trinetra	**TRINETRA Wireless**
	GPS Vehicle Tracking & Fleet Management Solutions

User Manual *ver. 10.0.1*

Developed By

trinetra

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About this User Manual

This user manual contains the information you need to understand and operate TRINETRA – Software.

How this guide is organized

This user guide contains the following parts:

Section 1: Product Introduction

This section describes the uses of TRINETRA and the technology it supports

Section 2: Login to the application

This section describes how to get started with TRINETRA

Section 3: Overview of the Functions

This section describes detailed overview of the functionalities of the TRINETRA

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Introduction

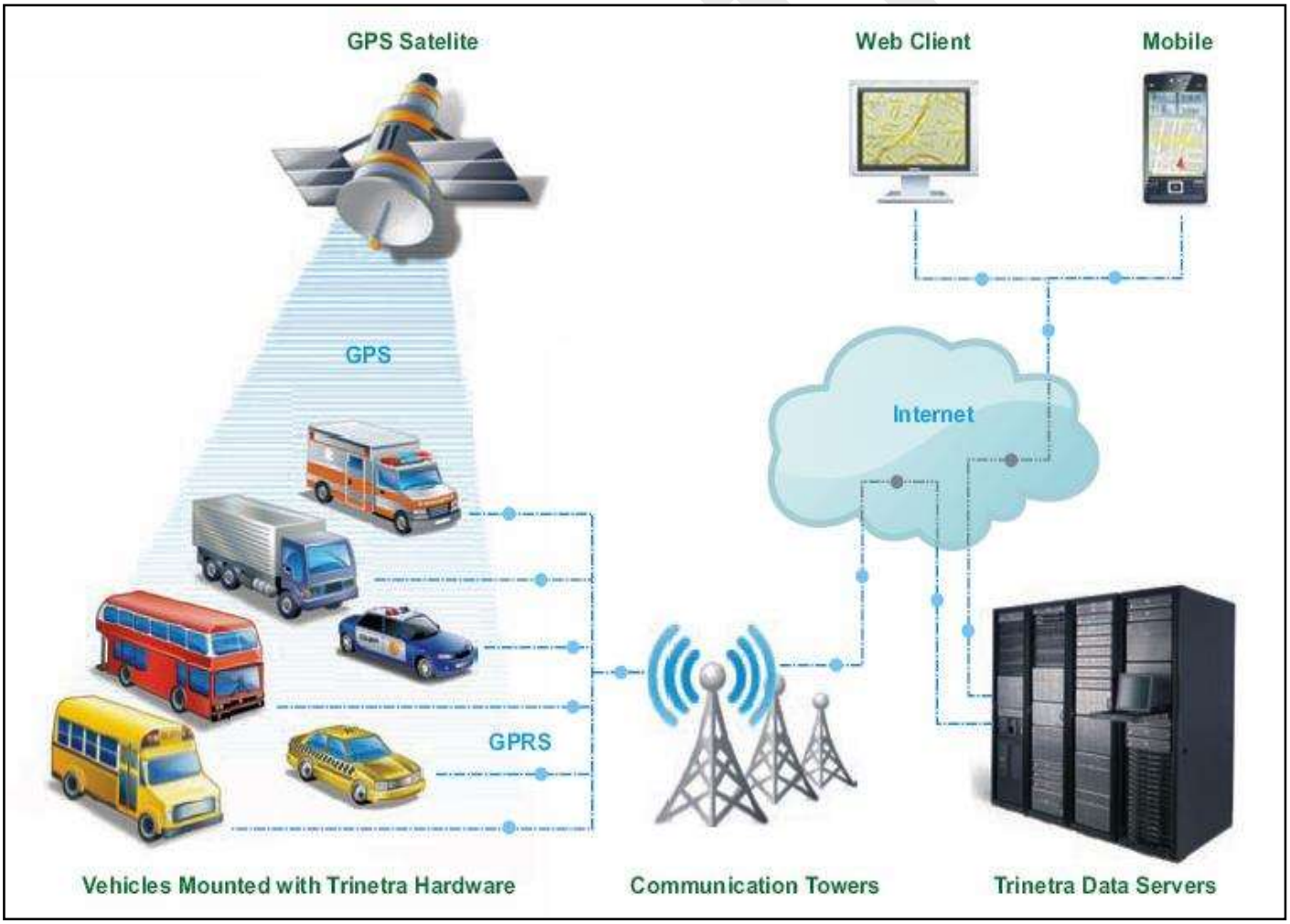
The Trinetra offers comprehensive solutions for your business challenges in **Vehicle Tracking and Fleet Management**.

The ability to control your fleet efficiently is central to optimizing your business needs and maximizing profitability. Whether you manage a small or large fleet, Vehicle Tracking & Asset Management can fundamentally change the way you do your business, helping your company work smarter.

Trinetra is a next generation web-based GPS-powered platform providing '**Real Time Automatic Vehicle Location & Tracking**' to assist companies to manage their vehicles and assets. Our product integrates all 3 core elements of AVL solutions namely Location, Tracking & Security, thus providing an integrated solution for your Fleet Management requirements.

Vehicle tracking assists you in monitoring your fleets, utilization of your assets and reduction of your operational costs.

Trinetra uses industry leading web technologies and cutting-edge hardware design to bring you the highest quality of vehicle tracking, digital mapping, routing, alerts, security, fleet maintenance and reports.



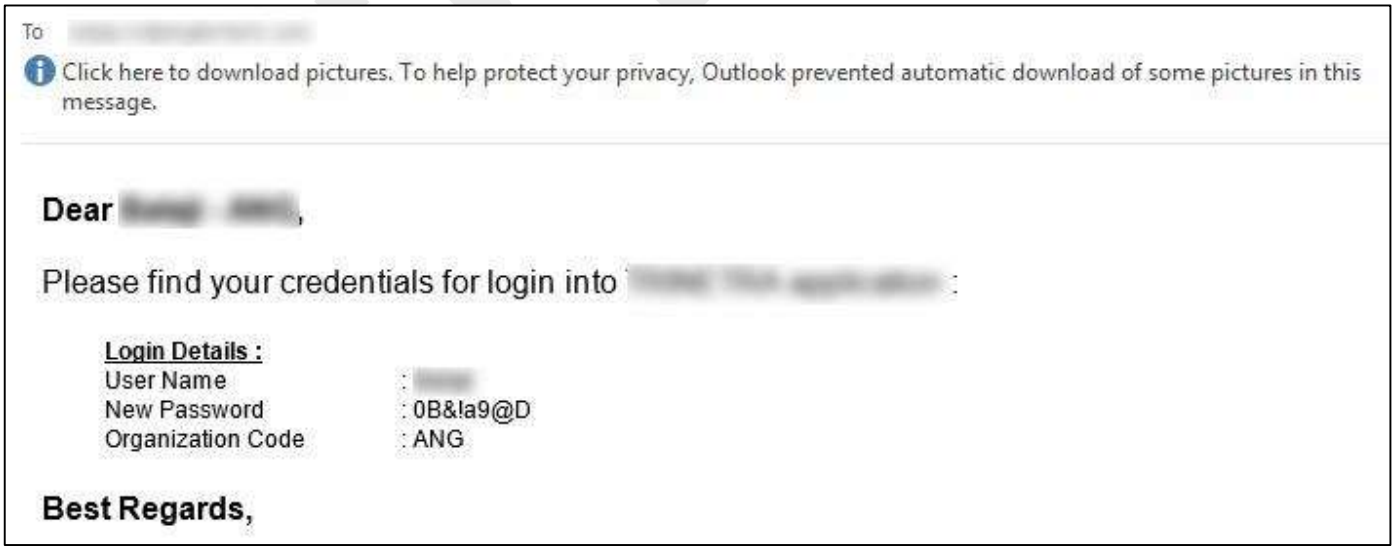
Logging In

1. The application would start with the login screen.
2. Enter your **Username, Password** and **Organization code.**
3. Click **Enter** to begin your Trinetra session

Fig: Login Screen

4. If the user wants the application to remember the credentials for consecutive logins, the 'Remember me' checkbox can be checked.
5. Clicking the 'Forgot your password?' link will redirect the user to the password retrieval screen. Here the user needs to enter the User Name & the Organization Code and click the **Submit** button. The password will be mailed to the user's email address. Clicking the **Cancel** button in the password retrieval screen will return the user back to Login screen.
6. Upon entering the "**Username and Organization**" mail will be triggered with "**Random**" password. Then user can login with that password and after login, user can change the password as per their wish.

Fig: Password Retrieval screen



To [redacted]

Click here to download pictures. To help protect your privacy, Outlook prevented automatic download of some pictures in this message.

Dear [redacted],

Please find your credentials for login into [redacted] :

Login Details :

User Name	: [redacted]
New Password	: 0B&!a9@D
Organization Code	: ANG

Best Regards,

Fig: Forgot password mail – Random.

Overview of Functions

1. Dashboard

The dashboard gives a snapshot of the important reports that the fleet manager would want to view at a glance, thus saving time and assists fleet manager in easier view of important reports.

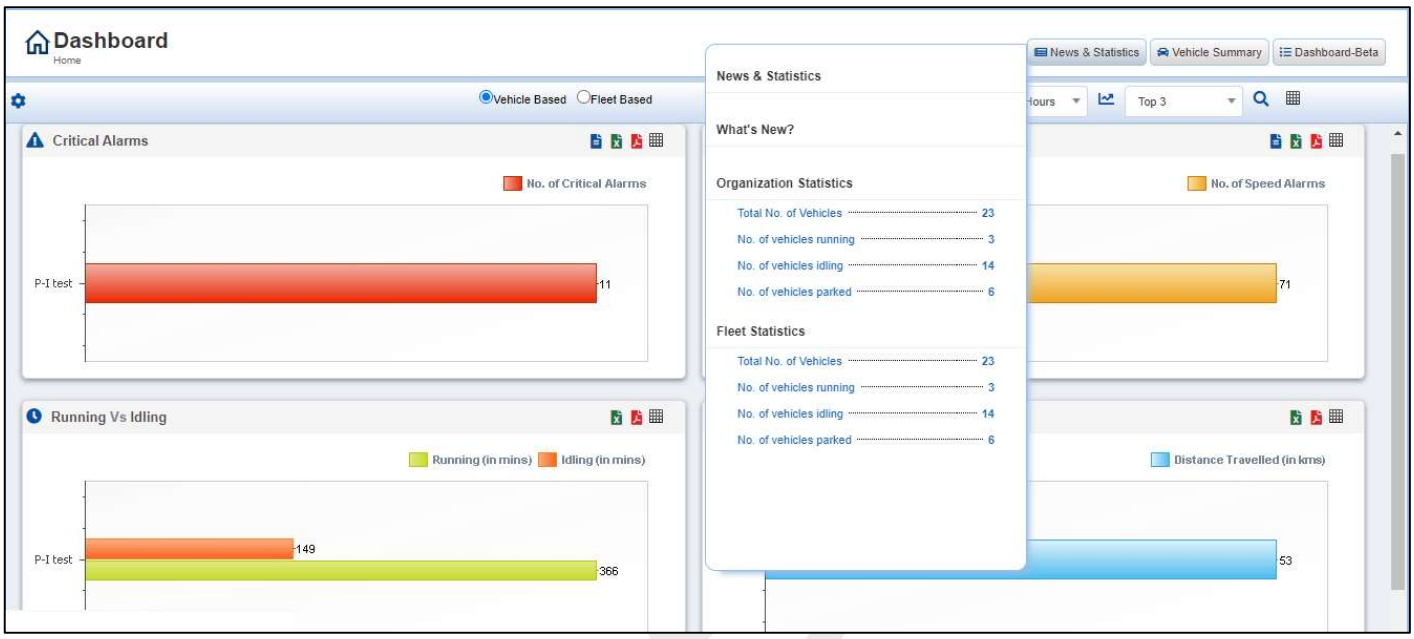


Fig: Dashboard Screen

- The fleet manager would be able to use filter option by selecting the type of fleet for which they prefer to view the Charts, time period (i.e. last 8/24/48 hours or 1 week) and could also prioritize the data for top 3, 5 or 10 vehicles.

Fig: Filter Options

- The fleet manager could view the following statistical reports/ charts in the dashboard screen

Critical Alarms

- The user can set different severity levels for the vehicles under the configuration section.
- Based on the settings made in the configuration section the user would be able to view the critical alarms.
- The status of the alert would get updated in the graph based on the alerts received from the vehicle.
- Clicking a bar in the graph will display the drilled-down graph of that vehicle, listing its different critical alarms.

- Clicking a bar in the drilled-down graph will return to the original graph.

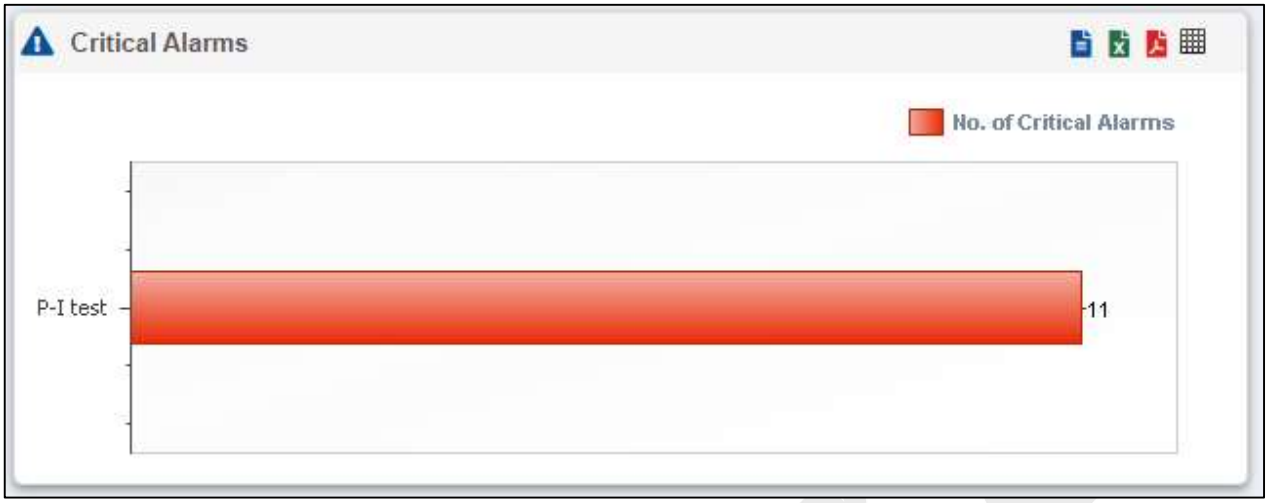


Fig: Critical Alarms chart

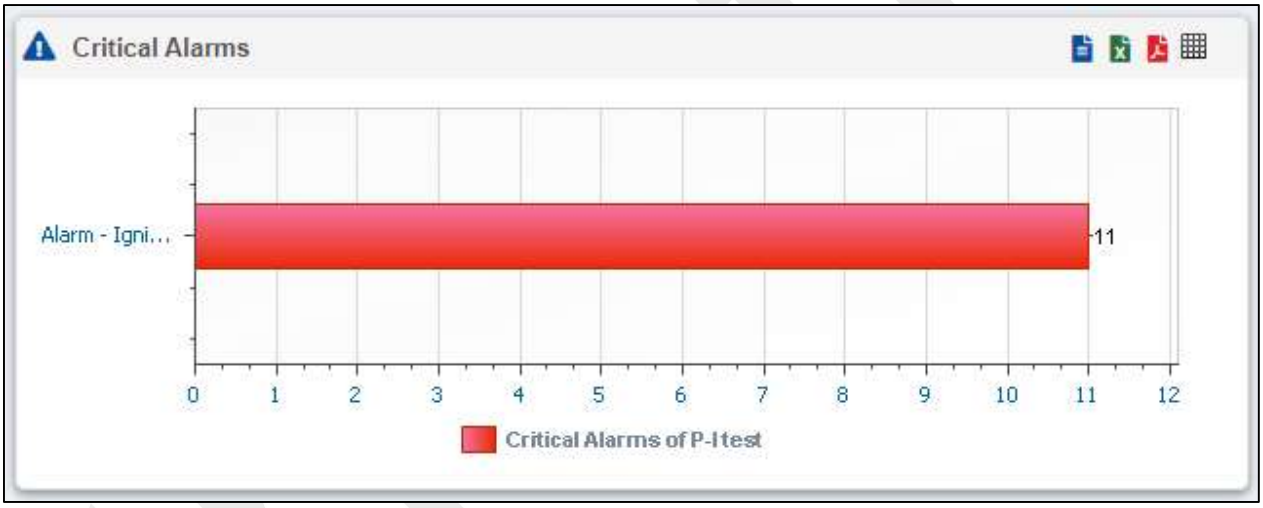


Fig: Drilled-down chart for a vehicle.

Speed Violations

- Speed Violations generated from the vehicle could be viewed in this graph
- The user can set the speed limit for the vehicle by sending command to the vehicles in Monitor screen and also in History screen.
- Clicking a bar in the graph will display the drilled-down graph of that vehicle, listing its different speed ranges.
- Clicking a bar in the drilled-down graph will return to the original graph.

Fig: Speed Violations chart

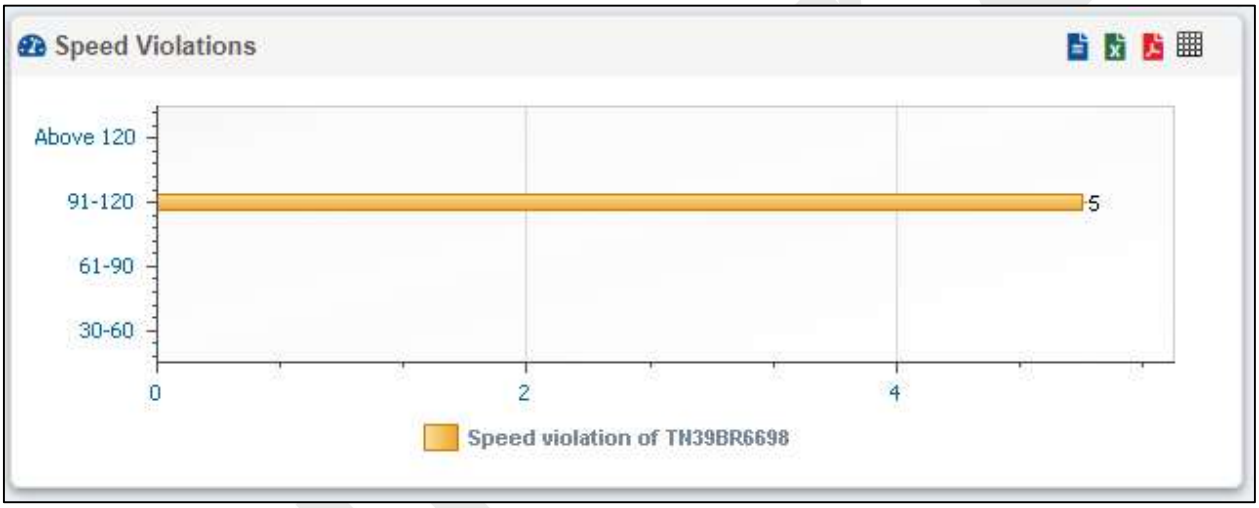


Fig: Drilled-down chart for a vehicle.

Running Vs. Idling

- The user could view the running time and idling time (i.e. in minutes) of the closed trips of the vehicles under the selected fleet.

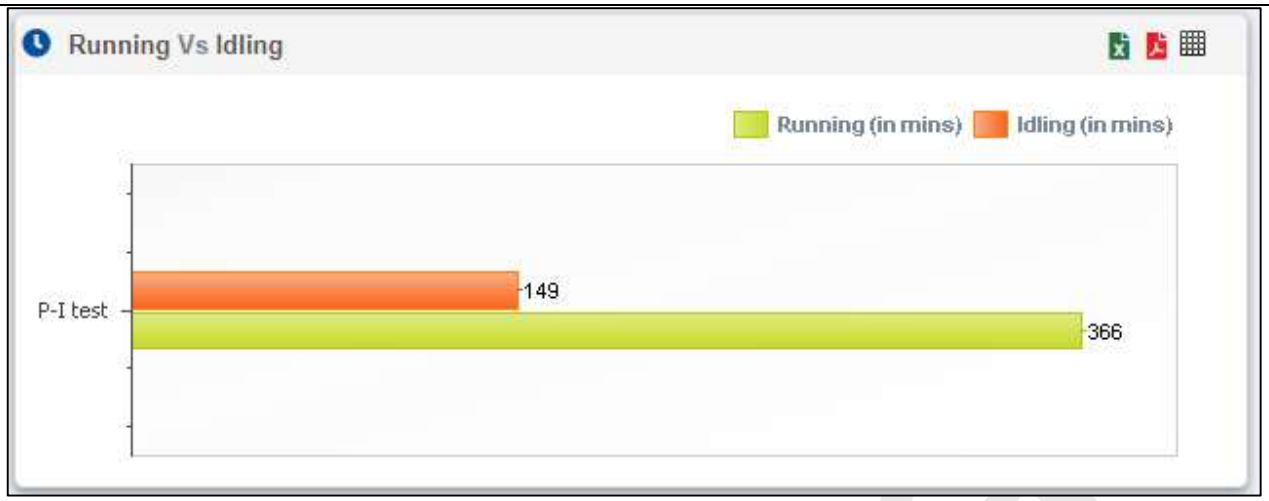
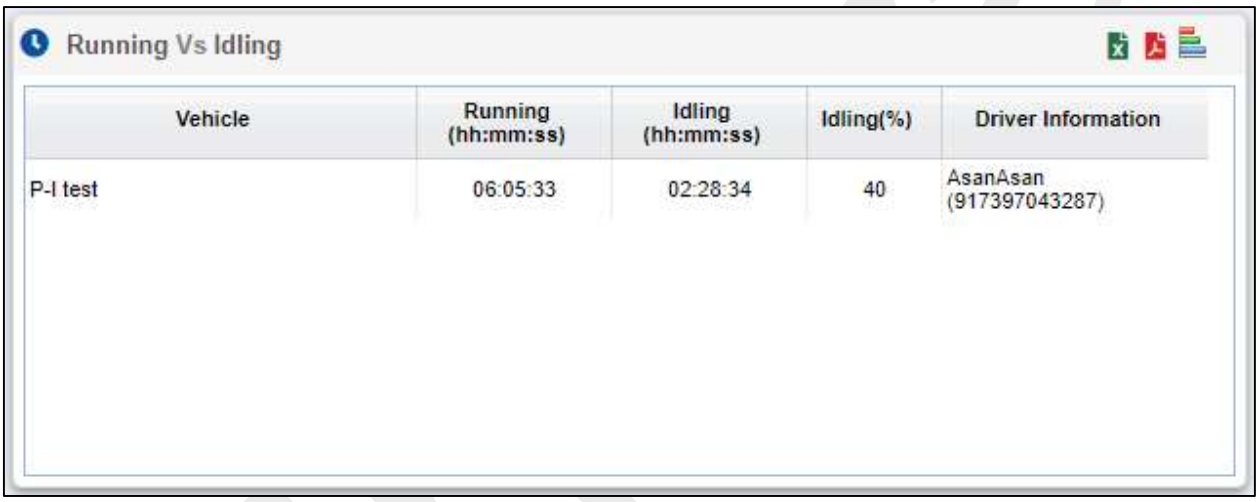


Fig: Running vs. Idling chart



Running Vs Idling

Vehicle	Running (hh:mm:ss)	Idling (hh:mm:ss)	Idling(%)	Driver Information
P-I test	06:05:33	02:28:34	40	AsanAsan (917397043287)

Fig: Export Options

- Running time enables the user to view the travel time taken by the vehicle (i.e. when the vehicle is traveling above 4 Km speed).
- Idling time enables the user to view the time till which the vehicle was having its ignition on and vehicle is not moving (i.e. when vehicles travel less than 4 Km speed).

Distance Traveled

- The user could view the distance traveled by the vehicles within time frame in this graph.
- The user could set the distance units in Miles / Kms in the Preferences section.

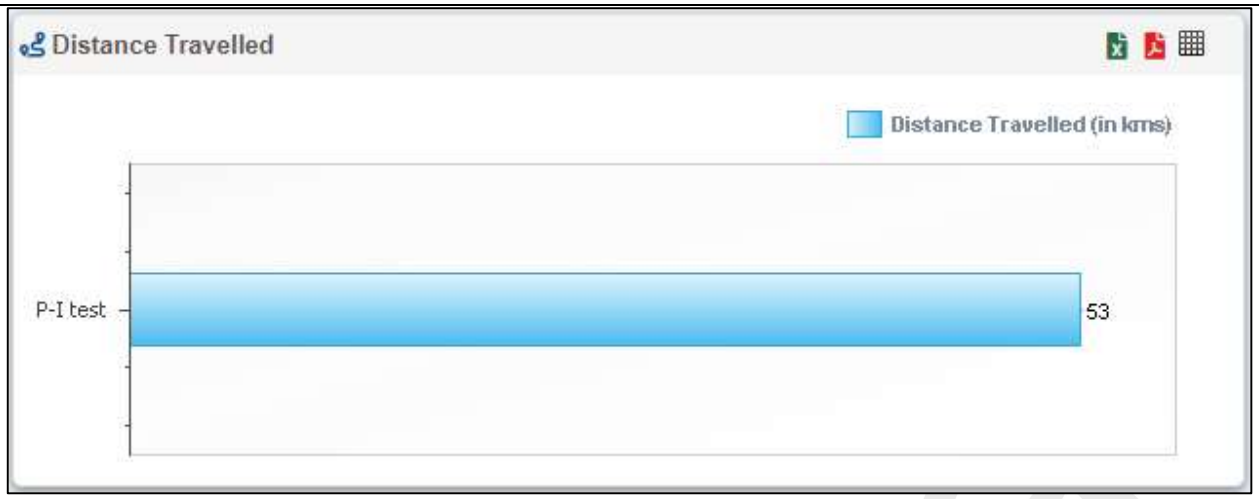


Fig: Distance Traveled chart

- The fleet manager would be able to view all the statistical data charts either in graphical chart form / data view, as shown in sample below.

- The fleet manager would be able to export the report either in PDF / Excel formats.

Idling

- The user could view the details of the time idled by the vehicles.
- Mouse-over on any of the chart bars will display the driver's contact info and the no. of idling instances in the displayed time.

Fig: Idling Chart

Portal Usage

- This chart provides the details of how long the users of the organization are logging in and using the portal.
- If any username is not displayed in the chart, the user might not have logged into the portal in the specified period or the user's usage time might be less than the other Top users.

Fig: Portal Usage chart

Module Usage

- This chart provides the details of how effectively the modules are used by your organization.
- The users can see how many landmarks, geozones and how many reports have been scheduled in the organization.

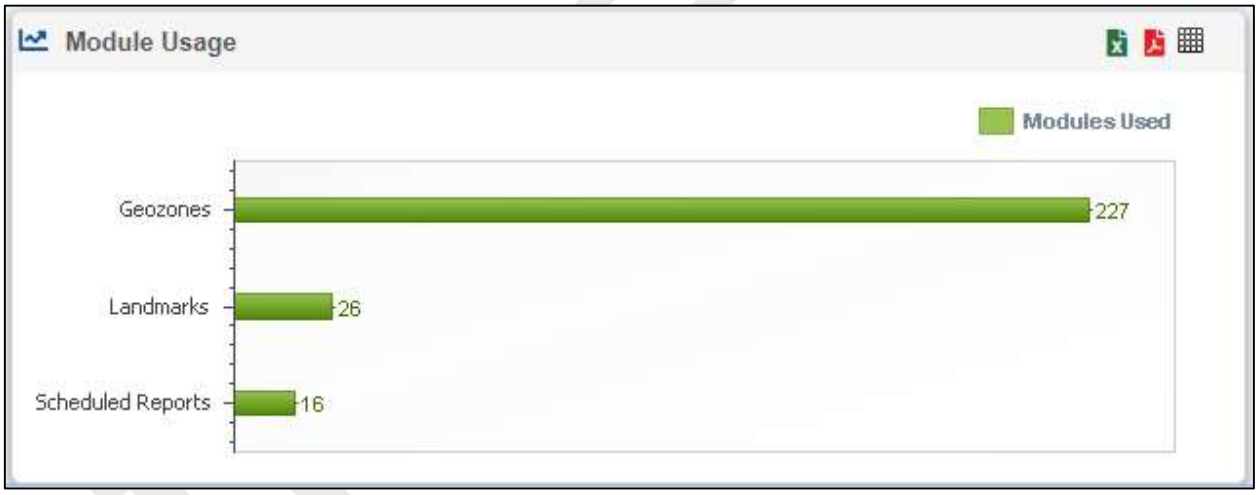


Fig: Module Usage chart

The exported report could be viewed as shown below

Fleet Utilization

- The user could view the utilization of his vehicles along with its trip details from this chart.
- This chart provides the details of most utilized Fleet in the portal

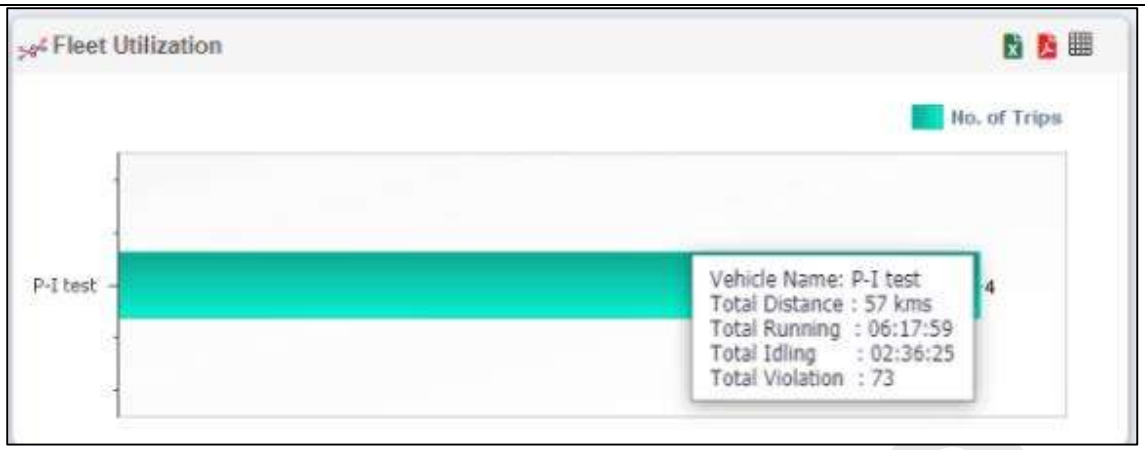


Fig: Fleet Utilization

- Top three most utilized vehicle for the selected time duration will be displayed in this chart.
- On mouse over of the chart user would be able to view the Vehicle name, Total distance, Total Running, Total idling and Total violation.
- The fleet manager would be able to view the other details of the company (like latest News, tip of the day and statistics of the organization) at the right side of the Dashboard screen as shown below.

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Critical Alarms

Fleet All	**Time Interval** Last 24 Hours	**Top** Top 3

Vehicle Name	No. of Critical Alarms	Driver Information
P-I test	11	AsanAsan (917397043287)

Fig: Graphical Report

Driving Behavior Chart

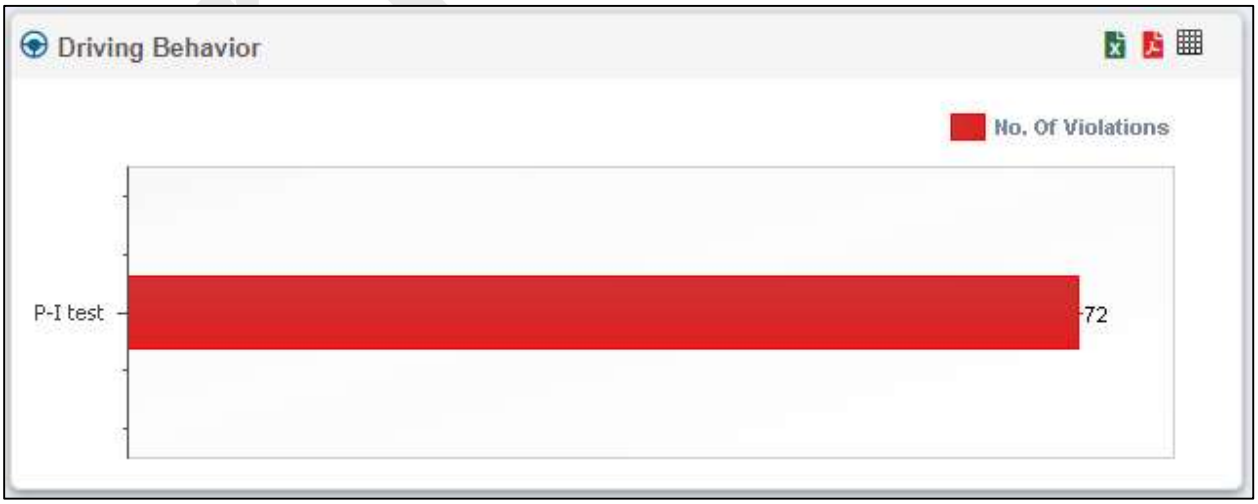

Fig: Driving Behaviour Chart

- Driving behavior chart is a new chart added to Dashboard module which provides a count of the violations made by the drivers for the selected duration. Violations include extended idling, extreme acceleration, extreme braking, harsh acceleration and harsh braking. Chart initially displays an overall count of the violations and when each driver detail is drilled down further, the count of violations in each category is displayed as a pie chart.
- This would enable users to monitor the driving behavior of each driver and take necessary steps wherever required.

Dashboard Fuel Chart

A new addition to the Dashboard is the chart related to the fuel used in the defined period of time.

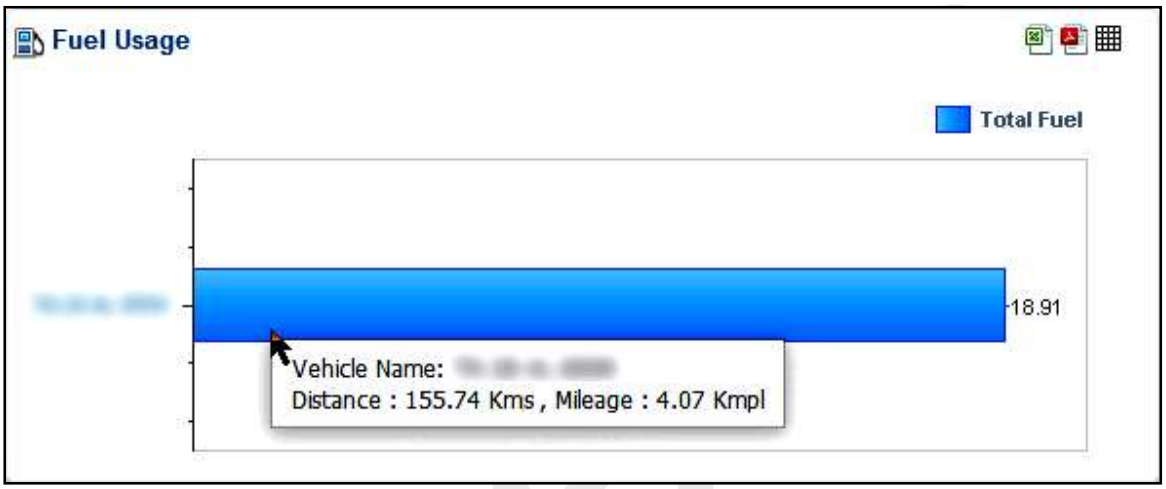

Fig. Fuel Usage chart

- In the pre-defined time periods (Last 8 hours, Last 24 hours, etc.), the chart will display the liters of fuel that has been consumed by the vehicle.
- This data is obtained from the OBD port of the vehicle (OBD is one of the add-on modules of Trinetra).
- Every trip will have the fuel consumed in that trip. This chart consolidates the data and presents it to the user.
- Apart from the fuel usage, mouse-over on the chart bar will reveal the total distance traveled and the mileage of the vehicle in the chart period.

Nearing Maintenance Chart

Fig.: Nearing Maintenance Chart

- Nearing maintenance chart is made available in Dashboard as a value addition to the existing Fleet Maintenance module. Chart displays the data of vehicles with maintenance date nearing to the planned date as in Fleet Maintenance.

- This can be useful in planning the maintenance accordingly for vehicles with higher nearing percentage. Data can be exported in PDF as well as Excel similar to all other charts in Dashboard.

Charts Resizing

The user has the option to resize the charts in for better clarity. The News section of the Dashboard automatically collapses on moving the mouse pointer away from the News & Statistics button. The charts and the grids automatically adjust to the new layout. On selecting the 'Top 10' option, the height of the charts also increase to accommodate the 10 vehicles' data for a clearer view.

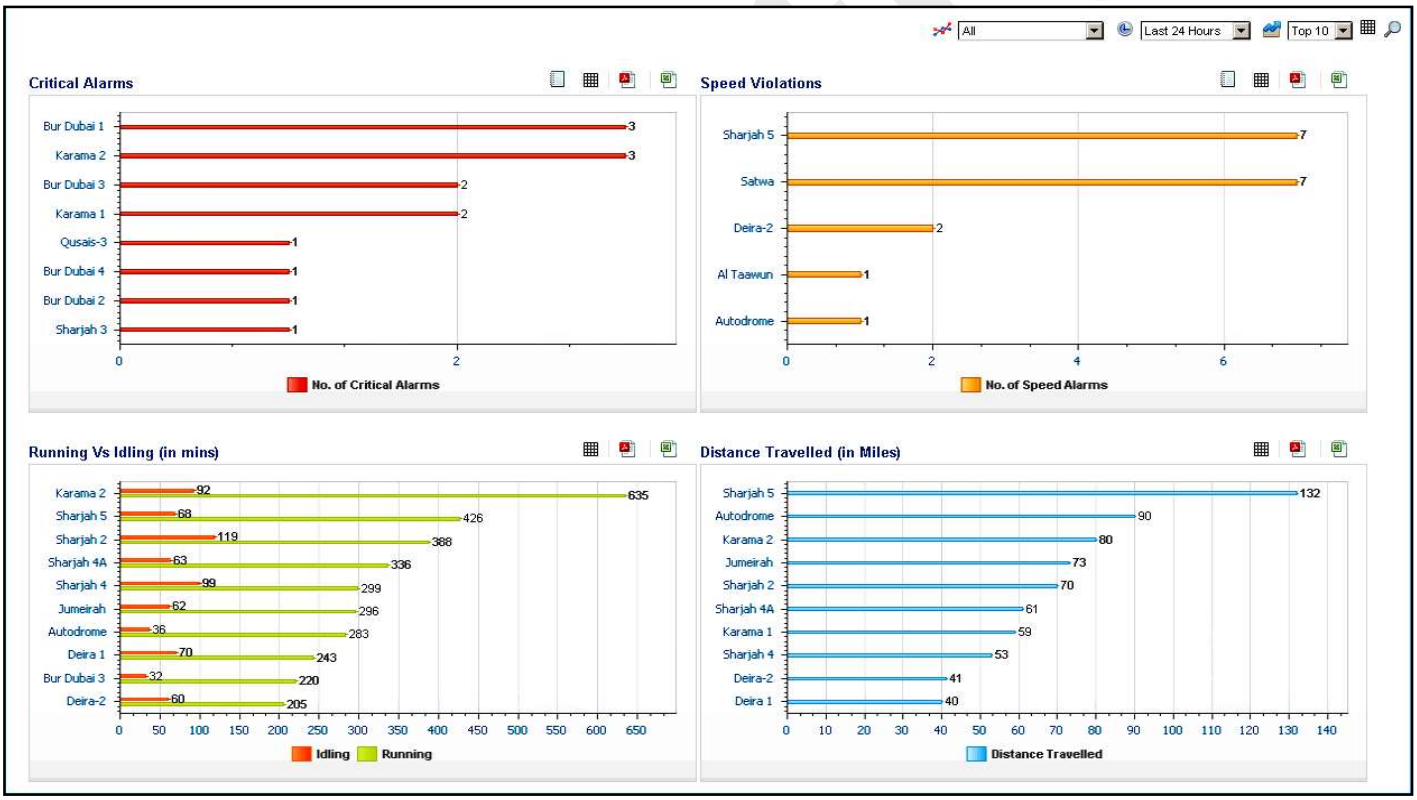

Fig: Charts with 'Top 10' selection

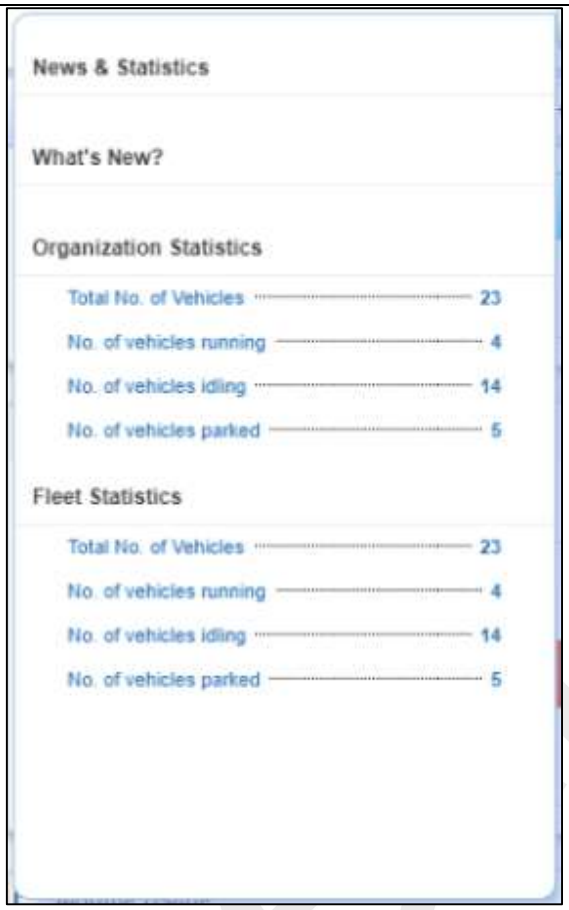

Fig: Organization Statistics

- The organization statistics provides the details on the vehicles under the selected company's fleet such as
  - Number of vehicles that are currently running.
  - Number of vehicles remaining idle (i.e. vehicle having its ignition on and speed is less than 4 km/h).
  - Number of vehicles parked.

1.1 FMS -Better Looks & Performance

As a chain of activities to enhance UX with Trinetra's web application, we have started to breathed in some minor tweaks in the UI. We hope it would refresh your experience with Trinetra…

1.1 Dashboard Beta

The Dashboard Beta – Version shows the overall data in the screen as per the current day reports and vehicle status. Below given data can be reflected,

- Vehicle insurance expiry(in 30days)

- Total vehicles
- Active(Reporting)
- Inactive(non-reporting)
- Violations today
- Idling today
- Critical Alarm(s) today
- Total distance travelled (in KM – All vehicle)
- Total Moving vehicles (in %)
- Total parked vehicles (in %)
- Total idling vehicles (in %)
- Release Notes (Previous sent and Latest One)
- Total User (Portal and Mobile users)

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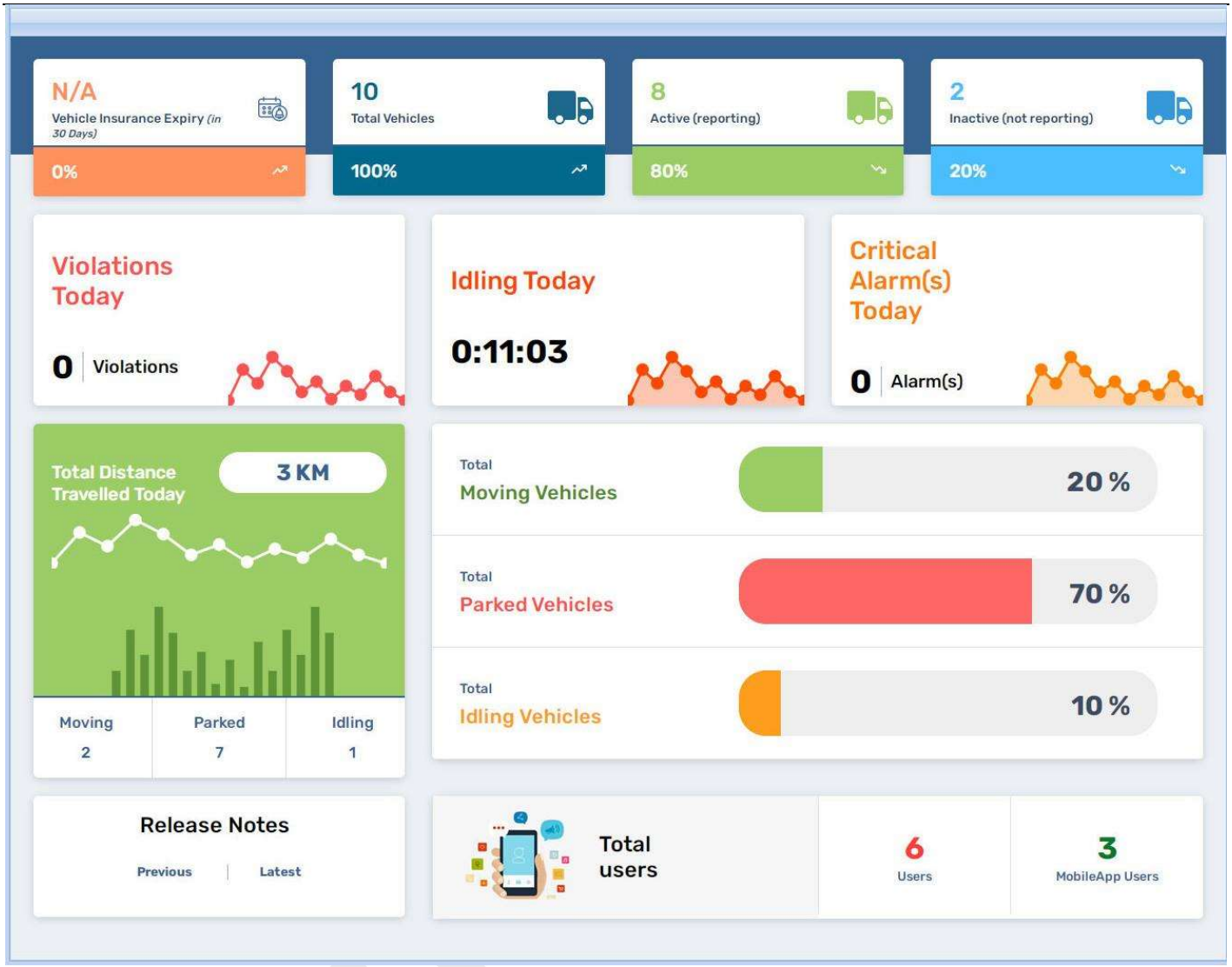


2. Monitor

The monitor screen is to assist the fleet manager to view all the fleet of the firm commuting around the globe. The fleet manager can

- Track the fleet anytime and from anywhere by logging into the application
- View the alerts triggered from the devices for the past 24 hours up to or last 25 alarms which would be scrolling at the top of the monitor screen. Further the alerts could be acknowledged and closed in this section
- Obtain updated information on vehicle position at preset intervals.
- Able to view or track the vehicle while its current status was running through live monitoring.

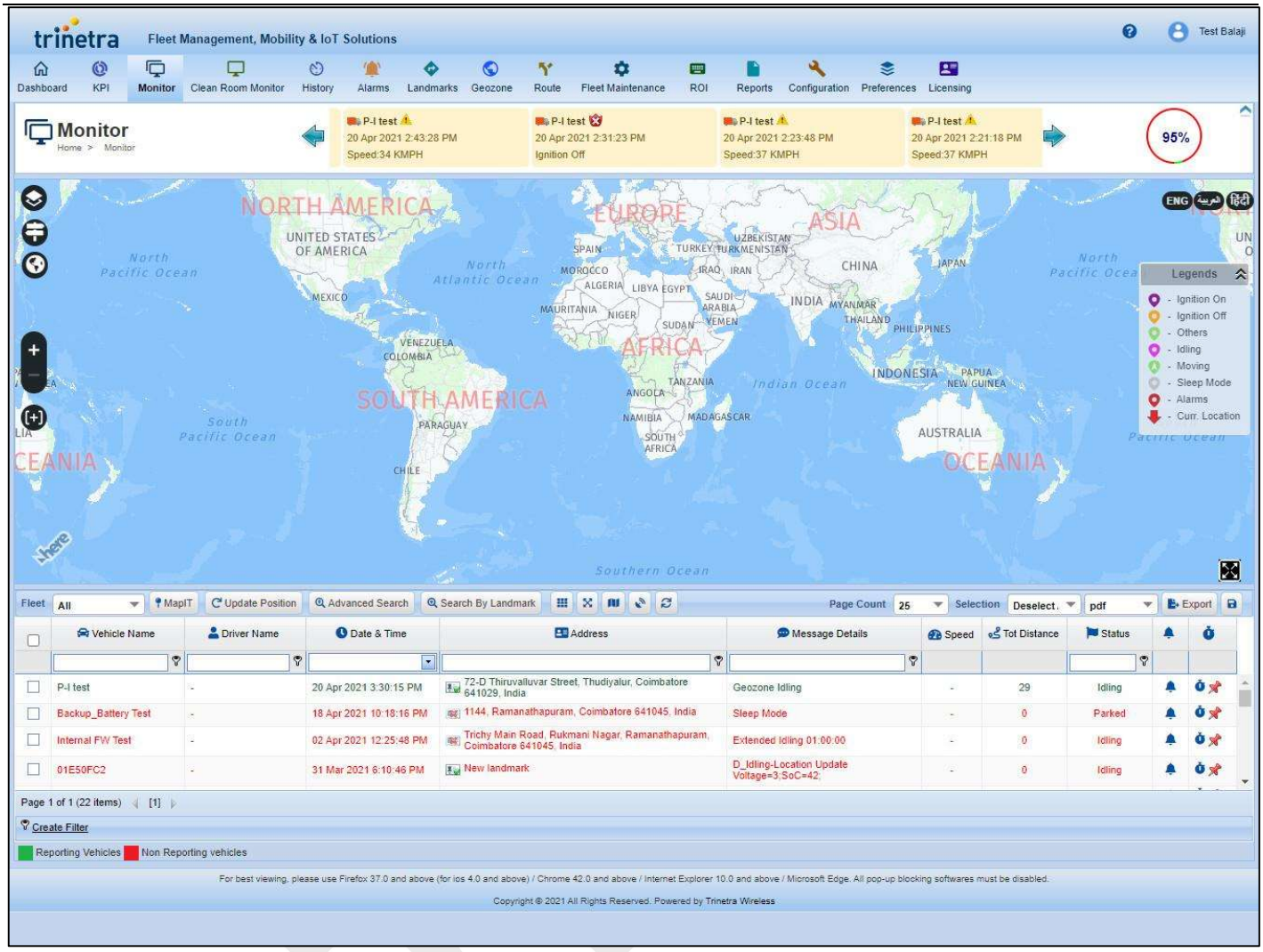


Fig: Monitor Screen

1. The fleet manager can view the alarm triggered from the vehicle (i.e. for last 24 hours) at the top of the screen. The alarm details like Name of the vehicle, date and time of the alarm received and location from where the alarm was received could be viewed in alarm information. The alarms panel can be collapsed by clicking the provision in the top right corner of the panel.

Fig: Scrolling Alarm Details

2. By clicking on the alarm, the alarm panel opens, where the user would be able to acknowledge (or) close the alarms. Comments can be added to such alarms for acknowledging / closing.

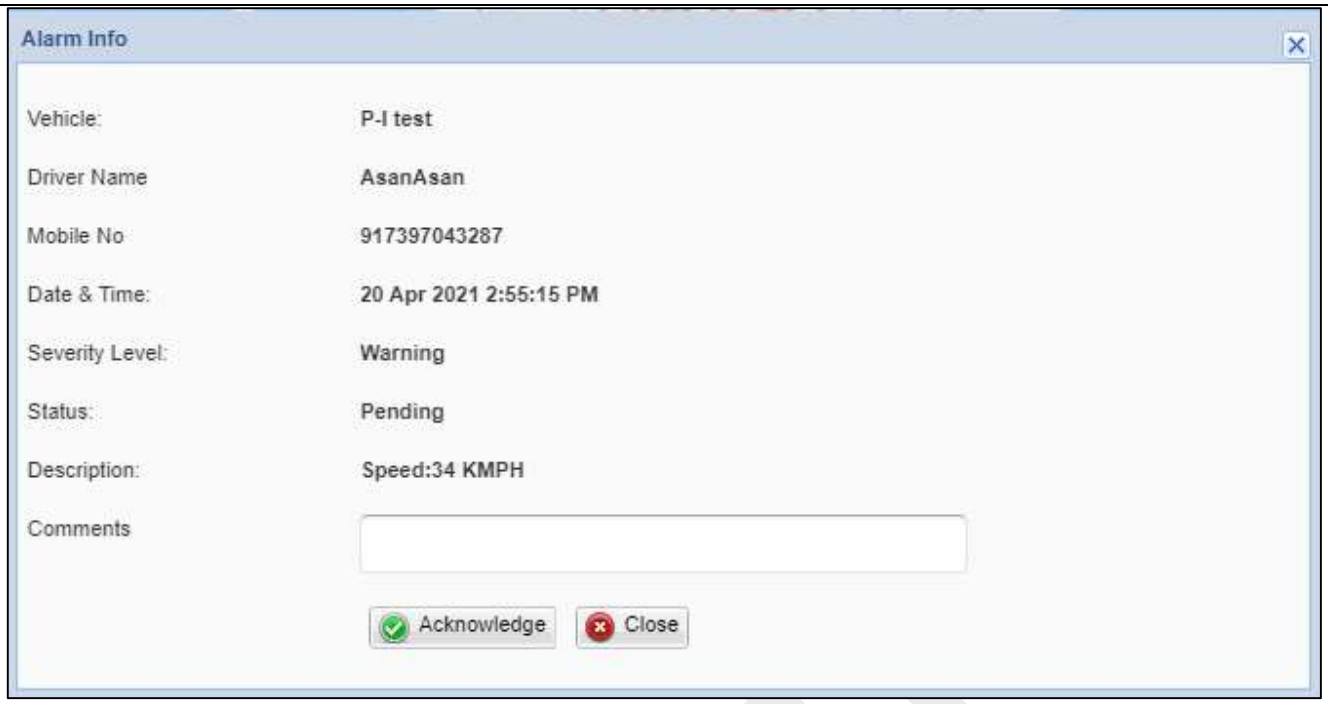


Fig: Alarm Info

3. Once the alarm/ alert are acknowledged, the background indication of the alarm would be changed to green color and the alarm status would be changed to acknowledged

Fig: Status of Alarm/ Alert

4. The alarm could be closed by selecting any alarm which would open a window as shown below, on selecting the close option the alarm would be removed from the scroll at the top of the screen

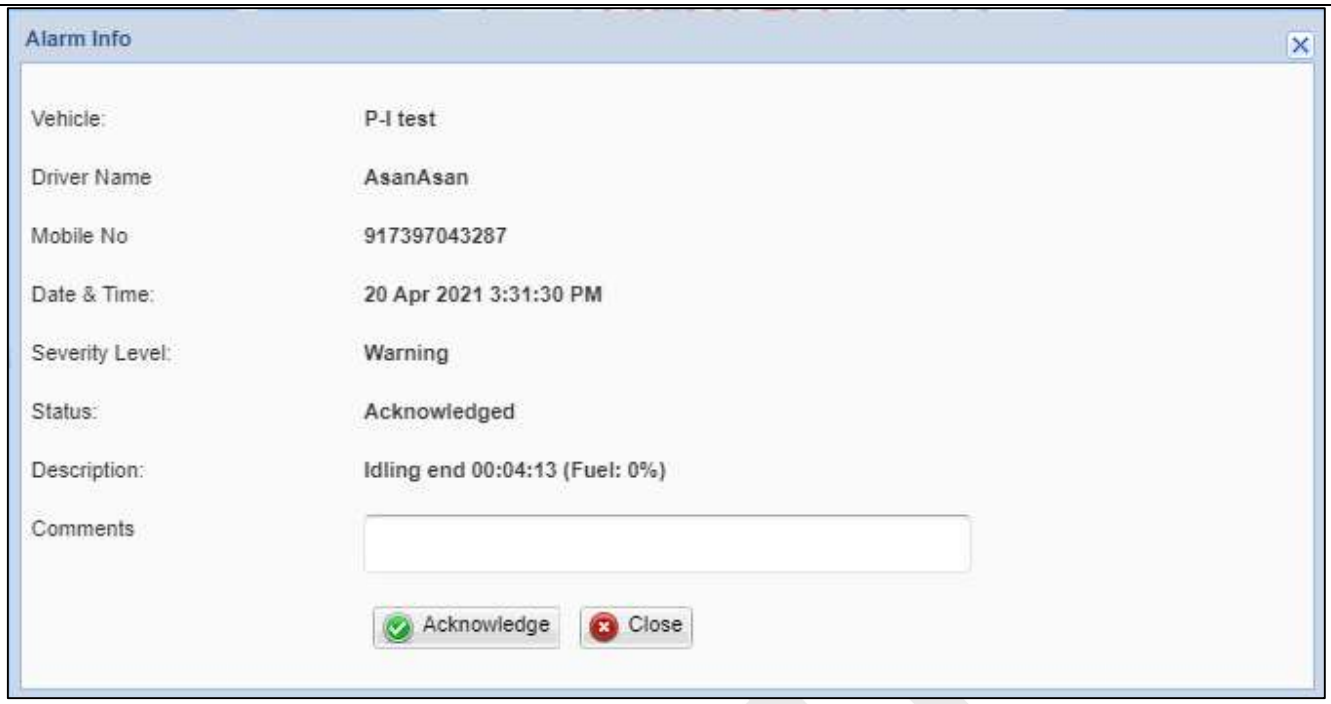


Fig: Acknowledged Alarm

5. At the bottom of the screen the fleet manager would be able to view the grid as shown below:

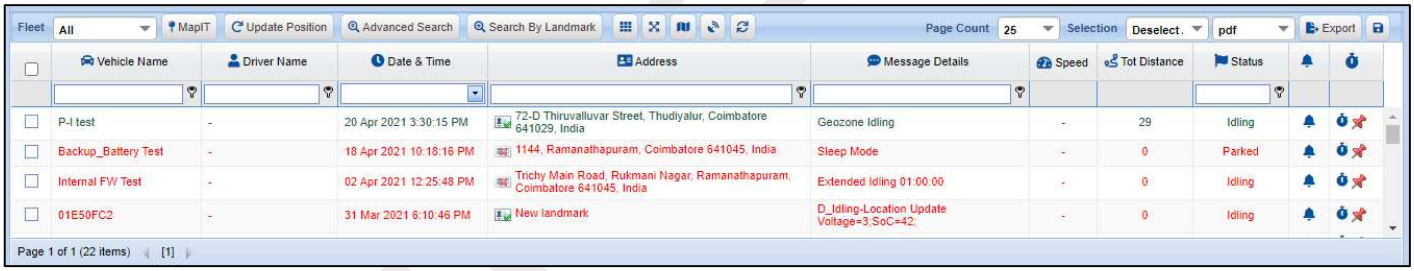


Fig: Monitor grid

6. On selecting one or more vehicles and clicking the **MapIT** button, the location of the corresponding vehicle will be plotted on the map.

Fig: Monitor's info bubble

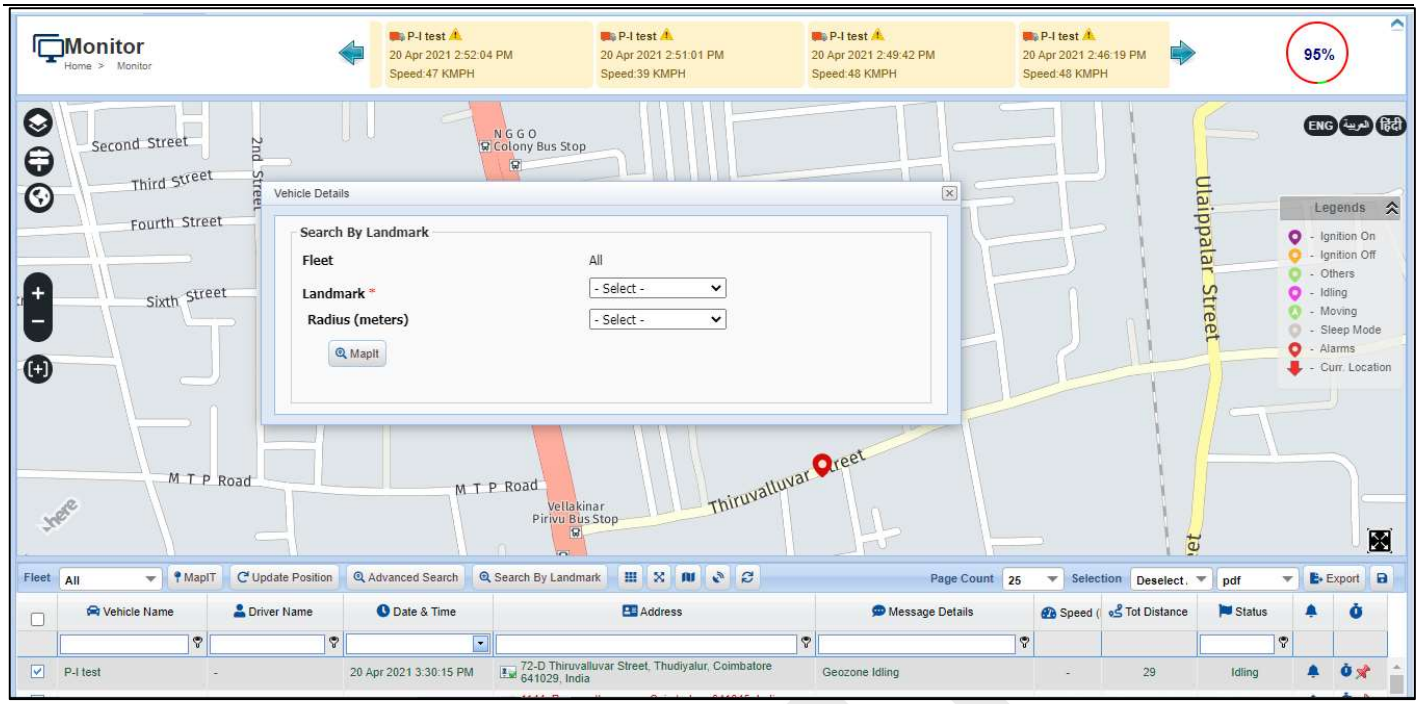


Fig: Search By Landmark

7. After selecting one or more vehicles, clicking the **Update Position** button will send a command to the device, querying the current position of the vehicle. If the command succeeds, the vehicle's current position will be displayed on the map as a marker.

8. The **Search by Landmark** feature is aimed at locating the vehicles that are close to a landmark for quick coordination. Users can select a landmark and search for vehicles near the landmark using pre-defined radius (up to 3kms). Vehicles that are near the landmark will be plotted on the map.

