you have a drop down menu . Clicking it displays options for track drawing. Check the check box next to the specific option to enable it for track drawing:

- ***Show polyline***
  Select this option to connect all the track points in a track with a solid line.
  
- ***Show points***
  Select this option to show markers with direction arrows on the track points. To show a bread crumb trail you should enable this option without the polyline option above.
  
- ***Show Fatpoints***
  Select this option to show "Fatpoints" where the vehicle has been idle. A Fatpoint also includes information on the length of the stop.
  

- ***Zoom to fit***
  Select this option to zoom in on the selected tracks when drawing and re-drawing them. You should un-check this option if you have zoomed in on a part of the selected tracks and you wish to re-draw them without changing the zoom level and position of the map.

Advanced Filters

You can narrow down your search further based on different search criteria. This is done by expanding the ***Advanced filters*** options found on top of the *Track points* list.
You have the options time, speed and altitude.



By default the search options are disabled. You enable them by checking the check box to the right of each field.

Live Filtering

When this option is enabled the *Track Point* list below will update directly when you change your search criteria. If you are working on large amounts of data you have the option to disable the *Live Filtering* by clearing the check-box and using the ***Apply Filter*** button to the right.

List Settings and Status Signals

In the upper right corner of the *Track points* list you'll find the column selector icon. Left click on this icon to choose what columns to display.

- ***Track color identifier*** – identifies the vehicle in the track list
- ***Date*** – date
- ***Time*** – time stamp
- ***km/h*** – speed (shown in the selected unit)
- ***Alt*** – altitude
- ***Heading*** – heading in degrees
- ***Lat*** – latitude
- ***Lon*** – longitude
- ***Valid*** – validity of the position update

Below the standard fields your available device signals are displayed (*SOS*, *Battery low* etc). These vary depending on device used.

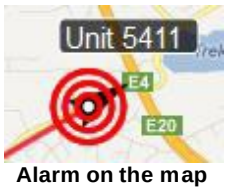
Learn more:

- Alarms 12
- Status tab 14
- Vehicle info 15
- Commands 16
- Tags and Views 18
- Settings 19
- Workspaces 21
- Maps 23

Alarms

Alarms on the map

When an alarm occurs it is displayed on the map with a red radius at the location the alarm was reported.



Alarm on the map

If there are multiple alarms in the same are and you are zoomed out a bit on the map (i.e normal zoom) a cluster icon is shown with the number of active alarms in the middle.

Alarm Cluster (3 alarms)

Zoom in to see the individual alarms.

Alarms list

Alarms has a normally collapsed list, by default below the map, with ***(no active alarms)*** in the title.

Once an alarm has activated, the *Alarms* list has ***(X active alarms)*** in its title (where *X* is the number of active alarms).

In the *Alarms list* you can manage current alarms:

In the top of the list there's an option to ***Show all alarms*** and ***Zoom all alarms***, to get a better overview on the map.

To the right of *Zoom all alarms* button you'll find ***Close all***. This will mark all alarms as managed, so they don't show up on the map any more. You can also close them individually with the ***Close alarm*** button to the far right.

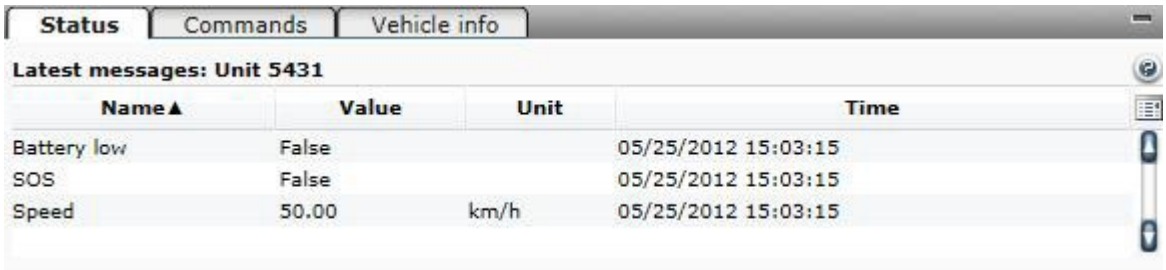
Clicking the small black arrow to the left expands the alarm and shows details such as signal arguments.

Learn more:

- Alarms 12
- Status tab 14
- Vehicle info 15
- Commands 16
- Tags and Views 18
- Settings 19
- Workspaces 21
- Maps 23

Status

By default shown right beneath the map in *Map view*, the ***Status*** tab will give you a detailed view of the selected vehicle's signal messages. With the *Status* tab you can easily see current signals from the device and when they occurred.



Learn more:

- Vehicle info 15
- Commands 16
- Tags and Views 18
- Settings 19
- Workspaces 21
- Maps 23

Vehicle info

The ***Vehicle Info*** tab, by default shown below the map in *Map view*, shows information for the vehicle currently selected in the *Vehicles* list. It displays information such as ***Latitude / Longitude***, ***Speed***, ***Heading*** and when it was last updated.

Learn more:

- Commands 16
- Tags and Views 18
- Settings 19
- Workspaces 21
- Maps 23

Commands

The ***Commands*** tab, by default located beneath the map in *Map view*, contains device control and configuration commands. It will show the commands available for the currently selected vehicle (*Vehicles* list)
.

Here you can start and stop tracking and send a poll-position SMS to request a position from an off-line device.

Sending Commands to Devices

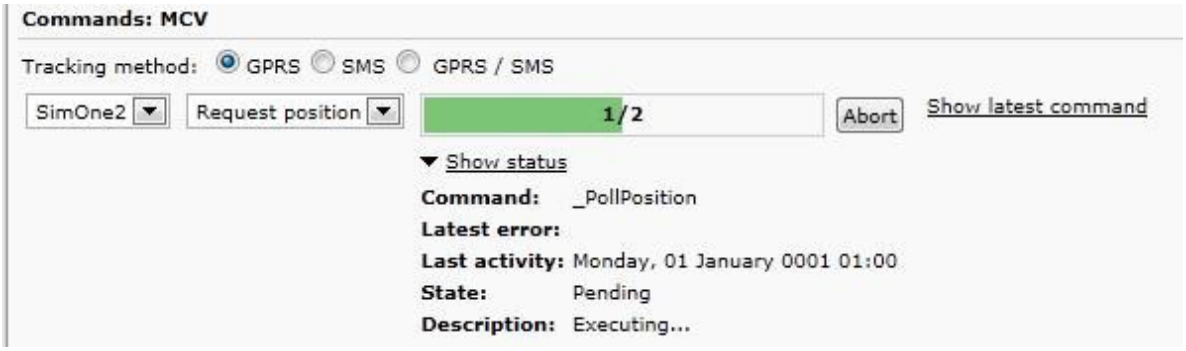
With the Commands tab you can send commands to your devices:

1. Make sure the vehicle is selected in the ***Vehicles*** list.

2. Open the ***Commands*** tab (below the map).

3. Select device in the first drop down list and a command in the second one.

4. Click on the ***Execute*** button.



A progress bar is displayed and you can click ***Show status*** to get a more detailed view.

Note: If the device won't respond the progress bar will never complete, as it waits infinitely. In this case, click on the ***Abort*** button and investigate any problems with the device.

The application Administrator can control which commands are available (read more about *Template Commands* below).
The following commands are available in a default installation for most devices:

Device setup	Sends default setting to the device
Request position	Sends a request to the device for a single position update
Start tracking	Starts tracking with the selected tracking method with the current ***Update*** interval. The *Update* interval can be changed in the *Track Recorder* settings
Stop tracking	Stops tracking

Template commands

To add additional commands, see the ***Devices*** tab in ***SiteAdmin***. For further information see the *SiteAdmin* manual.

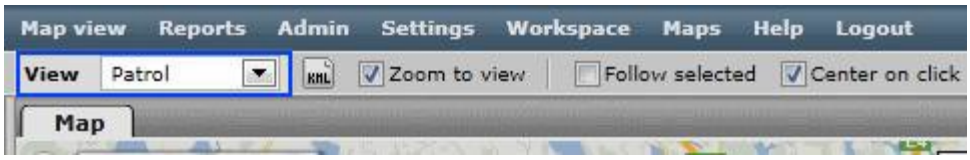
Learn more:

- Tags and Views 18
- Settings 19
- Workspaces 21
- Maps 23

Tags and Views

Tags and ***Views*** are used to group vehicles and users. You can for example create a *View* based on vehicle type (e.g. truck or taxi) or any other criteria (e.g. “West coast group”, “Subcontractor ACME” or “Unit Managers”). This enhances the usability of VehicleTracker as the information on the map can easily be kept relevant to the task at hand.

