

WEBFLEET.connect

1.73.0 Reference Guide



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What's new?

Here you find an overview of what is new or has changed in WEBFLEET.connect 1.73.0.

Please find the full revision history at the end of this document.

Deprecation of URL credentials

Please note that we will remove support for credentials (username, password) in URL query parameters end of June 2026. Requests with URL credentials will stop working after this date!

Use HTTP Basic Auth instead. This is supported since September 2022. See <u>Making HTTP requests</u>

This only affects the CSV/JSON API. SOAP is unaffected.

Fuel types

There are new fuel types available for <u>showVehicleReportExtern</u>, <u>updateVehicle</u>, <u>showTripReportExtern</u>, <u>showStandStills</u>, <u>showIdleExceptions</u>.

CAN data in message queues

Detailed CAN data in message queues (message type 80000930) is now also available in the SOAP API.

New rights for orders

The new access rights read_access_orders_when_vehicle_assigned and full_access_orders_when_vehicle_assigned can now be configured via setUserRight action. Users with this rights have access to orders if an vehicle is assigned to the order and the user has access to the vehicle.

Welcome

Welcome to the WEBFLEET.connect Reference Guide.

This document provides all the information you need to integrate Webfleet into your applications using the WEBFLEET.connect interface.

The documentation is divided into the following sections:

- <u>Terminology</u> In this chapter you learn understanding terms used in the context of Webfleet and WEBFLEET.connect products and features.
- <u>Programming Guide</u> The programming guide contains a detailed description of how to submit requests to WEBFLEET.connect and the data that is returned by the service, including an explanation of how to enable access to the service.
- Reference The Reference is a detailed description of all available operations, including their parameters and the data returned by these operations.

More information

Updated versions of this documentation and other resources are available online at https://www.webfleet.com/webfleet/partners/integration/developer-resources/

Terminology

Here is a description of the terms used in the context of fleet management and Webfleet.

Webfleet components

There are three variations of Webfleet solutions:

- · Webfleet connected to a LINK device.
- Webfleet connected to a LINK device and a Driver Terminal.
- Webfleet connected to a Driver Terminal.

Webfleet

Webfleet is Bridgestone Mobility Solutions' innovative Software as a Service (SaaS) fleet management software solution. It gives you secure access to all the information you need to manage your fleet operation in the most effective way. Webfleet is the web-based application for managing vehicles and orders and accessing Webfleet tracking and tracing functionality.

LINK

The LINK is a black box installed in the vehicle. The LINK is connected to the vehicle's power supply and the ignition. It registers ignition events, vehicle movement, and position information and sends all this information to the office. Connected via GPRS to Webfleet, it also enables communication between the office and a Driver Terminal. This device enables tracking and tracing.

Different models of the LINK are supported in Webfleet:

- LINK 7xx/6xx
- LINK 5xx/4xx
- LINK 3xx
- LINK (first generation)

Connected Driver Terminals

The term **Connected** refers to all Driver Terminals that come with a built-in mobile network modem. Driver Terminals do not need to establish a connection to a LINK but directly connect to Webfleet instead. There are different generations of connected Driver Terminals currently supported in Webfleet:

- PRO M
- TomTom PRO 5350/5250 (purchase of Webfleet-compatibility upgrade required)

Non-connected Driver Terminals

The term **Non-connected** refers to all Driver Terminals that need a LINK device for communication with Webfleet and the office. There are different generations of non-connected devices currently in use:

- PRO 84xx/83xx
- PRO M
- PRO 2020
- TomTom PRO 8275/8270/7350/7250

Remote LINK

Remote LINK is a remote control. It needs to be connected using Bluetooth* to an associated LINK 510/300/310 installed in a vehicle.

There are two variations:

- Remote LINK Working Time
 With Remote LINK Working time multiple employees are able to register their working times via the LINK 5xx/4xx/3xx.
- Remote LINK Logbook
 With Remote LINK Logbook, drivers are able to maintain a logbook via the LINK 5xx/4xx/3xx.

LINK 105/ecoPLUS

LINK 105/ecoPLUSTM retrieves fuel consumption information over the vehicle's OBD-II connector and sends this information to Webfleet in real time. LINK 105/ecoPLUS works together with the LINK 5xx/4xx using Bluetooth*.

Object

An object is the central entity in Webfleet. An object can be a vehicle like a car, truck or trailer. The vehicle or trailer is installed with a Webfleet unit. The Webfleet unit delivers all relevant vehicle/trailer-related information to Webfleet such as position, time, speed etc. The object is then shown on the map and in the respective lists in Webfleet. It is created in the Webfleet database as soon as it is activated after a successful installation.

Tracking and tracing

Tracking and tracing is the general term used for tracking the position of an object, either in real time or historically. Usually this includes functionality to communicate with vehicles and their drivers.

Tracking and tracing requires dedicated hardware and software. Webfleet uses both built-in and portable devices.

Built-in devices

24/7 monitoring and security is enabled by using built-in LINK devices.

The LINK device delivers position, movement and ignition information as well as input events, for example engine is running etc., related to the specific vehicle and cannot be switched off.

The LINK device normally sends six positions per minute as long as the vehicle is operated in countries covered by your Webfleet subscription. The countries and the position report interval vary per subscription. For details refer to the Webfleet contract. Using the application programming interface WEBFLEET.connect one position per minute is standard in these countries. You can extend the position report interval for WEBFLEET.connect integrations to more positions per minute by booking the Additional Service HD Tracking. Additional positions are then available in the 'surplus_data' result parameter as 'hd_tracking-positions' incl. geo coordinates, speed, course and time. For more details how to book this feature please refer to the Additional Service form.

A LINK device installed in the vehicle is required for additional devices such as the following:

- Non-connected navigation devices
- Remote LINK
- LINK 105/ecoPLUS
- Digital tachograph

For compatibility see www.webfleet.com.

These devices have basic functions like sending and accepting orders and messages, reporting working times, logbook-keeping, reporting on driver behaviour, driving times of driver and co-driver and fuel consumption.

Portable devices

Part-time tracking and tracing can be achieved with <u>Connected navigation devices</u> that directly communicate with Webfleet.

Tracking

Tracking is monitoring the position, movement, driving and other events of a vehicle in real time. The vehicle reports its current speed and the direction in which it is moving to Webfleet. Additionally you can see if a vehicle is stuck in a traffic jam, if it is parked and/or if it is idling the engine. This kind of information is available in Webfleet, for example on the map and in the vehicle details panel.

Tracing

Tracing is the ability to see the vehicles' positions, movements, driving and other events historically. The information is stored to Webfleet for up to 90 days, and can be evaluated during this time.

Trip

A trip is a movement of a vehicle from a start position to an end position.

After a trip has ended a trip report is sent to Webfleet containing all trip-relevant information such as start time, end time, stand stills, idling times, and fuel consumption.

Trip with LINK device

A trip start is reported when the vehicle's ignition is switched on and the vehicle moves or changes its GPS position for a minimum configured duration (default five min.), retroactive to vehicle ignition time.

The end of a trip is reported when one of the following conditions applies:

- The vehicle's ignition is switched off and remains so for a minimum configured duration (default 15 min.), and the vehicle does not move or change its GPS position.
- The logbook trip mode changes from private trip to business trip or vice versa.
- The driver changes, reported either through the Driver Terminal or the digital tachograph.

Trip with navigation device only

When using a connected navigation device, trips are reported under the following conditions:

The start of a trip is reported when all the following conditions apply to the navigation device:

- It is properly connected to the dock in the vehicle.
- It has GPS reception.
- It changes its GPS position.

The end of a trip is reported when one of the following conditions applies to the navigation device:

- It is removed from the dock.
- It has been switched off.
- It stands still for a minimum of ten minutes.
- The logbook mode has changed from business to private mode or vice versa.
- The driver changes, reported through the Driver Terminal (applicable for GO and PRO navigation devices with the software version 8.390.1916 or higher only).

Standstill

A standstill is reported when the vehicle stops moving or changing its GPS position for minimum configured duration (default five min.). The end of a stand still is determined when the vehicle starts moving or changing its GPS position. The complete standstill interval is reported to Webfleet when the standstill has ended.

Idle time

Idle time is the time a vehicle stands still with the engine running or the time the vehicle is moving very slowly. Idling is recorded after five minutes.

Event

Events are incidents recorded on the Driver Terminal that are reported as messages to Webfleet. Typical examples include the following:

- Predefined general status messages.
- Predefined order-related status messages.
- Being within geographical zones.
- Information on disconnection of peripherals, undesired functions, digital input events, etc.

Status messages and geo-zone events can be classified as notice, warning or alarm in three levels according to their importance.

Driving event

A driving event is reported to Webfleet when a driver exceeds a certain level of acceleration. Acceleration is recorded during braking, cornering and steering and exceptional acceleration, such as car crashes.

Order

An order is a message containing instructions about the job to be done. There are three types of orders:

- Delivery order.
- Pickup order.
- · Service order.

An order contains an order number and a free text message up to 500 bytes.

Optionally, the following can be attached to an order:

- A contact.
- A phone number for the contact.
- The planned date of execution.
- A destination address to be displayed to the driver on the Driver Terminal.
- Destination coordinates to be used by the Driver Terminal for route calculation to the job location.
- The desired time of arrival.
- A time tolerance for the start of the execution to generate an alarm message if the tolerance is exceeded.
- A lead time for an arrival message.

The order instructions appear on the navigation device and can be accepted, rejected or simply saved for later. The (co-)driver can accept or refuse an order and start and complete activities on the order by using the corresponding order steps. If the driver rejects or cancels the order, he is asked to type in a reason.

All actions on the order taken by the driver generate messages sent to Webfleet.

Working time

Working time can be reported to Webfleet using:

- A connected navigation device; the driver can report working time, by identifying himself to the connected navigation device.
- A navigation device in combination with a LINK device; the driver can report working time, by identifying himself to the navigation device.
- A Remote LINK Working Time together with a LINK device; multiple employees can report working time via one installation, as they identify themselves through a personalised ID Key.

The following working time states can be reported to Webfleet:

- · Commute to work.
- · Start break.
- Start work, also indicates end of a break if the last reported status was start break.
- End work, also indicates end of a break if last reported status was start break.

Working time reporting across vehicles or devices

Generally, when reporting working time, the start and the end are performed on the same device, but if drivers and workers use various vehicles and thus devices, the following rules should be considered:

- If a driver moves between PRO navigation devices or Remote LINK devices working times are driver-oriented.
- If a driver moves between GO navigation devices, working times are vehicle-oriented.
- Working sessions have to be closed, with End work, before pairing any device with a different device.
- Closing working sessions on a different device than the one with which you have started the working session is only possible, if you use <u>Remote LINK</u> with an ID Key or PRO navigation devices.

Vehicle maintenance

Maintenance schedule

A maintenance schedule describes a maintenance task that has to be carried out on a vehicle. It defines when the task is scheduled and whether it has to be carried out once at a certain date or vehicle mileage, or if it needs to start at a certain date or vehicle mileage and be repeated at regular intervals.

In accordance with the maintenance schedule, Webfleet creates a maintenance task when the task is due. A reminder can also be issued a certain time or distance before the task is due, giving advanced notice of the maintenance task.

Maintenance task

A maintenance task for a vehicle is created from the respective maintenance schedule. The task appears in Webfleet when it is due or the task's reminder is issued.

Additional features

WEBFLEET.connect comes with a large variety of features and functionality that help you drive your business out of the box. For industry specific needs Webfleet offers a range of additional features/additional services. These can be booked on top of your WEBFLEET.connect subscription.

HD Tracking I

Charged per: Device

Due upon activation: Monthly

Minimum contract period in months: 1

Extension for WEBFLEET.connect integrations to include all positions sent within the tracking message.

HD Tracking II

Charged per: Device

Due upon activation: Monthly

Minimum contract period in months: 1

Change of position report interval from 6 positions/minute (default) to 5 positions/15 seconds for the device.

HD Tracking III

Charged per: Device

Due upon activation: Monthly

Minimum contract period in months: 1

Change of position report interval from 6 positions/minute (default) to 5 positions/15 seconds for the device; and additionally extension for WEBFLEET.connect integrations to include all positions sent within the tracking message (combination of HD Tracking I & II).

Not supported by the following devices: LINK 300, LINK 310

Direct FMS

Charged per: Device

Due upon activation: Monthly

Direct FMS enables the required data for Webfleet FMS features (for example OptiDrive, fuel consumption, cruise control, AdBlue level) by connecting a LINK 710 directly to the CAN bus of a compatible heavy commercial vehicle.

Webfleet-compatibility upgrade (TomTom PRO 5150/5250)

Charged per: Device

Due upon activation: Once

Upgrades the TomTom PRO 5150/5250 LIVE TRUCK to connect to WEBFLEET.connect.

Webfleet additional reporting package

Charged per: Webfleet account

Due upon activation: Monthly

Extension of the number of reports that can be stored in the Webfleet reports Archive by 10 additional reports. The period of validity of the service is determined by the contract period of the corresponding Webfleet account.

Webfleet for Salescloud

Charged per: Device

Due upon activation: Monthly

Seamless integration with Salesforce enables you to compare driven mileage with sales performance. Other insights include: single trip data, purpose, number of trips, driving performance information and arrival times. By syncing Webfleet to your Salesforce calendar, you can send appointments to your Driver Terminals in real time.

Webfleet Plugin

Charged per: Device

Due upon activation: Monthly

With a Webfleet Plugin data from an external source can be displayed in Webfleet on an existing Webfleet object. A Webfleet.connect integration is required.

Webfleet Video Webfleet Video Plus

Charged per: Device

Due upon activation: Monthly

Minimum contract period in months: 1

Service as Webfleet Video with increased functionality of monitoring driver and their behaviour with the use of AI technology and the ability to request video on demand.

Available with Webfleet LINK subscription or higher. Excludes TomTom PRO 5350 Live subscription

Webfleet Video Live

Charged per: Device

Due upon activation: Monthly

Minimum contract period in months: 1

Service as Webfleet Video Plus with increased functionality of the ability to Live stream video content of the device via Webfleet for both the road and driver facing views. Also supports the use of auxiliary cameras for monitoring side and rear views of a vehicle.

Available with Webfleet LINK subscription or higher. Excludes TomTom PRO 5350 Live subscription

| Functionality | Video Plus | Video Live |
|--|------------|------------|
| LINK based events | ✓ | ✓ |
| Dual video view (street- and cabin-facing) | ~ | ✓ |
| Alert button events | ~ | ✓ |
| Video events inbox (notifications) | ✓ | ✓ |
| Deleting video events | ~ | ~ |
| Video tab in the Vehicles view | ~ | ~ |
| On-demand request for video events | ~ | ✓ |
| Camera based events (Al events) | ✓ | ✓ |
| Live streaming video | | ✓ |
| Auxiliary camera support | | ✓ |

Webfleet TPMS Webfleet TPMS

Charged per: Vehicle (for example: truck, bus, trailer)

Due upon activation: Monthly

Minimum contract period in months: 1

Enables Tyre Pressure Monitoring (TPMS) functionality in Webfleet, supporting live tyre pressure updates, notifications and maintenance tasks. Available with Webfleet ADM or Webfleet AST subscription for trailers and with Webfleet ECO subscription or higher for all other vehicles. A connection to a LINK 7xO is required for all vehicles except trailers. For trailers, the LINK 7xO in the towing vehicle is required for connectivity, unless the trailer is fitted with the LINK 350 and associated TPMS sensors.

IMPORTANT! TPMS for trailers – Live TPMS functionality is currently only supported for trailers when the trailer is used together with a towing vehicle fitted with Webfleet TPMS, unless the trailer is fitted with the LINK 350 and associated TPMS sensors.

Professional (Truck) Navigation

Charged per: Subscription

Due upon activation: Monthly

Minimum contract period in months: 1

Enables the use of TomTom GO Fleet in combination with Webfleet Work App. It includes best-in-class (truck) navigation, LIVE traffic, an automated reporting of ETA and destination to Webfleet, and more.

Only available for NAV and LIVE subscriptions. Can only be used in combination with Webfleet Work App. Requires an active data con-nection (SIM or Wi-Fi). Data consumption depends on usage and region, among other factors. The app should only be used with unlimited data plans or plans with automatic cost limits to avoid unexpected costs due to increased data consumption.

Order optimisation

Charged per: Device

Due upon activation: Monthly

Minimum contract period in months: 1

Order optimisation features allow you to increase the productivity of your field force by calculating the optimal sequence of orders per vehicle.

Only available for Webfleet subscriptions NAV and LIVE.

Can be used with:

- PRO 8475/8375/8275/8270/7350/7250/5350/5250.
- · Webfleet Work App.

Note: Some of the above listed devices may not be available in your country.

Webfleet Cold Chain

Charged per: Device

Due upon activation: Monthly

Minimum contract period in months: 1

Webfleet Cold Chain provides real-time temperature monitoring in Webfleet, offering a new dedicated module, with specific notifications based on temperature thresholds that can be completely configured by Webfleet users. Temperature data is archived in Webfleet for 1 year and can be accessible from the new Cold Chain module in Webfleet or via the new temperature report.

The customer must choose either of the following 2 options as data source for temperature monitoring:

- Connecting 1-Wire (DS1820) sensors to the LINK device*
- Integrating temperature data from Thermo King Tracking

This new service is supported by LINK 340, LINK 710 and LINK 740 devices.

Available for Webfleet LINK subscription or higher (LINK 7X0) and Webfleet AST-M or higher (LINK 340).

*1-Wire sensors are not included in the Webfleet Cold Chain subscription and must be purchased separately. Up to 6 sensors can be connected in one LINK device. Only sensors purchased from Webfleet must be used.

**The customer must have a valid Thermo King Tracking subscription available directly from Thermo King. Webfleet does not arrange Thermo King Tracking subscriptions on behalf of the customer, and is not responsible for the Thermo King Tracking service.

LINK.connect

Charged per: Device

Due upon activation: Monthly

Supports the LINK to connect to third party devices using Bluetooth. Only available for Webfleet subscription ECO or higher. Can be used with LINK 410/510/530.

The particular fee includes the costs for the booked GPRS data volume using LINK.connect.

Webfleet Tachograph Manager services Webfleet Tachograph Manager (TACHOMANAGER)

Charged per: Device

Due upon activation: Monthly

Minimum contract period in months: 1**

Support of downloading, archiving and analysis of tachograph information from driver card and vehicle mass storage. Includes Remote download and Manual download. Remote download frequency: weekly for driver card and monthly for vehicle unit mass storage. Manual download is free of charge for the object with TACHOMANAGER subscription.

Available for Webfleet ECO subscription or higher.

Webfleet Tachograph Manager PLUS (TACHOMANAGER PLUS)

Charged per: Device

Due upon activation: Monthly

Minimum contract period in months: 1**

Service as TACHOMANAGER with increased frequency remote download schedule and Remaining Driving Times. Remote download schedule; daily for driver cards and weekly for the vehicle unit mass storage.

Available for Webfleet ECO subscription or higher.

Manual download (TACHOMANAGER.MDL)

Charged per: Device

Minimum contract period in months: 1***

Manual download from digital tachographs that do not support remote download or are not connected to a LINK device. Does not include remote download.****

The prices listed in the table do not include the purchase of any hardware or the usage of the Webfleet service. The current terms and conditions for the Webfleet service and for the additional feature Webfleet Tachograph Manager apply.

Terms and conditions for the additional feature TACHOMANAGER services

All TACHOMANAGER subscriptions are determined by the Webfleet subscription for the respective object. For example, when you purchase TACHOMANAGER for a Webfleet object that has a WF-DE-EU-LIVE subscription, the TACHOMANAGER price for EU will be charged. Changing the Webfleet subscription consequently results in a change of the TACHOMANAGER/TACHOMANAGER PLUS price.

To use TACHOMANAGER services, please send your company card to Webfleet Sales Support to the address shown in the bottom right corner of your Webfleet service contract.

If you are located in Germany, Austria, Switzerland, Poland or Czech Republic please send your company card to:

Webfleet, Inselstraße 22, 04103 Leipzig, Germany

IMPORTANT! Company cards that are only valid for three months or less cannot be accepted and will be sent back. Please make sure that your company card is valid for a minimum of three more months.

- ** Cancellation of any TACHOMANAGER additional features for this article is required in writing sent to Webfleet Sales Support.
- *** The additional feature TACHOMANAGER.MDL for manual download is invoiced on a pay-per-activation base Every vehicle that has been active within a month will be invoiced for the entire month. Determining for the invoicing is the activation status of a vehicle in a month not whether a user uploaded a file or not. Deactivation of TACHOMANAGER for manual download does not require a written cancellation. The vehicle can be deactivated by deselecting the vehicle in the list in the Webfleet Tachograph Manager interface. The deactivation between two download dates is not supported If a vehicle is re-activated, the full period in between will be charged.

**** Manual download (TACHOMANAGER.MDL) will be automatically charged for vehicles that have been manually created in the Webfleet Tachograph Manager interface by uploading tachograph files.

Remaining driving times (TACHO.RDT)

Charged per: Device

Due upon activation: Monthly

Minimum contract period in months: 1

Assists fleet managers to determine remaining driving times.

Terms and conditions for the additional feature TACHO.RDT

Cancellation of TACHO.RDT is required in writing sent to Webfleet Sales Support. Every unit for which TACHO.RDT has been booked will be invoiced for the entire month.

Disclaimer: The remaining driving times supplied by Webfleet are indicative and are reliant upon the information being obtained from the tachograph and sent to Webfleet via the onboard device installed in a vehicle. The algorithms used to calculate the indicative remaining driving times are based on European driving time legislation and it is your responsibility to verify remaining driving times and any applicable national legislation.

Webfleet TachoShare services Webfleet TachoShare (TACHOSHARE)

Charged per: Device

Due upon activation: Monthly

Minimum contract period in months: 1**

Remote downloading and archiving of tachograph information and the option to share this data with selected analysis providers. Remote download frequency: weekly for driver card and monthly for vehicle unit mass storage.

Available for Webfleet ECO subscription or higher.

Webfleet TachoShare PLUS (TACHOSHARE PLUS)

Charged per: Device

Due upon activation: Monthly

Minimum contract period in months: 1**

Service as TACHOSHARE with increased frequency remote download schedule and Remaining Driving Times***. Remote download schedule; daily for driver cards and weekly for the vehicle unit mass storage.

Available for Webfleet ECO subscription or higher.

Webfleet TachoShare TIS Web Connect (TACHOSHARE.TIS-WEB)

Charged per: Device

Due upon activation: Monthly

Minimum contract period in months: 1**

Remote downloading and archiving of tachograph information and the option to share this data with VDO TIS-Web. Remote download frequency: weekly for driver card and monthly for vehicle unit mass storage.

Available for Webfleet ECO subscription or higher.

Webfleet TachoShare TIS Web Connect PLUS (TACHOSHARE.TIS-WEB PLUS)

Charged per: Device

Due upon activation: Monthly

Minimum contract period in months: 1**

Service as TACHOSHARE.IS-WEB with increased frequency remote download schedule and Remaining Driving Times***. Remote download schedule; daily for driver cards and weekly for the vehicle unit mass storage.

Available for Webfleet ECO subscription or higher.

Terms and conditions for the additional features TACHOSHARE services

All TACHOSHARE subscriptions are determined by the Webfleet subscription for the respective object. For example, when you purchase TACHOSHARE for a Webfleet object that has a WF-DE-EU-LIVE subscription, the TACHOSHARE price for EU will be charged. Changing the Webfleet subscription consequently results in a change of the TACHOSHARE price.

To use TACHOSHARE services, please send your company card to Webfleet Sales Support to the address shown in the bottom right corner of your Webfleet service contract.

If you are located in Germany, Austria, Switzerland, Poland or Czech Republic please send your company card to:

Webfleet, Inselstraße 22, 04103 Leipzig, Germany

IMPORTANT! Company cards that are only valid for three months or less cannot be accepted and will be sent back. Please make sure that your company card is valid for a minimum of three more months.

- ** Cancellation of the additional feature Webfleet TachoShare for this article is required in writing sent to Webfleet Sales Support.
- *** Remain Driving Times is subject to fair use. The subscription to the TACHOSHARE PLUS service is rendered to a Client on a per vehicle basis. It includes remote downloading for two active drivers (driver cards) per month. An active driver is any driver inserting a Driver Card into the tachograph of a vehicle for which the TACHOSHARE PLUS subscription has been purchased. Additional charges may be applied by Webfleet for use outside this fair use policy. For the sake of clarity, we have included the following calculation example concerning the application of the fair use by Webfleet: A Client that has purchased the TachoShare Plus for 20 vehicles may use it up to 40 active drivers per month.

Webfleet Hours of Service

Charged per: Device

Due upon activation: Monthly

Enables Hours of Service registration for the respective object. Drivers with Webfleet Hours-of-Service app installed on a smartphones driving this object can register their duty hours.

Disclaimer:

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Webfleet Road Usage Charges (TRUC)

Charged per: Device

Due upon activation: Monthly

Support of road usage charge calculations within Webfleet.

Programming Guide

This programming guide is an introduction to using the WEBFLEET.connect interface, how to access the service and how to interpret the output that is returned.

In order to access the WEBFLEET.connect service you need a Webfleet account that has WEBFLEET.connect enabled. Otherwise you will not be able to test the integration for your application.

Please talk to your Webfleet sales contact if you do not have access to a WEBFLEET.connect-enabled account.

Introduction to WEBFLEET.connect

WEBFLEET.connect is an API that allows you to access the Webfleet service through a web-enabled application. These are the primary features accessible through WEBFLEET.connect:

- **Reports** Retrieve data that correspond to the information contained in the reports generated within Webfleet
- Messaging Send text to mobile units and retrieve incoming messages.
 See Message queues and Orders.
- Addresses Insert, update and delete addresses and address groups as well as relations between addresses and address groups.
 See Addresses.
- Orders Insert, send, update and delete orders and retrieve order status information.
 See Orders.
- Drivers Insert, update and delete drivers and retrieve driver status information.
 See <u>Drivers</u>.

Note: As WEBFLEET.connect impersonates as the user that is provided as part of the service request authentication, access restrictions set up within Webfleet apply. This affects all elements of the WEBFLEET.connect interface. For instance, addresses can only be updated if the user has the respective access right to do so (for example: 'Edit access' for 'All addresses').

Preparing for WEBFLEET.connect

WEBFLEET.connect can be made available to every customer with a valid Webfleet account. There should be at least one active object to make full use of the functionality offered by WEBFLEET.connect.

Access to WEBFLEET.connect with API Key

To enable API access for your application, obtain an API key by doing the following:

For .connect partners

If you are a .connect partner, you will receive your API key during your partner application process. To request more API keys, complete the online request form on https://uk.sup-port.webfleet.com/app/ask.

- In the Refine search by product model drop-down menu select Integration, then select the desired API.
- In the Refine search by category drop-down menu select API key request.

For customers

If you are a customer and would like to request an API key, complete the online request form on https://uk.support.webfleet.com/app/ask.

- In the **Refine search by product model** drop-down menu select **Integration**, then select the desired API.
- In the Refine search by category drop-down menu select API key request.

Checking requirements Geographic coordinates

Some functions require geographic coordinates such as longitude and latitude. This includes inserts and updates of addresses and sending orders.

Make sure that you are able to provide valid coordinates, otherwise you won't be able to fully leverage all functionality that WEBFLEET.connect offers. Geographic coordinates used by Webfleet always refer to the <u>WGS84</u> coordinate system and have different representations.

Creating a user and assigning rights using Webfleet

In order to access WEBFLEET.connect, you must first create a user within your Webfleet account and give this user the right to use WEBFLEET.connect.

This procedure is outlined below:

1. Select the **Users** icon in the main menu.



Click the **New user** button in the lower right.The **New user** view opens.

3. In the **User data** section enter the user data.

Enter the user's name for **Name**, the Webfleet username for the new user under **Username**, and type in a contact email address in the field for **Email**.

Note: Name, Username and Email are required.

- 4. In the section for **Active time period**, select **Unlimited** or define a period by selecting **Temporary**, and then select a start date and an end date using the date picker.
- 5. Select a user profile in the **Profile** section.
 - A good starting point is to use the profile **Standard**.
 - Based on the user profile that you select, default settings for access rights are used for this user. You can adjust these settings in the following steps.
- 6. Select **WEBFLEET.connect** in the **Interfaces** section.
- 7. In the **System rights** section, select the user access rights regarding **Orders**, **Areas**, and **Reports**.

You can choose between **Full access**, **View access**, and **No access** for each module. For **Areas**, you can additionally choose the option **View access**, and for **Reports** the option **Download reports only** is available.

In the following sections you can refine the access rights to specific elements and features within Webfleet.

8. Click **Save** to save your changes.

Making requests to WEBFLEET.connect

Making HTTP requests

This section explains how to use HTTP to issue requests to WEBFLEET.connect.

Important: Only HTTPS requests are accepted. Requests using unencrpyted HTTP are rejected.

WEBFLEET.connect generally uses HTTP GET requests as the underlying transport mechanism for requests (POST is supported for few actions only, see below). All requests are made using specific <u>URLs</u>, passing parameter names and values as URL parameters. Responses are returned as character-separated values (CSV). You can experiment with WEBFLEET.connect-specific HTTPS requests by entering the request URL into the browser's address bar and submitting the request.