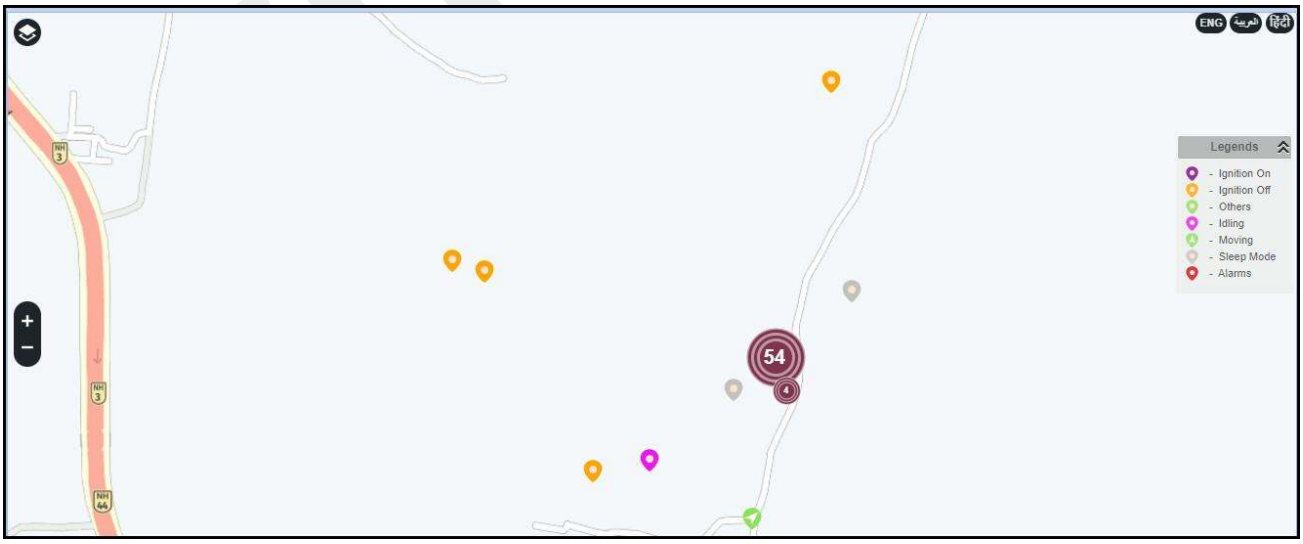


Fig: Search by Landmark

9. The **Advanced full screen map** feature is aimed at mapping multiple markers together with maximum of 9 plots in the map.

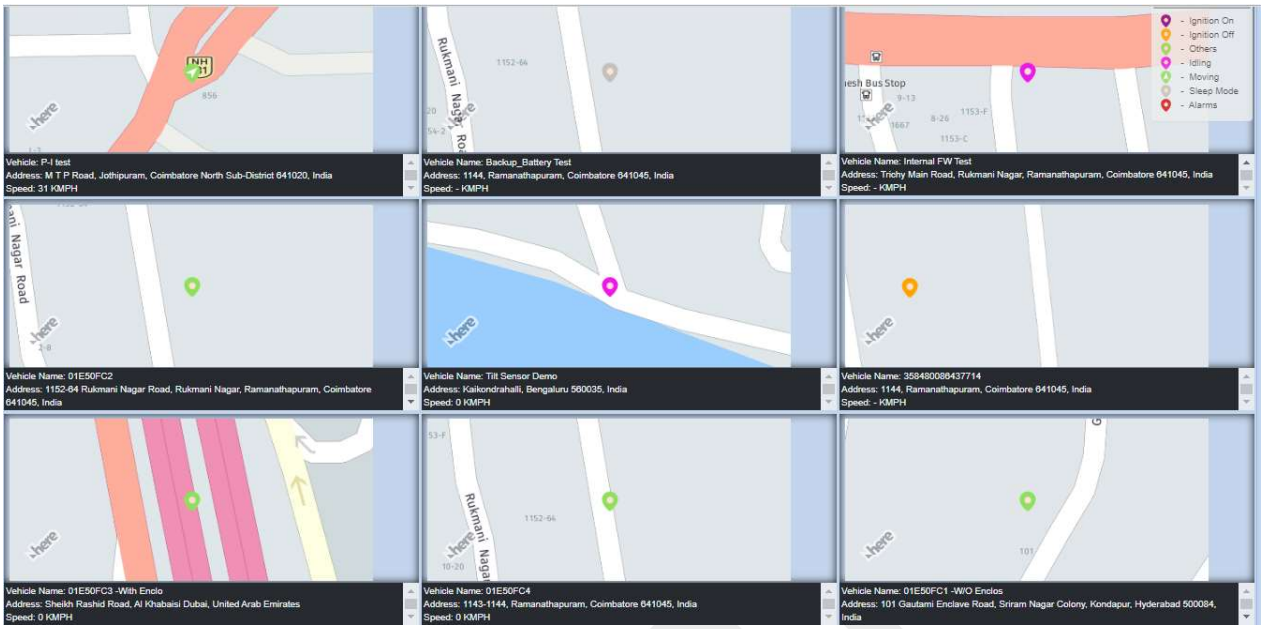
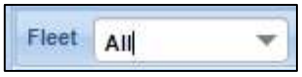


Fig: Advanced Full screen map

The fleet manager would be able to view the following information and fields in the grid



- Enables to select the appropriate fleet and view vehicles under that fleet.

- Plots the selected vehicle in the map.

- Sends a command to the device to retrieve the vehicle's current location.

- Enables users to search vehicle either near to a landmark / address location and can also be searched by vehicle name / license plate number.

- Search for vehicles using the landmark and dynamic radius.

- List of vehicles in a separate grid / window,

- Displays map in a separate window with selected vehicles plotted on it.

- Refreshes the contents of the grid.

Vehicle Name - List of vehicles running under the selected fleet.

Driver Name - List of driver allocated to the vehicle will be reflected

Date & Time - Last communicated date and time of the message.

Address - Latest location of the vehicle (i.e. last well known position).

Message Details - Latest message communicated by the device.

Speed - Speed of the vehicle (in MPH/KMPH as per the Preferences).

Status - Status of the vehicle (i.e. Parked / Running / Idling).

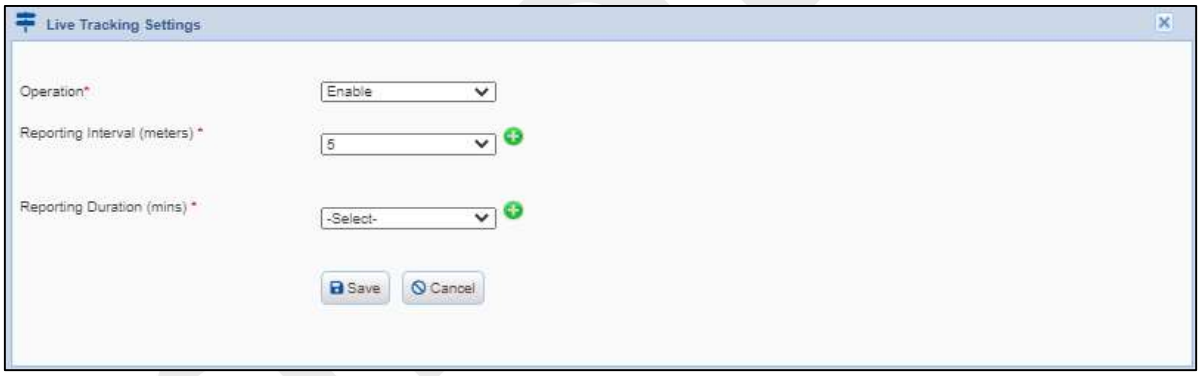
- Indicates the current position of the vehicle.

- Indicates that it is not the current position of the vehicle.ss

- Plots the selected vehicle in separate full screen map.

- Option to export the contents of the grid in PDF, XLS, RTF and CSV formats. This option is available for many of the grids in the application.

10. **Live Tracking** is aimed at providing details of vehicles movements at very short intervals for a fixed time period. Up to 25 vehicles can be monitored under live tracking, which makes tracking pretty nifty. You can select the vehicles you want to track, the duration and the reporting interval (as to how many meters once you need the update). Based on the same, the full screen map opens to display the moving vehicle(s) as per the reporting interval. Numbering and marker colors will be used to uniquely identify the vehicles.



11. Fig. Live Tracking Settings

Upon completion of the set duration, the live tracking will automatically be disabled with an intimation to the client regarding the same. Options are provided to locate all the Geozones and landmarks of the Organization on the map and a particular landmark/Geozone is highlighted when the vehicle travels in the Landmark/Geozone

Grid data presents the details of the vehicle(s)' current location and the last visited landmark/Geozone.

Live tracking can be extended for specific durations while the initial tracking is in progress.

Tracking will be stopped when the vehicle is not moving and will resume when the vehicle starts moving within the tracking duration specified. Users can also export the tracking data then and there and can use it for future reference

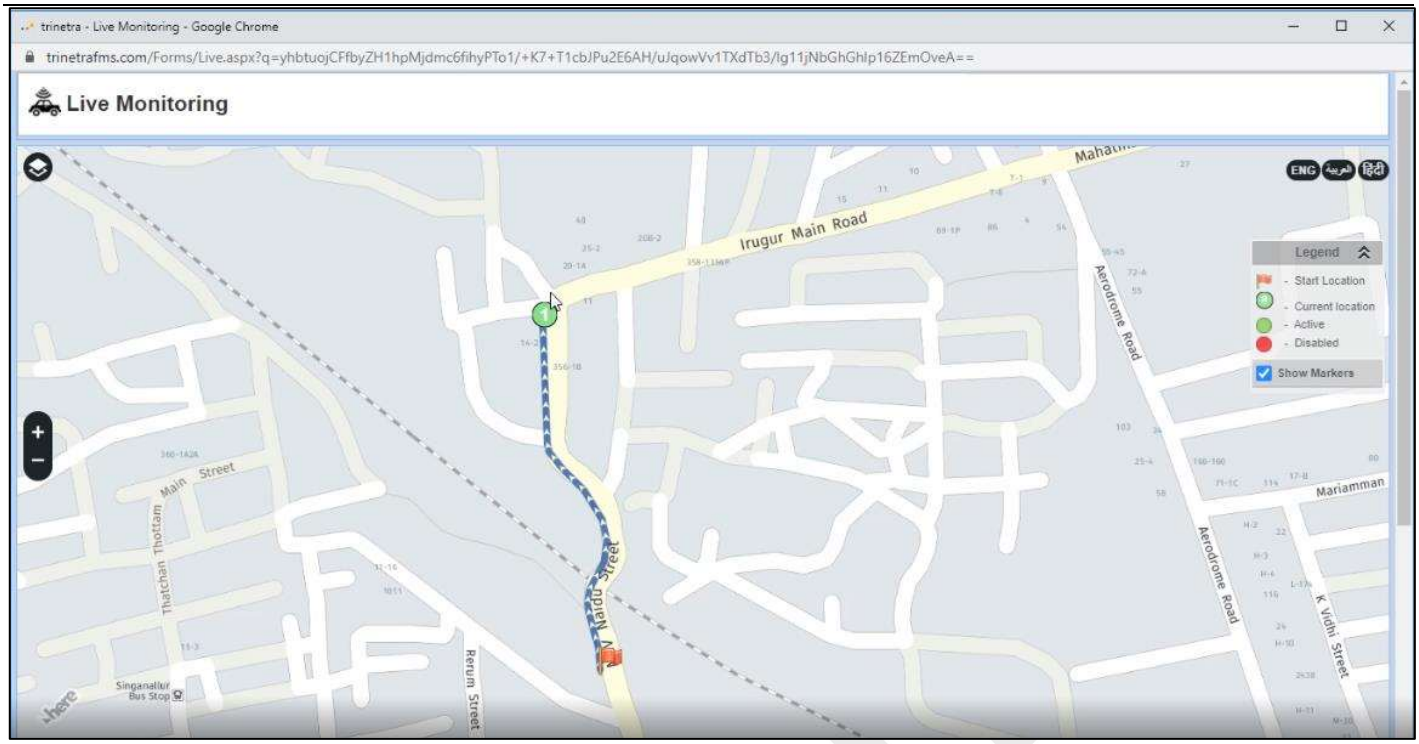
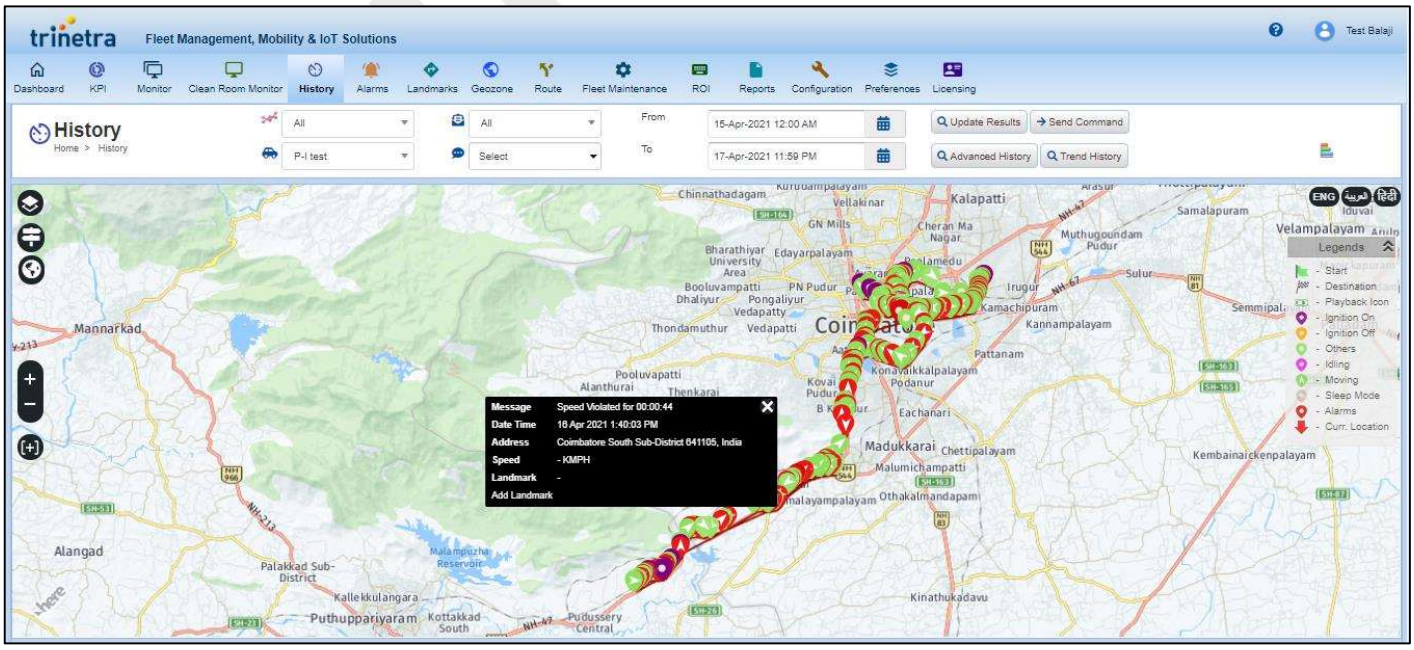


Fig.: Plots of a Live Tracking enabled vehicle

Note: Tracking duration can be set to a maximum of 1 hours initially and can be extended later based on need

3. History

The History screen assists to track the entire transit details of a particular vehicle. The user can generate the list of commands sent to the vehicle and the messages & alerts received from the vehicle. The history of the vehicle can be generated for any of the past date ranges.



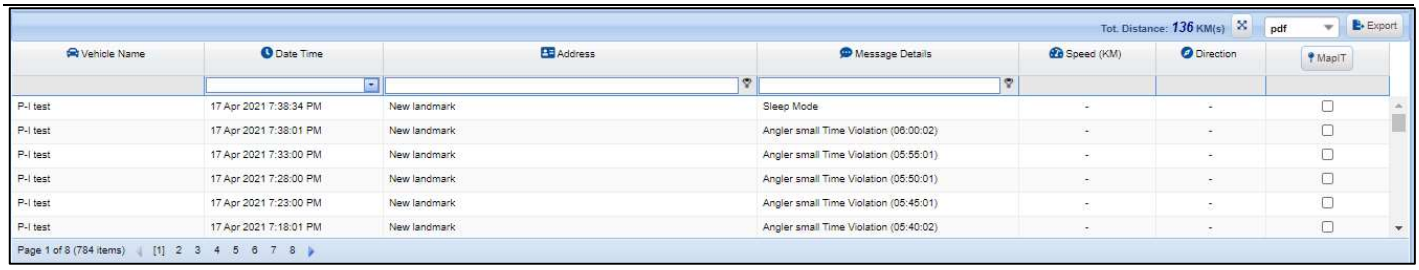


Fig: History page

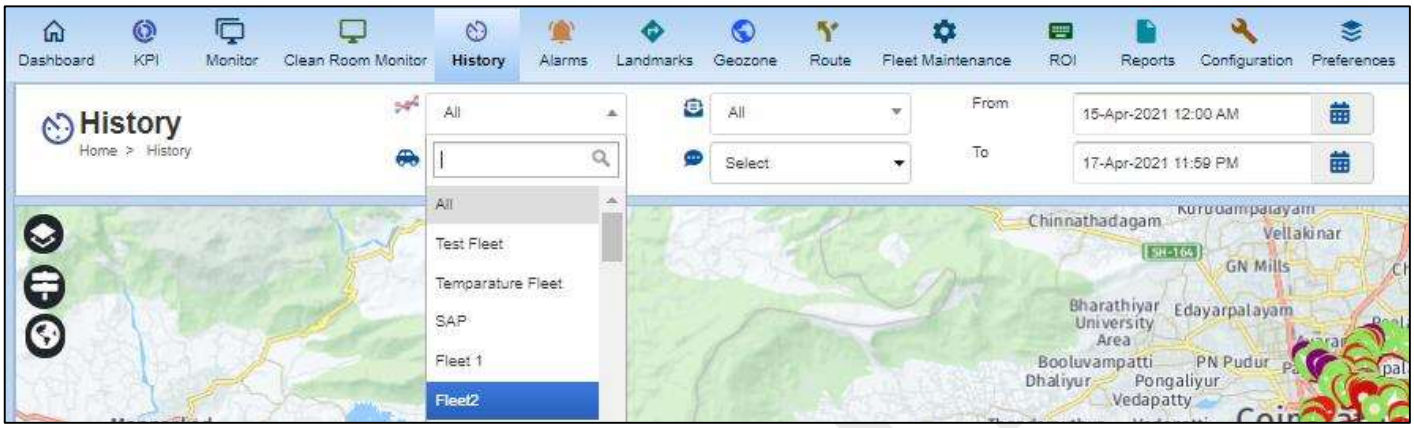


Fig: Fleet selection

1. On selecting a value from the Fleet drop-down, the Vehicle drop-down will be populated with the vehicles under the selected fleet.
2. The From & to fields display a calendar each for the user to select a date range. The time can be set up to the 59th minute of an hour on selecting a date range & time range, clicking the **Update Results** button will display the history of the selected vehicle, for the selected date & time range. If the selected date or time range is invalid, the user will be alerted for the same.
3. According to the values in the grid, the map will be populated with appropriate markers for the entries that have valid GPS information. If the markers to be plotted are more than 2,000 nos., the markers will not be plotted in the map. User will be alerted to reduce the time range such that the no. of markers falls below 2,000.
4. Also user can able to view the **Kilometer** travelled for the filtered date and time.
5. In the map the following icons can be observed:
   - Purple icon indicates vehicle – ignition On/Start of the trip
   - Orange icon indicates the end /stops of the trip / ignition off
   - Red Flag icon indicates the position where the vehicle has been parked/ current location.
   - Green icon with arrow indicates the vehicle has been moving after Ignition ON.
   - Green icon without arrow indicates the vehicle had been stationary after Ignition ON.
   - Red arrow icon indicates the speed alert
   - Red icon indicates the Harsh & Extreme alerts

- Pink icon indicates the idling of the vehicle
- Landmark icon.
- Starting point of the trip / vehicle.
- Sleep mode of the vehicle.
- Destination of the vehicle / trip
- Green icon - MapIT location.

6. On placing the mouse pointer over any of the markers plotted on the map, an info bubble containing the message details of the marker is displayed (as shown in the Fig: History Screen). This info bubble contains information like what message the marker is for, date & time of message origin, the location of its origin, the name of the landmark and the speed of the vehicle. The info bubble also provides an option to add the location of the marker as a new landmark (See the sub-heading Landmark).
7. In the grid, selecting a **Message Type** from the drop-down filters the grid contents to display only the messages of selected message type. For e.g., selecting 'Alarms' from the drop-down displays only the alarms that were generated within the selected date & time range.
8. **Page Count** represents the no. of entries to be displayed for a page, in the grid.
9. Selecting a file format from the drop-down, and clicking the **Export** button exports the contents of the grid to a file of the specified format.
10. The **MapIT** button highlights the selected entry's marker on the map. This allows the user to pinpoint any data on the map.

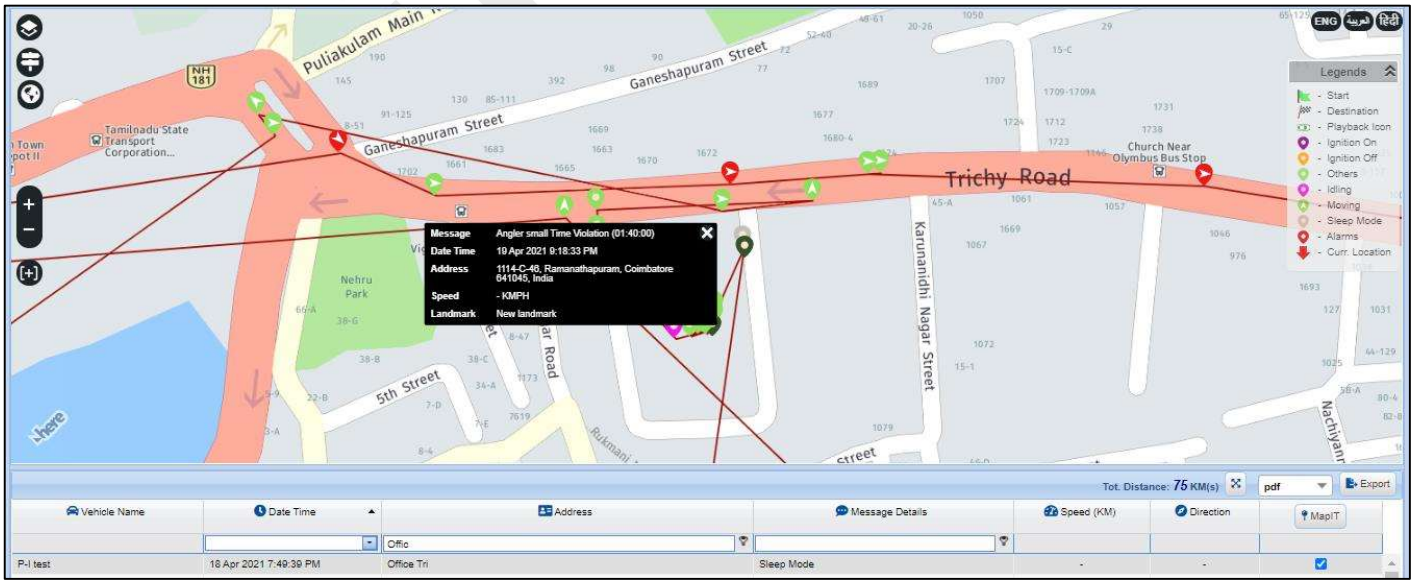


Fig: Map IT feature

3.1 History Playback

On generating the history for a period, the generated history can be viewed as an animation in the Full-screen map.

1. The following icons can be observed:

- Full-Screen Map icon. Opens a full-screen.
- Start of the history data.
- End of the history data.
- Ignition ON.
- Ignition OFF.
- Others. Vehicle has been stationary after Ignition ON.
- Idling. Vehicle has been stationary for more than 3mins after Ignition ON.
- Vehicle has been in Sleep Mode.
- Alarm. Vehicle has generated an alarm in the location.
- Moving. Vehicle is moving with speed and direction.

2. Click the Full-Screen map icon in the History page. The trips plotted in the History page will be displayed in the full-screen map.

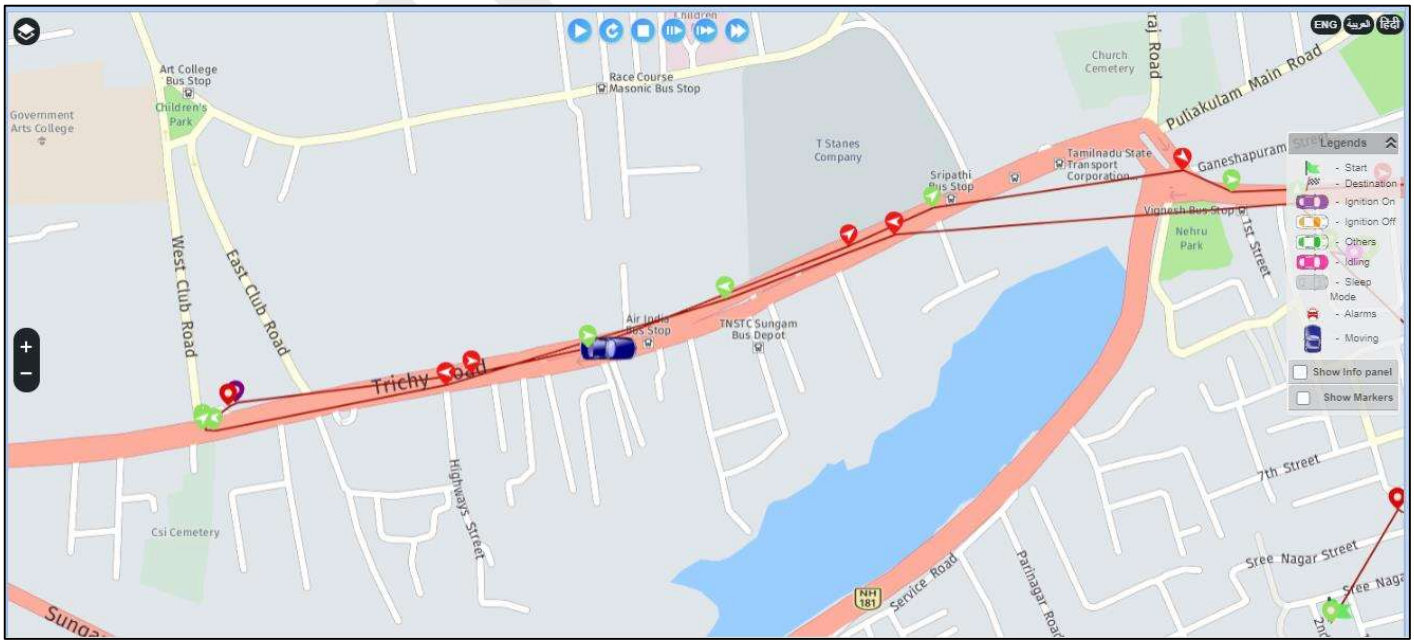


Fig: Full-Screen Map

3. The following are the playback controls:

- Play the trips.
- Reset to the beginning of data and start playing.
- Stop the playback and reset to the beginning of the data.
- Slow speed playback. Reduces the speed of playback.
- Medium speed playback. Plays the trips in normal speed.
- Fast speed playback. Increases the speed of playback.

4. Click the Play icon at the top of the page to start playing the trips.

5. Check the Show Info Panel checkbox to display the info panel of each location the vehicle travels to.

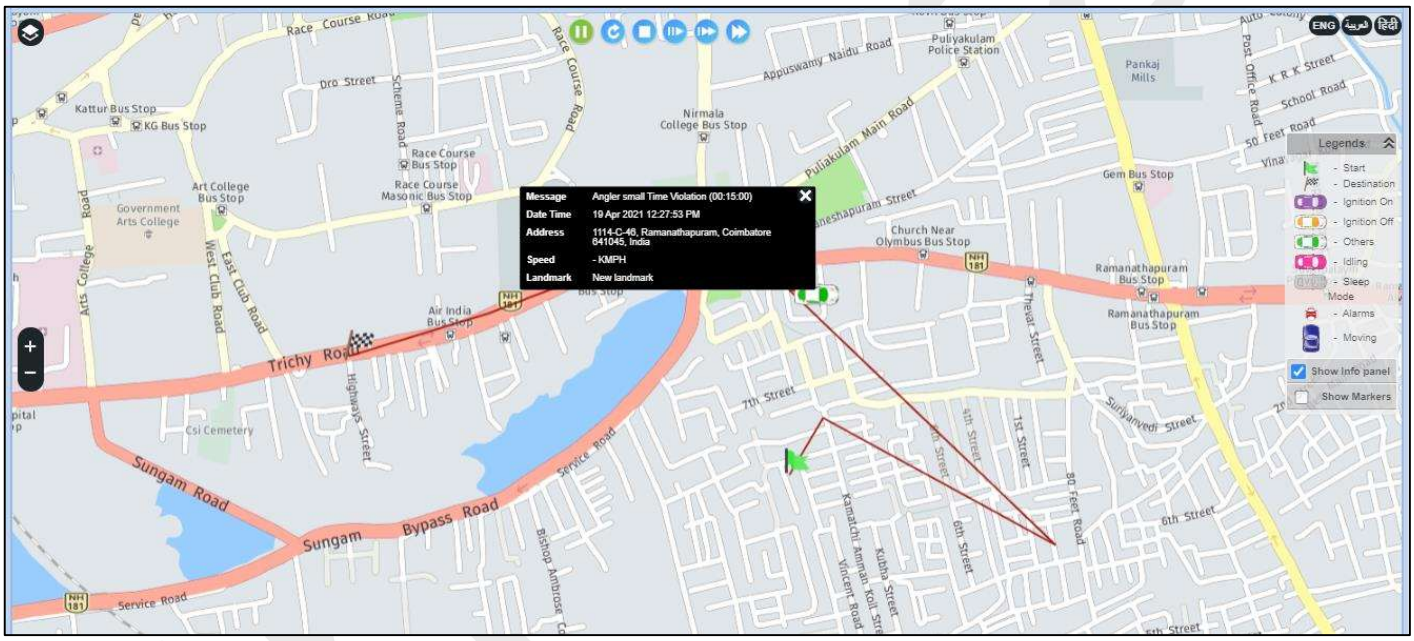


Fig: History Playback with Info Panel.

6. Check the Show Markers checkbox to display the markers as displayed in the History page.

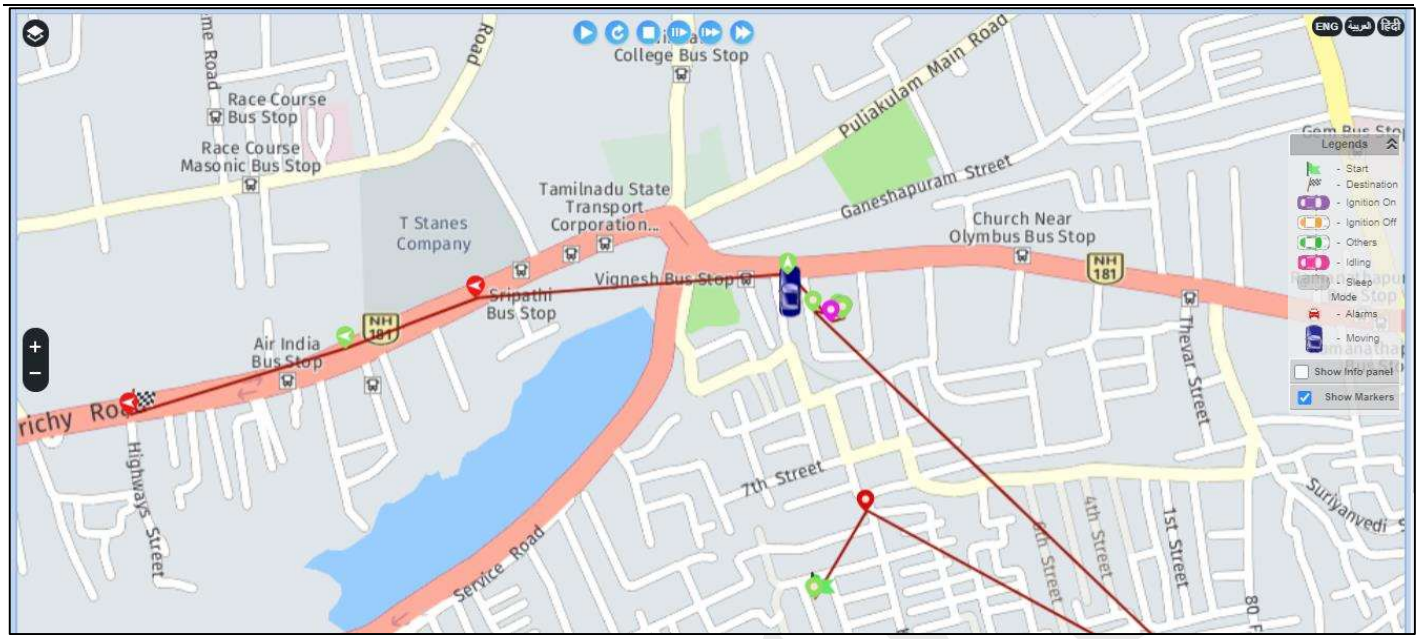


Fig: History Playback with Markers

3.2 Information Panel

Clicking a message in the grid displays an Information Panel, containing the following details:

- Message details like the type of message, date & time of origin & receipt of the message.
- Vehicle details like the name, device ID and license plate no.
- Location details like Latitude & Longitude, address of the marker & validity of GPS information.
- Sensor details displaying their statuses during the indicated time.
- Other related details like the vehicle's speed, direction, etc.

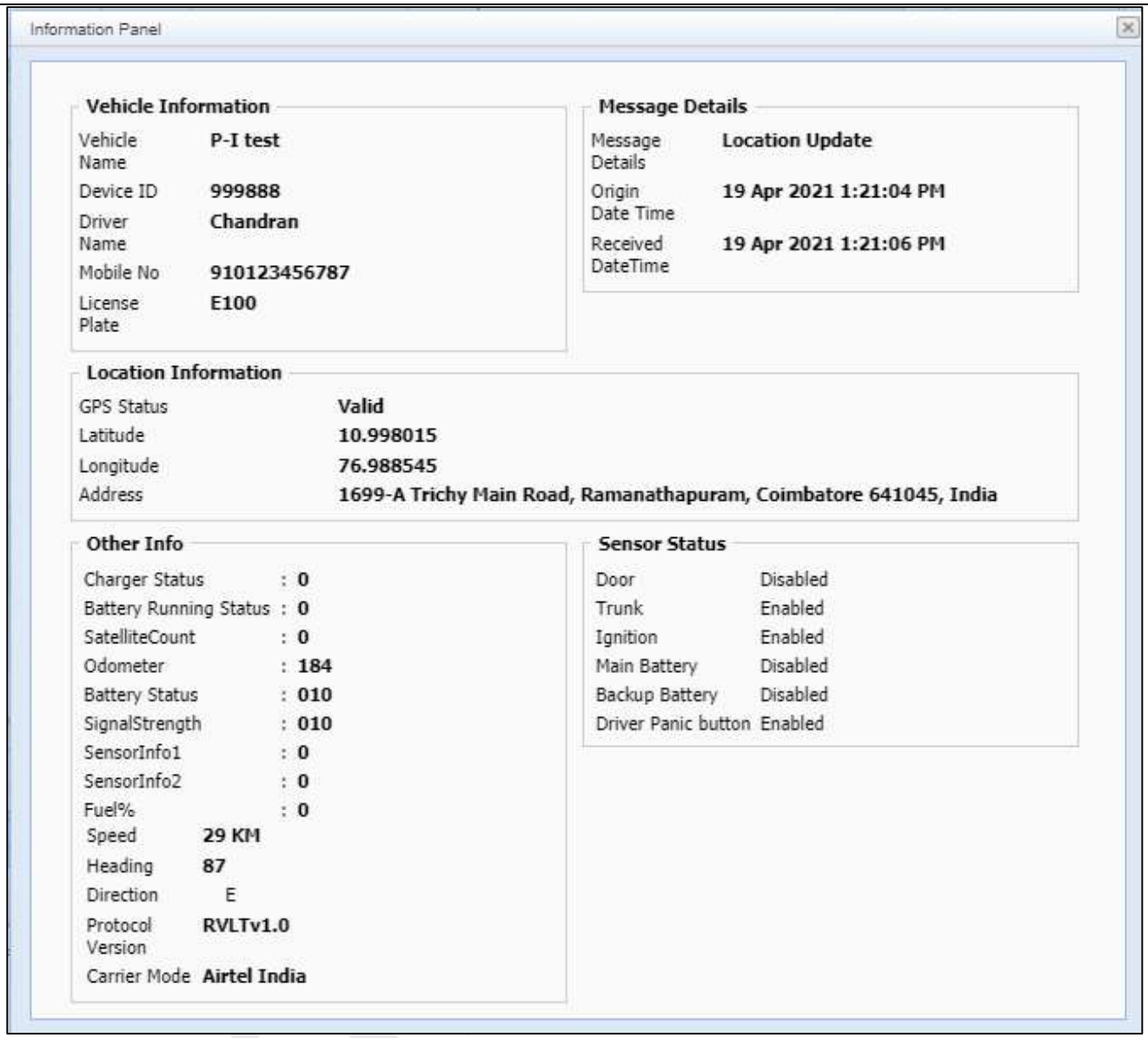


Fig: Information Panel

3.3 Send Command / Control Panel

The user can send commands to the vehicle similar to the Monitor screen. Clicking the **Send Command** button, a Control Panel is displayed for the user to select the commands and send to the device fitted in the vehicle.

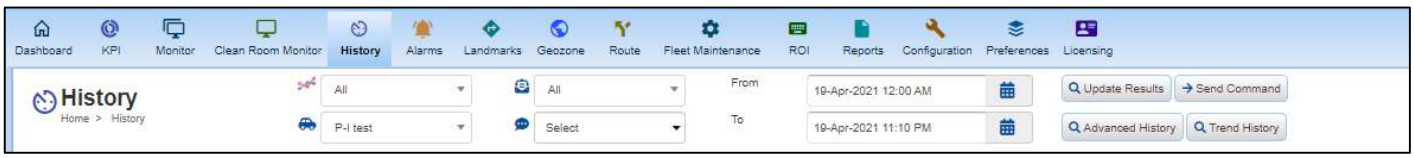


Fig: Send Command option

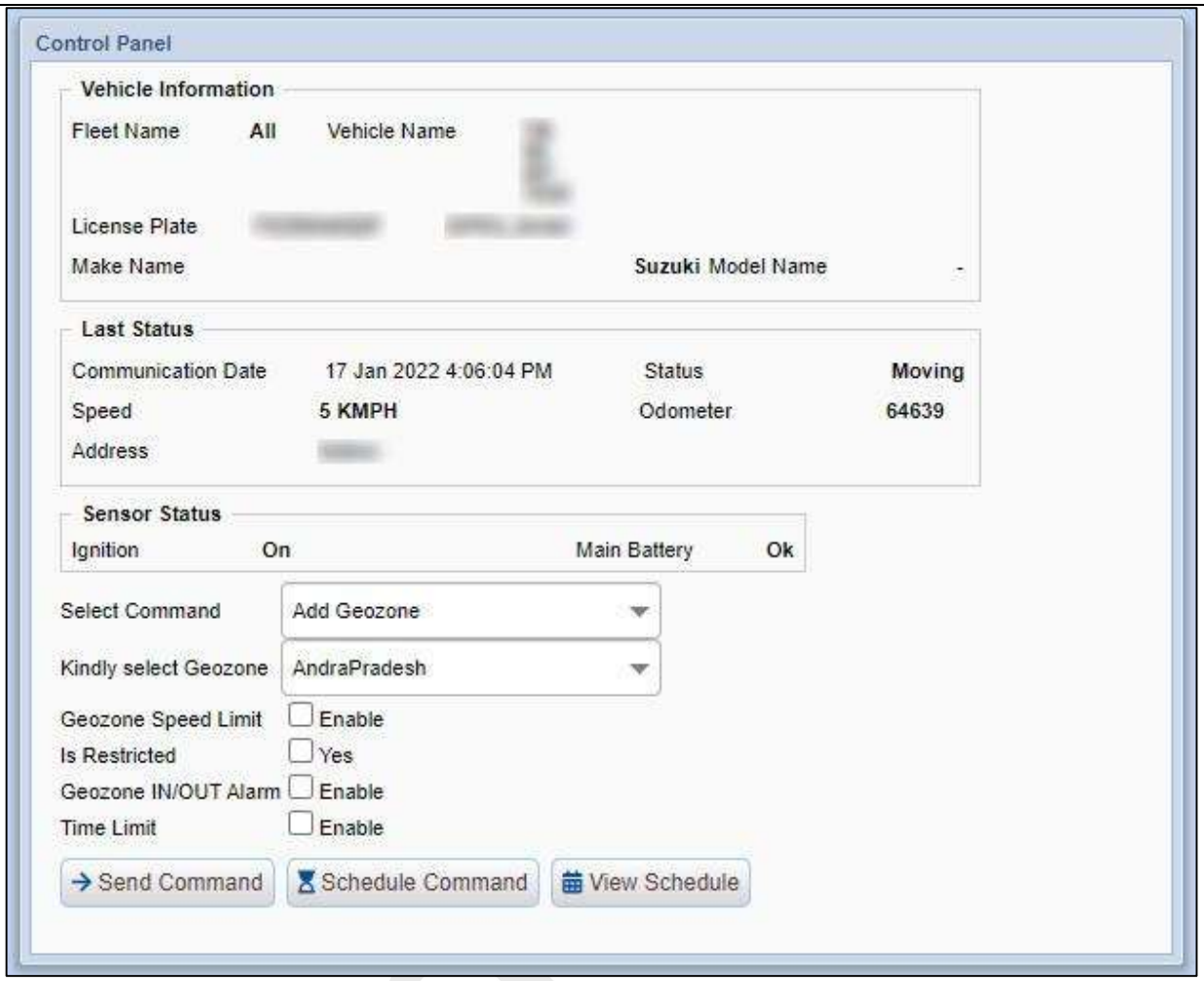


Fig: Control Panel

The user can select a command from the Select Command drop-down and can send it to the vehicle by clicking the Send Command button.

The following are some of the commands accessible to the user:

Command	**Description**
Add Geozone	Assigns the selected geozone to the vehicle (device).
Delete Geozone	Unassigns the selected geozones from the vehicle (device).
Set Odometer Reading	Set the required odometer reading to calculate the distance traveled by the vehicle.
Set Report Interval	Set the frequency of receiving the messages from the vehicle.
Set Speed Threshold	Sets the maximum allowed speed for the vehicle. If the vehicle exceeds the set threshold, an alarm will be generated.

Update Position	Displays the current position of the vehicle

On sending any command from the Control Panel, an indication of the command being sent is displayed in the Control Panel. Also, the result of the command, whether the command is a success or the command has timed out, will also be displayed.

3.3.1 Scheduling of Commands

Users can schedule the commands to the device installed in their vehicle, this enables them to execute the commands even in their absence. The command will be automatically sent to the device on receiving any message from the device. There is no restriction on the no. of commands that can be scheduled for a vehicle. Scheduling of Commands option can be utilized through Control Panel or through Configuration panel, as described below.

3.3.1.1 Command Scheduling

Users can select the command which is displayed in the drop-down of the Select Command option. Once the parameters for the selected command are defined, users can select the **Schedule** button to save the schedule. Clicking the Cancel button cancels and closes the scheduling option. The Control Panel will return to its previous state. The scheduling of commands option is depicted below.

On successfully scheduling the command, a confirmation message will be displayed below the **View Schedules** button. The scheduling option will close and the Control Panel will return to its previous state.

3.3.1.2 View Schedules

Users can view the scheduled commands assigned to the vehicle by clicking the View Schedules button. The user would be redirected to a Schedule Details page, where they can see the status of the command scheduled recently and of those scheduled earlier. Depending upon the filters selected, the user can view the commands scheduled for other vehicles, along with their statuses. Among the listed schedules, the user has the option to search for a particular item from any of the displayed columns.

Every time a message has been received from the device, the command will be tried for four times, to be executed. The date & time of last attempt to execute the command will be recorded under the Executed On column in Schedule Details.

The different statuses of the schedule and their meanings are as follows

Pending – The command is yet to be executed. The command will be retried again on receiving a message from the device.

Expired – The command has been tried till the end of the Retries Period and has been unsuccessful in execution. The command will not be retried.

Success – The command has been tried and has been successful in executing the command. The date & time under Executed On is when the command has been executed.

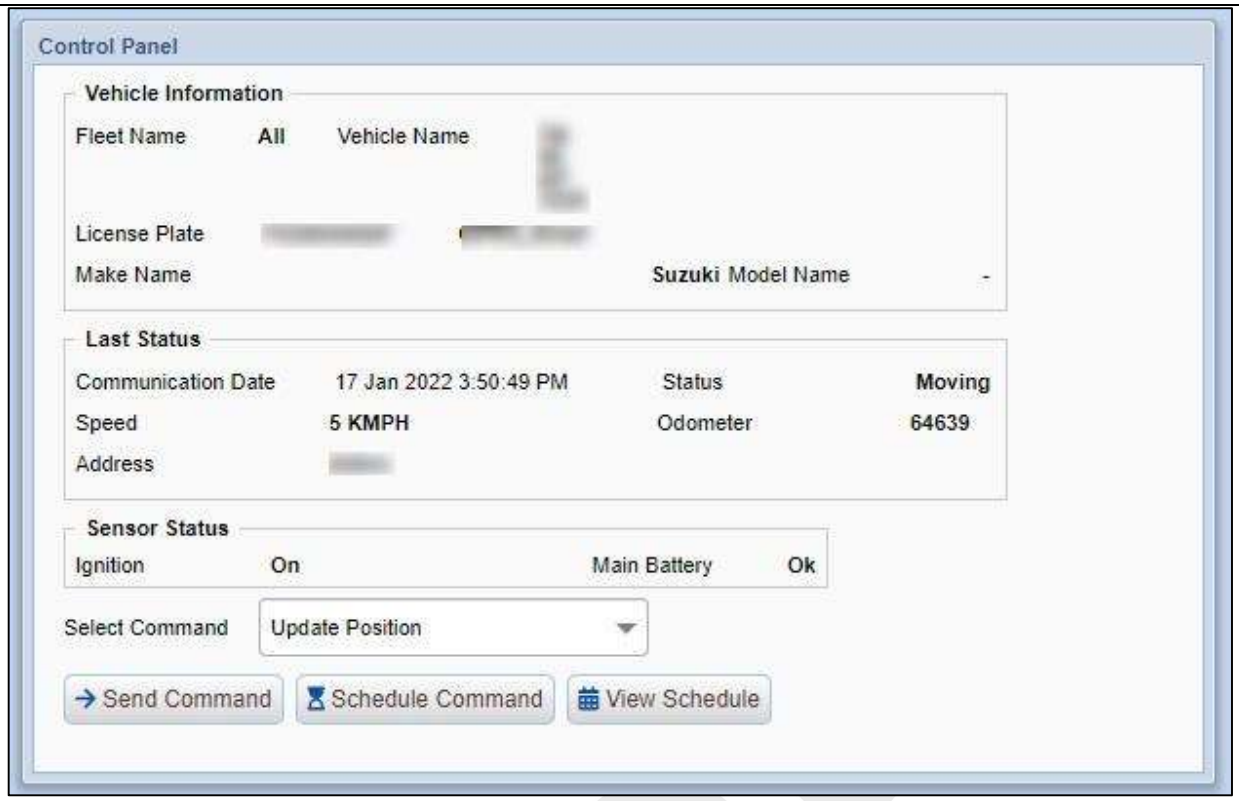


Fig: Scheduling of Commands option

In case of a Pending schedule, the user has the option to delete the schedule by clicking the Delete icon for the corresponding entry. A Success or Expired schedule cannot be deleted from the Schedule Details list. The user has an option to export the contents of the result of the above filters in the prescribed formats (PDF, XLS, RTF, & CSV).

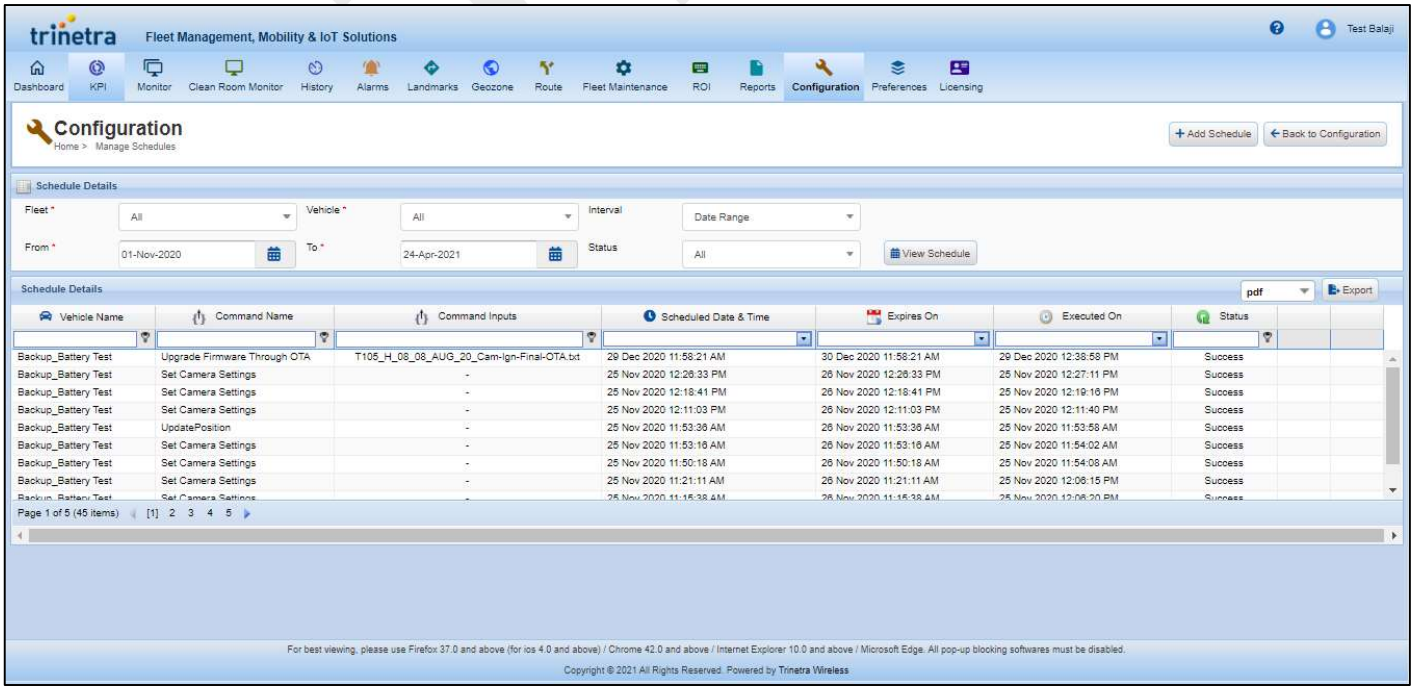


Fig: Schedule Details

3.3.1.3 Add Schedule

The user can also add a command from the scheduling of commands option, as shown below.

Fig: Fig: Add Schedule

Clicking the **Commands** button displays the following screen for selecting the command.

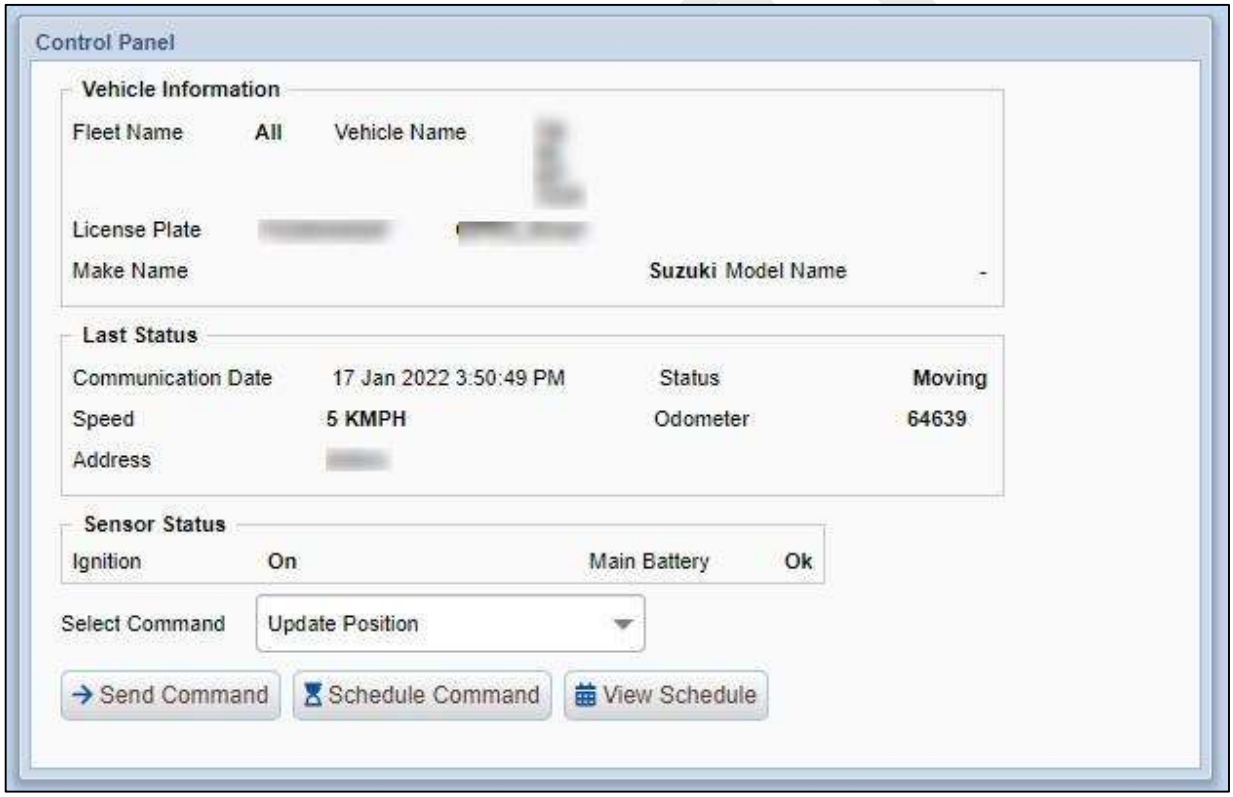


Fig: Select Command

Clicking the **Save** button after saving the command, the user will be redirected to the Add Schedule page where the user selects the **Retries Period**. Retries Period defines the no. of days the command has to be tried until the command is successfully executed.

Clicking the **Save** button saves the schedule, while the **Cancel** button cancels the scheduling operation. The scheduled command will be listed in the Scheduled Details list.

Limitations

1. In case the vehicle is in a non-coverage area, the scheduled command will not be executed until the vehicle returns to the GRPS coverage area.
2. If more than one command has been scheduled, the commands will be executed sequentially. In this case, one or more commands can fail / expire due to the vehicle moving into a non-coverage area.

3.4 Landmark Panel

If the user wants to set a marker location as a landmark, he / she can do so by clicking the **Add Landmark** link in the marker's info bubble.

1. A **Landmark Panel** will be displayed as a pop-up in the History page. The user can fill in the required details to create the landmark.
2. The Street Address will be filled automatically and will be non-editable.
3. Clicking the **Manage Notifications** button displays one more pop-up that has a list of organization users who have to be notified when the vehicle reaches the landmark.
4. Clicking the **Save** button will save the marker location as a landmark.
5. Clicking the **Cancel** button will cancel the landmark creation process.

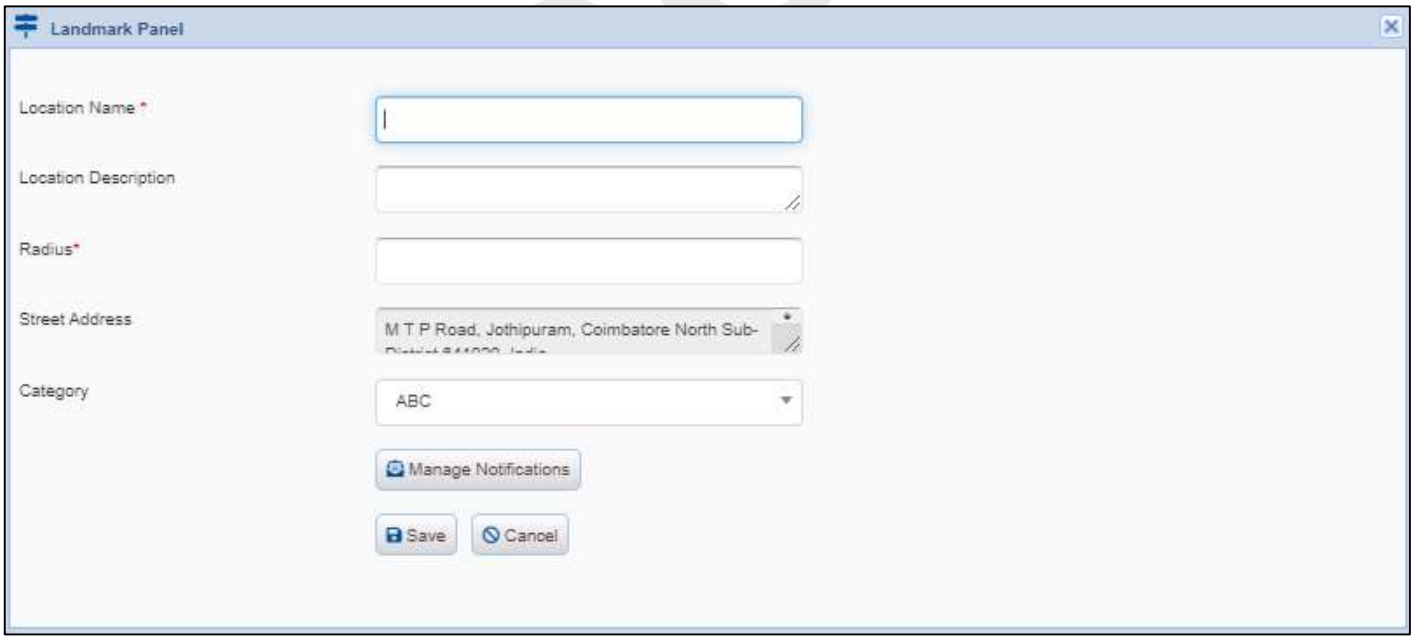


Fig: History – Landmark creation

The marker details or the current history will not contain any references to the new landmark created from the History panel. The landmark details will be updated only in the future, when the vehicle passes through the landmark.

3.5 Advanced History

Advanced History will allow the user to view the history details in more detailed from. Tripwise History details of each vehicle will be shown in this page.

On clicking the above button it will redirect to Advanced History page from where the user can view the individual trip details of the selected vehicle.

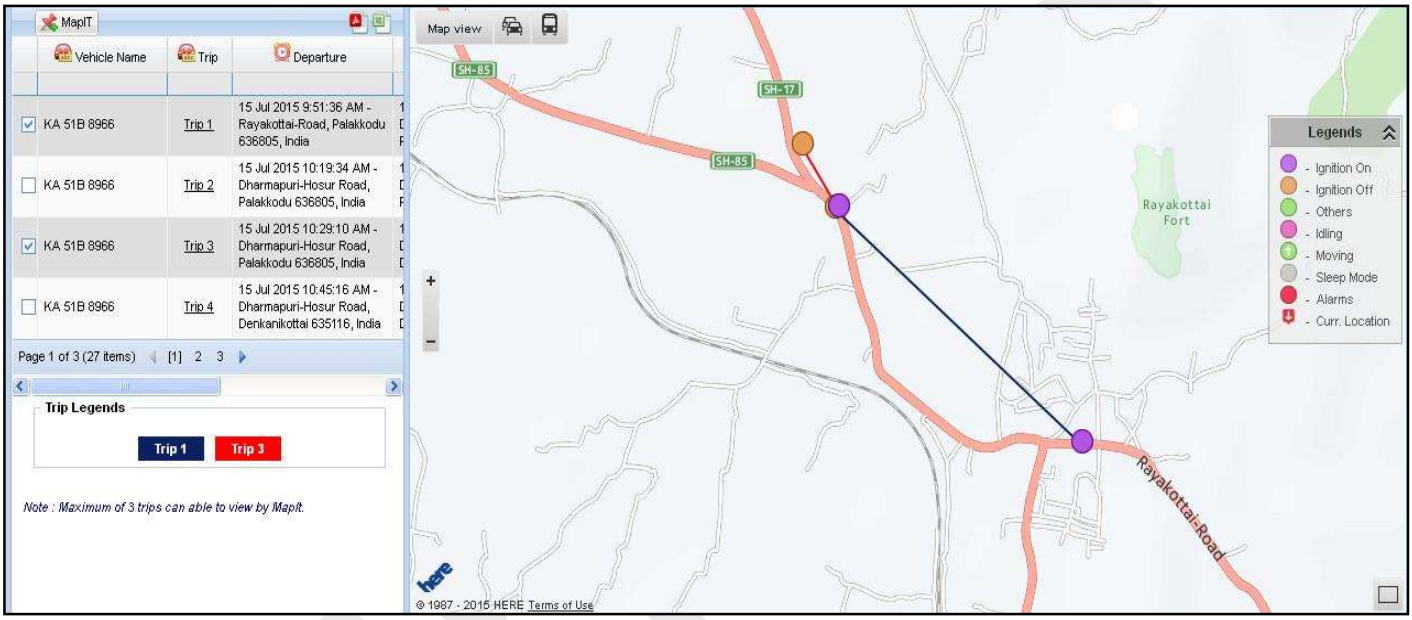
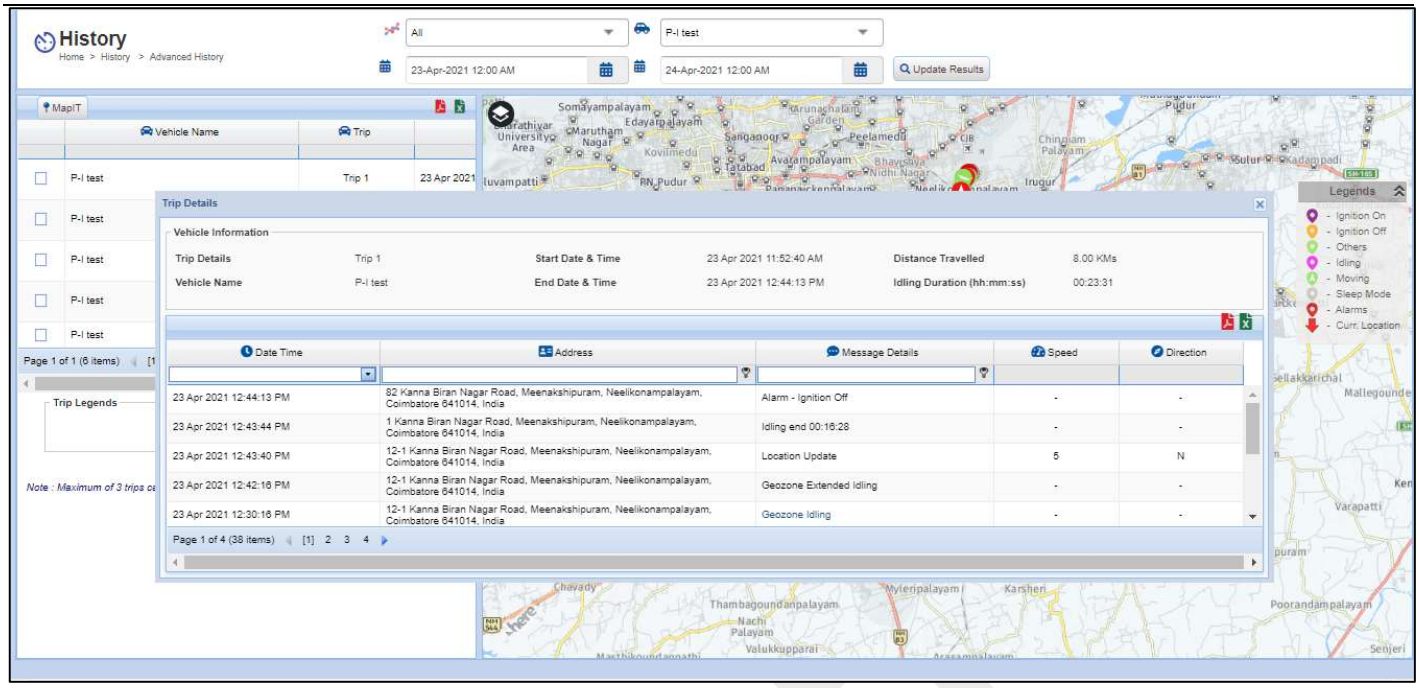


Fig: History – Advanced History

The Advanced History screen assists to track the entire transit details of a particular vehicle. User would be able to view the details of a particular vehicle in more advanced way. Unlike the History page, advanced history will let the user to get in to in-depth details of the history made.