If you have any views available in your account they can be found in the top left of the map:



Simply choose a view in the drop down list and the map will be "filtered" according to the view settings.

If you are an administrator of VehicleTracker you can manage these tags. Read more here 47.

Learn more:

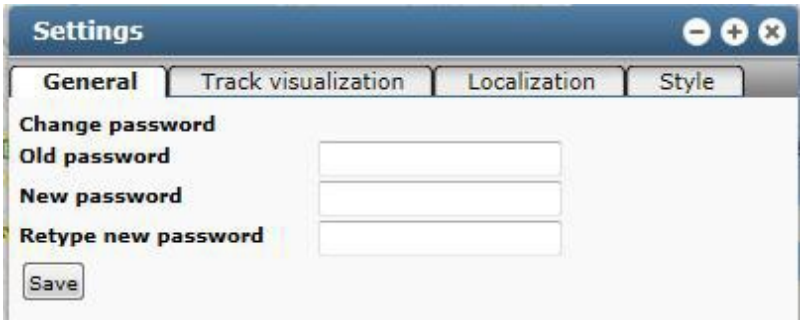
- Settings 19
- Workspaces 21
- Maps 23

Settings

In the main menu you can access the ***Settings*** window.

General tab

On the ***General*** tab you can change your password. Simply ***Save*** when you're done.



Track visualization tab

On the ***Track visualization*** tab has settings for how vehicle tracks 9 are shown on the map.

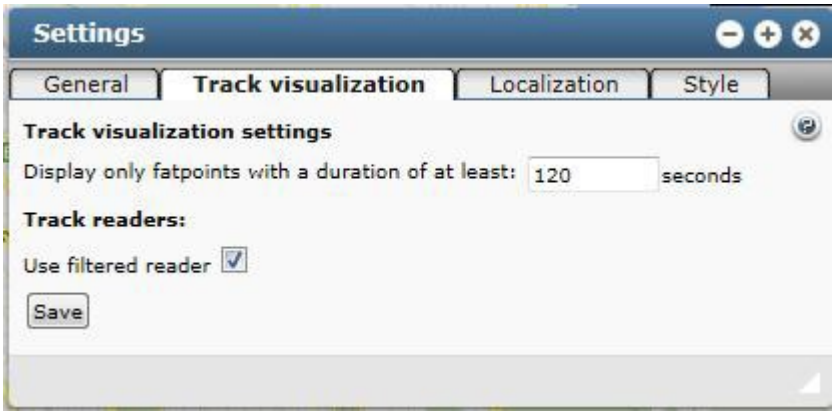
Fatpoint duration

The first setting determines how long a vehicle can idle on a position before it is considered a ***fatpoint*** 10. *Fatpoints* are then visible on the map.

Use filtered reader

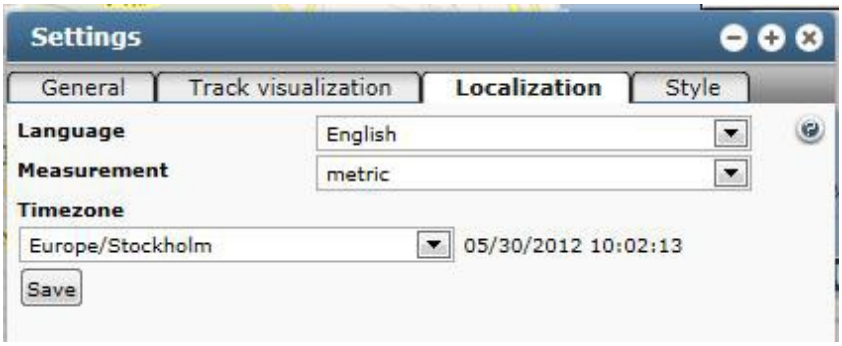
By default this check box is selected, which ensures that tracks are always current when drawn on map.

Warning: deselecting this check box might make the tracks draw faster, but has them rely on nightly updates and could cause inconsistencies.



Localization tab

On the *Localization* tab you can change language and measurement.
Your installation determines what languages are available and the TrackForce Server administrator can manage languages.



Style

Settings on the ***Style*** tab determines overall look and feel of VehicleTracker.

Marker settings

Settings for how vehicles are displayed on the map. By default they use an arrow marker and show their Name in a label above the marker. Change this as you see fit.

Workspace Settings - Marker clustering

By default the map clustering [23] feature will be used, but if you always want to see each individual vehicle on the map, deselect the ***Enable vehicle marker clustering*** check box here and click ***Save***.

Learn more:

- Workspaces [21]
- Maps [23]

Workspaces

A ***Workspace*** is a specific layout of the VehicleTracker user interface. You can have multiple Workspaces with different layouts for different tasks. A Workspace keeps track of the following information:

- list positions and sizes
- Columns visible in list lists
- Sort order in lists
- Current *View*

VehicleTracker has a **default** Workspace that you can always go back to.

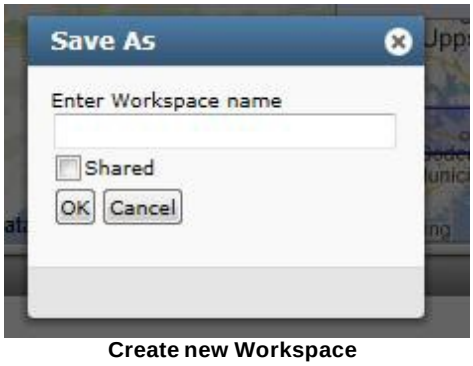
Save Workspace

You can save the state of the user interface as a Workspace at any time.

In the ***Workspace*** menu, select ***Save*** to save changes to the active Workspace.
However, if you try to save the default workspace, the ***Save as*** dialog is displayed instead (below).

Create a new Workspace

1. In the ***Workspace*** menu, select ***Save as***. The new Workspace window is displayed.



Create new Workspace

The ***Shared*** check box is only shown if you're an administrator / have rights to create shared Workspaces. This option will make the Workspace available to all users.
You can also use the ***Manage Workspaces*** window (below) and select *Shared*.

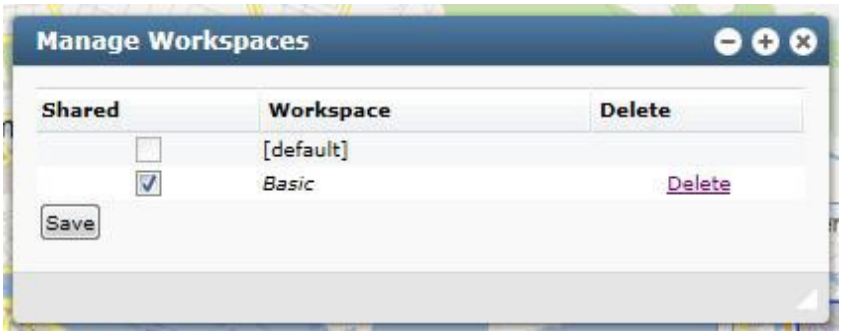
2. Enter a name to describe your Workspace.

3. Click on the ***OK*** button to save.

Deleting a Workspace

You can delete any workspace you've created (assuming your user has the right to do this).

1. Select ***Manage Workspaces*** in the ***Workspace*** menu. The Workspace window is displayed.



2. Click on the ***Delete*** link to remove a workspace.

3. Finalize by clicking on the ***Save*** button.

Learn more:

- Maps 23

Maps

In this chapter we'll have a deeper look at different map roles in VehicleTracker.

Map clusters

A feature that works with all maps is the map clustering: if three or more vehicles are in the visually same area (1 cm²) a cluster icon is shown, displaying how many vehicles are in that area:

Map Cluster

Zoom in to see the individual vehicles.

Area Search

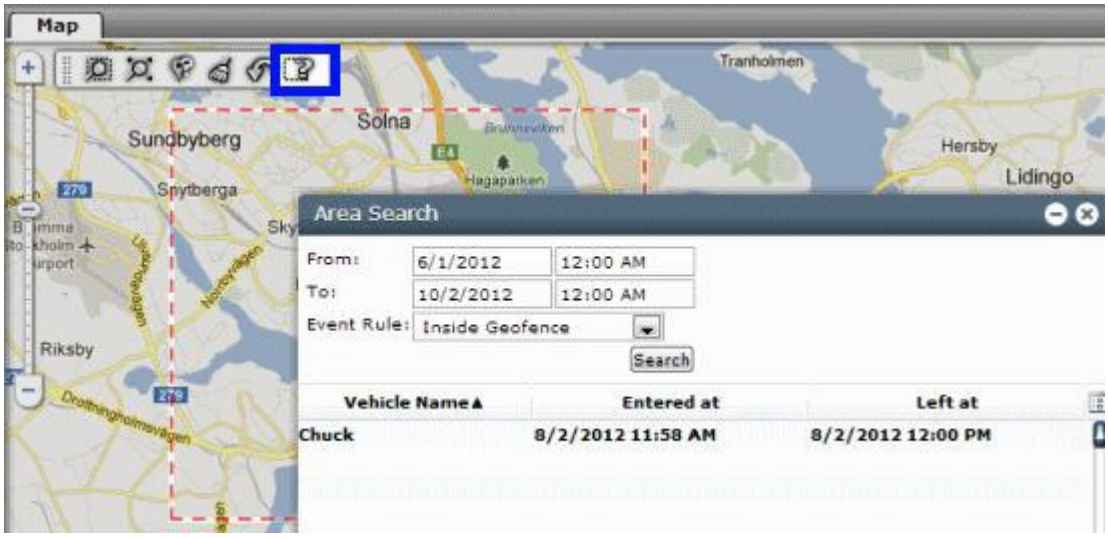
With the Area Search map tool you can see what vehicles and events occurred in a certain area during the specified period.