WEBFLEET.connect uses the standardized transport protocol HTTPS 1.1 for which compliance with <u>IETF RFC 2616</u> is very important. It includes proper evaluation and handling of all HTTP response header values, e.g. character set, content and transfer encoding including chunked transfer encoding.

The sequence of incoming messages may differ from the sequence of messages sent from the device. Use their timestamp to restore the sequence, if the sequence is significant for the application.

We highly recommend to use <u>ISO8601</u> for all date and time values even if its use is optional with some functions. Date and time values carry timezone information where appropriate.

Character sets and date/time values need translation to local configurations, for example. UTF-8 to ISO-8859-10, UTC to CET. We do not guarantee the character encoding (currently: UTF-8) and timezone (currently: UTC for queue service, else time zone of the account) of the web service response, as all information to properly convert this to local requirements is provided as per the above mentioned standards.

For details about time zones when using ISO8601 in CSV read General parameters.

Do not pass parameters with an empty value in a request, if you do not explicitly want to delete the parameter's value.

Note: If the format of the HTTP request is not valid you will get a corresponding error.

Authentication

Authentication method is HTTP Basic Auth according to RFC 7617.

The old way of providing user name and password in the request URL is deprecated and will be removed end of June 2026.

For Basic Auth concatenate the Webfleet user name and password with a colon as separator and apply Base64 encoding afterwards. Use the result in the Authorization HTTP header. The Webfleet account name is provided as a request parameter as usual. It's not part of the HTTP authorisation.

Example

GET /extern?lang=en&account=wfcdevaccountt&apikey=yourapikey&action=showOb-jectGroups&outputformat=json&useUTF8=true&useISO8601=true HTTP/1.1
Host: csv.webfleet.com
Authorization: Basic d2ZjdXNlcjp5b3VycHdk

The base URL

Every HTTP request to WEBFLEET.connect begins with constant elements for

host:

csv.webfleet.com

path:

extern

Therefore, the base URL with the https scheme used is:

https://csv.webfleet.com/extern

Handling the response

In case of an error, an error message is returned as plain text. The error message has the following layout:

id, description

id is a numeric value and description provides a reason text. The message is either in the language defined by the lang parameter or in English if no localised translation is available.

All methods that return data, provide the data as quoted character-separated values (CSV) with one record per line. Those methods' names typically contain verbs indicating data retrieval such as *show...* or *pop...* The Quoting character is ''' - if this character is part of the data, it is quoted with ', appearing as ''. The ordering of result columns might not always match that of the documentation and is subject to change without notice. It is therefore advisable to use the column names returned in the first response line to identify the data columns by their name. If there is no data to return, an error message is returned, for example:

```
63, document is empty
```

All methods that transmit data, e.g. all *send...* methods, return nothing on successful completion, that is the response is empty.

Error codes and descriptions are also returned in two HTTP response header fields:

- X-Webfleet-Errorcode: <Error code>
- X-Webfleet-Errormessage: <Error message>

If there is no error, the header fields are omitted.

Making HTTP POST requests

In addition to GET some actions allow to use HTTP POST to handle large payload. Examples are order related actions like

- sendDestinationOrderExtern
- insertDestinationOrderExtern
- updateDestinationOrderExtern

WEBFLEET.connect accepts POST requests with Content-Type 'application/x-www-form-urlencoded'. The parameters and values are transferred in the body of the request. The parameter name is separated from the value by ' = ' and name/value pairs are separated from each other by ' & '. Special characters have to be encoded like query strings in URLs, see RFC 1738 - Uniform Resource Locators (URL).

The default character set is ISO-8859-1. To use UFT-8, you have to specify the character set in the HTTP header 'Content-Type'.

Example:

```
Content-Type: application/x-www-form-urlencoded; charset=utf-8
```

Code sample 3-1: Example of a complete POST request

```
POST/extern HTTP/1.1
Host:csv.webfleet.com
Connection:keep-alive
Content-Type:application/x-www-form-urlencoded;charset=UTF-8
Content-Length:177
Authorization: Basic d2ZjdXNlcjp5b3VycHdk

lang=en&account=wfcdevaccount&apikey=yourapikey&action=sendDestina-
tionOrder&objectno=0094&orderid=itn32&ordertext=Clean*20streets&longi-
tude=12399200&latitude=51364460&wp=51363230,12392520,Hamburger*20Str.
%2012,1,1
```

Using JSON

To use JSON, add the additional parameter *outputformat=json* to the request URL. This will return JSON instead of CSV. All other parameters and functionality stays the same.

The field names in the JSON output are identical to the column names in the CSV format. The returned JSON is an array with a flat representation of the data, which is not grouped nor structured. But there is one exception from the 'flat rule': The *surplus_data* member in the result of popQueueMessagesExtern is structured JSON.

Empty data is omitted in the result - no 'null' members. JSON data types, such as string, number and boolean are used where applicable. If there is no data to return, an empty JSON array is returned.

The HTTP Content-Type is 'application/json;charset=UTF-8'.

Line breaks

To add line breaks in order text or message text you need to add the ASCII LF (line feed) character. For example: firstline%OAsecondline%OAthirdline

Getting started with HTTP requests

For trying out HTTP requests, you need a tool like cURL, wget, Postman, etc.

Preconditions

· Valid API key and credentials.

Making an HTTP request with cURL

Type in the following command on the command line. Remember to replace your specific credentials.

```
curl --user YOUR_USER:YOUR_PASSWORD "https://csv.webfleet.com/ex-
tern?lang=en&account=YOUR_ACCOUNT&apikey=YOUR_APIKEY&action=geocodeAd-
dress&outputformat=json&freetext=Leipzig"
```

The response looks like:

```
[{\'addrstreet':\'', \'addrstreetnumber':\'', \'addrzip':\'04', \'addrci-ty':\'Leipzig', \'addrcountry':\'DE', \'postext':\'04 Leipzig, Germany', \'format-ted_longitude':\'12°22'23.0\' E", \'formatted_latitude':\'51°20'22.9\' N", \'longitude':12373074, \'latitude':51339695, \'additional_information':\'accuracy=4'}]
```

HTTP request encoding

Every HTTP/HTTPS request must be a valid URL. That means that only <u>ASCII</u> characters are valid characters inside the URL and every other character, such as the German 'ß' character, or a special signs, such as the '@' sign, must be properly encoded inside the URL. There are two different types of encoding available depending on what kind of characters or special signs are needed.

Percent encoding

This is the basic version of character encoding. It contains only some special characters like for instance the 'B' character (encoded as %DF) or the '@' sign (encoded as %40).

Find below an example that uses 'Sußanne@work' as WEBFLEET.connect account name and how the special characters and characters inside this user name are correctly percent encoded:

```
https://csv.webfleet.com/extern?lang=de&account=Su%DFanne %40work&apikey=***&action=geocodeAddress&outputformat=json&freetext=Berlin
```

UTF-8 encoding

For more complex character encoding the UTF-8 encoding is needed as it contains nearly all characters and special signs.

Here is another example. For example, to geocode the Polish town 'Łódź' you have to enable the UTF-8 encoding in the request first by using the following extra parameter:

```
&useUTF8=true
```

All special characters and signs inside the URL must now be encoded using the UTF-8 for-

Here is how the URL should finally look like:

https://csv.webfleet.com/extern?lang=de&account=***&apikey=***&ac-tion=geocodeAddress&outputformat=json&useUTF8=true&freetext=%C5%81%C3%B3d%C5%BA

Please note that the word Łódź has been converted to the following UTF-8 encoded string:

```
%C5%81%C3%B3d%C5%BA
```

Making SOAP requests

This section explains how to use <u>SOAP</u> to issue requests to WEBFLEET.connect. In order to ensure transmission security, it is required to use HTTPS to access the service via SSL.

WEBFLEET.connect supports the SOAP message protocol for issuing requests over an HTTPS connection. The easiest way to use the SOAP interface with your application is to use a SOAP toolkit appropriate for your programming platform. SOAP toolkits are available for most popular languages and platforms.

The files describing the operations and the data types are available at https://soap.webfleet.com/. Most SOAP toolkits support the automatic generation of routines and classes based on the description.

WEBFLEET.connect uses the MTOM extension to SOAP in order to provide an optimised transmission of data. Although most modern SOAP toolkits support this extension, your specific toolkit might need an additional support library to enable proper handling of MTOM.

Using .NET with the WEBFLEET.connect SOAP API

If you are using the .NET to integrate with WEBFLEET.connect we recommend to using C# as the main programming language. If however you are forced to use Visual Basic this requires to apply the additional steps described in <u>Using WEBFLEET.connect SOAP with Visual Basic</u> before importing the web service references into your development project.

Enabling the MTOM encoding support in .NET

.NET 3.5 (and higher) and the underlying Windows Communication Framework support SOAP with the MTOM extension. If you create a default web service project in Visual studio, the MTOM support is not automatically enabled for a new project. To enable it edit the app.config file in your code project.

Rename every occurrence of the textMessageEncoding element to mtomMessageEncoding. See 'before' and 'after' samples below.

Note: Only rename the element. The attributes and their values **must not be removed**. Do not forget to **close and re-open the project** and **possibly Visual Studio** after this change, otherwise Visual Studio will not recognise the changes.

The following code samples show when MTOM encoding is supported.

Code sample 3-2: Example: Before (MTOM encoding NOT supported):

```
<textMessageEncoding maxReadPoolSize="64" maxWritePoolSize="16" messageVer-
sion="Soap12" writeEncoding="utf-8">
<readerQuotas maxDepth="32" maxStringContentLength="8192" maxAr-
rayLength="16384" maxBytesPerRead="4096" maxNameTableCharCount="16384" />
</textMessageEncoding>
```

Code sample 3-3: Example - After (MTOM encoding supported):

```
<mtomMessageEncoding maxReadPoolSize="64" maxWritePoolSize="16" messageVer-
sion="Soap12" writeEncoding="utf-8">
   <readerQuotas maxDepth="32" maxStringContentLength="8192" maxAr-
rayLength="16384" maxBytesPerRead="4096" maxNameTableCharCount="16384" />
   </mtomMessageEncoding>
```

Disabling MTOM

It's possible to enforce non-MTOM responses in the SOAP API. This allows to use the SOAP API also with frameworks or toolkits that don't support MTOM.

To ensure backward compatibility, the default response is still using MTOM. But you can disable MTOM per request by using one of these 2 methods:

- Append /disable-mtom to the URL of the SOAP service.
- Add a SOAP header with name disable-mtom and value true to the request.
 The namespace is http://connect.webfleet.tomtomwork.com/services

Using URL appendix

For example, instead of using https://soap.webfleet.com/addressService use https://soap.webfleet.com/addressService/disable-mtom when calling the API.

C# example code snippet

```
var endpointAddressBuilder = new EndpointAddressBuilder(client.Endpoint.Ad-
dress);
endpointAddressBuilder.Uri = new Uri(endpointAddressBuilder.Uri + "/dis-
able-mtom");
client.Endpoint.Address = endpointAddressBuilder.ToEndpointAddress();
...
```

Using SOAP header

Example SOAP message

C# example code snippet

```
var endpointAddressBuilder = new EndpointAddressBuilder(client.Endpoint.Ad-
dress);
endpointAddressBuilder.Headers.Add(AddressHeader.CreateAddressHeader("dis-
able-mtom", "http://connect.webfleet.tomtomwork.com/services", true));
client.Endpoint.Address = endpointAddressBuilder.ToEndpointAddress();
...
```

Using time zones with SOAP requests

With SOAP requests indicate a time zone known to the SOAP service in the general parameters (gParm) timeZone element. All date time values returned by the output of a SOAP function call will use the time zone thus indicated. Time zones known to the SOAP web service are enumerated in KnownTimeZones (see $\underline{\text{WSDL}}$). The general parameters (gParm) timeZone element does not influence the interpretation of date time input data. This means, if a date time value is sent in a SOAP request, the time zone information specified in this value will be used.

Getting started with SOAP requests

For making SOAP requests, you need a special tool.

We recommend using SoapUI (https://www.soapui.org), which also offers a basic open source version.

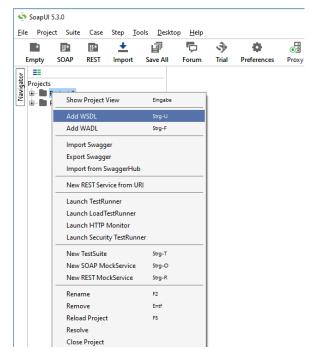
Preconditions

- SoapUI is installed.
- · Valid WSDL URL or file.
- Valid API key and credentials.

Making a SOAP request with SoapUI

To make a SOAP request, do the following:

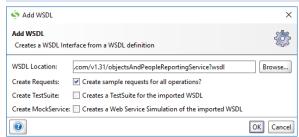
- 1. Create an empty project.
- 2. Right-click on the project
- 3. Click Add WSDL.

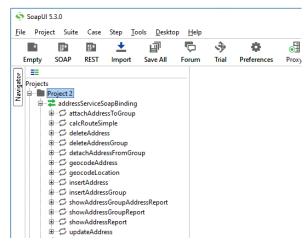


The **Add WSDL** dialogue opens.

4. Enter a valid WSDL URL that points to a WEBFLEET.connect SOAP service. All available actions for this SOAP service are displayed.

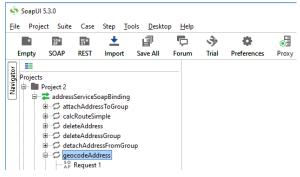
Example: https://soap.webfleet.com/v1.33/objectsAndPeopleReportingService?wsdl





- 5. Click to select an action, for example **geocodeAddress**.
- 6. Create a new SOAP request.

The request window opens.



- 7. Enter all required parameters.
- 8. Click the submit button.

```
| Aparm | Saparm | Sa
```

Here is the result for the example SOAP request:

SOAP parameters

The WEBFLEET.connect SOAP parameters and values slightly differ from the parameters and values that are used in the CSV/JSON interface. All valid SOAP parameters and values can always be found in the WSDL of the corresponding WEBFLEET.connect SOAP service.

The WSDLs for all our WEBFLEET.connect SOAP services can be found on https://soap.webfleet.com/

The following table shows some examples of what can differ between SOAP and JSON/CSV.

Table: Differences between SOAP and JSON/CSV

| | SOAP example | CSV/JSON example |
|--------------------------------|---|------------------|
| Spelling of para- meters | apiKey | apikey |
| Parameter names | accountName | account |
| Parameter structure | <object objectno="xxx"></object> | objectno=xxx |
| Parameter values | <msgclass filter="ALL"></msgclass> | msgclass=0 |
| Parameter structure and values | <gparm> <locale>UK</locale> <time- zone="">Europe_London</time-> </gparm> | lang=en |

Another good example of different parameter values between the SOAP and the CSV/ JSON interface are the SOAP date range parameter values. Find below the parameter values that can be found in the WSDL of the WEBFLEET.connect SOAP service.

Example: SOAP date range parameters in the WSDL

```
<xs:simpleType name="DateRangePattern">
  <xs:restriction base="xs:string">
    <xs:enumeration value="UD"/>
    <xs:enumeration value="D0"/>
    <xs:enumeration value="Dm1"/>
    <xs:enumeration value="Dm2"/>
```

```
<xs:enumeration value="Dm3"/>
 <xs:enumeration value="Dm4"/>
 <xs:enumeration value="Dm5"/>
 <xs:enumeration value="Dm6"/>
 <xs:enumeration value="W0"/>
 <xs:enumeration value="Wm1"/>
 <xs:enumeration value="Wm2"/>
 <xs:enumeration value="Wm3"/>
 <xs:enumeration value="WF0"/>
 <xs:enumeration value="WFm1"/>
 <xs:enumeration value="WFm2"/>
 <xs:enumeration value="WFm3"/>
 <xs:enumeration value="M0"/>
 <xs:enumeration value="Mm1"/>
 <xs:enumeration value="Mm2"/>
 <xs:enumeration value="Mm3"/>
 <xs:enumeration value="Mm4"/>
 <xs:enumeration value="Mm5"/>
 <xs:enumeration value="Mm6"/>
 <xs:enumeration value="Mm7"/>
 <xs:enumeration value="Mm8"/>
 <xs:enumeration value="Mm9"/>
 <xs:enumeration value="Y0"/>
 <xs:enumeration value="Ym1"/>
 <xs:enumeration value="Ym2"/>
 <xs:enumeration value="Ym3"/>
 <xs:enumeration value="Ym4"/>
 <xs:enumeration value="Ym5"/>
 <xs:enumeration value="Ym6"/>
 <xs:enumeration value="Ym7"/>
 <xs:enumeration value="Ym8"/>
 <xs:enumeration value="Ym9"/>
</xs:restriction>
</xs:simpleType>
```

The following table provides a detailed description for every SOAP date range parameter value. They correspond to the CSV/JSON date range filter parameters too.

Table: SOAP date range parameter value descriptions

| Parameter | Description |
|-----------|--------------------|
| UD | User-defined range |
| DO | Today |
| Dm1 | Yesterday |
| Dm2 | Two days ago |
| Dm3 | Three days ago |
| Dm4 | Four days ago |
| Dm5 | Five days ago |
| Dm6 | Six days ago |
| WO | Current week |

| Parameter | Description |
|-----------|--|
| Wm1 | Last week |
| Wm2 | Two weeks ago |
| Wm3 | Three weeks ago |
| WFO | Floating week, current day and previous seven days |
| WFm1 | Floating week, the seven calendar days before WFO |
| WFm2 | Floating week, the seven calendar days before WFm1 |
| WFm3 | Floating week, the seven calendar days before WFm2 |
| МО | Current month |
| Mm1 | Last month |
| Mm2 | Two months ago |
| Mm3 | Three months ago |
| Mm4 | Four months ago |
| Mm5 | Five months ago |
| Mm6 | Six months ago |
| Mm7 | Seven months ago |
| Mm8 | Eight months ago |
| Mm9 | Nine months ago |
| YO | Current year |
| Ym1 | Last year |
| Ym2 | Two years ago |
| Ym3 | Three years ago |
| Ym4 | Four years ago |
| Ym5 | Five years ago |
| Ym6 | Six years ago |
| Ym7 | Seven years ago |
| Ym8 | Eight years ago |
| Ym9 | Nine years ago |

Request limits

The number of requests that can be issued is limited. If the number of requests executed exceeds this limit, WEBFLEET.connect will return an error message and not process requests again until there were no further requests within the limit monitoring interval. Limits are defined by a maximum number of requests allowed in a certain time period. For more information about request limits, read the chapter for the function you want to use.

Extensions of limits are available upon request on a case by case basis, but require a certain period of proper client operation within the existing limits set.

Should an application using WEBFLEET.connect cause too much load on the system, the limit may be reduced at any time without prior notice and eventually access to WEBFLEET.connect might be revoked completely if the problems are not fixed within a reasonable amount of time.

Common parameters

WEBFLEET.connect requests take a variety of parameters.

Find the parameters that are required on all requests below:

- Authentication parameters
- General parameters

Find the parameters that are not required but are shared between various requests below:

• Date range filter parameters

Authentication parameters

| Parameter | Type | Description |
|--------------|---------------------------|---|
| account | string | A valid account name. |
| username | string | Username within the account that is allowed to access the service. Only for SOAP API. |
| password | string | Password for the user name. Only for SOAP API. |
| sessiontoken | string (32) | A session identifier, that has been fetched from the server using <u>createSession</u> . sessiontoken can be used as an alternative to account, username or password to authorise further requests for a limited time (see session lifetime). |
| apikey | string (36 characters) | This value is required. |

The CSV/JSON API uses HTTP Basic Auth for user authentication. See <u>Making HTTP requests</u>

General parameters

| Parameter | Туре | Description |
|-------------------------------|----------------------|--|
| separator (CSV only) | positiveInte- ger | A delimiter character identifier that indicates the de- limiter to be used for the output columns when using CSV format: |
| | | • 1 - a <i>tab</i> character |
| | | • 2 - a <i>space</i> character |
| | | • 3 - a comma character |
| | | If no value is specified, a semicolon used to as the delimiter for the output columns. |
| | | This parameter is optional. |
| lang | string | Valid values are: |
| (CSV/JSON only) | | • de - German |
| | | • en - English |
| | | Language to be used for output formatting. Expressed as a two-letter language code. The list of available languages is subject to change. Please ask your support contact if you want to use other values than those mentioned here. |
| locale (SOAP only) | enum | The value specified in the general parameters element (genPam) locale determines how the the result of a SOAP request will be localised. |
| | | For locales known to the SOAP web service see <u>WSDL</u> . |
| action (CSV/JSON only) | string | Specifies the operation to be executed. See chapter Reference for a list of available operations and more information. |
| uselSO8601 (CSV/JSON only) | boolean | If set to true, all date/time-relevant parameters are expected to be ISO8601-formatted and all date/time result fields will be ISO8601-formatted. See the ISO8601 specification or learn more here. The preferred ISO 8601 compliant notation for strings that represent dates which are to be passed to WEBFLEET.connect is the compact full notation with dashes and colons, optional milli seconds and time zone, for example: yyyy-MMdd'T'hh:mm:ss[(. ,)S](((+ -)hh:mm) Z) |
| | | Example: 2007-02-02T12:12:12.500+01:00 |
| | | If set to true, the result will return date time values in UTC. |
| | | If set to false, the result returns the time zone configured in the specific Webfleet account. |

| Parameter | Туре | Description |
|---------------------------------|---------|---|
| columnfilter (CSV/JSON only) | string | This parameter reduces the result of a request to the specified columns. The possible values for this parameter are column names that can be returned by the function. If <i>columnfilter</i> is not specified, is empty or contains only invalid column names, then the full data set requested by the function is returned. The requested column names are case-sensitive and must be indicated correctly. Multiple column names must be separated with commas. Misspelled column names are disregarded in the resulting data set with no error notification. |
| timeZone (SOAP only) | enum | The value specified in the general parameters element (genPam) timeZone defines the time zone to which date and time related result data of the SOAP request will be matched. For valid values see <u>WSDL</u> . |
| useUTF8 (CSV/JSON only) | boolean | Controls how WF.connect interprets the character encoding of URL request parameters. If set to true, all parameters are expected to be UTF-8-encoded. If set to false, all parameters are interpreted as ISO-8859-1. Default is false. |
| outputformat (CSV/JSON only) | string | Defines the response format to be used by WEBFLEET.connect. Valid values: • csv (default) • json |

Date range filter parameters

| Parameter | Туре | Description |
|---------------|--|---|
| range_pattern | string | Specifies a relative date range for the data to be returned. Valid values: |
| | | d0 — Today d-1 — Yesterday d-2 — Two days ago d-3 — Three days ago d-4 — Four days ago d-5 — Five days ago d-6 — Six days ago w0 — Current week w-1 — Last week w-2 — Two weeks ago wf0 — Floating week, current day and previous seven days wf-1 — Floating week, the seven calendar days before wf0 wf-2 — Floating week, the seven calendar days before wf-1 wf-3 — Floating week, the seven calendar days before wf-2 m0 — Current month m-1 — Last month m-2 — Two months ago m-3 — Three months ago ud — User-defined range |
| | Note : Use of this parameter rules out the usage of rangefrom_string and rangeto_string and vice versa except for range_pattern=ud. | |
| | | Requires rangefrom_string and rangeto_string to be present. |

| Parameter | Туре | Description |
|------------------|----------------------------|--|
| rangefrom_string | string | Lower bound for a date range (start date). The required format depends on the value for the lang parameter: |
| | | lang = de Format: dd.MM.yyyy HH:mm:ss |
| | | Example: 13.07.2007 23:59:59 |
| | | lang = en Format: dd/MM/yyyy HH:mm:ss |
| | | Example: 13/07/2007 23:59:59 |
| | | • lang = nl Format: d-M-yyyy H:mm:ss |
| | | Example: 13-07-2007 23:59:59 |
| rangeto_string | string | Upper bound for a date range (end date). |
| year | nonNega- tiveInteger(4) | A range that covers the entire year, from 1st of January 00:00:00 o'clock to 31st of December 23:59:59 o'clock. |
| | | Can be used as an alternative to range_pattern, rangefrom_string, rangeto_string. |
| month | nonNega- tiveInteger(2) | A range that covers the entire month that is indicated from first day 00:00:00 o'clock to last day 23:59:59 o'clock of the same month. |
| | | Note : This parameter has to be used together with with year. |
| | | Can be used as an alternative to range_pattern, rangefrom_string, rangeto_string. |
| day | nonNega- tiveInteger(2) | A range that covers the entire day that is indicated from 00:00:00 o'clock to 23:59:59 o'clock. |
| | | Note : This parameter has to be used together with year and month. |

Reference

Message queues

Overview of queues

An alternative way to collect data is offered via the message queues. All messages received by Webfleet are made available via message queues that can be accessed using a message queue. A message queue is a temporary repository for all messages associated with that subscription's filter condition (message class). Once a message has been retrieved from a queue by using popQueueMessagesExtern and subsequently acknowledged by using ackQueueMessagesExtern, the message is deleted from that queue and no longer available.

In order to prevent the message queues from overflowing, messages are stored a limited amount of time (time to live, TTL) and are automatically deleted once the TTL has expired, even if they have not been retrieved. The default TTL is set to 14 days.

The following points are a violation of the intended use of WEBFLEET.connect queues:

- Repeatedly creating queues and then leaving them inactive.
- Repeatedly calling <u>popQueueMessagesExtern</u> without subsequently calling <u>ack-QueueMessagesExtern</u>.

Note: Queues that have not been used for 30 consecutive days may be removed without prior notice.

Outbound messages

Outbound messages in the text and order messages classes are available in the message queue system. Consider that outbound messages in the message queue provide a reduced data set, e.g. no position or odometer information. Outbound messages that are in the queue already have not necessarily been delivered to the device.

createQueueExtern Description

Creates a new queue.

A queue is always bound to the user creating it and collects messages matching the message class provided.

Technical details

| SOAP endpoint address / function name | messagesService#createQueueExtern |
|---------------------------------------|-----------------------------------|
| Request limits | 10 requests / 24 hours |

Parameters

createQueueExtern requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to createQueueExtern

| Parameter | Type | Description |
|-----------|-------------------------|---|
| msgclass | nonNega- tiveInteger | Valid values are: 0 - All messages Includes tracking-only messages and 4,5,7,8 2 - All except position messages Includes 4,5,7,8, does not include tracking-only messages. 4 - Order related messages 5 - Driver related messages 7 - Status messages 8 - Text messages |
| | | 15 - Third party messages (LINK.connect,) |

Result

Result for createQueueExtern:

| Parameter | Туре | Description |
|-----------|---------|--|
| action | string | The name of the operation that has been executed. |
| result | boolean | Always true, errors will be reported using the standard error reporting mechanism. |

deleteQueueExtern Description

Deletes an existing queue.

Technical details

| SOAP endpoint address / function name | messagesService#deleteQueueExtern |
|---------------------------------------|-----------------------------------|
| Request limits | 10 requests / 24 hours |

Parameters

deleteQueueExtern requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to deleteQueueExtern:

| Parameter | Type | Description |
|-----------|-------------------------|---|
| msgclass | nonNega- tiveInteger | Valid values are: 0 - All messages Includes tracking-only messages and 4,5,7,8. 2 - All except position messages Includes 4,5,7,8, does not include tracking-only messages. |
| | | 4 - Order related messages 5 - Driver related messages 7 - Status messages 8 - Text messages 15 - Third party messages (LINK.connect,) |

Result

Result for createQueueExtern:

| Parameter | Type | Description |
|-----------|---------|---|
| action | string | The name of the operation that has been executed. |
| result | boolean | Always true. Errors will be reported using the standard error reporting mechanism. |

popQueueMessagesExtern Description

Retrieves outstanding messages for a given subscription. This includes most important and most often occurring inbound and outbound messages.

Before using popQueueMessagesExtern to retrieve outstanding messages, you need to create a queue using createQueueExtern using the same message class parameter that you are going to provide with calls to popQueueMessagesExtern.

Once you have successfully processed (and stored) all of the retrieved messages, you need to use ackQueueMessagesExtern to acknowledge completion of the message transfer to your application. Otherwise, the messages will be kept and returned again during the next call to popQueueMessagesExtern and ack-queueMessagesExtern must be serialised.

In order to prevent your system from being flooded with oversized responses, the number of messages that will be returned on a single response is limited to 500. This limit can be adjusted per account on request.

The resulting data set is delivered in the language you have chosen in the Webfleet account and not on the language you have indicated in the language parameter.