Fig: Advanced History – Trip details

User will also be able to view the complete trip details in grid view just by clicking the hyperlink provided for each Trip.



3.6 Stoppage History

This feature is aimed at providing the administrator and other users an information on where all the vehicle has stopped (Ignition OFF) & at what time during a specified period. This helps in ensuring the vehicle has halted only at designated locations at the right times. In turn, this helps in curbing uncharted stops of the vehicle at unsolicited times.

Just like generating the history of a vehicle, the privileged user can select the 'Stoppage History' from the Category drop-down in the History module, select the date and time ranges & clicking the Update Results button.

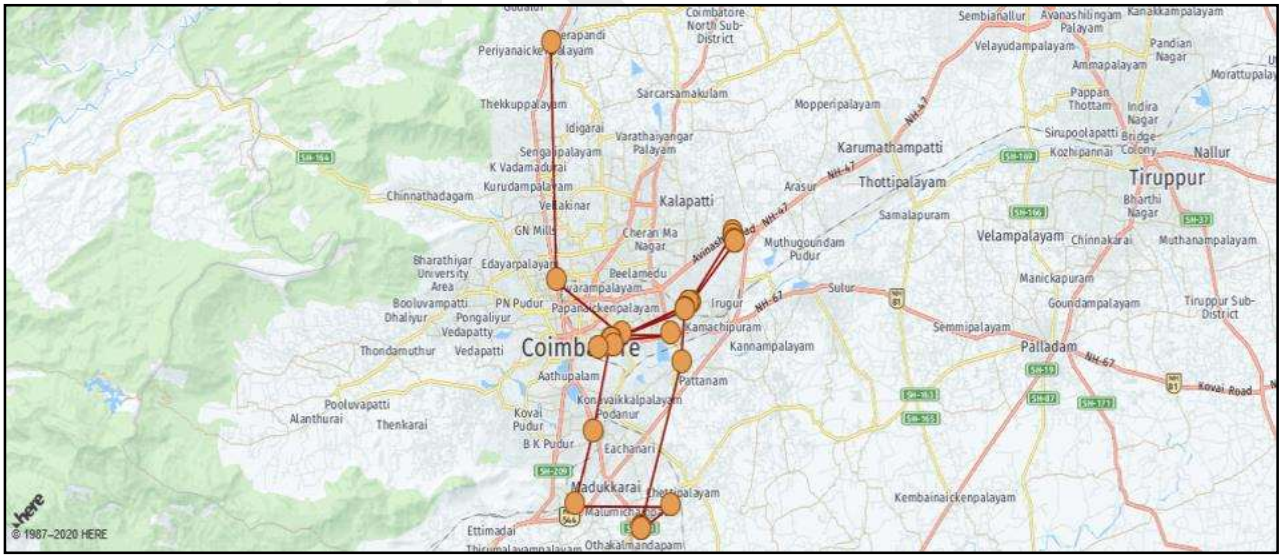


Fig.: Ignition OFF plots on the map

Vehicle Name	Stop Date Time	Start Date Time	Stop Duration	Address	Message Details
[illegible]	05 Feb 2020 12:19:16 PM	05 Feb 2020 12:21:43 PM	00:02:27	18, Jothipuram, Coimbatore North Sub-District 641020, India	Ignition Off (Durations: 00:31:00)
[illegible]	05 Feb 2020 11:46:43 AM	05 Feb 2020 11:47:24 AM	00:00:41	M T P Road, Saibaba Koil, Tatabad, Coimbatore 641043, India	Ignition Off (Durations: 00:32:00)
[illegible]	05 Feb 2020 11:03:04 AM	05 Feb 2020 11:14:21 AM	00:11:17	Pankaja Mill Road, Ramanathapuram, Coimbatore 641045, India	Ignition Off (Durations: 00:17:00)
[illegible]	05 Feb 2020 10:44:35 AM	05 Feb 2020 10:45:53 AM	00:01:18	8-1 Trichy Road, TNHB Housing Unit, Singanallur, Coimbatore 641005, India	Ignition Off (Durations: 00:44:00)
[illegible]	05 Feb 2020 10:00:43 AM			1114-C-46, Ramanathapuram, Coimbatore 641045, India	Main Battery Ok
[illegible]	04 Feb 2020 6:35:20 PM	05 Feb 2020 10:00:27 AM	15:25:07	Test KT	Ignition Off (Durations: 00:11:00)
[illegible]	04 Feb 2020 6:05:37 PM	04 Feb 2020 6:23:45 PM	00:18:08	Bypass Road, Ramanathapuram, Coimbatore 641045, India	Ignition Off (Durations: 00:16:00)
[illegible]	04 Feb 2020 4:01:05 PM	04 Feb 2020 4:23:46 PM	00:22:41	1144, Ramanathapuram, Coimbatore 641045, India	Ignition Off (Durations: 00:26:00)
[illegible]	04 Feb 2020 3:31:26 PM	04 Feb 2020 3:34:08 PM	00:02:42	Sihs Colony, Neelikonampalayam, Coimbatore 641014, India	Ignition Off (Durations: 00:08:00)
[illegible]	04 Feb 2020 3:08:59 PM	04 Feb 2020 3:23:05 PM	00:14:06	12-1 Kanna Biran Nagar Road, Meenakshipuram, Neelikonampalayam, Coimbatore 641014, India	Ignition Off (Durations: 00:02:00)
[illegible]	04 Feb 2020 2:48:53 PM	04 Feb 2020 3:06:20 PM	00:17:27	82 Kanna Biran Nagar Road, Meenakshipuram, Neelikonampalayam, Coimbatore 641014, India	Ignition Off
[illegible]	04 Feb 2020 2:47:08 PM	04 Feb 2020 2:48:22 PM	00:01:14	82 Kanna Biran Nagar Road, Meenakshipuram, Neelikonampalayam, Coimbatore 641014, India	Ignition Off (Durations: 00:25:00)
[illegible]	04 Feb 2020 2:11:14 PM	04 Feb 2020 2:21:42 PM	00:10:28	Avinashi Road, Chinniyampalayam, Coimbatore 641062, India	Ignition Off
[illegible]	04 Feb 2020 1:55:33 PM	04 Feb 2020 2:10:55 PM	00:15:22	Chinniyampalayam, Coimbatore 641062, India	Ignition Off
[illegible]	04 Feb 2020 1:34:13 PM	04 Feb 2020 1:54:50 PM	00:20:37	1st Street, Ramanujam Nagar, Chinniyampalayam, Coimbatore 641062, India	Ignition Off
[illegible]	04 Feb 2020 1:27:31 PM	04 Feb 2020 1:33:50 PM	00:06:19	Chinniyampalayam, Coimbatore 641014, India	Ignition Off

Fig: Stoppage History data

3.7 Trend History

This feature was used to find the analysis for the selected vehicle in terms of different parameters like idling duration(in mins), idling instances and extended idling(mins)

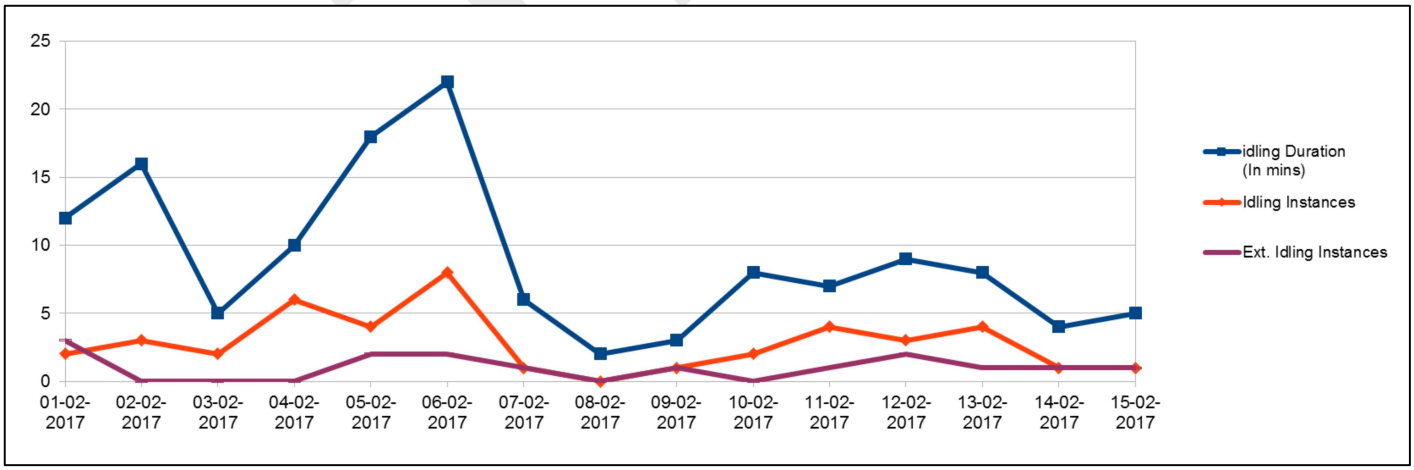


Fig: Trend History data

4. Alarms

The alert screen displays all the alerts triggered from the vehicle, which enables the fleet manager to analyze the type of alerts for all the vehicles.

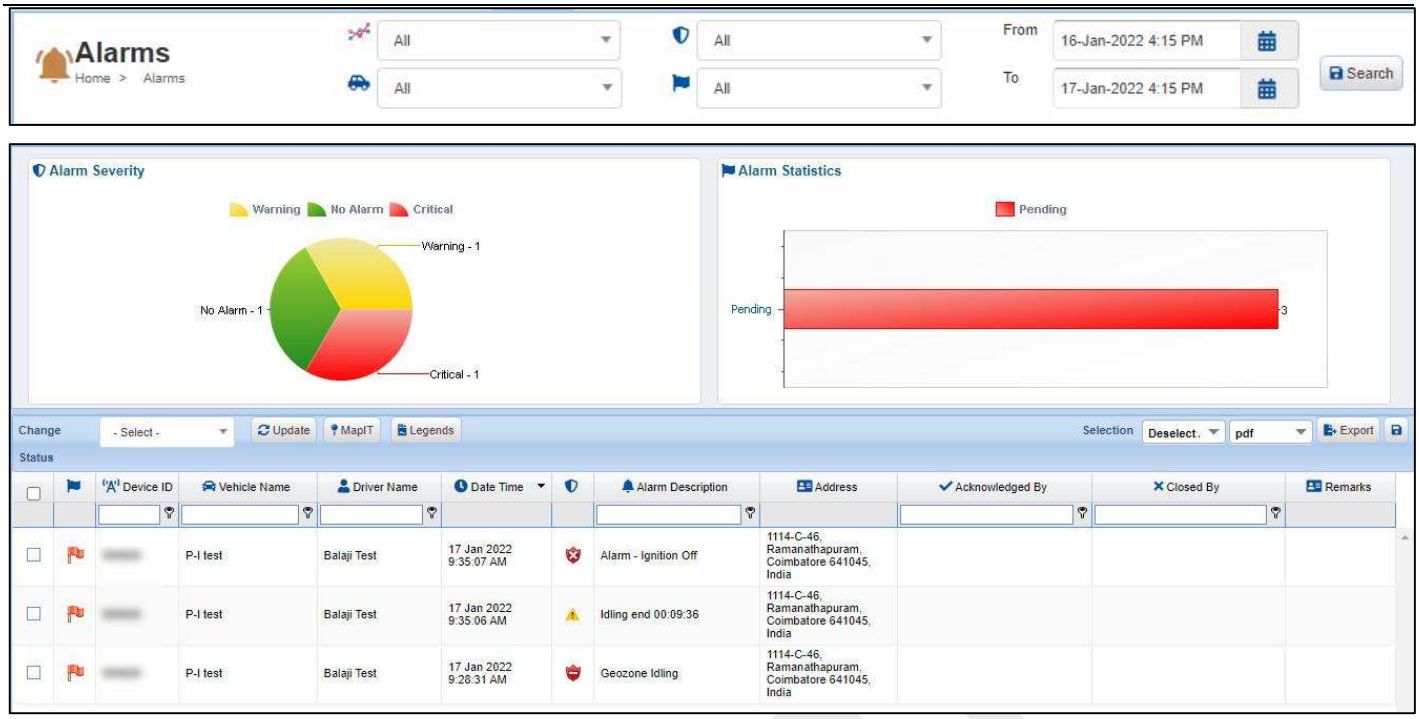


Fig: Alarms Screen

Icon Indications in the Alert screen:

- Indicates the Fleet Name
- Indicates the Vehicle Name
- Indicates the Severity Level (i.e. Notify/ Warning/ Critical).
- Indicates the Flag Status (i.e. Pending/ Acknowledged/ Closed)

- The fleet manager can **search** the alerts for their desired fleet and the vehicles would get listed for the selected fleet, where they could select either all/ particular vehicle.
- The fleet manager could select the type of fleet for which they prefer to view the alerts
- Once the fleet is selected by the fleet manager, the vehicles would get listed for the selected fleet, here they could select either all the vehicles / particular vehicle
- The alerts could be viewed by selecting the severity levels (i.e. Critical/ Warning/ Notify)
- The alerts could also be viewed based on their status by selecting the status type (i.e. Pending/ Acknowledged/ Closed)
- The fleet manager could view all the alerts based on the time period (i.e. they could select the date and time period for which they want to view the alerts)
- The status of the alert of the alert would be identified by three different colored flags:
    - The **red** flag indicates alerts that are pending, yellow flag indicates acknowledged alerts and the green flag indicates alerts that are closed.

- Once the fleet manager acknowledges the alert it implies that the fleet manager had attended the alert and not yet closed it and the status of that alert would turn **yellow**.

☐		P-I test	AsanAsan	24 Apr 2021 12:26:28 PM		Alarm - Ignition Off	50-B Neelikkotham Palayam Road, NKG Nagar, Neelikonampalayam, Coimbatore 641033, India			
☐		P-I test	AsanAsan	24 Apr 2021 12:26:00 PM		Speed:34 KMPH	NKG Nagar, Neelikonampalayam, Coimbatore 641033, India			
☐		P-I test	AsanAsan	24 Apr 2021 12:13:29 PM		Alarm - Ignition Off	15-2, Meenakshipuram, Neelikonampalayam, Coimbatore 641014, India			

Fig: Status of Alert

- If the fleet manager closed the alert it implies that they had attended and closed that alert and the status of the alert would turn **green**

Icon Observed during Search

Flag icons:

- Red Flag indicates that the alarm is not yet acknowledged by the fleet manager.
- Yellow Flag indicates that the fleet manager had acknowledged the alert but not yet closed.
- Green Flag indicates that the ALARM is CLOSED by the fleet manager.

Severity icons:

- This icon mentions the WARNING type of ALARMS
- This icon mentions the CRITICAL type of ALARMS
- This icon mentions the NO ALARM type of ALARMS.

- The fleet manager can acknowledge/ close the alerts for the selected/ all the vehicles for the fleet controlled by them.
- The fleet manager can select the vehicle by selecting the check box against the vehicle name. Under Change status, they can select either acknowledge/ close and select the update option to change the status of the alert for the selected vehicles
- When user select status as “Acknowledge” and on updating the status the following confirmation window would be seen enabling user to enter comments for acknowledging the alarm(s).
- When the user selects status as “Close” and on updating the status the following confirmation window would be seen enabling the user to enter comments for closing the alarm(s).

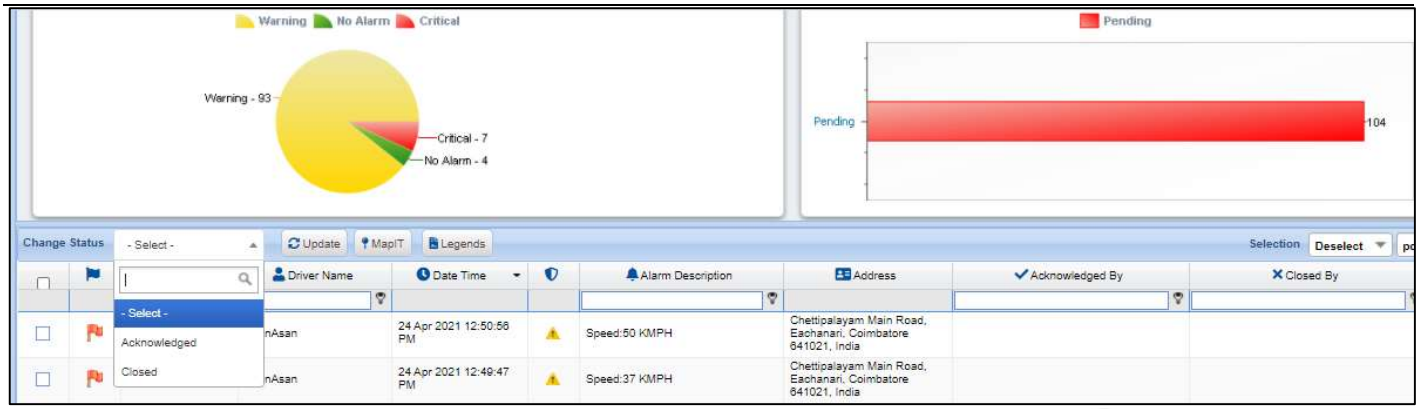


Fig: Acknowledge/ Close Alert

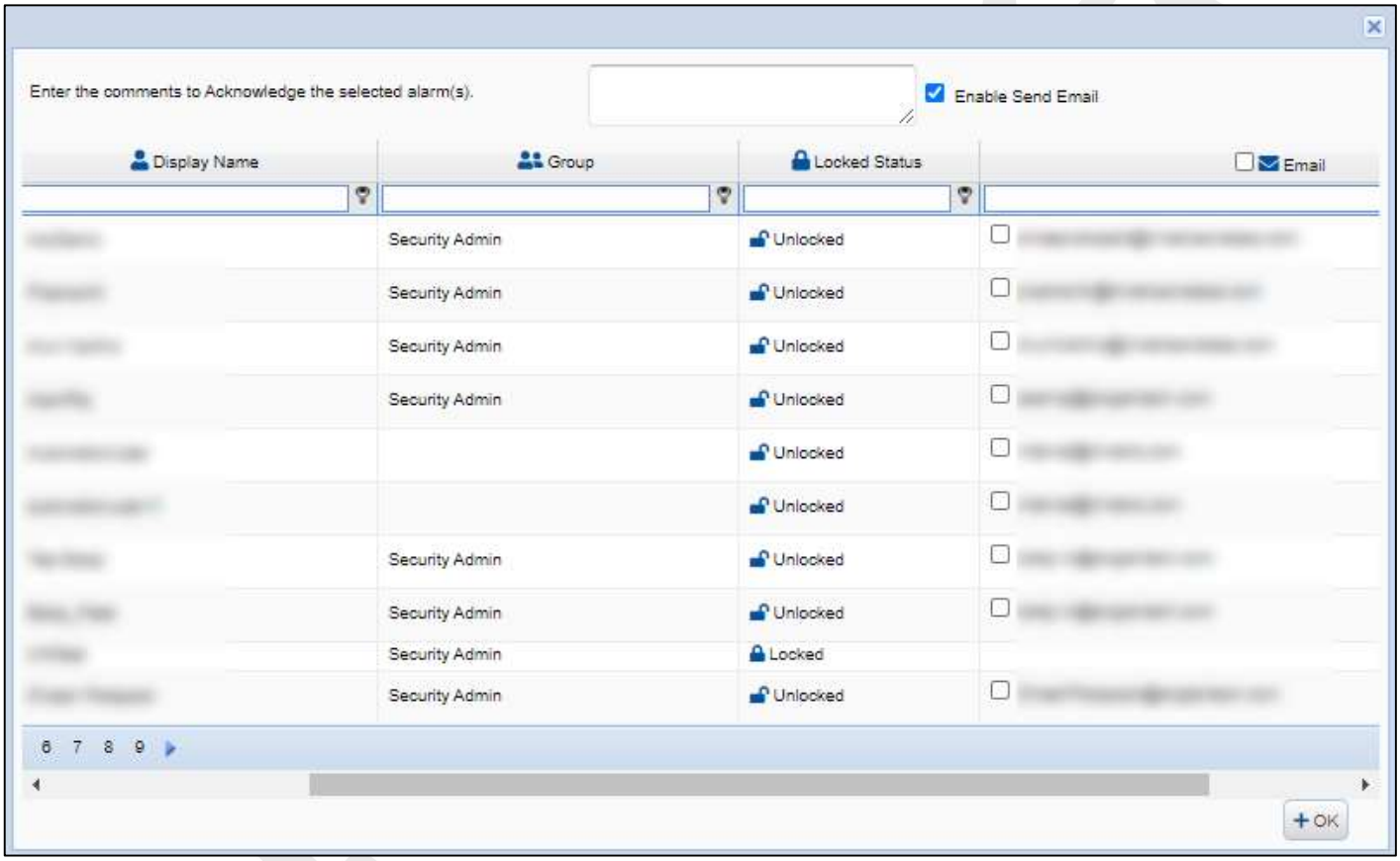


Fig: Confirmation to close alarms/Email notification

- In case if the user wants to trigger notification for the acknowledge/close alarms he can check 'Enable Send Email' checkbox. On checking the same, complete list of users with email ID's will be shown from which the user can select the email address and send the notification to respective users.
- The user can view confirmation message for the acknowledged/ closed status.

Fig: Acknowledgement for closing alarms

- In case if the user selects the closed alarm and updates the status again as closed they would be alerted as shown in the following figure.

Fig: Alert for already closed alarms

- In case if the user selects the Acknowledged alarm and updates the status again as Acknowledged they would be alerted as shown in the following figure.

Fig: Alert for already acknowledged alarms.

5. Landmarks

Landmarks may be a building or place of importance; etc. that the user would set for easier identification of the vehicles movement in any location, landmarks can also be created from History.

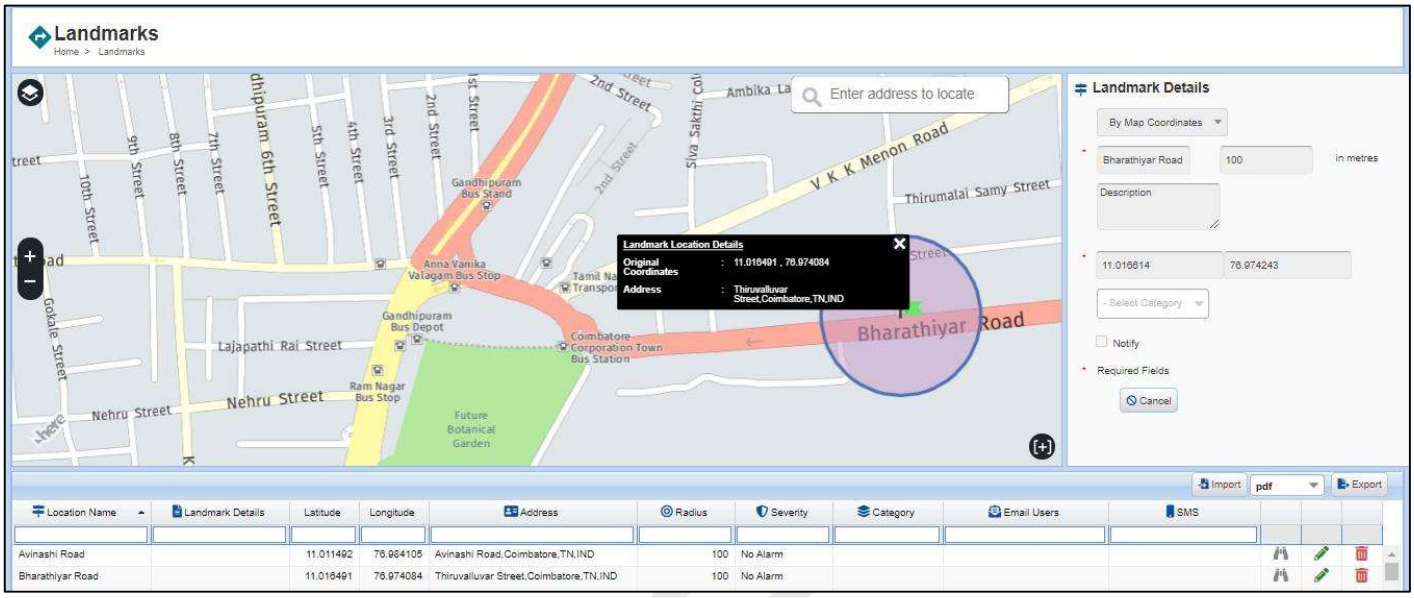
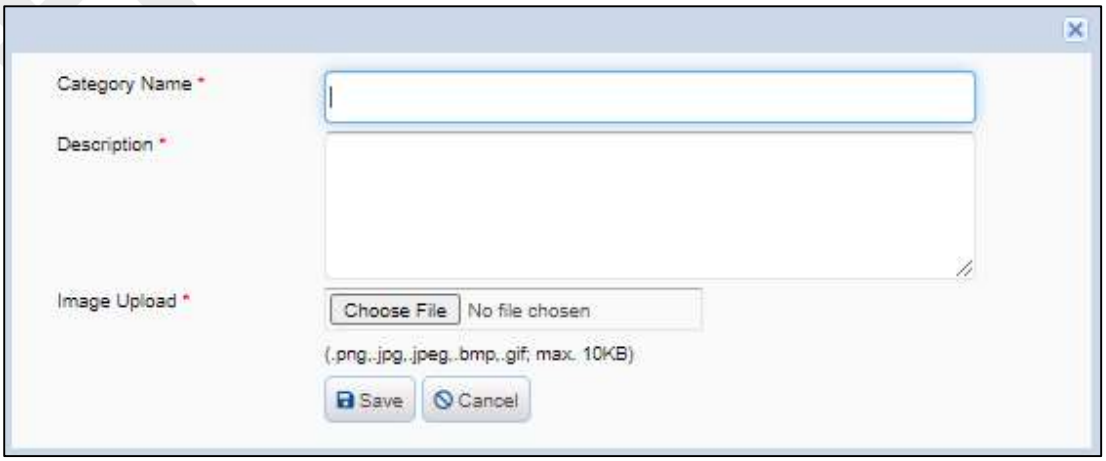


Fig: Landmark Screen

1. The user would be able to create a new landmark by giving street address/ by mentioned the map coordinates
2. Symbol - specifies creation of new Landmark Category. On selecting this add icon, the below mentioned pop-up is displayed, where the user can create / edit the landmark category. A Landmark Category is used to group the landmarks based on their importance, relevance, etc. For ex., Indian Landmarks, Dubai landmarks, etc. The image uploaded as the category icon will be displayed as the landmark icon at the center of the selected landmark area.
3. Once a landmark is created and assigned to the vehicle, whenever the vehicle is entering it, the corresponding address of the location will be replaced by the landmark name.



4. **Fig: Landmark Category**

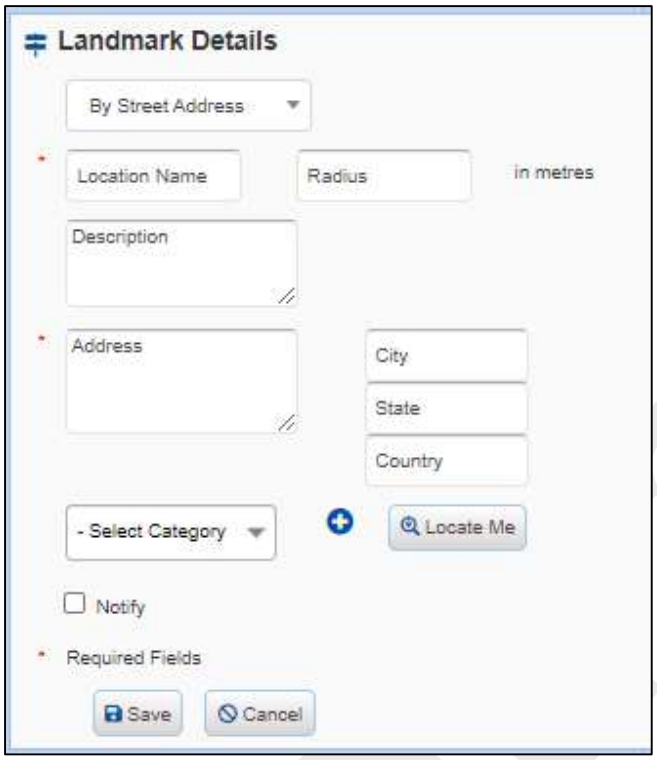


Fig: Creating New Landmark

5. The user can create a landmark either by the street address or by the map coordinates. He can set the desired radius and assign users to whom the notifications are to be sent as email or SMS. The set users will be notified whenever an Ignition ON occurs in the landmark.
6. If the landmark is plotted using the Map Coordinates, the user has the option to drag and re-plot the landmark in a different location. In case of plotting by Street Address, this option is not available.
7. The user would be able to view the list of landmarks at the bottom of the landmark screen as shown below

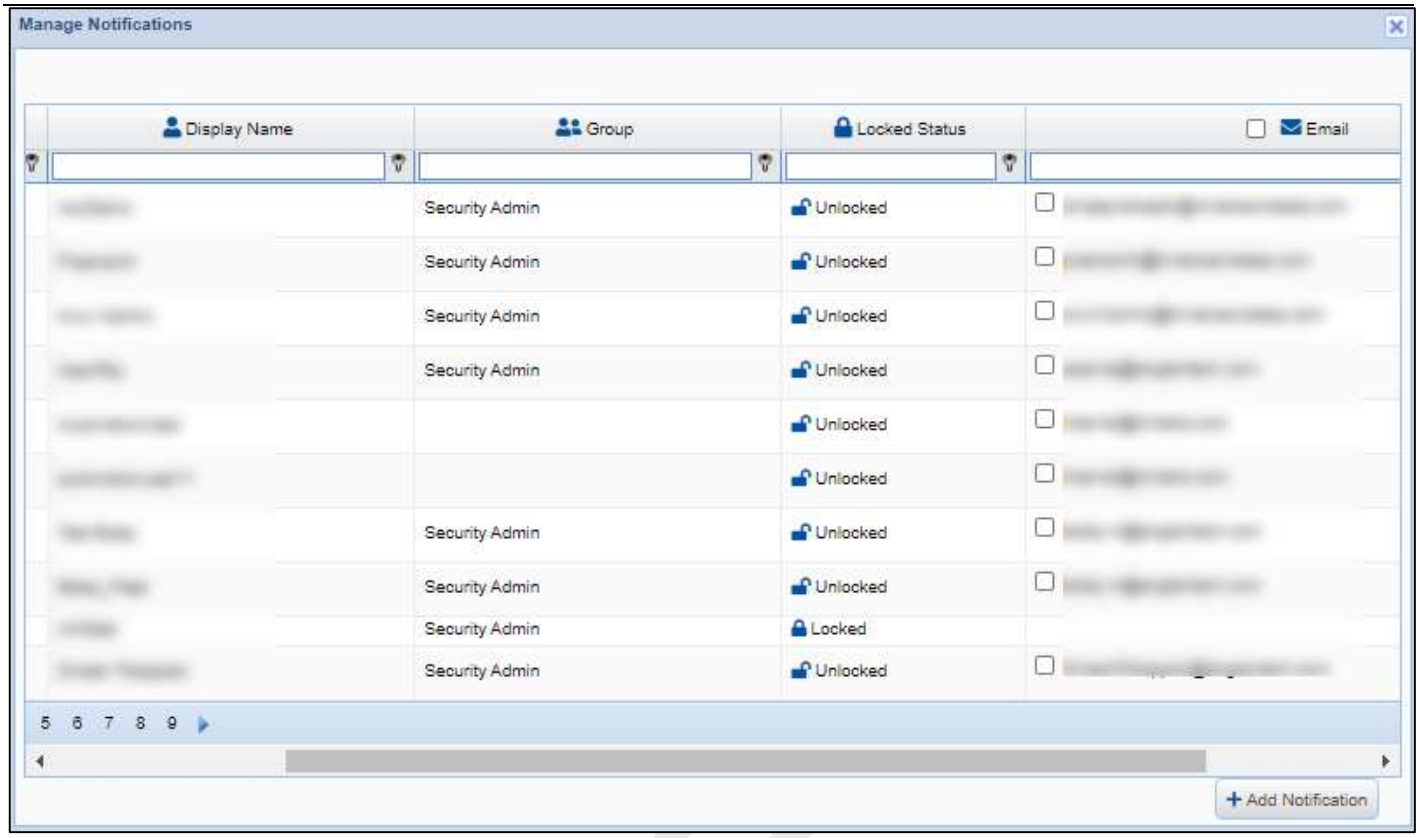


Fig: Manage Notification - 2

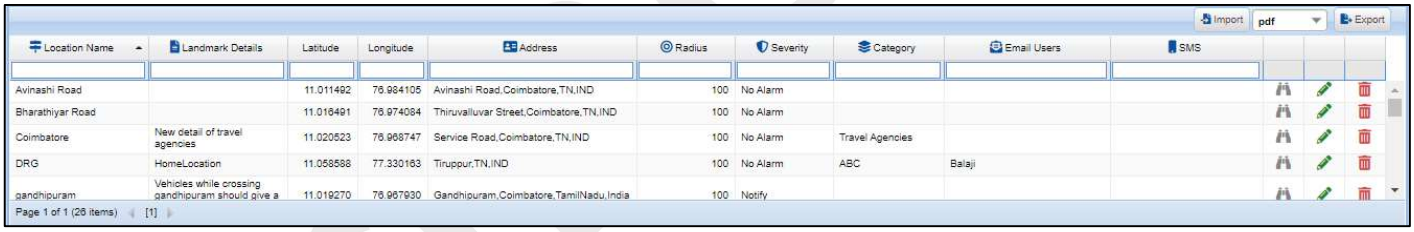


Fig: List of Landmarks

Symbols used in the page are as below:

PENCIL: Used to edit the landmark.

BINOCULAR: Used to view the landmark.

CROSS: Used to delete the landmark.

Note: For better accuracy, landmarks can be plotted by clicking the appropriate location on the map. Providing Address to plot landmarks may have minor adjustments from the actual address, done by the map provider.

Landmark Import

In case there are a lot of landmarks to be created, they can be imported using the Landmark Import option that is currently available in the Landmarks page. A user can download the template and input a very few requested details like Landmark Name, Latitude & Longitude and the Radius of the landmark. On uploading the template, the landmarks will be created as per the inputs provided in the uploaded file.

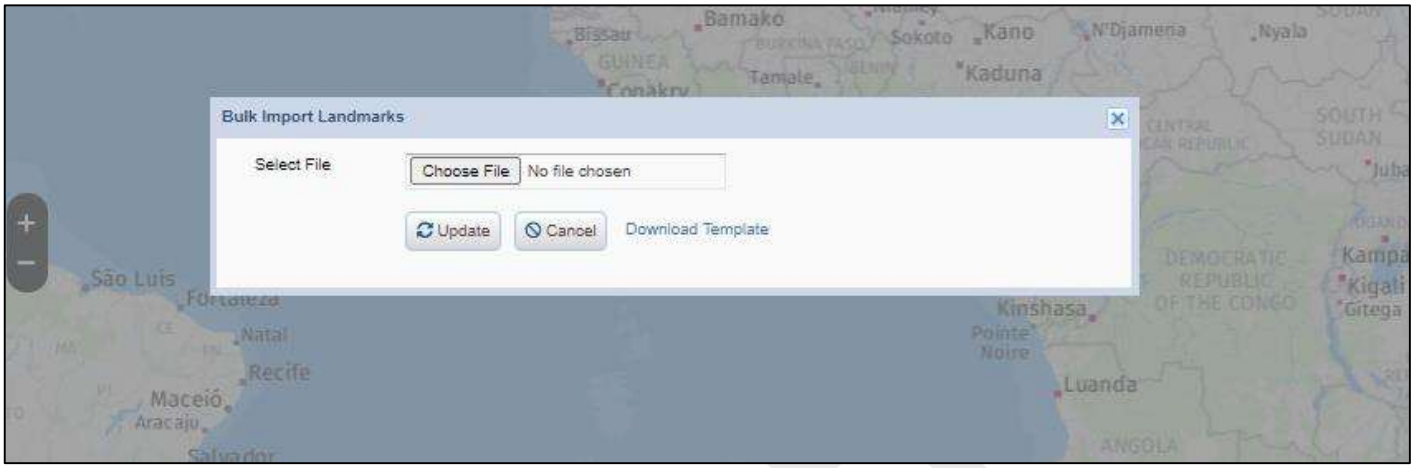


Fig: Landmark Import

6. Geozone

The **Geozone Management** includes

- ✓ Manage Geozones for creating and updating the geozones.
- ✓ Assign Geozones for assigning and assigning the geozones to the vehicle.
- ✓ Vehicle Geozone Assignment for assigning and unassigning the vehicles to the geozones.

6.1 Manage Geozones

Manage Geozone module allows the user to manage the geozones by creating, updating and deleting them.

Select **Geozone** →**Geozone Management** → **Manage Geozones** as shown in the below screen.

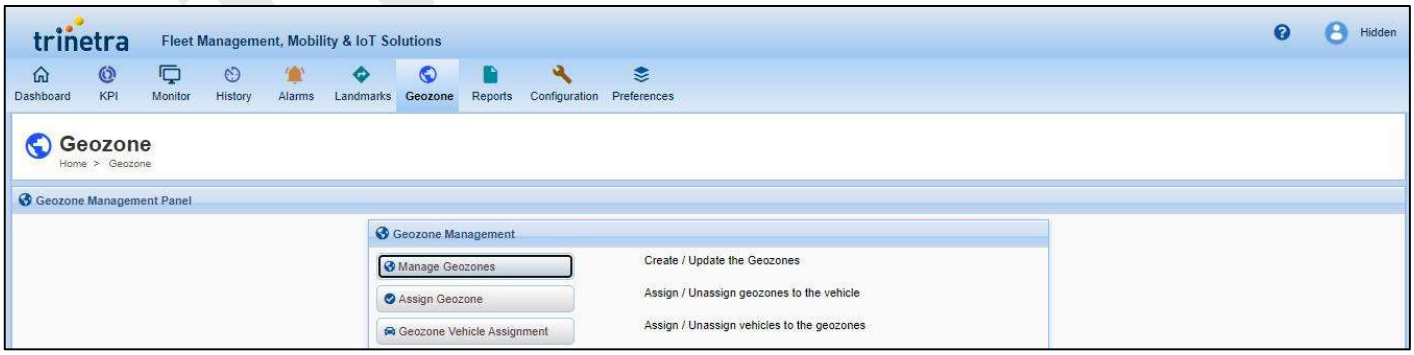


Fig: Geozone Management Panel

Click the **Manage Geozones** button to view the following Geozone Listing Screen

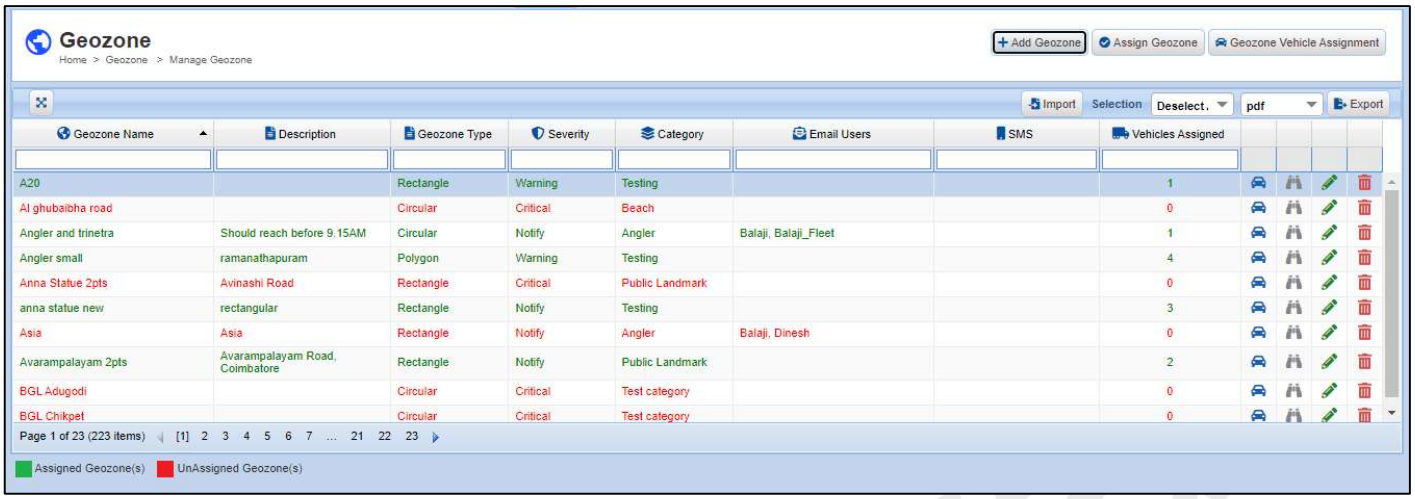


Fig: Manage Geozones Listing

There is a provision for search under each column in the above geozone listing screen such that the user can search for a particular geozone or group of geozones based on the Geozone Name, Description, Severity, Category, Emails Users and SMS Users.

The users can also sort the grid contents based on a particular column by clicking the appropriate column header.

The following are the purpose of the symbols used in the above Manage Geozones Listing Screen

PENCIL: Used to edit the geozone.

BINOCULAR: Used to view the geozone.

CROSS: Used to delete the geozone.

CAR: Used to assign the geozone for vehicles.

Add the Geozone – Click **Add Geozone** button as highlighted in the Manage Geozones Listing Screen

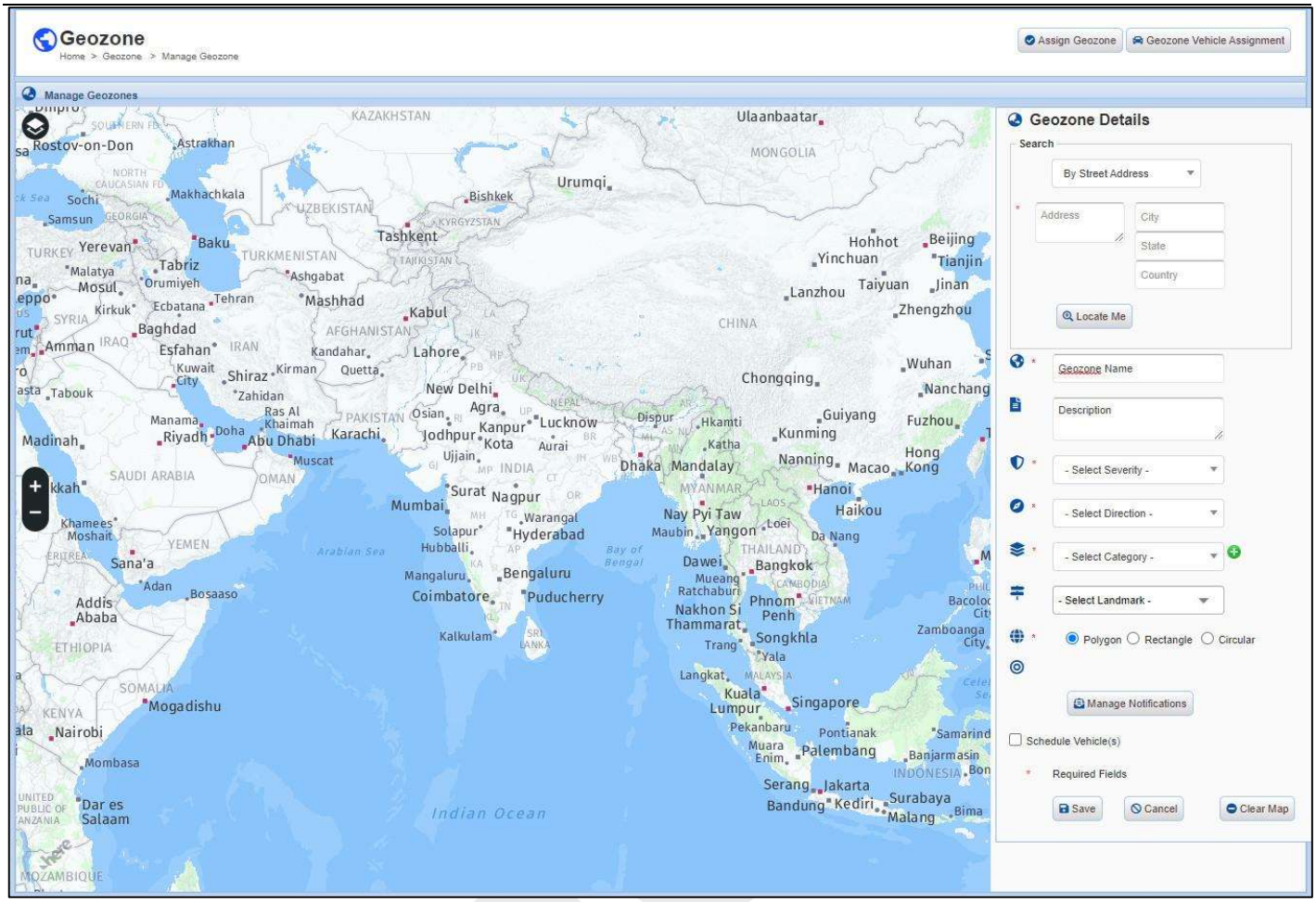


Figure: Manage Geozones Add Screen

The following are the purpose of the symbols used in the above Manage Geozones Add Screen

PLUS: Used to add the geozone category

PENCIL: Used to edit the geozone category

The following are the steps to create the Geozone

- Fill Geozone name and its description if necessary
- Set the Severity Level (Notify / Warning / Critical / No Alarm) based on the need
- Set the Direction (Disable / In Only / Out Only / In and Out) so that vehicle will trigger the message based on it
- Select the category. Geozone category helps the user to group the geozones so that geozones can be easily managed by the user based on the country, state, region, etc.,

The user can also create, update and delete the geozone category.

Create Geozone Category – Click the Plus ( ) icon on the right side of the category drop-down as highlighted, the following popup appears

Fig: Add Geozone Category pop-up

Enter the Category Name and its Description if required and click Save Button to create the geozone category and the created category will be loaded in the dropdown for selection.

Edit Geozone Category – Click the Pencil ( ) icon on the right side of the category drop-down, the following popup appears

Fig: Edit Geozone Category pop-up

Change the Category Name and its Description if required and click Save Button to reflect the changes in the drop down.

Delete Geozone Category – Click the **Delete** button to delete the geozone category. The geozone category cannot be deleted once it is mapped to the geozone.

- Select either polygon or rectangle radio button to draw the Polygon Geozone or Rectangle Geozone. The user can draw the Geozone based on the requirement on the map. The user can also clear the drawn Geozone by clicking the Clear Map button if needed.
- Select the landmark if required.
- Click the Manage Notification button if required to select the users to whom the notification related to the Geozone has to be given. On clicking the highlighted Manage Notification button, following popup appears

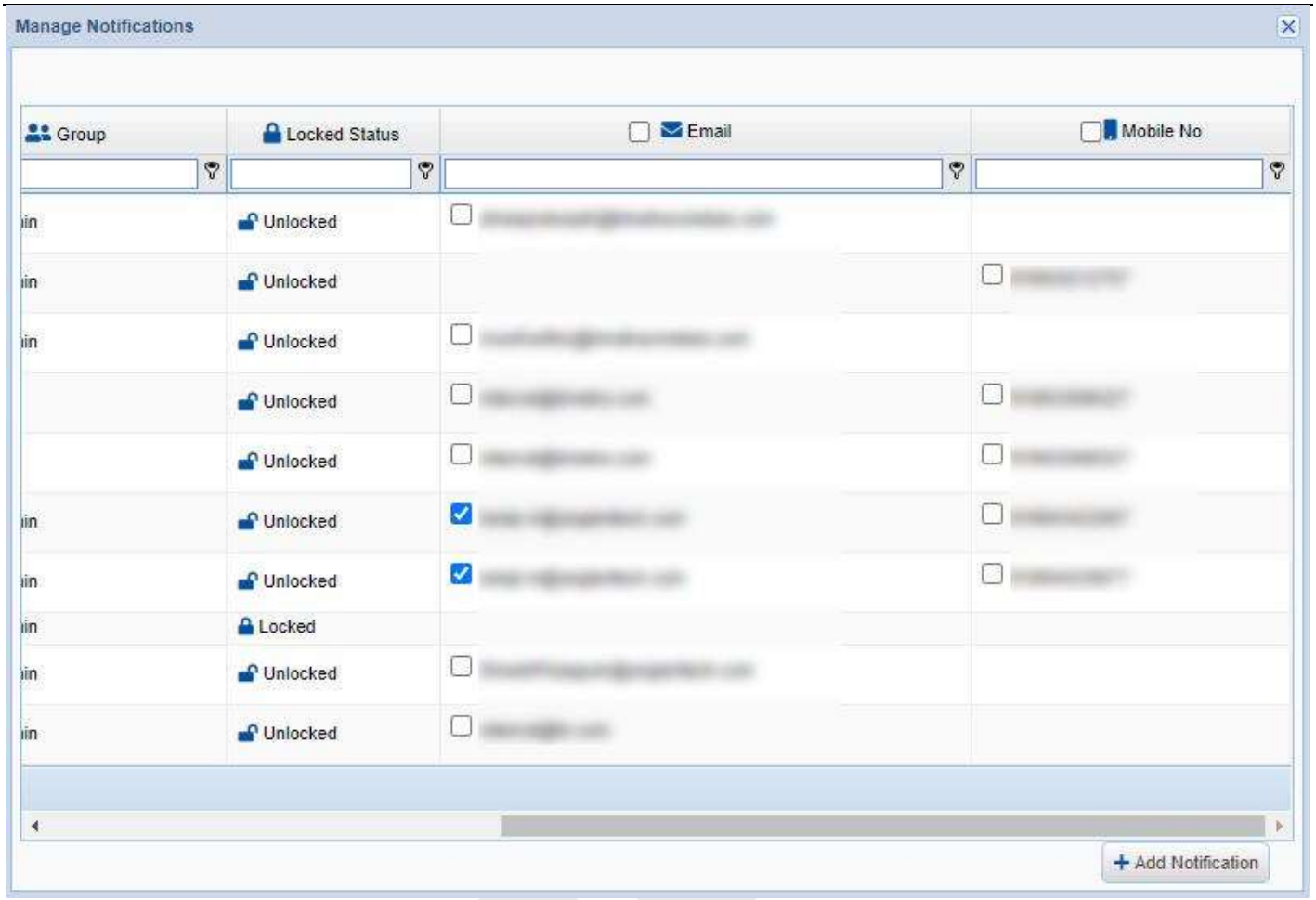


Figure: Manage Notifications Popup

Select the appropriate check box in the Email and Mobile column in the list corresponding to the users to whom the notifications have to send and finally click **Add Notification** button to set the email and SMS notifications to the selected users.

- Finally click **Save** button to add the Geozone details or click **Cancel** button to cancel the add Operation

Edit Geozone – Click the appropriate **Edit (** **)** icon in the right side of the Geozone Listing Screen corresponding to the Geozone for which the details have to be updated. The Edit screen appears and change the Geozone details as needed and click Save Button to reflect the changes. The rectangle or polygon points and geozone details like direction and Geozone type cannot be changed once the Geozone is assigned to the vehicles.

Working with the Map

- The map can be zoomed in by double clicking on the map. The map can also be zoomed in and out either using the mouse scroll or by clicking the plus and minus symbol on the top left corner of the map.
- The arrows on the top left corner of the map can be used to navigate the map.
- To draw a Polygon Geozone, select Polygon as the Geozone Type.

The symbol refers to the polygon points

The polygon points will be placed by clicking the particular location on the map. Clicking the polygon points will remove it from the map. The polygon points can be moved to another location by dragging it.

- To draw a Rectangle Geozone, select Rectangle as the Geozone Type.

Fig: Add / Edit Geozone – Polygon Geozone in Map

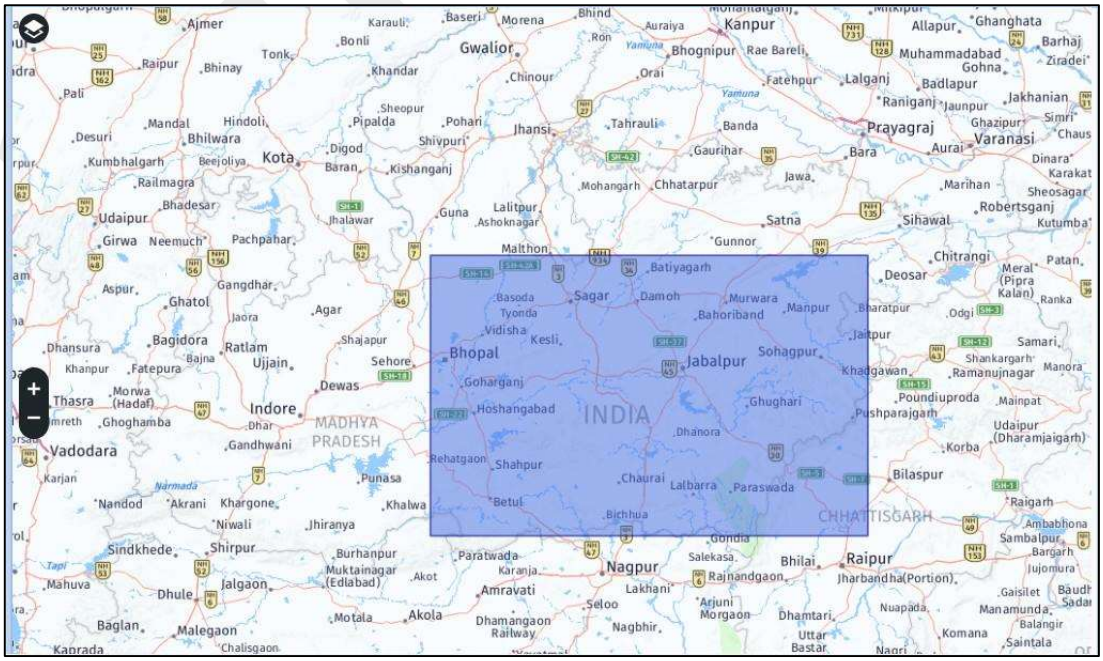


Fig: Add / Edit Geozone – Rectangle Geozone in Map

Fig: Add / Edit Geozone – Circular Geozone in Map

First click on the map will be considered as top left corner and the second click will be considered as the bottom right corner to draw the rectangle geozone.

View Geozone – Click the appropriate **View** ( ) icon in the right side of the Manage Geozone Listing Screen corresponding to the Geozone for which the details have to be viewed. The details will be viewed by the user in the read only mode.

Delete Geozone – Click the appropriate **Delete** ( ) icon in the right side of the Manage Geozone Listing Screen to delete the corresponding Geozone. User will be prompted to confirm the delete operation. The Geozone cannot be deleted once it is assigned to vehicles.

Limitations

1. The total number of geozones allowed per organization is 65,534nos.
2. The maximum number of polygon points that can be drawn on the map for a polygon geozone, is 5.

6.2 Assign Geozones

Assign Geozones Modules allows the user to assign and unassign the geozones to the vehicle.

- The geozones can be assigned to the vehicles, such that the vehicle will trigger a message when it enters or exits the geozone based on the settings.
- When the vehicle enters / exits from a geozone a notification will be triggered to the user based on the severity settings.

Select **Geozone** →**Geozone Management** →**Assign Geozones** as shown in the below screen

Fig: Assign Geozones - Geozone Management Panel

Click the **Assign Geozones** button in the Geozone Management Panel to view the following Assign Geozones Screen

There is a provision for searching the geozones based on the Geozone Name, Severity and Category for both Unassigned Geozones and Assigned Geozones. The user can enter the Geozone Name or select Severity or select Category and click Search Button for displaying the geozones as per the filtering criteria.

The users can sort the grid contents based on a particular column by clicking the appropriate column header.

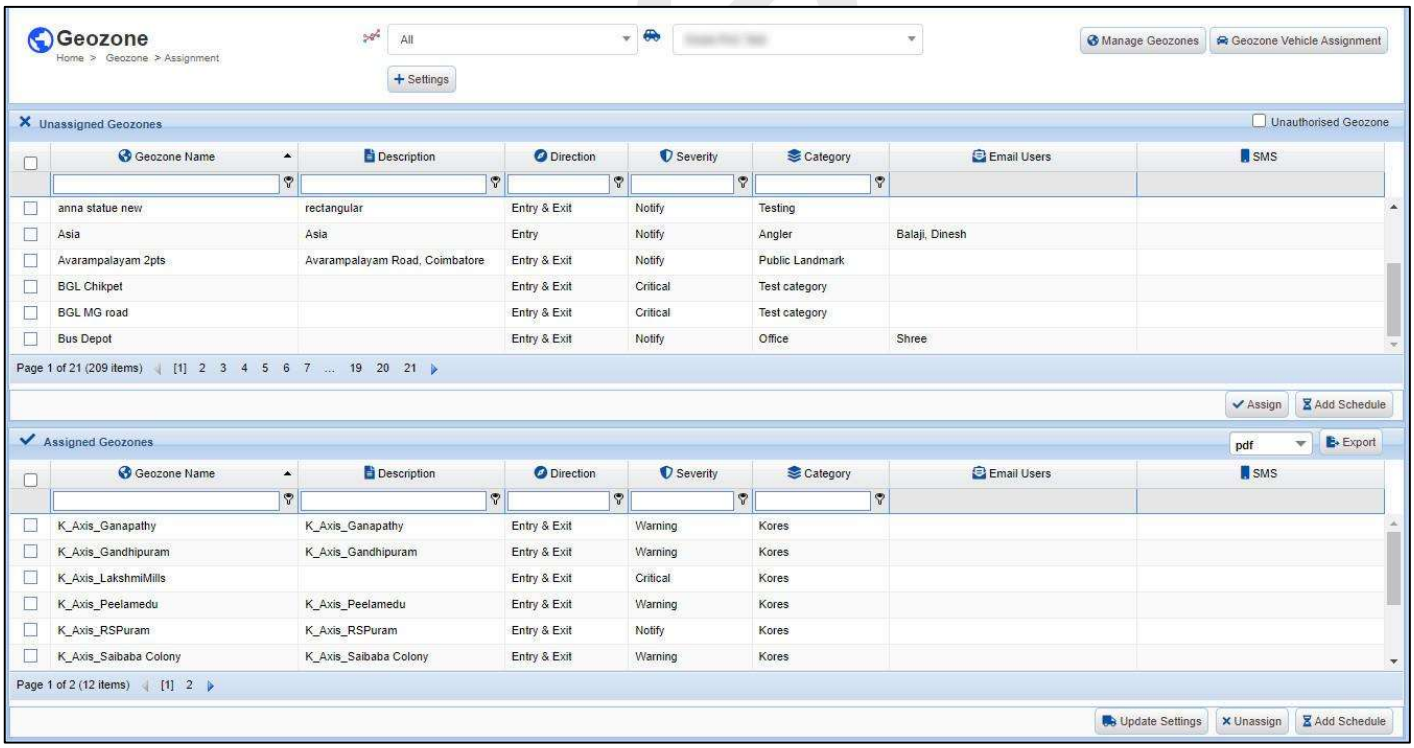


Fig: Assign Geozones

The user can select multiple geozones that are to be assigned from the unassigned geozones list and vice versa.

The following are the steps to assign and unassign geozones to the vehicle

- Select the required fleet. The vehicles will be loaded based on the fleet selected.
- Select the vehicle for which the geozones have to be assigned or unassigned. By selecting the vehicles, the geozones which were all assigned and unassigned will be displayed.
- To assign the geozone to the selected vehicle, Select the check box of the corresponding geozones from the Unassigned Geozones List and click **Assign Geozones** button to assign the selected geozones to the vehicle as highlighted in the Assign Geozones Screen Shot.
- To unassign the geozones from the selected vehicle, Select the check box of the corresponding geozones from the Assigned Geozones List and click **Unassigned Geozones** button to unassign the selected geozones from the vehicle as highlighted in the Assign Geozones Screen Shot.

Scheduling Geozone Assignment

The user has the option to schedule the geozones that are to be assigned to the vehicle. This allows the geozones to be assigned to the vehicle even in their absence. Scheduling the geozone assignment is similar to Scheduling of Commands. The user selects the geozones to be assigned / unassigned and clicks the Add Schedule button available next to the Assign / Unassign Geozone buttons. The command for assigning / assigning the geozone will be automatically scheduled and listed in the Schedule History page, under Configuration.