1. Simply click the Area Search icon and select a area on the map. The Area Search window is shown.

2. Specify period and optionally an Event Rule and click ***Search***.

3. Matching vehicles are shown. You can now click on a vehicle to show the specific track.

Close the Area Search window when you're done.



Google Map Roles

By default, Google Maps is used in VehicleTracker and you won't have any other options in the ***Maps*** menu.

Your administrator may however have installed additional maps. You can then change map as you wish. Different maps have different roles - try to find the one that works best for you.

If your system uses Google Maps (which is default), it has the following functionality:

- ***Map modes*** - there are currently four different Google Map views: Map, Satellite, Hybrid and Terrain. Note that if you are using custom maps then you will not have these options.

- **Zoom control** – on the left side of the map you have the zoom control bar. Drag it up or down to zoom in and out. You can also zoom in with a double left click on the map and zoom out with a double right click.
- **Zoom area** - click on the button and then hold down left mouse button and drag a square over the area you would like to zoom into.
- **Zoom all vehicles** - click on the button to zoom in on all vehicles on the map.
- **Request Address** – Click on the button and then drag the marker to the place you want address information for.
- **Clear map** – click on the button to clear all tracks from the map.
- **Undo zoom** - the button undoes the previous zoom operation.

Learn more:

- Points of Interest[5]

The ***Geofence*** tab, by default located below the map in *Map view*, is divided in two modes: *Administrator* and *Operator*.
As an Operator you can only view existing *Geofences* created by an Administrator.

Operator mode

Click on the ***Geofence*** tab and select the Geofence ***Tag*** 18 you would like to view in the drop-down menu. You will get a list of all included Geofences. Click on a Geofence to pan the map to the location of the selected Geofence.

Administrator mode

As an VehicleTracker administrator you have the ability to create and edit Geofences. You also have the ability to group Geofences using Geofence *Tags*.

Note that there is also a ***Points of Interest*** 5 plugin 5 that works very similar to Geofences, but suit some scenarios better (visual points with or without alarms).

Create a Geofence

Make sure the ***Geofence mode*** radio button is selected.

1. In the dropdown, select ***-- New circle--*** or ***-- New polygon--***.
2. Type in an appropriate name that describes the location in the ***Geofence name*** text box (e.g. "Acme Warehouse", "4th Presinct" etc).

3A. When choosing a ***circle*** geofence, the red circle that appears on the map is the Geofence boundary. Click on the circle center and drag it to the right place on the map. You can click and drag on the circle border to increase or decrease the Geofence radius. Alternately, you can use the ***Radius*** text box.

3B. When choosing a ***polygon*** geofence, left click on the map to start drawing the polygon. Left click on the map for each new point of the polygon that you wish to create. Finish by left clicking on the start point (red circle with black border).

4. You connect a single Geofence to a group of Geofences by adding a Geofence ***Tag***. There are two predefined Geofence Tags that trigger alarms:

- ***Go inside – Alarm*** - triggers an alarm when a vehicle enters the Geofence area
- ***Go outside – Alarm*** - triggers an alarm when a vehicle leaves the Geofence area

Select the one you would like to use in the drop down menu ***Select Tag***.

5. Optionally click the Advanced link to add a new Geofence tag. Here you are also able to link the Geofence to multiple tags. Custom Geofence tags can be used to create more advanced ***Event Rules*** 43.

6. Save your Geofence when you are done. The Geofence will now trigger alarms for all Vehicles in your application.

Edit a Geofence

You edit an existing Geofences by selecting the Geofence in the drop down menu. You can then rename, move, resize or remove the Geofence just as you do when creating one.

Tag mode

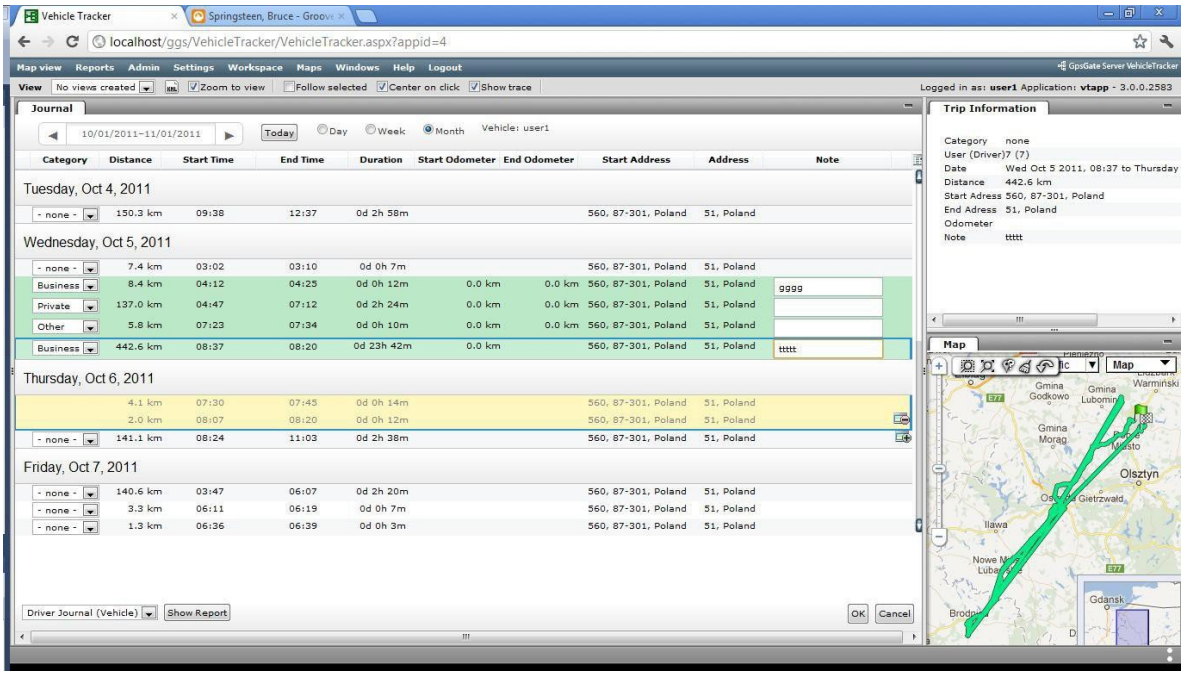
You can also Edit Geofence Tags by selecting the ***Tag mode*** radio button. All the Geofence tags will then be selectable in the drop down menu. Here you can select and deselect Geofences within each Geofence Tag. Click ***Save*** to apply your changes.

Learn more:

- Maps 23
- Points of Interest 5

Driver Journal is used to create detailed reports to justify vehicle usage. You can combine multiple trips to one journal entry and for each journal entry you can choose a category and add a description. You can select the categories you want to show in Driver Journal reports.

Select ***Driver Journal*** in the ***Workspace*** menu to open your Driver Journal.



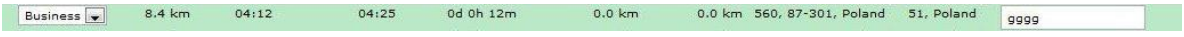
The Driver Journal Workspace has three main windows, **Journal**, **Trip information** and **Map**. When you work in the **Journal**, the currently selected trip is shown in the **Trip information** and **Map** windows.

In the list you can see the trips and vehicles assigned to you. If you drive multiple vehicles you can select the vehicle you want to work with in the ***Vehicle*** drop-down.

When you open the Journal the week with the latest journal entry is shown. You can move forward and backward in time with the arrows and change time period with the buttons ***Day / Week / Month.*** The ***Today*** button takes you back to today.

Add trip to Journal

When you give a trip a category it turns green and is automatically added to the Journal.