Technical details

| SOAP endpoint address / function name | messagesService#popQueueMessagesExtern |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

popQueueMessagesExtern requires the following common parameters:

- <u>Authentication parameters</u>
- <u>General parameters</u>

Parameters specific to popQueueMessagesExtern

| magrafia a Valid valuari | |
|--|---------|
| msgclass nonNegativeInteger output output | ng-only |

Result

 $Result\ for\ popQueueMessagesExtern$

| Parameter | Туре | Description |
|-----------|----------|---|
| msgid | string | mgsid identifies a message and is system wide unique. Valid value range: 0 # msgid # 2 ⁶⁴ -1. |
| msg_time | dateTime | ISO 8601-formatted date and time in the UTC time- zone, combined representation in the extended for- mat. |
| | | Example: 2007-12-24T16:00:00Z |
| | | |

| Parameter | Туре | Description |
|-----------|-------------------------|--|
| msg_class | nonNega- tiveInteger | Valid values: • 0 - unknown • 1 - system • 2 - text • 3 - polling • 4 - timer event • 5 - GPS event • 6 - input event • 7 - set output • 8 - data • 9 - configuration • 10 - trip • 11 - order |
| msg_type | nonNega- tiveInteger | A 8 or 9 digit number representing class and type of the message. Counted from right to left, digits 0-3 indicate the message type, digits 4-6 are reserved and digits 7 and 8 indicate the message class. The message class is equal to the field msg_class. For a comprehensive list of possible message types see Messages types. |
| msg_text | string | The actual text of the message. |
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| driverno | string | Identifying number of a driver. Unique within an account. See <u>Drivers</u> to learn more about drivers. |
| ign | int | |
| inputs | string | This property is deprecated. Please use ioname in surplus_data instead of inputs. |
| odometer | int | The current odometer value in 100 meter . |
| outputs | string | |
| pndconn | boolean | Indicates the connection state of the Driver Terminal. |
| trip_mode | nonNega- tiveInteger | Valid values: 0 - Unknown trip type 1 - Private trip 2 - Business trip 3 - Commute trip 4 - Correction trip (user changed the odometer value manually) |

| Parameter | Type | Description |
|---------------|-------------------------|--|
| pos_latitude | int | Geographic latitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). |
| pos_longitude | int | Geographic longitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). |
| pos_text | string | |
| pos_country | string (2) | ISO 3166-1 alpha-2 code for the country (capital letters). |
| pos_postcode | string | |
| pos_params | string | Note : This parameter is not supported anymore. Use location_params instead. |
| pos_time | dateTime | ISO 8601-formatted date and time in the UTC time- zone, combined representation in the extended for- mat. |
| | | Example: 2007-12-24T16:00:0 |
| pos_addrno | string (10) | Refers to the nearest address if the position is within the address radius. See <u>Addresses</u> to learn more. |
| speed | int | in km/h |
| course | nonNega- tiveInteger | Compass direction in degrees (0° 360°): |
| status | string | GPS status indicator. Valid values: |
| | , | L - No fix available. Position data refer to the last known position. V - No fix data available. A - Sufficient quality for a valid fix. |

| Parameter | Туре | Description |
|-------------|-------------------------|---|
| direction | nonNega- tiveInteger | Cardinal and intercardinal compass directions, derived from course. Valid values: |
| | | 1 - North 2 - Northeast 3 - East 4 - Southeast 5 - South 6 - Southwest 7 - West 8 - Northwest |
| orderno | string (20) | Account-unique order id, case-sensitive. Maximum capacity is 20 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters. See Orders to learn more about orders. |
| order_state | nonNega- tiveInteger | Valid values: • 0 - Not yet sent • 100 - Sent • 101 - Received • 102 - Read • 103 - Accepted • 201 - Service order started • 202 - Arrived at destination • 203 - Work started • 204 - Work finished • 205 - Departed from destination • 221 - Pickup order started • 222 - Arrived at pick up location • 223 - Pick up started • 224 - Pick up finished • 225 - Departed from pick up location • 241 - Delivery order started • 242 - Arrived at delivery location • 243 - Delivery started • 244 - Delivery finished • 245 - Departed from delivery location • 298 - Resumed • 299 - Suspended • 301 - Cancelled • 302 - Rejected • 401 - Finished |

| Parameter | Type | Description |
|----------------|-------------------------|--|
| order_type | nonNega- tiveInteger | Type of order. Valid values: |
| | | • 1 - service order |
| | | • 2 - pickup order |
| | | • 3 - delivery order |
| dest_latitude | int | Geographic latitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). |
| dest_longitude | int | Geographic longitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). |
| | | onit of measurement is finicio degrees (10 gra). |
| dest_text | string ——————— | |
| eta | dateTime | ISO 8601-formatted date and time in the UTC time- zone, combined representation in the extended for- mat. |
| | | Example: 2007-12-24T16:00:00Z |
| distance | nonNega- tiveInteger | Distance to destination (in meters) |
| user_status | int | The number of a predefined status message or a predefined order message. |
| user_text | String (60) | An additional text that refers to a predefined status message or a predefined order message. |
| dt_cardid | string (18) | A driver card id as used with the Digital Tachograph, prefixed with the ISO 3166-1 alpha-2 code for the country (capital letters). |
| | | Contains the card id for driver cards that are not assigned to a driver or for any other card type. |
| | | Only available on card insertion and removal messages. |
| dt_cardaction | int | Valid values: |
| | | • 0 - inserted |
| | | • 1 - removed |
| dt_cardtype | nonNega- | Valid values: |
| | tiveInteger | • 0 - Unknown |
| | | • 1 - Driver card |
| | | • 2 - Workshop card |
| | | • 3 - Control card |
| | | • 4 - Company card |

| Parameter | Type | Description |
|---------------|-------------------------|---|
| dt_slot | nonNega- tiveInteger | Valid values: • 1 - Driver • 2 - Co-Driver |
| dt_state | int | Valid values: • 0 - connected • 1 - disconnected |
| workstate | nonNega- tiveInteger | Valid values: • 0 - Unknown • 1 - Free time (PND only) • 2 - Pause (PND and digital tachograph) • 3 - Standby (digital tachograph only) • 4 - Working (PND only) • 5 - Driving (digital tachograph only) • 6 - Other work (digital tachograph only) |
| source_device | string | The external equipment this message originated from: • 0 - Driver Terminal • 1 - Digital tachograph • 2 - Remote LINK Working Time • 3 - Remote LINK Logbook • 4 - ecoPLUS • 6 - LINK 105 • 11 - PRO 2020 |
| rll_btaddress | string (17) | Remote LINK Bluetooth address. The <u>IEEE 802 MAC-48/EUI-48</u> address of a Bluetooth device, formatted as six groups of two hexadecimal digits, separated by colons (:). <i>Example: 00:13:6C:88:26:0B</i> |
| rll_buttonid | string (16) | Remote LINK/ID key identifier |
| surplus_data | string | A JSON-encoded string that carries additional data items that augment certain messages. dt_timeoffset: time difference between event_time and the Digital Tachograph's internal clock, in milliseconds. ep_paireddata: ecoPLUS initiating message, containing parameters specific to ep_paireddata. ep_tripdata: Additional trip information reported by ecoPLUS, containing parameters specific to ep_tripdata. |

| Parameter | Type | Description |
|-----------|------|---|
| | | ep_snapshotdata: ecoPLUS update recording, containing parameters specific to ep_snapshotdata. invalid_waypoints: An array of the numbers of the waypoints that are not valid for a route calculation on a Driver Terminal. fms_snapshotdata: FMS live data, containing parameters specific to fms_snapshotdata. |
| | | fms_fuel_difference: Additional data for fuel level increase/decrease messages, containing parameters specific to fms_fuel_difference. fms_tripdata: Additional trip information reported by FMS, containing parameters specific to fms_tripdata. acc_events: additional details on acceleration events, containing parameters specific to acc_events. Note: This parameter is not available by default. Please contact Customer Support to activate it. Additional cost will apply. |
| | | aux_device_data_in: information about third party Bluetooth device (LINK.connect), containing parameters specific to aux_device_data_in. aux_device_data_quota: information about allowed and used quota (LINK.connect), containing parameters specific to aux_device_data_quota. aux_device_data_out_status: status of sent messages (LINK.connect), containing parameters specific to aux_device_data_out_status. |
| | | aux_device_data_reference: indentifiers for outgoing and incoming messages (LINK.connect), containing parameters specific to aux_device_data_reference. troublecodes: Information about diagnostic trouble codes. See parameters specific to troublecodes. |

| app_data_in: information about application (small binary message) data, containing parameters specific to app_data in. app_data_quota: information about allowed and used quota, containing parameters specific to app_data_quota. app_data_quota. app_data_quota: status: status of sent small binary messages, containing parameters specific to app_data_out_status. app_data_out_status. app_data_out_status: and indentifiers for outgoing and incoming small binary messages, containing parameters specific to app_data_reference. er_tripdata: Additional trip information reported by eco reporting, containing parameters specific to er_tripdata. ioname: input/output name, for example the name of a digital input. This element is appended if an input/output was switched to ON or OFF. msg_type gives information about switch type. BEO 8601-formatted date and time in the UTC timezone, combined representation in the extended format. Example: 2007-12-24T16:00:00Z Contains local time of the device on which the event occurred and/or the time the message was generated. Start_time string The time recorded when this event started. Start_latitude int Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10° grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10° and rounding to an integer. See Geographic coordinate conversion on Wikipedia. Start_longitude int Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10° grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10° and rounding to an integer. See Geographic coordinate conversion on Wikipedia. Start_odometer int The odometer reading when this event started. | Parameter | Type | Description |
|---|-----------------|----------|--|
| used quota, containing parameters specific to app_p_data_quota. app_data_out_status: status of sent small binary messages, containing parameters specific to app_p_data_out_status. app_data_reference: indentifiers for outgoing and incoming small binary messages, containing parameters specific to app_data_reference. er_tripdata: Additional trip information reported by eco reporting, containing parameters specific to er_tripdata. ioname: input/output name, for example the name of a digital input. This element is appended if an input/output was switched to ON or OFF. msg_type gives information about switch type. event_time dateTime ISO 8601-formatted date and time in the UTC timezone, combined representation in the extended format. Example: 2007-12-24T16:00:00Z Contains local time of the device on which the event occurred and/or the time the message was generated. start_time string The time recorded when this event started. start_latitude int Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10-6 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. start_longitude int Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10-6 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. start_longitude int The odometer reading when this event started. | | | binary message) data, containing <u>parameters spe-</u> |
| ry messages, containing parameters specific to app_data_out_status. • app_data_reference: indentifiers for outgoing and incoming small binary messages, containing parameters specific to app_data_reference. • er_tripdata: Additional trip information reported by eco reporting, containing parameters specific to er_tripdata. • inoname: input/output name, for example the name of a digital input. This element is appended if an input/output was switched to ON or OFF. msg_type gives information about switch type. event_time dateTime ISO_8601-formatted date and time in the UTC timezone, combined representation in the extended format. Example: 2007-12-24T16:00:00Z Contains local time of the device on which the event occurred and/or the time the message was generated. start_time string The time recorded when this event started. start_latitude int Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. | | | used quota, containing <u>parameters specific to ap-</u> |
| and incoming small binary messages, containing parameters specific to app_data_reference. • er_tripdata: Additional trip information reported by eco reporting, containing parameters specific to er_tripdata. • ioname: input/output name, for example the name of a digital input. This element is appended if an input/output was switched to ON or OFF. msg_type gives information about switch type. event_time dateTime ISO 8601-formatted date and time in the UTC timezone, combined representation in the extended format. Example: 2007-12-24T16:00:00Z Contains local time of the device on which the event occurred and/or the time the message was generated. start_time string The time recorded when this event started. start_latitude int Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. start_longitude int Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. | | | ry messages, containing <u>parameters specific to ap-</u> |
| by eco reporting, containing parameters specific to er_tripdata. ioname: input/output name, for example the name of a digital input. This element is appended if an input/output was switched to ON or OFF. msg_type gives information about switch type. event_time dateTime ISO 8601-formatted date and time in the UTC timezone, combined representation in the extended format. | | | and incoming small binary messages, containing |
| of a digital input. This element is appended if an input/output was switched to ON or OFF. msg_type gives information about switch type. event_time dateTime ISO 8601-formatted date and time in the UTC timezone, combined representation in the extended format. Example: 2007-12-24T16:00:00Z Contains local time of the device on which the event occurred and/or the time the message was generated. start_time string The time recorded when this event started. start_latitude int Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. start_longitude int Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. start_odometer int The odometer reading when this event started. | | | by eco reporting, containing <u>parameters specific</u> |
| zone, combined representation in the extended format. Example: 2007-12-24T16:00:00Z Contains local time of the device on which the event occurred and/or the time the message was generated. Start_time string The time recorded when this event started. Start_latitude int Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. Start_odometer int The odometer reading when this event started. | | | of a digital input. This element is appended if an input/output was switched to ON or OFF. msg_type |
| Contains local time of the device on which the event occurred and/or the time the message was generated. start_time string The time recorded when this event started. start_latitude int Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10-6 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. start_longitude int Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10-6 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. start_odometer int The odometer reading when this event started. | event_time | dateTime | zone, combined representation in the extended for- |
| start_time string The time recorded when this event started. start_latitude int Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. start_longitude int Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. start_odometer int The odometer reading when this event started. | | | Example: 2007-12-24T16:00:00Z |
| start_latitude int Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. start_longitude int Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. start_odometer int The odometer reading when this event started. | | | |
| Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. Start_longitude int Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. Start_odometer int The odometer reading when this event started. | start_time | string | The time recorded when this event started. |
| tem. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. start_odometer int The odometer reading when this event started. | start_latitude | int | Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. |
| Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See Geographic coordinate conversion on Wikipedia. start_odometer int The odometer reading when this event started. | start_longitude | int | |
| | | | Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. |
| end_time string The time recorded when this event ended. | start_odometer | int | The odometer reading when this event started. |
| | end_time | string | The time recorded when this event ended. |

| Parameter | Type | Description |
|------------------------------|-------------|---|
| end_latitude | int | Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| end_longitude | int | Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| end_odometer | int | The odometer reading when this event ended. |
| trip_type | string | Valid values:G - trip (vehicle changed GPS position)S - standstill |
| order_addrno | string (10) | The address number of the order destination, if available. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |
| driverkey_de- viceaddress | string | Address of the driver key reading device which is associated with the vehicle. |
| driverkey | string | Composed by driver key type and driver key value. |

| Parameter | Туре | Description | |
|----------------------------|--------------------|---|--|
| Parameter location_params | Type string | A list of name-value pairs that describe the position. Name and value are separated by '='. Pairs are separated by ';'. Possible names are: countryCode countryName adminLevel1Code adminLevel1Name adminLevel3Name adminLevel3Name adminLevel4Name locality subLocality1 subLocality2 | |
| | | | |
| | | Example: countryCode=DE; countryName=Deutsch-land; adminLevel1Code=SN; adminLev-el1Name=Sachsen; locality=Leipzig; subLocality=Zentrum-Ost; street=Inselstraße; postal-Code=04103; houseNumber=22; speedLimit=30; roadUse=LocalStreet; | |
| odometer_long | int | The current odometer value in meter . | |
| start_battery_lev- el | int | Electric Vehicle's battery level in percent at the start of the trip. Values are within [0, 100] | |
| end_battery_level | int | Electric Vehicle's battery level in percent at the end of the trip. Values are within [0, 100] | |

ackQueueMessagesExtern Description

Acknowledges outstanding messages retrieved with a previous call to <u>popQueueMessagesExtern</u>.

Technical details

| SOAP endpoint address / function name | messagesService#ackQueueMessagesExtern |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

ackQueueMessagesExtern requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to ackQueueMessagesExtern:

| Parameter | Туре | Description |
|-----------|-------------------------|---|
| msgclass | nonNega- tiveInteger | Valid values: 0 - All messages Includes tracking-only messages and 4,5,7,8. 2 - All except position messages Includes 4,5,7,8, does not include tracking-only messages. 4 - Order related messages 5 - Driver related messages 7 - Status messages 8 - Text messages 15 - Third party messages (LINK.connect,) |

Result

Result for ackQueueMessagesExtern:

| Parameter | Type | Description |
|-----------|---------|--|
| action | string | The name of the operation that has been executed. |
| result | boolean | Always true. Errors will be reported using the standard error reporting mechanism. |

| Parameter | Туре | Description |
|---------------------------|-------------------------|--|
| acknowl- edgedMessages | nonNega- tiveInteger | This value is a pointer value that does not always represent the actually acknowledged messages. |
| | | Note : This value is used for internal purposes only. |
| | | |
| outstanding Mes- sages | nonNega- tiveInteger | An estimate for the number of messages that are still waiting in the queue. |

Message types

| msg_type | Available in message queue | Description |
|----------|----------------------------|--|
| 10000110 | 0, 2 | Async command completion successful (outbound) |
| 10000111 | 0, 2 | Async command completion failed (outbound) |
| 20000100 | 0, 2, 8 | Sent text message (outbound) |
| 20000101 | 0, 2, 8 | Incoming text message |
| 20000103 | 0, 2, 8 | All messages deleted (outbound) |
| 21100100 | 0, 2, 8 | Sent text message (outbound) |
| 21100101 | 0, 2, 8 | Incoming text message |
| 30000200 | 0, 2 | Position query |
| 31100200 | 0, 2 | Position query |
| 31100202 | 0, 2 | Position reply - error |
| 40000220 | 0, 2 | Position message |
| 40000230 | 0, 2 | Distance message |
| 41100300 | 0, 2 | Position message |
| 41100310 | 0, 2 | Position/total position number |
| 41100320 | 0, 2 | Position message |
| 41100330 | 0, 2 | Distance message |
| 41100340 | 0, 2 | Position message |
| 41100350 | 0, 2 | Position/total position number |
| 41100351 | 0, 2 | Position message - empty |

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| msg_type | Available in message queue | Description |
|---------------------------|----------------------------|--|
| 41100353 | 0, 2 | Tracking data indicating the number of positions delivered |
| 50000420 | 0, 2 | Standstill begin |
| 50000421 | 0, 2 | Standstill end |
| 50000424 | 0, 2 | Standstill end - indicating the duration of the standstill event |
| 51100420 | 0, 2 | Standstill begin |
| 51100421 | 0, 2 | Standstill end |
| 51100426 | 0, 2 | Movement violation |
| 51100427 | 0, 2 | Position lock alarm |
| 60000510 | 0, 2 | Ignition on |
| 60000511 | 0, 2 | Ignition off |
| 60000520 | 0, 2, 7 | Unit switched on |
| 60000521 | 0, 2, 7 | Unit switched off |
| 60000545 | 0, 2, 7 | Input switched on |
| 60000546 | 0, 2, 7 | Input switched off |
| 60000547 | 0, 2, 7 | GPS antenna connected (specific to LINK 300/310) |
| 60000548 | 0, 2, 7 | GPS antenna disconnected (specific to LINK 300/310) |
| 60000551 | 0, 2, 7 | External GSM antenna connected (specific to LINK 510) |
| 60000552 | 0, 2, 7 | External GSM antenna disconnected/not connected (specific to LINK 510) |
| 60000553 | 0, 2, 7 | External GSM antenna error/defective/does not comply with technical requirements from Webfleet |
| 60000831 | 0, 2, 7 | PTO (input) switched on |
| 60000832 | 0, 2, 7 | PTO (input) switched off |
| 61100510 | 0, 2 | Ignition on |
| 61100511 | 0, 2 | Ignition off |
| 61100512 Message types | 0, 2, 7 | Trip data |

| msg_type | Available in message queue | Description |
|---------------|----------------------------|---|
| 61100530 | 0, 2, 7 | Power connected |
| 61100531 | 0, 2, 7 | GPS antenna failure |
| 61100532 | 0, 2, 7 | Power disconnected |
| 61100540 | 0, 2, 7 | Input signal changed |
| 61100542 | 0, 2, 7 | Operating data |
| 61100543 | 0, 2, 7 | Operating data not available |
| 61100544 | 0, 2, 7 | Operating data: input name, number of switch events, duration, distance |
| 61100545 | 0, 2, 7 | Input switched on |
| 61100546 | 0, 2, 7 | Input switched off |
| 61100547 | 0, 2, 7 | Request operating data - error (specific to LINK classic) |
| 66000510 | 0, 2, 7 | Device on (specific to TomTom GO 715) |
| | | Note : This device is no longer in use. |
| 66000511 | 0, 2, 7 | Device off (specific to TomTom GO 715) |
| | | Note : This device is no longer in use. |
| 70000600 | 0, 2 | Switch indicated output on |
| 70000601 | 0, 2 | Switch indicated output off |
| 70000602 | 0, 2 | Acknowledgment for message 600 |
| 70000603 | 0, 2 | Acknowledgment for message 601 |
| 71100600 | 0, 2 | Switch indicated output on |
| 71100601 | 0, 2 | Switch indicated output off |
| 71100602 | 0, 2 | Acknowledgment for message 600 |
| 71100603 | 0, 2 | Acknowledgment for message 601 |
| 80000705 | 0, 2, 5, 7 | Status message |
| 80000706 | 0, 2, 5, 7 | Text message |
| 80000710 | 0, 2, 5, 7 | Logon driver (including tachograph driver card inserted) |
| Message types | | |

| msg_type | Available in message queue | Description |
|---------------|----------------------------|---|
| 80000711 | 0, 2, 5, 7 | Logoff driver (including tachograph driver card removed) |
| 80000712 | 0, 2, 5, 7 | Begin of work, driver indicated |
| 80000713 | 0, 2, 5, 7 | End of work, driver indicated |
| 80000714 | 0, 2, 5, 7 | Begin of break, driver indicated |
| 80000715 | 0, 2, 5, 7 | End of break, driver indicated |
| 80000716 | 0, 2, 5, 7 | Work status change, indicating driver role, old and new work status (applies to all PRO 71xx, 91xx devices when used with identified driver and Remote LINK Working Time) |
| 80000717 | 0, 2, 5, 7 | Work started (driver role and driver name indicated) |
| 80000718 | 0, 2, 5, 7 | Work ended (driver role and driver name indicated) |
| 80000719 | 0, 2, 5, 7 | Work time event, indicating driver |
| 80000750 | 0, 2, 5, 7 | Message read |
| 80000751 | 0, 2, 5, 7 | Destination reached |
| 80000752 | 0, 2, 5, 7 | Navigation started (destination indicated) |
| 80000753 | 0, 2, 5, 7 | Navigation cancelled |
| 80000754 | 0, 2, 5, 7 | Message received |
| 80000755 | 0, 2, 5, 7 | Message discarded |
| 80000756 | 0, 2, 5, 7 | Connection established to device |
| 80000770 | 0, 2, 5, 7 | Digital tachograph connected |
| 80000771 | 0, 2, 5, 7 | Digital tachograph disconnected |
| 80000772 | 0, 2, 5, 7 | Device signals disconnection of unknown digital tachograph |
| 80000773 | 0, 2, 5, 7 | Tachograph driver card not assigned to driver |
| 80000774 | 0, 2, 5, 7 | Digital tachograph card (company card, workshop card, control card) inserted into digital tachograph |
| 80000775 | O, 2, 5, 7 | Digital tachograph card (company card, workshop card, control card) removed from digital tachograph |
| Message types | | |

| msg_type | Available in message queue | Description | |
|----------|----------------------------|---|--|
| 80000776 | 0, 2, 5, 7 | Time difference between digital tachograph and LINK device | |
| 80000777 | 0, 2, 5, 7 | Working state changed for digital tacho- graph card that is not assigned to a driver in Webfleet | |
| 80000778 | 0, 2, 5, 7 | Driving without appropriate card started | |
| 80000779 | 0, 2, 5, 7 | Driving without appropriate card ended | |
| 80000780 | 0, 2, 5, 7 | Remote LINK is paired | |
| 80000781 | 0, 2, 5, 7 | Remote LINK low battery (specific to LINK 5xx/4xx/3xx) | |
| 80000782 | 0, 2, 5, 7 | Driver logon | |
| 80000783 | 0, 2, 5, 7 | Unknown driver logon | |
| 80000784 | 0, 2, 5, 7 | Driver logoff | |
| 80000785 | 0, 2, 5, 7 | Unknown driver logoff | |
| 80000786 | 0, 2, 5, 7 | Working time event of driver | |
| 80000787 | 0, 2, 5, 7 | Working time event of unknown employee | |
| 80000788 | 0, 2, 5, 7 | Remote LINK pairing rejected as not supported by subscription | |
| 80000789 | 0, 2, 5, 7 | Remote LINK battery replaced | |
| 80000790 | 0, 2, 5, 7 | Remote LINK setup request per installation tool | |
| 80000791 | 0, 2, 5, 7 | Remote LINK setup response for installation tool | |
| 80000792 | 0, 2, 5, 7 | Remote LINK pairing rejected as there is already another device paired | |
| 80000800 | 0, 2, 5, 7 | ecoPLUS paired (specific to LINK 5xx/4xx/3xx) | |
| 80000801 | 0, 2, 5, 7 | ecoPLUS pairing rejected as not supported by subscription | |
| 80000802 | 0, 2, 5, 7 | ecoPLUS pairing rejected as there is already another device assigned (specific to LINK 5xx/4xx/3xx) | |
| 80000805 | 0, 2, 5, 7 | ecoPLUS power status (specific to LINK 5xx/4xx/3xx) | |

| msg_type | Available in message queue | Description |
|----------|----------------------------|---|
| 80000806 | 0, 2, 5, 7 | ecoPLUS fuel type changed (specific to LINK 5xx/4xx/3xx) |
| 80000807 | 0, 2, 5, 7 | ecoPLUS connection lost (specific to LINK 5xx/4xx/3xx) |
| 80000808 | 0, 2, 5, 7 | ecoPLUS plugged into vehicle (specific to LINK 5xx/4xx/3xx) |
| 80000809 | 0, 2, 5, 7 | ecoPLUS power reconnected |
| 80000810 | 0, 2, 5, 7 | Crash sensor triggered |
| 80000811 | 0, 2, 5, 7 | Acceleration event |
| 80000820 | 0, 2, 5, 7 | Fuel level in the fuel tank decreased during driving |
| 80000821 | 0, 2, 5, 7 | Unexpected fuel loss - Significant drop of fuel level in the fuel tank detected |
| 80000822 | 0, 2, 5, 7 | Refuelled vehicle - Significant increase of fuel level in the fuel tank detected |
| 80000830 | 0, 2, 5, 7 | Fuel level in fuel tank is low |
| 80000840 | 0, 2, 5, 7 | FMS connected |
| 80000841 | 0, 2, 5, 7 | FMS disconnected (specific to LINK 510/710) |
| 80000860 | 0, 2, 5, 7, 15 | Mobile-terminated - LINK.connect/Binary message was sent to LINK/device. This message contains an outgoing actual opaque payload message. The payload is not repeated as the integration server backend has previously sent it. Integrations have to store this message when following up on the delivery status of outbound opaque payload to a device. |