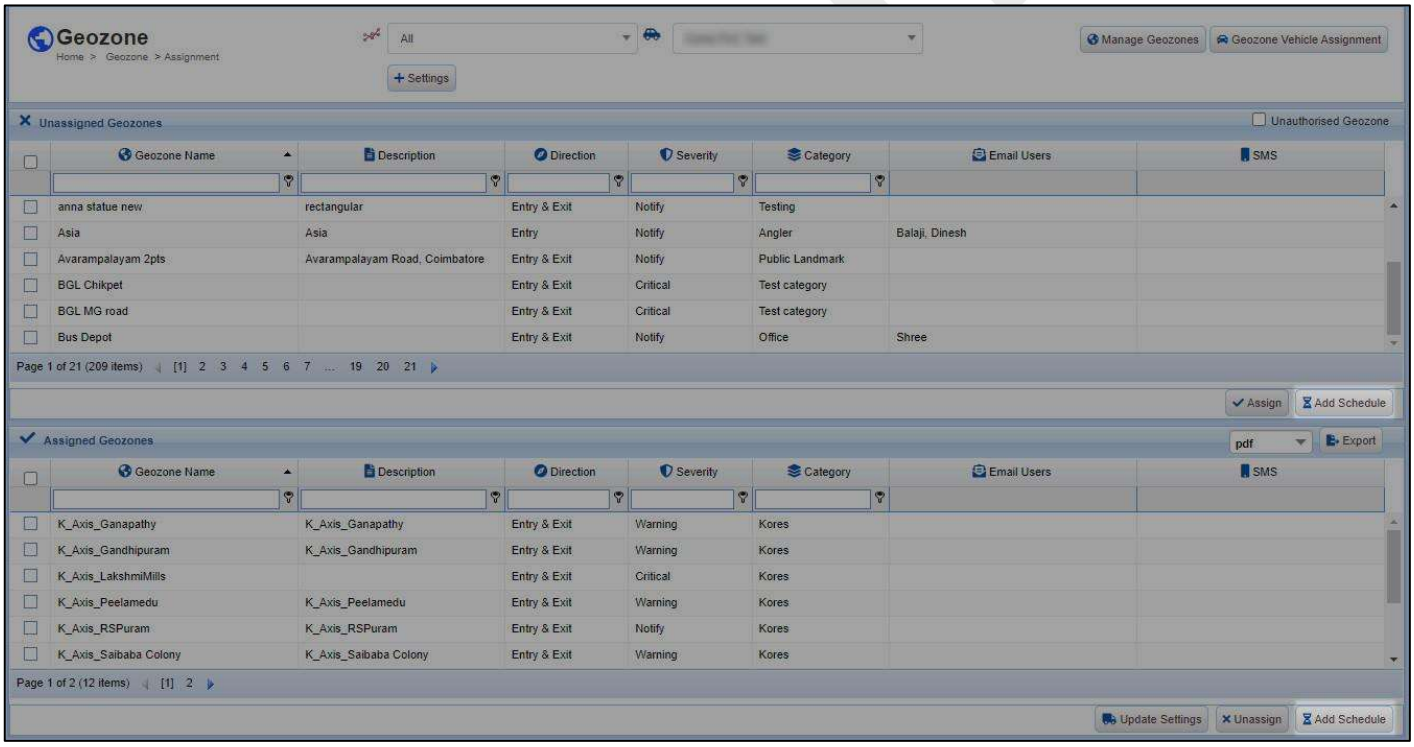


Fig: Schedule for Geozone Assignment

Limitations

1. The maximum number of geozones assigned per vehicle should not exceed 50.

6.3 Geozone Vehicle Assignment

Assign Geozone Assignment Modules allows the user to assign and unassign the vehicles to the geozone.

- The vehicles can be assigned to the geozones, such that the vehicle will trigger a message when it enters or exits the geozone based on the settings.
- When the vehicle enters / exits from a geozone a notification will be triggered to the user based on the severity settings.

Select **Geozone** → **Geozone Management** → **Geozone Vehicle Assignment** as shown in the below screen

Fig: Geozone Vehicle Assignment – Geozone Management Panel

Click the **Geozone Vehicle Assignment** button in the Geozone Management Panel to view the following Vehicle Geozone Assignment Screen

There is a provision for search under each column in the above Unassigned Vehicles and Assigned Vehicles such that the user can search for the particular or group of Unassigned Vehicles or Assigned Vehicles based on the Vehicle Name, Vehicle Type, Make Name, Model Name, Model Year, Assigned Geozones and Max. Geozones. The users can sort the grid contents based on a particular column by clicking the appropriate column header.

The user can select multiple vehicles that are to be assigned from the unassigned vehicles list and vice versa.

The following are the steps to assign and unassign vehicles to the geozone

- Select the geozone category. The geozones will be loaded based on the category selected.
- Select the geozone for which the vehicles have to be assigned or unassigned. By selecting the Geozone, the vehicles which were all assigned and unassigned will be displayed.
- To assign the vehicles to the selected geozone, Select the check box of the corresponding vehicles from the Unassigned Vehicles List and click **Assign** button to assign the selected vehicles to the geozone as highlighted in the Geozone Vehicle Assignment Screen Shot.
- To unassign the vehicles from the selected geozone, Select the check box of the corresponding vehicles from the Assigned Vehicles List and click **Unassign** button to unassign the selected vehicles from the geozone.

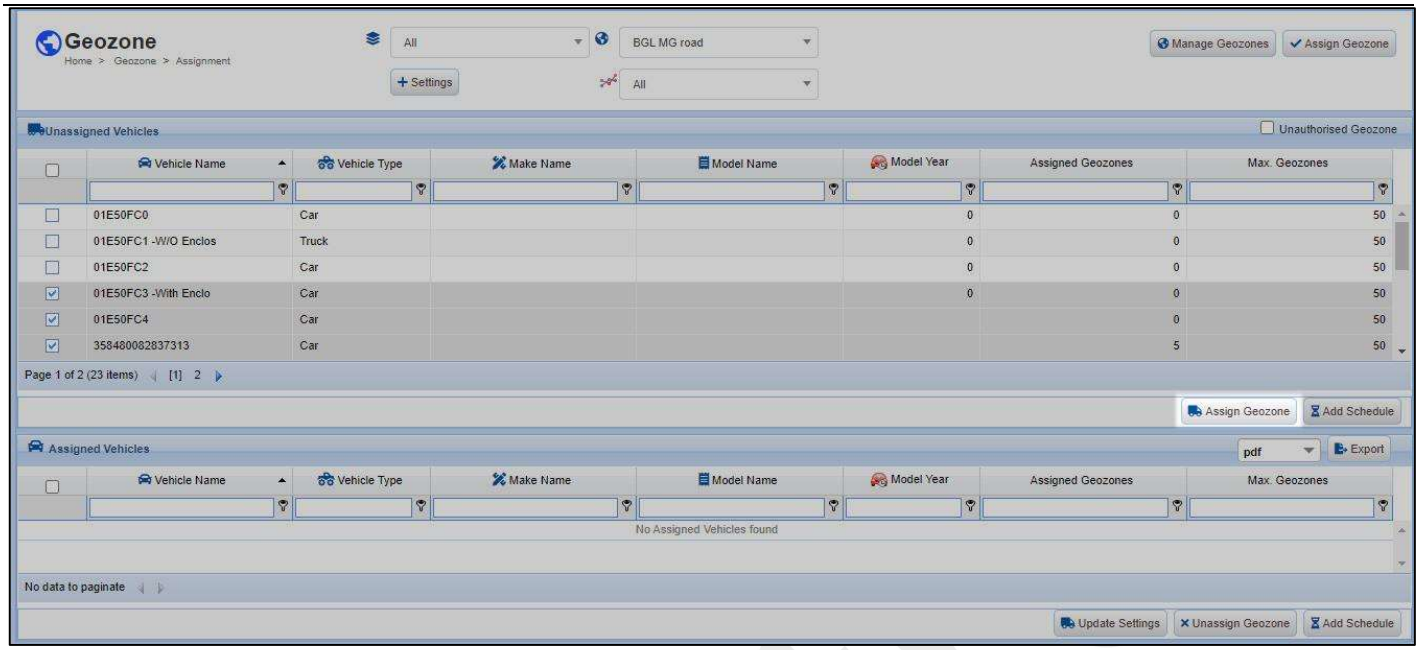


Fig: Geozone Vehicle Assignment

Scheduling Geozone Vehicle Assignment

The user has the option to schedule the vehicles that are to be assigned to a geozone. This allows the vehicles to be assigned to the geozone whenever there is an interaction from the device to the server. Scheduling the geozone vehicle assignment is similar to Scheduling of Commands. The user selects the vehicles to be assigned / unassigned and clicks the Add Schedule button available next to the Assign / Unassign buttons. The command for assigning / unassigning the vehicle will be automatically scheduled and listed in the Schedule History page, under Configuration.

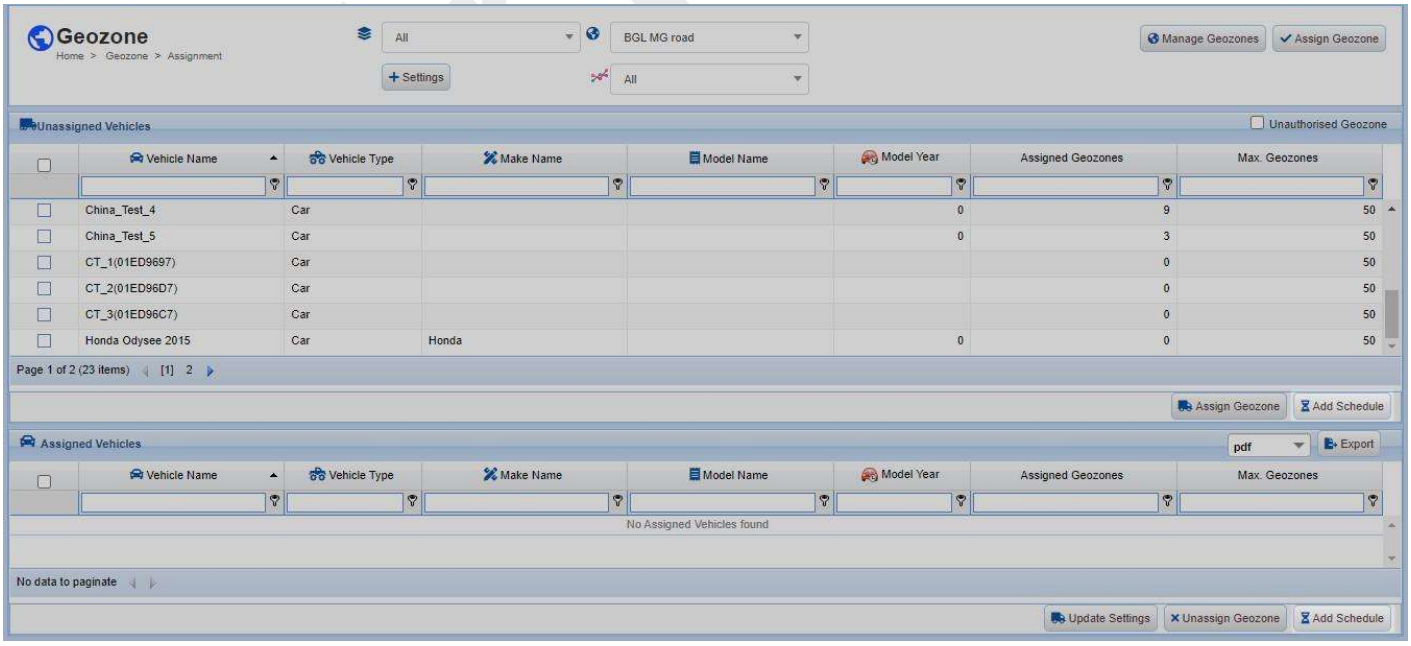


Fig: Scheduling Geozone Vehicle Assignment

Limitations

1. The maximum number of geozones assigned per vehicle should not exceed 50.

7. Reports

The reports module displays the data collected by the application, in a consolidated manner. The data are displayed based on the various criteria selected. The criteria are as below:

- Fleet
- Vehicle
- Duration
- Advance Filters based on the report types
- Show / Hide Options to hide the information in the report
- Sort By and Sort Direction to customize the sorting of the information
- Export To option to export the report to required format like PDF, Word and Excel

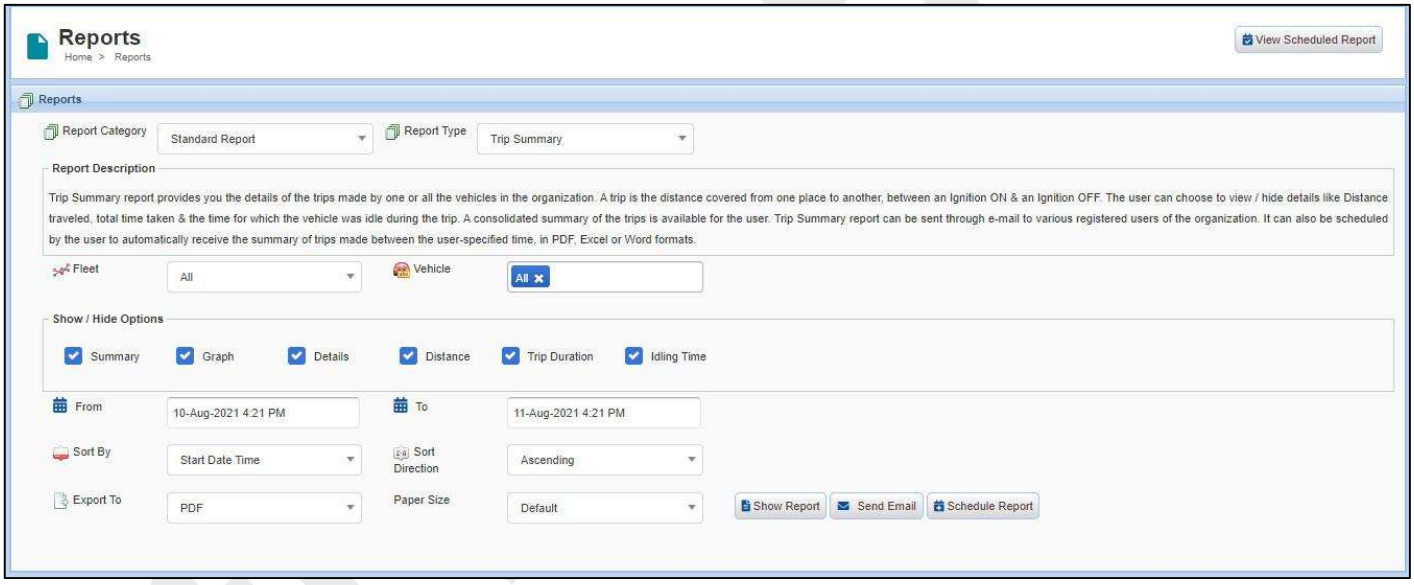


Fig: Reports Main Screen

The reports can be viewed by following the below steps.

1. Select the required **Fleet** from the drop down. On selecting the fleet, the vehicles under the selected fleet will be loaded in the vehicle drop down.
2. Select the required **Vehicle** from the vehicle drop down.
3. Select the **Report Type**. The Show / Hide Options, Advanced Filter and Sort By Options will vary based on the report type selected.
4. Select the **Duration** for which the report data should be viewed.
5. Select PDF from the **Export To** drop-down and Click **Show Report** button to view the selected report based on the selected criteria. If the Export To is selected as Word or Excel, then the selected reports can be downloaded in Word or Excel formats and can be saved in the desired location of the system.

7.1 Reports Category

The reports are categorized based on the different solutions they are used in. The different categories and the reports under them are as below:

Standard Reports	Fleet Maintenance Reports	Driver Management Reports	Vehicle Utilization Reports	Others
Trip Summary Report	Nearing Maintenance Report	Driver Violations Report	Fleet Utilization Summary Report	PTO Activity Report
Trip Details Report	Maintenance Service History Report	Driver Trip Summary Report	Weekly Fleet Utilization Report	Temperature Report
Alarms Report	Maintenance Cost Report	Driver Trip Details Report	Fleet Idling Summary Report	Transit Mixer Report
Violations Report.	Unplanned Vehicles Report	Driver Behavior Summary Report		MDT Report
Geozone Activities Report.	Tyre Details			Manual Fuel Entry Report
Idling Details Report.	Tyre Stock Details			Toll Gate Fare Report
Landmark Trips Report.				Route Deviation Report
Day-wise Trip Summary Report.				Head Count Report
Portal Usage.				Student Travel History Report
Vehicle Details Report.				Lease History Details Report
Best Drivers				Audit Trail Report
Route – Landmark Skipping				Notification Settings

Roster				Landmark Activity
Route – Time/Distance Deviation				Accident details
Parked Status				Application usage details
Delayed Arrived report				Clean room temperature and humidity
Non- Reporting Devices				Door activity
RFID Activity				Fuel operating cost
Schedule deviation				Geozone trip details
Vehicle Summary				Fuel report
ROI Analysis				OBD fuel consumption
Daily Fare details				RFIC activity summary
Monthly Fare Details				Route history details
Refrigerator fuel consumption				SMS bases query report
Vehicle details				SMS summary
Consolidated vehicle summary				Speed band
Day Summary				Stock details report
Landmark trip sheet				Stock issued report

Geozone entry				Ultrasonic fuel sensor details
				User login tracking
				Vehicle Off road report

Type of Reports

The types of reports are explained in detail below.

1. Trip Summary

Trip Summary Report allows the user to view the details of the trips made by the vehicles in the organization for the selected report duration. A trip is the distance covered from one place to another, between an Ignition ON & an Ignition OFF. It provides the summarized information of each trip such as date and time, address of the start and end of the trip, duration of the trip, distance traveled calculated in miles or kilometers (based on the user preferences), stop time, idling time and odometer reading.

trinetra GPS Vehicle Tracking & Fleet Management Solutions **Trip Summary**

Fleet : All **Vehicle :** All **From :** Apr 20, 2014 8:00:00 AM **To :** Apr 21, 2014 8:00:00 PM

Vehicle Name : [illegible] **VIN :** VIN **License Plate :** [illegible]

Trip no	Departure	Arrival	Distance (Kms)	Max. Speed (KMPH)	Duration	Idling	Stop Time
1	Apr 20, 2014 4:52:53 PM Saravanampatti, Coimbatore 641035, India	Apr 20, 2014 4:56:29 PM Saravanampatti, Coimbatore, India	0	0	00:03:36	-	00:13:59
2	Apr 20, 2014 5:10:28 PM Saravanampatti, Coimbatore, India	Apr 20, 2014 5:13:33 PM Saravanampatti, Coimbatore, India	0	0	00:03:05	-	00:10:39
3	Apr 20, 2014 5:24:12 PM Saravanampatti, Coimbatore, India	Apr 20, 2014 5:27:08 PM Saravanampatti, Coimbatore, India	0	0	00:02:56	-	00:15:45
4	Apr 20, 2014 5:42:53 PM Saravanampatti, Coimbatore, India	Apr 20, 2014 5:46:37 PM Saravanampatti, Coimbatore 641035, India	1	-	00:03:44	-	00:07:05

Fig: Trip Summary Report

2. Trip Details

Trip Details Report allows the user to view the details of each and every trip like date & time, speed, street address and its message details for every vehicle in the organization. It also provides the summary at the top of each trip details for the each vehicle. The trip summary includes date, time and address of trip start and end, total distance traveled, total duration of the trip, average speed, total idling time and stop time.

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Trip Details

Fleet : All **Vehicle :** All **From :** Apr 20, 2014 8:00:00 AM **To :** Apr 21, 2014 8:00:00 PM

Vehicle Name : [illegible] **VIN :** **License Plate :** [illegible]

Report Summary

Departure	Arrival	Distance (Kms)	Avg. Speed (KMPH)	Duration	Idling	Stop Time	Odometer Start - End
Apr 20, 2014 1:35:18 PM [illegible]	Apr 20, 2014 2:03:27 PM [illegible]	16	34	00:28:09	00:00:00	00:04:56	34093 - 34109

Date & Time	Message Details	Speed (KMPH)	Location	Odometer
Apr 20, 2014 1:35:18 PM	Ignition On	0	[illegible]	34093
Apr 20, 2014 1:45:17 PM	Location Update	42	[illegible]	34098
Apr 20, 2014 1:55:17 PM	Location Update	34	[illegible]	34104
Apr 20, 2014 2:03:27 PM	Ignition Off	0	[illegible]	34109

Fig: Trip Details Report

3. Alarms

Alarms Report allows the user to view the information about the alarms like vehicle name which have generated the alarm, date time at which the alarms were generated, description, severity of the alarms warning or critical, street address and status of the alarms pending or acknowledged or closed. The user can also view the name of the user who have acknowledged or closed the alarms and date & time on which the alarms were acknowledged or closed.

Advanced filters like severity, alarm status and user name is provided for the user to select the report based on the condition. The user name filter will only be available when the acknowledged or closed is selected from the alarm status drop down.

trinetra GPS Vehicle Tracking & Fleet Management Solutions

Alarms Details

Fleet : All **Vehicle :** All **From :** Apr 20, 2014 8:00:00 AM **To :** Apr 21, 2014 8:00:00 PM

Vehicle Name : [illegible] **VIN :** **License Plate :** [illegible]

Alarm	Driver Name	Date & Time	Description	Location	Acknowledged By	Closed By
Warning	-	Apr 20, 2014 10:45:46 AM	Idling end 00:06:05	Tindivanam Road, Gingee, Gingee 604202, India		
Warning	-	Apr 20, 2014 2:42:14 PM	Idling end 00:06:28	Viluppuram Sub-District, India		
Warning	-	Apr 21, 2014 5:59:00 AM	Idling end 00:11:42	Viluppuram Sub-District, India		
Warning	-	Apr 21, 2014 6:59:39 AM	Idling end 00:03:10	Viluppuram Sub-District, India		
Warning	-	Apr 21, 2014 9:56:52 AM	Idling end 00:05:46	Tindivanam Road, Gingee, Gingee 604202, India		

Fig: Alarms Details Report

4. Violations

Violations Report allows the user to view the details of the violations that have been generated during the trip for all vehicles in the organization. The information like vehicle name, date & time on which the violation has occurred, address at which the violation has occurred, speed, duration and violation type namely Speed Alert, Harsh Braking, Extreme Braking Harsh Acceleration & Extreme Acceleration will be shown in this report. An advanced filter for violation type is provided to the user to select the report based on the violation type.

trinetra GPS Vehicle Tracking & Fleet Management Solutions **Violations Details**

Fleet : All **Vehicle :** All **From :** Apr 20, 2014 8:00:00 AM **To :** Apr 21, 2014 8:00:00 PM

Vehicle Name : [illegible] **VIN :** **License Plate :** [illegible]

Date & Time	Driver Name	Violation Type	Speed (in KMPH)	Duration	Location
Apr 20, 2014 10:31:41 PM	-	Harsh Braking	0	00:00:01	NH-45, Srirangam, India
Apr 20, 2014 11:38:08 PM	-	Speed Alert	66	00:02:37	Trichy Road, Lalgudi, India
Apr 20, 2014 11:41:31 PM	-	Speed Alert	68	00:04:06	Trichy Road, Lalgudi, India
Apr 20, 2014 11:46:19 PM	-	Speed Alert	60	00:01:06	Trichy Road, Kunnam, India
Apr 20, 2014 11:53:20 PM	-	Speed Alert	66	00:01:27	Trichy Road, Kunnam, India
Apr 20, 2014 11:59:13 PM	-	Speed Alert	69	00:02:50	Trichy Road, Perambalur Sub-District, India

Fig: Violation Report

5. Geozone Activities

The Geozone Activities Report allows the user to view the information of all vehicles in the organization when the vehicle enters or leaves the defined geozones. The user can view the information like vehicle name that have entered or left the geozones, date & time on which the vehicle has entered or left the geozones, geozone name through which the vehicle has entered or left, Severity – Notify or Warning or Critical and the Street Address of the geozone activities. An advanced filter for geozone activities like All, Entry only and Exit only is provided to the user to view the report based on the geozone activities.

trinetra GPS Vehicle Tracking & Fleet Management Solutions

Geozone Activity Details

Fleet : All	**Vehicle :** All	**From :** 07/14/14 8:00:00 AM	**To :** 07/15/14 8:00:00 PM
Vehicle Name : Saud_Veh 1	**VIN :**	**License Plate :** [redacted]	

Report Summary

Total No. of Activity	No. of Geozone In	No. of Geozone Out	No. of Critical Alarms
14	8	6	0

Geozone Name - Activity	Date & Time	Severity	Location
[redacted] - In	07/14/14 9:09:44 AM	Notify	[redacted]
[redacted] - In	07/14/14 9:09:44 AM	No Alarm	[redacted]
[redacted] - Out	07/14/14 10:16:36 AM	Notify	[redacted]
[redacted] - Out	07/14/14 10:16:36 AM	No Alarm	[redacted]
[redacted] - In	07/14/14 10:18:19 AM	Notify	[redacted]
[redacted] - In	07/14/14 10:18:19 AM	No Alarm	[redacted]
[redacted] - Out	07/14/14 10:38:47 AM	Notify	[redacted]
[redacted] - Out	07/14/14 10:38:47 AM	No Alarm	[redacted]

Fig: Geozone activity Report

5.1 Geozone Entry Report

Ever wondered whether your vehicles are at the designated places at any point of time? Geozone Entry Report gives the vehicle details that are currently in their respective geozones. This allows you to plan the trips for the vehicles at your disposal.

trinetra GPS Vehicle Tracking & Fleet Management Solutions

Geozone Entry

Fleet : All **Vehicle :** All

Geozone Name	Geozone Category	No Of Vehicle	Details			
[redacted]	[redacted]	1	**Vehicle Name**	**Geozone In Time**	**Vehicle Type**	**Serverity Level**
			[redacted]	04 Jan 2020 1:42:16 PM	Car	Warning
[redacted]	[redacted]	21	**Vehicle Name**	**Geozone In Time**	**Vehicle Type**	**Serverity Level**
			[redacted]	25 Nov 2019 9:56:02 PM	Lorry	Warning
			[redacted]	08 Dec 2019 12:19:07 PM	Lorry	Warning
			[redacted]	05 Jan 2020 6:20:27 AM	Lorry	Warning
			[redacted]	08 Jan 2020 9:03:54 PM	Lorry	Warning
			[redacted]	08 Jan 2020 9:21:53 PM	Lorry	Warning

Fig : Geozone Entry Report

trinetra GPS Vehicle Tracking & Fleet Management Solutions **Geozone Activity Details**

Fleet : All **Vehicle :** All **From :** Apr 20, 2014 8:00:00 AM **To :** Apr 21, 2014 8:00:00 PM

Vehicle Name : Vehicle Tracking 1 **VIN :** **License Plate :**

Report Summary				
Total No. Of Geozones	Total No. Of Geozone In	Total No. Of Geozone Out	Total Geozone Duration (HH:MM:SS)	No. Of Alarms
2	2	2	00:00:47	0

Geozone Name	Arrival (IN)	Departure (OUT)	Duration	Severity Level
Toll Gate 1			00:00:36	No Alarm
Toll Gate 2			00:00:11	No Alarm

Fig: Geozone Activity Report

6. Idling

Idling Report allows the user to view the information about the number of trips made by the vehicle, ignition on, idling time and percentage of idling.

% of Idling = (Total Idling duration / Total Trip duration) * 100

This will be helpful for the organization to identify the usage of each vehicle and its efficiency.

trinetra GPS Vehicle Tracking & Fleet Management Solutions **Idling Details**

Fleet : All **Vehicle :** All **From :** Apr 20, 2014 8:00:00 AM **To :** Apr 21, 2014 8:00:00 PM

Vehicle Name : Vehicle Tracking 1 **VIN :** **License Plate :**

Idling Start Date & Time	Idling End Date & Time	Location	Ignition Duration	Idling Duration	% Of Idling
Apr 20, 2014 7:39:08 PM	Apr 20, 2014 7:42:49 PM		00:07:23	00:03:41	49.89
Apr 21, 2014 9:45:14 AM	Apr 21, 2014 9:48:34 AM		00:12:28	00:03:20	26.74

Fig: Idling Report

7. Landmark Trips

Landmark Trips report provides you the details of the vehicles' trips between the selected landmarks. The report covers the details of the landmarks it has gone through to reach the destination landmark. This report is helpful to know the day-to-day distances covered by the vehicles. It also keeps track of the path taken by the vehicle to reach the destination, thereby controlling the unwanted vehicle mileage. The report provides the information on what times the vehicle has left the source landmark, visited the different landmarks and has reached the destination landmark. It also provides information on the distance traveled, idling time in the trip, the maximum speed of the vehicle in the trip and the actual time the vehicle was

running. An overall summary and a trip-wise summary, with the above-said information, are available for the selected vehicle.

trinetra GPS Vehicle Tracking & Fleet Management Solutions **Landmark Activity**

Fleet : All **Vehicle :** All **From :** Apr 13, 2014 8:00:00 AM **To :** Apr 18, 2014 8:00:00 AM

Vehicle Name : Vehicle Tracking 1 **VIN :** **License Plate :**

Report Summary					
No of Trips	Distance (Km)	Trip Duration	Idling Duration	Max.Speed (KMPH)	Odometer Start - End
1	38	01:52:21	-	92	549843 - 549881

Trip No	Start Location	End Location	Distance (Km)	Trip Duration	Idling Duration	Total Running Time	Odo Start - End
1	16-Apr-2014 11:06:59 AM	16-Apr-2014 12:59:20 PM	38	01:52:21	-	00:24:00	549843 - 549881

Start Location	End Location	Odo-Start	Odo-End	Distance (Km)	Stop Time	Running Duration	Idling
Apr 16, 2014 11:06:59 AM	Apr 16, 2014 12:59:20 PM	549843	549881	38	-	00:24:00	-

Fig: Landmark Activity report

7.1 Landmark Trip Sheet Report

Earlier, the Landmark Reports had provided details on when the vehicles left the origin landmark and when they reached the destination landmark, along with the details on the duration and the distance traveled. Then there were enquiries from our clients as to capturing the details during the vehicles' travel between the landmarks.

Now, we have come up with an additional report – Landmark Trip Sheet report – to provide additional clarity on the above requested details. This report will provide the details of other landmarks visited by the vehicle during its travel, along with details on how long it had waited in those landmarks, travel duration, stop time and distance.

trinetra GPS Vehicle Tracking & Fleet Management Solutions **Landmark Trip Sheet**

Fleet : All **Vehicle :** All **From:** **To:** **From :** 02 Sep 2019 8:00:00 AM **To :** 06 Sep 2019 8:00:00 PM

Vehicle Name	Start Point	Start Time	End Point	End Time	Trip Details						
					Supplier	In Time	Out Time	Waiting Time	Running Duration	Stop Time	Distance (Km)
		03 Sep 2019 4:50:20 PM	Ongoing Trip	06 Sep 2019 1:16:24 PM		-	03 Sep 2019 4:50:20 PM	-	00:00:00	00:00:00	0
						04 Sep 2019 3:50:40 PM	04 Sep 2019 4:39:26 PM	00:48:46	01:28:45	21:31:35	0
						04 Sep 2019 6:13:04 PM	04 Sep 2019 9:46:21 PM	03:33:17	01:14:00	00:19:38	0
						04 Sep 2019 11:55:42 PM	05 Sep 2019 5:55:33 AM	05:59:51	01:24:00	00:45:21	0
						05 Sep 2019 9:37:03 AM	05 Sep 2019 9:37:35 AM	00:00:32	00:08:17	03:33:13	0
						05 Sep 2019 12:58:11 PM	05 Sep 2019 1:00:58 PM	00:02:47	00:09:09	03:11:27	1
						05 Sep 2019 5:31:17 PM	05 Sep 2019 8:30:11 PM	02:58:54	02:20:00	02:10:19	0
						05 Sep 2019 9:59:52 PM	-	-	01:29:41	00:00:00	0

7.2 Landmark Distance Mapping & Tripsheet Report

Landmark Activity report had been provided to monitor the movement of your vehicles from one designated landmark to the other. Now the Landmark Tripsheet report features like trip cost and distance from one landmark to another have been added, through which you can match the actual cost against the planned cost of the trips. Cost per km for the vehicle can be entered in Manage vehicle for each vehicle and distance between landmarks can be maintained in the Landmark-Distance Mapping sub-module under Configurations module. Based on the cost per km of the vehicle and the distance between landmarks, the report will generate the planned and actual trip costs, thus reducing the manual work.

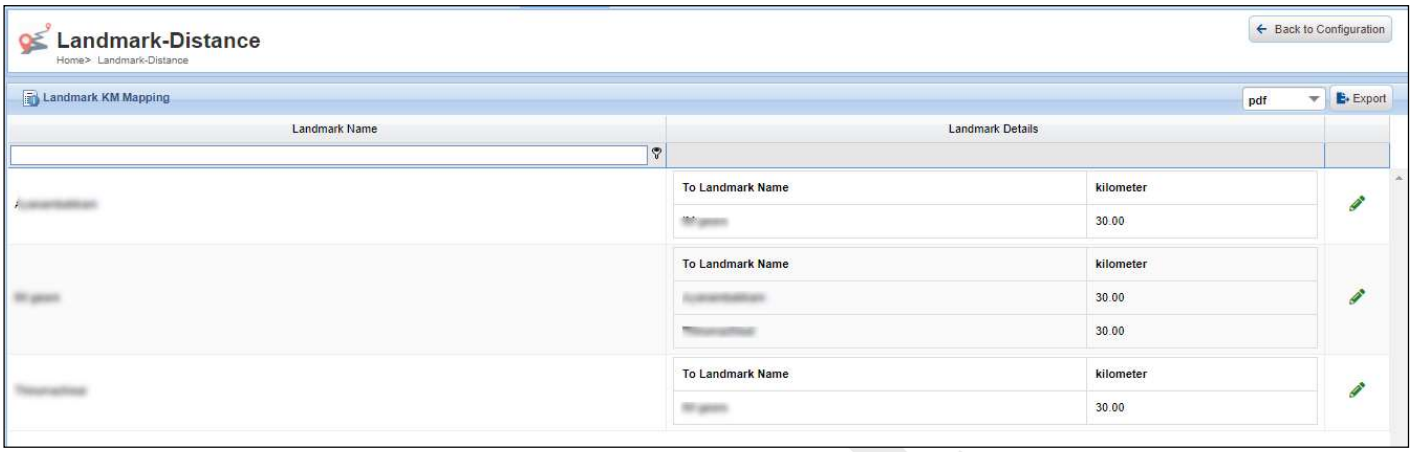

Fig: Landmark Distance Mapping

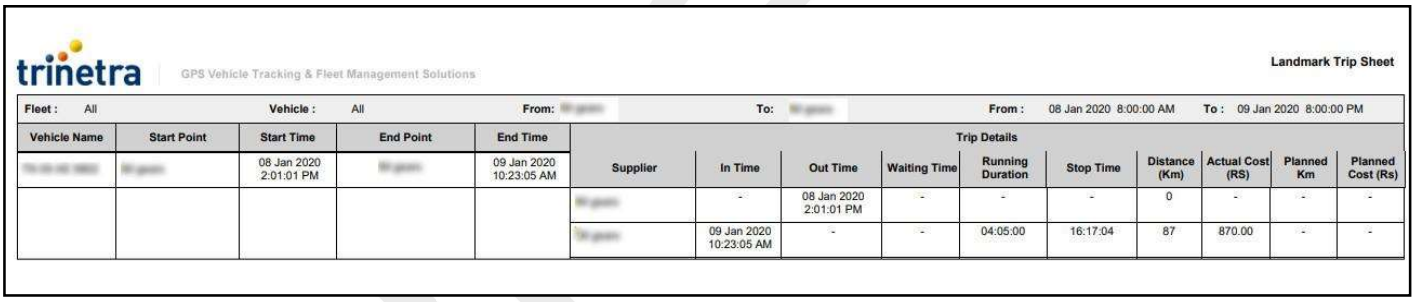

Fig: Landmark Tripsheet Report

7.3 Enhancement – Waiting Time Cost in Landmark Tripsheet Report

Last month, we had released the new Landmark Tripsheet report that focuses on providing the costs factors for trips between the landmarks. This month, we have brought in some more information into the report. Now you can add costs to the waiting time of the vehicles in a particular delivery / pickup point.

The allowed waiting time and the cost of vehicles waiting (beyond the allowed waiting time) in the landmarks can be added to up to a single minute in the Landmark Distance Mapping page. Based on the waiting duration of the vehicles in the landmarks, the cost will be automatically calculated, added to the total cost of the trip and brought to the report. Additionally, a summary is also provided towards the end of the report to provide an oversight of the total costs for the generated time duration.

Vehicle Name	Start Point	Start Time	End Point	End Time	Trip Details									
TN		04 Feb 2020 11:52:31 AM		05 Feb 2020 9:23:54 AM	Supplier	In Time	Out Time	Waiting Time	Running Duration	Stop Time	Distance (Km)	Actual Cost (RS)	Planned Km	Planned Cost (Rs)
						-	04 Feb 2020 11:52:31 AM	-	-	-	0	-	-	-
						04 Feb 2020 11:57:31 AM	04 Feb 2020 12:25:54 PM	00:28:23	00:05:00	00:00:00	1	46.00	-	-
						04 Feb 2020 1:27:13 PM	04 Feb 2020 1:36:39 PM	00:09:26	00:53:22	00:07:57	17	170.00	-	-
						04 Feb 2020 3:10:21 PM	04 Feb 2020 4:15:05 PM	01:04:44	01:14:27	00:19:15	24	348.00	-	-
						04 Feb 2020 5:19:45 PM	04 Feb 2020 5:19:45 PM	-	01:04:40	00:00:00	17	170.00	-	-
						05 Feb 2020 9:23:54 AM	-	-	16:04:09	00:00:00	0	0.00	-	-
							04 Feb 2020 11:52:31 AM	**01:42:33**	**19:21:38**	**00:11:18**	**59**	**734**	**0**	**0**
TN		05 Feb 2020 11:40:14 AM	Ongoing Trip	05 Feb 2020 1:07:57 PM	Supplier	In Time	Out Time	Waiting Time	Running Duration	Stop Time	Distance (Km)	Actual Cost (RS)	Planned Km	Planned Cost (Rs)
						-	05 Feb 2020 11:40:14 AM	-	00:00:00	00:00:00	0	0.00	-	-
						05 Feb 2020 11:44:19 AM	05 Feb 2020 11:45:18 AM	00:00:59	00:04:05	00:00:00	1	10.00	-	-
						05 Feb 2020 12:44:36 PM	-	-	00:59:18	00:00:00	17	170.00	-	-
							05 Feb 2020 11:40:14 AM	**00:00:59**	**01:03:23**	**00:00:00**	**18**	**180**	**0**	**0**

Fig: Latest Landmark Tripsheet report

Summary							
Trip Date	Total Planned Distance	Total Actual Distance	Total Planned Cost	Total Actual Cost	Total Running Time	Total Waiting Time	Total Stop Time
TN							
2020-02-04	71.3	55	713	550	01:52:00	00:00:00	00:09:33
TN19A2905							
2020-02-04	135	128	1350	1312	03:15:16	00:26:32	02:00:14
2020-02-05	135	133	1350	1330	04:20:34	00:00:00	12:07:20
TN							
2020-02-04	0	0	0	0	00:27:27	00:00:00	00:00:00
2020-02-05	47.8	94	478	1224	11:28:46	02:43:05	00:00:00
TN							
2020-02-04	0	59	0	734	03:17:29	01:42:33	00:11:18
2020-02-05	0	18	0	180	17:07:32	00:00:59	00:00:00
TN							
2020-02-04	142.6	113	1426	1564	03:53:20	03:47:24	00:24:47
2020-02-05	71.3	58	713	580	02:03:00	00:00:00	00:34:59

Fig: Summary of Landmark Trip sheet Report

8. Day-wise Trip Summary

Day-wise Trip Summary report provides you the details of the trips made by one or all the vehicles in the organization on a day-to-day basis. A trip is the distance covered from one place to another, between an Ignition ON & an Ignition OFF. The user can choose to view / hide details for which the vehicle was idle during the trip. A consolidated summary of the trips is available for the user.

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Day-wise Trip Summary

Fleet : All **Vehicle :** All **From :** Apr 20, 2014 8:00:00 AM **To :** Apr 21, 2014 8:00:00 PM

Vehicle Name : Vehicle Tracking 1 **VIN :** **License Plate :**

Report Summary					
No of Trips	Distance (Kms)	Ignition on Duration	Idling Duration	Total Stop Time	Odometer Start - End
23	193	07:44:11	02:23:22	20:15:47	550682 - 550875

Initial Departure	Final Arrival	Distance (Kms)	Max. Speed (KMPH)	Duration	Idling	Stop Time
20-Apr-2014 08:35:45 AM	20-Apr-2014 07:46:25 PM Landmark 1	112	92	05:36:37	02:20:02	16:56:37
21-Apr-2014 07:08:59 AM Landmark 1		81	93	02:07:34	00:03:20	03:19:10

Fig: Day-wise Trip Summary report

9. Portal Usage Report

Portal usage report provides you the details of when the application users have logged in the selected time period. The report provides a summary of the individual user like no. of logins, first login, last logout and total time spent.

trinetra GPS Vehicle Tracking & Fleet Management Solutions

Portal Usage

No of Users : 1 **Organization :** Internal **From :** Apr 20, 2014 8:00:00 AM **To :** Apr 21, 2014 8:00:00 PM

Report Summary					
Station	Name	No. of logins	First Login	Last Logout	Total Time Spent (HH:MM:SS)
All	Administrator	3	4/20/2014 10:26:38 AM	4/21/2014 12:50:22 PM	12:56:56

Sno	Login Time	Logout Time	Time Spent (HH:MM:SS)
1	4/20/2014 10:26:38 AM	4/20/2014 9:50:13 PM	11:23:35
2	4/21/2014 10:33:14 AM	4/21/2014 11:28:36 AM	00:55:22
3	4/21/2014 12:12:23 PM	4/21/2014 12:50:22 PM	00:37:59

Fig: Portal Usage Report

10. Driver Violations

Driver Violation Report displays the violations that occurred in the trips of the specified driver(s). The report also shows demerit points that the driver has acquired based on the demerit ratings.

trinetra GPS Vehicle Tracking & Fleet Management Solutions

Driver Violation Report

Fleet : All	**Vehicle :** All	**From :** 07/14/14 8:00:00 AM	**To :** 07/15/14 8:00:00 PM
Driver Name : Jack		**Driver License No :**	**Mobile No :** [illegible]

Report Summary

Violations Summary :	Speed	Harsh Braking	Extreme Braking	Harsh Acceleration	Extreme Acceleration	Accident	Total
Demerit Points per Violation	10	10	10	10	10	15	--
No. of Violations	22	0	0	0	2	0	24
Total Demerit Points	220	0	0	0	20	0	240

Vehicle Name	Date & Time	Violation Type	Speed (KMPH)	Duration	Location
A 29883 - Pajero MDT	07/14/14 2:20:09 PM	Speed Alert	106	-	E 11 - United Arab Emirates
A 29883 - Pajero MDT	07/14/14 2:26:25 PM	Speed Alert	111	-	Abu Dhabi - United Arab Emirates
A 29883 - Pajero MDT	07/14/14 2:38:00 PM	Speed Alert	111	-	Abu Dhabi - United Arab Emirates
A 29883 - Pajero MDT	07/14/14 2:46:38 PM	Speed Alert	108	-	Abu Dhabi - United Arab Emirates
A 29883 - Pajero MDT	07/14/14 2:53:01 PM	Speed Alert	111	-	Abu Dhabi - United Arab Emirates

Fig: Driver Violations Report

11. Driver Trip Summary

Driver Trip Summary report provides you the details of the trips made by one or all the vehicles that is assigned to the Driver in the organization.

trinetra GPS Vehicle Tracking & Fleet Management Solutions

Driver Trip Summary

Fleet : All	**Vehicle :** All	**From :** 07/14/14 8:00:00 AM	**To :** 07/15/14 8:00:00 PM
Driver Name : [illegible]		**Driver License No :** --	**Mobile No :** [illegible]
Vehicle Name : [illegible]		**License Plate :** [illegible]	**Vin :**

REPORT SUMMARY

No of Trips	Total Shift Duration	Distance (Km)	Total Running Time	Total Idling Duration
1	22:30:00	242	05:21:00	00:00:00

Trip Start	Trip End	Shift Duration	Distance (Km)	Running Duration	Idling
07/14/14 12:00:00 AM [illegible]	07/14/14 10:30:00 PM [illegible]	22:30:00	242	05:21:00	00:00:00

Fig: Driver Trip Summary Report

12. Driver Trip Details

Driver Trip Details report gives you a drill-down format of the Driver Trip Summary report, with the details like the duration, distance traveled, etc. of trips during the selected time interval. The user has the option to view / hide details like the Summary of the trip & the Location of the trip.

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Driver Trip Details

Fleet : All	**Vehicle :** All	**From :** 07/14/14 8:00:00 AM	**To :** 07/15/14 8:00:00 PM
Driver Name : [illegible]	**Driver License No :** --	**Mobile No :** [illegible]	
Vehicle Name : [illegible]	**License Plate :** [illegible]	**Vin :**	

Trip Summary

Trip Start	Trip End	Distance (Km)	Peak Speed	Duration	Idling
07/14/14 12:00:00 AM [illegible]	07/14/14 10:30:00 PM [illegible]	165	58	22:30:00	00:10:32

Date & Time	Location	Speed (Km / Hr)	Message Details
07/14/14 1:00:34 PM	National Highway 46, Bargur, Tamil Nadu, India	56	Location Update
07/14/14 1:00:55 PM	National Highway 46, Tamil Nadu, India	0	Jack - Logout
07/14/14 1:01:29 PM	National Highway 46, Tamil Nadu, India	0	Ignition Off
07/14/14 1:19:36 PM	National Highway 46, Tamil Nadu, India	0	Ignition On
07/14/14 1:19:41 PM	National Highway 46, Tamil Nadu, India	0	Idling started
07/14/14 1:22:14 PM	National Highway 46, Tamil Nadu, India	0	Driver Panic button On
07/14/14 1:23:38 PM	National Highway 46, Tamil Nadu, India	0	Idling end 00:03:57

Fig: Driver Trip Details Report

13. Nearing Maintenance

Nearing Maintenance report gives you the details of the vehicles that are ready for maintenance service, as per the plan(s) assigned to them. A vehicle will be listed under Nearing Maintenance if it reaches the first level of Notification, set during Maintenance Plan creation. You can choose to view the data of a single fleet, all the fleets, a single vehicle or all the vehicles of a fleet. You can also filter the display data by selecting a particular Plan Name, Service Type and by selecting a particular range of Nearing Percentage and Duration. Nearing Maintenance report can be sent through e-mail to various registered users of the organization.

trinetra GPS Vehicle Tracking & Fleet Management Solutions

Nearing Maintenance Report

Fleet : India **Vehicle :** All **From :** 03/13/13 **To :** 03/18/13

Report Summary			
No. Of Vehicles	Nearing Maintenance Vehicles	Overdue Maintenance Vehicles	Total Planned Cost
2	0	2	440.00

Vehicle Name : IB-TN [illegible] **VIN :** **License Plate :** [illegible]

Plan Name	Service Type	Planned Cost	Expected / Due On	Due Readings	Current Readings	Overdue By	Nearing (%)
Weekly Services	Time Based	220.00	03/13/13	50 hrs; 35750 km	0.09 hrs; 35750 km	41 days	250

Vehicle Name : RF-TN 37 BA 2937 **VIN :** **License Plate :** TN 37 BA 2937

Plan Name	Service Type	Planned Cost	Expected / Due On	Due Readings	Current Readings	Overdue By	Nearing (%)
Weekly Services	Time Based	220.00	03/18/13	8500 hrs; 0 km	8500.00 hrs; 0 km	36 days	371

Fig: Nearing Maintenance Report

14. Maintenance Service History

Service History report provides you with the details of the maintenance services that have been carried out for the vehicles as per the Maintenance Plan(s). A vehicle will be listed under the Service History only when all the assigned services are either completed or skipped. You can select and view the data of a single fleet, all the fleets, a single vehicle or all the vehicles of a fleet. Applying the Service History filters like Plan Name, Service Type, Status of the plan, Maintenance Type and Duration, can help you to narrow down the results to one vehicle or a group of vehicles. Service History report can be sent through e-mail to various registered users of the organization.

trinetra GPS Vehicle Tracking & Fleet Management Solutions

Maintenance Service History

Fleet : India **Vehicle :** All **From :** 04/22/13 8:00:00 AM **To :** 04/23/13 8:00:00 PM

Vehicle Name : RF-TN [illegible] **VIN :** **License Plate :** [illegible]

Maintenance Summary						
Type	No. of Maintenances	Skipped Services	Completed Services	Planned Cost	Cost Incurred	Cost Deviation (%)
Planned	1	0	1	220.00	151.00	-
Adhoc	0	N/A	N/A	N/A	0.00	-
Total	**1**	**0**	**1**	**220.00**	**151.00**	-

Maintenance	Plan Name	Service Type	Services Planned	Services Done	Execution On	Planned Cost	Cost Incurred	Status
Planned	Weekly Services	Time Based	Air Check, Exhaust Cleaning, Water Wash	Air Check, Exhaust Cleaning	04/23/13	220.00	151.00	Completed

Fig: Maintenance Service Report

15. Maintenance Cost

Maintenance Cost report gives you the maintenance cost details of the vehicles that are completed service, as per the plan(s) assigned to them. You can choose to view the data of a single fleet, all the fleets, a single vehicle or all the vehicles of a fleet. You can also filter the display data by selecting a particular Plan Name, Service Type, Plan Status, Service Name, Maintenance Type and Duration. Maintenance Cost report can be sent through e-mail to various registered users of the organization.

s

trinetra GPS Vehicle Tracking & Fleet Management Solutions **Maintenance Cost Report**

Fleet : India **Vehicle :** All **From :** 04/22/13 8:00:00 AM **To :** 04/23/13 8:00:00 PM

Overall Maintenance Cost Summary

Total Planned Cost	Total Cost Incurred	Cost Deviation (%)	Cost Savings
1390.00	1382.00	0	8.00

Vehicle Name : IB-TN **VIN :** **License Plate :** TN

Maintenance Cost Summary

Type	No. of Services	Planned Cost	Cost Incurred	Cost Deviation (%)
Planned	3	1100.00	1101.00	0
Adhoc	0	N/A	0.00	-
Total	**3**	**1100.00**	**1101.00**	**0**

Fleet : India **Vehicle :** All **From :** 04/22/13 8:00:00 AM **To :** 04/23/13 8:00:00 PM

Vehicle Name : IB-TN **VIN :** **License Plate :** TN

Maintenance	Plan Name	Service Type	Service	Execution On	Planned Cost	Service Cost
Planned	Regular Maintenance Services	Engine Hours	Brake Oil Check	04/23/13	125.00	126.00
Planned	Regular Maintenance Services	Engine Hours	Engine Oil Check	04/23/13	225.00	225.00
Planned	Regular Maintenance Services	Engine Hours	Gearbox Check	04/23/13	750.00	750.00

Fig: Maintenance Cost Report

16. Temperature Report

Temperature report displays information on the different stages of Temperature level within selected duration.

trinetra GPS Vehicle Tracking & Fleet Management Solutions **Temperature Report**

Fleet : All **Vehicle :** All **From :** Apr 20, 2014 8:00:00 AM **To :** Apr 21, 2014 8:00:00 PM

Vehicle Name : Temperature Tracker 1 **VIN :** **License Plate :** DS897FSFS987D

Date & Time	Temperature 1	Location
20-Apr-2014 08:01:45 AM	Temperature = -1°C	Coimbatore Central, Katoor, Coimbatore, India
20-Apr-2014 08:41:05 AM	Temperature = -3°C	Coimbatore Central, Katoor, Coimbatore, India
20-Apr-2014 08:41:27 AM	Temperature = -3°C	Coimbatore Central, Katoor, Coimbatore, India
20-Apr-2014 08:41:48 AM	Temperature = -2.7°C	Coimbatore Central, Katoor, Coimbatore, India
20-Apr-2014 08:41:59 AM	Temperature = -3°C	Coimbatore Central, Katoor, Coimbatore, India
20-Apr-2014 09:12:19 AM	Temperature = 11.3°C	Coimbatore Central, Katoor, Coimbatore, India
20-Apr-2014 09:12:31 AM	Temperature = 11°C	Coimbatore Central, Katoor, Coimbatore, India
20-Apr-2014 11:00:55 AM	Temperature = -2.6°C	Coimbatore Central, Katoor, Coimbatore, India

Fig: Temperature Report

17. Fleet Utilization Summary

Fleet Utilization Summary report gives you a snapshot of how the vehicles of the organization have been effectively utilized during the specified period, helping in quick decision-making on restructuring the fleets. The report provides a consolidated summary on the total no. of trips made by the vehicles of the fleet, the total distance covered and their consolidated running and idling times. Individual vehicles' utilization data are also available. The user can choose to view / hide details like License Plate, Distance traveled by each of the vehicles & the no. of days utilized (for individual vehicles).

trinetra GPS Vehicle Tracking & Fleet Management Solutions **Fleet Utilization Summary**

Fleet : All **Vehicle :** All **From :** Apr 20, 2014 12:00:00 AM **To :** Apr 21, 2014 11:59:00 PM

Report Summary					
No.of Vehicles	No. of Trips	Total Distance (Kms)	Running Time	Idling Time	Total Violations
14	302	6276.62	6D 08:03:42	09:41:19	23

Vehicle Name	License Plate	Trips	Distance (Kms)	Running Time	Idling Time	Idling %	Violations	Days Utilized
[illegible]	[illegible]	0	-	00:00:00	00:00:00	0.00	0	0 out of 2
[illegible]	[illegible]	16	307.09	07:40:01	00:15:46	3.43	1	2 out of 2
[illegible]	[illegible]	43	686.94	18:24:01	00:33:08	3.00	0	2 out of 2
[illegible]	[illegible]	36	115.56	05:01:56	00:46:30	15.40	0	2 out of 2
[illegible]	[illegible]	43	1058.23	1D 03:05:59	00:09:55	0.61	0	2 out of 2
[illegible]	[illegible]	27	680.52	14:50:10	00:27:36	3.10	0	1 out of 2

Fig: Fleet Utilization Summary report

18. Weekly Fleet Utilization

Weekly Fleet Utilization report gives you a drill-down on the Fleet Utilization Summary report. The report provides the data for 7 days from the chosen date. The report shows how the fleet vehicles have been utilized, with the details like Utilization Details, Distance Traveled Details, Running Duration Details and Trip Details. The report's summary displays the grand total of the above details, while both day-wise and vehicle-wise sums are available in the drill-down.

trinetra GPS Vehicle Tracking & Fleet Management Solutions **Weekly Fleet Utilization Report**

Fleet : All **Vehicle :** All **From :** Apr 15, 2014 8:00:00 AM **To :** Apr 21, 2014 8:00:00 AM

Report Summary				
No.of Vehicles	Total Utilized Days	Total Distance (Kms)	Total Running Time	Total Trips
14	86	30038.11	32D 17:32:10	1231

Utilization Details									
Vehicle Name	License Plate	15 Apr	16 Apr	17 Apr	18 Apr	19 Apr	20 Apr	21 Apr	Total Days
[illegible]	[illegible]	-	-	-	-	-	-	-	0
[illegible]	[illegible]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	7
[illegible]	[illegible]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	7
[illegible]	[illegible]	Yes	Yes	Yes	Yes	Yes	Yes	Yes	7

Fig: Weekly Fleet Utilization report

19. Fleet Idling Summary

Fleet Idling Summary report gives you a quick and overall view of the idling instances of a vehicle. The report provides the details like the number of idling instances in the selected duration, total idling time in the selected duration, the maximum and the average idling time, percentage of idling, total time the vehicle was actually running, number of trips and the distance covered by the vehicle.

trinetra GPS Vehicle Tracking & Fleet Management Solutions **Fleet Idling Summary**

Fleet : All **Vehicle :** All **From :** Apr 20, 2014 8:00:00 AM **To :** Apr 21, 2014 8:00:00 AM

Report Summary					
No.of Vehicles	No.of Idling	Total Idling Time	No.of Trips	Total Running Time	Distance (Kms)
14	40	04:18:37	141	3D 02:29:52	2900.77

Vehicle Name	License Plate	Idling Instances	Idling Time	Max Idling Time	Avg Idling Time	% of Idling	No.of Trips	Running Time	Distance (Kms)
[illegible]	[illegible]	0	-	-	-	0	0	00:00:00	-
[illegible]	[illegible]	0	-	-	-	0	0	00:00:00	-
[illegible]	[illegible]	4	00:26:38	00:11:51	00:06:39	4	26	10:59:38	349.89
[illegible]	[illegible]	1	00:05:06	00:05:06	00:05:06	70	3	00:07:12	0.00

Fig: Fleet Idling Summary report

20. Manual Fuel Entry

Fuel report gives you the consolidated data of Total Fuel Filled, number of instances and cost incurred based on Fuel entry filled by user. Fleet Managers can get an idea of how much Fuel has been filled per vehicle. The consumption of Fuel and wastages can be easily identified from the data. The date & time of Fuel filled will be available for quick analysis.

trinetra GPS Vehicle Tracking & Fleet Management Solutions **Manual Fuel Entry**

Fleet : All **Vehicle :** All **From :** 22 Oct 2012 8:00:00 AM **To :** 26 Oct 2012 8:00:00 PM

Vehicle Name : Balero (Haneda) **VIN :** [redacted] **License Plate :** [redacted]

Report Summary				
Driver Name	No of Instances	Total Fuel Filled (Litres)	Average Fuel Filled (Litres)	Total Fuel Cost
[redacted]	2	30.00	15	0

Start Date	End Date	Fuel Station	Fuel Filled (Litres)	Fuel Cost	Distance Travelled (KMs)	Comments
Oct 25 2012 5:30AM	Oct 26 2012 8:00PM		15.00	0.00	0.00	Haneda use
Oct 23 2012 5:30AM	Oct 25 2012 5:30AM		15.00	0.00	0.00	Haneda used

Fig: Manual fuel report

21. Route Deviation Report

Route deviation report will let the user to view the missed stops in their assigned route. If the vehicle is travelling in a particular route and if it misses down some stop in the travelled route these routes will be captured and shown in this report. Now the user will simply able to view all the missed stops using this route deviation report.

trinetra GPS Vehicle Tracking & Fleet Management Solutions **Route Deviation Report**

Fleet : All **Vehicle :** All **From :** 21 Jul 2015 8:00:00 AM **To :** 22 Jul 2015 8:00:00 PM

Vehicle Name : [redacted] **VIN :** **License Plate :** [redacted]

Report Summary		
No. of Routes	Total no. of Skipped Stops	Total no. of Incomplete Route
6	17	4

Sno	Route Name	Route Started Date & time	Route End Date & Time	Duration	Total Stops	Total Skipped Stops	Skipped Stops
1	Route Report test	21 Jul 2015 10:28:52 AM	-	-	6	5	Olympus_circular_tst,Ramanathapuram_Circular_Tst,Sowripalayam_pirivu_circular,Perks_Arch_circular,Singanallur_Circular_Tst
2	Route Report test	21 Jul 2015 10:31:30 AM	21 Jul 2015 10:44:29 AM	0:12:59	6	2	Sowripalayam_pirivu_circular,Singanallur_Circular_Tst
3	Route test	21 Jul 2015 11:29:04 AM	-	-	3	2	Olympus_circular_tst,Ramanathapuram_Circular_Tst
4	Route Report test	22 Jul 2015 3:48:39 PM	-	-	6	2	Ramanathapuram_Circular_Tst,Sowripalayam_pirivu_circular
5	Route Report test	22 Jul 2015 4:11:39 PM	-	-	6	4	Ramanathapuram_Circular_Tst,Sowripalayam_pirivu_circular,Singanallur_Circular_Tst,Ondipudur_Circular_Tst
6	Route Report test	22 Jul 2015 4:44:24 PM	22 Jul 2015 5:00:16 PM	0:15:52	6	2	Ramanathapuram_Circular_Tst,Sowripalayam_pirivu_circular

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Fig: Route Deviation Report

22. Vehicle Details Report

As an addition to the existing Reports available in the Reports Module, Vehicle details Report has been included in the Standard Reports Category. Report presents the standard data about all the vehicles in an Organization as available in the Vehicle Management Module. Apart from the standard data, it also provides details about the age and lifespan of the vehicle which is calculated based on the purchase date and life span values provided in Vehicle Management.

trinetra GPS Vehicle Tracking & Fleet Management Solutions **Vehicle Details**

Fleet All **Vehicle** All **Organization** [redacted]

Report Summary

No. Of Vehicles	No. Of Owned Vehicles	No. Of Leased Vehicles	No. Of Warranty Expired Vehicles	No. Of Insurance Expired Vehicles	No. Of Lease Expired Vehicles	Overdue Lifespan Vehicles
6	-	2	4	4	4	-

S no	Device Id	Vehicle Name	License Plate	Type	Make / Model / Year	Vehicle Capacity	Tank Capacity	Own / Lease	Purchased On	Warranty Expired On	Lease Expired On	Insurance Expired On	Age	Lifespan (%)
1	[redacted]	[redacted]	[redacted]	Car	Ford / Figo / 2012	5 - Kilos / Tons	350 - lts	Lease	08 Mar 2012	09 Feb 2016	09 Feb 2016	08 Mar 2012	3	99.00
2	[redacted]	[redacted]	[redacted]	Car	Ford / NA / NA	-	-	-	-	09 Feb 2016	09 Feb 2016	-	NA	99.10
3	[redacted]	[redacted]	[redacted]	Truck	Mercedes - Benz / SLS AMG / 2010	8 - No of seats	100 - lts	Lease	02 Jan 2012	09 Feb 2016	09 Feb 2016	06 Feb 2012	4	99.00
4	[redacted]	[redacted]	[redacted]	Car	Ford / Mustang / 2009	-	350 - lts	-	17 Jul 2009	09 Feb 2016	09 Feb 2016	11 Jan 2009	6	99.03
5	[redacted]	[redacted]	[redacted]	Car	Tata / NA / 2010	-	57 - lts	-	09 Jul 2009	09 Feb 2016	09 Feb 2016	03 Jan 2009	6	99.00
6	[redacted]	[redacted]	[redacted]	Car	NA / NA / NA	-	-	-	-	09 Feb 2016	09 Feb 2016	-	NA	99.00

Fig: Vehicle Details Report

23. Head Count report

A new addition to the Student Management module is the addition of Students Head Count report. The report provides you the count of students traveled in each pick-up / drop trip of the school bus.

trinetra GPS Vehicle Tracking & Fleet Management Solutions **Students Head Count**

Fleet : All **Vehicle :** All **From :** 10 Jan 2016 8:00:00 AM **To :** 14 Jan 2016 8:00:00 PM

Vehicle Name : [redacted] **VIN :** **License Plate :** [redacted]

Report Summary

Total No. of Trips	Total Travel Count	Total Assigned Travel Count	Total Unassigned Travel Count
14	176	174	2

Trip no	Trip Details	Total Students Travelled	Assigned Students Travelled	Unassigned Students Travelled
1	Jan 11 2016 7:58AM Senior School IN	13	13	0
2	Jan 11 2016 8:22AM Senior School IN	14	13	1
3	Jan 11 2016 9:58AM Nursery and Primary School IN	16	16	0
4	Jan 11 2016 3:02PM Senior School OUT	11	11	0
5	Jan 11 2016 4:22PM Nursery and Primary School OUT	15	15	0
6	Jan 12 2016 7:57AM Senior School IN	12	12	0
7	Jan 12 2016 8:20AM Senior School IN	12	11	1

Fig: Students Head Count report

Students Head Count Report works based on the geozone created for the school(s) and the RFID swipes made by the students when getting on board the school bus. Apart from providing the total count of traveled students, the report also provides information on how many unassigned students traveled in the bus, allowing the stakeholders to quickly decide on the next steps for the same.