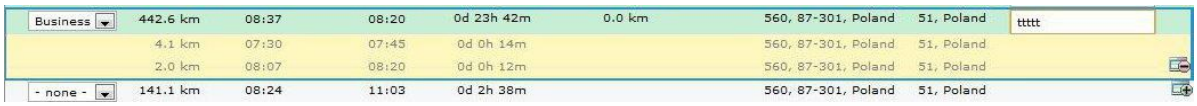
1. Select the trip category in the ***Category*** drop-down. The trip turns green and is added to the Journal
2. Add a description of the trip in the note field

The trip is automatically saved when you make changes to it.

Note: The odometer values are automatically calculated based on the **Accumulator** settings for the vehicle.

Merge multiple trips

You can merge multiple trips when you add them to the Journal (for example if one customer visit is listed as several trips).



1. Select the trip category in the ***Category*** drop-down. The trip turns green and is added to the Journal
2. Add a description of the trip purpose in the note field
3. Click on the "Plus" sign to include the next trip in this Journal entry (the start and stop times and addresses are updated)
4. Keep clicking on the "Plus" sign to add more trips
5. Click on the "Save" icon to save the trips as one Journal entry

The **Trip information** and **Map** windows are updated as you add more trips to show the current selection.

Note: You can click on the "minus" sign to remove the last trip from the Journal entry.

Edit Journal entry

At any time you can make changes to the Category and Note fields directly in the list.

You can merge in additional trips to the selected journal entry with the "Plus" sign. If you want to remove trips from a Journal entry you must first remove the Journal entry and then add it again.

Remove Journal entry

A Journal entry is removed when you change the ***Category*** to " - none - ". When you do this the trip turns gray.

Note: When you remove a Journal entry made of multiple trips they will again show up as separate trips in the list.

Odometer handling

The Odometer is managed from the **Accumulator** tab in the administration page for the vehicle.

Show Journal reports

At the bottom of the Journal you can select a report for your Journal (the reports available depend on your installation).

Select a report and click on ***Show Report***
Your report is opened in a separate window.

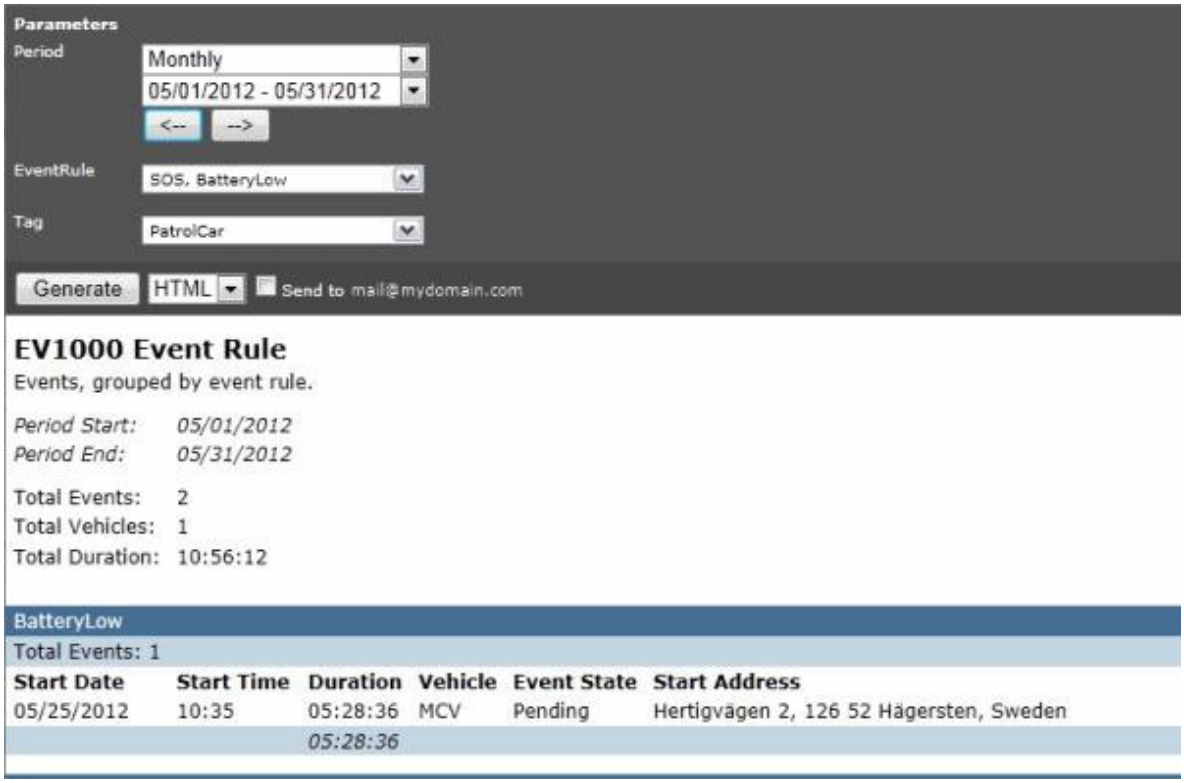
Assuming your account has access to this feature, you will find ***Reports*** in the main menu.

Depending on your VehicleTracker configuration, there might be preconfigured reports available, like *Event Rule*, *Trip & Idle (Daily)* etc, ready to use.

Usually it's only the VehicleTracker administrator who has ***Manage Reports*** available in this menu.

Running a report

If you have reports available below the *Reports* / *Manage Reports* menu option, click one of these to run it. The report preview is shown in a new window:



Report Preview

The parameters may have default values, but change these as you see fit (***Period*** etc).

By default the report will be show as HTML (web layout). But if you for example wish to use the result in Excel, then choose ***CSV*** instead to export as a comma separated list.

Click on the ***Generate*** button. The report is shown below the gray list.
When using HTML layout you can print the report. If you chose CSV you'll be able to save the report.

Also, you can select the ***Send to youraddress@yourdomain.com*** check box to mail the report to yourself.

Learn more:

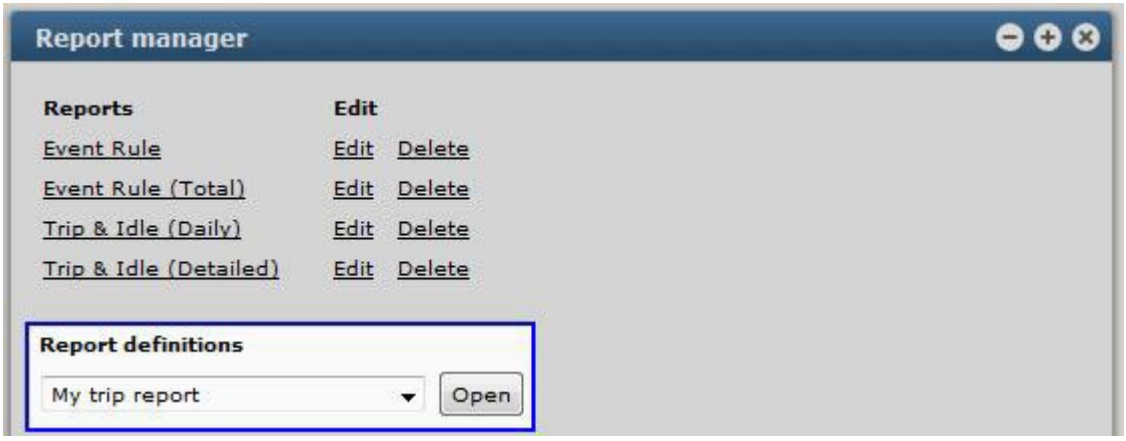
- Adding a report 31

Adding a report

Adding a report in VehicleTracker

We will now "create" the report in our Application. This let us choose the report's default settings.

1. Click ***Manage reports*** in the ***Reports*** menu. The *Report manager* window is shown.



2. Choose your report in the *Report definitions* list and click ***Open***. Report settings and preview pops up in a new windows/tab.

3. Choose suitable ***Report settings*** as desired:

- ***Name*** and ***Description*** - this is what the users primarily see
- ***Show Parameters*** - leave this ticked to let the users choose period and other parameters by themselves. You can, however, unselect this check box and make the default parameters (below) static.
- ***Default format*** is set to ***HTML*** as default, which works well for general purposes.
  You can also choose ***PDF*** if the report is normally printed (requires the users to have a PDF reader installed).
  If the report is primarily to be used for export, and then import to Excel or other compatible applications, choose ***CSV*** instead.

4. ***Select parameters*** to set their default values. This can make the report more effective even if ***Show parameters*** is selected, since the user don't have to do more than necessary to run the report.

Hide parameters

Other then hiding all parameters (above), there's an option to hide individual parameters by selecting the ***Hide*** check box to the right. This enables you to choose what event rules to include, for example, and prevent the *Operator* (user) from changing these values.