Message types

| msg_type | Available in message queue | Description |
|----------|----------------------------|---|
| 80000861 | 0, 2, 5, 7, 15 | Mobile-originated - Status response for aux_device_data_out/app_device_data_out This message acknowledges device data sent from the integration server backend to an device. After using sendAuxDevice-Data/sendBinaryMessage the integrator should wait for this acknowledge message to come through on the Queue Service and check the status of the opaque payload data sent out. Before this acknowledge message is received back from the device by Webfleet/integration server backend, all further calls to sendAuxDeviceData/sendBinaryMessage will be rejected by Webfleet with a specific error message, as it is assumed that the previous opaque payload transmission is still in progress. JSON structures in surplus_data: • aux_device_data_out_status/app_da- |
| | | ta_out_status aux_device_data_quota/app_da-ta_quota aux_device_data_reference/app_da-ta_reference |
| 80000862 | 0, 2, 5, 7, 15 | Mobile-originated - Contains the payload that was sent by the device. This message contains incoming actual opaque payload data from a device. Integrations have to store this data as there is no other way for the integration server backend to retrieve the opaque payload data. JSON structures in surplus data: |
| | | aux_device_data_in/app_data_in aux_device_data_quota/app_da-ta_quota aux_device_data_reference/app_da-ta_reference |
| 80000863 | 0, 2, 5, 7, 15 | Mobile-terminated - Response sent to the device after receiving third party data. This message acknowledges data received from the device.Integrations can use this message for tracking the message flow. JSON structures in surplus_data: • aux_device_data_status/app_data_s-tatus • aux_device_data_reference/app_da- |

| msg_type | Available in message queue | Description |
|----------|----------------------------|---|
| 80000864 | 0, 2, 5, 7, 15 | Mobile-originated/mobile-terminated - Control message. This is a multi-purpose control message sent to the device or received from the device. |
| 80000880 | 0, 2, 5, 7 | List of current vehicle Diagnostic Trouble Codes has changed. JSON structure in surplus_data: • troublecodes |
| 80000913 | 0, 2, 5, 7 | LINK 105 pairing rejected (there is already another device assigned) |
| 80000914 | 0, 2, 5, 7 | LINK 105 paired |
| 80000915 | 0, 2, 5, 7 | LINK 105 pairing rejected (not supported by subscription) |
| 80000916 | 0, 2, 5, 7 | LINK 105 setup response for installation tool |
| 80000917 | 0, 2, 5, 7 | LINK 105 setup request via installation tool |
| 80000918 | 0, 2, 5, 7 | LINK 105 connection lost |
| 80000919 | 0, 2, 5, 7 | LINK 105 connection re-established |
| 80000927 | 0, 2, 5, 7 | Service token request/response message |
| 80000930 | 0, 2 | generic CAN data |
| 80000931 | 0, 2, 5, 7 | Periodic alive message |
| 80000934 | 0, 2 | Vehicle battery voltage measurement |
| 80000945 | 0, 2, 5, 7 | Driver/worker worktime event (specific to PRO 2020) |
| 80000946 | 0, 2, 5, 7 | Driver key signals driver logon but driver is undefined because key value is unknown or not assigned |
| 80000947 | 0, 2, 5, 7 | Driver key signals driver logoff but driver is undefined because key value is unknown or not assigned |
| 80000948 | 0, 2, 5, 7 | Driver key signals driver logoff |
| 80000949 | 0, 2, 5, 7 | Driver key signals driver logon |
| 80000950 | 0, 2, 5, 7 | Driver key signals driver logoff but driver is not assigned to this unit |
| | | Driver key signals driver logoff |

| msg_type | Available in message queue | Description | |
|----------|----------------------------|---|--|
| 80000971 | 0, 2 | Signals a door's state has changed | |
| 80000981 | 0, 2, 5, 7 | Number of days driven in roaming area | |
| 80000982 | 0, 2, 5, 7 | Exceeded maximum days driven in roaming area | |
| 80001000 | 0, 2 | Device Update: Network check request | |
| 80001001 | 0, 2 | Device Update: Network check response | |
| 80001002 | 0, 2 | Device Update: Key request | |
| 80001003 | 0, 2 | Device Update: Key response | |
| 80001004 | 0, 2 | Device Update: Start | |
| 80001005 | 0, 2 | Device Update: Result | |
| 80001006 | 0, 2 | Device Update: Progress | |
| 80001040 | 0, 2, 5, 7 | Driver key signals driver logon but driver is undefined because key value is unknown or not assigned | |
| 80001041 | 0, 2, 5, 7 | Driver key signals driver logoff but driver is undefined because key value is unknown or not assigned | |
| 80001042 | 0, 2, 5, 7 | Driver key signals driver logoff | |
| 80001043 | 0, 2, 5, 7 | Driver key signals driver logon | |
| 80001044 | 0, 2, 5, 7 | Driver key signals driver logoff but driver is not assigned to this unit | |
| 80001045 | 0, 2 | Driver Key Identification 2: Driver Key Identification Result | |
| 80001046 | 0, 2 | Driver Key Identification 2: Driver logon rejected | |
| 80001050 | 0, 2 | Device reports periodic eco data without trips | |
| 80001051 | 0, 2 | Device reports periodic eco data without trips, fuel information missing or invalid | |
| 80001060 | 0, 2 | Vehicle Data Reporting: Announcement of available data items | |
| 80001061 | 0, 2, 5, 7 | Vehicle Data Reporting: Cruise control switched on | |

| msg_type | Available in message queue | Description | |
|----------|----------------------------|--|--|
| 80001062 | 0, 2, 5, 7 | Vehicle Data Reporting: Cruise control switched off | |
| 80001064 | 0, 2, 5, 7 | Vehicle Data Reporting: Engine switched on | |
| 80001065 | 0, 2, 5, 7 | Vehicle Data Reporting: Engine switched off | |
| 80001066 | 0, 2 | Contains the length of the engine on interval | |
| 80001067 | 0, 2 | Contains the length of the engine on interval, but no total engine hours data | |
| 80001068 | 0, 2 | Contains the length of the engine on interval, but no fuel related data | |
| 80001069 | 0, 2 | Contains the length of the engine on interval, but no fuel and no total engine hour related data | |
| 80001080 | 0, 2 | Driver key list request | |
| 80001081 | 0, 2 | Driver key list | |
| 80001091 | 0, 2 | Tire status changed message | |
| 80001092 | 0, 2 | Tire status request | |
| 80001093 | 0, 2 | External tire issue | |
| 80001100 | 0, 2 | Exhaust fluid warning | |
| 80001200 | 0, 2, 5, 7 | Engine oil temperature too high | |
| 80001201 | 0, 2, 5, 7 | Engine coolant temperature too high | |
| 81100700 | 0, 2, 5, 7 | Event message, status | |
| 81100703 | 0, 2, 5, 7 | Status log - no data available | |
| 81100704 | 0, 2, 5, 7 | Request status log - error | |
| 81100751 | 0, 2, 5, 7 | Odometer manual input | |
| 81100760 | 0, 2, 5, 7 | Arriving at customer (specific to LINK classic) | |
| 81100761 | 0, 2, 5, 7 | Departing from customer (specific to LINK classic) | |
| 81100763 | 0, 2, 5, 7 | Trip begin (specific to LINK classic) | |
| 81100764 | 0, 2, 5, 7 | Trip end (specific to LINK classic) | |
| 81100765 | 0, 2, 5, 7 | Begin waiting | |

| msg_type | Available in message queue | Description | |
|---------------|----------------------------|---|--|
| 81100766 | 0, 2, 5, 7 | End waiting | |
| 90000550 | 0, 2 | Query for status of the external GPS antenna (outbound) (specific to LINK 510/710) | |
| 90000801 | 0, 2 | Configuration acknowledge (specific to LINK classic) | |
| 90000808 | 0, 2 | Firmware release information | |
| 90000811 | 0, 2 | Reset unit - ok | |
| 90000814 | 0, 2 | CAN configuration request | |
| 90000815 | 0, 2 | CAN config | |
| 90000816 | 0, 2 | CAN config acknowledge | |
| 90000826 | 0, 2 | Device successfully activated | |
| 90000827 | 0, 2 | Device has been reset | |
| 90000843 | 0, 2 | PRO 5150 activation request. | |
| | | This message is created when a TomTom PRO 5150 that is not yet connected to Webfleet pairs with a LINK device for the first time and requests for the additional service PRO 5150 Webfleet compatibility upgrade. | |
| 90000847 | 0, 2 | Set initial engine hours | |
| 90000848 | 0, 2 | Setting of engine hours is rejected, the LINK has another source for the total engine hours | |
| 90000849 | 0, 2 | Acknowledgment to set initial hours | |
| 90000912 | 0, 2 | Reset LINK 105 | |
| 90000990 | 0, 2 | CAN3 configuration request | |
| 90000991 | 0, 2 | CAN3 config announcement | |
| 90000992 | 0, 2 | CAN3 signals config | |
| 90000993 | 0, 2 | CAN3 trigger config | |
| 90000994 | 0, 2 | CAN3 signals config acknowledge | |
| 90000995 | 0, 2 | CAN3 trigger config acknowledge | |
| 90001010 | 0, 2 | CAN bus installation: Device request to store its configuration | |
| Message types | | | |

| msg_type | Available in message queue | Description | |
|-----------|----------------------------|--|--|
| 90001011 | 0, 2 | CAN bus installation: Set response | |
| 91100802 | 0, 2 | For LINK classic: Configuration acknowledge - error (specific to LINK classic) | |
| 91100803 | 0, 2 | Version information (specific to LINK classic) | |
| 91100806 | 0, 2 | Version information - error (specific to LINK classic) | |
| 91100841 | 0, 2 | Device reset completed | |
| 91100842 | 0, 2 | Device reset error | |
| 91100871 | 0, 2 | Odometer change acknowledged | |
| 91100872 | 0, 2 | Odometer change error | |
| 91100874 | 0, 2 | Odometer function disabled | |
| 91100876 | 0, 2 | Odometer | |
| 91100877 | 0, 2 | Odometer query - error | |
| 91100878 | 0, 2 | Odometer query - error due to private mode | |
| 91100879 | 0, 2 | Odometer change not allowed as a digital tachograph is connected | |
| 91100881 | 0, 2 | Ignition time counter set to ignition on time and duration | |
| 91100882 | 0, 2 | Set ignition time counter - error | |
| 91100884 | 0, 2 | Ignition time counter disabled | |
| 91100886 | 0, 2 | Ignition time counter is ignition on time and duration | |
| 91100887 | 0, 2 | Query ignition time counter - error | |
| 91100888 | 0, 2 | Query ignition time counter - error (private mode) | |
| 101100550 | O, 2 | Trip distance, duration, idling information, maximum speed, average speed, GPS coverage | |
| 101100551 | 0, 2 | This message is delivered when either no GPS signal or partly no GPS signal was available during the trip. | |

| msg_type | Available in message queue | Description | |
|----------------|-------------------------------|--|--|
| 101100552 0, 2 | | Minor vehicle action (gives a summary of fuel usage and distance that do not qualify as a trip) | |
| 101100554 | 0, 2 | Trip, distance, duration, idling information, fuel usage, maximum speed, GPS coverage | |
| 106010550 | 0, 2 | Trip distance, duration, idling information, maximum speed, average speed, GPS coverage | |
| 106010551 | 0, 2 | This message is delivered when either no GPS signal or partly no GPS signal was available during the trip. | |
| 106010552 | 0, 2 | Minor vehicle action (gives a summary of fuel usage and distance that do not qualify as a trip) | |
| 110000729 | 0, 2, 4 | Order sent (outbound) | |
| 110000730 | 0, 2, 4 | Order accepted | |
| 110000731 | 0, 2, 4 | Order rejected | |
| 110000732 | 0, 2, 4 | Order started | |
| 110000733 | 0, 2, 4 | Order completed | |
| 110000734 | 0, 2, 4 | Order cancelled | |
| 110000735 | 0, 2, 4 | Order modified (outbound) | |
| 110000736 | 0, 2, 4 | Cancel order (outbound) | |
| 110000737 | 0, 2, 4 | Order deleted (outbound) | |
| 110000738 | 0, 2, 4 | All orders deleted (outbound) | |
| 110000760 | 0, 2, 4 | Order state | |
| 110000761 | 0, 2, 4 | Estimated time of arrival to order destination | |
| 110000762 | 0, 2, 4 | Time left until order destination is reached | |
| 110000763 | 0, 2, 4 | Estimated time of arrival without order information | |
| 110000764 | 0, 2, 4 | List of invalid order waypoints | |
| 110000765 | 0, 2, 4 | Appended order waypoints | |
| 110000766 | 0, 2, 4 | Estimated time of arrival without distance to destination information | |
| Message types | | | |

| msg_type | Available in message queue | Description |
|-----------|----------------------------|--|
| 110000767 | 0, 2, 4 | Estimated time of arrival without order and without distance information |
| 111100730 | 0, 2, 4 | Order accepted |
| 111100731 | 0, 2, 4 | Order rejected |
| 111100732 | 0, 2, 4 | Order started |
| 111100733 | 0, 2, 4 | Order completed |
| 111100734 | 0, 2, 4 | Order cancelled |
| 111100735 | 0, 2, 4 | Arrived at loading site (specific to LINK classic) |
| 111100736 | 0, 2, 4 | Begin loading (specific to LINK classic) |
| 111100737 | 0, 2, 4 | End loading (specific to LINK classic) |
| 111100738 | 0, 2, 4 | Departure from loading site (specific to LINK classic) |
| 111100739 | 0, 2, 4 | Arrival at unloading site |
| 111100741 | 0, 2, 4 | End unloading |
| 111100742 | 0, 2, 4 | Departure from unloading site |
| 111100743 | 0, 2, 4 | Delay announcement indicating time |
| 111100744 | 0, 2, 4 | Begin waiting |
| 111100745 | 0, 2, 4 | End waiting |
| 111100746 | 0, 2, 4 | Additional costs (type, amount, currency) |
| 111100747 | 0, 2, 4 | Arriving at depot |
| 111100749 | 0, 2, 4 | Statustext |

Message types

JSON objects

Parameters specific to acc_events

| Parameter | Type | Description |
|-------------|----------|---|
| type | int | The type of acceleration. Valid values: |
| | | 0 - Acceleration 1 - Braking 2 - Steering left 3 - Steering right |
| maxacc | int | Maximum acceleration, in milli-g. |
| avgacc | int | Average acceleration, in milli-g. |
| dir | int | Direction of the acceleration, 0 360. |
| startspeed | float | Speed at the beginning of the acceleration event, in km/h. |
| maxaccspeed | float | Maximum acceleration speed. |
| endspeed | float | Speed at the end of the acceleration event, in km/h. |
| lat | int | Geographic latitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . |
| lon | int | Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| st | dateTime | Time at which the acceleration event started. |
| maxacct | dateTime | Maximum acceleration time. |
| et | dateTime | Time at which the acceleration event ended. |
| dur | int | Duration of the acceleration event in milliseconds. The maximum precision is 100ms. |

Parameters specific to app_data_in

| Parameter | Type | Description |
|-----------|--------|--|
| app_id | string | An identifier to mark the application on the device. |
| app_data | string | Base64 encoded aux device data received from device. |

Parameters specific to app_data_out_status

| Parameter | Type | Description |
|-----------|------|---|
| status | int | Result status of sending operation. Valid values: 0 - Data was sent successfully. 1 - Device has rejected the message, because the internal buffer is full. 2 - The last sent but rejected message would now fit into the buffer of the device. |

Parameters specific to aux_device_data_quota

| Parameter | Type | Description |
|-----------|------|---|
| max | int | Maximum allowed data volume for a period. |
| used | int | Used volume in current period. |

Parameters specific to app_data_quota

| Parameter | Туре | Description |
|-----------|------|---|
| max | int | Maximum allowed data volume for a period. |
| used | int | Used volume in current period. |

Parameters specific to app_data_reference

| Parameter | Type | Description |
|----------------|------|---|
| correlation_id | int | User provided correlation ID of outgoing messages. |
| reference_id | int | Internal ID provided by Webfleet and device. Available for outgoing and incoming messages. |

Parameters specific to aux_device_data_in

| Parameter | Type | Description |
|-----------|--------|--|
| device_id | string | Identifies the sending third party device. In the case of Bluetooth this is the MAC address. |
| aux_data | string | Base64 encoded aux device data received from LINK. |

Parameters specific to aux_device_data_out_status

| Parameter | Type | Description |
|-----------|------|---|
| status | int | Result status of sending operation. Valid values: 0 - data was sent successfully. 1 - LINK has rejected the message, because the internal buffer is full. 2 - the last sent but rejected message would now fit into the buffer of the LINK. |

Parameters specific to aux_device_data_reference

| Parameter | Туре | Description |
|----------------|------|---|
| correlation_id | int | User-provided correlation ID of outgoing messages. |
| reference_id | int | Internal ID provided by Webfleet and LINK. Available for outgoing and incoming messages. |

Parameters specific to ep_paireddata

| Parameter | Type | Description |
|--------------|--------|---------------------------------------|
| ep_btaddress | String | The Bluetooth address of the ecoPLUS. |
| version_info | String | |

Parameters specific to ep_snapshotdata

| Parameter | Type | Description |
|----------------------------|------|---|
| avgfuelusage_dis- tance | int | in ml/100km, only returned if distance is greater than 0. |
| avgfu- elusage_time | int | in ml/h |

| Parameter | Туре | Description |
|-----------|------|------------------------|
| rpm | int | revolutions per minute |
| gear | int | the current gear |

Parameters specific to aux_device_data_in

| Parameter | Type | Description |
|------------|-------|--|
| distance | int | The difference between start_odometer and end_odometer. Unit of measurement is 'meters'. |
| fuel_usage | float | Fuel consumption in litres |
| | | Note: Max. three decimals allowed. |
| co2 | int | Carbon dioxide emissions in grams. |

Parameters specific to fms_fuel_difference

| Parameter | Type | Description |
|-----------------|------|---|
| slopetype | int | Fuel jump or continuous event. Valid values: |
| | | 0 - leap1 - continuous |
| timespan | int | Duration of event if continuous, in seconds. |
| fuellevel_start | int | Fuel level at start of the event in per mill. |
| fuellevel_end | int | Fuel level at end of the event in per mill. |

Parameters specific to fms_snapshotdata

| Parameter | Туре | Description |
|------------|------|---------------------------------|
| fuel_level | int | Current fuel level in per mill. |

Parameters specific to fms_tripdata

| Parameter | Туре | Description |
|------------|------|-------------------|
| fuel_usage | int | Fuel usage in ml. |

| Parameter | Type | Description |
|-----------------------------|-------|--|
| rpm_violation_du- ration | · int | The duration during the trip the engine speeds over a threshold, in seconds. |

Parameters specific to troublecodes

| Parameter | Туре | Description |
|-----------|-----------------|---|
| dtclist | Array of string | Contains all current Diagnostic Trouble Codes. Optional. |
| ptclist | Array of sting | Contains all current Pending Trouble Codes. Optional. |
| milon | Boolean | Flag indicating whether the malfunction indicator is lit. Optional. |

Parameters specific to er_tripdata

| Parameter | Type | Description |
|---------------------------------|-------|--|
| fuel_usage | float | Fuel usage in ml. |
| co2 | int | Carbon dioxide emissions in grams. Optional. |
| energy_consump- tion_driving | float | Energy used for driving in kWh. |
| energy_consump- tion_other | float | Energy used for heating, climate, etc. in kWh. |
| energy_recovered | float | Energy recovered from braking in kWh. |

Objects

showObjectReportExtern Description

Delivers a list of all objects.

Provides access to object master data and the most recent position information available for each object.

Technical details

SOAP endpoint address / function objectsAndPeopleReportingService#showObjectRename port

Request limits

6 requests / minute

Use <u>Message queues</u> instead of showObjectReportExtern, if you need all tracking data for the objects in your account.

Object types - An object in Webfleet always has a certain type (vehicle, person, asset, etc.). Every type defines special properties. These properties are listed by special actions (showVehicleReportExtern etc.), whereas this action lists all objects with type independent properties like number, name and description.

Code sample 4-1: Request

```
CSV request
```

```
https://csv.webfleet.com/extern?account=xxx&apikey=xxx&lang=de&ac-
tion=showObjectReportExtern&filterstring=Demo
SOAP request
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"</pre>
 xmlns:ser="http://connect.webfleet.tomtomwork.com/services">
 <soap:Header/>
  <soap:Body>
  <ser:showObjectReport>
    <aParm>
     <accountName>xxx</accountName>
     <userName>xxx</userName>
     <password>xxx</password>
    <apiKey>xxx</apiKey>
    </aParm>
    <qParm>
     <locale>DE</locale>
    <timeZone>Europe Berlin</timeZone>
    </gParm>
    <objectFilter>
    <filterCriterion>Demo</filterCriterion>
    </objectFilter>
  </ser:showObjectReport>
  </soap:Body>
</soap:Envelope>
```

Parameters

showObjectReportExtern requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to showObjectReportExtern:

| Parameter | Type | Description |
|-----------------|-------------|---|
| filterstring | string | An arbitrary pattern that is located in the object data. |
| objectgroupname | string | A name of an object group. |
| ungroupedonly | string | Allows to filter on objects that are currently not assigned to a certain object group. Only valid value is true. This parameter overrules the group name filter parameter. This parameter is optional. |
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| externalid | string | For future use. This parameter is optional. |

Parameters specific to showObjectReportExtern

Result

Result for showObjectReportExtern:

| Parameter | Туре | Description |
|-------------------|--------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectname | string | Display name of an object. |
| object class name | string | |
| objecttype | string | Can be empty or contain the valid values listed in vehicletype, see updateVehicle. |
| description | string (500) | Vehicle description |

| Parameter | Type | Description |
|---------------|-------------------------|---|
| lastmsgid | string | The ID of the last message received from or sent to this object. mgsid identifies a message and is system-wide unique. Possible values are in the range 0 # msgid # 264-1. |
| deleted | boolean | |
| msgtime | string | |
| longitude | string | Geographic longitude in the form GGG° MM' SS.S" E/W in the <u>WGS84</u> coordinate system. |
| latitude | string | Geographic latitude in the form GGG° MM′ SS.S″ N/S in the <u>WGS84</u> coordinate system. |
| postext | string | |
| postext_short | string | |
| pos_time | dateTime | Time that is related to the last known position of the vehicle. |
| speed | string | |
| course | nonNegativeIn- teger | Compass direction in degrees (0° 360°). |
| direction | nonNegativeIn- teger | Cardinal and intercardinal compass directions, derived from course. Valid values: 1 - North 2 - Northeast 3 - East 4 - Southeast 5 - South 6 - Southwest 7 - West 8 - Northwest |
| quality | string | Not supported anymore. This was only specific to LINK classic. |
| satellite | string | Not supported anymore. This was only specific to LINK classic. |

| Parameter | Туре | Description |
|-------------------|-------------|---|
| status | string | GPS signal status indicator, possible values are: |
| | | • A - ok: a current GPS fix is available with this message. |
| | | V - warn: a current GPS fix is available, but it might be inaccurate. |
| | | L - last: the GPS position is from the last known good fix, a current fix is not (yet) available. |
| | | 0 - invalid: no GPS fix available or GPS has no meaning for this message. |
| dest_latitude | int | Geographic latitude in the <u>WGS84</u> coordinate system. |
| | | Unit of measurement is micro degrees (10 ⁻⁶ grd). |
| dest_longitude | int | Geographic longitude in the WGS84 coordinate system. |
| | | Unit of measurement is micro degrees (10 ⁻⁶ grd). |
| dest_text | string | |
| dest_eta | dateTime | Date and time of the estimated time of arrival (eta) as reported from the navigation system. |
| dest_isorder | | |
| dest_addrnr | | |
| orderno | string (20) | Account-unique order id, case sensitive. Maximum capacity is 20 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters. |
| driver | string (20) | Account-unique driver number, case-sensitive. |
| drivername | string | Display name of a driver. |
| drivertelmobile | string | Mobile phone number of the driver. |
| codriver | string (20) | Account-unique driver number, case-sensi- tive. |
| codrivername | string | Display name of a co-driver. |
| codrivertelmobile | string | Mobile phone number of the co-driver. |

| Parameter | Type | Description |
|---|-------------------------|---|
| driver_currentworkstate | nonNegativeIn- | Valid values: |
| | teger | 0 - Unknown 1 - Free time (PND only) 2 - Pause (PND and digital tachograph) 3 - Standby (digital tachograph only) 4 - Working (PND only) 5 - Driving (digital tachograph only) 6 - Other work (digital tachograph only) When no driver has signed on, driver is empty, the state shown indicates the current working state of the vehicle. |
| codriver_currentwork- state | nonNegativeIn- teger | Valid values: • 0 - Unknown • 1 - Free time (PND only) • 2 - Pause (PND and digital tachograph) • 3 - Standby (digital tachograph only) • 4 - Working (PND only) • 5 - Driving (digital tachograph only) • 6 - Other work (digital tachograph only) |
| rll_btaddress | string (17) | Remote LINK Bluetooth address. The IEEE 802 MAC-48/EUI-48 address of a Bluetooth device, formatted as six groups of two hexadecimal digits, separated by colons (:). Example: 00:13:6C:88:26:0B |
| | | Example: 00.13.0C.86.20.0B |
| odometer | string | The current odometer value in 100 meter . |
| ignition | nonNegativeln- teger | The current state of the ignition. • 0 - Ignition off • 1 - Ignition on |
| ignition_time | string | The time the last ignition state was reported. |
| dest_distance Result for showObjectRen | string | The distance to the current navigation destination in meters. If empty, no navigation destination was specified. |

| Parameter | Туре | Description |
|----------------|-------------------------|---|
| tripmode | nonNegativeIn- teger | Valid values: • 0 - Unknown trip type |
| | | 1 - Private trip 2 - Business trip 3 - Commute trip 4 - Correction trip (user changed the odometer value manually) |
| standstill | nonNegativeIn- teger | Indicates if the vehicle is standing still. Valid values: |
| | | 0 - not standing still1 - standing still |
| pndconn | nonNegativeIn- teger | Indicates if a navigation device is connected to the LINK device. Valid values: |
| | | 0 - not connected1 - connected |
| latitude_mdeg | int | Geographic latitude in the <u>WGS84</u> coordinate system. |
| | | Unit of measurement is micro degrees (10 ⁻⁶ grd). |
| | | Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. |
| | | See <u>Geographic coordinate conversion on</u> <u>Wikipedia</u> . |
| longitude_mdeg | int | Geographic longitude in the <u>WGS84</u> coordinate system. |
| | | Unit of measurement is micro degrees (10 ⁻⁶ grd). |
| | | Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. |
| | | See Geographic coordinate conversion on Wikipedia. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

| Parameter | Туре | Description |
|-------------------------|-------------------------|--|
| fuellevel | int | The current fuel level in per mill. |
| | | Note : This information is only available for LINK 510/710 devices connected to the vehicle's FMS. |
| externalid | string | For future use. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |
| codriveruid | string | A unique, unchangeable identifier for the indicated codriver, automatically generated. Can be used alternatively to codriver. |
| driverkey_deviceaddress | string | JSON encoded string with an array of strings. Each string contains the address of the driver key reading device which is associated with the vehicle. |
| | | Example: ['00:21:3E:B3:8D:EA'] |
| fuellevel_milliliters | string | The current fuel level in milliliters. |
| | | Note : This information is only available for LINK 204. |
| engine_operation_time | nonNegativeIn- teger | Returns the accumulated time of operation of the engine in seconds. |
| | | Note : This information is only available for some LINK devices e.g. LINK 7x0 (with input configured for 'Engine state') or LINK devices that are connected to FMS. |
| odometer_long | int | The current odometer value in meter . |

showVehicleReportExtern Description

Lists all objects of type 'Vehicle'.

Technical details

SOAP endpoint address / function name

objects And People Reporting Service #show Vehicle Report

Parameters

showVehicleReportExtern requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to showVehicleReportExtern:

| Parameter | Type | Description |
|-----------------|-------------|--|
| filterstring | string | An arbitrary pattern that is located in the object data. |
| objectgroupname | string | A name of an object group. |
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| externalid | string | For future use. This parameter is optional. |

Result

Result for showVehicleReportExtern:

| Parameter | Туре | Description |
|-------------------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectname | string | Display name of an object. |
| licenseplatenum- ber | string | |
| vehicletype | string | Can be empty or contain the valid values listed in vehicletype, see updateVehicle . |
| width | string | |
| length | string | |
| height | string | |
| maxweight | string | |
| netweight | string | |
| · | | <u> </u> |

| Parameter | Туре | Description |
|------------------|-------------|--|
| netload | string | |
| power | string | |
| numaxes | string | |
| identnumber | string (20) | If connected to FMS or Tachograph or when using a LINK 105 or ecoPLUS this field contains the VIN (Vehicle Identification Number) and cannot be changed. |
| registrationdate | string | |
| vh_avgfuelusage | int | Vehicle-based fuel consumption reference value, in ml/100 km |
| ep_avgfuelusage | int | ecoPLUS-based fuel consumption reference value, in ml/100 km |
| fl_avgfuelusage | int | Fleet-based fuel consumption reference value, in ml/100km. |
| vh_fueltype | int | Vehicle configured fuel type. Valid values: • 0 - unknown • 1 - diesel • 2 - gasoline • 3 - lpg • 4 - hybrid petrol • 5 - hybrid diesel • 6 - electric • 7 - cng • 8 - lng • 9 - hydrogen • 10 - plug-in hybrid electric • 11 - bioethanol • 12 - biodiesel_fame (Fatty acid methyl esters) • 13 - biodiesel_fame_uco (Fatty acid methyl esters, Used cooking oil) • 14 - hvo (Hydrotreated vegetable oil) • 15 - commercial_diesel • 16 - cbg (Bio-CNG) • 17 - lbg (Bio-LNG) |
| ep_fueltype | int | Fuel type determined by ecoPLUS. Valid values: 1 - diesel 2 - gasoline |

| Parameter | Type | Description |
|--------------|-------------------------|--|
| fl_fueltype | int | Fleet based fuel type. Valid values: |
| | | 0 - unknown 1 - diesel 2 - gasoline 3 - lpg 4 - hybrid petrol 5 - hybrid diesel 6 - electric 7 - cng 8 - lng 9 - hydrogen 10 - plug-in hybrid electric 11 - bioethanol 12 - biodiesel_fame (Fatty acid methyl esters) 13 - biodiesel_fame_uco (Fatty acid methyl esters, Used cooking oil) 14 - hvo (Hydrotreated vegetable oil) 15 - commercial_diesel 16 - cbg (Bio-CNG) 17 - lbg (Bio-LNG) |
| enginesize | nonNega- tiveInteger | Engine size in ccm. |
| ep_btaddress | string (17) | ecoPLUS Bluetooth address. The IEEE 802 MAC-48/EUI-48 address of a Bluetooth device, formatted as six groups of two hexadecimal digits, separated by colons (:). Example: 00:13:6C:88:26:0B |
| speedlimit | float | Speed limit in km/h, min: 0, max: 300 |
| vehiclecolor | string | <pre>Valid values: white grey black red orange yellow green blue</pre> |
| description | string (500) | Vehicle description. |

| Parameter | Type | Description |
|------------------|-------------------------|---|
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| | | Can be used alternatively to object no. |
| vh_rpmlimit | int | Indicates the engine's maximum allowed revolutions per minute. This value is used to report RPM violations. |
| | | Supported by LINK 510/710 connected to FMS. |
| fl_rpmlimit | int | Indicates the engine's maximum allowed revolutions per minute defined for the whole vehicle fleet. This value is used to report RPM violations. |
| | | Supported by LINK 510/710 connected to FMS. |
| externalid | string | For future use. |
| obu_btaddress | string (17) | The Bluetooth address of the LINK device. This information is currently available for LINK 510/710/410 with firmware version 3.4 or higher. The IEEE 802 MAC-48/EUI-48 address of a Bluetooth device, formatted as six groups of two hexadecimal digits, separated by colons. |
| | | Example: 00:13:6C:88:26:0B |
| fueltanksize | int | Size of the fuel tank in litres. |
| ep_type | nonNega- tiveInteger | Type of the OBDII dongle (eco periphery). Valid values: |
| | | 1 - ecoPLUS2 - LINK 105 |
| manufacturedyear | int | The year in which the vehicle was manufactured. This parameter is optional. |
| fuelreference | nonNega- tiveInteger | Indicates to which type of fuel reference to refer to. Valid values: |
| | | 0 - The reference value defined for the fleet. 1 - The reference value definded for the individual vehicle. 2 - ecoPLUS |

| Parameter | Туре | Description |
|------------------------------|--------|---|
| accelerationvehi- cletype | string | The "acceleration vehicle type" is used to calibrate the acceleration event handling. By default it is determined by the vehicle type and can be overwritten via updateVehicle Valid values: |
| | | heavy_weightmedium_weightlight_weight |

showNearestVehicles Description

showNearestVehicles retrieves a list of vehicles that are within a defined radius around the indicated location. This action delivers details on the routed distance and the routed time for the 8 nearest vehicles. The list is sorted by:

- 1. Object state.
- 2. Linear distance to the location.
- 3. Object number.