24. Student Travel details report

This report serves as an enhancement to the Student Management Module. Report provides details of the students who have travelled in a vehicle for the selected duration along with the boarding point and school entry and exit time. This would make it easy for the School admin users to identify the details of students who are travelling in the bus regularly over a period of time.

trinetra GPS Vehicle Tracking & Fleet Management Solutions **Students Travel History details**

Fleet : All **Vehicle :** All **From :** 17 Mar 2016 8:00:00 AM **To :** 18 Mar 2016 8:00:00 PM

Vehicle Name : [redacted] **VIN :** **License Plate :** [redacted]

S.No	Student ID	Student Name	School Name	Grade / Class	Boarding Point	School Entry	School Exit
38	99/06/P	ASHIKA	[redacted]	VII-B	Konduraja Line, Theni 625531, India	18 Mar 2016 8:21:18 AM	
39	91/05/P	SUBHA SRI	[redacted]	VIII-A	Konduraja Line, Theni 625531, India	18 Mar 2016 8:21:18 AM	18 Mar 2016 3:02:14 PM
40	17/12/V	YAZHINI	[redacted]	VIII-A	Konduraja Line, Theni 625531, India	18 Mar 2016 8:21:18 AM	18 Mar 2016 3:02:14 PM
41	98/08/I	AVANTHIGA	[redacted]	VIII-B	Konduraja Line, Theni 625531, India	18 Mar 2016 8:21:18 AM	18 Mar 2016 3:02:14 PM
42	108/08/I	SHALMIKA	[redacted]	VIII-B	Konduraja Line, Theni 625531, India	18 Mar 2016 8:21:18 AM	18 Mar 2016 3:02:14 PM
43	04/03/P	SHARNI	[redacted]	X-A	Konduraja Line, Theni 625531, India	18 Mar 2016 8:21:18 AM	18 Mar 2016 3:02:14 PM
44	36/14/P	DEV REYAS	[redacted]	LKG-C	Theni Road, Andipatti Jakkampatti, Andipatti 625512, India	18 Mar 2016 9:52:10 AM	18 Mar 2016 4:31:25 PM
45	41/14/P	RITESHA KANDHAA	[redacted]	LKG-C	Andipatti Jakkampatti, Andipatti 625512, India	18 Mar 2016 9:52:10 AM	18 Mar 2016 4:31:25 PM

Fig: Students Travel History Details report

25. Lease History Details Report

This report is a value addition to the Lease Management module. Report includes data about the lease history of a vehicle that has been given to or taken for lease. Report can be generated to view lease data for over a period of 5 years. Along with the lease details report also provides the vehicle utilization data such as Distance covered or Engine hours utilized during the lease period. This creates a clear picture of how effectively a vehicle is being used during the lease.

trinetra GPS Vehicle Tracking & Fleet Management Solutions

Lease History Details

Fleet : All	**Vehicle :** All	**From :** Mar 31, 2016 12:00:00 AM	**To :** Apr 07, 2016 11:59:00 PM
Vehicle Name : [illegible]	**VIN :** [illegible]	**License Plate :** [illegible]	

Report Summary

No of Leases		Average Utilization Percentage		Current Lease Status
Exceeded Limits	Within Limits	Distance	Engine Hours	
0 out of 1	1 out of 1	6.12	39.71	Active

S No	Vendor / Customer	Contract Period		Distance				Engine Hours			
		From	To	Limit	Used	Utilization %	Remaining	Limit	Used	Utilization %	Remaining
1	[illegible]	Apr 05, 2016	Mar 31, 2017	11000	673	6.12	10327	2750	1092	39.71	1658

Fig: Lease History Details Report

26. Audit Trail report

Audit trail report serves as a value addition to the Audit trail module. Audit trail is a process of tracking the changes that have been made to the data in the portal by the users of the Organization. Audit data would be available for the module that have been enabled for audit trail.

trinetra GPS Vehicle Tracking & Fleet Management Solutions

Audit Trail Report

Module Name: Landmarks		**From :** 25 Apr 2016 8:00:00 AM	**To :** 28 Apr 2016 8:00:00 PM
Module Name: Landmarks			

S.No	Field Name	Operation	Date & Time	Old Value	New Value	Updated By
1	Longitude	Update	[illegible]	[illegible]	[illegible]	[illegible]
2	Latitude	Update	[illegible]	[illegible]	[illegible]	[illegible]
3	Longitude	Update	[illegible]	[illegible]	[illegible]	[illegible]
4	Radius	Update	[illegible]	[illegible]	[illegible]	[illegible]
5	Latitude	Update	[illegible]	[illegible]	[illegible]	[illegible]
6	LandmarkName	Update	[illegible]	[illegible]	[illegible]	[illegible]

Fig: Audit Trail Report

Report provides the details of the data that has been added, updated or deleted by any users of the organization over a period of time. Along with the field level information, details of the user changing the data is also made available in the report.

27. Notification Settings Report

Suppose, you have configured to receive notification for a vehicle and forgot totally about the same. Now, if you want to stop those notifications, you have to look around in the portal to see where you have configured. Now, you can just generate

a Notification Settings report to know what notifications you have configured in the portal to be received in your mail, mobile or both.

trinetra GPS Vehicle Tracking & Fleet Management Solutions **Notification Settings**

User Name	All	**Module Name**	All
User Name:	Administrator		

Report Summary		
No of Notifications Assigned	**Total No. of Email Notifications**	**Total No. of SMS Notifications**
22	22	

S.No	Display Name	Modules / Operations	Name	Notification Type	Created Date & Time
1	Admin	Inventory Items	[illegible]	Email	
2	Admin	Maintenance Plan	[illegible]	Email	
3	Admin	Inventory Items	[illegible]	Email	

Fig.: Notifications Settings Report

28. Landmark Activity Report

In addition to the existing Landmark Activity Report, which provides details about the list of landmarks a vehicle has travelled in the selected duration, Trinetra has come up with a new Report that provides the details of the activities that occurred in the selected landmarks for the selected duration. This would help the users to keep track of the activities that take place in any landmark.

trinetra GPS Vehicle Tracking & Fleet Management Solutions **Landmark Activity**

Vehicle Name : [illegible]	**VIN :**	**License Plate :** F7DFB8692B

Landmark	Date & Time	Message Details	Location	Speed (KMPH)	Odometer
[illegible]	03-Aug-2016 08:22:36 AM	Ignition Off (T1: 27°C)	[illegible]	0	211638
[illegible]	03-Aug-2016 08:28:45 AM	Ignition On (T1: 27.1°C)	[illegible]	0	211638
[illegible]	03-Aug-2016 08:28:50 AM	Idling started (T1: 27.3°C)	[illegible]	0	211638
[illegible]	03-Aug-2016 08:32:48 AM	Idling end 00:03:57 (T1: 27.3°C)	[illegible]	0	211638
[illegible]	03-Aug-2016 08:32:48 AM	Ignition Off (T1: 27°C)	[illegible]	0	211638

Fig: Landmark Activity Report

Receiving the Reports

There are 2 ways to mail the reports to the registered users of the application. They are:

- Emailing the reports.
- Scheduling the reports.

Emailing of Reports

Emailing of Reports allows the application users to email the required report to the selected recipients. The reports can be mailed by following the below steps.

- Select Report Type
- Select the various report criteria like Fleet, Vehicle, Duration, Sort By, Sort Direction and Export To
- Click **Send Email** button in the Reports Main Screen. On clicking the Send Email Button, the following Manage Recipients popup appears to get the email recipients for whom the selected report should be emailed.
- Choose the recipients by selecting the appropriate check boxes in the email column.
- Finally click **Send Email** button as highlighted in the above figure, so that the selected report will be emailed to the selected recipients.

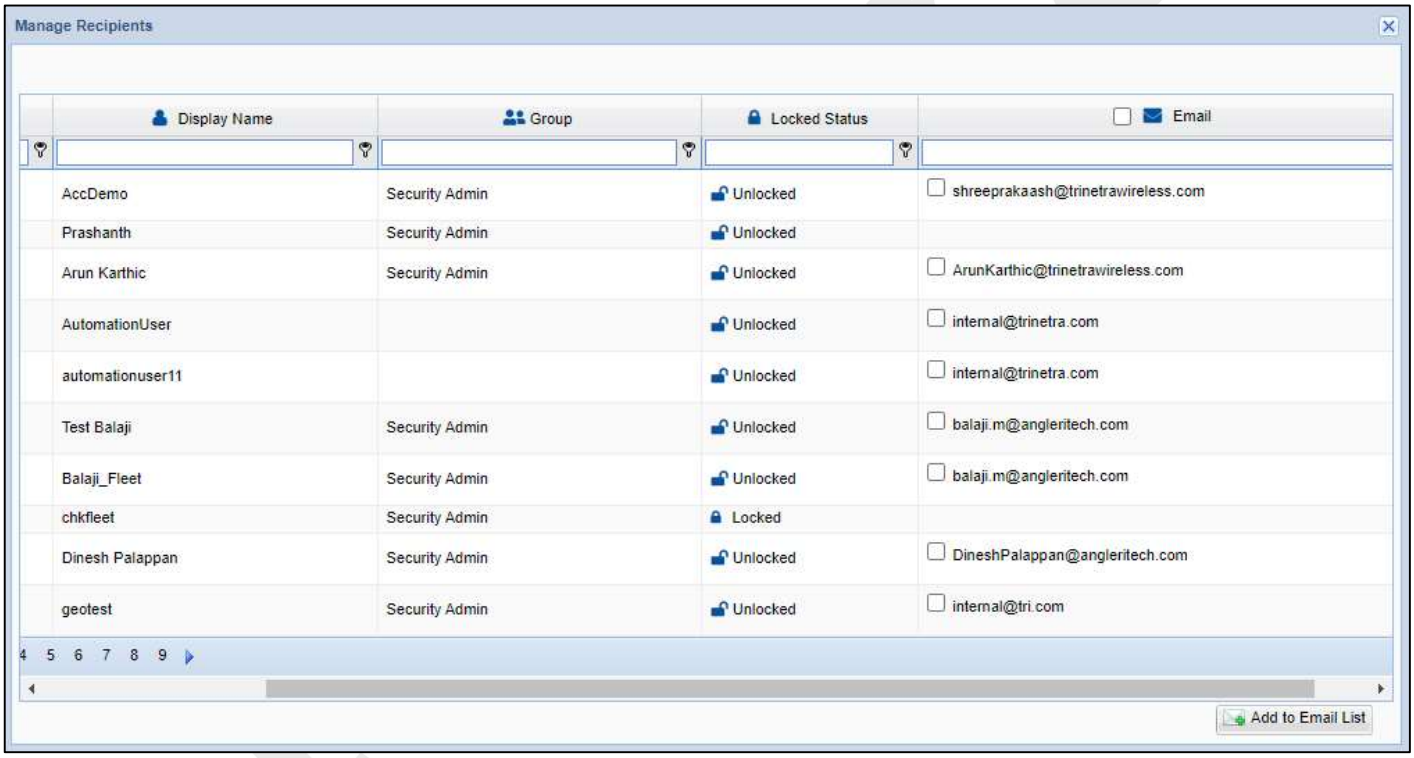


Fig: Manage Recipients pop-up

Scheduling of Reports

Scheduling of reports Module allows the users to schedule the reports by selecting the type of reports, various report criteria and the recipients to whom the selected reports should be scheduled. The scheduling of reports can be done Daily, Weekly and monthly based on the requirement.

Schedule the Reports – Click Schedule Report button from the report main screen and the following screen appears.

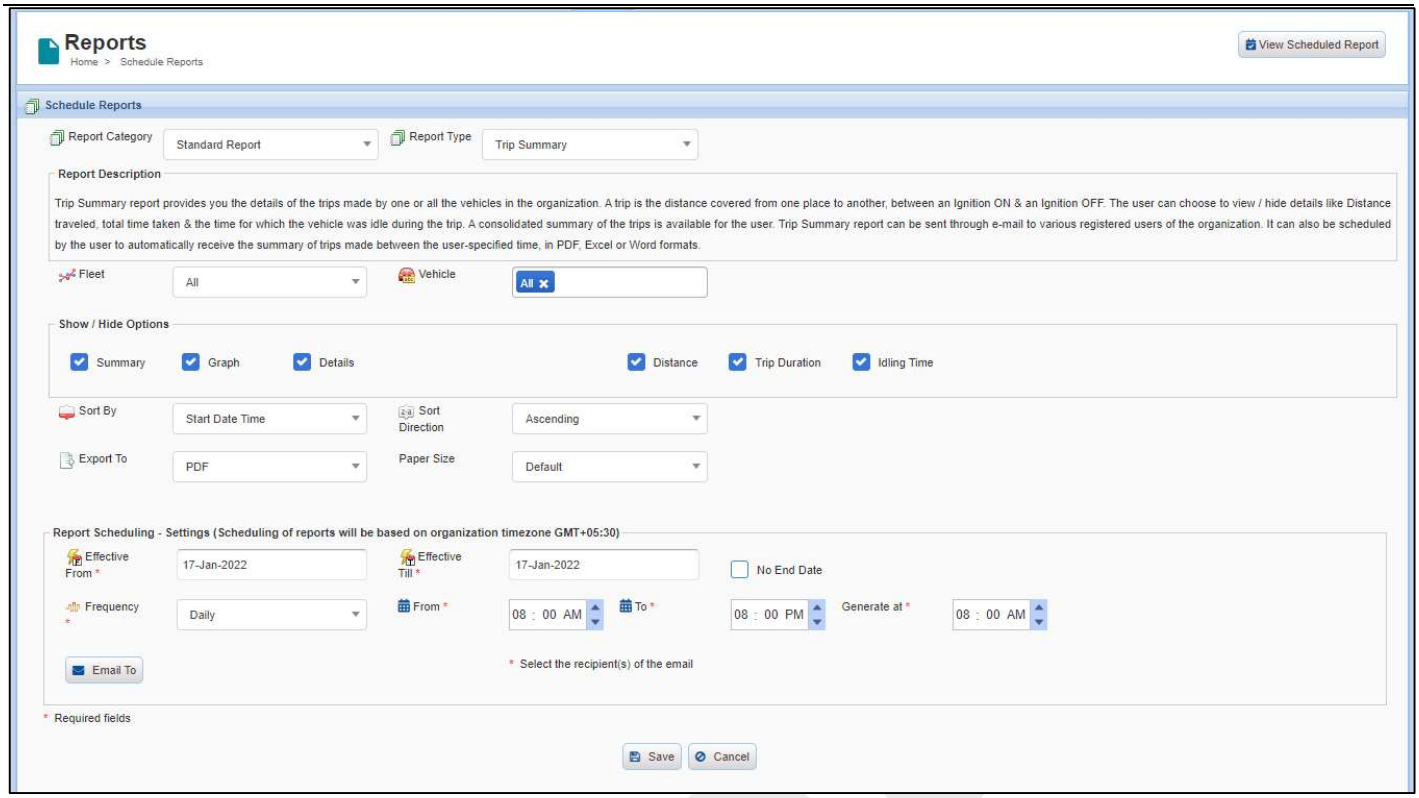


Fig: Schedule Reports screen

- Select the Report Type.
- Select the various report criteria like Fleet, Vehicle, Duration, Sort By, Sort Direction and Export To as required.
- Select the **Effective From** date, from which the report scheduling should start.
- If **No End Date** is checked, the report scheduling will take place until the user stops the scheduling. If No End Date is not checked, the user has to select the **Effective Till** date up to which the scheduling should take place.
- Select the **Frequency** as Daily or Weekly or Monthly from the drop-down based on the requirement.

If frequency is Daily, select the time duration of the report data by selecting the From & To time range and select the report generation time by selecting the Generate at, as in the below figure.

Fig: Scheduling Reports Frequency – Daily Option

If frequency is Weekly, select the week duration for the report data by selecting the **From** & **To** and select the report generation time by selecting the **Generate at**, as in the below figure

Fig: Scheduling Reports Frequency – Weekly Option

If frequency is Monthly, enter the date of month and select the **Generate at** time at which the report should be scheduled.

Fig: Scheduling Reports Frequency – Monthly Option

If frequency is fortnightly, enter the time and select the **Generate at** time at which the report should be scheduled.

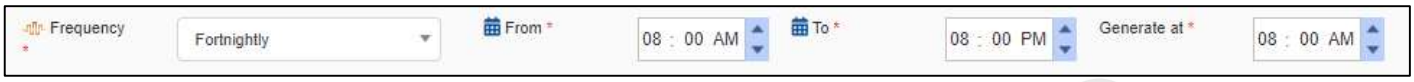


Fig: Scheduling Reports Frequency – Fortnightly Option

Click the **Email To** Button in the Reports Main Screen. On clicking the Email To Button, the following Manage Recipients pop-up appears to get the email recipients for whom the selected report should be scheduled.

- Choose the recipients by selecting the appropriate check boxes in the email column.
- Click **Add to Email List** button as highlighted in the Manage Recipients Popup to add the recipients for scheduling the reports.
- Finally click Save Button to schedule the selected report or click Cancel Button to cancel the scheduling of reports.

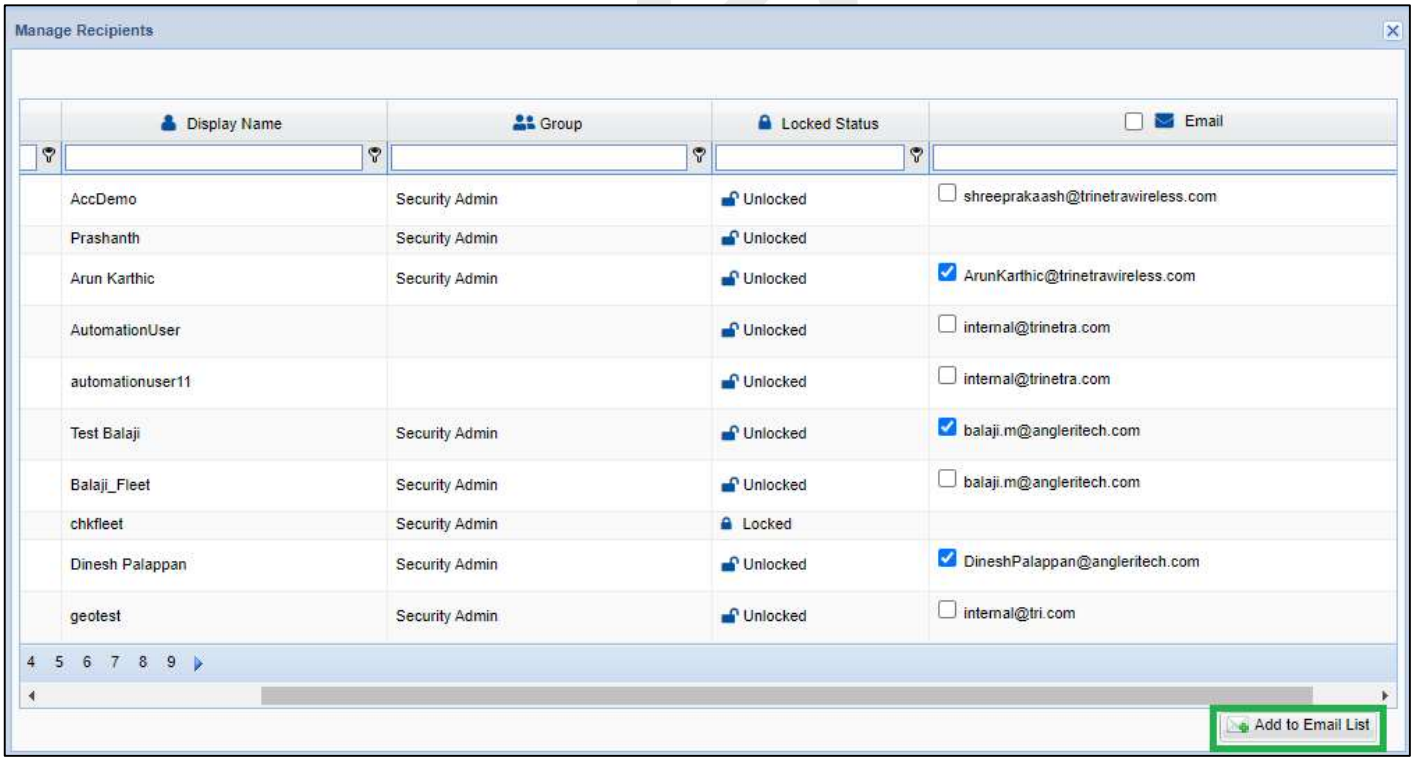
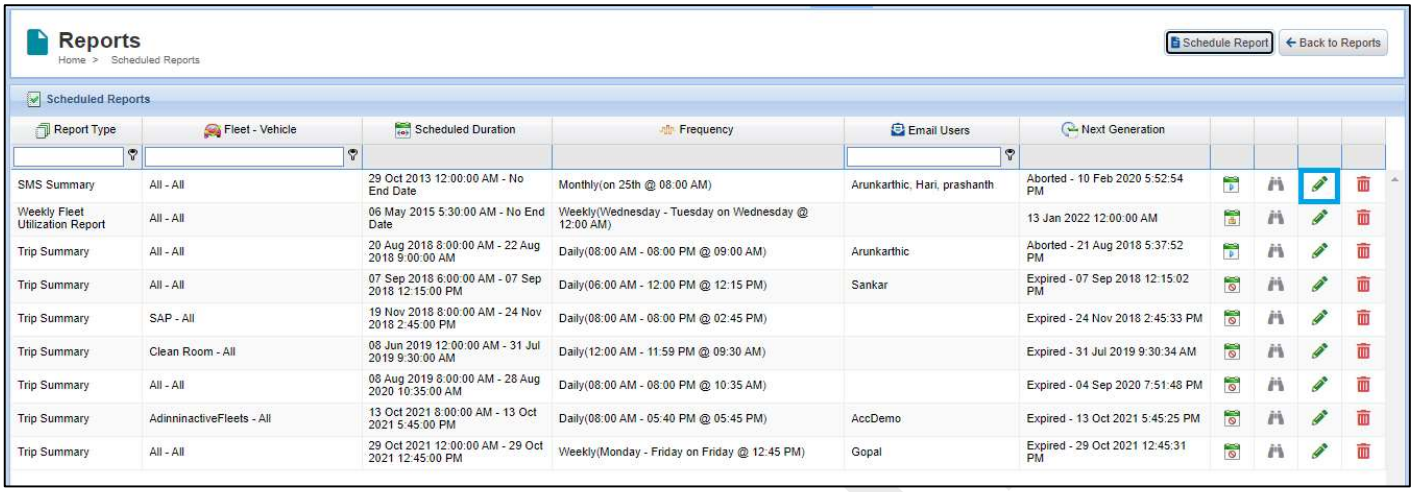


Fig: Manage Recipients pop-up – Schedule Reports

View history of Scheduled Reports – Click the **Scheduled Report** button in the top right corner of the report main screen and the following scheduled reports listing screen appears

There is a provision for **search** under each column in the above scheduled reports screen such that the user can search for a particular scheduled report or group of scheduled reports based on the Report Type, Fleet – Vehicle and Email Users.

The users can also **sort** the grid contents based on a particular column by clicking the appropriate column header.



Report Type	Fleet - Vehicle	Scheduled Duration	Frequency	Email Users	Next Generation
SMS Summary	All - All	29 Oct 2013 12:00:00 AM - No End Date	Monthly(on 25th @ 08:00 AM)	Arunkarthic, Hari, prashanth	Aborted - 10 Feb 2020 5:52:54 PM
Weekly Fleet Utilization Report	All - All	06 May 2015 5:30:00 AM - No End Date	Weekly(Wednesday - Tuesday on Wednesday @ 12:00 AM)		13 Jan 2022 12:00:00 AM
Trip Summary	All - All	20 Aug 2018 8:00:00 AM - 22 Aug 2018 9:00:00 AM	Daily(08:00 AM - 08:00 PM @ 09:00 AM)	Arunkarthic	Aborted - 21 Aug 2018 5:37:52 PM
Trip Summary	All - All	07 Sep 2018 6:00:00 AM - 07 Sep 2018 12:15:00 PM	Daily(06:00 AM - 12:00 PM @ 12:15 PM)	Sankar	Expired - 07 Sep 2018 12:15:02 PM
Trip Summary	SAP - All	19 Nov 2018 8:00:00 AM - 24 Nov 2018 2:45:00 PM	Daily(08:00 AM - 08:00 PM @ 02:45 PM)		Expired - 24 Nov 2018 2:45:33 PM
Trip Summary	Clean Room - All	08 Jun 2019 12:00:00 AM - 31 Jul 2019 9:30:00 AM	Daily(12:00 AM - 11:59 PM @ 09:30 AM)		Expired - 31 Jul 2019 9:30:34 AM
Trip Summary	All - All	08 Aug 2019 8:00:00 AM - 28 Aug 2020 10:35:00 AM	Daily(08:00 AM - 08:00 PM @ 10:35 AM)		Expired - 04 Sep 2020 7:51:48 PM
Trip Summary	AdinninactiveFleets - All	13 Oct 2021 8:00:00 AM - 13 Oct 2021 5:45:00 PM	Daily(08:00 AM - 05:40 PM @ 05:45 PM)	AccDemo	Expired - 13 Oct 2021 5:45:25 PM
Trip Summary	All - All	29 Oct 2021 12:00:00 AM - 29 Oct 2021 12:45:00 PM	Weekly(Monday - Friday on Friday @ 12:45 PM)	Gopal	Expired - 29 Oct 2021 12:45:31 PM

Fig: Scheduled Reports Screen

The following are the purpose of the symbols used in the above Manage Users Listing Screen

Indicates that the scheduled report is running

Indicates that the scheduled report is stopped

Indicates that the scheduled report is expired

Used to view the scheduled reports details

Used to edit the scheduled reports details

Used to delete the scheduled reports

Stop the Report Scheduling – Click the appropriate **Stop** ( ) icon in the right side of the Scheduled Reports Listing Screen corresponding to the Scheduled Report.

Resume Report Scheduling – Click the appropriate **Resume** ( ) icon in the right side of the scheduled Reports Listing Screen corresponding to the Scheduled Report.

Edit the Scheduled Reports – Click the appropriate **Edit** ( ) icon in the right side of the Scheduled Reports Listing Screen corresponding to the Scheduled Report for which the details have to be updated. The Edit screen appears and select No End Date or Effective Till, Modify the recipients and parameters like From, To and Generate On as needed and click the **Save** button to reflect the changes.

View the Scheduled Reports – Click the appropriate **View** ( ) icon in the right side of the Scheduled Reports Listing Screen corresponding to the Scheduled Report for which the details have to be viewed. The scheduled reports details will be viewed by the user in the read only mode.

Delete the Scheduled Reports – Click the appropriate **Delete** ( ) icon in the right side of the Scheduled Reports Listing Screen corresponding to the Scheduled Report which has to be deleted.

Limitations

1. Only the users having privileges can access the reports or schedule reports module.
2. The user cannot edit the parameters other than No End Date or Effective Till, From, To, Generated On and Email To recipients.
3. The user cannot delete the scheduled reports when the report is under scheduling process.

trinetra

8. Fleet Maintenance

Fleet Maintenance module allows the company to track their vehicles' maintenance services history, without tracking services manually or searching through piles of papers. This module includes

- Maintenance Service
- Maintenance Plan
- Plan Assignment
- Nearing Maintenance
- Ad hoc Services
- Service History

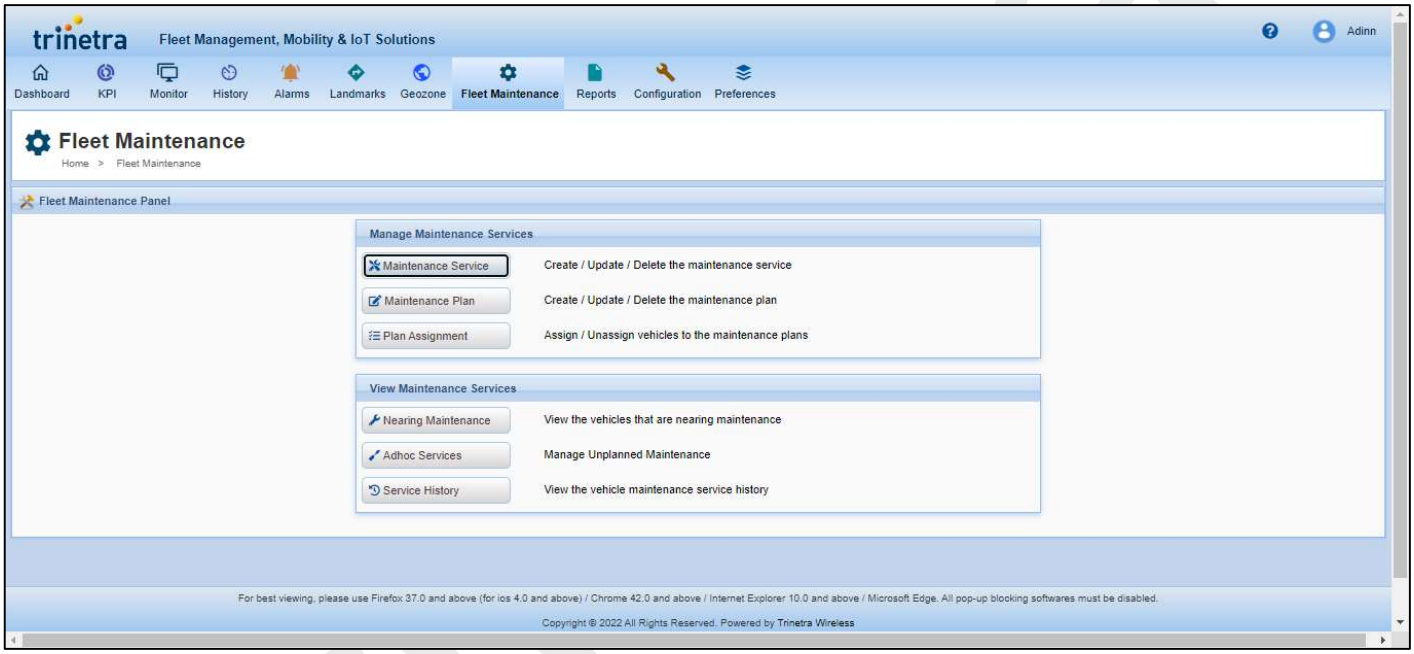


Fig.: Fleet Maintenance page

8.1 Maintenance Service

Maintenance Service Module allows the user to manage the maintenance services of the vehicles. User can create services for vehicles and add them to a Maintenance Plan for vehicles. For e.g., maintenance services can be Oil Change, Changing Tires, Water Service, etc.

User can also manage the maintenance Service Package and group the maintenance services under the service packages. For e.g., service packages can be General Services, Services for Car, Services for Van, etc. under which the services like Oil Change, Changing Tires, etc. can be assigned.

Select **Fleet Maintenance → Maintenance Service**

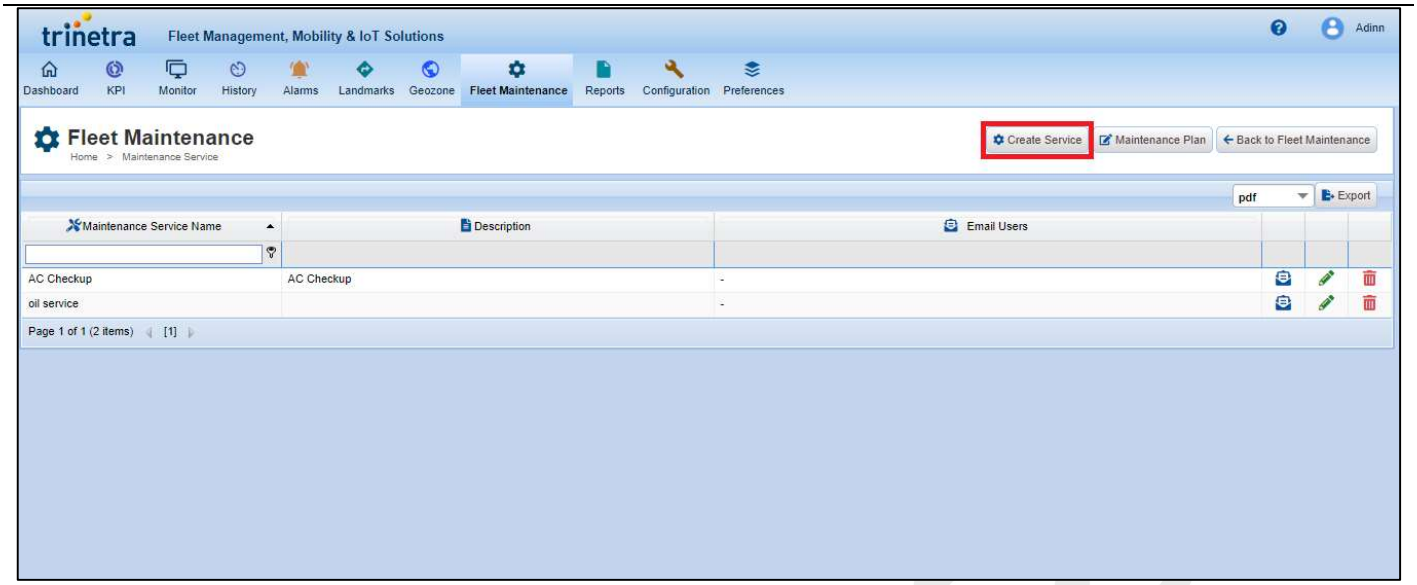


Fig: Maintenance Services list

There is a provision for **search** under each column in the above maintenance services listing screen such that the user can search for a particular maintenance service or group of maintenance based on the Maintenance Service Name. The users can also **sort** the grid contents based on a particular column by clicking the appropriate column header. There is a provision for **exporting the contents** from the Manage Maintenance Service grid to PDF, XLS, CSV and RTF as required. To export, select the file format and click **Export** button at the top right corner.

The following are the symbols used in the Manage Maintenance Service page:

PENCIL – Used to edit the maintenance service details.

CROSS – Used to delete the maintenance service.

MAIL – Used to set the notifications for the service.

Add a Maintenance Service – Click **Create Service** button as highlighted in the above Manage Maintenance Service screen.

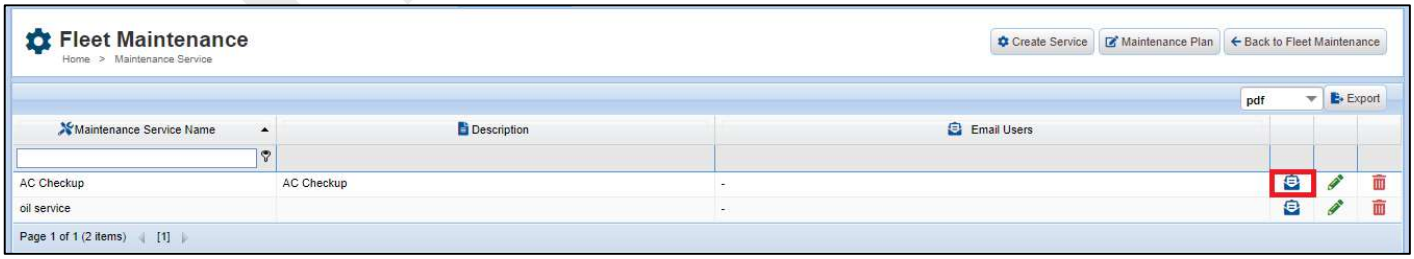


Fig: Manage Maintenance Service Notifications

The following are the steps to create the Maintenance Services, Maintenance Service Categories and assigning the maintenance service to the maintenance service categories.

8.1.1. Creating Maintenance Service

The following are the steps to create a maintenance service

1. Fill the **Maintenance Service Name** (required) and **Description** (optional).
2. Click **Save** button to add the maintenance service or click **Cancel** button to cancel the add operation.

8.1.2. Creating Maintenance Service Category (Package)

Managing the Maintenance Service Category helps the user to group the maintenance services so that maintenance services can be easily managed by the user based on the vehicle type, service type, etc

Create Service Category (Package) – In the Manage Service Assignment section, **c**lick the **Add** ( ) icon on the right side of the Service Category drop-down to display the following popup.

Fig: Add Maintenance Service package pop-up

Enter the **Category Name** (required)**,** the category's **Description** (optional) and click the **Save** button to create the service category. The created service category will be loaded in the Service Category drop- down for selection.

Edit Service Category – Click the **Edit** ( ) icon on the right side of the selected Service Category to display the following popup.

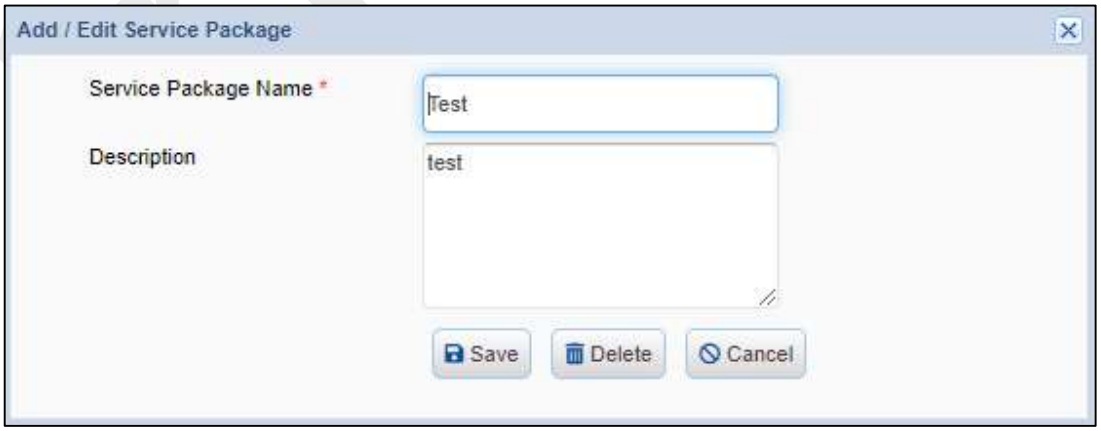


Fig: Edit Maintenance Service Package pop-up

After making the required changes, click the **Save** button to reflect the changes in the drop down.

Delete Service Category – Click the **Delete** button to delete the selected Service Category. The service category cannot be deleted if it is contains one or more maintenance services under it.

8.1.3. Maintenance Service Assignment

The following are the steps to assign / unassign the maintenances services from the service category.

1. On selecting a Service Category from the drop-down, the list of defined maintenance services will be displayed in the list. The assigned maintenance services will be checked in the list.
2. Check the maintenance services to be assigned to the service category & uncheck the maintenance services to be unassigned from the category.
3. Click the **Assign** button to save the list of maintenance services under the category. Click the **Close** button to cancel the operation and leave to the Maintenance Service list page.

Edit Maintenance Service – Click the appropriate **Edit** ( ) icon of the Maintenance Service. Make the necessary changes in the maintenance service details and click the **Save** button to reflect the changes.

Delete Maintenance Service – Click the **Delete** ( ) icon of the Maintenance Service to be deleted. Maintenance Services cannot be deleted if they are assigned to one or more service categories.

8.1.4. Notifications Settings - Maintenance Service

The following are the steps to set the notifications for a service:

1. Click the **Notifications** icon in the Manage Maintenance Service screen. The list of registered users will be listed under the Add Users to the Notifications List grid.
2. Option is available for adding 'Unregistered Users' for receiving the services notifications. How to add an unregistered user is explained below.
3. Select the required users for the notifications and click the **Save** button to save the selected list of users. The saved list of users will be displayed under the Email Users column of the Manage Maintenance Services list.
4. Clicking the **Cancel** button will abort the notifications settings operation.

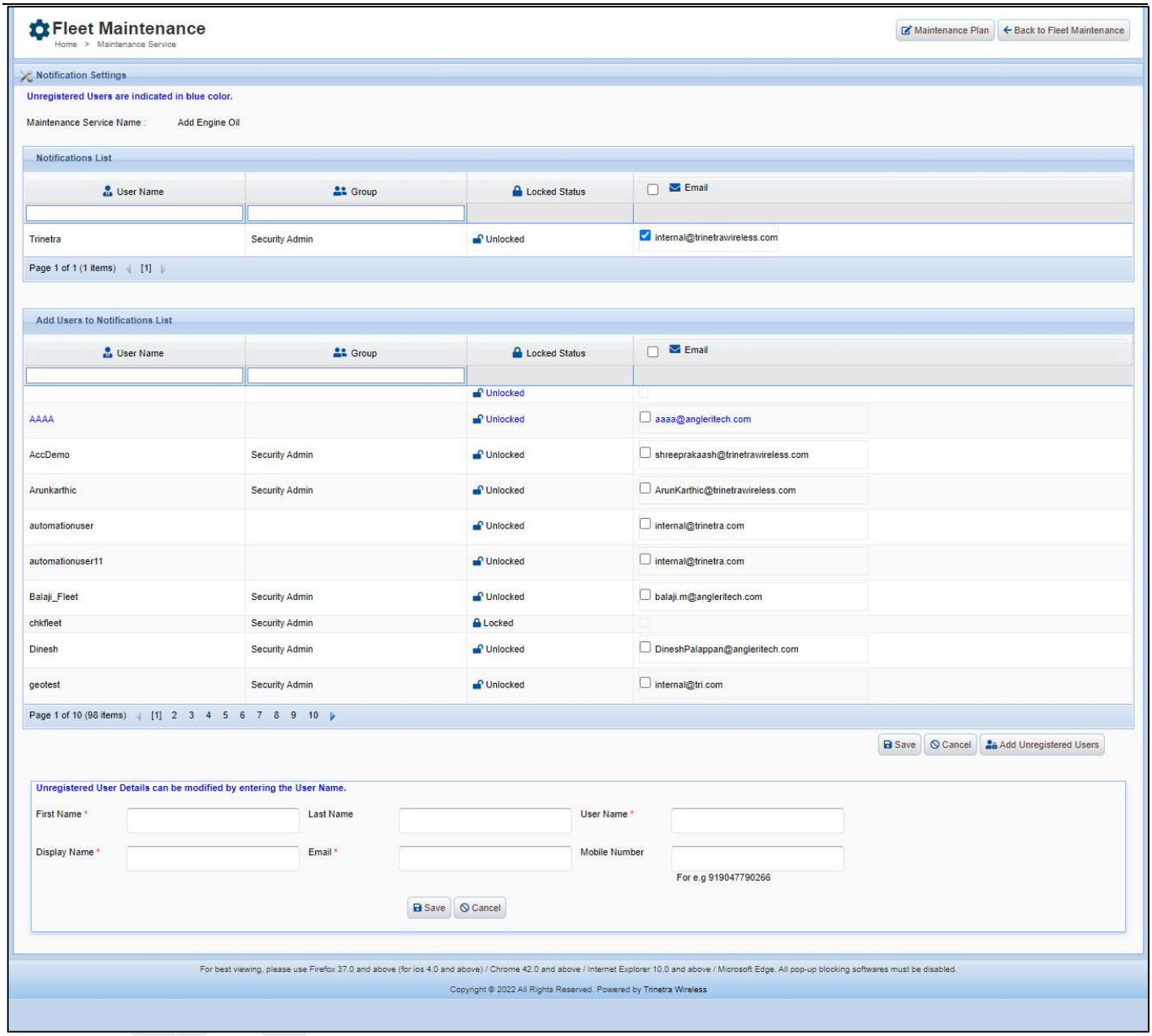


Fig: Service Notifications Settings

Add Unregistered Users – Click the **Add Unregistered User** button below the grids to display the necessary fields. After filling the mandatory fields clicking the Save button displays the created user under the Add Users to the Notification List grid.

Note

a) Unregistered users will be highlighted in blue color to differentiate them from the registered users.
b) Unregistered users cannot be created in the name of an existing registered user.
c) Creating an unregistered user under the same name as an existing unregistered user will edit the existing user's details.

Limitations

1. Only the users having privileges can manage the maintenance services & categories.
2. A Maintenance Service cannot be deleted once it is assigned to one or more service categories.
3. A Maintenance Service Category cannot be deleted if it contains one or more Maintenance Services under it.
4. Maintenance Services cannot be assigned or unassigned to the Maintenance Service Category if it is assigned to the vehicles.
5. Unregistered users cannot be deleted once created.

8.2 Maintenance Plan

Maintenance Plan Module allows the user to manage the maintenance plans for the vehicles.

Select **Fleet Maintenance → Maintenance Plan**

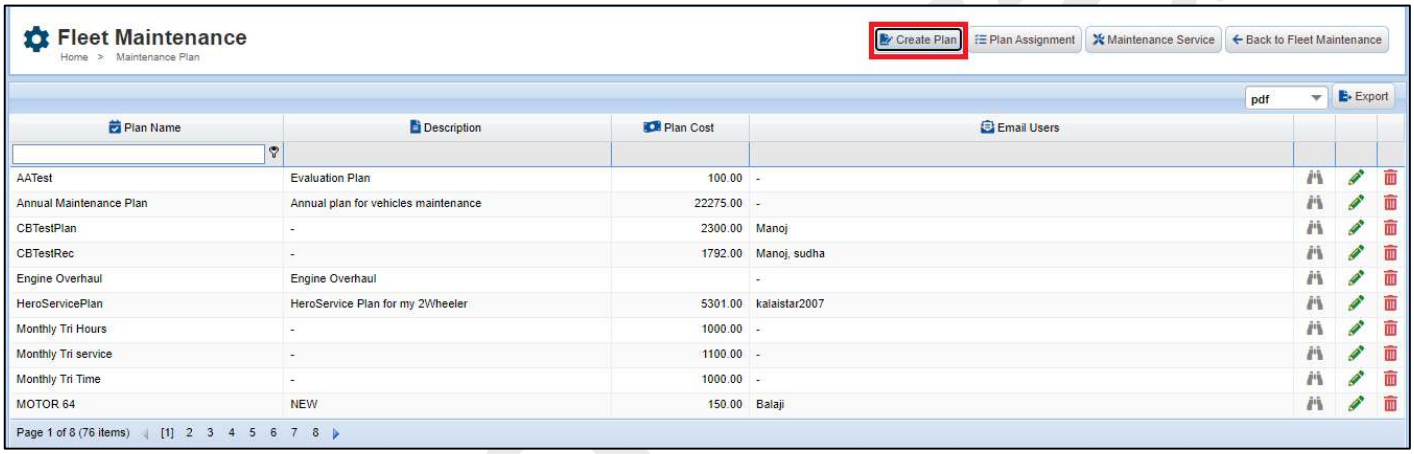


Fig: Manage Maintenance Plan

The following are the symbols used in the Manage Maintenance Plan page:

PENCIL – Used to edit the maintenance plan details.

CROSS – Used to delete the maintenance plan.

BINOCULARS – Used to view the contents of the maintenance plan.

8.2.1 Add Maintenance Plan

While adding a new maintenance plan, the user can select the required details in a comprehensive manner. To create a new maintenance plan, click the **Create Plan** button as highlighted in the Manage Maintenance Plan figure to display above.

The following are the tabs that are to be populated to successfully create a maintenance plan.

- Maintenance Plan Details,
- Service Details, and
- Notification Settings.

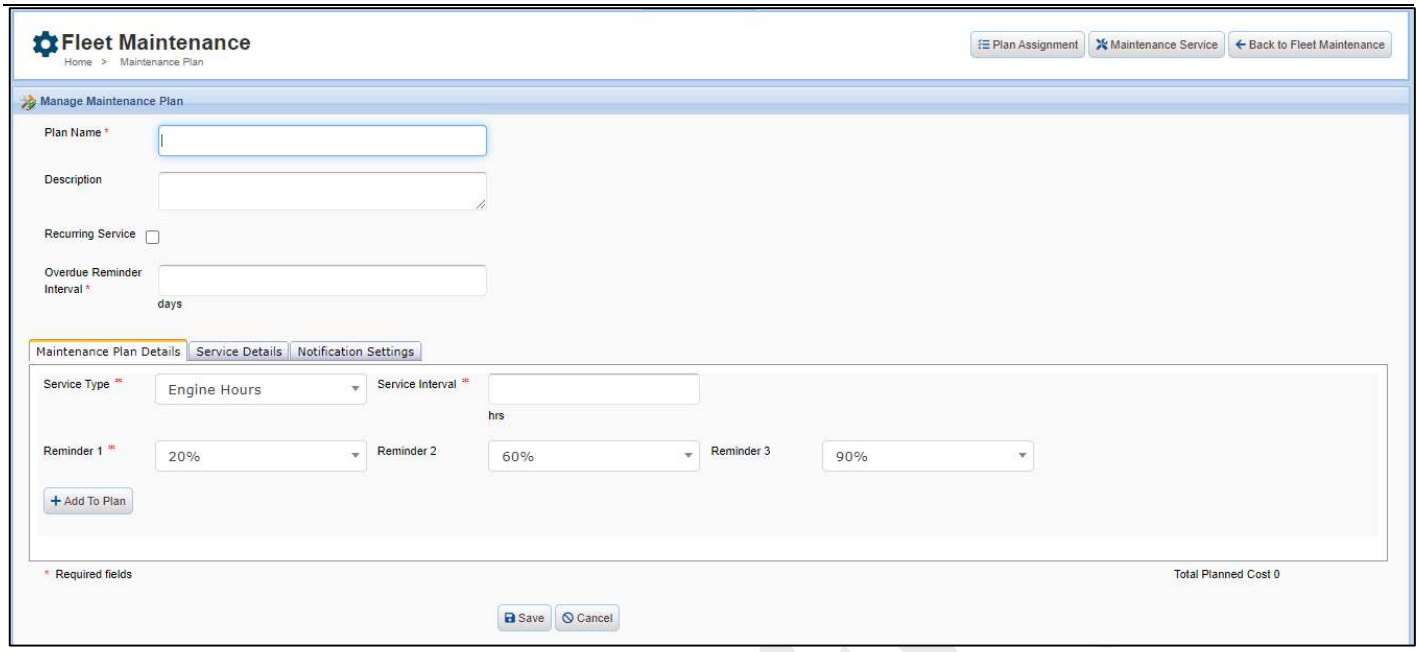


Fig: Maintenance Plan Details tab

Maintenance Plan Details

The following are the details to be filled up the Maintenance Plan Details tab

1. Fill the **Plan Name** (required) and **Description** (optional).
2. If the plan is a recurring one, check the **Recurring Service** checkbox.
3. Fill in the **Overdue Reminder Interval**. This interval is used to send the reminder mails to the notified users, in case the plan is overdue. For ex., if '3' is the entered value, the overdue reminder mails will be sent to the notified users once in 3 days.
4. Select the **Service Type** (Engine Hours / Odometer / Time Based).
5. Enter the **Service Interval**. For 'Engine Hours' Service Type, the Service Interval has to be in hours. For 'Odometer Interval' Service Type, the Service Interval will be in either kilometer or miles depending on the user's Preferences. For 'Time Based' Service Type, the service interval will be entered in days, months or years, as required.
6. Select the **Reminders** as required. Reminders indicate the percentage on which the notification for the maintenance service should be sent. Reminder 1 is mandatory. Reminder 2 & 3 are optional and can be set to 'None'.
7. Click the **Add To Plan** button to add the maintenance plan details. These details will be shown in the list below the button. The maintenance plan details can be deleted by clicking the appropriate **Delete** ( ) icon of the maintenance plan details.

Note

1) Only one entry of a Service Type can be added to the plan.
2) Once a Service Type is added to the list, the Recurring Services checkbox will not be editable.

Service Details

The Service Details tab displays the list of available services, along with their Service Category. The user can select the required services and enter the budgeted / planned cost for the service.

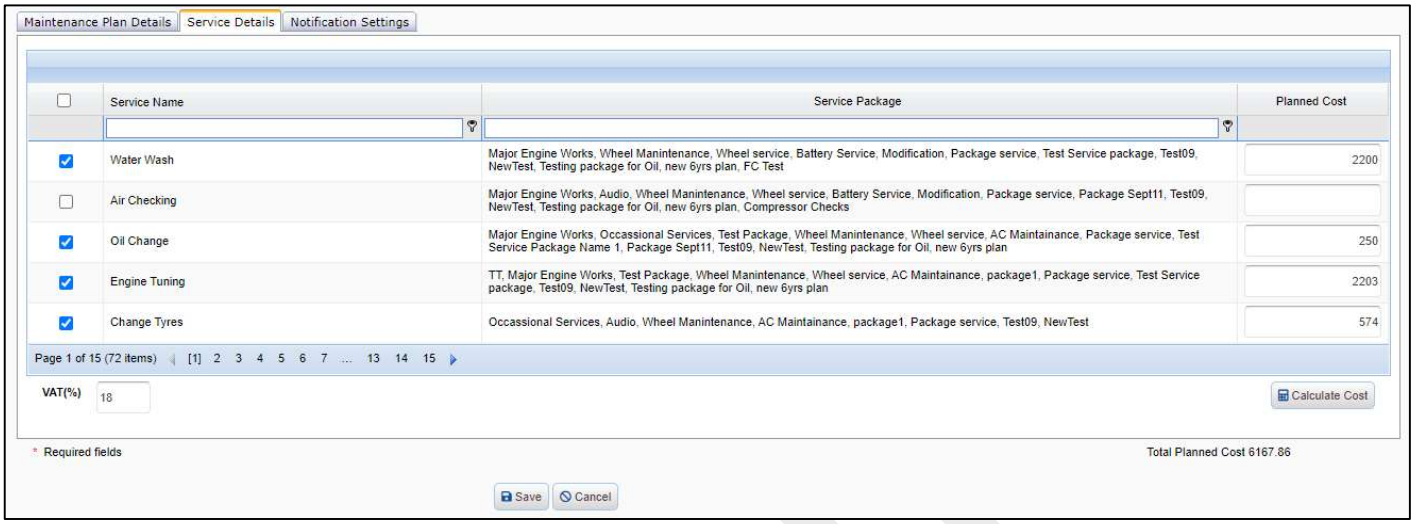


Fig: Service Details tab

After selecting the necessary services, clicking the **Calculate Cost** button displays the total budgeted / planned cost of the maintenance plan.

Notification Settings

The Notification Settings tab provides the option to select the users intended to receive the reminders of the plan. The following figure shows the Notification Settings tab.

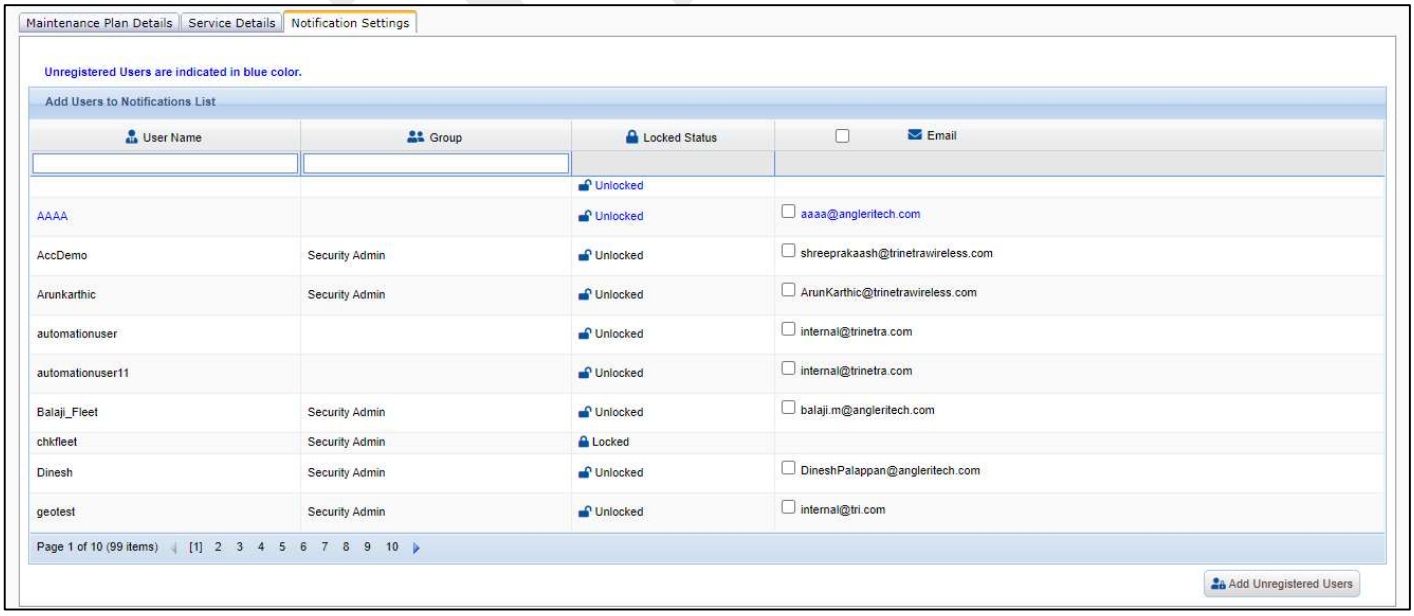


Fig: Notification Settings tab

The list of registered users will be displayed in the Add Users to Notifications List grid. In case an unregistered user has to receive the notifications regarding that plan, he / she can be added using the Add Unregistered Users option.

Add Unregistered Users – Click the **Add Unregistered User** button below the grids to display the necessary fields. After filling the mandatory fields clicking the Save button displays the created user under the Add Users to the Notification List grid.

Note

a) Unregistered users will be highlighted in blue color to differentiate them from the registered users.
b) Unregistered users cannot be created in the name of an existing registered user.
c) Creating an unregistered user under the same name as an existing unregistered user will edit the existing user's details.

After the necessary details have been filled in the appropriate tabs, click the **Save** button to create the maintenance plan or click **Cancel** button to cancel the creation.

Edit Maintenance Plan – Click the **Edit** ( ) icon of the Maintenance Plan to be updated. Make the necessary changes in the maintenance plan details and click the **Save** button to reflect the changes.

Vehicle Plans

This tab is available once the plan has been assigned to vehicles. The tab displays the list of vehicles that have been assigned to this plan. The following figure shows the Vehicle Plans tab.

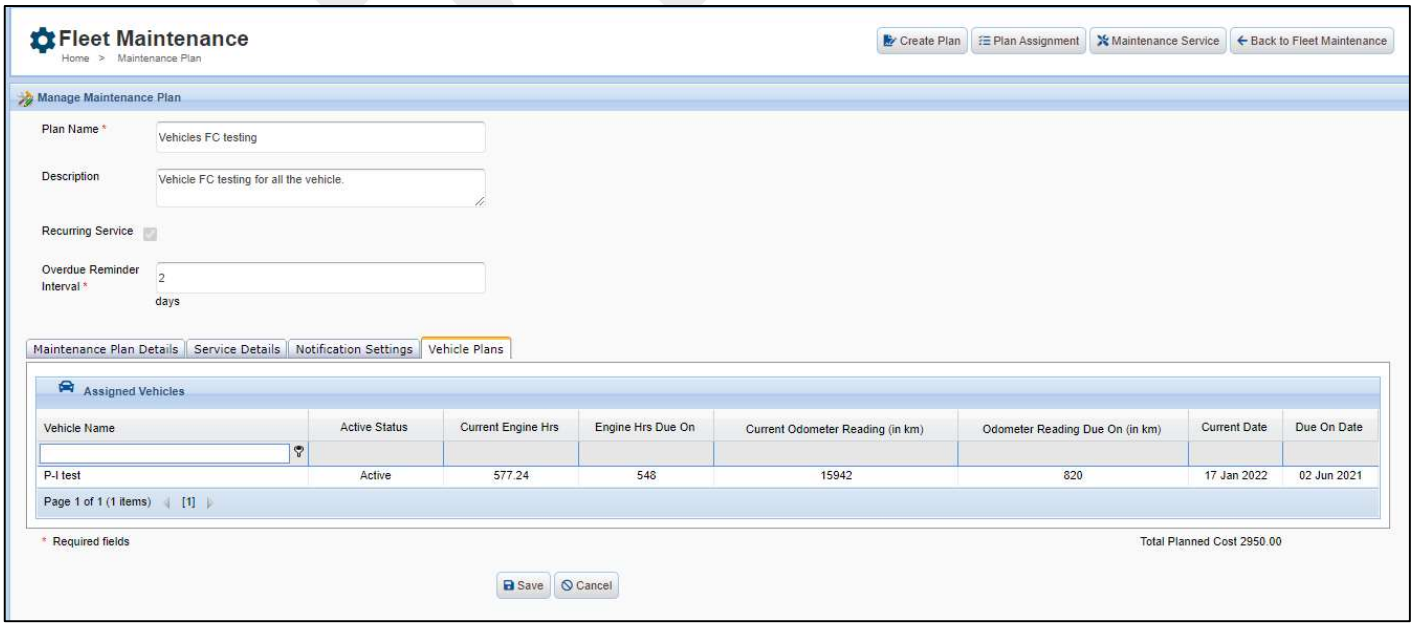


Fig: Vehicle Plans tab

Delete Maintenance Plan – Click the **Delete** ( ) icon of the Maintenance Plan to be deleted. Maintenance Plan cannot be deleted if it is assigned to one or more vehicles.

Limitations

1. Only the users having privileges can create, edit, view and delete the maintenance plans.
2. Neither the plan nor its details in the Maintenance Plan Details can be deleted once the plan has been assigned to one or more vehicles.

8.3 Plan Assignment

Plan Assignment screens allows the user to assign one or more maintenance plans to the vehicles.