5. *Email schedule* (optional)
Other than running the report from VehicleTracker you might want to add an email schedule. This often increases usage of the report significantly. When you select the ***Activated*** check box email options are shown:

Choose interval, users with which tag and format (works in the same way as *Default format*, above).

6. *Preview* and/or ***Save***
Preview the result if you like to and then save the report.

Your report should now be available in the ***Reports*** menu of VehicleTracker.
All done!

A TrackForce Server administrator control who the report is available for with user roles. To do this, go to ***Admin > Roles*** and enable / disable reports just like in ***SiteAdmin***.

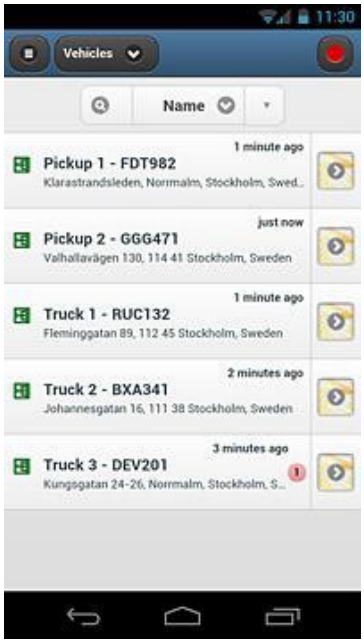
You can access roles directly from you mobile device with the TrackForce Mobile interface.
As an administrator you can install the ***Mobile*** plugin from ***SiteAdmin*** and enable it in the *Application*.

Logging in

Login to TrackForce Mobile from the same url as you login to VehicleTracker. Your mobile device is detected at login.

If you want to login from a desktop web browser you add "/m" to the standard login url (for example "http: myserver.com/m" or "http://myserver.com/TrackForceServer/m" depending on your installation).
If not available, ask your system administrator.

You can expect TrackForce Mobile to work well on all modern mobile devices.



Vehicle list

Fleet status

The vehicle list is continuously updated showing the address, time since the last update and all active alarms for each vehicle.

The list can be sorted in date, name and alarm order using the menu at the top of the list and with the search function you can quickly find specific vehicles.

Tap on any vehicle for more details or tap a map icon to go directly to the real time map for the vehicle.

Vehicle information and Alarms

The vehicle information page shows more details for the selected vehicle including current speed and vehicle status. The map icon takes you to a map page for real time tracking of the vehicle.

Active alarms are listed with detailed information and times stamp. You can show alarms on a map or close them directly in the list.

The alarm icon in the top right corner is available on every page. As long as there are active alarms the alarm icon is red. Tap the alarm icon to show the vehicle list with the vehicles with active alarms first.

Vehicle info

Live maps

Tap the map icon to track a vehicle in real time. The map window shows the vehicle and active alarms. You can show and hide vehicles and alarms with the menu above the map.

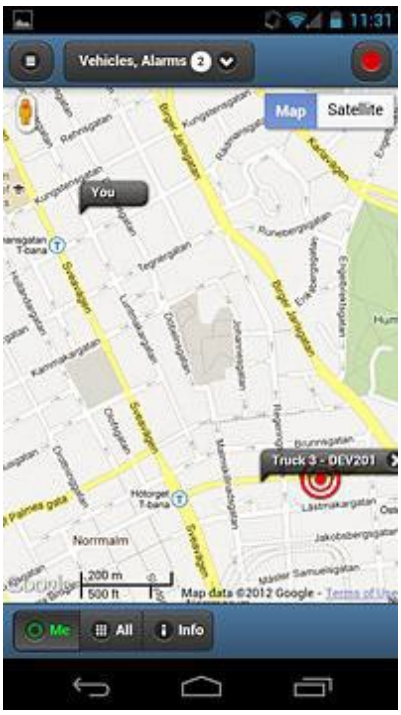
You can show your own position on the map by tapping the Me button below the map. This is great if you want a visual reference between you and the vehicle.

The All button zooms and pans the map to include all objects.

The Info button brings up the information box showing details and status information for the tracked vehicle.

As shown in the images multiple maps are supported. At the time of the first version of TrackForce Mobile this included Google Maps, OpenLayers and OpenStreetMaps.

Open layers



Map with alarm

This section explains how to work with the ***Admin*** menu options.

Only **administrators** of VehicleTracker have this menu available.
If you don't see *Admin* in the main menu, please ignore this section of the manual.

Admin menu in VehicleTracker

Users

This chapter will cover the management of ***Users*** in VehicleTracker (only available for administrators).

User Roles

There are three different user roles in VehicleTracker: application *Operators, Administrator* (Operator with admin rights), *Driver*, and *Unit* (vehicle). The table below shows the differences between the user types.

User type	Send tracking data	Viewing rights	Administration rights	Act on alarms	Geofence
Administrator	Yes	Yes	Yes	Yes	Create/Edit
Operator	Yes	Yes	-	Yes	View
Unit (vehicle)	Yes	-	-	-	-
Driver	-	-	-	-	-

Units

Units are users that can send tracking information to TrackForce Server by being attached to a *Device*. These users can not login to the VehicleTracker user interface. Normally this user type is selected for vehicle
mounted tracking devices.

Operators

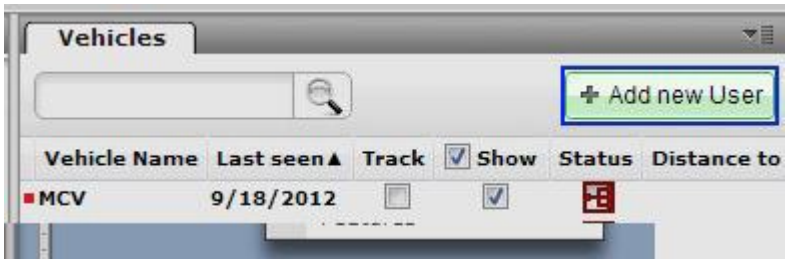
Operators can be connected to a device, but are also able to login to the VehicleTracker user interface and view vehicles, draw tracks, export track data (KML / CSV), generate different reports and act on alarms.

Application Administrators

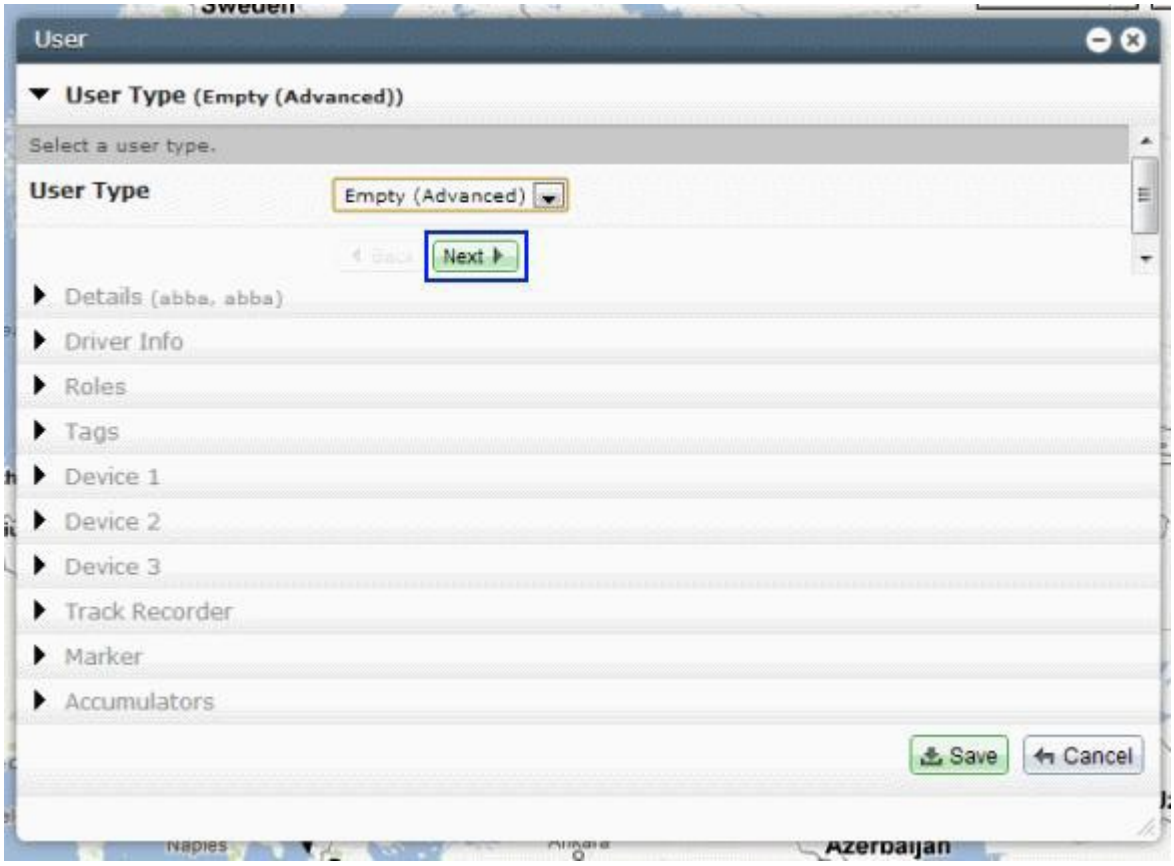
In addition to the *Operator* functionality *Administrators* can create, manage and delete other users in the application, add reports etc. Note that this user may be a VehicleTracker administrator while not having access to ***SiteAdmin***.