Technical details

| SOAP endpoint address / function name | objects And People Reporting Service #show Nearest Vehicles |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

showNearestVehicles requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to showNearestVehicles:

| Parameter | Type | Description |
|-----------------|-------------|--|
| objectgroupname | string | A name of an object group. |
| addrno | string (10) | Identifying number of an address. Unique within an account. Is optional if you are using latitude and longitude to specify the destination. |

| Parameter | Type | Description |
|-------------|------|---|
| latitude | int | Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. This parameter is optional if addrno is indicated. |
| longitude | int | Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. This parameter is optional if addrno is indicated. |
| priority | int | Defines the priority of attributes by which the results shall be sorted. Valid values: 1 - Object state / linear distance / object number 2 - Linear distance / object number The default is 1. This parameter is optional. |
| | | Note : The first 8 results will be returned including routed distance and estimated travel time. |
| maxdistance | int | Defines the maximum linear distance from the indicated location, in meters. Vehicles that are further away from the location than the defined distance will not be included in the result list. This parameter is optional. |

Result

Result for showNearestVehicles:

| Parameter | Type | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

| Parameter | Type | Description |
|----------------|------|---|
| objectstate | int | The status the vehicle currently has. Valid values: |
| | | • 1 - available |
| | | 2 - has order3 - offline |
| | | • 3 - Offinie |
| latitude | int | Geographic latitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. |
| | | See Geographic coordinate conversion on Wikipedia. |
| | | This parameter is optional if addrno is indicated. |
| longitude | int | Geographic longitude in the <u>WGS84</u> coordinate system. |
| | | Unit of measurement is micro degrees (10 ⁻⁶ grd). |
| | | Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. |
| | | See <u>Geographic coordinate conversion on Wikipedia</u> . This parameter is optional if addrno is indicated. |
| lineardistance | int | The linear distance between the vehicle and the defined location, in meters. |
| routedistance | int | The distance calculated based on the roads to take from the actual position to the defined location considering HD Traffic information, in meters. |
| routetime | int | The time that is needed to get to the defined location using the calculated route, see routedistance, in seconds. |
| | | |

showContracts Description

This action shows contract and device data for selected devices.

Technical details

| SOAP endpoint address / function name | objectsAndPeopleReportingService#showContracts |
|---------------------------------------|--|
| Request limits | 6 requests / minute |

Parameters

showContracts requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to showContracts:

| Parameter | Type | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. This parameter is optional. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

Result

Result for showContracts:

| Parameter | Type | Description |
|-----------------|-------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| contractno | string | Contract unit number |
| begin_date | dateTime | ISO 8601-formatted date and time in the UTC timezone, combined representation in the extended format. |
| | | Example: 2007-12-24T16:00:00+02:00 |
| end_date | dateTime | ISO 8601-formatted date and time in the UTC time- zone, combined representation in the extended for- mat. |
| | | Example: 2007-12-24T16:00:00+02:00 |
| tariff_name | string | |
| activation_key | string | |
| iccid | string | SIM card number |
| roaming_enabled | boolean | |
| obu_type | string | |
| obu_serialno | string | |
| obu_osversion | string | 102 |

| Parameter | Туре | Description |
|----------------|-------------|---|
| obu_appversion | string | |
| pnd_type | string | |
| pnd_serialno | string | |
| pnd_ncversion | string | |
| pnd_appversion | string | |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| referenceno | string | Reference number for the object individually assigned by the customer. |
| pnd_mapversion | string | Name and version of the map, that is currently installed on the navigation device. This column can be empty, if there is no navigation device in use for this contract. This column may contain multiple values separated by comma if there is more than one map installed on the navigation device. |
| msisdn | string | The MSISDN of the SIM card. This value is optional and might not be used for certain device types. |

updateVehicle Description

This action allows the update of vehicle details.

Technical details

 ${\tt SOAP\ endpoint\ address\ /\ function\ objects And People Reporting Service \# update Vehicle\ name}$

| Request limits | 10 requests / minute | |
|----------------|----------------------|--|
|----------------|----------------------|--|

Parameters

updateVehicle requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to updateVehicle:

| Parameter | Туре | Description |
|--------------------|-------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. If both parameters objectuid and objectno are given, then objectno will be updated. objectno is required to have between 1 and 10 characters and must not already exist. |
| vehicletype | string | Case-sensitive. For valid values, see the <u>List of vehicle</u> <u>types</u> at the end of this section. |
| vehiclecolor | string | Case-sensitive. Valid values: • white • grey • black • red • orange • yellow • green • blue |
| identnumber | string (20) | If connected to FMS or Tachograph or when using a LINK 105 or ecoPLUS this field contains the VIN (Vehicle Identification Number) and cannot be changed. |
| registrationdate | string (20) | |
| denotation | string (30) | Changes the value of objectname. |
| licenseplatenumber | string (20) | |
| speedlimit | float | Speed limit in km/h. • min: 0 • max: 300 This parameter is optional. |
| fuelconsumption | float | Fuel consumption in I/100km. • min: 0 • max: 100 This parameter is optional. |

| Parameter | Туре | Description |
|-------------|-------------------------|--|
| fueltype | int | Case-sensitive. Valid values: |
| | | 0 - unknown 1 - diesel 2 - gasoline 3 - lpg 4 - hybrid petrol 5 - hybrid diesel 6 - electric 7 - cng 8 - lng 9 - hydrogen 10 - plug-in hybrid electric 11 - bioethanol 12 - biodiesel_fame (Fatty acid methyl esters) 13 - biodiesel_fame_uco (Fatty acid methyl esters, Used cooking oil) 14 - hvo (Hydrotreated vegetable oil) 15 - commercial_diesel 16 - cbg (Bio-CNG) 17 - lbg (Bio-LNG) |
| netweight | float | in kg |
| maxweight | float | in kg |
| netload | float | in kg |
| maxload | float | in kg |
| numaxles | nonNegativeIn- teger | |
| length | nonNegativeIn- teger | in mm |
| width | nonNegativeIn- teger | in mm |
| height | nonNegativeIn- teger | in mm |
| description | string (500) | Vehicle description |
| power | float | in kW |
| enginesize | nonNegativeln- teger | in ccm |

| Parameter | Туре | Description |
|---------------|-------------------------|---|
| reset_fuelavg | boolean | Reset switch for measured or calculated average fuel consumption. |
| | | • 1 - reset |
| odometer | nonNegativeln- teger | Updated odometer value in meters. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. Can also be used to update objectno, please refer to the description of parameter objectno. |
| rpmlimit | int | Indicates the engine's maximum allowed revolutions per minute. This value is used to report RPM violations. Supported by LINK 510/710 connected to FMS. Valid values: • <int value=""> sets the vehicle specific RPM limit • 'null' or empty parameter value removes the vehicle specific RPM limit. Note: If the vehicle-specific value is removed, the fleet-based value will be used for RPM violation reporting.</int> |
| ep_btaddress | string (17) | ecoPLUS Bluetooth address. The IEEE 802 MAC-48/EUI-48 address of a Bluetooth device, formatted as six groups of two hexadecimal digits, separated by colons. Example: 00:13:6C:88:26:0B Note: If empty, the existing value will be deleted. When omitted, the existing value will not change. |
| | | This parameter is optional. |

| Parameter | Туре | Description |
|-------------------------|-------------------------|--|
| rll_btaddress | string (17) | Remote LINK Bluetooth address. The IEEE 802 MAC-48/EUI-48 address of a Bluetooth device, formatted as six groups of two hexadecimal digits, separated by colons (:). |
| | | Example: 00:13:6C:88:26:0B |
| | | Note : If empty the existing value will be deleted. When omitted the existing value will not change. |
| | | This parameter is optional. |
| externalid | string | For future use. |
| fueltanksize | int | Size of the fuel tank in litres. Maximum allowed value is 65535. |
| ep_type | nonNegativeln- teger | Type of the OBDII dongle (eco periphery). Valid values: |
| | | 1 - ecoPLUS2 - LINK 105 |
| manufacturedyear | int | The year in which the vehicle was manufactured. This parameter is optional. |
| fuelreference | nonNegativeIn- teger | Indicates to which type of fuel reference to refer to. Valid values are: |
| | | 0 - The reference value defined for the fleet. 1 - The reference value defined for anin-dividual vehicle. 2 - ecoPLUS |
| accelerationvehicletype | string | The 'acceleration vehicle type' is used to calibrate the acceleration event handling. By default it is determined by the vehicle type. It can be overwritten with this action, but will be set back, when the vehicle type is changed. Case-sensitive. Valid values: • heavy_weight • medium_weight • light_weight |

List of vehicle types

The following list shows valid values for parameter <code>vehicletype</code> including vehicle types, special vehicle types and devices:

- **Vehicle types** with icons that have a separate colouring option in the user interface; all eight colors are supported:
 - o ape (shown as 'Three wheeler' in the UI)
 - o barge
 - ° bike (shown as 'Motor bike' in the UI)
 - boom lift
 - o boom_lift_truck
 - o bus
 - o caddy (shown as 'Small van' in the UI)
 - ° car
 - ° car_station_wagon
 - concrete_lorry
 - containership (Shown as 'Cargo ship' in the UI)
 - o crane
 - o deposit_tipper
 - dump_truck
 - ° dump_truck_open
 - excavator
 - garbage_truck
 - o heavy_truck
 - o heavytruck_us
 - heavyweight_truck
 - o heavyweight_truck_trailer
 - lighttruck
 - o light_truck_pallet
 - loader (shown as 'Wheel loader' in the UI)
 - o medium_truck
 - multicar (shown as 'Snow plough' in the UI)
 - ° multivan
 - pallet_truck
 - o pickup
 - o smart
 - sprinter (shown as 'Van / Light truck' in the UI)
 - street sweeper
 - o suv
 - o tanker_truck
 - o telescopic_handler
 - tractor
 - ° trailer
 - ° train
 - truck
 - o truck_loader_arm
 - ° truck_trailer
 - o truck_with_trailer
 - o truck_wrecker

- ° van
- ° vespa
- wrecker
- o yacht
- **Special vehicle types** not all colours are supported; allowed colours are given in brackets:
 - ° ambulance (yellow, blue, red, white)
 - firetruck (red)
 - o police (blue, green)
 - ° taxi (green, blue, yellow, orange, red, black, grey, white)
 - o taxi_uk (black)
- **Devices** with separate colouring option in the user interface, all eight colours are supported:
 - ° link
 - ° ecoPLUS
 - o link100
 - ° link510
 - ° link610
 - ° link710
 - ° phone
 - ° tablet

showObjectGroups Description

This actions retrieves a list of all object groups.

Technical details

| SOAP endpoint address / function name | objectsAndPeopleReportingService#showObject- GroupReport |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

showObjectGroups requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to showObjectGroups:

| Parameter | Type | Description |
|-----------------|--------|---|
| objectgroupname | string | The given entry filters the result list on the object groups with matching names. Can be used alternatively to objectgroupuid. |

| Parameter | Type | Description |
|----------------|--------|---|
| objectgroupuid | string | A unique, unchangeable identifier for the indicated object group, automatically generated. Can be used alternatively to objectgroupname. |

Result for showObjectGroups:

| Parameter | Туре | Description |
|-----------------|--------|---|
| objectgroupname | string | Name of the object group. |
| objectcount | string | The number of objects assigned to the indicated group. The number of objects that are not assigned to a group is not returned. |
| objectgroupuid | string | A unique, unchangable identifier for the indicated object group, automatically generated. |

showObjectGroupObjects Description

Lists the assignments of objects to object groups. Each object can be in no, one or more than one group.

Using both parameters objectgroupname and onbjectno, only according matches are returned.

Technical details:

| SOAP endpoint address / function name | objectsAndPeopleReportingService#showObject- GroupObjectReport |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

showObjectGroupObjects requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to showObjectGroupObjects:

| Parameter | Type | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. This parameter is optional. |
| | | · |

| Parameter | Type | Description |
|-----------------|-------------|---|
| objectgroupname | string | The given entry filters the result list on the object groups with matching names, case-sensitive. This parameter is optional. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

Result for showObjectGroupObjects:

| Parameter | Туре | Description |
|-----------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account. Case-sensitive. |
| objectname | string | Display name of an object. |
| objectgroupname | string | |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| objectgroupuid | string | A unique, unchangable identifier for the indicated object group, automatically generated. |

attachObjectToGroup Description

This action assigns an object to a specific object group.

Technical details

| SOAP endpoint address / function name | objectsAndPeopleReportingService#attachObject- ToGroup |
|---------------------------------------|---|
| Request limits | 1000 requests / hour |

Parameters

attachObjectToGroup requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to attachObjectToGroup:

| Parameter | Туре | Description |
|-----------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectgroupname | string | Name of the object group, case-sensitive. This parameter is required. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

detachObjectFromGroup Description

This action detached an object from a specific object group.

Technical details

| SOAP endpoint address / function name | objectsAndPeopleReportingService#detachObject- FromGroup |
|---------------------------------------|---|
| Request limits | 1000 requests / hour |

Parameters

detachObjectFromGroup requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to detachObjectFromGroup:

| Parameter | Type | Description |
|-----------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectgroupname | string | Name of the object group, case-sensitive. This parameter is required. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

insertObjectGroup Description

This action creates an object group. The group name must not start with 'sys\$'.

Technical details

| SOAP endpoint address / function name | objectsAndPeopleReportingService#insertObject- Group |
|---------------------------------------|---|
| Request limits | 100 requests / 30 minutes |

Parameters

insertObjectGroup requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to insertObjectGroup:

| Parameter | Type | Description |
|-----------------|--------|---|
| objectgroupname | string | Name of the object group, case-sensitive. This parameter is required. |

deleteObjectGroup Description

This action deletes an object group and the assignments of all objects assigned to that group. The objects detached through this action are not being deleted.

Technical details

| SOAP endpoint address / func- | objectsAndPeopleReportingService#deleteObject- |
|-------------------------------|--|
| tion name | Group |
| Request limits | 100 requests / 30 minutes |

Parameters

deleteObjectGroup requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to deleteObjectGroup:

| Parameter | Type | Description |
|-----------------|--------|---|
| objectgroupname | string | Name of the object group, case-sensitive. This parameter is required. |

updateObjectGroup Description

This action allows to update the name of the object group while retaining the assignment of objects to that group. The group name must not start with 'sys\$'.

Technical details

| SOAP endpoint address / function name | objectsAndPeopleReportingService#updateObject- Group |
|---------------------------------------|---|
| Request limits | 100 requests / 30 minutes |

Parameters

updateObjectGroup requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to updateObjectGroup:

| Parameter | Type | Description |
|--------------------------|--------|---|
| objectgroupname | string | Name of the object group, case-sensitive. This parameter is required. |
| objectgroup- name_old | string | Name of the object group, case-sensitive. This parameter is required. |

switchOutput Description

Using switchOutput you can control the digital output of the LINK classic and the LINK 510/710 to be on or off (1 or 0). You first need to enable the digital output of the LINK classic/LINK 510/LINK 710 in the device configuration dialogue in the Webfleet user interface.

Technical details

| SOAP endpoint address / function name | objectsAndPeopleReportingService#switchOutput |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

switchOutput requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific for switchOuput:

| Parameter | Type | Description |
|-------------|-------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| status | int | Valid values: • 1 • 0 This parameter is required. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| output_name | string (50) | Identifies the output to be switched. The name can be configured in the Webfleet user interface. This parameter is optional. If omitted, the first configured output is used. It is recommended to always use the output_name parameter instead of relying on configuration order. |

showWakeupTimers Description

This action returns a list of days and times that are configured on the LINK 7xx/6xx/5xx/4xx/3xx to wake up the device.

The LINK device can be set to wake up at several times per day. The times defined apply to all the days that are enabled for wake-up.

Technical details

| SOAP endpoint address / function name | objectsAndPeopleReportingService#showWakeupTi- mers |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

showWakeupTimers requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific for showWakeupTimers:

| Parameter | Type | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

Result

Result for showWakeupTimers:

| Parameter | Туре | Description |
|------------|--------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. |
| objectname | string (200) | Display name of an object. |
| mon | boolean | Indicates whether the LINK device is set to wake up at that day. Valid values: 0 - LINK set to not wake up 1 - LINK set to wake up |
| tue | boolean | See mon. |
| wed | boolean | See mon. |
| thu | boolean | See mon. |
| fri | boolean | See mon. |
| sat | boolean | See mon. |
| sun | boolean | See mon. |
| time1 | String (5) | Wake up time in format hh:mm, in the local time zone of the user. If empty, the wake up time is not set. |
| time2 | String (5) | See time1. |
| time3 | String (5) | See time1. |
| time4 | String (5) | See time1. |

| Parameter | Type | Description |
|-----------|------------|-------------|
| time5 | String (5) | See time1. |

updateWakeupTimers Description

Using updateWakeupTimers you can set and change the days and times the specified LINK 7xx/6xx/5xx/4xx/3xx device shall automatically wake up.

The LINK device can be set to wake up at several times per day. The times defined apply to all the days that are enabled for wake-up.

Technical details

| SOAP endpoint address / function name | objects And People Reporting Service #update Wakeup- Timers |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

updateWakeupTimers requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific for updateWakeupTimers:

| Parameter | Type | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| mon | boolean | Indicates whether the LINK device is set to wake up at that day. The parameter can be omitted to leave its value unchanged. Valid values: 0 - LINK set to not wake up 1 - LINK set to wake up This parameter is optional. |
| tue | boolean | See mon. |
| wed | boolean | See mon. |

| Parameter | Type | Description |
|-----------|------------|--|
| thu | boolean | See mon. |
| fri | boolean | See mon. |
| sat | boolean | See mon. |
| sun | boolean | See mon. |
| time1 | string (5) | Wake up time in format hh:mm, in the local time zone of the user. If empty the existing value will be deleted. When omitted, its existing value will not change. |
| time2 | string (5) | See time1. |
| time3 | string (5) | See time1. |
| time4 | string (5) | See time1. |
| time5 | string (5) | See time1. |

getObjectFeatures Description

getObjectFeatures returns all <u>additional features</u> that are booked for the object. If you specify a feature, getObjectFeatures returns all objects that have the indicated additional feature booked.

Technical details

| SOAP endpoint address / function name | objectsAndPeopleReportingService#getObjectFea- tures |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

getObjectFeatures requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific for getObjectFeatures:

| Parameter | Type | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |

| Parameter | Type | Description |
|------------|-------------|---|
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| externalid | string | For future use. This parameter is optional. |
| feature | string | Identifies the feature (additional service): |
| | | linkconnect hdtracking waypoints tachodownload drivingtime plugins orderscheduleoptimization fmsdirect tpms eld video vehiclechecklist proappnav coldchain oemconnect |

Result for getObjectFeatures:

feature

| Parameter | Туре | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. |

| Parameter | Type | Description |
|-------------|--------|---|
| feature | string | Identifies the feature (additional service): |
| | | • linkconnect |
| | | hdtracking |
| | | • waypoints |
| | | tachodownload |
| | | • drivingtime |
| | | • plugins |
| | | orderscheduleoptimization |
| | | • fmsdirect |
| | | • tpms |
| | | • eld |
| | | • video |
| | | • oemconnect |
| | | • proappnav |
| | | • coldchain |
| | | • oemconnect |
| volume_max | int | Quota limit (if applicable). |
| volume_used | int | Currently used quota (if applicable). |

| Parameter | Туре | Description |
|----------------|--------|--|
| feature_detail | string | The name of the exact variant of an additional feature. This parameter is only available for additional features with multiple variants. |
| | | Possible values, depending on feature |
| | | hdtracking |
| | | • hdtracking_1 |
| | | hdtracking_2hdtracking_3 |
| | | hdtracking_3hdtracking 4 |
| | | • hdtracking 5 |
| | | • e toll |
| | | • e_toll_pl |
| | | linkconnect |
| | | • linkconnect_xs |
| | | • linkconnect_s |
| | | • linkconnect_m |
| | | • linkconnect_l |
| | | • linkconnect_xl |
| | | tachodownload |
| | | • tachoshare_tis_web_plus |
| | | • tachoshare_tis_web |
| | | tachoshare_plustachoshare |
| | | • tachomanager |
| | | tachomanager plus |
| | | video |
| | | • video basic |
| | | • video plus |
| | | video_live |
| | | video_basic_int |
| | | video_plus_int |
| | | video_live_int |
| | | eld |
| | | • eld_mex |
| | | • eld_usa |

updateContractInfo Description

Using updateContractInfo you can update data that refer to the contract.

Technical details

| SOAP endpoint address / function name | objectsAndPeopleReportingService#updateContractInfo |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

updateContractInfo requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific for updateContractInfo:

| Parameter | Type | Description |
|-------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| referenceno | string (20) | Reference number for the object individually assigned by the customer. This parameter is required. |

getObjectCanSignals Description

<code>getObjectSignals</code> returns the latest received CAN signal values for an object in an account. This action will also be useful for FMS when LINK 610/710 are used.

Technical details

| SOAP endpoint address / function name | objects And People Reporting Service #get Object Signals |
|---------------------------------------|--|
| Request limits | 6 requests / minute |

Parameters

getObjectCanSignals requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to getObjectCanSignals:

| Parameter | Type | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

Result for getObjectCanSignals:

| Parameter | Туре | Description | |
|--------------------------------|-------------------------|---|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. | |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. | |
| cansignaltime | dateTime | The time the CAN signal was read from the CAN bus of the vehicle. | |
| cansignaltype- name | string | Corresponds to a defined list of CAN signal types. All available signals are listed in <u>Appendix F</u> . | |
| cansignal type- description | string | Description of CAN signal type | |
| cansignal data type | nonNega- tiveInteger | 1 = Integer2 = Decimal3 = Boolean | |
| cansignalvalue | float | The value of the CAN signal. Either 0 = false, 1 = true for boolean values or a decimal number for other values like fuel level or battery voltage. | |

| Parameter | Type | Description | |
|---------------|-------------------------|---|--|
| cansignalunit | nonNega- tiveInteger | Indicates the unit of measurement in which cansignalvalue is provided. Valid value are: | |
| | | O - Special use (such as bit masks etc.) 1 - Kilometer per hour 2 - One per minute 3 - Kilometer 4 - Degree Celsius 5 - Volt 6 - On/Off 7 - Percent 8 - Ampere 9 - Decimeter 10 - Hours 11 - Kilogram 12 - Kilopascal 13 - Milliliter 14 - Liter 15 - Liter per hour 16 - Meter 17 - Minutes 18 - Newton meter 19 - Rounds per minute 20 - Seconds 21 - Watt-hours | |

getObjectCanMalfunctions Description

 ${\tt getObjectCanMalfunctions}\ returns\ the\ current\ state\ of\ CAN\ based\ malfunctions\ of\ an\ object.\ This\ action\ will\ also\ be\ useful\ for\ FMS\ when\ a\ LINK\ 610/710\ are\ used.$

Technical details

| SOAP endpoint address / function name | objectsAndPeopleReportingService#getObjectCan- Malfunctions |
|---------------------------------------|--|
| Request limits | 6 requests / minute |

Parameters

getObjectCanMalfunctions requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to getObjectCanMalfunctions:

| Parameter | Туре | Description |
|------------------|-------------------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. This parameter is optional. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. This parameter is optional. |
| objectgroupname | String | The given entry filters the result list on the object groups with matching names. Can be used alternatively to objectgroupuid. This parameter is optional. |
| objectgroupuid | String | A unique, unchangeable identifier for the indicated object group, automatically generated. Can be used alternatively to objectgroupname. This parameter is optional. |
| malfunctionlevel | nonNega- tiveInteger | Filter by malfunction level. All CAN based malfunctions of the same or higher level are returned. This parameter is optional. |

Result for getObjectCanMalfunctions:

| Parameter | Type | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

| Parameter | Туре | Description | |
|---------------------------|--------------------------|--|--|
| Parameter malfunctiontype | Type nonNegativeInteger | Malfunction types. Valid value are: 10 = Battery 20 = Battery voltage 30 = Lights 40 = Exhaust system 50 = Tyre pressure 60 = Brake fluid 70 = Coolant level 80 = Engine oil level 90 = Engine oil pressure 100 = Diesel particulate filter 110 = Coolant temperature 120 = Engine cooling 130 = ABS 140 = Brake system 150 = Airbag 160 = EPC 170 = ESP 180 = Preheat or engine malfunction 190 = Brake pads 200 = Engine/malfunction indicator lamp 210 = Transmission failure 220 = Low coolant level 230 = Brake failure 240 = Airbag 250 = AdBlue level | |
| | | 180 = Preheat or engine malfunction 190 = Brake pads 200 = Engine/malfunction indicator lamp 210 = Transmission failure 220 = Low coolant level 230 = Brake failure 240 = Airbag | |
| malfunctionlevel | nonNega- tiveInteger | 1 = OK 2 = WARNING 3 = ERROR | |

getElectricVehicleData Description

getElectricVehicleData returns data for all electric vehicles in the account.

This action is supported by the following devices:

- Webfleet LINK 740
- TomTom LINK 710
- Webfleet LINK 640
- TomTom LINK 610
- TomTom LINK 710B
- Webfleet LINK 240
- Webfleet LINK 245
- TomTom LINK 210

Technical details

| SOAP endpoint address / function name | objectsAndPeopleReportingService#getElectricVehi- cleData |
|---------------------------------------|--|
| Request limits | 6 requests / minute |

Parameters

getElectricVehicleData requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Result

Result for getElectricVehicleData:

| Type | Description |
|-------------|---|
| string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. |
| float | Current battery level in percent. Values are within [0.00, 100.00]. |
| dateTime | The moment at which the battery will be fully charged. ISO 8601-formatted date and time. |
| boolean | Status of charging. True when the vehicle is being charged, false otherwise. |
| int | Total range in meters. For hybrid vehicles this is electric range + fuel range. |
| dateTime | Date and time of last signal received from the electric vehicle. |
| float | User defined battery capacity of the electric vehicle in kWh. Values are within [0.00, +infinity] |
| | string (30) float dateTime boolean int dateTime |

| Parameter | Туре | Description |
|----------------|---------------|--|
| batteryHealth | float | Current battery health in percentages. Values are within [0.00, 100.00] |
| connectorTypes | array[string] | A list of user defined charger connector types supported by the electric vehicle (may include additional adapters). The list is initially empty. Connector types can be configured in the Webfleet UI. Possible values: |
| | | StandardHouseholdCountrySpecificIEC62196Type1 |
| | | • IEC62196Type1 • IEC62196Type1CCS |
| | | • IEC62196Type2CableAttached |
| | | • IEC62196Type2Outlet |
| | | • IEC62196Type2CCS |
| | | • IEC62196Type3 |
| | | • Chademo |
| | | • GBT20234Part2 |
| | | • GBT20234Part3 |
| | | • IEC60309AC3PhaseRed |
| | | • IEC60309AC1PhaseBlue |
| | | • IEC60309DCWhite |
| | | • Tesla |

getActiveAssetCouplings Description

 ${\tt getActiveAssetCouplings}\ returns\ the\ active\ couplings\ of\ vehicles\ and\ assets.\ Optionally\ also\ the\ last\ couplings\ can\ be\ retrieved.$

Technical details

 ${\tt SOAP\ endpoint\ address\ /\ function\ assetCoupling\#getActiveAssetCouplings\ name}$

Parameters

getActiveAssetCouplings requires the following common parameters:

- Authentication parameters
- <u>General parameters</u>

Parameters specific to getActiveAssetCouplings:

| Parameter | Type | Description |
|---------------------|-------------|--|
| objectuid | string (30) | A unique, unchangeable identifier for the indicated vehcile or asset, automatically generated. |
| | | This parameter is optional. If not provided, all active couplings of the account are returned. |
| | | If view access is not granted, the result is empty. |
| includeLastCoupling | boolean | If set to true, also the last coupling will be returned in the response. This parameter is optional. |

Result for getActiveAssetCouplings:

| Parameter | Туре | Description |
|--------------|-------------|---|
| vehicleuid | string (30) | The coupled vehicle. A unique, unchangeable identifier, automatically generated. |
| assetuid | string (30) | The coupled asset. A unique, unchangeable identifier, automatically generated. |
| couplingtime | dateTime | The detection time of the coupling event. ISO 8601-formatted date and time in the UTC timezone, combined representation in the extended format. |
| | | Example: 2007-12-24T16:00:00+02:00 |
| longitude | Integer | The longitude of the the coupling event location. |
| | | Geographic longitude in the <u>WGS84</u> coordinate system. |
| | | Unit of measurement is micro degrees (10 ⁻⁶ grd). |
| | | Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. |
| | | See <u>Geographic coordinate conversion on Wikipedia</u> . |

| Parameter | Type | Description |
|-----------|---------|---|
| latitude | Integer | The latitude of the the coupling event location. |
| | | Geographic latitude in the <u>WGS84</u> coordinate system. |
| | | Unit of measurement is micro degrees (10 ⁻⁶ grd). |
| | | Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |

getTelemetryDeviceBatteryState Description

getTelemetryDeviceBatteryState returns the battery state of a telematics device.