Select **Fleet Maintenance → Plan Assignment**

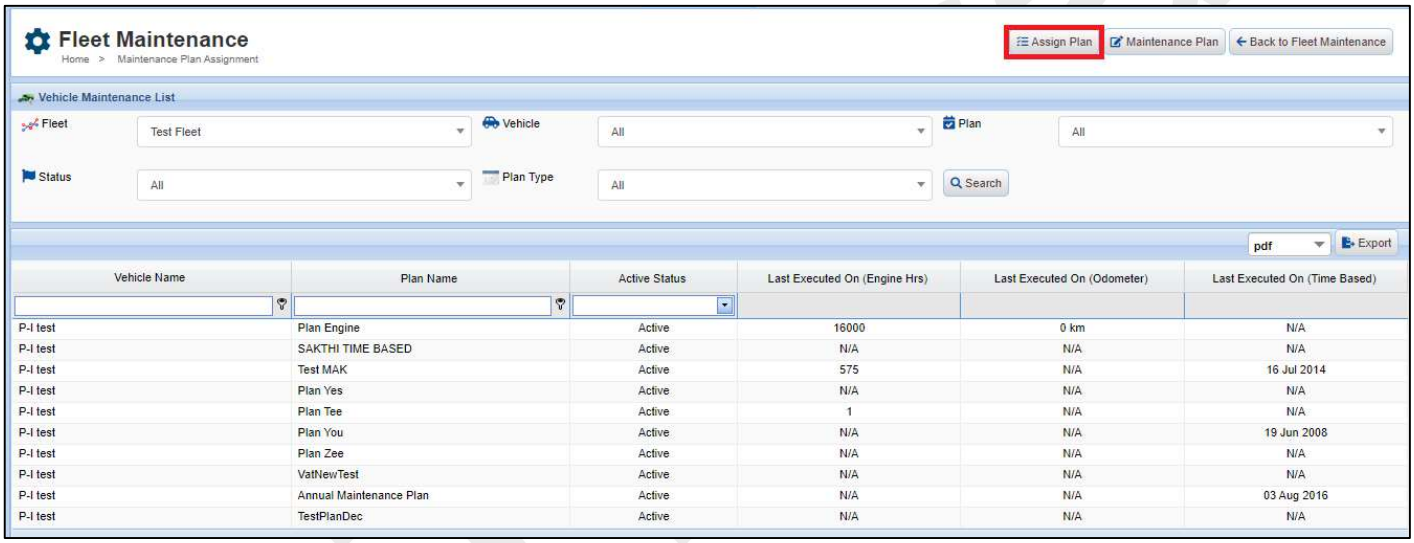


Fig: Plan Assignment screen

The Plan Assignment screen lists the vehicles that have already been assigned to plans. These vehicles are listed based on the filters at the top of the grid, like Fleet, Vehicle, Plan, Status and Plan Type. The page contains details like the Vehicle Name, the Plan assigned to it, Status of the vehicle's plan and the Last Executed On values depending on the Service Type selected in the plan.

More than one plan can be assigned to a vehicle. In such cases, the vehicle name will be repeated as per the number of plans assigned to it.

Clicking the Vehicle Name in the grid displays a pop-up that shows the details of the plan assigned to the vehicle. The following figure shows the Plan Details pop-up.

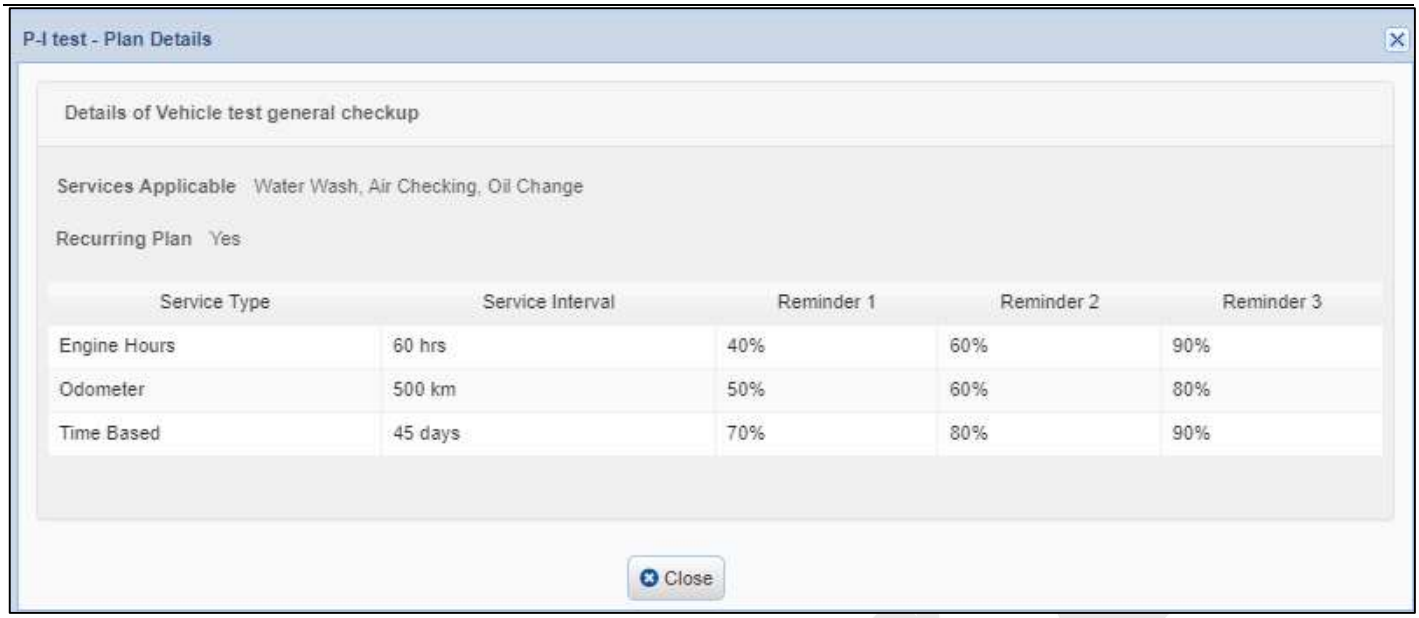


Fig: Vehicle Plan Details pop-up

The pop-up shows the Services that are applicable for the vehicle, whether the plan is recurring or not, the Service Type in the plan, the Service Interval and the different Reminder levels under the plan.

8.3.1 Assign Plan

The Assign Plan page lists the vehicles that are assigned and unassigned for the particular plan. By default, the lists of vehicles for the first plan, alphabetically, will be displayed in the grids.

BINOCULARS – Used to view the contents of the maintenance plan.

Selecting a plan from the Plan drop-down and clicking the **View** ( ) icon displays a Vehicle Plan Details pop-up, like the below figure, with the details of the selected plan.

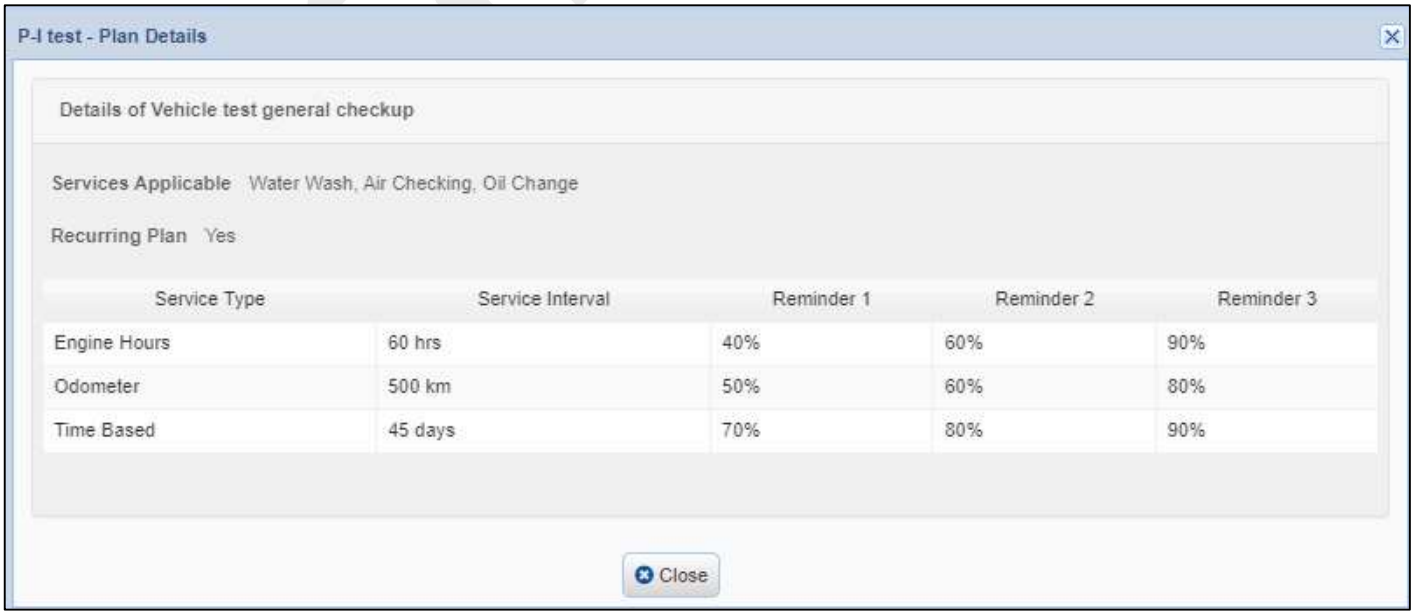


Fig: Vehicle Plan Details pop-up

The vehicles that are already assigned to the plan will be listed in the Assigned Vehicles grid. The Assigned Vehicles grid contains the following icons:

- Status is 'Active'. Clicking the icon deactivates the vehicle maintenance plan.

- Status is 'Inactive' Clicking the icon activates the vehicle maintenance plan.

Deactivating a vehicle maintenance plan will not display the vehicle / plan in the Nearing Maintenance list even though the vehicle has reached the maintenance level according to the plan. The reminder notifications that are yet to be sent will not be sent once the plan is deactivated.

Assigning / Unassigning a Maintenance Plan

The following are the steps to assign the Maintenance Plan to the vehicle:

1. Select the **Fleet** & **Plan** from the drop-downs to display the assigned and unassigned vehicles of the selected maintenance plan.
2. Select the vehicles from the 'Add Vehicles to Plan' list to be assigned to the selected maintenance plan.
3. As per the Service Types in the plan, either the Last Executed On or the Due On columns, or both, will be displayed in the Add Vehicles to Plan grid. The Opening Value column will also be displayed.

   Opening Value – This is the current engine hours / odometer of the vehicle.

   Last Executed On – This value should be the engine hours / odometer / date at which the last service was done to the selected vehicle.

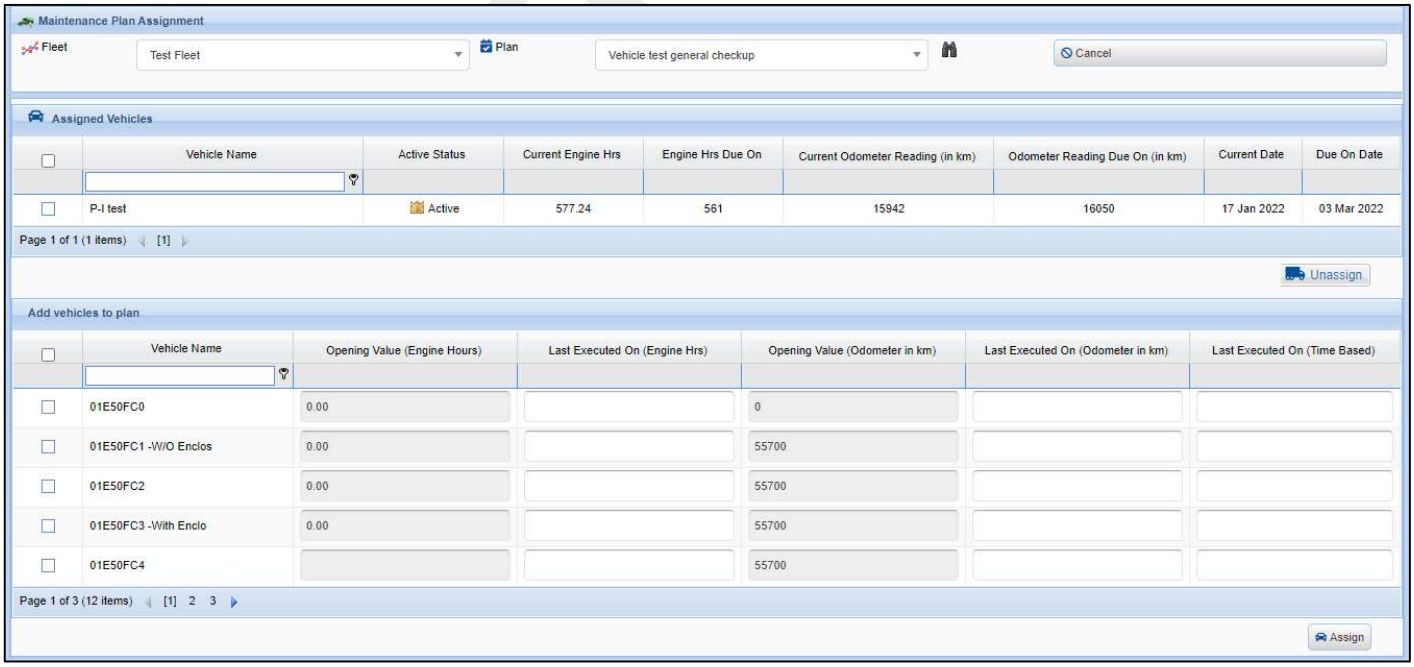


Fig: Assign Plan screen

Due On – This value should be the engine hours / odometer / date at which the maintenance plan should be 100% due.

The Opening Value and Last Executed On columns will be displayed only for the recurring plans. For non-recurring plans, the Opening Value and the Due On columns will be displayed.

4. Click the **Assign** button to assign the selected maintenance plan to the selected vehicles.

The following are the steps to unassign the Maintenance Plan to the vehicle:

1. Select the **Fleet** & **Plan** from the dropdown to display the assigned and unassigned vehicles under the selected fleet.
2. Select the vehicles from the Assigned Vehicles list to be unassigned from the selected maintenance plan.
3. Click the **Unassign** button to unassign the selected vehicles from the maintenance plan.

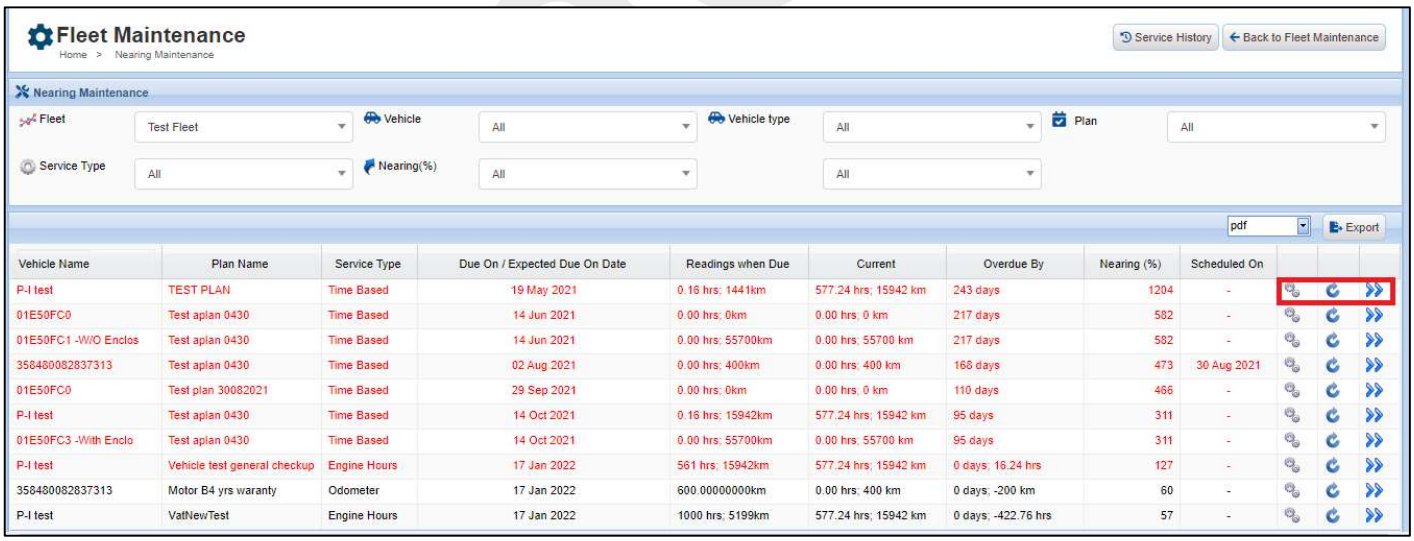
Limitations

1. Only the users having privileges can assign or unassign the vehicles from the maintenance plan.

8.4 Nearing Maintenance

Nearing Maintenance page lists the vehicles which are nearing the service deadline. Based on the Fleet and Vehicle selected, the plans assigned to the selected vehicle, nearing maintenance, will be displayed. This is done if a maintenance service schedule reaches the 'Reminder 1' percentage.

Select **Fleet Maintenance →Nearing Maintenance**



Vehicle Name	Plan Name	Service Type	Due On / Expected Due On Date	Readings when Due	Current	Overdue By	Nearing (%)	Scheduled On
P-I test	TEST PLAN	Time Based	19 May 2021	0.16 hrs; 1441km	577.24 hrs; 15942 km	243 days	1204	-
01E50FC0	Test aplan 0430	Time Based	14 Jun 2021	0.00 hrs; 0km	0.00 hrs; 0 km	217 days	582	-
01E50FC1 -W/O Enclos	Test aplan 0430	Time Based	14 Jun 2021	0.00 hrs; 55700km	0.00 hrs; 55700 km	217 days	582	-
358480082837313	Test aplan 0430	Time Based	02 Aug 2021	0.00 hrs; 400km	0.00 hrs; 400 km	168 days	473	30 Aug 2021
01E50FC0	Test plan 30082021	Time Based	29 Sep 2021	0.00 hrs; 0km	0.00 hrs; 0 km	110 days	466	-
P-I test	Test aplan 0430	Time Based	14 Oct 2021	0.16 hrs; 15942km	577.24 hrs; 15942 km	95 days	311	-
01E50FC3 -With Enclo	Test aplan 0430	Time Based	14 Oct 2021	0.00 hrs; 55700km	0.00 hrs; 55700 km	95 days	311	-
P-I test	Vehicle test general checkup	Engine Hours	17 Jan 2022	561 hrs; 15942km	577.24 hrs; 15942 km	0 days; 16.24 hrs	127	-
358480082837313	Motor B4 yrs waranty	Odometer	17 Jan 2022	600.00000000km	0.00 hrs; 400 km	0 days; -200 km	60	-
P-I test	VatNewTest	Engine Hours	17 Jan 2022	1000 hrs; 5199km	577.24 hrs; 15942 km	0 days; -422.76 hrs	57	-

Fig: Nearing Maintenance screen

If the vehicle is due under more than one Service Type in a plan, the Service Type with the highest Nearing % will be displayed in the Nearing Maintenance grid. If a vehicle is due under more than one plan, then they will be displayed as separate entries in the Nearing Maintenance grid.

Besides the Vehicle Name and the Plan Name, the Nearing Maintenance grid displays the following details:

- **Service Type** – The Service Type that has the highest nearing percentage in the plan.
- **Due On / Expected Due On Date** – If the nearing percentage has reached or crossed 100%, this date refers the actual Due On date at which the plan was 100% due. Otherwise, this is the tentative date at which the plan will be 100% due.
- **Readings When Due** – Here again, if the nearing percentage has reached or crossed 100%, these are the vehicle's readings when the plan reached 100% due. Otherwise, these are the vehicle's readings at which the plan will be 100% due.
- **Current** – These are the current readings of the vehicle.
- **Overdue By** – These will be displayed in days and the reading according to the Service Type (engine hours or odometer). They represent the overdue readings. If they are displayed in negative values, the vehicle is yet to reach 100% due.
- **Nearing %** – This percentage represent how near the vehicle is ready for maintenance. If it is above 100%, it will be displayed in red color to highlight and represent that the vehicle is overdue for maintenance.
- **Scheduled On** – In case the user wants to postpone the maintenance of the vehicle, the date in this cell displays the user-selected date for maintenance.

The following are the symbols used in the Nearing Maintenance page:

Enter the service details, cost of services and close the schedule.

Schedule the maintenance plan to a later date for execution.

Skips the maintenance service for the current schedule.

Entering Service Details / Closing A Plan

The below figure represents the Service Details pop-up used to save the service details or to close a plan. Click the Service Details ( ) icon to display following pop-up.

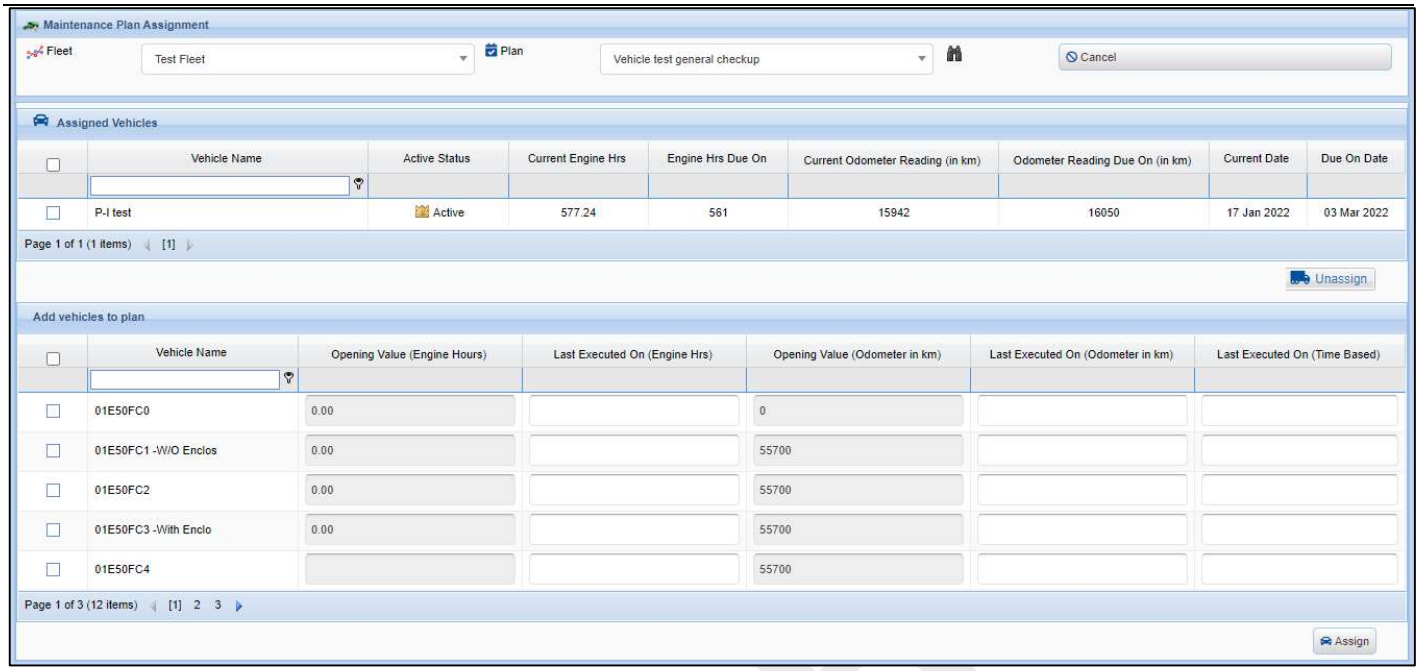


Fig: Service Details Popup

1. A date for the **Executed On** field needs to be selected. This date will be considered for calculating the forthcoming maintenance dates.
2. The user can select the list of services, from the **Services List**, that needs to be closed.
3. For each of the selected service, the **Serviced On** date needs to be selected. This is the actual date the maintenance was done.
4. Also, for the selected services, the **Service Cost** needs to be entered. This is the actual cost incurred for the selected service.
5. Entering **Comments** is optional. The user can enter any specific details he wishes to notify with the closing services.
6. The Next Schedule From option decides the date / odometer reading / engine hour in which the next maintenance should be carried out.

   Due On – This option will calculate the next schedule based on the current Due On value, even if the plan is currently overdue.

   Serviced Value – This option will calculate the next schedule based on the actual serviced value, even if the plan's Nearing % has not yet reached 100%.
7. Checking the **Skip the remaining services and close the plan** checkbox is optional. If the user wants to enter only some of the services in the Services List and wants to skip the remaining services in the plan, he can do so by checking this option. The plan will be closed, on saving, with whatever service details have been entered.

   If this option is not checked and not all the services are selected, the user can return back any time to close the remaining services, and thereby close the plan.
8. Click the **Save** button to save the plan details. Clicking the **Cancel** button cancels the above operations.

Note

1) To use the 'Skip the remaining services and close the plan' option, at least one service must be selected from the Services List.
2) There is no restriction that the Serviced On date should be within the Executed On date.

If the maintenance plan is not recurring, the plan will not be displayed for the vehicle in the future. The plan will be unassigned for the vehicle. If the maintenance plan is recurring, the next 'Due On' will be calculated based on the service interval, defined in the plan.

The maintenance plan will remain open until the user closes the schedule. When the open maintenance service schedule reaches 100%, the notification for the schedule will be sent to the user based on the Overdue Reminder Interval in the plan, until the plan is closed.

Rescheduling a Plan

If the user does not want to carry out the maintenance for the vehicle, but wants to acknowledge that the vehicle is due for maintenance, the user can do so by rescheduling the maintenance to a later date. Click the Reschedule ( ) icon to display the following 'reschedule plan' pop-up.

Fig: Reschedule Plan pop-up

The user can select the date at which he would like to execute the maintenance plan and add a comment to save the rescheduled date of the maintenance plan.

Note

1) Rescheduling a plan does changes neither its Nearing % nor stops the reminder notifications of a plan.

Skipping a Plan

In case the user does not want the plan to be executed in this maintenance cycle, the user can choose to skip the service.

Click the **Skip** ( ) icon to display the following skip service pop-up.

Fig: Skip Service pop-up

Enter the appropriate **Comments** for skipping the schedule and click the **Save** button to skip the service. If the schedule is not recurring, the schedule will be skipped and closed forever. If the schedule is recurring, the selected schedule will be skipped and the next 'Due On' will be calculated based on the service interval.

Limitations

1. Only the users having privileges can view nearing maintenance, enter the service details or skip the maintenance service schedule.
2. Ensure the Next Schedule On value before closing or skipping the plan.
3. In a recurring Time-based plan, the next schedule of the plan is based on the Executed On date. Serviced On value will not be considered for the next schedule.

8.5 Ad hoc Services

Ad hoc services are unplanned services, made available for unforeseen circumstances.

Select **Fleet Maintenance → Ad hoc Services**

The following are the steps to log an Ad hoc maintenance service:

1. Select the Fleet & Vehicle from the drop-downs for which the ad hoc maintenance service is to be done.
2. Select the date of execution of the unplanned maintenance in the Executed On field.
3. From the Services List, select the services done in the ad hoc maintenance, and enter their costs.
4. Enter their Service Costs and click the Calculate Cost button to sum the entered service costs.
5. Enter the Comments to indicate the nature of the maintenance.

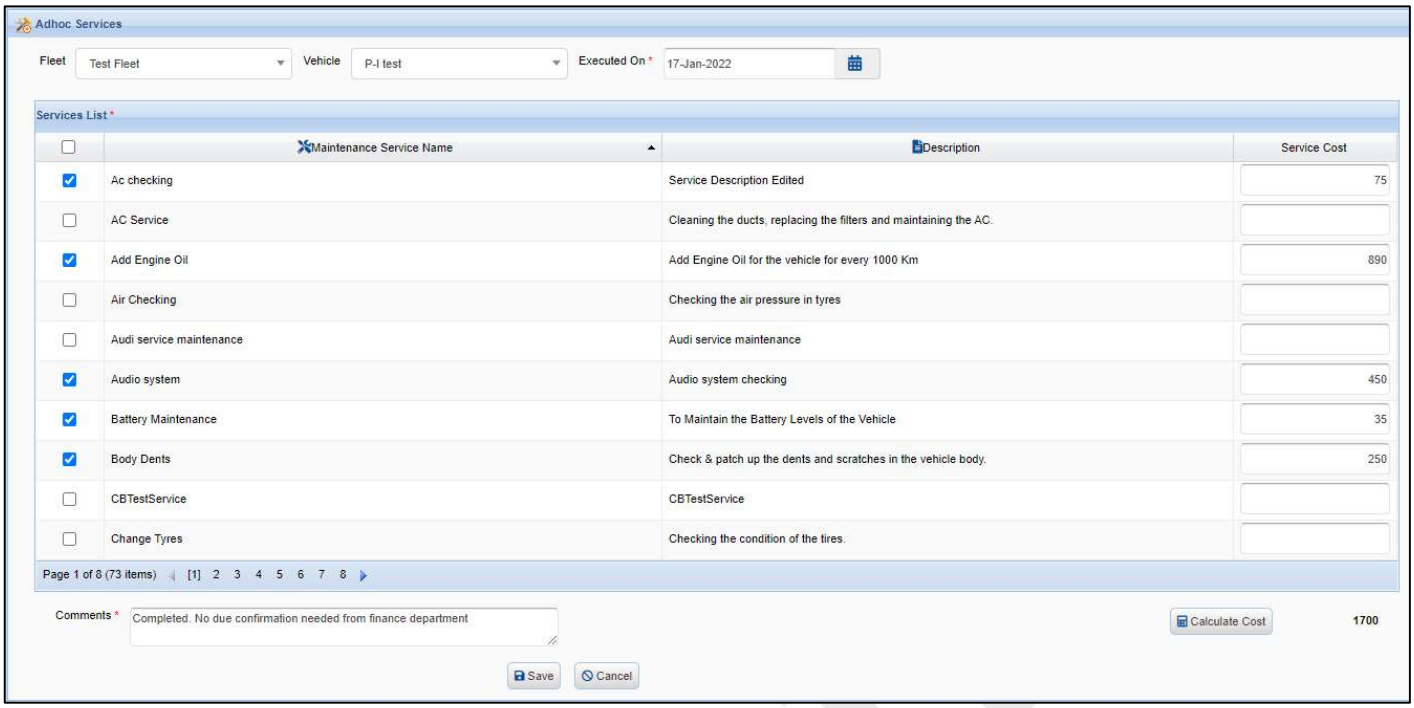


Fig: Ad hoc Services screen

Once the details are entered, clicking the Save button saves the unplanned maintenance details. Clicking the Cancel button clears the entered contents and resets the page.

On saving the ad hoc maintenance, the user will be redirected to the Service History page, where the maintenance will be displayed under the Unplanned Type of maintenance.

8.6 Service History

Service History displays the list of completed, skipped and dismissed maintenance schedules of the vehicles.

- Select **Fleet Maintenance → Service History**

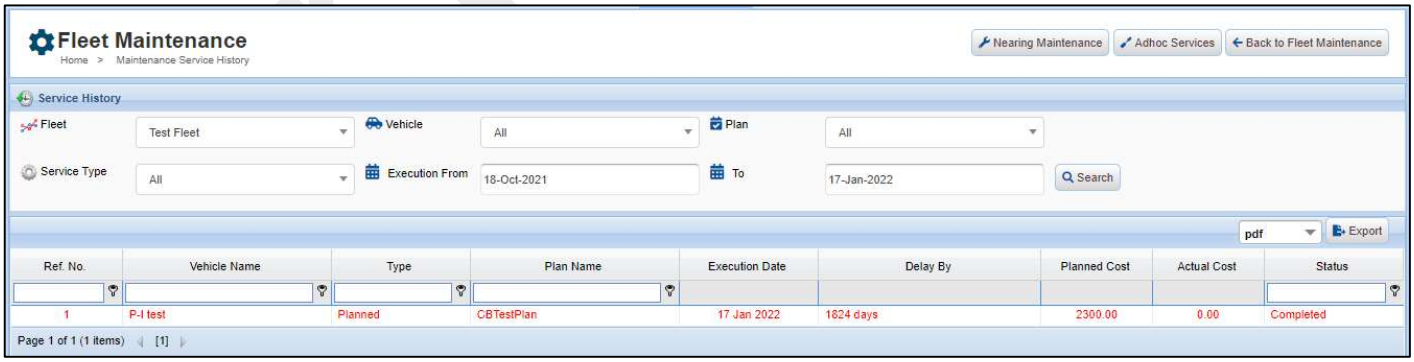


Fig: Service History Screen

The user can view the Maintenance Service History schedule based on the criteria like

- Fleet
- Plan

- Vehicle
- Status – All, Completed and Skipped
- Service Type – Engine Hours, Odometer, Time-based
- Executed Date From & To

Click the **Search** button after selecting the criteria to view the service history.

In case the maintenance plan was closed after the vehicle has reached 100%, the corresponding entry will be shown in red color, meaning it was overdue. Otherwise, the entry will be displayed in black. If the plan was closed before 100% but the maintenance cost of the plan is more than the budgeted / planned cost, the entry will be displayed in blue color.

The details of the services that were done in the maintenance plan can be viewed by clicking the **Ref. No.** of the corresponding entry.

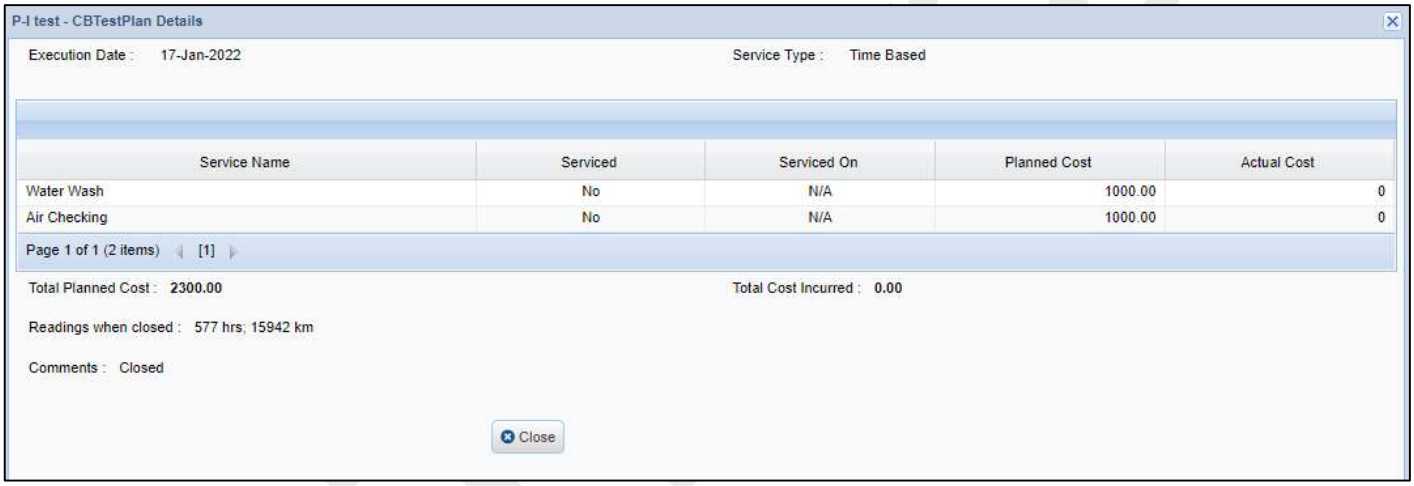


Fig: Service Details pop-up

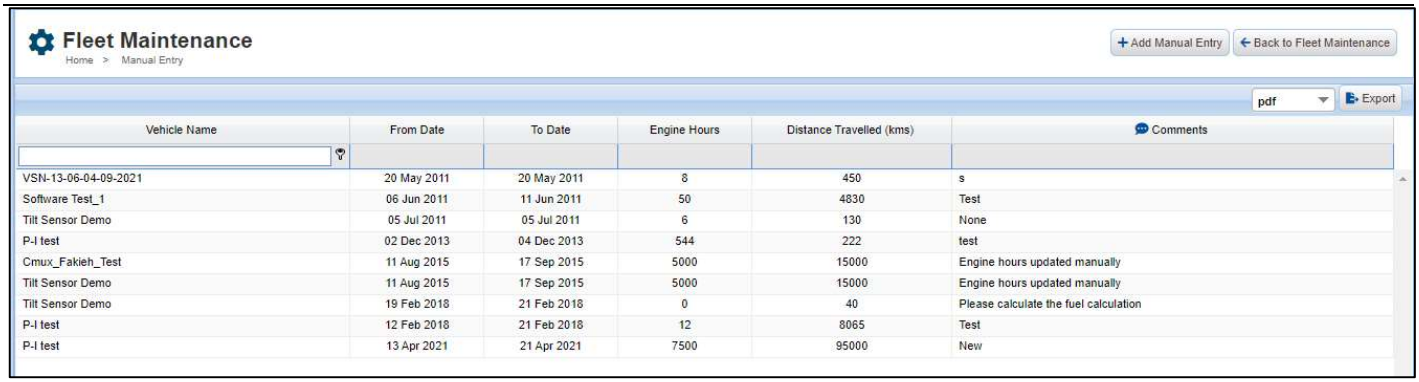
Limitations

1. Only the users having privileges can view the service history for the vehicles.

8.7 Manual Entry

Manual Entry allows the user to input the odometer reading and the engine hours clocked by the vehicle in the specified date range. This will be particularly helpful in case the device has stopped reporting due to any unforeseen circumstances.

Select Fleet Maintenance → Manual Entry as shown in the below screen



Vehicle Name	From Date	To Date	Engine Hours	Distance Travelled (kms)	Comments
VSN-13-06-04-09-2021	20 May 2011	20 May 2011	8	450	s
Software Test_1	06 Jun 2011	11 Jun 2011	50	4830	Test
Tilt Sensor Demo	05 Jul 2011	05 Jul 2011	6	130	None
P-I test	02 Dec 2013	04 Dec 2013	544	222	test
Cmux_Fakieh_Test	11 Aug 2015	17 Sep 2015	5000	15000	Engine hours updated manually
Tilt Sensor Demo	11 Aug 2015	17 Sep 2015	5000	15000	Engine hours updated manually
Tilt Sensor Demo	19 Feb 2018	21 Feb 2018	0	40	Please calculate the fuel calculation
P-I test	12 Feb 2018	21 Feb 2018	12	8065	Test
P-I test	13 Apr 2021	21 Apr 2021	7500	95000	New

Fig: Manual Entry grid

The user can add a manual entry based on Odometer or on Engine Hours.

Add Manual Entry – Click the **Add Manual Entry** button in the listing screen.

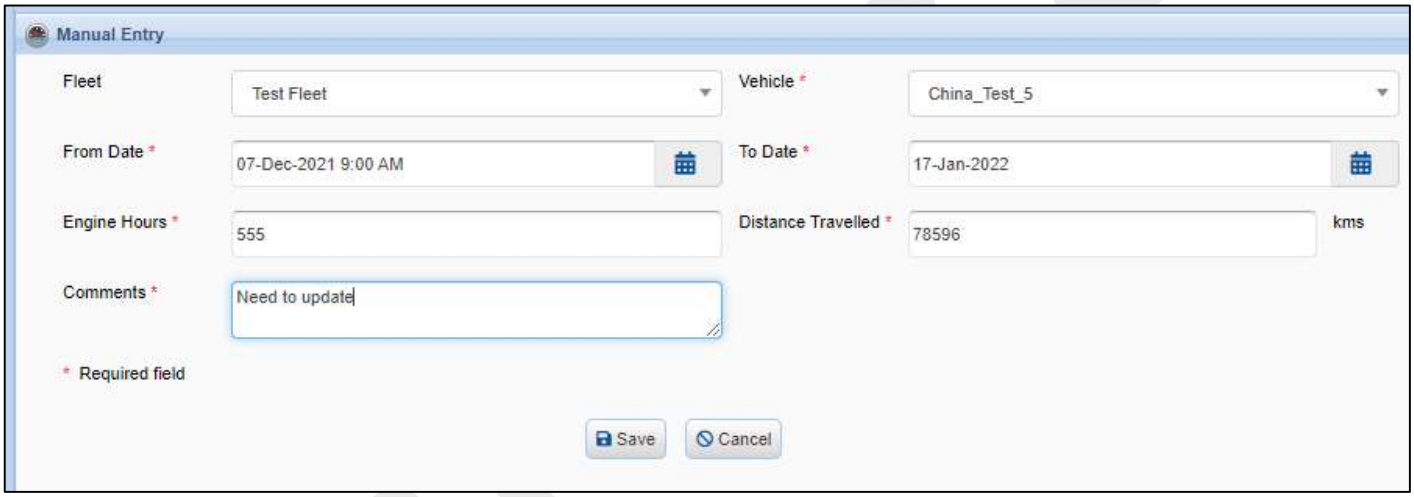


Fig: Add Manual Entry screen

The following are the steps to add a manual entry:

1. Select the Fleet and the Vehicle for which the fuel entry is to be made.
2. Select the date range for the fuel entry. The manual entry can be for a single day or for a series of dates.
3. Enter the Engine Hours clocked by the vehicle in the said date range. If the Engine Hours is not needed for the entry, a zero can be entered in the field.
4. Enter the Distance Travelled by the vehicle in the said date range. If the Distance Travelled is not needed for the entry, a zero can be entered in the field.
5. Enter the comments specific to the entry.

After filling in the required fields, clicking the Save button saves the manual entry for the vehicle.

Edit / Delete Manual Entry – Once a manual entry is made, the entry cannot be edited or deleted from the grid.

The Nearing % of the vehicles will be based on the manual entry made by the user. So, the user is required to enter the correct data for manual entry.

Limitations:

1. For a past date, if the data from the device is available, the Distance Travelled value in the manual entry will not be considered for the Nearing % calculation. However, the Engine Hours value in the manual entry will overwrite the data from the device.
2. If a manual entry is available for a device non-reporting date, and if the device later sends the messages to the server, the device data will not be considered for the Nearing % calculations.

9. Configuration

Configuration Module allows the user to

- Modify the organization details
- Configure the user groups, users and assigning user group to users.
- Configure the vehicles
- Configure the fleet, assigning vehicles to the fleet and assigning users to the fleet
- Configure the message & sensor severity settings

The user can drag and change the default arrangement of the modules listed in the Configuration page. On rearranging, the user will be requested whether the current layout has to be saved while leaving the page. The saved layout will be loaded next time the user visits the Configuration page.

9.1 Organization Management

Organization Management allows the users to modify the organization details.

Select **Configuration** → **Organization Management** → **Organization Mgt.** as shown in the below screen

Fig: Organization Management – Configuration Panel

Click the **Organization Management** button in the Configuration Panel to view the following Organization Management Listing Screen

Fig: Organization Management Listing

The following are the purpose of the symbols used in the above Manage Organization Listing Screen

PENCIL: Used to edit the organization details

Edit the Organization details – Click the **Edit** ( ) icon in the right side of the Manage Organization Listing Screen and the following Edit screen appears

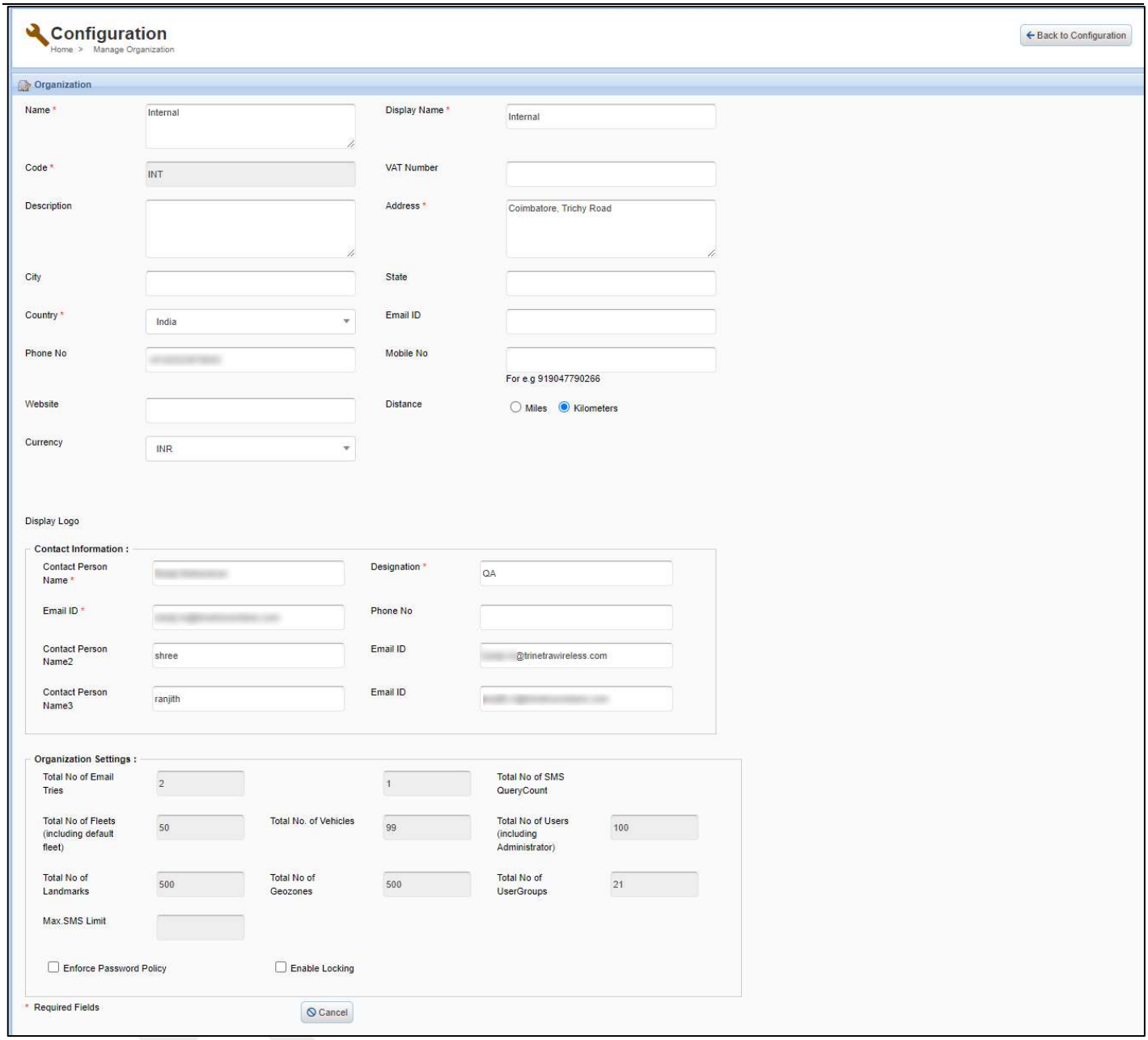


Fig: Organization Management Edit Screen

The following are the steps to update the organization details

- Update the organization details and contact information if required.
- Set **Enforce Password Policy** and **Enable Locking** if required.
  - If **Enforce Password Policy** is selected, then there will be two options like Minimum Characters and Change on first login. Select the **Minimum Characters** if required which specifies the minimum password characters allowed throughout the system. If the **Change on first login** is selected, then the change password screen will be displayed when the user first logs into the system. The user cannot login into the system until the user changes the password.
  - If **Enable Locking** is selected, then there will be two options like Lock IP and Lock User.
  - If **Lock IP** is selected, then select Lock IP hours and for how much invalid tries. The IP of the user will be locked for certain hours when the user tries to logs into the system with certain number of invalid tries. For e.g., the hours is

set to 1 and number of invalid tries is set to 3. If the user tries to log into the system with more than 3 invalid tries, the IP of the user will be locked for 1 hour restricting the user from logging into the application, even with a valid set of credentials.

- If **Lock User** is selected, then select the number of invalid tries after which the user should be locked. If the user is locked, the organization's **Administrator** or **Security Admin** has to unlock the user using the Manage Users Screen. Until the user is unlocked, the user could not able to login to the system.

- Finally click the **Save** button to update the organization details and settings or click the **Cancel** button to cancel the update operation.

Limitations

1. The organization administrator or users cannot edit the details like Total No of Email Tries, Total No of SMS Tries, Total No of Fleet, Total No of Vehicles and Total No. of Users.
2. Only the users having privileges can view or edit the organization details.

9.2 User Management

The **User Management** includes

1. **Manage Users** for creating and updating the users.
2. **Manage User Group** for creating, updating and deleting the user groups.
3. **Group Assignment** for assigning and unassigning the users to the user group.

9.2.1 Manage Users

Manage Users module allows the user to manage the organization users by creating and updating them.

Select **Configuration** → **User Management** → **Manage Users** as shown in the below screen

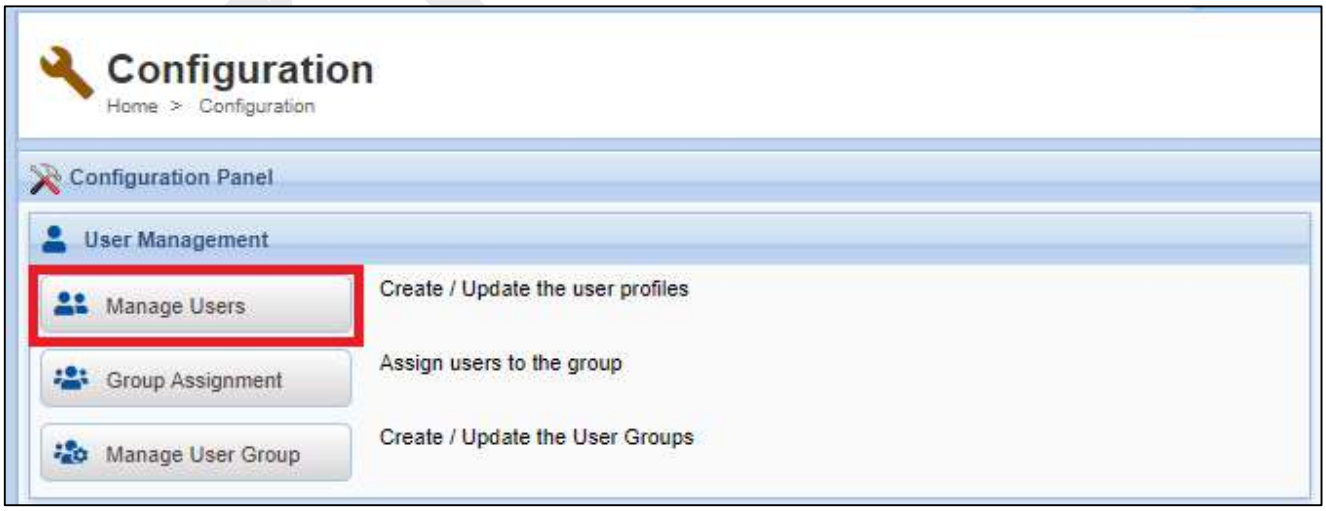


Fig: Manage Users – Configuration Panel

Click the **Manage Users** button in the Configuration Panel to view the following Manage Users Listing screen.

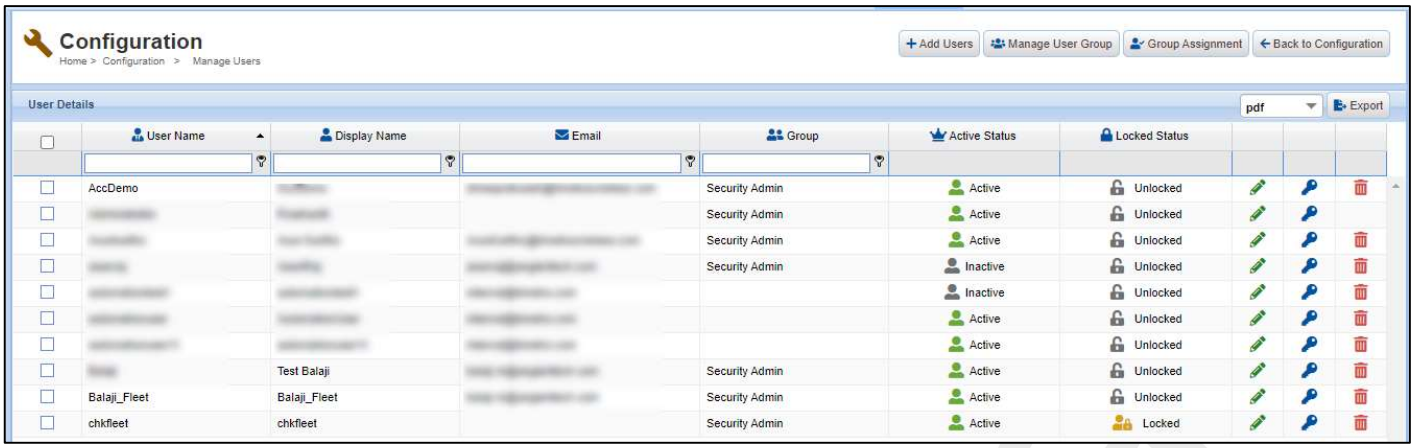


Fig: Manage Users

- There is a provision for **search** under each column in the above manage users listing screen such that the user can search for a particular user or group of users based on the User Name, Display Name, Email and Group.
- The users can also **sort** the grid contents based on a particular column by clicking the appropriate column header.
- There is a provision for **exporting the contents** from the manage users grid to **PDF, XLS, CSV and RTF** as required. To export, select the file format and click **Export** button at the top right corner.
- The **Active Status** and **Unlocked Status** can also be changed by clicking the icons in the appropriate Active Status and Locked Status column in the grid.

The following are the purpose of the symbols used in the above Manage Users Listing Screen.

Used to edit the user details

Used to reset the password of the user

Add a User – Click **Add Users** button as highlighted in the above Manage Users screen.

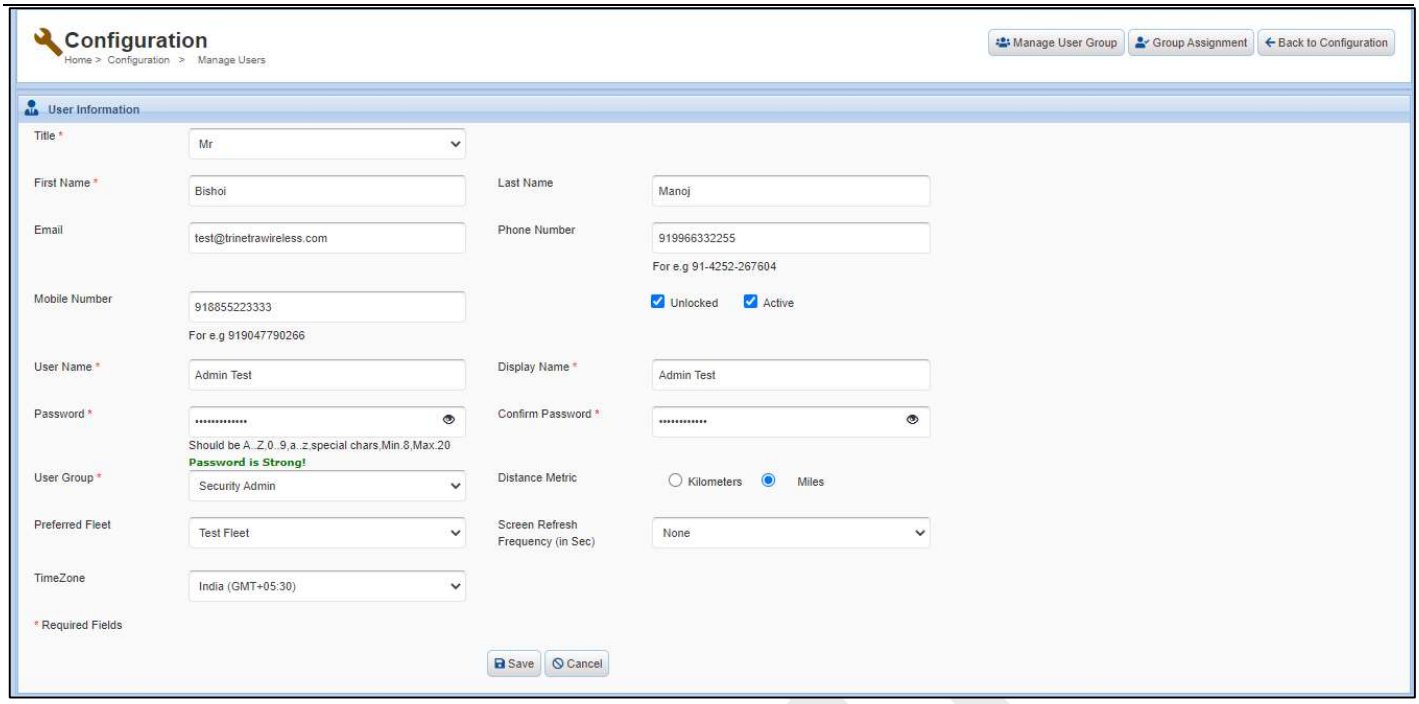


Fig: Add Users screen

The following are the steps to create the Users

1. Select the **Title** (Mr. / Miss / Mrs.).
2. Fill the personal details of the users like **First Name, Last Name, Email Id, Phone Number** and **Mobile Number,** where Last Name, Phone and Mobile Number are optional.
3. Select the **Unlocked** checkbox. By default, it will be checked. If the Unlocked checkbox is not checked, the user will be locked and would not be able to log into the system. The user will be locked when the user attempts to log into the system with certain number of invalid tries which is set for the organization. It determines whether the user can login into the system or not.
4. Select the **Active** checkbox. By default, it will be checked. If the Active checkbox is not checked, then the user will be made in-active and could not able to login into the system. It determines whether the user is available in the organization or not.
5. Fill **User Name** which allows the user to login to the system.
6. Fill **Display Name** which is displayed throughout in the system when the user logs into the system.
7. Fill **Password** and **Confirm Password** which allows the user to login to the system. The number of password characters allowed should not be less than the number of password characters set for the organization.
8. Select the **User Group** which applies the module and operation wise rights to the user.
9. Select the user preferences like **Default Fleet, Screen Refresh Frequency in seconds, Time zone** and **Distance**.
10. Finally click the **Save** button to add the User details or click **Cancel** button to cancel the add operation.

Edit a User – Click the appropriate **Edit** ( ) icon in the right side of the Manage Users Listing Screen corresponding to the User for which the details have to be updated. The Edit screen appears and change the User details as needed and click **Save Button** to reflect the changes.

Reset the password of a User – Click the appropriate **Reset** ( ) icon in the right side of the Manage Users screen, corresponding to the User for which the password has to reset. The following Reset Password screen appears

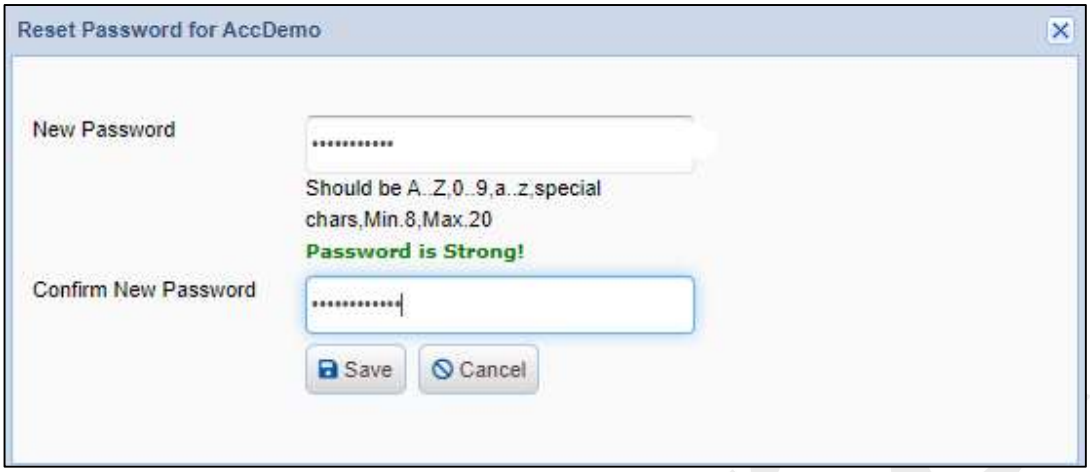


Fig: Reset Password Screen

The following are the steps to reset the password

1. Fill **New Password** and **Confirm Password.** The number of password characters allowed should not be less than the number of password characters set in the manage organization.
2. Click the **Save** button to reset the password of the selected user or click **Cancel** button to cancel the reset password operation.

Update the Locked Status, Active Status and User Group for a group of users – There is a provision called **Mass Update** in the Manage Users Listing Page.

The following are the steps for Mass Update

1. The user has to select the group of users using the check box in the grid at the left corner.
2. Select the User Group, Locked and Active Status if required.
3. Finally click the **Update** button for mass updation.

Limitations

1. Only the users having the privileges can view or edit the user details or edit the user group.
2. Users cannot be created if the defined user count reaches more than the **Total No of Users** set in the Manage Organization.
3. The users cannot edit their own user group, unlocked status and active status.
4. The users cannot edit the user group, unlocked status and active status of Organization Administrator'.
5. The users cannot reset their own password and the password of Organization 'Administrator'.

9.2.2 Manage User Group

Manage User Group module allows the user to manage the organization user groups by creating, updating and deleting them.

Select **Configuration** → **User Management** →**Manage User Group** as shown in the below screen

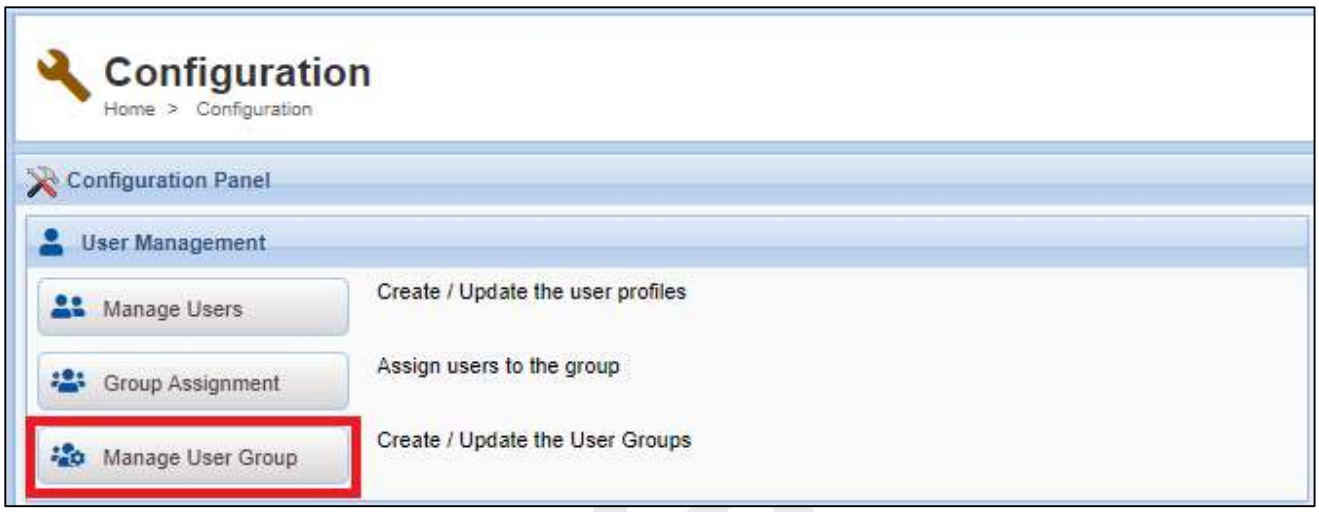


Fig: Manage User Group – Configuration Panel

Click the **Manage User Group** button in the Configuration Panel to view the following Manage User Group screen.