Adding Operators

An administrator can create all type of users. We'll now look at creating an *Operator*.
Click on the ***Add new user*** button in the ***Vehicle list***.



The user creation wizard is shown:



You navigate the wizard with the ***Next*** / ***Back*** buttons available in each section.
You can also click on a section to expand it.

1. Choose a ***User Type*** template (or none) and click ***Next***.

2. In the ***Details*** section, supply username, name, surname, e-mail and password.
If your user is a Driver (using iButton), supply a ***Driver ID*** in that section. Else skip to ***Roles***.

3. The *permissions* step is shown. Else *Operator* (if not selected) and click *Next*.

4. Add a new tag if necessary and select the tag or tags to associate with this user. Click *Next*.

4. A summary of the *Operator* settings are shown. Click *Finish* and you're done.

Adding Vehicles

A vehicle is a user attached to a device, giving the device an identity in VehicleTracker.
The process is similar to adding an *Operator*. When you've clicked ***Add user*** on the *Users* page:

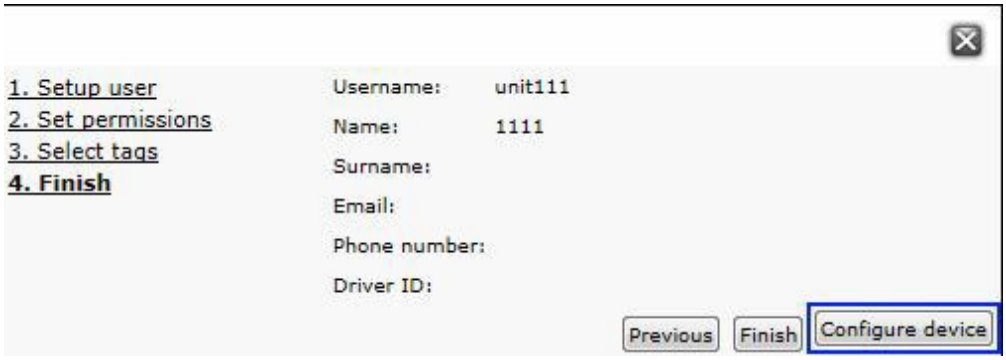
1. Supply username, name, surname, e-mail and password. Click on the bottom right ***Next*** button.

Note: The username and password are used both as login credentials to the VehicleTracker user interface and when sending data to TrackForce Server from a ***Device*** (client).

2. The *permissions* step is shown. Select *_Unit* and click *Next*.

3. Add a new tag if necessary and select the tag or tags to associate with this user. Click *Next*.

4. The summary is shown. Now click ***Configure device*** instead of *Finish*. The ***Devices*** tab of your new user is shown. Follow the steps below for adding a device.



Adding a device

Now we will look at adding a *Device* for one of your users. This will enable you to track the *Device*.

1. On the ***Devices*** tab of a user, click ***Add new device***.

2. Supply the correct information about your *Device*:

Device name	Your own description
IMEI	The device IMEI number (usually printed somewhere on the device). If IMEI is used the device can use this to log in instead of username and password from the *User* - not to be confused with GPRS login.
Device mapper	A device mapper 41 matching your device protocol.
Country*	Country of the SIM card.
Operator*	The SIM card operator.
APN*	*Access Point Name* received from the SIM card's telecom operator.
GPRS username & ***GPRS password****	Login credentials for GPRS traffic on the SIM card's telecom operator.

***** Only be available if your installation has SMS support.

3. Click ***Save*** to finish.

Device Mappers

VehicleTracker can handle status messages and alarms from a large number of supported devices. Device specific messages are mapped to system messages using *Device mappers* for each device type.

Device specific inputs are mapped to the common TrackForce Server message format. For example: the message “SOS Alarm“ can be different for different devices, such as: “SOS”, “SOS Button”, “Alarm1”, “Input1”, “In1”. The device mapper is used to transform these device specific messages to system messages.

Add Device Mapper

From the ***Admin > Device*** mappers page, click ***Add new Device mapper*** or ***Edit*** on a current mapper.

1. Select a installed device in the drop down menu. If the device you're looking for isn't available, download it as a ***Plugin*** through *SiteAdmin*. Please contact us on support@gpsgate.com if you wish to discuss additional devices.

2. Give the mapper a name and a description.

3. Map the device specific messages to system messages. You only need to map the messages that you actually use in you implementation.

Conversion

If you are mapping analog inputs you can add a multiplier and constant to transform the device specific input to a “real” value.

- ***Input*** is the device signal.
- ***Multiplier*** is used to multiply the *Input* for a correct out value
- ***Constant*** can be used as an offset to add / subtract a constant value

Output = (***Input*** * ***Multiplier***) + ***Constant***.

Example

If your vehicle tracking device sends fuel level represented as 0 – 255 for 0 to 70 liters your multiplier should be set to "0.2745098" - giving you a 70/255 conversion. This way the system *Fuel level* message will contain the actual fuel level in liters. The constant can be used to add an offset to the value.

You can add several device mappers for one device type. For example you would want to do this if you have two types of trucks with different fuel tank volumes or different fuel level meters. When you add devices to your system you can select one device mapper for each device.

Non linear conversion

It is possible to map analog values with a non-linear function. This can be useful when taking a sensor value from a vehicle (e.g. a fuel tank) and map it to a system variable (e.g. "Fuel level" when the sensor value is not proportional/linear to the actual fuel volume.

Rather then using a constant in the ***Multiplier*** filed you add a formula with the following syntax:

IN1:IN2#OUT1:OUT2,IN3:IN4#OUT3:OUT4, etc.

INx and *OUTx* are numbers, which defines intervals. The IN-interval maps to the OUT-interval.

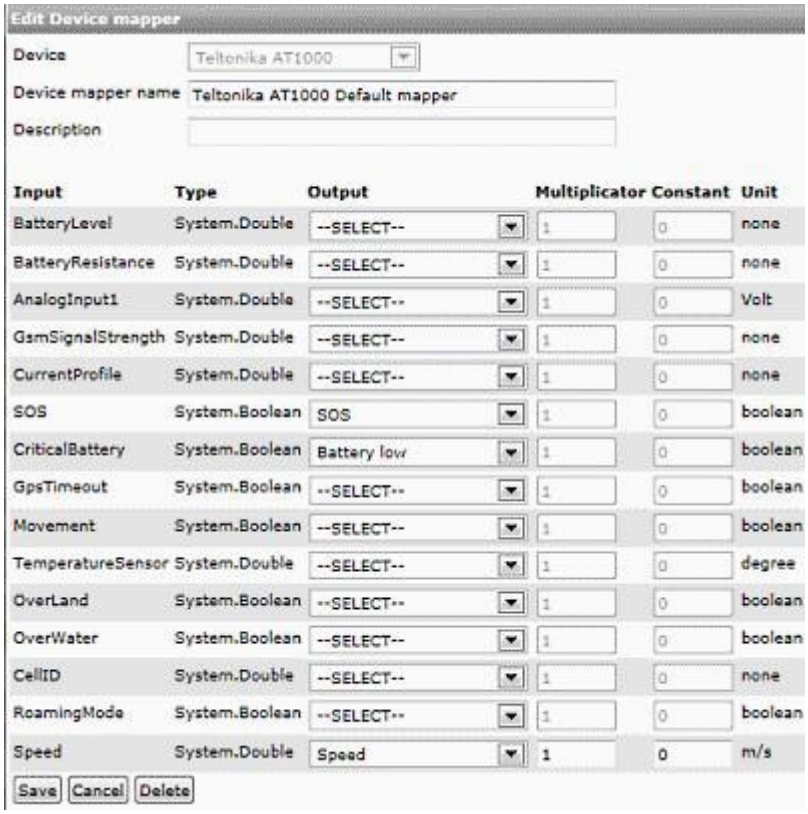
Example:
0:2#0:20,2:4#20,80

A value 1.0 from the tracker will map to 10.0 in the system variable. A value 3.0 will map to 50.0

Example 2:
0:1.5#0:15.0,1.5:3#15:45.8,3:10#45.8:0

Example with decimal numbers in interval.