This is only supported for devices which can operate in battery-powered mode (e.g. LINK 340, LINK 350).

Technical details

| SOAP endpoint address / function name | objectsAndPeopleReportingService#getTelemetry- DeviceBatteryState |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

getTelemetryDeviceBatteryState requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to getTelemetryDeviceBatteryState:

| Parameter | Type | Description |
|-----------|-------------|--|
| objectuid | string (30) | A unique, unchangeable identifier for the indicated vehicle or asset, automatically generated. |

Result

Result for getTelemetryDeviceBatteryState:

| Parameter | Type | Description |
|-----------------|-------------|--|
| objectUid | string (30) | A unique, unchangeable identifier for the indicated vehicle or asset, automatically generated. |
| levelPercentage | int | Current battery level in percentages. Values are within [0, 100]. |
| chargingState | string | Charging state. Values are CHARGING_ON or CHARGING_OFF. |
| lastGpsTime | dateTime | Date and time of last GPS update received from the device. |

getObjectDTCs Description

getObjectDTCs returns diagnostic trouble code (DTC) information for an object. It allows to retrieve diagnostic data related to specific vehicles or assets, including fault codes, their classification and recommended actions.

Technical details

| SOAP endpoint address / function name | objects And People Reporting Service #get Object DTCs |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

getObjectDTCs requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to getObjectCanSignals:

| Parameter | Туре | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

Result

Result for getObjectDTCs:

| Parameter | Туре | Description |
|-----------------------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| trouble_code_id | string | Unique identifier for the trouble code. |
| code | string | Vehicle trouble code. |
| odometer | long | Vehicle odometer. |
| trou- ble_code_counter | int | Trouble code counter. |
| vin | string | Vehicle Identification Number. |
| event_time | dateTime | Event time. |
| resolve_time | dateTime | Timestamp when the trouble was resolved. |
| driver_uid | string | Unique identifier of the driver associated with the event. |
| trouble_classification | string | Classification of the trouble code (e.g., info, warning, critical). |
| trouble_title | string | Title or short description of the trouble. |
| trouble_cause | string | Identified or suspected cause of the trouble. |
| trouble_effect | string | Effect or impact of the trouble on the vehicle or operation. |
| trouble_recom- mendation | string | Recommended action or steps to resolve the trouble. |
| latitude | int | Latitude coordinate where the event occurred. |
| longitude | int | Longitude coordinate where the event occurred. |
| address_desc | string | Human-readable description of the location (e.g., street address or area). |
| address_uid | string | Unique identifier for the address or location. |

Orders

About orders

Asynchronous processing

Many order actions involve sending messages to devices. These messages are processed and sent asynchronously. As a consequence, there's no guarantee that a message was already sent out when the API call returns.

There are a few scenarios where this needs to be considered. For example, if you delete an order from a device and immediately create a new order with the same order number.

Asynchronous processing applies to the following actions:

- cancelOrderExtern
- sendOrderExtern
- sendDestinationOrderExtern
- updateOrderExtern
- updateDestinationOrderExtern
- deleteOrderExtern
- clearOrdersExtern
- assignOrderExtern
- reassignOrderExtern

sendOrderExtern Description

The sendOrderExtern operation allows you to send an order message to an object. The message is sent asynchronously and therefore a positive result of this operation does not indicate that the message was sent to the object successfully.

Technical details

| SOAP endpoint address / function name | ordersService#sendOrder |
|---------------------------------------|---------------------------|
| Request limits | 300 requests / 30 minutes |

Note: On the Driver Terminal, the most recent order is shown at the top of the list of orders. If you tap the **New order** button in the Driving View, the oldest order is listed first.

Important: Orders without an order destination are not displayed in Webfleet. As soon as an order destination is added with the action updateDestinationOrderExtern, the order will also be visible in the Webfleet user interface.

Parameters

sendOrderExtern requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to sendOrderExtern:

| Parameter | Туре | Description |
|----------------|---------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| orderid | string (20) | Account-unique order id, case-sensitive. Maximum capacity is 20 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters. This parameter is required. |
| ordertext | string (1000) | This parameter is required. |
| useorderstates | string | Specifies the order states that appear in the workflow of the indicated order. You can specify multiple values for this parameter. Separate the values with a comma when using CSV interface. Valid values: |
| | | 202 - Arrived at destination 203 - Work started 204 - Work finished 205 - Departed from destination null - The states do not appear in the workflow, even if specified differently in the account settings. If you do not specify this parameter, the account-specific settings are used. This parameter is optional. |

| Parameter | Type | Description |
|------------------|-------------|---|
| orderautomations | int | Specifies the workflow step(s) when starting an order that can be automated. |
| | | You can specify multiple values for this parameter. Separate the values with a comma when using CSV interface. |
| | | Example: orderautomations=1,2 |
| | | Valid values: |
| | | • 1 - accept the order |
| | | • 2 - start the order |
| | | 3 - navigate to the order destination |
| | | 4 - skip displaying the route summary screen |
| | | • 5 - delete the order after it has been finished |
| | | • 6 - suppress the 'continue with next order' screen |
| | | If you do not specify this parameter, the account-specific settings are used. |
| | | This parameter is optional. |
| | | Available on PRO devices with firmware version 10.533 or higher. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. |
| | | Can be used alternatively to objectno. |

sendDestinationOrderExtern Description

The sendDestinationOrderExtern operation allows you to send an order message together with target coordinates for a navigation system connected to the in-vehicle unit. The message is sent asynchronously and therefore a positive result of this operation does not indicate that the message was sent to the object successfully.

Technical details

| SOAP endpoint address / function name | ordersService#sendDestinationOrder |
|---------------------------------------|------------------------------------|
| Request limits | 300 requests / 30 minutes |

Note: On the Driver Terminal, the most recent order is shown at the top of the list of orders. If you tap the **New order** button in the Driving View, the oldest order is listed first.

Use with ISO8601 date and time formats

If used in conjunction with useISO8601=true, you need to take care of specifying the time zone, because otherwise UTC will be assumed by definition. Therefore, you should always provide a time zone definition with orderdate, e.g. 2009-01-20T+01:00 and provide your local time part to ordertime.

Example for minimal set of parameters

Sends a destination order referring to an address that has been created before with insertAddressExtern. The address must be geocoded.

Code sample 4-2: Minimal set of parameters

CSV

https://csv.webfleet.com/extern?account=xxx&apikey=xxx&lang=de&action=send-DestinationOrderExtern&objectno=001&orderid=S-1234.001AF&ordertext=Test&addrnr=401

SOAP

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"</pre>
xmlns:ser="http://connect.webfleet.tomtomwork.com/services">
<soap:Header/>
<soap:Body>
 <ser:sendDestinationOrder>
   <aParm>
    <accountName>xxx</accountName>
   <userName>xxx</userName>
   <password>xxx</password>
   <apiKey>xxx</apiKey>
   </aParm>
   <qParm>
   <locale>DE</locale>
   <timeZone>Europe Berlin</timeZone>
   </gParm>
   <dstOrderToSend orderNo="S-1234.001AF" orderType="" scheduledCompletion-</pre>
DateAndTime="2018-09-21T00:00:00.000+02:00">
    <orderText>Test</orderText>
    <addrNoToUseAsDestination>401</addrNoToUseAsDestination>
   </dstOrderToSend>
  <object objectNo="001"/>
 </ser:sendDestinationOrder>
</soap:Body>
</soap:Envelope>
```

Example for ISO-formatted order date

Sends a destination order with an scheduled arrival time of 4:30pm on June 5th 2009 in the CEST timezone (Central European Summer Time is 2 hours ahead of UTC). Make sure to quote the + as %2B, otherwise the timezone specification will not parse correctly and the response will contain an error message.

Code sample 4-3: ISO-formatted order date

CSV

https://csv.webfleet.com/extern?account=xxx&apikey=xxx&lang=de&action=send-DestinationOrderExtern&objectno=001&orderid=S-1234.002AF&ordertext=Test&addrnr=401&useIS08601=true&orderdate=2009-06-05T+02:00&ordertime=16:30:00

SOAP

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"</pre>
xmlns:ser="http://connect.webfleet.tomtomwork.com/services">
<soap:Body>
 <ser:sendDestinationOrder>
   <aParm>
    <accountName>xxx</accountName>
    <userName>xxx</userName>
   <password>xxx</password>
   <apiKey>xxx</apiKey>
   </aParm>
   <gParm>
    <locale>DE</locale>
```

Example for destination with latitude and longitude

Sends a destination order; the destination is given by geographical coordinates (51° 21′55,2″ N - 12° 23′55,6″ E) and a location description is provided for the driver.

Code sample 4-4: Destination with latitude and longitude

```
CSV
```

https://csv.webfleet.com/extern?account=xxx&apikey=xxx&lang=de&ac-tion=sendDestinationOrderExtern&objectno=001&orderid=S-1234.003AF&order-text=Test&latitude=51365338&longitude=12398799&country=DE&zip=04129&c-ity=Leipzig&street=Maximilianallee 4

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"</pre>
 xmlns:ser="http://connect.webfleet.tomtomwork.com/services">
<soap:Body>
 <ser:sendDestinationOrder>
   <aParm>
    <accountName>xxx</accountName>
    <userName>xxx</userName>
   <password>xxx</password>
   <apiKey>xxx</apiKey>
  </aParm>
   <qParm>
    <locale>DE</locale>
    <timeZone>Europe Berlin</timeZone>
   </gParm>
   <dstOrderToSend orderNo="S-1234.003AF" scheduledCompletionDateAnd-</pre>
Time="">
    <orderText>Test</orderText>
    <explicitDestination>
     <street>Maximilianallee 4</street>
     <postcode>04129</postcode>
     <city>Leipzig</city>
     <country>DE</country>
     <geoPosition latitude="51365338" longitude="12398799"/>
     <contact contactName=""/>
    </explicitDestination>
   </dstOrderToSend>
  <object objectNo="001"/>
  </ser:sendDestinationOrder>
 </soap:Body>
</soap:Envelope>
```

Parameters

sendDestinationOrderExtern requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to sendDestinationOrderExtern:

| Parameter | Type | Description |
|-----------|-------------------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| orderid | string (20) | Account-unique order id, case-sensitive. Maximum capacity is 20 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters. |
| ordertext | string (1000) | This parameter is required. |
| ordertype | nonNegativeIn- teger | Type of order. Valid values: • 1 - service order • 2 - pickup order • 3 - delivery order If empty or not present, the default is service order. This parameter is optional. |
| orderdate | date | Scheduled date of fulfilment for this order. If empty or not present, the default is the current day (calculated using the time zone defined on the Webfleet account). This parameter is optional. |
| ordertime | time | Scheduled time of fulfilment for this order. If empty or not present, the default is 00:00. This parameter is optional. |

| Parameter | Туре | Description |
|------------------|-------------------------|---|
| arrivaltolerance | nonNegativeIn- teger | If there is an active order, the Driver Terminal constantly monitors the ETA and sends notifications messages if the ETA changes significantly. Differences between ETA and ordertime are interpreted as follows: |
| | | show as standard if: t_{eta} < t_{order} show as warning if: t_{order} < t_{eta} < t_{order}+arrivaltolerance show as alarm if: t_{order}+arrivaltolerance < t_{eta} Unit of measurement is minutes. Valid values: 0 15 30 60 120 |
| | | Requires ordertime and orderdate. This parameter is optional. |
| notify_enabled | boolean | If set to 1 enables generation of an event (Events) as soon as the ETA is lower than notify_leadtime. If not set, the default will be 0 (no notification created). This parameter is optional. |
| notify_leadtime | nonNegativeIn- teger | Time in minutes before arrival at destination at which an event (<u>Events</u>) is generated if notify_enabled is set to 1. If not set, the default will be 15min. This parameter is optional. |
| contact | string (50) | Name of a contact person for this order. This parameter is optional. |
| contacttel | string (20) | Phone number of the contact person for this order. Must conform to the following format: |
| | | \+?([\d /\(\)\-])+ |
| | | (a sequence of numbers and () /- that may be proceeded by a +). This parameter is optional. |
| contactemail | string (50) | The order contact email address. This parameter is optional. |

| Parameter | Туре | Description |
|-----------|-------------|--|
| addrnr | string (10) | Use an address identified by addrnr as returned by showAddressReportExtern . The address must be geocoded. Case-sensitive. |
| | | Note: If addrnr is provided, other parameters describing the destination (longitude, latitude, country, zip, city, street, contact, contectTel) are ignored and replaced by the respective values from the address record identified by addrnr. |
| | | This parameter is optional. |
| longitude | int | Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10-6 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| latitude | int | Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| country | string (2) | ISO 3166-1 alpha-2 code for the country (capital letters). Country of the destination address; see navigation hints below. |
| zip | string (10) | Post code of the destination address; see navigation hints below. Please note: A zip is mandatory, if you want to make use of sharing the ePOD (electronic proof of delivery) data via order status page. |
| city | string (50) | City of the destination address; see navigation hints below. |
| street | string (50) | Street and house number of the destination address; see navigation hints below. |

| Parameter | Туре | Description |
|----------------|--------|---|
| useorderstates | string | Specifies the order states that appear in the workflow of the indicated order. You can specify multiple values for this parameter. Separate the values with comma when using CSV interface. Valid values: null - Below states do not appear in workflow, even if specified differently in the account settings. For ordertype = 1: |
| | | 202 - Arrived at destination 203 - Work started 204 - Work finished 205 - Departed from destination 207 - Electronic proof of delivery (ePOD) |
| | | For ordertype = 2: |
| | | 222 - Arrived at pick up location 223 - Pick up started 224 - Pick up finished 225 - Departed from pick up location 227 - Electronic proof of delivery (ePOD) |
| | | For ordertype = 3: |
| | | 242 - Arrived at delivery location 243 - Delivery started 244 - Delivery finished 245 - Departed from delivery location 247 - Electronic proof of delivery (ePOD) |
| | | Note : If you do not specify the parameter, the account specific settings are used. |
| | | This parameter is optional. |

| Parameter | Type | Description |
|------------------|------|---|
| orderautomations | int | Specifies the workflow step(s) when starting an order that can be automated. You can specify multiple values for this parameter. Separate the values with a comma when using CSV interface. |
| | | Example: orderautomations=1,2 |
| | | Valid values: |
| | | 1 - accept the order 2 - start the order 3 - navigate to the order destination 4 - skip displaying the route summary screen 5 - delete the order after it has been finished 6 - suppress the 'continue with next order' screen |
| | | Note : If you do not specify the parameter, the account specific settings are used. |
| | | This parameter is optional. Available on PRO devices with firmware version 10.533 or higher. |

| Parameter | Туре | Description |
|-----------|-------------|--|
| wp | string | Contains details for a waypoint for orders with predefined routes (itinerary) in the following format. |
| | | <pre><latitude>, <longitude>, [<descrip- tion="">], [<notify>], [<visible>]</visible></notify></descrip-></longitude></latitude></pre> |
| | | For details of the parameters contained, see Parameters in wp . The number of waypoints per order is limited: |
| | | The following devices support up to 1000 waypoints per order: |
| | | TomTom PRO 7100/7150 TomTom PRO 9100/9150 TomTom PRO 5150 |
| | | The following devices support up to 250 waypoints per order: |
| | | PRO 8475 PRO 8375 TomTom PRO 8270/8275 PRO 7350 PRO 5350 The following devices do not support waypoints: TomTom PRO 5250, TomTom PRO 7250 The number of waypoints/vehicle/month is limited to 20,000. If you exceed this limit this action will return with response code 25001. This parameter is optional. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| mapcode | string (20) | A mapcode represents a location. Either mapcode or latitude/longitude coordinates can be used, but not both. Learn more about mapcodes. |

| Parameter | Туре | Description |
|---------------|---------|---|
| epod_required | boolean | If set to true, the order requires to be signed after completion (ePOD - electronic proof of delivery). |
| | | Note that ePOD is only supported on the Work App. Other driver terminals will ignore this step in the workflow. |

Hints for navigation

The latitude and longitude parameters are mandatory, if addrnr is not used. Optional parameters country, zip, city, street have 2 purposes:

- Used for display to the driver.
- On Work App or driver terminals running the Work App (like PRO M, PRO X) the parameters are also used to improve routing to the order destination.

So, please always specify this parameter values when possible.

Note: If addrnr is provided, other parameters describing the destination (longitude, latitude, country, zip, city, street, contact, contacttel, contactemail) are ignored and replaced by the respective values from the address record identified by addrnr.

updateOrderExtern Description

Updates an order that was submitted with sendOrderExtern.

Technical details

| SOAP endpoint address / function name | ordersService#updateOrder |
|---------------------------------------|---------------------------|
| Request limits | 300 requests / 30 minutes |

Important: Orders without an order destination are not displayed in Webfleet. As soon as an order destination is added with the action updateDestinationOrderExtern, the order will also be visible in the Webfleet user interface.

Parameters

updateOrderExtern requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to updateOrderExtern:

| Parameter | Туре | Description |
|------------------|---------------|---|
| orderid | string (20) | Account-unique order id, case-sensitive. Maximum capacity is 20 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters. This parameter is required. |
| ordertext | string (1000) | This parameter is required. |
| orderautomations | int | Specifies the workflow step(s) when starting an order that can be automated. You can specify multiple values for this parameter. Separate the values with a comma when using CSV interface. |
| | | Important : Updating the order automation exclusively affects orders that are being sent to the device. |
| | | Example: orderautomations=1,2 |
| | | Valid values: |
| | | 1 - accept the order 2 - start the order 3 - navigate to the order destination 4 - skip displaying the route summary screen 5 - delete the order after it has been finished 6 - suppress the 'continue with next order' screen |
| | | Note : If you do not specify this parameter, the account-specific settings are used. |
| | | This parameter is optional. Available on PRO devices with firmware version 10.533 or higher. |

updateDestinationOrderExtern Description

Updates an order that was submitted with sendDestinationOrderExtern, with insert-DestinationOrderExtern or with sendOrderExtern.

Technical details

| SOAP endpoint address / function name | ordersService#updateDestinationOrder |
|---------------------------------------|--------------------------------------|
| Request limits | 300 requests / 30 minutes |

Parameters

updateDestinationOrderExtern requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

 ${\tt Parameters\ specific\ to\ updateDestinationOrderExtern:}$

| Parameter | Type | Description |
|------------------|-------------------------|--|
| orderid | string (20) | Account-unique order id, case-sensitive. Maximum capacity is 20 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters. This parameter is required. |
| ordertext | string (1000) | This parameter is optional. |
| orderdate | date | Scheduled date of fulfilment for this order. If empty or not present, the default is the current day (calculated using the time zone defined on the Webfleet account). This parameter is optional. |
| ordertime | time | Scheduled time of fulfilment for this order. If empty or not present, the default is 00:00. This parameter is optional. |
| arrivaltolerance | nonNegativeln- teger | If there is an active order, the Driver Terminal constantly monitors the ETA and sends notifications messages if the ETA changes significantly. Differences between ETA and ordertime are interpreted as follows: |
| | | show as standard if: t_{eta} < t_{order} show as warning if: t_{order} < t_{eta} < t_{order}+arrivaltolerance show as alarm if: t_{order}+arrivaltolerance < t_{eta} Unit of measurement is minutes. Valid values: 0 15 |
| | | 30 60 120 Requires ordertime and orderdate. This parameter is optional. |

| Parameter | Туре | Description |
|--------------|-------------|--|
| contact | string (50) | Name of a contact person for this order. This parameter is optional. |
| contacttel | string (20) | Phone number of the contact person for this order. Must conform to the following format: |
| | | \+?([\d /\(\)\-])+ |
| | | (a sequence of numbers and () /- that may be proceeded by a +). This parameter is optional. |
| contactemail | string (50) | The order contact email address. This parameter is optional. |
| addrnr | string (10) | Use an address identified by addrnr as returned by showAddressReportExtern . The address must be geocoded. Case-sensitive. |
| | | Note: If addrnr is provided, other parameters describing the destination (longitude, latitude, country, zip, city, street, contact, contectTel) are ignored and replaced by the respective values from the address record identified by addrnr. |
| | | This parameter is optional. |
| longitude | int | Geographic longitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ |
| | | grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| latitude | int | Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |

| Parameter | Туре | Description |
|------------------|-------------|---|
| country | string (2) | ISO 3166-1 alpha-2 code for the country (capital letters). Country of the destination address; see navigation hints below. |
| zip | string (10) | Post code of the destination address; see navigation hints below. |
| city | string (50) | City of the destination address; see navigation hints below. |
| street | string (50) | Street and house number of the destination address; see navigation hints below. |
| orderautomations | int | Specifies the workflow step(s) when starting an order that can be automated. You can specify multiple values for this parameter. Separate the values with a comma when using CSV interface. |
| | | Important : Updating the order automation exclusively affects orders that are being sent to the device. |
| | | Example: orderautomations=1,2 |
| | | Valid values: |
| | | 1 - accept the order 2 - start the order 3 - navigate to the order destination 4 - skip displaying the route summary screen 5 - delete the order after it has been finished 6 - suppress the 'continue with next order' screen Note: If you do not specify this parameter, the account-specific settings are used. This parameter is optional. Available on PRO devices with firmware version 10.533 or higher.PRO 8475 |

| Parameter | Туре | Description |
|-----------|-------------|--|
| wp | string | Contains details for a waypoint for orders with predefined routes (itinerary) in the following format. This parameter is optional. |
| | | <pre><latitude>, <longitude>, [<descrip- tion="">], [<notify>], [<visible>]</visible></notify></descrip-></longitude></latitude></pre> |
| | | For details of the parameters contained, see <u>Parameters in wp</u> in <u>sendDestinationOrderExtern</u> . The number of waypoints per order is limited: |
| | | The following devices support up to 1000 waypoints per order: |
| | | TomTom PRO 7100/7150TomTom PRO 9100/9150TomTom PRO 5150 |
| | | The following devices support up to 250 waypoints per order: |
| | | PRO 8475 PRO 8375 TomTom PRO 8270/8275 PRO 7350 PRO 5350 |
| | | The following devices do not support waypoints: |
| | | TomTom PRO 5250, TomTom PRO 7250 |
| | | Note : The number of waypoints/vehicle/month is limited to 20,000. |
| mapcode | string (20) | A mapcode represents a location. Either mapcode or latitude/longitude coordinates can be used but not both. Learn more about mapcodes. |

Hints for navigation

The latitude and longitude parameters are mandatory, if addrnr is not used. Optional parameters country, zip, city, street have 2 purposes:

- Used for display to the driver.
- On Work App or driver terminals running the Work App (like PRO M, PRO X) the parameters are also used to improve routing to the order destination.

So, please always specify this parameter values when possible.

Note: If addrnr is provided, other parameters describing the destination (longitude, latitude, country, zip, city, street, contact, contacttel, contactemail) are ignored and replaced by the respective values from the address record identified by addrnr.

insertDestinationOrderExtern Description

The insertDestinationOrderExtern operation allows you to transmit an order message to Webfleet. The message is not sent and must be manually dispatched to an object within Webfleet.

Technical details

SOAP endpoint address / function ordersService#insertDestinationOrder name

| | Request limits | 300 requests / 30 minutes |
|--|----------------|---------------------------|
|--|----------------|---------------------------|

Parameters

insertDestinationOrderExtern requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to insertDestinationOrderExtern:

| Parameter | Type | Description |
|-----------|-------------------------|---|
| orderid | string (20) | Account-unique order id, case-sensitive. Maximum capacity is 20 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters. |
| ordertext | string (1000) | This parameter is required. |
| ordertype | nonNegativeIn- teger | Type of order. Valid values: |
| | | 1 - service order2 - pickup order3 - delivery order |
| | | If empty or not present, the default is service order. This parameter is optional. |

| Parameter | Туре | Description |
|------------------|-------------------------|--|
| orderdate | date | Scheduled date of fulfilment for this order. If empty or not present, the default is the current day (calculated using the time zone defined on the Webfleet account). This parameter is optional. |
| ordertime | time | Scheduled time of fulfilment for this order. If empty or not present, the default is 00:00. This parameter is optional. |
| arrivaltolerance | nonNegativeIn- teger | If there is an active order, the Driver Terminal constantly monitors the ETA and sends notifications messages if the ETA changes significantly. Differences between ETA and ordertime are interpreted as follows: • show as standard if: teta < torder • show as warning if: torder < torder • show as alarm if: torder + arrival tolerance < torder Unit of measurement is minutes. Valid values: • 0 • 15 • 30 • 60 • 120 Requires ordertime and orderdate. This parameter is optional. |
| notify_enabled | boolean | If set to 1 enables generation of an event (Events) as soon as the ETA is lower than notify_leadtime. If not set, the default will be 0 (no notification created). This parameter is optional. |
| notify_leadtime | nonNegativeln- teger | Time in minutes before arrival at destination at which an event (<u>Events</u>) is generated if notify_enabled is set to 1. If not set, the default will be 15min. This parameter is optional. |
| contact | string (50) | Name of a contact person for this order. This parameter is optional. |

| Parameter | Туре | Description |
|--------------|-------------|---|
| contacttel | string (20) | Phone number of the contact person for this order. Must conform to the following format: |
| | | \+?([\d /\(\)\-])+ |
| | | (a sequence of numbers and () /- that may be proceeded by a +). This parameter is optional. |
| contactemail | string (50) | The order contact email address. This parameter is optional. |
| addrnr | string (10) | Use an address identified by addrnr as returned by showAddressReportExtern . The address must be geocoded. Case-sensitive. |
| | | Note: If addrnr is provided, other parameters describing the destination (longitude, latitude, country, zip, city, street, contact, contectTel) are ignored and replaced by the respective values from the address record identified by addrnr. |
| | | This parameter is optional. |
| longitude | int | Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| latitude | int | Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |

| Parameter | Type | Description |
|-----------|-------------|--|
| country | string (2) | ISO 3166-1 alpha-2 code for the country (capital letters). Country of the destination address; see navigation hints below. |
| zip | string (10) | Post code of the destination address; see navigation hints below. |
| city | string (50) | City of the destination address; see navigation hints below. |
| street | string (50) | Street and house number of the destination address; see navigation hints below. |
| wp | string | Contains details for a waypoint for orders with predefined routes (itinerary) in the following format. This parameter is optional. |
| | | <pre><latitude>, <longitude>, [<descrip- tion="">], [<notify>], [<visible>]</visible></notify></descrip-></longitude></latitude></pre> |
| | | For details of the parameters contained, see <u>Parameters in wp</u> in <u>sendDestinationOrderExtern</u> . |
| | | The number of waypoints per order is limited: |
| | | The following devices support up to 1000 waypoints per order: |
| | | ° TomTom PRO 7100/7150 |
| | | ° TomTom PRO 9100/9150 |
| | | ° TomTom PRO 5150 |
| | | The following devices support up to 250 waypoints per order: |
| | | ° PRO 8475 |
| | | ° PRO 8375 |
| | | ° TomTom PRO 8270/8275 |
| | | ° PRO 7350 |
| | | ° PRO 5350 |
| | | The following devices do not support waypoints: |
| | | ° TomTom PRO 5250, TomTom PRO 7250 |
| | | Note : The number of waypoints/vehicle/month is limited to 20,000. |

| Parameter | Type | Description |
|-----------|-------------|--|
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| mapcode | string (20) | A mapcode represents a location. Either mapcode or latitude/longitude coordinates can be used but not both. Learn more about mapcodes. |

Hints for navigation

The latitude and longitude parameters are mandatory, if addrnr is not used. Optional parameters country, zip, city, street have 2 purposes:

- · Used for display to the driver.
- On Work App or driver terminals running the Work App (like PRO M, PRO X) the parameters are also used to improve routing to the order destination.

So, please always specify this parameter values when possible.

Note: If addrnr is provided, other parameters describing the destination (longitude, latitude, country, zip, city, street, contact, contacttel, contactemail) are ignored and replaced by the respective values from the address record identified by addrnr.

cancelOrderExtern Description

Cancels orders that were submitted using one of sendDestinationOrderExtern, insert-DestinationOrderExtern or sendOrderExtern.

Technical details

| SOAP endpoint address / function name | ordersService#cancelOrder |
|---------------------------------------|---------------------------|
| Request limits | 300 requests / 30 minutes |

Parameters

cancelOrderExtern requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to cancelOrderExtern:

| Parameter | Type | Description |
|-----------|-------------|---|
| orderid | string (20) | Account-unique order id, case-sensitive. Maximum capacity is 20 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters. |

assignOrderExtern Description

Assigns an existing order to an object and can be used to accomplish the following:

- send an order that was inserted before using insertDestinationOrderExtern
- · resend an order that has been rejected or cancelled

Technical details

| SOAP endpoint address / function name | orders Service #assign Order |
|---------------------------------------|------------------------------|
| Request limits | 300 requests / 30 minutes |

Parameters

assignOrderExtern requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to assignOrderExtern:

| Parameter | Type | Description |
|-----------|-------------|--|
| orderid | string (20) | Account-unique order id, case-sensitive. Maximum capacity is 20 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters. This parameter is required. |
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. This objectno names the object that will receive the order. Required if the order is not linked to an object yet. This parameter is optional. |

| Parameter | Туре | Description |
|----------------------|-------------|---|
| orderautomations int | int | Specifies the workflow step(s) when starting an order that can be automated. You can specify multiple values for this parameter. Separate the values with a comma when using CSV interface. |
| | | Example: orderautomations=1,2 |
| | | Valid values: |
| | | 1 - accept the order 2 - start the order 3 - navigate to the order destination 4 - skip displaying the route summary screen 5 - delete the order after it has been finished 6 - suppress the 'continue with next order' screen |
| | | Note : If you do not specify this parameter, the account-specific settings are used. |
| | | This parameter is optional. Available on PRO devices with firmware version 10.533 or higher. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

reassignOrderExtern Description

Reassigns an order that was submitted using one of sendOrderExtern, insert-DestinationOrderExtern or sendOrderExtern to another object. This is done by cancelling the order on the old object that is currently assigned to this order and assigning the new object to the order. The order is then sent to the new object.

Technical details

| SOAP endpoint address / function name | orders Service #reassign Order |
|---------------------------------------|--------------------------------|
| Request limits | 300 requests / 30 minutes |

Parameters

reassignOrderExtern requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to reassignOrderExtern:

| Parameter | Type | Description |
|------------------|-------------|---|
| orderid | string (20) | Account-unique order id, case-sensitive. Maximum capacity is 20 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters. This parameter is required. |
| objectid | string (10) | Identifying number of an object. Unique within an account, case-sensitive. This objectid (which is equal to objectno) names the object that will receive the order. This parameter is required. |
| orderautomations | int | Specifies the workflow step(s) when starting an order that can be automated. You can specify multiple values for this parameter. Separate the values with a comma when using CSV interface. Example: orderautomations=1,2 |
| | | Valid values: 1 - accept the order 2 - start the order 3 - navigate to the order destination 4 - skip displaying the route summary screen 5 - delete the order after it has been finished 6 - suppress the 'continue with next order' screen If you do not specify this parameter, the account-specific settings are used. This parameter is optional. Available on PRO devices with firmware version 10.533 or higher. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectid. |

deleteOrderExtern Description

Deletes an order from a device and optionally marks it as deleted in Webfleet too.

Supported for the stand-alone Driver Terminals connected to Webfleet and the Driver Terminals connected to LINK 7xx/5xx/4xx/3xx.

Technical details

| SOAP endpoint address / function name | ordersService#deleteOrder |
|---------------------------------------|---------------------------|
| Request limits | 300 requests / 30 minutes |

Parameters

deleteOrderExtern requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to deleteOrderExtern:

| Parameter | Type | Description |
|--------------|-------------|---|
| orderid | string (20) | Account-unique order id, case-sensitive. Maximum capacity is 20 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters. |
| mark_deleted | boolean | If set to 1, the order is deleted in Webfleet and the order ID can be used again. Defaults to 0. |

clearOrdersExtern Description

Removes all orders from the device and optionally deletes them all in Webfleet too.

Technical details

| SOAP endpoint address / function name | ordersService#clearOrders |
|---------------------------------------|---------------------------|
| Request limits | 300 requests / 30 minutes |

Parameters

clearOrdersExtern requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to clearOrdersExtern:

| Parameter | Туре | Description |
|-----------|-------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case sensitive. |

| Parameter | Type | Description |
|--------------|-------------|--|
| mark_deleted | boolean | If set to 1, the orders are deleted in Webfleet too and the order IDs can be used again. Defaults to 0. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

showOrderReportExtern **Description**

Shows a list of orders that match the search parameters. Each entry shows the order details and current status information.

Technical details

| SOAP endpoint address / function name | ordersService#showOrderReport |
|---------------------------------------|-------------------------------|
| Request limits | 6 requests / minute |

Example - Retrieve all orders for the previous week

Uses a range pattern to access all orders with an orderdate within the last week.

Code sample 4-5: Retrieve all orders for the previous week

https://csv.webfleet.com/extern?account=xxx&apikey=xxx&lang=de&action=showOrderReportExtern&range pattern=w-1