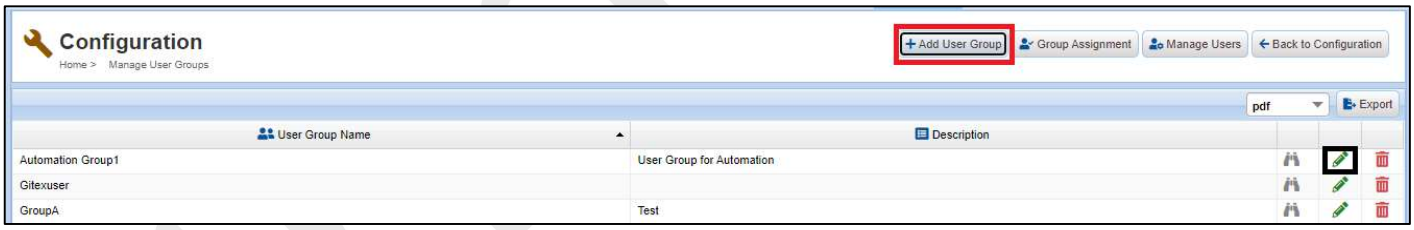


Fig: Manage User Group screen

The users can sort the grid contents based on a particular column by clicking the appropriate column header.

The following are the purpose of the symbols used in the above Manage User Group Listing Screen

BINOCULARS: Used to view the user group details.

PENCIL: Used to edit the user group details

CROSS: Used to delete the user group

Add a User Group – Click **Add User Group** button as highlighted in the above Manage User Group screen.

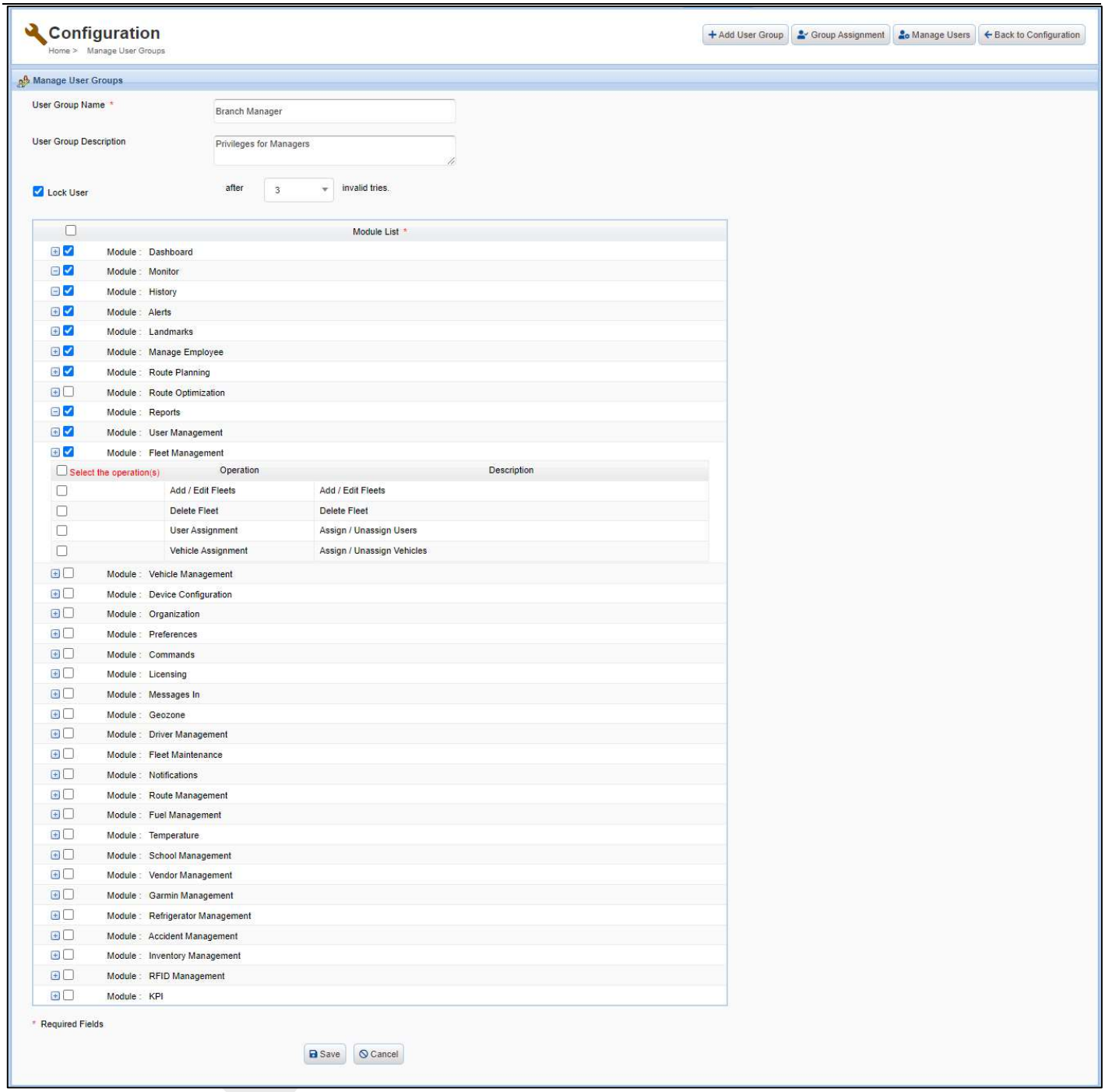


Fig: Add User Group screen

The following are the steps to create the User Groups

1. Fill **User Group Name** (mandatory) and **User Group Description** (optional).
2. Select the required modules and operations by selecting the appropriate check box at the left corner.
3. Finally click the **Save** button to add the User Group details or click **Cancel** button to cancel the add operation.

Edit a User Group – Click the appropriate **Edit** ( ) icon in the right side of the Manage User Group screen, corresponding to the User Group for which the details have to be updated. Change the user group details, module and operation rights as needed, and click the **Update** button to reflect the changes.

View a User Group – Click the appropriate **View** ( ) icon in the right side of the Manage User Group screen, corresponding to the User Group for which the details have to be viewed. The user group details will be viewed by the user in the read only mode.

Delete a User Group – Click the appropriate **Delete** ( ) icon in the right side of the Manage User Group screen, corresponding to the User Group which has to be deleted.

Limitations

1. Only the users having privileges can create, edit, view and delete the user group.
2. The users cannot able to edit their own user group details.
3. Other than the **Security Admin** group users, users of other group cannot update the details of **Security Admin** group.
4. The User Group cannot be deleted once it is assigned to users.
5. The default User Group **Security Admin** cannot be deleted.

9.2.3 Group Assignment

Group Assignment Module allows the user to assign the user group to the users. Group Assignment provides the module and operation wise rights to the users. The users without user group cannot login to the system.

Select **Configuration** → **User Management** → **Group Assignment** as shown in the below screen

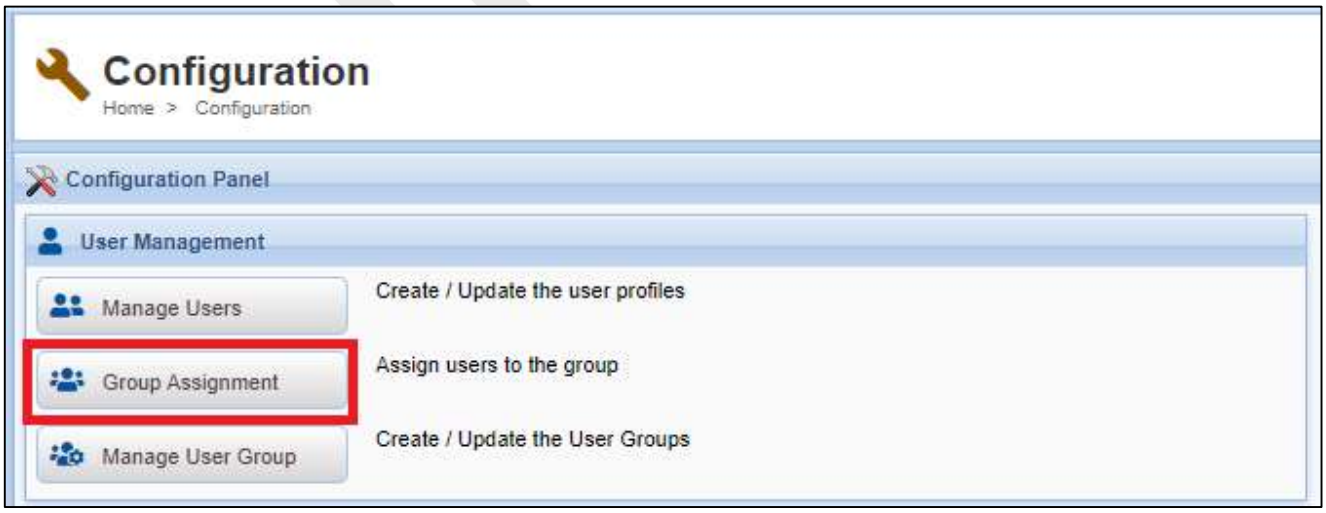


Figure: Group Assignment – Configuration Panel

Click the **Group Assignment** button in the Configuration Panel to view the following Group Assignment Screen

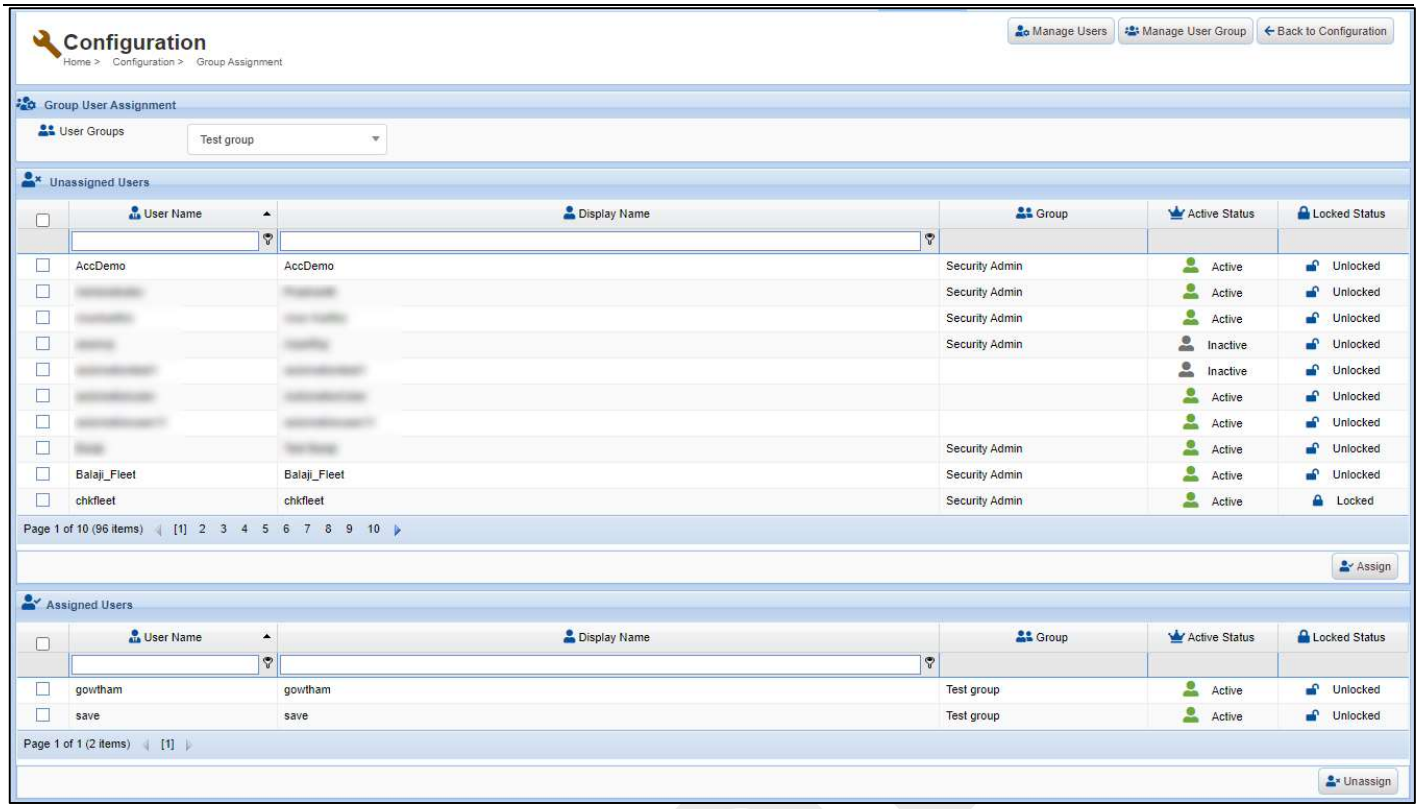


Fig: User Group Assignment

There is a provision for **search** under each column in both unassigned users list and assigned users list in the above User Group Assignment screen such that the user can search for a particular user or group of users based on the User Name and Display Name.

The users can also **sort** the grid contents based on a particular column by clicking the appropriate column header in both unassigned users list and assigned users list.

The user can select multiple users that are to be assigned from the unassigned list and vice versa for the particular User Group.

The following are the steps to assign and unassign the users to the user group

- Select the required **User Group**. The users will be loaded based on the user group selected.
- Select the user group for which the user has to be assigned or unassigned. By selecting the user group, the users which were all assigned and unassigned will be displayed.
- To assign the users to the selected user group, Select the check box of the corresponding users from the Unassigned Users List and click the **Assign** button to assign the selected users to the User Group as highlighted in the Group User Assignment Screen Shot.

  If the user is already assigned with other user group, then on clicking the assign button will replace the user group with selected user group for the user.

- To unassign the users from the selected User Group, Select the check box of the corresponding users from the Assigned Users List and click the **Unassign** button to unassign the selected users from the User Group as highlighted in the Group User Assignment Screen Shot.

  If the user is already assigned with the same selected user group and on clicking the unassign button will not allow the user to login into the system until the user group is assigned.

Limitations

1. Only the users having privileges can assign and unassign the users from the user group.
2. The users cannot assign or unassign their own user group.
3. The user cannot assign or unassign the user group of organization **Administrator**.

9.3 Fleet Management

The **Fleet Management** includes

1. **Manage Fleet** for creating, updating and deleting the fleet.
2. **Vehicle Assignment** for assigning and unassigning the vehicles to the fleet.
3. **User Assignment** for assigning and unassigning the users to the fleet.

9.3.1 Manage Fleet

Manage Fleet Module allows the user to create, modify and delete the fleet. Fleet creation is used to group the vehicles in the organization.

Select **Configuration** → **Fleet Management** → **Manage Fleet** as shown in the below screen

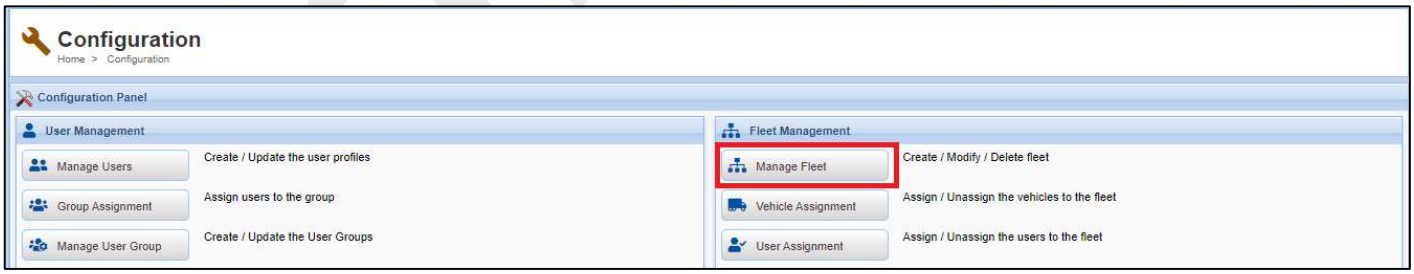


Fig: Manage Fleet – Configuration Panel

Click the **Manage Fleet** button in the Configuration Panel to view the following Manage Fleet screen.

Fig: Manage Fleets

- There is a provision for **search** under each column in the above manage fleet listing screen such that the user can search for a particular fleet or group of fleet based on the Fleet Name and Description.
- The users can also **sort** the grid contents based on a particular column by clicking the appropriate column header.
- There is a provision for **exporting the contents** from the Manage Fleet grid to PDF, XLS, CSV and RTF as required. To export, select the file format and click **Export** button at the top right corner.

The following are the purpose of the symbols used in the above Manage Fleet Listing Screen

PENCIL: Used to edit the fleet details

CROSS: Used to delete the fleet

Add a Fleet – Click **Add Fleet** button as highlighted in the above Manage Fleets screen.

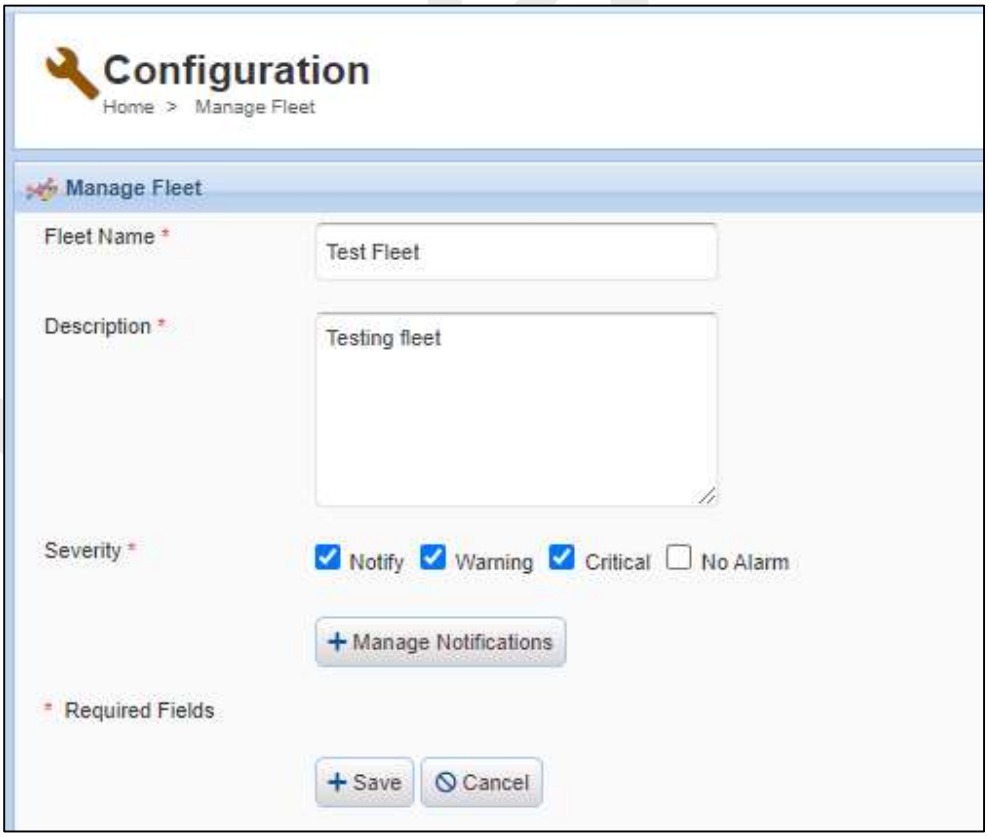


Fig: Manage Fleet Add Screen

The following are the steps to create the Fleet

1. Fill **Fleet Name** and **Description**.
2. Select the **Severity** levels for the fleet as highlighted in the above Manage Fleet Add Screen.
   If no notification is required, then select **No Alarm** which will reset the other severity level selection and no notification will be triggered at this fleet level.
   If all other three severities are selected, whenever the vehicles under this fleet triggers the messages with these severities then, Email / SMS / Both notification will be given to the intended user automatically by the system.
3. Click the **Manage Notification** button as highlighted in the above Manage Fleet Add Screen and following **Manage Notifications** pop-up appears.

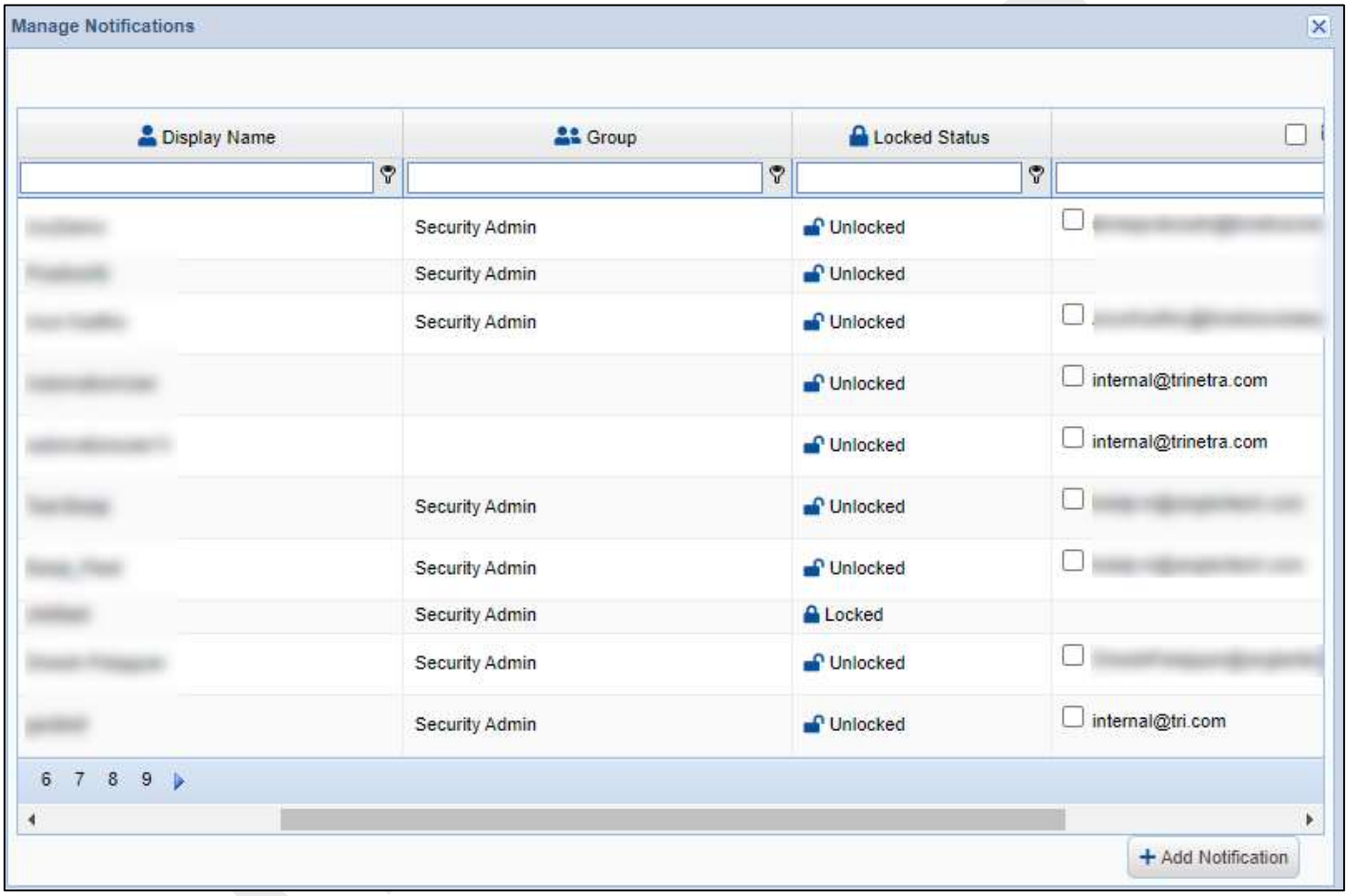


Figure: Manage Notifications Popup

If the user has the **Email** then a check box will be shown along with the email address of the user and also the same applies for the **Mobile Number**. Select the users to whom Email & SMS notifications have to be sent.

4. Click **Add Notifications** to set the notification list against the selected Fleet.
5. Finally click the **Save** button to add the fleet or click **Cancel** button to cancel the add operation.

Edit a Fleet – Click the appropriate **Edit** ( ) icon in the right side of the Manage Fleet Screen corresponding to the Fleet for which the details have to be updated. The Edit screen appears and change the fleet details as required and click the **Save** button to reflect the changes.

Delete a Fleet – Click the appropriate **Delete** ( ) icon in the right side of the Manage Fleet screen corresponding to the Fleet which has to be deleted.

Limitations

1. Only the users having privileges can create, edit, view and delete the fleet.
2. Users can manage only assigned fleets which are done in the Fleet User Assignment module and rest of them will not be displayed in the list. But organization's Administrator can manage all the available fleets in the organization.
3. Fleets cannot be created more than the **Total No. of Fleets,** set in the Manage Organization.
4. User cannot delete the default fleet **All Vehicles.**
5. User cannot delete the fleet which has assigned vehicles (or) users (or) set as default fleet in user preferences.

9.3.2 Vehicle Assignment

Vehicle Assignment Module allows the user to assign the vehicles to the fleet.

Select **Configuration** → **Fleet Management** → **Vehicle Assignment** as shown in the below screen

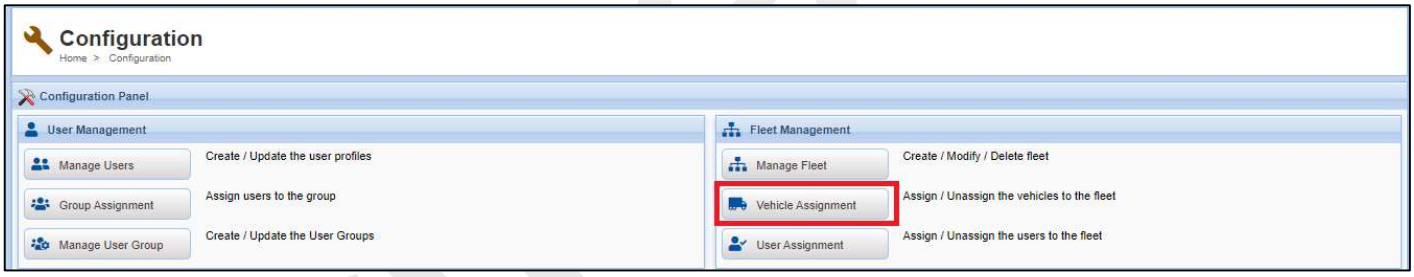


Fig: Vehicle Assignment – Configuration Panel

Click the **Vehicle Assignment Button** in the Configuration Panel to view the following Vehicle Assignment Screen

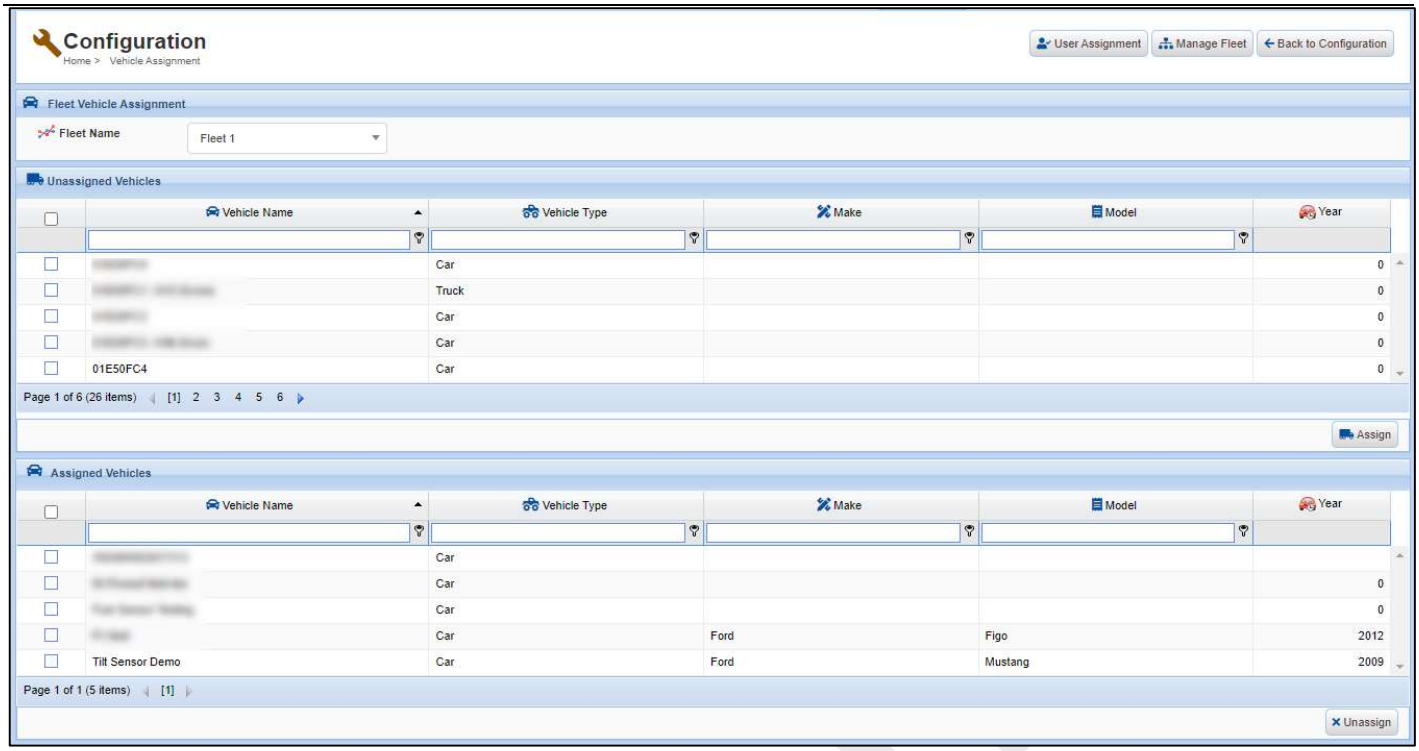


Fig: Fleet Vehicle Assignment

There is a provision for **search** under each column in both unassigned vehicles list and assigned vehicles list in the above Fleet Vehicle Assignment screen such that the user can search for a particular vehicle or group of vehicles based on the Vehicle Name, Vehicle Type, Make and Model.

The users can also **sort** the grid contents based on a particular column by clicking the appropriate column header in both unassigned vehicles list and assigned vehicles list.

The user can select multiple vehicles that are to be assigned from the unassigned vehicle list and vice versa for the particular Fleet.

The following are the steps to assign and unassign the vehicles to the fleet

- Select the required **Fleet** from the drop down. The vehicles will be loaded based on the fleet selected.
- Select the fleet for which the vehicles have to be assigned or unassigned. By selecting the fleet, the vehicles which were all assigned and unassigned will be displayed.
- To assign vehicles to the selected fleet, Select the check box of the corresponding vehicles from the Unassigned Vehicles List and click the **Assign** button to assign the selected vehicles to the Fleet as highlighted in the Fleet Vehicle Assignment Screen Shot.
- To unassign vehicles from the selected Fleet, Select the check box of the corresponding vehicles from the Assigned Vehicles List and click the **Unassign** button to unassign the selected vehicles from the Fleet as highlighted in the Fleet Vehicle Assignment Screen Shot.

Limitations

1. Only the users having privileges can assign and unassign the vehicles from the fleet.
2. By default, all vehicles created in the Manage Vehicles will be assigned to the default fleet 'All Vehicles'. The user cannot unassign the vehicles from the default fleet 'All Vehicles'
3. Only the assigned fleet will be loaded in the Fleet drop down for the users other than the organization's Administrator.

9.3.3 User Assignment

User Assignment Modules allows the user to assign the users to the fleet. Only the assigned fleets will be displayed for the user throughout the application when the user logs into the system and the organization's Administrator can manage all fleet.

Select **Configuration** → **Fleet Management** → **User Assignment** as shown in the below screen

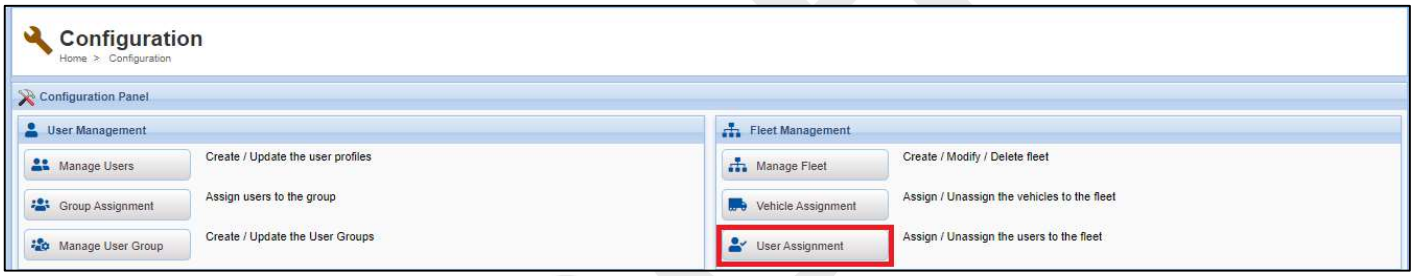


Fig: User Assignment – Configuration Panel

Click the **User Assignment Button** in the Configuration Panel to view the following User Assignment Screen

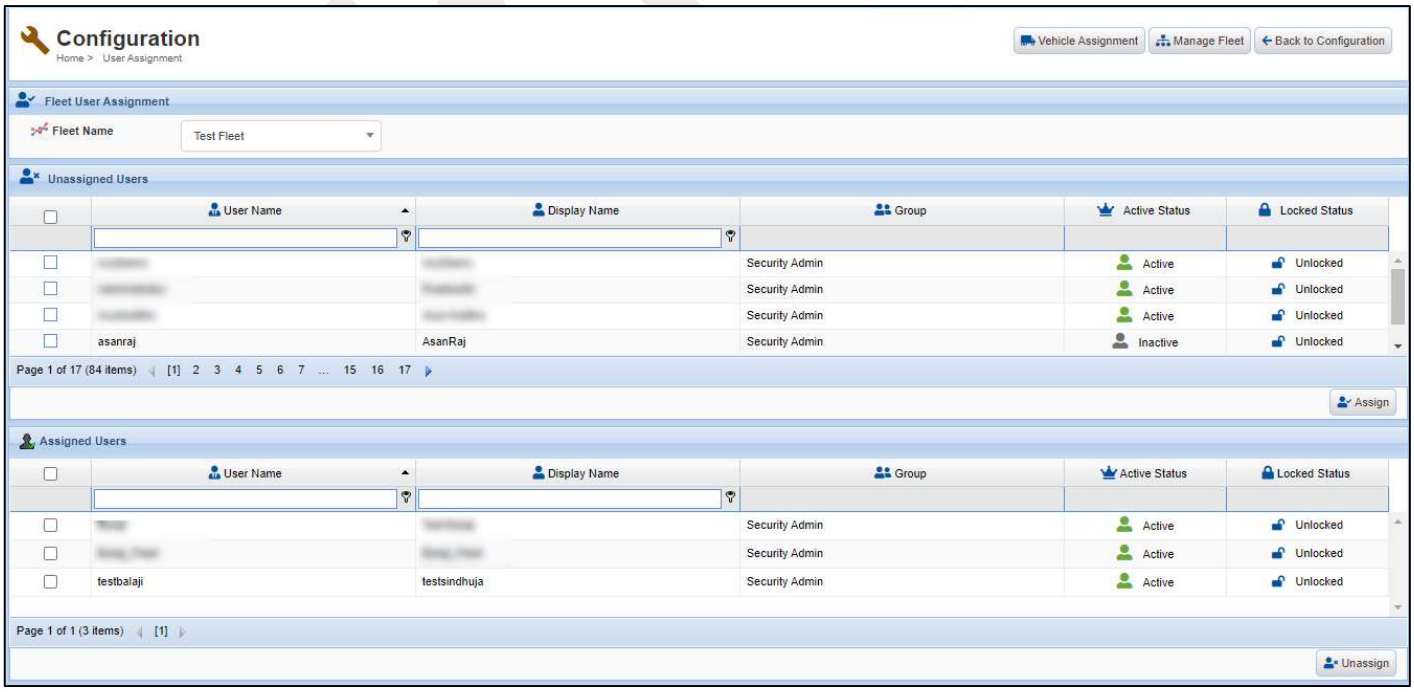


Fig: User Assignment

There is a provision for **search** under each column in both unassigned users list and assigned users list in the above Fleet User Assignment screen such that the user can search for a particular user or group of users based on the User Name and Display Name.

The users can also **sort** the grid contents based on a particular column by clicking the appropriate column header in both unassigned users list and assigned users list.

The user can select multiple users that are to be assigned from the unassigned users list and vice versa for the particular Fleet.

The following are the steps to assign and unassign the users to the fleet

- Select the required **Fleet** from the drop down. The users will be loaded based on the fleet selected.
- Select the fleet for which the users have to be assigned or unassigned. By selecting the fleet, the users which were all assigned and unassigned will be displayed.
- Select the check box of the corresponding users from the Unassigned Users List and click the **Assign** button to assign the selected users to the Fleet as highlighted in the Fleet User Assignment Screen Shot.
- Select the check box of the corresponding users from the Assigned Users List and click the **Unassign** button to unassign the selected users from the Fleet as highlighted in the Fleet User Assignment Screen Shot.

Limitations

1. Only the users having privileges can assign and unassign the users from the fleet.
2. The users cannot unassign their own fleet.
3. The user cannot assign or unassign the fleet for the organization's Administrator.
4. Only the assigned fleet will be loaded in the Fleet drop down for the users other than the organization's Administrator.

9.4 Vehicle Management

The **Vehicle Management** includes

1. **Manage Vehicles** for creating and updating the details of the vehicles.
2. **Severity Settings** for setting the severity to messages and sensors.

9.4.1 Manage Vehicles

Manage Vehicles Modules allows the users to modify the vehicle details.

Select **Configuration** → **Vehicle Management** → **Manage Vehicles** as shown in the below screen

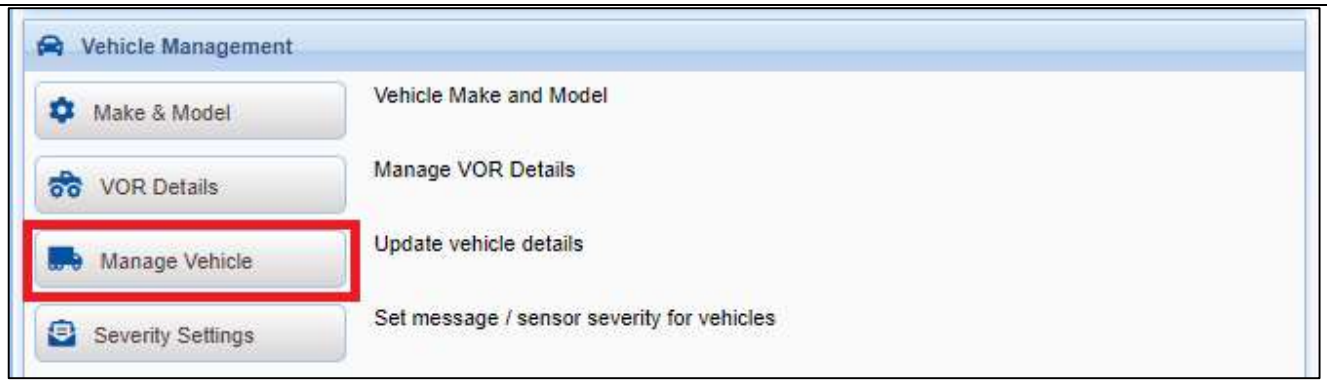


Fig: Manage Vehicles – Configuration Panel

Click the **Manage Vehicles Button** in the Configuration Panel to view the following Manage Vehicles Listing Screen

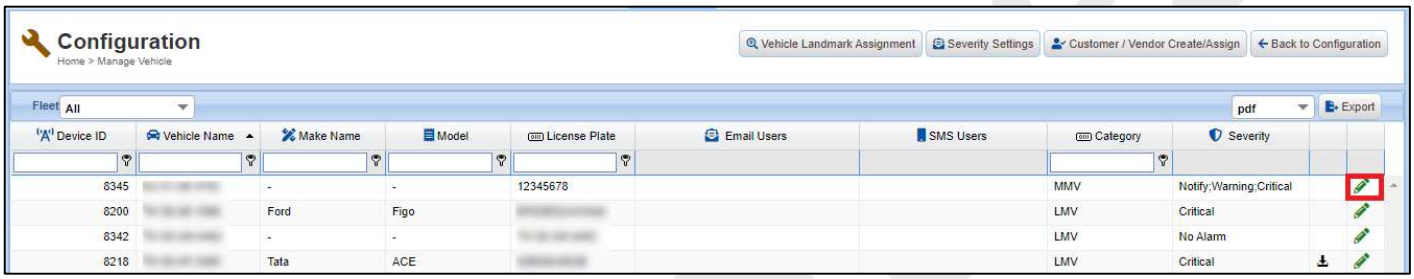


Fig: Manage Vehicles

- There is a provision for **search** under each column in the above manage vehicles listing screen such that the user can search for a particular vehicle or group of vehicles based on the Device ID, Vehicle Name, Make Name, Model and License Plate.
- The users can also **sort** the grid contents based on a particular column by clicking the appropriate column header.
- There is a provision for **exporting the contents** from the manage vehicles grid to **PDF**, XLS, CSV and RTF as required. To export, select the file format and click **Export** button at the top right corner.

The following are the purpose of the symbols used in the above Manage Vehicles screen.

PENCIL: Used to edit the vehicle details

Edit a vehicle's details – Click the **Edit** ( ) icon in the right side of the Manage Vehicles screen. The following Edit screen appears

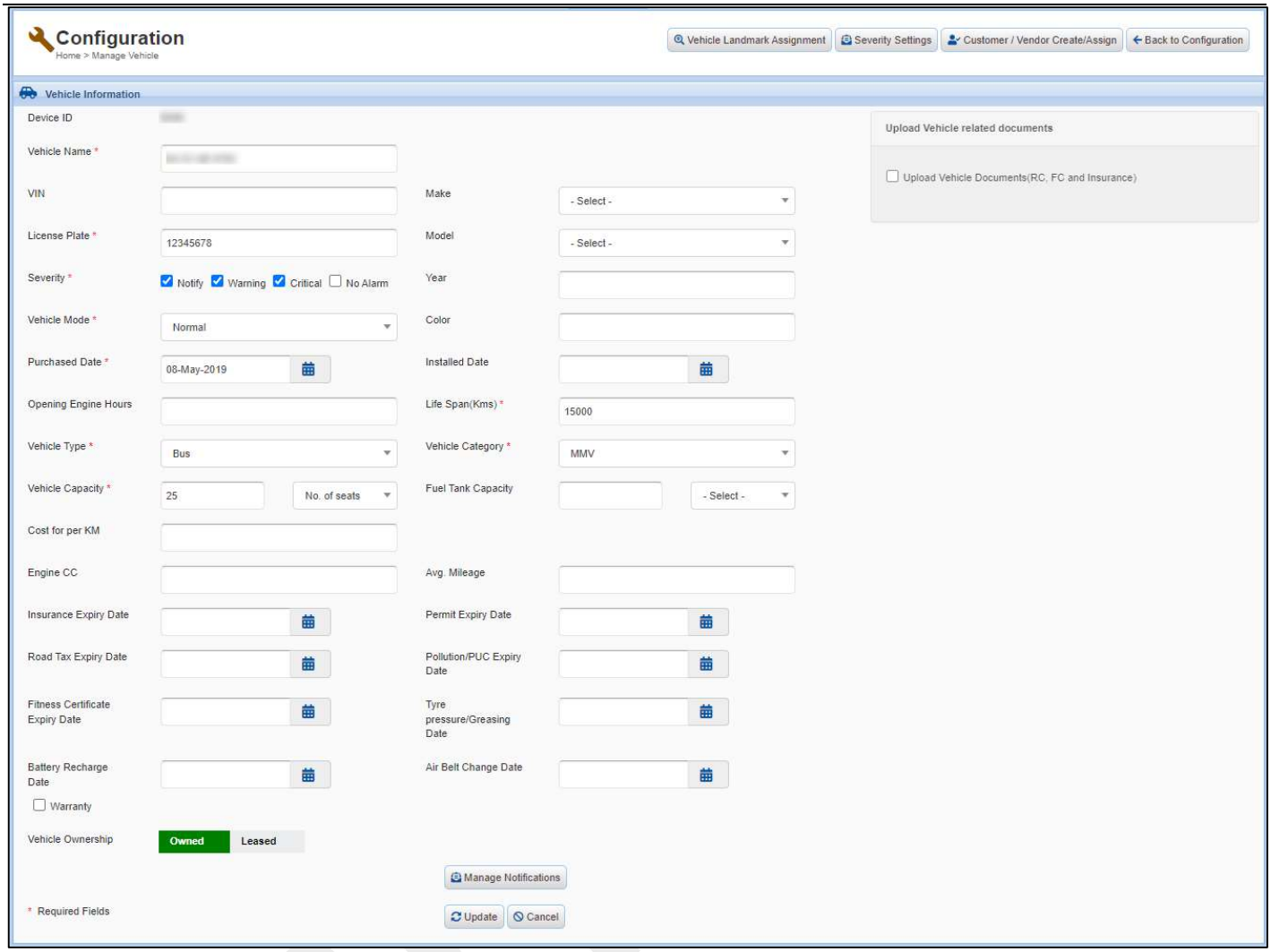


Fig: Manage Vehicles Edit Screen

The following are the steps to update the vehicle details

1. Update the vehicle details like Vehicle Name, Display Name, VIN, Make, License Plate, Model, Year, Vehicle Type and Color if required.
2. Set the required **Severity** for the vehicle.
3. Click the **Manage Notification** button to select the users to whom the Email / SMS notifications should be sent for the selected vehicle.
4. Finally click the **Update** button to reflect the changes or click the **Cancel** button to cancel the edit operation.

Limitations

1. Only the users having privileges can edit and view the vehicle details.
2. Users can manage only the vehicles of the assigned fleets which is done in Fleet User Assignment Module and rest of them will not be displayed in the list but the organization's Administrator can manage vehicles under all fleets in the organization.
3. Vehicles cannot be created if the defined vehicles count reaches more than the **Total No. of Vehicles** set in the Manage Organization.

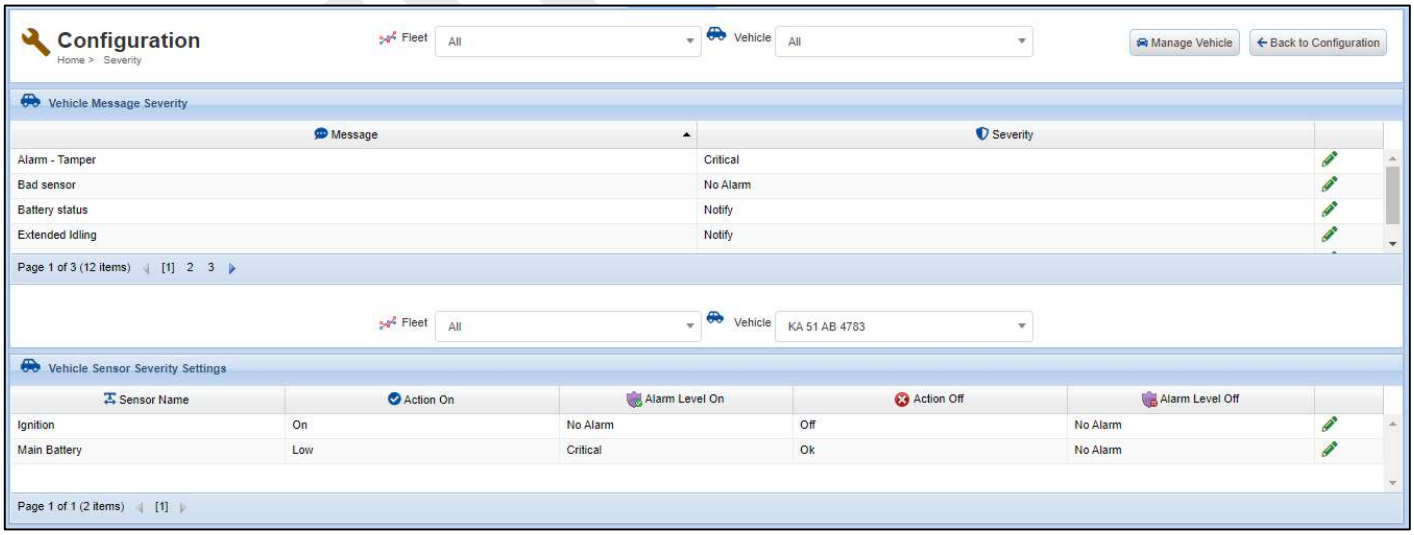
9.4.2 Severity Settings

Severity Settings Modules allows the users to set the severity for both messages and sensors. The various severity settings for the messages that are triggered from the vehicle, sensor alarms can be setup. Also lists the various outputs that can be controlled by the application for selected vehicle.

Select **Configuration** → **Vehicle Management** → **Severity Settings** as shown in the below screen

Fig: Severity Settings – Configuration Panel

Click the **Severity Settings Button** in the Configuration Panel to view the following Severity Settings Screen



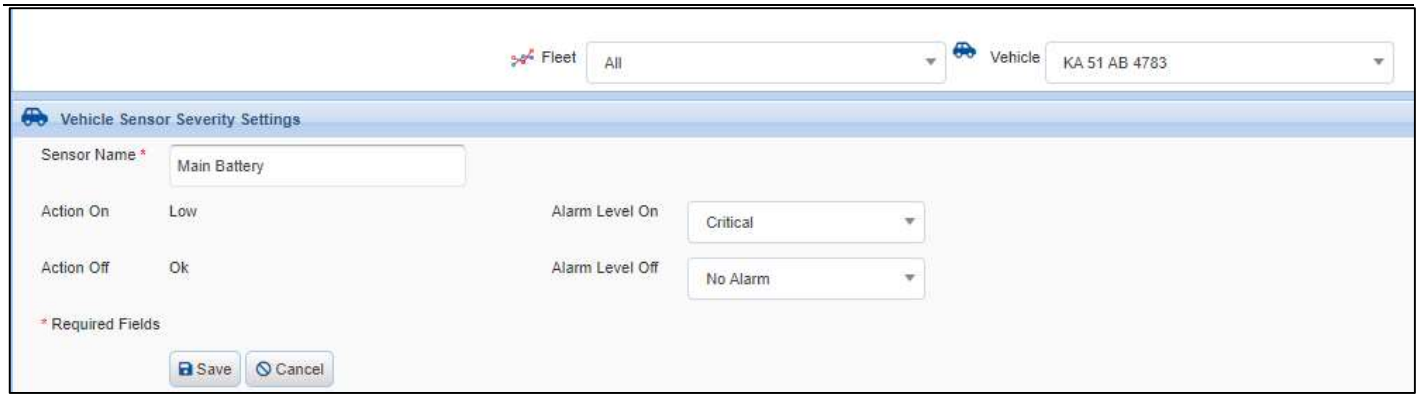


Figure: Severity Settings Screen

The users can also **sort** the grid contents based on a particular column by clicking the appropriate column header.

The following are the purpose of the symbols used in the above Manage Vehicles Listing Screen

PENCIL: Used to update the severity settings for messages and sensors.

The following are the steps to set the severity

1. Select the required **Fleet** from the drop down. On selecting the fleet, the vehicles under the selected fleet will be loaded in the Vehicle drop down.
2. Select the required **Vehicle** from the drop down for which the severity has to be set.
3. On selecting the vehicle, appropriate Vehicle Message Severity Settings, Vehicle Sensor Severity Settings and Vehicle Outputs will be displayed.
4. The user can update the severity level for messages as required. This is shown in the below figure.

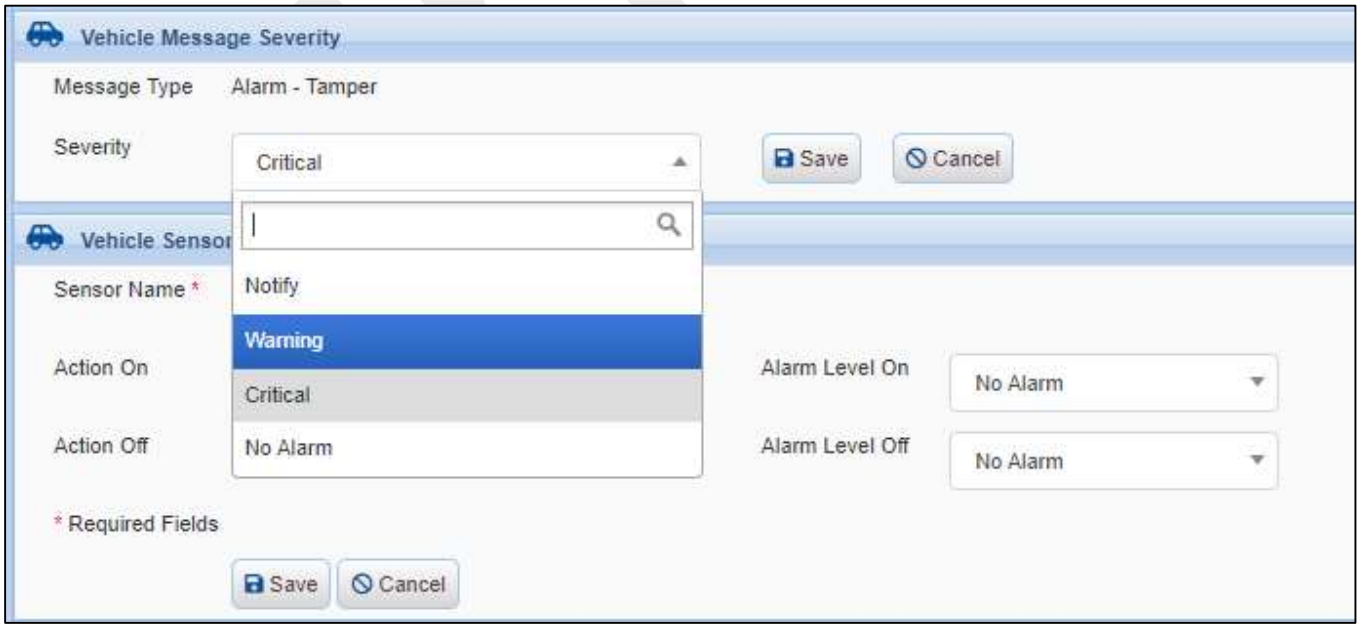


Fig: Severity Settings

Severity Levels

- **No Alarm** – When this is set, then no notification will be given to the user and will not be shown as an alarm in "Alerts" and "Monitor" pages.
- **Notify** – Will notify the user but not be shown in the "Alerts" page.
- **Warning** – Will trigger a notification if set and be shown in the "Alerts" and "Monitor" page.
- **Critical** – Will trigger a notification if set and be shown in the "Alerts" and "Monitor" page.

Only Warning and Critical severity levels can be set for the default alarm messages like Tamper and Fuel Drain. These messages will be shown in the Alerts page irrespective of the severity level set. these messages are applicable to the organization only.

5. The user can update the severity level for sensors as required. This is shown in the below figure.

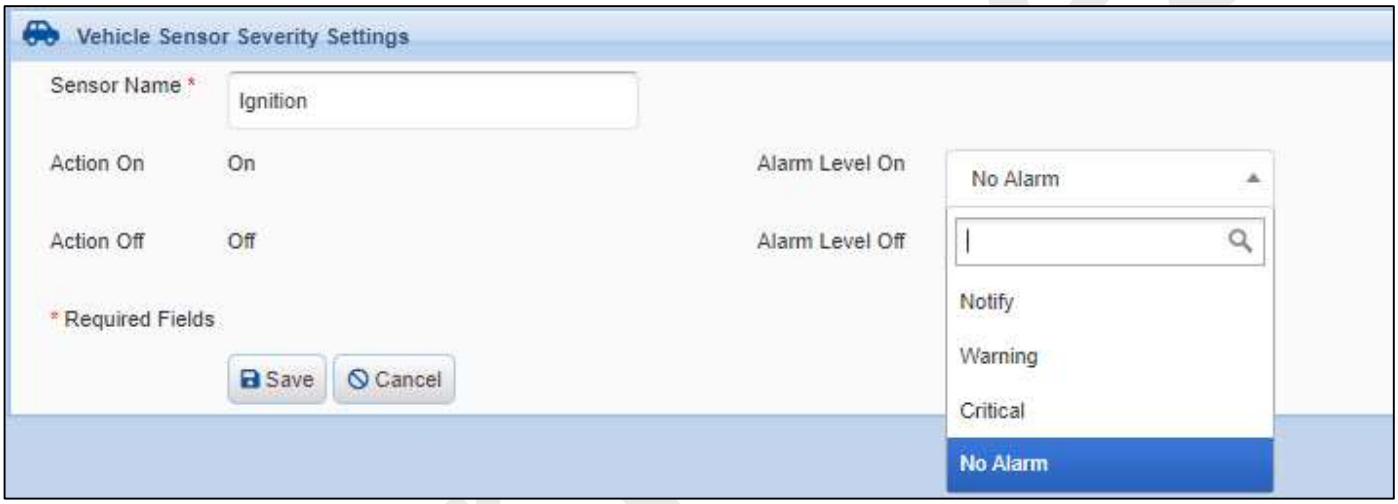


Fig: Severity Settings – Sensor Severity Settings

6. The user can also view the vehicles outputs for the selected vehicle.

Limitations

1. Only the users having privileges can set the severity level for messages and sensors.

9.4.3 Make and Model

Make and Model section allows the user to add the required makes and the models to be listed for modifying their vehicles' details.

Select **Configuration** → **Vehicle Management** → **Make and Model** as shown in the below screen

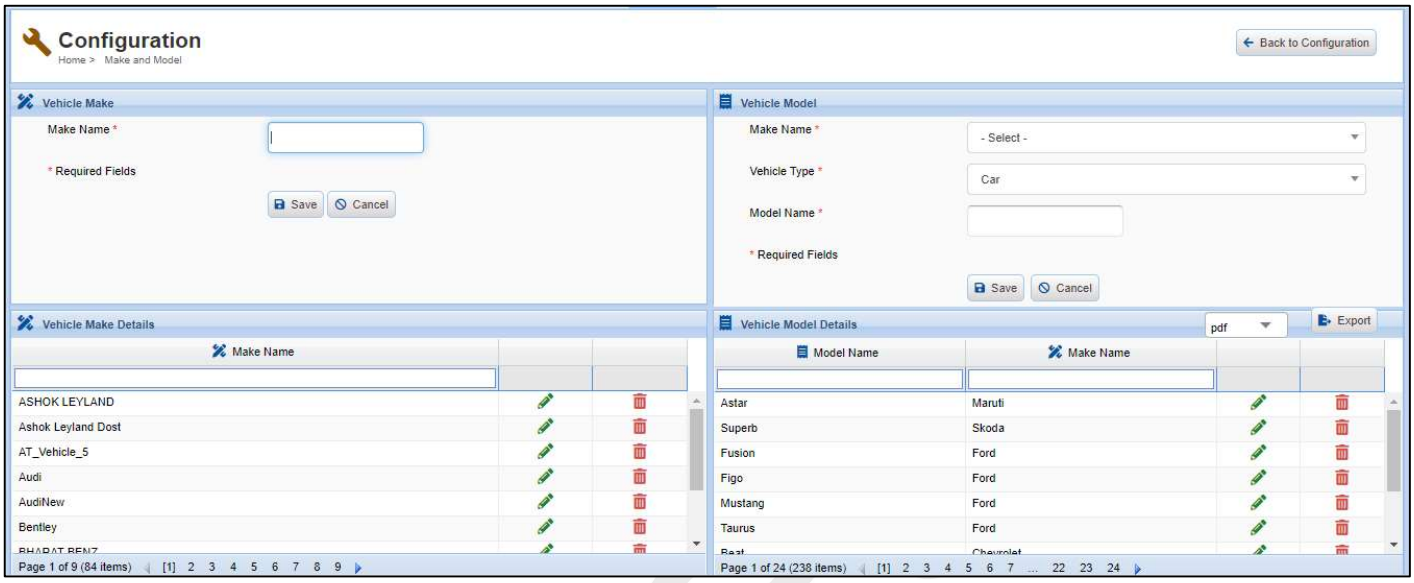


Fig: Make and Model screen

Add a Make – Fill the Make Name and click the **Save** button.

Editing a Make – Click the Edit icon of the appropriate make. After making the necessary changes, click the Update button. The Make Name would have been updated.

Delete a Make – Click the Delete icon of the appropriate make. If there are no models under the make, the confirmation for deleting the make will be displayed. Clicking OK in the confirmation message will delete the make from the list.
If there are models under the make, the models have to be deleted before the make can be deleted.

Add a Model – Select the Make under which the model is to be added. Select the Vehicle Type, fill in the Model Name and click the **Save** button.

Editing a Model – Click the Edit icon of the appropriate model. After making the necessary changes, click the Update button. The Model Name would have been updated.

Delete a Make – Click the Delete icon of the appropriate model. A confirmation for deleting the model will be displayed. Clicking OK in the confirmation message will delete the model from the list.

The changes made in the make and models of the vehicles can be seen in the Make and Model fields while editing the details of the vehicles.

9.5 Driver Management

The **Driver Management** allows the user to

- **Schedule Driver** for creating the driver schedule for a trip.
- **Manage Drivers** for creating and updating the drivers' details.
- **Demerit Rating** for assigning the demerit points to the drivers, in case of any violations.

9.5.1 Schedule Driver

The Schedule Driver module allows the user to schedule the drivers for trips. The user can select the date and time of the trip, from the provided calendar, to assign the driver to a selected vehicle.

Select **Configuration → Driver Management → Schedule Driver** as shown in the below screen

Fig: Schedule Driver – Configuration Panel

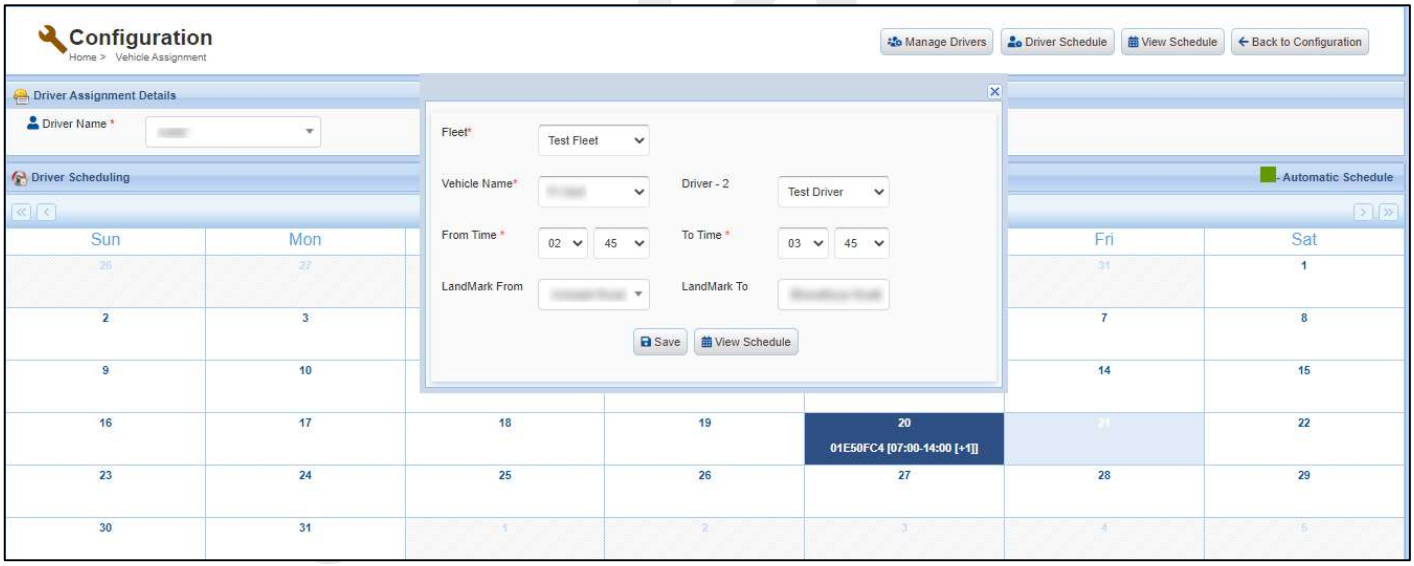


Fig: Schedule Driver Listing

- Select the driver name for the schedule in the highlighted drop down list. The existing driver schedules will be highlighted in different dates of the calendar.
- Select a date for the schedule in the calendar. A pop-up will be displayed as below. Mandatory fields are marked in the pop-up.