When using a formula the ***Constant*** field is not used.



4. Click ***Save*** to finish.

Event Rules

Event Rules decide under which conditions incoming messages should create alerts and how they should be handled in VehicleTracker. Rules can also detect when a tracking device has been offline for a certain duration of time.

This approach enables flexible implementations where alarm monitoring can be customized to include exactly the right messages or missing messages.

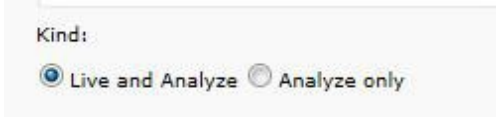
Add Event Rule

For ease of use a wizard guides you when you setup an event rule. If you make a mistake or omit something a yellow triangle comes up next to rules that have potential issues. Moving the mouse over a triangle brings up a detailed explanation as shown in the picture.

From the *Admin* > *Event Rules* page, click ***Add new Event Rule***. The wizard is shown.

1. Provide a name and optionally a description. Also choose what *Kind* of rule to create:

- ***Live and Analyze*** - will display alarms 12 on the map. Further see ***Notifications*** 15, below.
- ***Analyze only*** - the event is strictly used for reporting 29.



Then click on ***Next***.

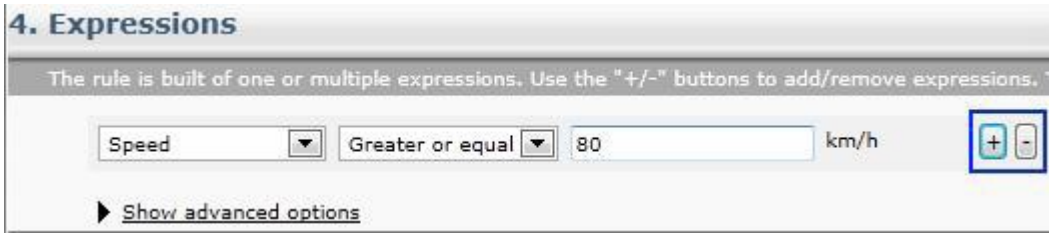
2. Choose which tags 18 the Event Rule applies to and click ***Next***.

Note: if you need to add a tag through ***Admin > Tags***, remember to click Refresh in the Event Rules window once you've saved the tag.

3. Now decide when the rule should be active. By default *Always active* is selected, but you can change it to ***Active on schedule*** and make exceptions on for example weekends:

Click ***Next*** when you're done.

4. In the ***Expressions*** step, add the actual rule condition. This is typically a device signal, but can be many other things too.



When you add a new expression, make sure to choose an appropriate type:

Driver ID login	Use this to track drivers with iButton.
Analog Expression	Analog Expressions let you create an expression for analog inputs. The expression compares the input value to the value you set. To use this expression you need to map an analog input from your device to a TrackForce variable using the Device Mapper.
Digital Expression	Digital Expressions let you create create an expression for digital inputs. The expression compares the input value to the value you set. To use this expression you need to map an analog input from your device to a TrackForce variable using the Device Mapper.
Geofence Expression	Trigger event when vehicles pass through Geofences 25 .
Offline Expression	Offline Expressions let you specify a time period since last connection for a device to be considered as offline.

Match all or any

When using multiple expressions in the same Event Rule you can choose ***Match all*** or ***Match any*** (radio buttons) below the last rule. Selecting *all* will require that all the conditions are met, while only one of them must be met if you choose *any*.

Event delays

You also have the option to delay how fast the event triggers. If the vehicle for example must stay in a Geofence for at least 5 minutes before the event should trigger, Change ***Immediate*** to ***Delayed event*** and input 5 in the ***minutes*** text box.

Click ***Next*** when you're finished with the expression.

5. The final step is ***Notifications***. This is both used for reports, and also to display event information in the map view.

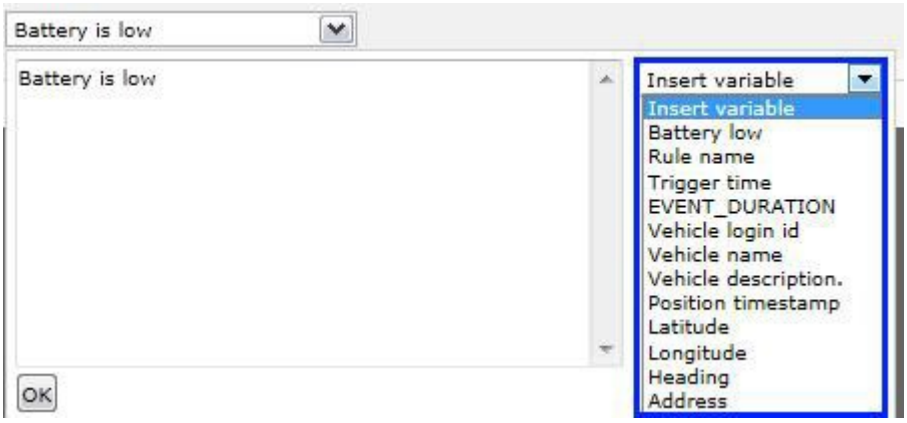
Application

If the Event Rule applies to *Alarm panel and reports,* you will find a SOS/Alarm drop down list to the right (not seen with *Reports only*), followed by the ***Message*** drop down.

The *Message* window allows you to supply a message for reports and / or the *Map view*.
This can simply be a static message like "Battery is low" or a dynamic message using variables.

Using variables

The variable drop down list is located to the far right in the message window. Available variables depends on the type of Event Rule you're creating.



For example, we could customize the "battery low" message like this:

"Battery low: [USER_NAME] [EVENT_TIME]"

This would output the vehicle name and what time the event occurred.

When you're done with the Event Rule, click ***Save*** in the bottom right corner of the page.

Tags

Tags are used in many parts of the system for categorizing and filtering users and vehicles, so the using tags should be essential for you as an administrator.

Let's take a look at managing tags, which is pretty straightforward. Begin by choosing ***Admin > Tags*** in the main menu.

Edit tag

To the right of each tag there's an ***Edit*** link. Click it and see below.

Add new tag

1 .Click the bottom left ***Add New*** button.

2. Provide a tag ***Name*** and optionally a ***Description***.

3. Choose which users this tag applies to.

4. Click the ***Save*** button.

Learn more:

- Views 48
- Roles 49

Views

Views are used to filter users in the user interface. Only the users that fit into the View criteria are shown in the user interface. This can be used to group vehicles after their status, such as Online / Offline. It is also possible to add tags for additional filtering such as “Taxi”, “Truck”, “Department A”, “Operator A”, etc.

Manage Views through ***Admin > Views*** in the main menu.

Edit View

To the right of each tag there's an ***Edit*** link. Click it and see below.

Add new View

1 .Click the bottom left ***Add new View*** button.

2. Provide a tag ***Name*** and optionally a ***Description***.

3. Choose which ***Status*** codes to include in this view.

4. In the Tags section, you can choose to include vehicles with all selected tags - ***Match all*** - or every vehicle with any of the tags you select below - ***Match any***.

5. When you've selected Tags, click the ***Save*** button.

Roles

You can use Roles to set privileges and available roles per user role (***Administrator***, ***Driver***, ***Operator*** and ***Unit***).

Click ***Admin > Roles*** to show the ***Roles*** window.

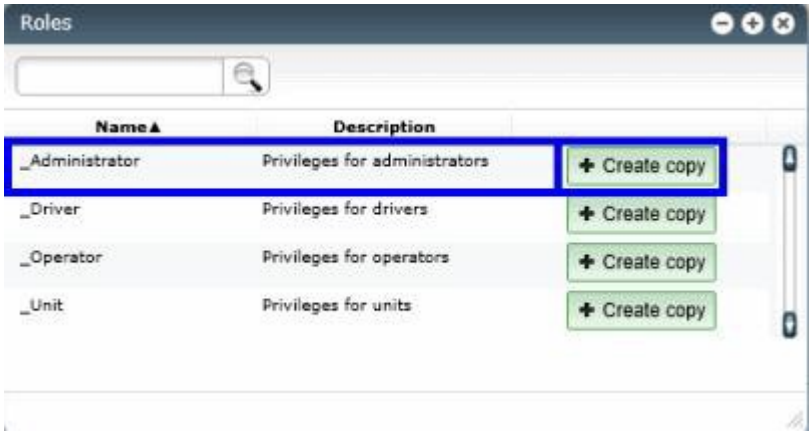
Copy Role

To the far right of each Role there's an ***Create copy*** button. This is a effective way to create a new role, without having to set every single feature from scratch.