```
SOAP
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"</pre>
xmlns:ser="http://connect.webfleet.tomtomwork.com/services">
<soap:Header/>
 <soap:Body>
  <ser:showOrderReport>
   <aParm>
    <accountName>xxx</accountName>
    <userName>xxx</userName>
    <password>xxx</password>
    <apiKey>xxx</apiKey>
   </aParm>
   <qParm>
    <locale>DE</locale>
    <timeZone>Europe Berlin</timeZone>
   </gParm>
   <queryFilter>
    <object objectNo="" objectUid="" externalId=""/>
    <dateRange rangePattern="Wm1"></dateRange>
   </queryFilter>
  </ser:showOrderReport>
 </soap:Body>
</soap:Envelope>
```

Example - Retrieve orders for a specific object and day

Uses a user-defined (ud) range_pattern with ISO-formatting to access all orders with a specific orderdate assigned to a specific object.

Code sample 4-6: Retrieve orders for a specific object and day

```
CSV
```

```
https://csv.webfleet.com/extern?account=xxx&apikey=xxx&lang=de&action=showOrderReportExtern&objectno=001&useISO8601=true&range_pattern=ud&rangefrom_string=2009-06-11T00:00:00&range-to_string=2009-06-11T23:59:59
```

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"</pre>
xmlns:ser="http://connect.webfleet.tomtomwork.com/services">
<soap:Header/>
<soap:Body>
  <ser:showOrderReport>
  <aParm>
<accountName>xxx</accountName>
<userName>xxx</userName>
<password>xxx</password>
<apiKey>xxx</apiKey>
  </aParm>
   <qParm>
<locale>DE</locale>
<timeZone>Europe Berlin</timeZone>
  </gParm>
  <queryFilter>
<object objectNo="001"/>
<dateRange rangePattern="UD">
<from>2009-06-11T00:00:00.000+01:00</from>
<to>2009-06-11T23:59:59.000+01:00</to>
</dateRange>
   </queryFilter>
  </ser:showOrderReport>
</soap:Body>
</soap:Envelope>
```

Parameters

showOrderReportExtern requires the following common parameters:

- Authentication parameters
- General parameters

The following other parameters are required if orderid is not indicated:

• <u>Date range filter parameters</u>

Parameters specific to showOrderReportExtern:

| Parameter | Type | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. This parameter is optional. |

| Parameter | Type | Description |
|-----------------|-------------------------|--|
| objectgroupname | string | Case-sensitive. This parameter is optional. |
| orderid | string (20) | Account-unique order id, case-sensitive. Maximum capacity is 20 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters. This parameter is optional. |
| ordertype | nonNega- tiveInteger | Type of order. Valid values: 1 - service order 2 - pickup order 3 - delivery order This parameter is optional. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

Result for showOrderReportExtern:

| Parameter | Туре | Description |
|------------|-------------------------|---|
| orderdate | date | Scheduled date of fulfilment for this order. If empty or not present, the default is the current day (calculated using the time zone defined on the Webfleet account). |
| orderid | string (20) | Account-unique order id, case-sensitive. Maximum capacity is 20 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters. |
| ordertext | string (1000) | |
| ordertype | nonNega- tiveInteger | Type of order. Valid values: |
| | | 1 - service order2 - pickup order3 - delivery order |
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectname | string | Display name of an object. |

| Parameter | Туре | Description |
|-------------|-------------------------|--|
| longitude | int | Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| latitude | int | Geographic latitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . |
| destination | string | |
| orderstate | nonNega- tiveInteger | Valid values: 0 - Not yet sent 100 - Sent 101 - Received 102 - Read 103 - Accepted 201 - Service order started 202 - Arrived at destination 203 - Work started 204 - Work finished 205 - Departed from destination 207 - Proof of delivery (service order type) 221 - Pickup order started 222 - Arrived at pick up location 223 - Pick up started 224 - Pick up finished 225 - Departed from pick up location 227 - Proof of delivery (pick up oder type) 241 - Delivery order started 242 - Arrived at delivery location 243 - Delivery started 244 - Delivery started 245 - Departed from delivery location 247 - Proof of delivery (delivery order type) 298 - Resumed 299 - Suspended 301 - Cancelled 302 - Rejected 401 - Finished |

| Parameter | Туре | Description |
|-----------------------------|-------------------------|--|
| orderstate_time | string | |
| orderstate_longi- tude | int | Geographic longitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . |
| orderstate_lati- tude | int | Geographic latitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . |
| orderstate_pos- text | string | |
| orderstate_msg- text | string | String containing the message text of the last order related message. |
| planned_ar- rival_time | time | Scheduled time of fulfillment for this order. If empty or not present, the default is 00:00. |
| estimated_ar- rival_time | time | Scheduled time of fulfillment for this order. If empty or not present, the default is 00:00. |
| arrivaltolerance | time | |
| notify_enabled | boolean | |
| notify_leadtime | nonNega- tiveInteger | |
| delay_warnings | nonNega- tiveInteger | Warning state based on planned and estimated arrival time and the arrival time tolerance value. Possible values are: 1 - Estimated delay within tolerance. 2 - Estimated delay above tolerance. |
| contact | string | Name of the contact person. |
| contacttel | string (20) | Phone number of the contact person for this order. |
| contactemail | string (50) | The order contact email address. |

| Parameter | Type | Description |
|-----------------|-------------------------|--|
| driverno | string | Identifying number of a driver. Unique within an account. See <u>Drivers</u> to learn more about drivers. Assigned to the driver who reported working on the order most recently. |
| drivername | string | Display name of a driver. Assigned to the driver who reported working on the order most recently. |
| drivertelmobile | string | Mobile phone number of the driver. Associated to the order. Assigned to the driver who reported working on the order most recently. |
| waypointcount | nonNega- tiveInteger | The number of waypoints in an itinerary order. |
| addrnr | string (10) | Identifying number of an address. Unique within an account. Number of the destination address. Only returned when the order destination is identified by the address number. |
| country | string (2) | ISO 3166-1 alpha-2 code for the country (capital letters). Country of the destination address. |
| zip | string (10) | Post code of the destination address. |
| city | string (250) | City of the destination address. |
| street | string (250) | Street and house number of the destination address. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |
| mapcode | string (20) | A mapcode represents a location. Learn more about <u>mapcodes</u> . |

showOrderWaypoints Description

This action retrieves the waypoints for an itinerary order with additional information on the validity and state. The waypoints are sorted in the same order which was used when creating the itinerary.

Itinerary orders (predefined routes over the air) are supported on all Driver Terminals with software version 10.537 or higher.

Technical details

| SOAP endpoint address / function name | ordersService#showOrderWaypoints |
|---------------------------------------|----------------------------------|
| Request limits | 10 requests / minute |

Parameters

showOrderWaypoints requires the following common parameters:

- <u>Authentication parameters</u>
- <u>General parameters</u>

Parameters specific to showOrderWaypoints:

| Parameter | Type | Description |
|-----------|-------------|---|
| orderid | string (20) | Account-unique order id, case-sensitive. Maximum capacity is 20 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters. This parameter is mandatory. |

Result

Result for showOrderWaypoints:

| Parameter | Type | Description |
|--------------------------|-------------|---|
| waypointnumber | string | Automatically generated ordering number. |
| latitude | int | |
| longitude | int | |
| formatted_lati- tude | string | Human readable formatted latitude. Geographic latitude in the form GGG° MM′ SS.S″ N/S in the <u>WGS84</u> coordinate system. |
| formatted_longi- tude | string | Human readable formatted longitude Geographic longitude in the form GGG° MM′ SS.S″ E/ W in the <u>WGS84</u> coordinate system. |
| description | string (20) | Short waypoint description. |
| notify | Boolean | Indicates whether the driver gets a notification when the waypoint is passed. Default is 1. Valid values: • 0 - false • 1 - true (driver will be notified when passing this waypoint) |

| Parameter | Туре | Description |
|-----------|---------|--|
| visible | Boolean | Indicates whether the waypoint is visible on the navigation device. Default is 1. Valid values: • 0 - false • 1 - true (waypoint is visible in the list of waypoints on the navigation device) |
| state | int | Indicates whether the waypoint was valid for a route calculation on the navigation device. Valid values: 0 - normal 1 - rejected |

Parameters in wp

| Parameter | Type | Description |
|-------------|-------------|---|
| latitude | int | Geographic latitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). |
| | | Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. |
| | | See Geographic coordinate conversion on Wikipedia. |
| | | This parameter is required. |
| longitude | int | Geographic longitude in the <u>WGS84</u> coordinate system. |
| | | Unit of measurement is micro degrees (10 ⁻⁶ grd). |
| | | Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. |
| | | See Geographic coordinate conversion on Wikipedia. |
| | | This parameter is required. |
| description | string (20) | Short waypoint description. |
| | | This parameter is optional. |

| Parameter | Type | Description |
|----------------|-----------------|--|
| notify Boolean | Boolean | Note : This parameter is not supported any more on newer devices. The use is discouraged. |
| | | Indicates whether the driver gets a notification when the waypoint is passed. Default is 1. Valid values: • 0 - false • 1 - true (driver will be notified when passing the waypoint) |
| | | This parameter is optional. |
| visible | risible Boolean | Note : This parameter is not supported any more on newer devices. The use is discouraged. |
| | | Indicates whether the waypoint is visible on the navigation device. Default is 1. Valid values: |
| | | 0 - false 1 - true (waypoint is visible in the list of waypoints on the navigation device) |
| | | This parameter is optional. |

getOrderStatusPageURL Description

getOrderStatusPageURL returns a link which can be used to track the status of the specified order. The returned link is a public URL and can be used by everyone who knows the URL.

Calling getOrderStatusPageURL multiple times for the same order will always return the same existing link, except if you invalidate an existing link using removeOrderStatus-PageURL.

Please note that the status of the order, including its planned time of arrival and estimated time of arrival, is an approximation. Information relating to the status of the order relies on factors including, but not limited to the timely update of progress by the dispatcher and driver, stops such as for mandatory breaks or refueling, or route deviations.

Technical details

| SOAP endpoint address / function name | ordersService#getOrderStatusPageURL |
|---------------------------------------|-------------------------------------|
| Request limits | 300 requests / 30 minutes |

Parameters

getOrderStatusPageURL requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to getOrderStatusPageURL:

| Parameter | Туре | Description |
|-----------|-------------|---|
| orderno | string (20) | Account-unique order number, case-sensitive. This parameter is mandatory. |

Result

Result for getOrderStatusPageURL:

| Parameter | Type | Description |
|---------------|-------------|--|
| orderno | string (20) | Account-unique order number, case-sensitive. |
| statuspageurl | string | A URL for order status page. |

removeOrderStatusPageURL Description

 ${\tt removeOrderStatusPageURL}\ invalidates\ the\ link\ created\ by\ {\tt getOrderStatusPageURL}.$

Usually you don't need to remove order status links, as they expire automatically some days after order completion. Using removeOrderStatusPageURL you can invalidate a link before its automatic expiration, for example if you gave the link to someone by accident. Calling getOrderStatusPageURL after invalidation will create a new link with a different URL.

Technical details

| SOAP endpoint address / function name | ordersService#removeOrderStatusPageURL |
|---------------------------------------|--|
| Request limits | 300 requests / 30 minutes |

Parameters

removeOrderStatusPageURL requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to removeOrderStatusPageURL:

| Parameter | Type | Description |
|-----------|-------------|---|
| orderno | string (20) | Account-unique order number, case-sensitive. This parameter is mandatory. |

downloadOrderAttachment Description

downloadOrderAttachment fetches a specific order attachment.

Technical details

| SOAP endpoint address / function name | ordersService#downloadOrderAttachment |
|---------------------------------------|---------------------------------------|
| Request limits | 10 requests / minute |

Parameters

downloadOrderAttachment requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to downloadOrderAttachment:

| Parameter | Туре | Description |
|---------------|-------------|---|
| orderno | string (20) | Account-unique order number, case-sensitive. This parameter is mandatory. |
| attachment_id | string | A unique, unchangeable identifier for the order attachment. Required. |

Result

The file content is returned in the response body. The Content-Type HTTP header contains the MIME type.

The SOAP API returns a data structure containing these values.

downloadOrderAttachmentThumbnail Description

downloadOrderAttachmentThumbnail fetches a thumbnail of a specific order attachment.

Technical details

 ${\tt SOAP\ endpoint\ address\ /\ func-orders Service \# download Order Attachment Thumbnail\ tion\ name}$

Parameters

downloadOrderAttachmentThumbnail requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to downloadOrderAttachmentThumbnail:

| Parameter | Type | Description |
|---------------|-------------|---|
| orderno | string (20) | Account-unique order number, case-sensitive. This parameter is mandatory. |
| attachment_id | string | A unique, unchangeable identifier for the order attachment. Required. |

Result

The thumbnail content is returned in the response body. The Content-Type HTTP header contains the MIME type.

The SOAP API returns a data structure containing these values.

uploadOrderAttachment Description

uploadOrderAttachment uploads an order attachment, such as a picture or document, for the given order number.

This action requires to use **HTTP POST** due to the size limitation of URLs. See <u>Making HTTP requests</u>

A maximum of 10 attachments can be uploaded for each order. 5 of them via WEBFLEET.connect or the Webfleet user interface. 5 more attachments can be uploaded by the driver using the Webfleet Work App.

The maximum file size of each attachment is 5 MB.

Technical details

| SOAP endpoint address / function name | ordersService#uploadOrderAttachment |
|---------------------------------------|-------------------------------------|
| Request limits | 10 requests/minute |

Parameters

uploadOrderAttachment requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to uploadOrderAttachment:

| Parameter | Type | Description |
|--------------|-------------|--|
| orderno | string (20) | Account-unique order number, case-sensitive. This parameter is mandatory. |
| file_name | string | The file name of the attachment. Required, must have at least one character and extension e.g. 'test.txt'. The following file types may be uploaded: .jpg, .p-ng, .bmp, .pdf, .txt, .rtf, .doc, .docx, .gif, .heic and .heif. |
| file_content | string | Order attachment as base64 encoded string. Required. Maximum allowed file size is 5 MB. |

Result

Result for uploadOrderAttachment:

| Parameter | Type | Description |
|---------------|-------------|---|
| attachment_id | string | A unique, unchangeable identifier for the created order attachment. |
| orderno | string (20) | Account-unique order number, case-sensitive. |

getOrderAttachmentsMetadata Description

 ${\tt getOrderAttachmentsMetadata}\ provides\ information\ of\ all\ the\ order\ attachments\ of\ the\ given\ order\ number.$

Technical details

| SOAP endpoint address / function name | ordersService#getOrderAttachmentsMetadata |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

getOrderAttachmentsMetadata requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to getOrderAttachmentsMetadata:

| Parameter | Type | Description |
|-----------|-------------|---|
| orderno | string (20) | Account-unique order number, case-sensitive. This parameter is mandatory. |

Result for getOrderAttachmentsMetadata:

| Parameter | Туре | Description |
|-------------------------|-------------|--|
| attachment_id | string | A unique, unchangeable identifier for the order attachment. |
| orderno | string (20) | Account-unique order number, case-sensitive. |
| file_name | string | File name of the attachment. |
| file_size_in_bytes | int | File size of the order attachment in bytes. |
| file_mime_type | string | MIME type of the stored file. |
| uploader_user_uid | string | ID of the user who uploaded the attachment for the order. |
| has_thumbnail | boolean | true if a thumbnail for the attachment can be requested. |
| uploaded_by_dri- ver | boolean | true if the upload was done by a driver. |
| creation_time | dateTime | The date and time the order attachment was uploaded. |
| expiration_time | dateTime | The date and time the order attachment will be deleted due to an expired retention duration. |

deleteOrderAttachment Description

 $\verb|deleteOrderAttachment| \ \ \textbf{deletes} \ \ \textbf{a} \ \ \textbf{specific order} \ \ \textbf{attachment}.$

Technical details

| SOAP endpoint address / function name | orders Service #delete Order Attachment |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

deleteOrderAttachment requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to deleteOrderAttachment:

| Parameter | Туре | Description |
|---------------|-------------|---|
| orderno | string (20) | Account-unique order number, case-sensitive. This parameter is mandatory. |
| attachment_id | string | A unique, unchangeable identifier for order attachment. Required. |

getOrderEpod Description

getOrderEpod returns the ePOD (electronic proof of delivery) metadata of an order. An ePOD for an order is available only if the ePOD workflow state was included in the workflow states when the order was sent. (e.g. ServiceEpod 207, PickUpEpod 227, DeliveryEpod 247)

Technical details

| SOAP endpoint address / function name | ordersService#getOrderEpod |
|---------------------------------------|----------------------------|
| Request limits | 10 requests / minute |

Parameters

getOrderEpod requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to getOrderEpod:

| Parameter | Туре | Description |
|-----------|-------------|---|
| orderno | string (20) | Account-unique order number, case-sensitive. This parameter is mandatory. |

Result

Result for getOrderEpod:

| Parameter | Type | Description |
|-------------------|-------------|--|
| state | string | State of the electronic proof of delivery (ePOD). • PENDING • REJECTED • COMPLETED • SKIPPED This property is always present in response. |
| state_change_time | dateTime | The date and time, when the ePOD state has changed. This property is always present in response. |
| signatory | string (50) | The name of the person who should sign the receipt, pre-filled with the contact name from the order. Maximum length is 50 characters. This property is optional and can be empty. |
| comment | string | A free-text comment regarding the delivery (e.g., quality of service, damage to the package), provided by the driver or signatory. Maximum length is 4000 characters. This property is optional and can be empty. |
| rating | string | A rating allowing clients to give feedback on their satisfaction of the delivery or service. If there was no rating the NO_RATING value is used. NO_RATING VERY_DISSATISFIED DISSATISFIED NEUTRAL SATISFIED VERY_SATISFIED This property is always present in response. |
| photo_uids | string | JSON encoded string with an array of strings. Each string contains the UIDs of photos related to the ePOD. Example: '[''1-6712264'', ''1-28EDD4D'']'. This property is optional and can be empty. |

downloadOrderEpodSignature Description

downloadOrderEpodSignature fetches a signature (JPEG) attached to an ePOD.

Technical details

| SOAP endpoint address / function name | orders Service #download Order Epod Signature |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

downloadOrderEpodSignature requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to downloadOrderEpodSignature:

| Parameter | Type | Description |
|-----------|-------------|---|
| orderno | string (20) | Account-unique order number, case-sensitive. This parameter is mandatory. |

Result

The file content is returned in the response body. The Content-Type HTTP header contains the MIME type 'application/octet-stream'. The Content-Disposition HTTP header contains the type 'attachment' and the file name, which is currently always 'signature.jpg'.

The SOAP API returns a data structure containing these values.

downloadOrderEpodPhoto Description

downloadOrderEpodPhoto fetches a photo (JPEG) attached to an ePOD.

Technical details

| SOAP endpoint address / function name | orders Service #download Order Epod Photo |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

downloadOrderEpodPhoto requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to downloadOrderEpodPhoto:

| Parameter | Type | Description |
|-----------|-------------|---|
| orderno | string (20) | Account-unique order number, case-sensitive. This parameter is mandatory. |
| photo_uid | string | A required, unique, identifier for a photo. |

The file content is returned in the response body. The Content-Type HTTP header contains the MIME type 'application/octet-stream'. The Content-Disposition HTTP header contains the type 'attachment' and the file name, which is currently always 'epod_photo.jpg'.

The SOAP API returns a data structure containing these values.

createOrderLoadedGoods Description

createOrderLoadedGoods creates a loaded goods entry associated with a specific order.

Loaded goods information is available for drivers when using the Work App.

Note that loaded goods might be created and updatedf only if the order is not yet sent.

Technical details

| SOAP endpoint address / function name | orders Service # create Order Loaded Goods |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

createOrderLoadedGoods requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to createOrderLoadedGoods:

| Parameter | Type | Description |
|---------------|-------------|--|
| orderno | string (20) | Account-unique order number, case-sensitive. This parameter is mandatory. |
| productId | string (50) | User defined identifier. Unique per order. This parameter is mandatory. |
| contents | string (50) | Description. This parameter is mandatory. |
| loadingMedium | string (50) | Name of the loading medium. This parameter is mandatory. |

| Parameter | Type | Description |
|---------------|------|--|
| quantity | int | Number of mediums. This parameter is mandatory. |
| weightInGrams | int | Weight of all mediums. This parameter is mandatory. |

Result for createOrderLoadedGoods:

| Parameter | Туре | Description |
|---------------|-------------|-----------------------------|
| productId | string (50) | User defined identifier. |
| contents | string (50) | Description. |
| loadingMedium | string (50) | Name of the loading medium. |
| quantity | int | Number of mediums. |
| weightInGrams | int | Weight of all mediums. |

updateOrderLoadedGoods Description

 ${\tt updateOrderLoadedGoods} \ {\tt updates} \ {\tt an} \ {\tt existing} \ {\tt loaded} \ {\tt goods} \ {\tt entry} \ {\tt associated} \ {\tt with} \ {\tt a} \ {\tt specific} \ {\tt order}.$

Loaded goods might be created and updated only if the order is not yet sent.

Technical details

| SOAP endpoint address / function name | ordersService#updateOrderLoadedGoods |
|---------------------------------------|--------------------------------------|
| Request limits | 10 requests / minute |

Parameters

updateOrderLoadedGoods requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to updateOrderLoadedGoods:

| Parameter | Type | Description |
|-----------|-------------|---|
| orderno | string (20) | Account-unique order number, case-sensitive. This parameter is mandatory. |

| Parameter | Type | Description |
|---------------|-------------|--|
| productId | string (50) | User defined identifier. Unique per order. This parameter is mandatory. |
| contents | string (50) | Description. This parameter is mandatory. |
| loadingMedium | string (50) | Name of the loading medium. This parameter is mandatory. |
| quantity | int | Number of mediums. This parameter is mandatory. |
| weightInGrams | int | Weight of all mediums. This parameter is mandatory. |

Result for updateOrderLoadedGoods:

| Parameter | Type | Description |
|---------------|-------------|-----------------------------|
| productId | string (50) | User defined identifier. |
| contents | string (50) | Description. |
| loadingMedium | string (50) | Name of the loading medium. |
| quantity | int | Number of mediums. |
| weightInGrams | int | Weight of all mediums. |

deleteOrderLoadedGoods Description

 ${\tt deleteOrderLoadedGoods} \ \ {\tt deleted} \ \ {\tt an} \ \ {\tt existing} \ \ {\tt loaded} \ \ {\tt goods} \ \ {\tt entry} \ \ {\tt associated} \ \ {\tt with} \ \ {\tt aspecific} \ \ {\tt order}.$

Loaded goods might be created and updated only if the order is not yet sent.

Technical details

| SOAP endpoint address / function name | orders Service # delete Order Loaded Goods |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

deleteOrderLoadedGoods requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to deleteOrderLoadedGoods:

| Parameter | Туре | Description |
|-----------|-------------|--|
| orderno | string (20) | Account-unique order number, case-sensitive. This parameter is mandatory. |
| productId | string (50) | User defined identifier. Unique per order. This parameter is mandatory. |

getOrderLoadedGoods Description

 ${\tt getOrderLoadedGoods}\ \textbf{retrieves}\ \textbf{existing}\ \textbf{loaded}\ \textbf{goods}\ \textbf{entries}\ \textbf{associated}\ \textbf{with}\ \textbf{a}\ \textbf{specific}\ \textbf{order}.$

Technical details

| SOAP endpoint address / function name | orders Service #get Order Loaded Goods |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

getOrderLoadedGoods requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to getOrderLoadedGoods:

| Parameter | Type | Description |
|-----------|-------------|---|
| orderno | string (20) | Account-unique order number, case-sensitive. This parameter is mandatory. |

Result

Result for getOrderLoadedGoods:

| Parameter | Type | Description |
|---------------|-------------|-----------------------------|
| productId | string (50) | User defined identifier. |
| contents | string (50) | Description. |
| loadingMedium | string (50) | Name of the loading medium. |
| quantity | int | Number of mediums. |

| Parameter | Туре | Description |
|---------------|------|------------------------|
| weightInGrams | int | Weight of all mediums. |

Messages

sendTextMessageExtern Description

The sendTextMessageExtern operation allows you to send a text message to an object. The message is sent asynchronously and therefore a positive result of this operation does not indicate that the message was sent to the object successfully.

Technical details

| SOAP endpoint address / function name | messagesService#sendTextMessage |
|---------------------------------------|---------------------------------|
| Request limits | 300 requests / 30 minutes |

Parameters

sendTextMessageExtern requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to sendTextMessageExtern:

| Parameter | Type | Description |
|-------------|--------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| messagetext | string (500) | |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

clearTextMessagesExtern Description

Removes all text messages from the device.

Technical details

| SOAP endpoint address / function name | messages Service # clear Text Messages |
|---------------------------------------|--|
| Request limits | 300 requests / 30 minutes |

clearTextMessagesExtern requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to clearTextMessagesExtern:

| Parameter | Туре | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

showMessages Description

Using showMessages you can retrieve exclusively text, order, or text status messages without using the queue service. The maximum result size is limited to 500 entries. To get an additional batch of messages the date range parameter has to be changed.