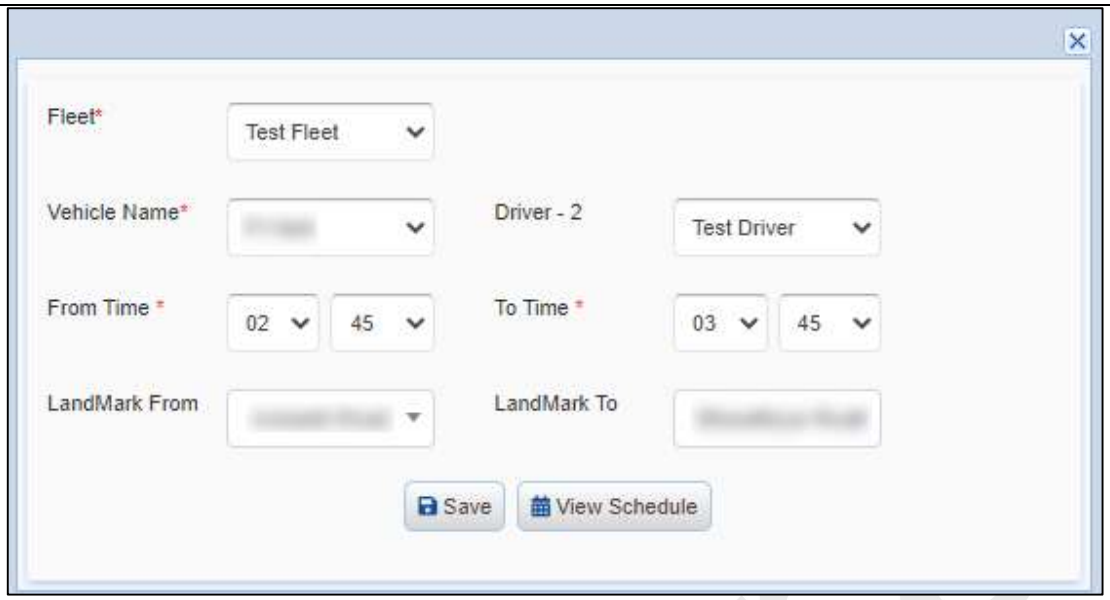


Fig: Vehicle Schedule

- Select the vehicle for the schedule, from the drop-down.
- Select the From and To times of the schedule, from the appropriate drop-downs.
- Optionally, select the Landmark From and To from the drop-downs.
- Click the **Save** button to add the schedule or click the **Clear** button to reset the fields.
- Clicking the **View Schedules** button redirects the user to the Driver Schedules page, displaying the available schedules for that driver on that date.
- Click the **(X)** icon in the top-right corner to close the pop-up.

The schedules in the calendar are displayed in different colors based on their nature, namely, past schedules, future schedules and automatic schedules (based on RFID punches).

Limitations

1. Schedules can be made only by users with appropriate privileges.
2. Users can make the schedules for current and future dates only.
3. The Administrator has the rights to make schedules for the past dates.

9.5.2 Driver Schedule

Driver Schedule allows the user to view the driver schedules based on the selected date ranges, selected driver. The user can also delete a schedule as required.

Select **Driver Schedule** button as shown in the below screen

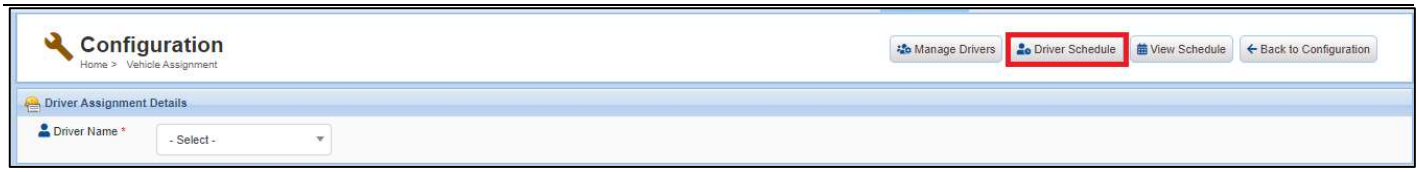
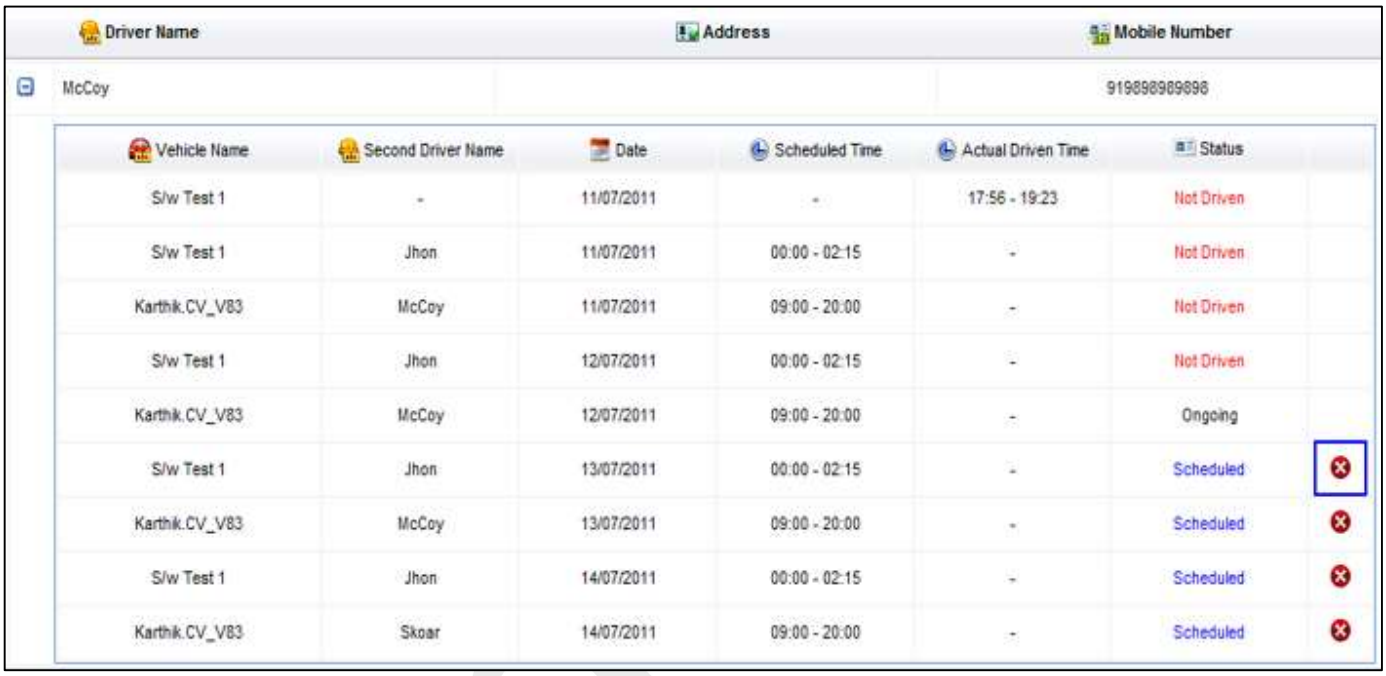


Fig: Driver Schedule button



Driver Name	Address	Mobile Number
McCoy		919898989898

Vehicle Name	Second Driver Name	Date	Scheduled Time	Actual Driven Time	Status
S/w Test 1	-	11/07/2011	-	17:56 - 19:23	Not Driven
S/w Test 1	Jhon	11/07/2011	00:00 - 02:15	-	Not Driven
Karthik.CV_V83	McCoy	11/07/2011	09:00 - 20:00	-	Not Driven
S/w Test 1	Jhon	12/07/2011	00:00 - 02:15	-	Not Driven
Karthik.CV_V83	McCoy	12/07/2011	09:00 - 20:00	-	Ongoing
S/w Test 1	Jhon	13/07/2011	00:00 - 02:15	-	Scheduled
Karthik.CV_V83	McCoy	13/07/2011	09:00 - 20:00	-	Scheduled
S/w Test 1	Jhon	14/07/2011	00:00 - 02:15	-	Scheduled
Karthik.CV_V83	Skoar	14/07/2011	09:00 - 20:00	-	Scheduled

Fig: Driver Schedule

- Select the driver name from the drop-down. Selecting 'All' will display the schedules of all the drivers.
- Select the From and To date range from the appropriate fields.
- Select the Status from the drop-down. Selecting 'All' will display all the schedules irrespective of the status.
- Click the **View Schedules** button to view the schedule details with status.
- The different statuses of the schedules are:
  - Scheduled – The trip has been scheduled for a future date / time.
  - Not Started – The scheduled time has arrived; the trip has not started on time.
  - Not Driven – The scheduled time is complete but the trip did not take place in that time.
  - On Going – Trip is in progress.
  - Completed – Trip has completed.
- If the driver has an assigned ibutton key, the punch times will be displayed in the Actual Driven Time column.
- If the trip has an additional driver, the second driver's name will be displayed in the appropriate column of the schedules.

Delete a schedule – Click the appropriate **Delete** ( ) icon for the schedule. New schedules can be created in the same time space.

Limitations

1. Only the users having the appropriate privileges can delete the schedules.
2. Other than the 'Scheduled' schedules, schedules in other statuses cannot be deleted.

9.5.3 Vehicle Schedule

The Vehicle Schedule allows the user to view the vehicle schedules based on the selected date ranges, selected driver. Like Driver Schedule, the user can unassign / cancel the schedules as required.

Select the **Vehicle Schedule** button as shown in the below screen

Fig: Vehicle Schedule

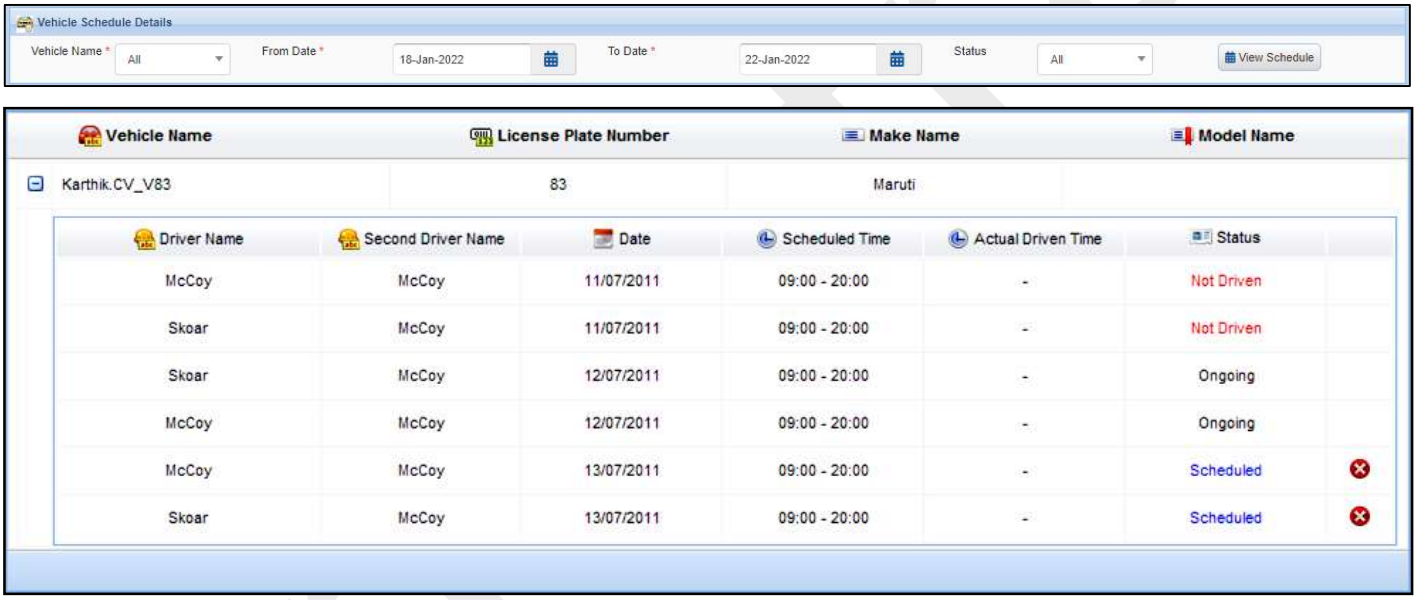


Fig: Vehicle Schedule

- Select the vehicle name from the drop-down. Selecting 'All' will display the schedules of all the vehicles.
- Select the From and To date range from the appropriate fields.
- Select the Status from the drop-down. Selecting 'All' will display all the schedules irrespective of the status.
- Click the **View Schedules** button to view the schedule details with status.
- The different statuses of the schedules are:
  - Scheduled – The trip has been scheduled for a future date / time.
  - Not Started – The scheduled time has arrived; the trip has not started on time.
  - Not Driven – The scheduled time is complete but the trip did not take place in that time.
  - On Going – Trip is in progress.
  - Completed – Trip has completed.
- If the driver has an assigned IButton key, the punch times will be displayed in the Actual Driven Time column.

- If the trip has an additional driver, the second driver's name will be displayed in the appropriate column of the schedules.

Delete a schedule – Click the appropriate **Delete** ( ) icon of the schedule. New schedules can be created in the same time space.

Limitations

1. Only the users having privileges can unassign the schedules.
2. 'Completed' and 'Engaged' schedules cannot be unassigned. Only the 'Scheduled' schedules can be unassigned.

9.5.4 Manage Drivers

Manage Drivers module allows the user to manage the drivers' details.

Select **Configuration → Driver Management → Manage Drivers** as shown in the below screen

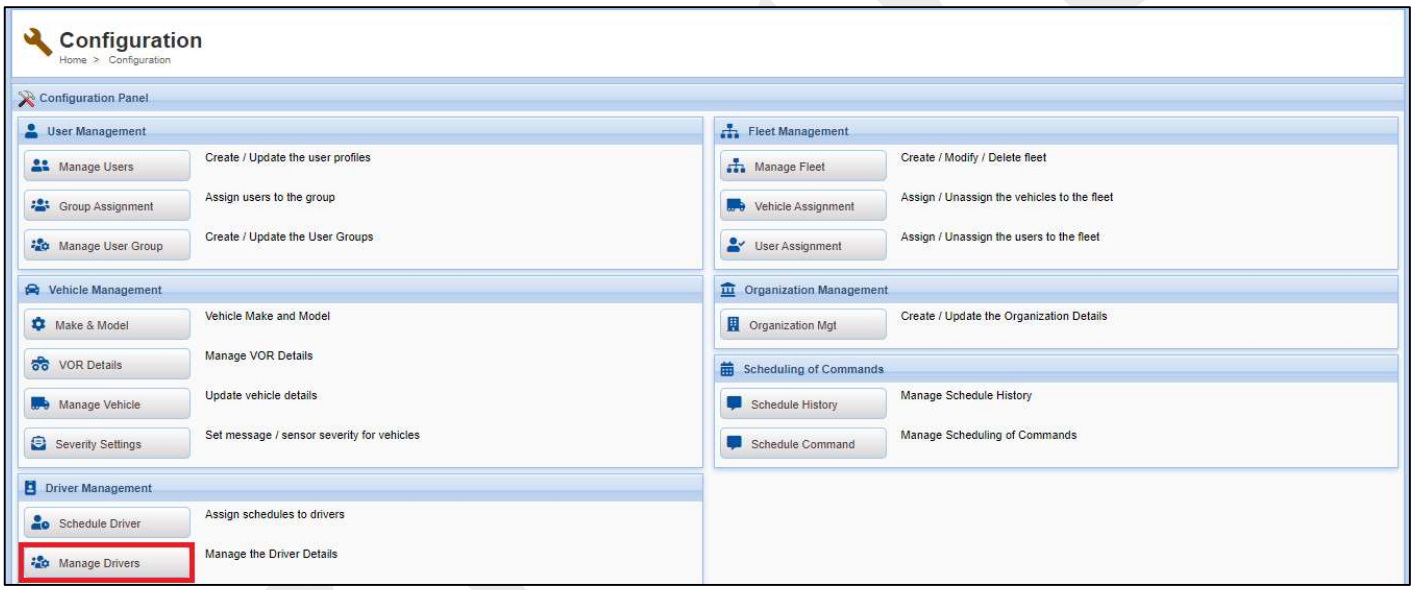


Fig: Manage Drivers – Configuration Panel

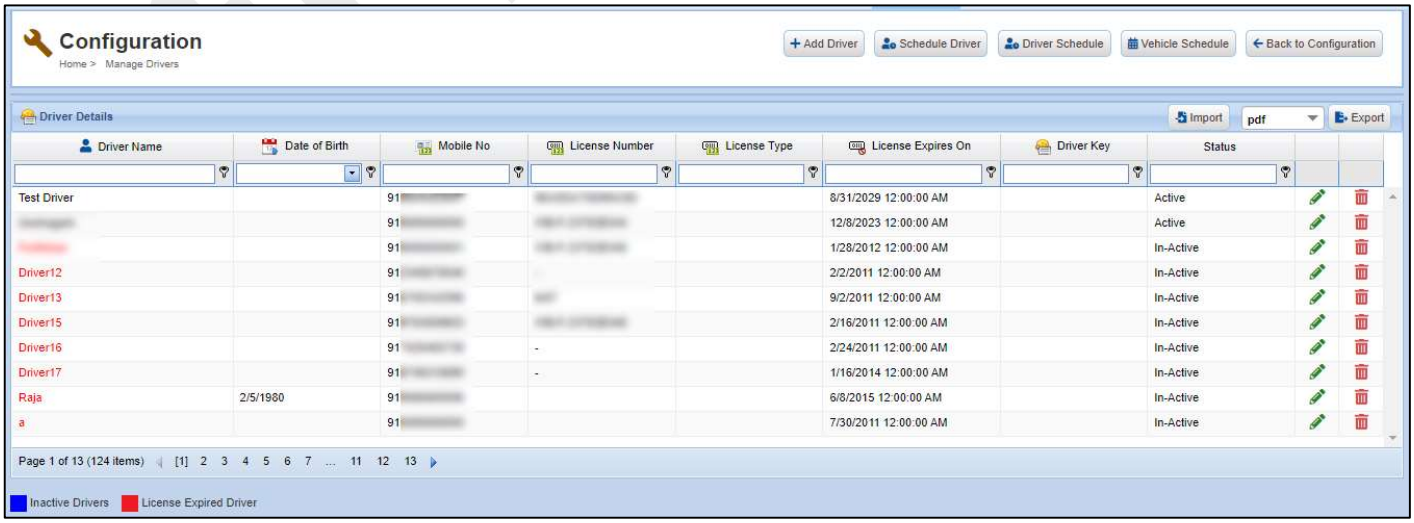


Fig: Manage Drivers Listing

- There is a provision for **search** under each column in the above Manage Drivers list enabling the user to search for a particular driver or group of drivers based on the columns of the list.
- The users can also **sort** the grid contents, based on a particular column, by clicking the appropriate column header.

The following are the icons used in the Manage Driver screen:

PENCIL – Used to edit the driver details

CROSS – Used to delete the driver details

Add driver – Click the **Add Driver** button as highlighted in the above Manage Driver Listing Screen.

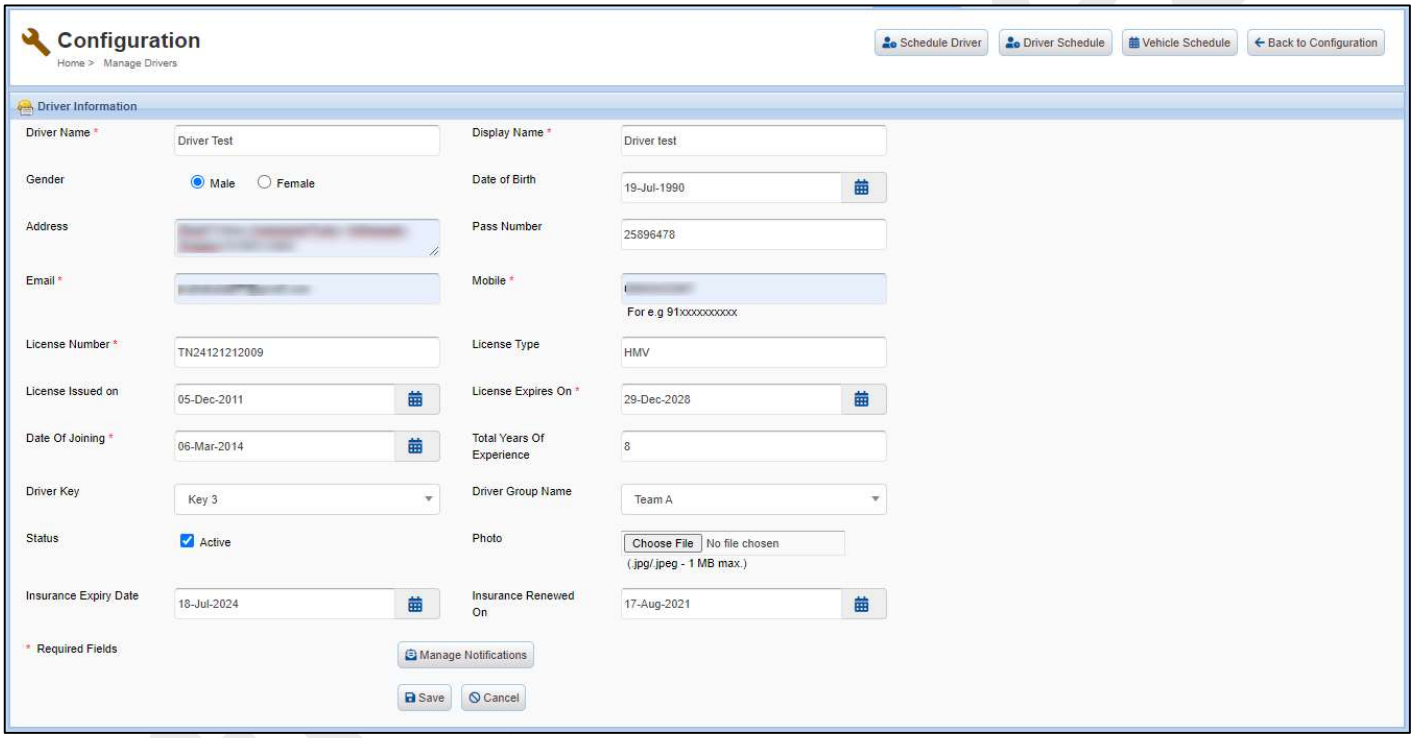


Fig: Manage Drivers Add Screen

The following are the steps to create a driver:

- Fill the Driver Name and the Display Name (displayed throughout the application).
- Fill in the Address and select the Gender.
- Enter the Mobile Number and select the Date of Joining.
- Fill in the License Number and select its expiry date.
- If a key is to be assigned to the driver, it can be done by selecting the appropriate Key Name in the Driver Key field.
- Select the Driver Group Name, if applicable.
- Fill in the Total Years Of Experience and Photo (Optional).
- Select the **Active** checkbox. By default, it will be checked. Inactive drivers will not be considered for the scheduling.
- Click the **Save** button to add the driver details or click the **Cancel** button to cancel the add driver operation

Edit driver details – Click the appropriate **Edit** ( ) icon for the driver to edit the driver's details. After making the changes in the Edit screen, click the **Update** button to reflect the changes.

Delete driver details – Click the appropriate **Delete** ( ) icon for the driver to delete the driver's details.

Limitations

1. Only the users having privileges can manage the drivers' details.
2. Age of the drivers should be a minimum of 18 years to successfully create a driver profile.
3. Date of Joining can be more or less by one month from the current date.
4. If the Date of Joining is greater than the current date, the driver will not be considered for scheduling until the date of joining.
5. The Photo of the driver should be of the JPEG / JPG format, of less than or equal to 10 KB & of the dimension 90 x 90 maximum.

9.5.5 Demerit Rating

Demerit rating module allows the user to set the driver demerit rating points based on the driver behavior.

Select Configuration → Driver Management → Demerit Rating as shown in the below screen

Fig: Demerit Rating – Configuration Panel

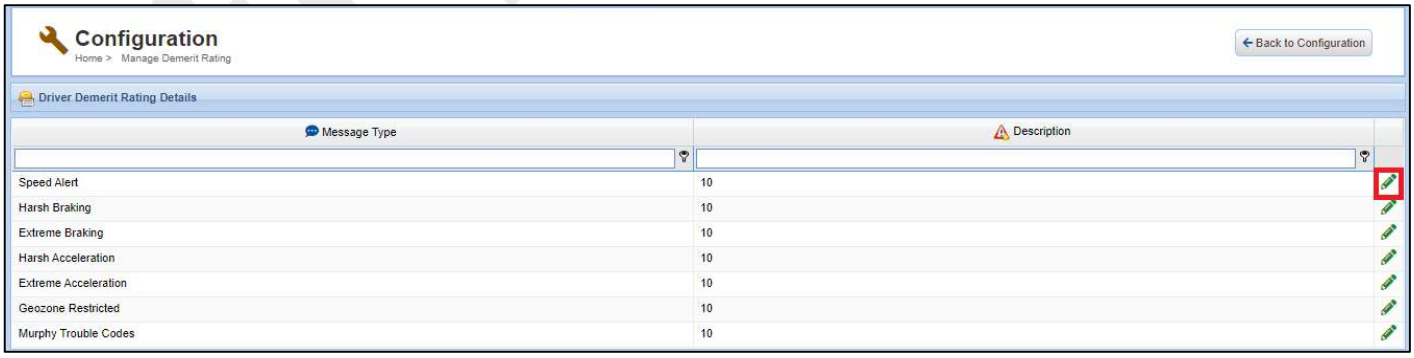


Fig: Demerit Rating list

- There is a provision for search under each column in the above demerit rating listing screen such that the user can search for a particular message or group of message based on the Message Name and Demerit rating.

- The users can also sort the grid contents based on a particular column by clicking the appropriate column header.

The following icons used in the Demerit Rating screen:

PENCIL – Used to edit the demerit rating.

Edit Demerit Rating – Click the appropriate **Edit** ( ) icon of the corresponding violation. After changing the points in the Edit screen, click the **Save** button to reflect the changes.

Limitations

1. Only the users having privileges can set the demerit rating.

10. Preferences

The Preferences screen is to manipulate the user preferences like time zone, screen refresh frequency, choose a default fleet setting and change the current password.

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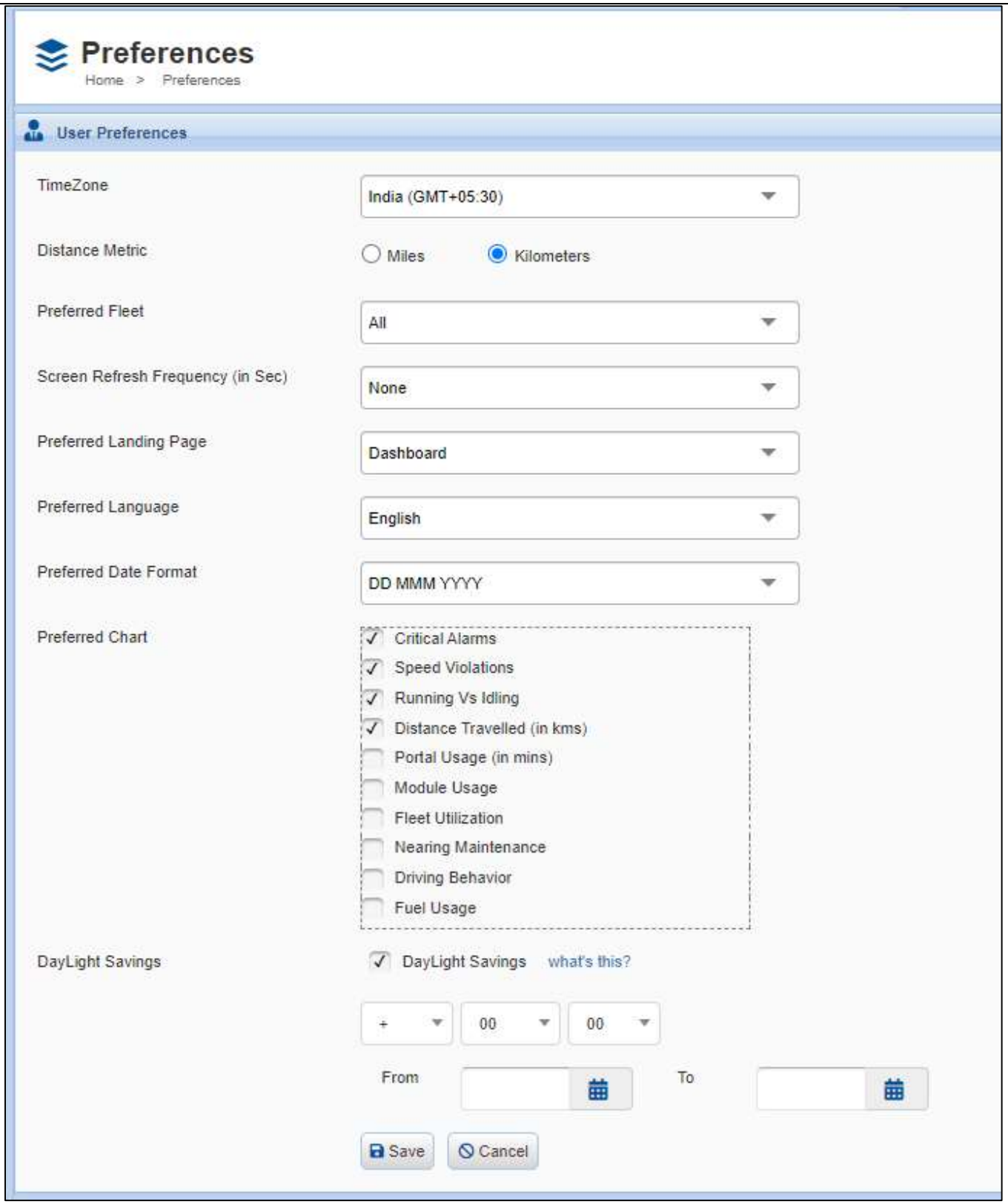

Fig: User Preferences

Time Zone

1. The user would be able to set their time zone. Based on the time zone selected, the time displayed in the data throughout the application, and the output of some of the commands, will vary.

2. Some of the places where the a change of time zone will be reflected, are:

Module	Effect
Dashboard	Based on the time zone selected, the chart data will be displayed.
Monitor	The no. of alarms scrolling above the map will differ.
History	The no. of entries displayed by the Update Results command will vary.
Alerts	The no. of entries displayed for the selected criteria, will vary.
Reports	The output of the reports for the selected criteria will vary depending on the time zone selected.

3. The time zone of the user can be changed in two ways:
   - Using the Preferences page.
   - By editing the user's details, under Manage Users. This can be done either by a Security Admin of the organization or by a user with appropriate privileges.

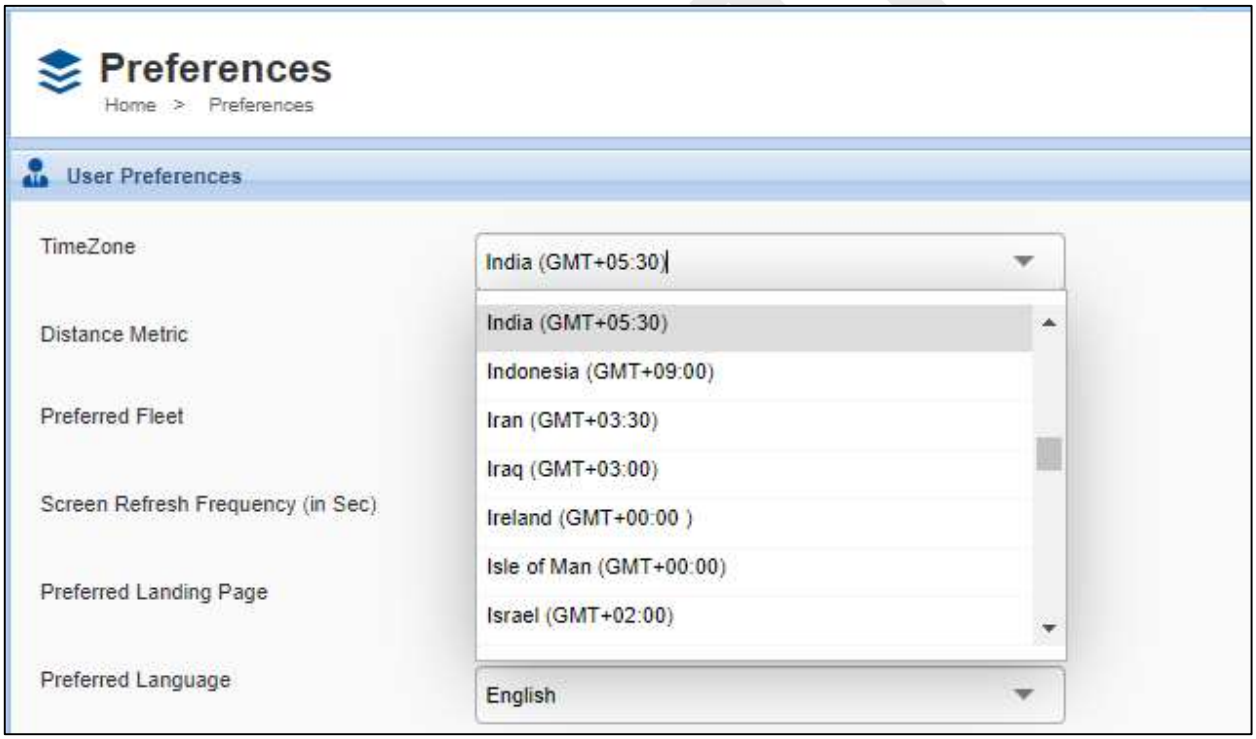

Fig: Time Zone

Distance

1. The user can choose to view the speed and distance related details either in Kilometers or in Miles.

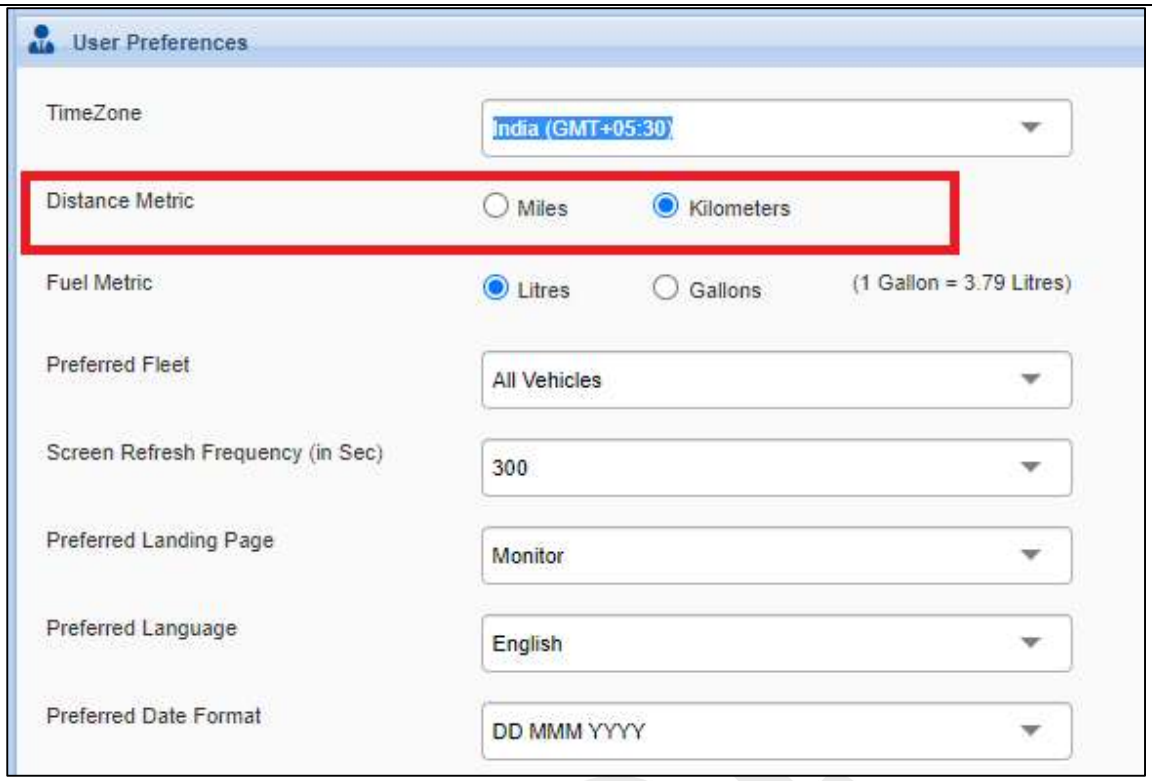

Fig: Distance

2. Selecting 'Miles' as the metric will allow the user to view the speeds and distances in miles. Selecting 'Kilometers' will convert the speeds and distances from miles into kilometers and display the appropriate values. For e.g., if the speed of a vehicle is displayed as 20 miles / hr, it will be displayed as 32.19 km/hr when the Kilometers is selected as the metric.
3. Some of the modules where the change in Distance metric reflects are:

Module	**Effect**
Dashboard	The data displayed in the Distance Traveled chart will be displayed as per the metric selected
Monitor	Speed details displayed in the Monitor grid will be displayed in the selected metric
History	Speed displayed in the History grid will vary according to the selected metric.

Fuel

1. The user can choose to view the metric in the Manual Fuel Entry page in Gallons or in Liters.
2. The values in the grid will be automatically changed according to the metric selected.

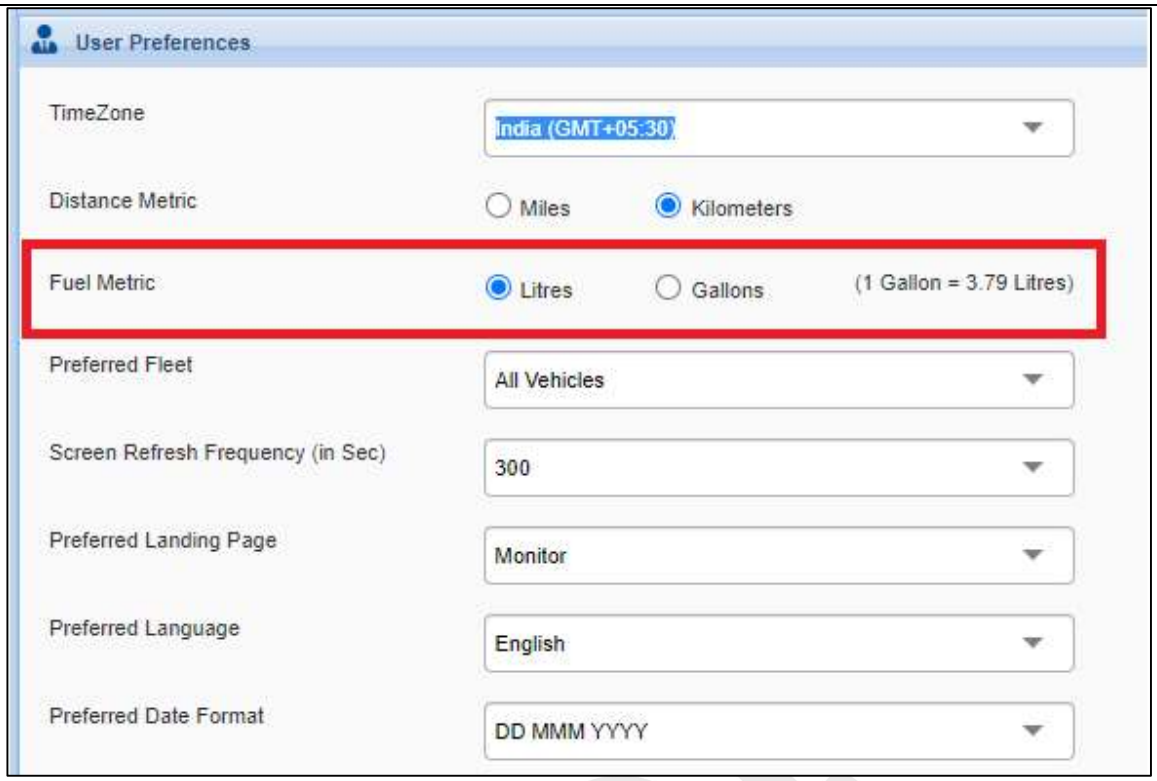

Fig: Fuel

Default Fleet

1. The user can choose the default fleet he / she wants to view the details. The selected default fleet will be displayed in the below mentioned modules every time the logs in.

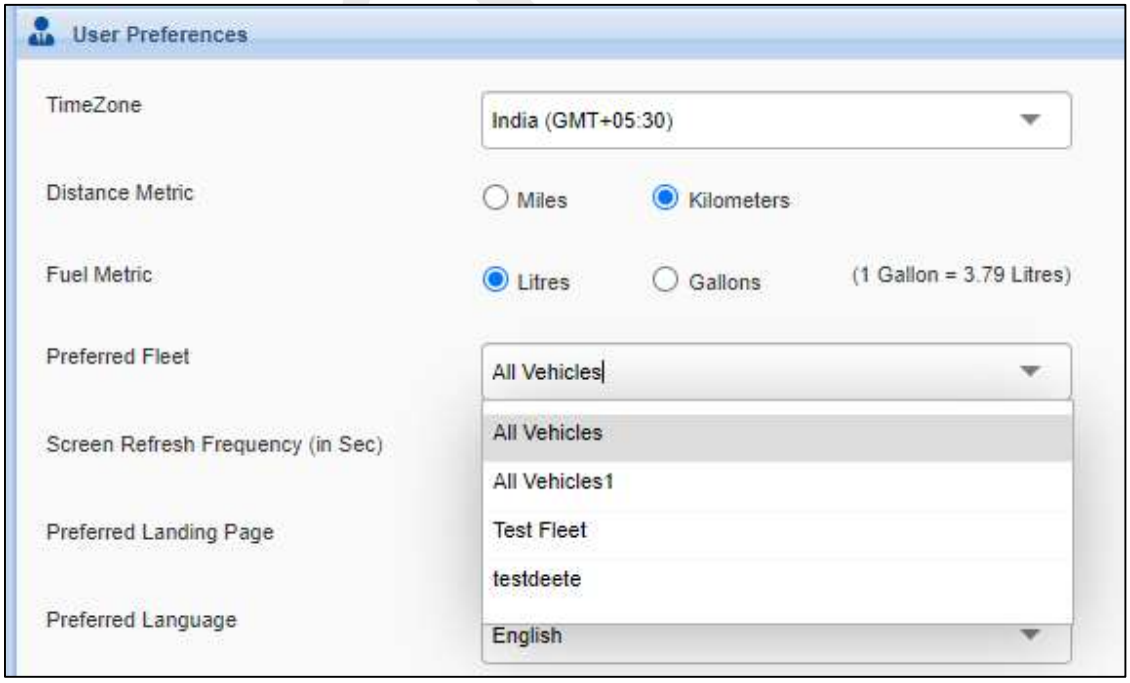

Fig: Default Fleet

2. Other fleets will still be accessible to the user in all the modules. The user can select the required fleet from the drop-down, in the respective module pages, to access the vehicles of other fleets.
3. The selection of default fleet will be reflected in the following modules:

Module	Effect
Dashboard	The Fleet drop-down will be displaying the selected default fleet and the data displayed in the charts will be for the vehicles under the default fleet.
Monitor	Vehicles under the selected default fleet will be displayed in the Monitor grid
History	Data will be displayed for the default fleet vehicle(s) until the user chooses to view the other fleets' history.
Alerts	Alerts related to the vehicles of the selected default fleet alone will be displayed in the Alerts grid. The user can change the fleets in the drop-down to view the alerts of other vehicles.

Screen Refresh Frequency

1. The screen refresh frequency would enable the user to set the frequency rate at which the monitor screen should get refreshed.
2. The user can select the refresh frequency from a range of half-minute to 5 minutes.
3. Every time the screen is refreshed, if any of the vehicles in the grid have been selected, the current location of the vehicle(s) will be plotted on the map, with the details in the grid.

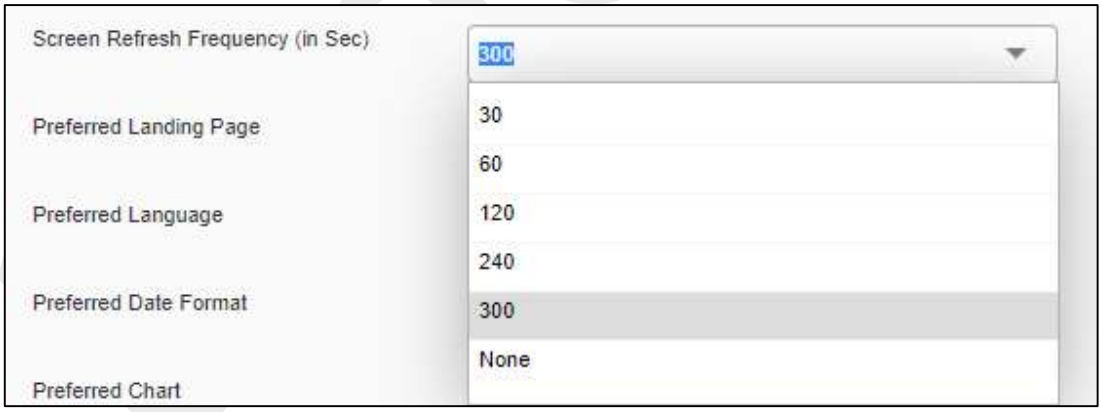

Fig: Screen Refresh Frequency

4. Selecting 'None' as the value will not refresh the Monitor map and the grid at all. The content will be updated only when the user issues an Update Position command.

Preferred Landing Page

1. Preferred Landing Page allows the user to set the required page to be displayed upon logging into the application.
2. The list of modules listed in the drop-down depends on the user group privileges available for the user.
3. By default, the first module available in the user's user group will be set as the landing page for the user.

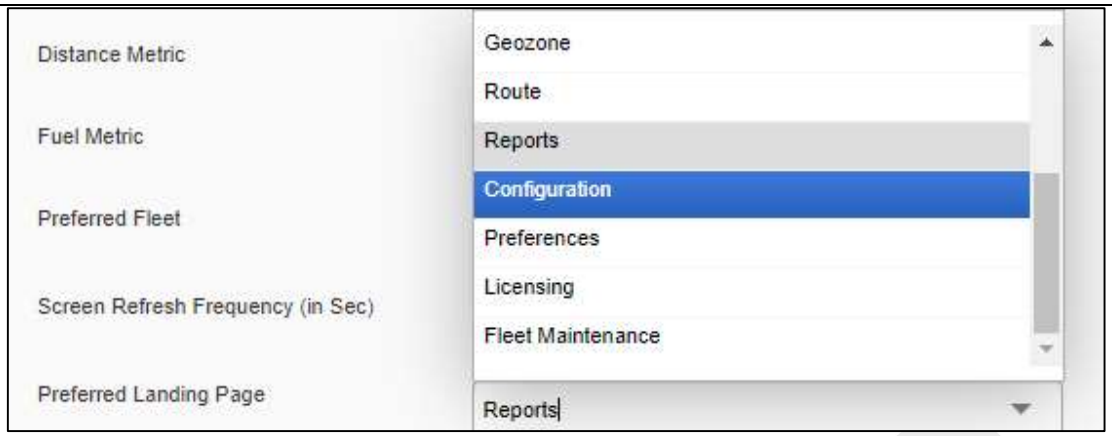

Fig: Preferred Landing Page

Preferred Language

1. Preferred Language option allows the user to set the language in which the user wants to view the portal in.
2. English will be the default language for all the users.
3. Additional language (Hindi or Arabic) will differ based on the geographical area of the client.

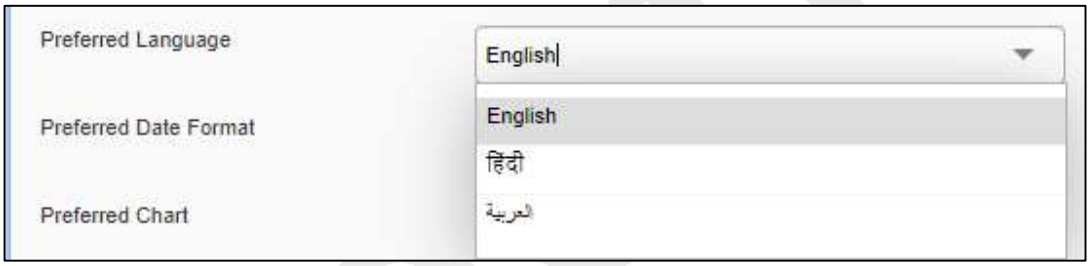

Fig: Preferred Language

Preferred Date Format

1. Preferred Date Format allows the user to choose the required date formats of the application.
2. The selected date format will be applied to the dates displayed throughout the application.
3. The exported contents of the application data also will contain the selected date format.
4. The dates displayed in the calendar controls are not affected by the selected date formats. They will be displayed in their pre-defined formats.

Fig: Preferred Date Format

Change Password

1. The user can change their password using the Change Password section.
2. The user will have to provide their current password to change their password.
3. If the provided current password is incorrect, the user will not be allowed to change his / her password.
4. Once the password has been changed, the previous password will not be considered for logging into the application.

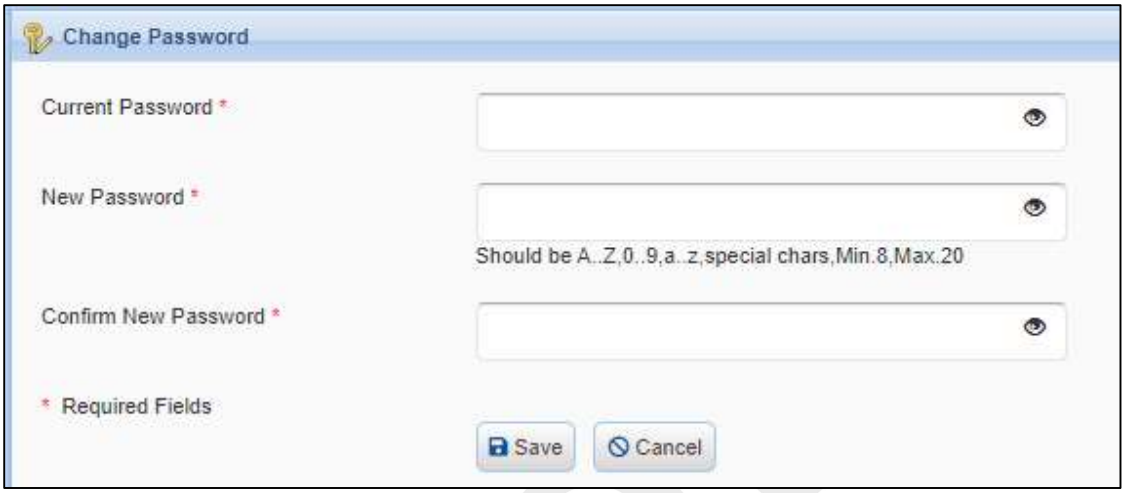

Fig: Change Password

10. KPI (Key Performance Indicator)

KPI (Key Performance Indicators) module presents information about the status of some of the critical parameters that needs to be monitored for effective utilization and based on the status and values for each parameter, user can take necessary steps as and when required. KPI Module consists of two different sections.

KPI Dashboard page presents the data for each of the KPI in either chart grid or tile format based on the configuration made.

KPI Settings page allows the user to make pre-defined configuration for each of the KPIs based on which the KPI status will be displayed on the dashboard

11.1 KPI Dashboard

KPI Dashboard contains a slider menu which contains all the list of KPIs that are available for the organization. Each KPI will be displayed in tile, grid or chart view based on the settings made. The status of each KPI will be either safe, warning or critical based on the predefined range set in the KPI Settings page. User can also edit the KPI based on the options available for editing. Deleting a KPI from the dashboard will temporarily remove the KPI form the dashboard and will be available again when selected from the slider menu.

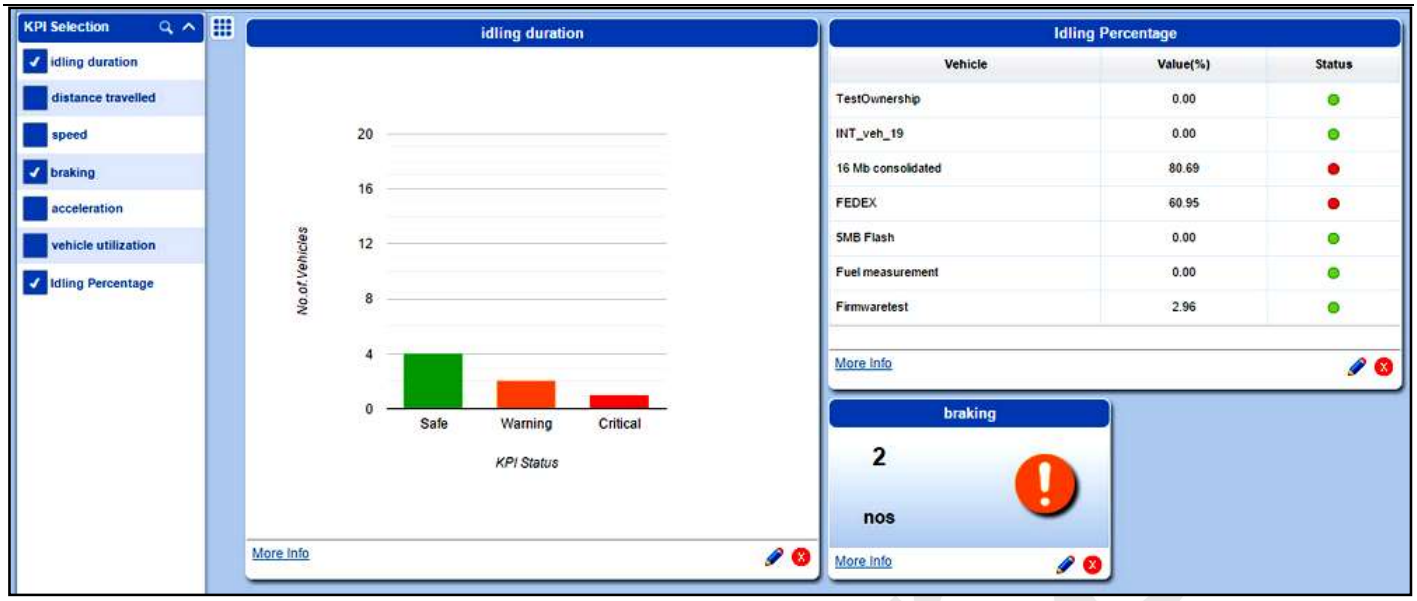

Fig: KPI Dashboard

11.2 KPI Settings

KPI Settings page allows users to configure the standard KPIs available as per the user's requirement. Admin users can create and assign the KPIs to any user or user group who are supposed to monitor the KPIs. Following are the set of parameters available in the KPI settings page based on which the user can create any number of KPIs.

KPI Settings:

- KPI – List of all the KPIs available
- Custom Title - Title for the custom KPI which is to be created
- Description - Description of the KPI

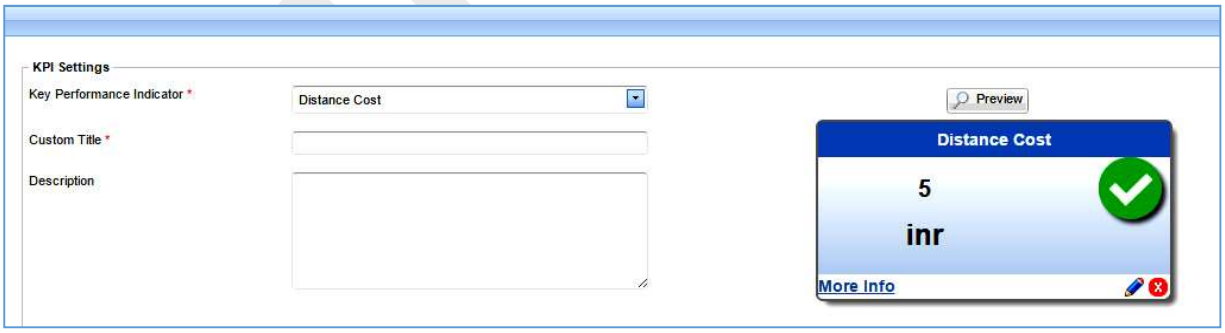

Fig: KPI Settings

Other Settings:

- Fleet - Fleet for which the KPI is to be created
- Vehicle - Vehicles which have to be monitored as part of the KPI
- Display – Format (Tile, Grid, Chart) in which the KPI has to be displayed in KPI Dashboard
- Duration – Duration based on which the KPI data will be generated

- Ideal range - Min and max values based on which the status of the KPI will be displayed. If the overall data falls within the specified range, then the status will be Warning and if the status falls below or above the range status will be displayed as Safe and Critical respectively.
- Range to be validated - Based on the selected choice range will be validated in the usual or reverse order. For Ex : In distance travelled and Fleet Utilization KPIs, more the value, safe is the state of the KPI which is in reverse to other KPIs such as Idling duration, Idling percentage Speed Violations etc.
- Cost per Km/Hr. - This field is specific to cost related KPIs such as Distance cost and Idling cost. Based on the cost specified, value for the KPIs will be calculated.

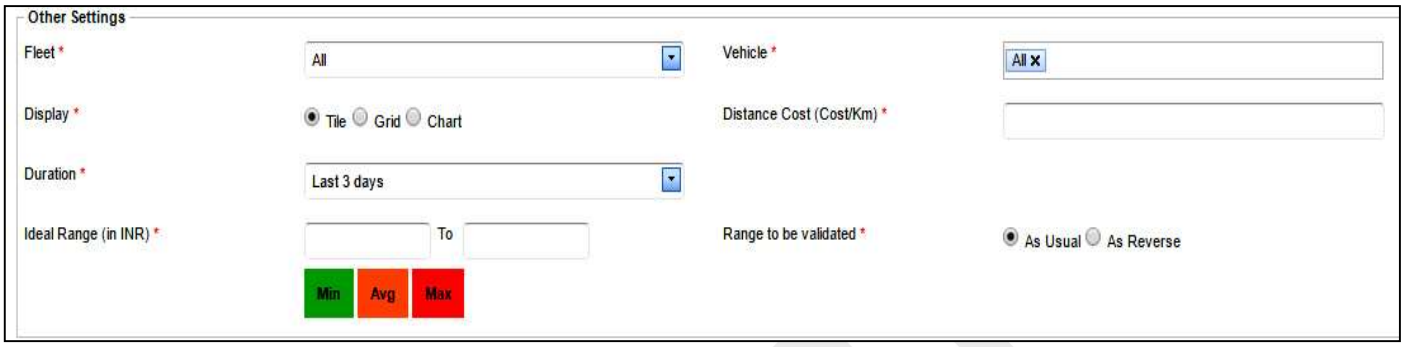

Fig: KPI Other Settings

Permission Settings:

- Apply Settings by - Based on the selected option KPI permission settings will have to be created on own or it will be copied based on the selected KPI.
- Privilege Type – Based on the selected option KPI will be assigned to either an individual User or a User Group.
- List of Users or User Groups have to be selected.
- Filters to Display – Selected filters will only be available for editing to the users assigned with KPI

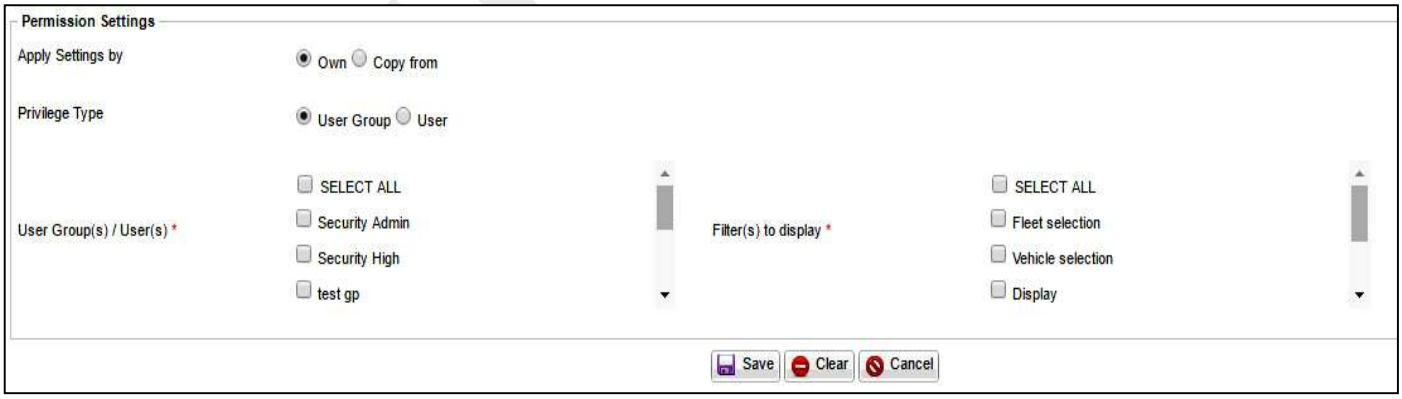

Fig: Permission Settings

Common Error Page

1. Common Error Page will be encountered by the user in case there has been a break in the flow of application.

Fig: Common Error Page

2. The following are the operations in the error page, that are available to the user:

- Go back to the Home page of the application. The user will be taken to the default home page, usually the Dashboard.

- Go back to the previous page in the application. The user will be taken to the application's previous page that was working fine.

- Mail the error to the Trinetra team. This will trigger a mail to the Trinetra team with the encountered error details.

- Refresh the current page. Sometimes, the error might have occurred due a minor glitch. A simple refresh of the page will return the application right on track.

- Log out of the application. Sometimes, just logging out and logging back into the application will clear the error from the application.