Click the button and continue to edit as described in ***Edit roles***, below.

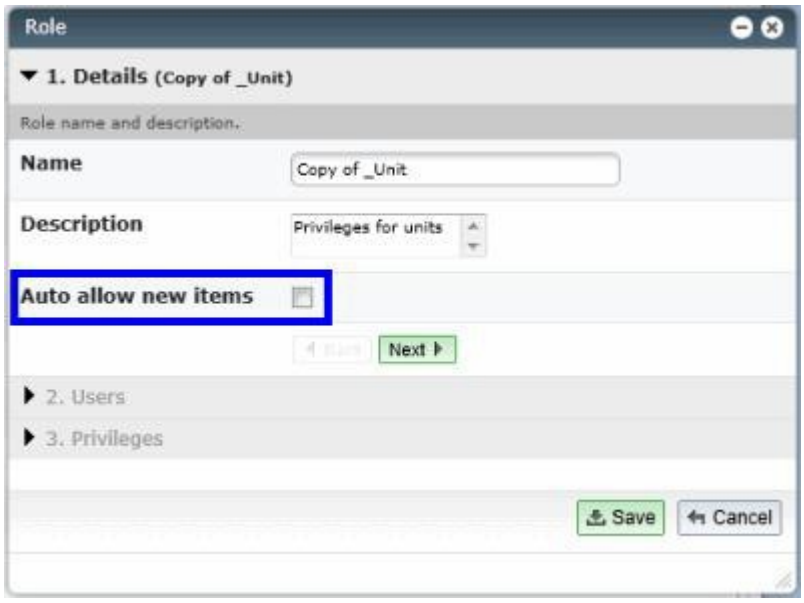
Edit Role

To edit a role, click anywhere to the left of the ***Create copy*** button, on the role's row.



The Role's details are displayed. Make sure Name and Description have appropriate values.

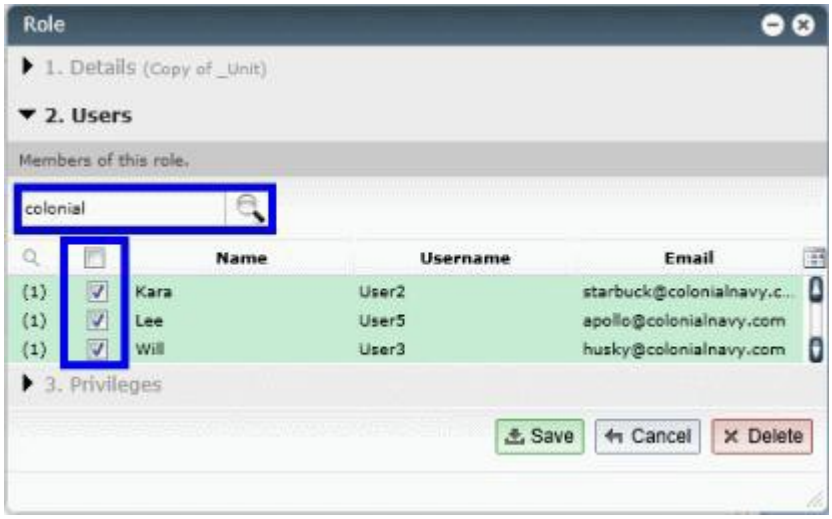
Auto allow new items will add features to this role as they are enabled for the Application.
This way you don't have to update each role with the new features when, a new feature is enabled in SiteAdmin.



Click the ***Next*** button (or the ***2. Users*** title) to continue.

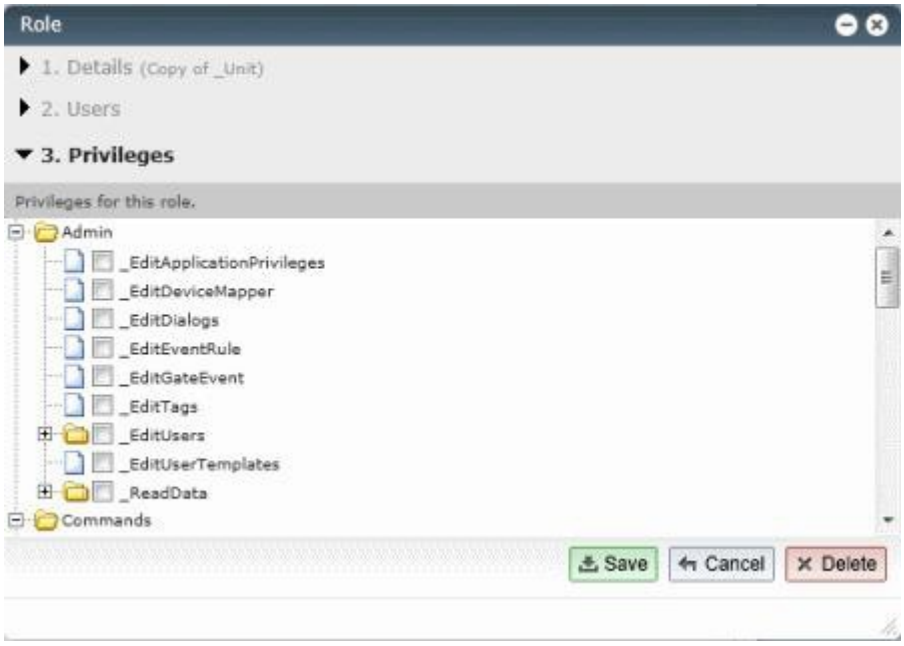
Role Users

Use the check boxes to select which users to include in this role. Just like in the Vehicles list, you can use the search box to filter the results. When you're done, click Next (or the ***3. Privileges*** title).



Role Privileges

The role privileges appear in a tree of folders.



- ***Admin***
  - ***_EditApplicationPrivileges*** enables user to edit Roles and Privileges.
  - ***_EditDeviceMapper*** enables user to edit Device Mappers.
  - ***_EditDialogs*** enables user to edit dialogs. Some dialogs e.g. the ***Jobs*** dialog in ***Dispatch***, have downward arrow in the upper right corner. This contains a menu where you can edit which fields are visible in the dialog. Changes are saved in the ***Workspace***.
  - ***_EditEventRule*** will enables user to edit ***Event Rules***.
  - ***_EditGateEvent*** will enable user to close ***Alarms***.
  - ***_EditTags*** will enable user to edit ***Tags***.
  - ***_EditUsers*** enables user editing. Select which ***Roles*** users may be edited for. For example you may prevent an *_Operator* from editing *_Administrator* users.
  - ***_EditUserTemplates*** enables user to edit ***User Templates***. Read more
  - ***_ReadData*** using _ReadData to determine who can see which vehicle data and the _Me tag to only see

your own data.

- ***Commands***
  - ***_ExecuteCommandAll*** lets a user send commands to devices.
  - ***_ExecuteSpecialCommandAll*** enables the user to also send commands marked as ***Special***.
  - ***_ResetCommandQueue*** allows the user to reset the outgoing queue when it contains commands.

Further see ***Template Commands*** in the SiteAdmin documentation.

- ***Geocoding***
  - ***_LiveAddress*** will enable the Live Address functionality, so addresses are only retrieved when the user is logged in. ***_LiveAddress*** must be enabled for this Application in SiteAdmin first.

- ***Geofences***
  - ***_EditGeofence*** if Geofences 25 is installed and enabled in the Application this enables the user to edit geofences.

- ***Login*** - determines how the user can login:
  - ***_DeviceLogin*** is used for tracking devices to login in and transmit data.
  - ***_MobileLogin*** controls access to the GpsGate Mobile 33 site.
  - ***_WebLogin*** refers to VehicleTracker.

- ***Maps***
  - ***_UseMapCustom*** enables imported PEG, PNG, GIF or BMP maps. Read more
  - ***_UseMapNative*** enable the standard Google Maps.
  - _UseMapPlugin - Enable other map plugins.

Further see the SiteAdmin documentation.

- ***Reports and Export***
  - ***_UseTrackExport*** determines of the users have general access to reports and/or can export data from the track points list.

- ***Tracks*** - read / edit rights for track lists 9 .

- ***User settings*** - possibility to change password, localization etc.

- ***Views*** - read / edit rights for Views 48.

- ***Workspaces*** - control usage of private and shared Workspaces 21 .

- ***Plugins*** - control access and settings for plugins you've installed.
  - ***PointsOfInterest*** enables the use of Points of Interest
  - ***Reporting*** controls which reports are available. You will need them enabled as ***_CreateReport*** to add them in the Report Manager 31.

The ***Save*** button is in the very bottom left corner.

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