Technical details

| SOAP endpoint address / function name | messagesService#showMessages |
|---------------------------------------|------------------------------|
| Request limits | 10 requests / minute |

Parameters

showMessages requires the following common parameters:

- Authentication parameters
- General parameters
- <u>Date range filter parameters</u> (lower limit is 14x24h back)

Parameters specific to showMessages:

| Parameter | Type | Description |
|-----------|-------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. This parameter is optional |

| Parameter | Type | Description |
|-----------|-----------------------------|---|
| category | int | Valid values: |
| | | 1 - text messages2 - order status messages3 - text status messages |
| | This parameter is optional. | |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. This parameter is optional. |

Result

Result for showMessages:

| Parameter | Туре | Description |
|--------------|-------------|--|
| msgid | int | Identifies a message and is unique within the system. Possible values are in the range 0 $\#$ msgid $\#$ 2 ⁶⁴ -1 |
| msg_time | dateTime | ISO 8601-formatted date and time in the UTC time- zone, combined representation in the extended for- mat. |
| | | Example: 2007-12-24T16:00:00+02:00 |
| msg_flag | string | Valid values: s = sent R = received |
| msg_category | int | Valid values: 1 - text messages 2 - order status messages 3 - text status messages |
| msg_text | string | The text of the message. |
| msg_refid | int | The message ID reference to the original message (if available). |
| msg_reftype | int | Valid values: 1 - received 2 - read 3 - discarded Only in use if msg_refid exists, otherwise empty. |
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |

| Parameter | Type | Description |
|---------------|-------------|---|
| pos_time | dateTime | ISO 8601-formatted date and time in the UTC time- zone, combined representation in the extended for- mat. |
| | | Example: 2007-12-24T16:00:00+02:00 |
| pos_latitude | int | Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| pos_longitude | int | Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| pos_text | string | A detailed textual description of the location. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

sendBinaryMessage Description

sendBinaryMessage sends a maximum of 2560 byte raw data to a the driver terminal. The base64 encoding required for transmission of binary messages through the web service API does not count as raw payload data size. Be aware that there can only be one pending binary message for a driver terminal at a time.

Further calls of sendBinaryMessage for the same driver terminal will be rejected until the data is transferred to the driver terminal.

To track the status of the binary message, please use the WEBFLEET.connect Queue Service.

Note: To run sendBinaryMessage, an API key and the LINK.connect feature is required.

This action is supported on PRO 83xx/TomTom PRO 82xx devices only.

To use this action, you need to have the additional service LINK.connect booked. The data volume caused through <code>sendBinaryMessage</code> should be covered by the data volume of the selected LINK.connect tariff.

Technical details

| SOAP endpoint address / function name | messagesService#sendBinaryMessages |
|---------------------------------------|------------------------------------|
| Request limits | 10 requests / minute |

Parameters

sendBinaryMessages requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to sendBinaryMessage:

| Parameter | Туре | Description |
|---------------|------------------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| appid | string (128) | An identifier to mark the application on the destination device. |
| | | Note : Use package style for example com.vendor.application.part |
| | | This parameter is required. |
| correlationid | int | An arbitrary identifier that helps to identify Webfleet messages in the message queue service that belong to this request. Should be unique in the integration server backend. This paramter is optional. |
| data | base64 (raw (2560)) | Base64 encoded user payload, max. 2.5 KB. The data is not interpreted by Webfleet. This parameter is required. |

resetBinaryMessages Description

If the driver terminal does not respond to outgoing data sent using <u>sendBinaryMessage</u> the transfer status is incomplete. resetBinaryMessages resets the outgoing data transfer and gets back to a consistent state between integration server backend and device. This is important because you cannot send new data until the current transfer is completed or cancelled/reset.

If the binary data to be delivered with the original send is still important from the view of the PRO.connect integration solution, the integration server backend should repeat the sendBinaryMessages operation after the reset.

Note: This action is supported on PRO 83xx/TomTom PRO 82xx devices only. To use this action, you need to have the additional service LINK.connect booked.

Technical details

| SOAP endpoint address / function name | messages Service #reset Binary Messages |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

resetBinaryMessages requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to resetBinaryMessage:

| Parameter | Type | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

clearBinaryMessages Description

clearBinaryMessages removes data from the outgoing queue on the triver terminal. This can be used to remove stale data for applications on the driver terminal that do not exist anymore or that are unlikely to connect anymore.

clearBinaryMessages is needed because the driver terminal does not remove outgoing data by itself as it cannot decide if an application will connect sometime.

Note: This action is supported on PRO 83xx/TomTom PRO 82xx devices only. To use this action, you need to have the additional service LINK.connect booked.

Technical details

| SOAP endpoint address / function name | messagesService#clearBinaryMessages |
|---------------------------------------|-------------------------------------|
| Request limits | 10 requests / minute |

clearBinaryMessages requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to clearBinaryMessages:

| Parameter | Type | Description |
|-----------|--------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| appid | string (128) | An identifier to mark the application on the destination device. |
| | | Note : Use package style, for example <i>com.ven-dor.application.part</i> |
| | | If not used, all binary messages on the device will be removed. |
| | | This parameter is optional. |

Drivers

Synchronising driver lists Manually

Using the Webfleet user interface, you can send the complete driver list to a vehicle.

- 1. Select your vehicle.
- 2. Go to Contract/Details.
- 3. Select Configure.
- 4. Select the Basic settings tab.

You can find the section Synchronize driver list.

5. Click Send.

The current driver list is transmitted.

Automatically

Webfleet will send the latest changes of the driver list to a currently connected LINK 7xx/5xx/4xx/3xx/Driver Terminal combination when the device:

- Sends a working time related message.
- Sends a text message.
- Sends a predefined general status message.
- Sends an order related predefined status message.
- · Changes the status of the active order.
- · Activates in Webfleet.
- Starts navigating.

Specifically for connected navigation devices, the driver list is updated when the user accesses the driver list and the device is connected to Webfleet.

showDriverReportExtern Description

Lists all drivers matching the indicated parameters and filters.

Technical details

| SOAP endpoint address / function name | objects And People Reporting Service #show Driver Report |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

showDriverReportExtern requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to showDriverReportExtern:

| Parameter | Type | Description |
|---------------|--------|---|
| filterstring | string | An arbitrary pattern that is located in the object data. |
| driverno | string | Identifying number of a driver. Unique within an account. Search for the specified driver number. Can be used alternatively to driveruid. |
| ungroupedonly | string | Allows to filter on drivers that are currently not assigned to a certain driver group. Only valid value is true. This parameter overrules the group name filter parameter. This parameter is optional. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |

Result

Result for showDriverReportExtern:

| Parameter | Туре | Description |
|-------------|--------------|---|
| driverno | string (15) | Account-unique driver number, case-sensitive. |
| name1 | string (50) | |
| name2 | string (50) | |
| name3 | string (50) | |
| addrno | string (10) | Identifying number of an address. Unique within an account. |
| state | string (2) | ISO 3166-1 alpha-2 code for the country (capital letters). |
| zip | string (10) | |
| city | string (250) | |
| street | string (250) | |
| telmobile | string (50) | |
| telprivate | string (50) | |
| email | string (50) | |
| description | | |

| Parameter | Туре | Description |
|-------------------------------|-------------------------|--|
| company | string (250) | |
| objectno | string (10) | Identifying number of an object. Unique within an account, case sensitive. Identifies the driver currently signed on to this object. |
| signontime | dateTime | The time when the driver signed on to this object. ISO 8601-formatted date and time in the UTC time- zone, combined representation in the extended for- mat. |
| | | Example: 2007-12-24T16:00:00+02:00 |
| dt_cardid | string (16) | A driver card id as used with the digital tachograph. |
| dt_cardcountry | string (2) | ISO 3166-1 alpha-2 code for the country (capital letters). |
| rll_buttonid | string (16) | Remote LINK/ID key identifier |
| signonrole | nonNega- tiveInteger | Valid values: • 1 - Driver • 2 - Co-Driver • 3 - Worker |
| current_workstate | nonNega- tiveInteger | Valid values: 0 - Unknown 1 - Free time (PND only) 2 - Pause (PND and digital tachograph) 3 - Standby (digital tachograph only) 4 - Working (PND only) 5 - Driving (digital tachograph only) 6 - Other work (digital tachograph only) |
| current_working- timestart | dateTime | ISO 8601-formatted date and time in the UTC time- zone, combined representation in the extended for- mat. |
| | | Example: 2007-12-24T16:00:00+02:00 |
| current_working- timeend | dateTime | ISO 8601-formatted date and time in the UTC time- zone, combined representation in the extended for- mat. |
| | | Example: 2007-12-24T16:00:00+02:00 |

| Parameter | Туре | Description |
|------------------|---|---|
| current_working- | duration | ISO 8601-formatted duration. |
| time | | Example: PT362S represents a duration of 362 seconds, as does PT6M2S. |
| | | Accumulated working time if current_workstate indicates a non-working state. |
| addr_latitude | int | Geographic latitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . |
| addr_longitude | int | Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| manualassignment | int | Indicates whether the driver is assigned to the current vehicle manually by using attachDriverToVehicle or automatically by the driver who has logged on using a navigation device or digital tachograph. Valid values: • 0 - automatically • 1 - manually • <empty> - if no vehicle is assigned or the information is not available</empty> |
| pin | nonNega- tiveInteger (20) ([1-9]\d*) | The PIN that a driver uses to log in to the Driver Terminal. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |

| Parameter | Туре | Description |
|------------------------|--------|--|
| driver_keys | string | JSON encoded string with an array of JSON objects composed by the driver keys, associated with the driver. The JSON objects have following format: |
| | | <pre>"driver_key_type": <number>, "driver_key_value": <string> }</string></number></pre> |
| | | Valid values: |
| | | 1 - Remote LINK2 - Generic identifier |
| | | Usage example: RFID used with PRO 2020 Driver Terminal. |
| | | |
| driving_license string | string | JSON encoded string with a JSON object composed by the driving licence details of the driver. The JSON object has following format: |
| | | <pre>"number": <string>, "country": <string>, "state": <string>, "issue_date": <date>, "expiry_date": <date>, "types": <array> </array></date></date></string></string></string></pre> |
| | | Field ${\tt types}$ is an array of JSON objects which have the following format: |
| | | <pre>"code": <string> "valid_from": <date>, "valid_to": <date> }</date></date></string></pre> |
| | | Valid values of licence type code: A, A1, B, B1, BE, C, C1, C1E, CE, D, D1, D1E, DE |

insertDriverExtern Description

This action creates a driver.

Technical details

SOAP endpoint address / function name

SOAP endpoint address / func- driverManagementService#insertDriver

insertDriverExtern requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to insertDriverExtern:

| Parameter | Type | Description |
|-------------|---------------|---|
| driverno | string (15) | Account-unique driver number, case-sensitive. This parameter is required. |
| name | string (50) | This parameter is required. |
| name2 | string (50) | Additional driver name. This parameter is optional. |
| name3 | string (50) | Additional driver name. This parameter is optional. |
| company | string (250) | |
| description | string (4000) | |
| addrno | string (10) | Identifying number of an address. Unique within an account. The following conditions apply: If addrno is indicated and it shows a valid address number, the corresponding address will be assigned to the driver. If addrno is indicated and the value is empty, the relation between an assigned address and the driver will be deleted. If addrno is empty and at least one of the free text address components country, zip, city and street is indicated, the stored address relation for this driver will be removed and the value of the ad- |
| country | string (2) | dress component will be attached to the driver. ISO 3166-1 alpha-2 code for the country (capital letters). |
| zip | string (10) | |
| city | string (250) | |
| street | string (250) | |
| telmobile | string (50) | |
| telprivate | string (50) | |
| | | 193 |

| Parameter | Type | Description |
|----------------|---|---|
| pin | nonNeg- ativeInte- ger (20) ([1-9]\d*) | Identifying number used for driver identification. To be used for all devices except LINK (classic) and TomTom GO 715. This parameter is optional. |
| email | string (50) | |
| dt_cardid | string (16) | A driver card id as used with the digital tachograph. This parameter is optional. |
| dt_cardcountry | string (2) | ISO 3166-1 alpha-2 code for the country (capital letters). This parameter is optional. |
| rll_buttonid | string (16) | Remote LINK/ID key identifier. Usage details: |
| | | the ID key provided must be 'available', that is, not assigned to any other driver to remove the ID key assignment, provide an empty parameter to assign a new ID key, first remove the old assignment if the parameter is not part of the request, the current assignment is left unchanged This parameter is optional. |
| driver_key | string | Driver key identifier composed by driver key type and driver key value. The value must follow the format: driverkeytype, driverkeyvalue Usage details: • the driver key provided must not be assigned to |
| | | any other driver to remove a driver key assignment, driverkey-type followed by an empty driverkeyvalue must be provided to change multiple driver keys you can specify the driver_key parameter multiple times Valid values for driverkeytype: 1 - Remote LINK 2 - Generic Identifier, which is used for example for RFID used with PRO 2020 Driver Terminal |
| license_number | string (20) | Number of the driving licence. This parameter is required if any driving licence field is filled. |

| Parameter | Туре | Description |
|--------------------------|-------------|--|
| license_country | string (2) | Country code of the driving licence. ISO 3166-1 alpha-2 for the country (capital letters). This parameter is required if any driving license field is filled. |
| license_state | string (30) | Issuing state of the driving licence. This parameter is required if any driving licence field is filled. |
| license_issue_date | date | Issue date of the driving licence. This parameter is required if any driving licence field is filled. |
| license_ex- piry_date | date | Expiry date of the driving licence. This parameter is optional. |
| license_type | string | Driving licence type composed by licence type code, valid from date and optional valid to date. The value must follow one of these formats: |
| | | <pre>licenseTypeCode,validFrom,validTo licenseTypeCode,validFrom</pre> |
| | | Valid values of licence type code: A, A1, B, B1, BE, C, C1, C1E, CE, D, D1, D1E, DE. This parameter is required if any driving licence field is filled. |

updateDriverExtern Description

This action updates driver details.

Technical details

| SOAP endpoint address / function name | driverManagementService#updateDriver |
|---------------------------------------|--------------------------------------|
| Request limits | 10 requests / minute |

Parameters

 ${\bf update Driver Extern} \ {\bf requires} \ {\bf the} \ {\bf following} \ {\bf common} \ {\bf parameters} :$

- Authentication parameters
- General parameters

Parameters specific to updateDriverExtern:

| Parameter | Type | Description |
|-------------|---|---|
| driverno | string (15) | New driver number to be set for the driver identified by driverno_old or driveruid, account-unique, case-sensitive. |
| | | This paramater is optional. |
| name | string (50) | |
| name2 | string (50) | Additional driver name. This parameter is optional. |
| name3 | string (50) | Additional driver name. This parameter is optional. |
| company | string (250) | |
| description | string (4000) | |
| addrno | string (10) | Identifying number of an address. Unique within an account. The following conditions apply: If addrno is indicated and it shows a valid address number, the corresponding address will be assigned to the driver. If addrno is indicated and the value is empty, the relation between an assigned address and the driver will be deleted. If addrno is empty and at least one of the free text address components country, zip, city and street is indicated, the stored address relation for this driver will be removed and the value of the ad- |
| country | string (2) | dress component will be attached to the driver. ISO 3166-1 alpha-2 code for the country (capital letters). |
| zip | string (10) | |
| city | string (250) | |
| street | string (250) | |
| telmobile | string (50) | |
| telprivate | string (50) | |
| pin | nonNeg- ativeInte- ger (20) ([1-9]\d*) | Identifying number used for driver identification. To be used for all devices except LINK (classic) and TomTom GO 715. |
| email | string (50) | |
| | | |

| Parameter | Type | Description |
|----------------|-------------|--|
| dt_cardid | string (16) | A driver card id as used with the digital tachograph. This parameter is optional. |
| dt_cardcountry | string (2) | ISO 3166-1 alpha-2 code for the country (capital letters). This parameter is optional. |
| rll_buttonid | string (16) | Remote LINK/ID key identifier Usage details: the ID key provided must be 'available', that is, not assigned to any other driver to remove the ID key assignment, provide an empty parameter to assign a new ID key, first remove the old assignment if the parameter is not part of the request, the current assignment is left unchanged This parameter is optional. |
| driverno_old | string (10) | Account-unique driver number, case-sensitive. Either driverno_old or driveruid is required. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Either driverno_old or driveruid is required. |
| driver_key | string | Driver key identifier composed of driver key type and driver key value. The value must follow the format: driverkeytype, driverkeyvalue Usage details: • the driver key provided must not be assigned to any other driver • to remove a driver key assignment, driverkey-type followed by an empty driverkeyvalue must be provided • to change multiple driver keys you can specify the driver_key parameter multiple times Valid values for driverkeytype: • 1 - Remote LINK • 2 - Generic Identifier, which is used for example for RFID used with PRO 2020 Driver Terminal |
| license_number | string (20) | Number of the driving licence. This parameter is required if any driving licence field is filled. |

| Parameter | Type | Description |
|--------------------------|-------------|--|
| license_country | string (2) | Country code of the driving licence. ISO 3166-1 alpha-2 for the country (capital letters). This parameter is required if any driving licence field is filled. |
| license_state | string (30) | Issuing state of the driving licence. This parameter is required if any driving licence field is filled. |
| license_issue_date | date | Issue date of the driving licence. This parameter is required if any driving licence field is filled. |
| license_ex- piry_date | date | Expiry date of the driving licence. This parameter is optional. |
| license_type | string | Driving license type composed by licence type code, valid from date and optional valid to date. The value must follow one of these formats: |
| | | <pre>licenseTypeCode, validFrom, validTo licenseTypeCode, validFrom</pre> |
| | | Valid values of licence type code: A, A1, B, B1, BE, C, C1, C1E, CE, D, D1, D1E, DE. This parameter is required if any driving licence field is filled. |

Additional notes for driver license data

To delete existing driver license data use empty field in license_number parameter.

deleteDriverExtern Description

This action deletes the indicated driver.

Technical details

| SOAP endpoint address / function name | driverManagementService#deleteDriver |
|---------------------------------------|--------------------------------------|
| Request limits | 10 requests / minute |

Parameters

 $\label{thm:common parameters:} \textbf{deleteDriverExtern} \ \text{requires the following common parameters:}$

- Authentication parameters
- General parameters

Parameters specific to deleteDriverExtern:

| Parameter | Туре | Description |
|-----------|-------------|--|
| driverno | string (15) | Account-unique driver number, case-sensitive. This parameter is required. Can be used alternatively to driveruid. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |

showOptiDriveIndicator Description

showOptiDriveIndicator shows the OptiDrive indicator per driver, the values of all its influencing variables and the factors each of them is calculated from for a defined period. The start and end of this period can be adjusted up to a maximum time frame of seven days within the last three months.

The OptiDrive indicator for the defined period delivered by <code>showOptiDriveIndicator</code> is calculated from pre-aggregated values per calendar day. The aggregated results produced by <code>showOptiDriveIndicator</code> are based on information for each driver across multiple vehicles.

Technical details

| SOAP endpoint address / function name | trip And Time Reporting Service #show Opti Drive Indicator |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

showOptiDriveIndicator requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Make use of the range pattern for floating weeks.

rangefrom_string and rangeto_string are treated as pure date values, there is no time indication needed. The specified day is considered in the currently valid time zone of the account. The date range must not be greater than 8 days ranging from the beginning of the start day to the ending of the current day. The date range must not be greater than 7 days when defined for an earlier period.

Parameters specific to showOptiDriveIndicator:

| Parameter | Type | Description |
|-----------|-------------|---|
| driverno | string (15) | Identifying number of a driver. Unique within an account, case-sensitive. This parameter is optional. |

| Parameter | Type | Description |
|-----------------|--------|--|
| drivergroupname | string | Name of the group of drivers the driver is assigned to, case-sensitive. This parameter is optional. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. This parameter is optional. |

Result

Result for showOptiDriveIndicator:

| Parameter | Туре | Description |
|--------------------------|---------|--|
| driverno | string | Identifying number of a driver. Unique within an account. |
| drivername | string | Display name of a driver. |
| totaldrivingtime | integer | The total driving time of the driver in the defined period in seconds. |
| optidrive_indica- tor | float | The overall OptiDrive indicator. |
| trend | float | Value ranges from -1 to 1. Indicates the development of the OptiDrive value of the past showing whether the driver's driving style was increasing, stable or decreasing. Increase of the OptiDrive value is indicated by positive numbers. Decrease of the OptiDrive value is indicated by negative numbers. Values around 0 indicate the OptiDrive indicator stays stable. Example 1: A value of 0.1 indicates only a slight increase of the OptiDrive indicator. Example 2: A value of -0.9 indicates a heavy decrease of the OptiDrive indicator. |
| totaldistance | integer | Total distance driven in defined period in meters. |
| speeding_indica- tor | float | Value of influencing variable for speeding events. Value ranges from 0 to 1. |
| speeding_time | integer | Total time of speeding events in seconds. |

| Parameter | Туре | Description |
|-------------------------------------|---------|--|
| speeding_avgex- cess | float | The average speed limit excess of all speeding events within defined period, in km/h. |
| | | Example: During the first speeding event the speed limit was broken by 10 km/h. During the second speeding event the speed limit was broken by 20 km/h. The resulting speeding_avgexcess is 15 km/h. |
| speeding_avglimit | float | The average of effective speed limits during all speeding events in km/h. |
| | | Example: If the speed limit during the first speeding event was 50 km/h and the speed limit during the second speeding event was 70 km/h, the resulting speeding_avglimit is 60 km/h. |
| speeding_count | integer | Number of speeding events registered during the defined period. |
| drivingevents_indicator | float | Value of influencing variable for driving events. Value ranges from 0 to 1. |
| dri- vingevents_count | integer | Number of driving events registered during defined period. |
| dri- vingevents_avg- severity | float | The average severity of driving events in percent. |
| idling_indicator | float | Value of influencing variable for idling. Value ranges from 0 to 1. |
| idling_time | integer | Time spent idling during defined period, in seconds. |
| idling_wastedfuel | integer | Total amount of fuel wasted while idling within the defined period. |
| fuelusage_indica- tor | float | Value of influencing variable for fuel consumption. Value ranges from 0 to 1. |
| fuelusage_total | integer | Total amount of fuel used by driver within the defined period in millilitres. |
| fuelusage_refer- ence | integer | The amount of fuel the driver should have used according to the fuel consumption reference value for the covered distance within the defined period. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |
| coasting_indicator | float | Value of influencing variable for coasting. Value ranges from 0 to 1. |

| Parameter | Туре | Description |
|--|-------------------------|--|
| coasting_refer- ence_time | nonNega- tiveInteger | Potential coasting time in seconds, i.e. the sum of coasting and braking time. |
| coasting_time | nonNega- tiveInteger | Actual coasting time in seconds. |
| coasting_distance | nonNega- tiveInteger | Actual coasting distance in meters. |
| constan- t_speed_indicator | float | Value of influencing variable for constant speed. Value ranges from 0 to 1. |
| constan- t_speed_refer- ence_time | nonNega- tiveInteger | Potential driving time in seconds at which constant speed was evaluated. |
| constan- t_speed_time | nonNega- tiveInteger | Actual driving time with constant speed, in seconds. |
| constan- t_speed_refer- ence_time_urban | nonNega- tiveInteger | Potential driving time with constant speed in urban areas, in seconds. |
| constan- t_speed_refer- ence_time_ex- tra_urban | nonNega- tiveInteger | Potential driving time with constant speed in extra urban areas, in seconds |
| constan- t_speed_refer- ence_time_motor- way | nonNega- tiveInteger | Potential driving time with constant speed on motorway, in seconds. |
| constan- t_speed_time_ur- ban | nonNega- tiveInteger | Actual driving time with constant speed in urban areas, in seconds. |
| constan- t_speed_time_ex- tra_urban | nonNega- tiveInteger | Actual driving time with constant speed in extra urban areas, in seconds. |
| constan- t_speed_time_mo- torway | nonNega- tiveInteger | Actual driving time with constant speed on motorways, in seconds. |
| green_speed_indi- cator | float | Value of influencing variable for green speed. Value ranges from 0 to 1. |
| green_speed_ref- erence_time | nonNega- tiveInteger | The actual time of a trip the green speed reference value would apply, in seconds. |
| | | Example: The time where the speed limit was greater than > 80 km/h. |

| Parameter | Type | Description |
|-----------------------------------|-------------------------|--|
| green_speed_time | nonNega- tiveInteger | Driving time with speed lower than/equal to current green speed limit (never greater than green_speed_reference_time), in seconds. |
| high_revving_indi- cator | float | Value of influencing variable for highrevving. Value ranges from 0 to 1. |
| high_revving_reference_time | nonNega- tiveInteger | Driving time in which RPM data was reported, in seconds. |
| high_revving_time | nonNega- tiveInteger | Actual time in which the high-revving was reported, in seconds. |
| energy_consump- tion_indicator | float | Value of influencing variable for energy consumption of electric vehicles. Value ranges from 0 to 1. |
| cruise_control_in- dicator | float | Value of influencing variable for cruise control. Value ranges from 0 to 1. |
| video_indicator | float | Value of influencing variable video events. Value ranges from 0 to 1. |

showDriverGroups Description

This action retrieves a list of all driver groups.

Technical details

| SOAP endpoint address / function name | driver Management Service #show Driver Groups |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

showDriverGroups requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to showDriverGroups:

| Parameter | Туре | Description |
|-----------------|--------|---|
| drivergroupname | string | The given entry filters the result list on driver groups with matching names. This parameter is optional. |

Result

Result forshowDriverGroups:

| Parameter | Type | Description |
|-----------------|--------|---|
| drivergroupname | string | |
| drivergroupuid | string | A unique, unchangable identifier for the indicated driver group, automatically generated. |

showDriverGroupDrivers Description

This action lists the assignment of drivers to driver groups. Each driver can be in no, one or more than one group.

Using one or both of the parameters driverno and drivergroupname, only according matches are returned.

Technical details

| SOAP endpoint address / function name | driver Management Service #show Driver Group Drivers |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

showDriverGroupDrivers requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to showDriverGroupDrivers:

| Parameter | Туре | Description |
|-----------------|--------|--|
| driverno | string | Identifying number of a driver. Unique within an account, case-sensitive. Can be used alternatively to driveruid. |
| drivergroupname | string | The given entry filters the result list on driver groups with matching names, case-sensitive. This parameter is optional. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |

Result

Result for showDriverGroupDrivers:

| Parameter | Type | Description |
|-----------------|--------|--|
| driverno | string | Identifying number of a driver. Unique within an account. |
| drivername | string | Display name of a driver. |
| drivergroupname | string | |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |
| drivergroupuid | string | A unique, unchangeable identifier for the indicated driver group, automatically generated. |

attachDriverToGroup Description

This action assigns a driver to a specific group.

Technical details

| SOAP endpoint address / function name | driverManagementService#attachDriverToGroup |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

attachDriverToGroup requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to attachDriverToGroup:

| Parameter | Type | Description |
|-----------------|--------|---|
| drivergroupname | string | Name of the group the driver shall be assigned to, case-sensitive. This parameter is required. |
| driverno | string | Identifying number of a driver. Unique within an account, case-sensitive. This parameter is required. Can be used alternatively to driveruid. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |

detachDriverFromGroup Description

This action detaches a driver from a specific driver group.

Technical details

| SOAP endpoint address / function name | driverManagementService#detachDriverGroup |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

detachDriverFromGroup requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to detachDriverFromGroup:

| Parameter | Туре | Description |
|-----------------|--------|---|
| drivergroupname | string | Name of the group the driver group from which the driver shall be detached, case-sensitive. This parameter is required. |
| driverno | string | Identifying number of a driver. Unique within an account, case-sensitive. This parameter is required. Can be used alternatively to driveruid. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |

insertDriverGroup Description

This action creates a driver group. The group name must not start with 'sys\$'.

Technical details

| SOAP endpoint address / function name | driver Management Service # insert Driver Group |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

insertDriverGroup requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to insertDriverGroup:

| Parameter | Туре | Description |
|-----------------|--------|---|
| drivergroupname | string | Name of the driver group, case-sensitive. This parameter is required. |

deleteDriverGroup Description

This action deletes a driver group and the assignments of all drivers to that group. The drivers detached through this action are not being deleted.

Technical details

| SOAP endpoint address / function name | driverManagementService#deleteDriverGroup |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

deleteDriverGroup requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to deleteDriverGroup:

| Parameter | Туре | Description |
|-----------------|--------|---|
| drivergroupname | string | Name of the driver group, case-sensitive. This parameter is required. |

updateDriverGroup Description

This action allows to update the name of a driver group while retaining the assignment of drivers to that group. The group name must not start with 'sys\$'.

Technical details

| SOAP endpoint address / function name | driverManagementService#updateDriverGroup |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

updateDriverGroup requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to updateDriverGroup:

| Parameter | Туре | Description |
|--------------------------|--------|---|
| drivergroupname | string | Name of the driver group, case-sensitive. This parameter is required. |
| drivergroup- name_old | string | Name of the driver group, case-sensitive. This parameter is required. |

attachDriverToVehicle Description

Using attachDriverToVehicle you can manually assign a driver to a specific vehicle.

If the driver was previously assigned to another vehicle, they will be automatically detached from that vehicle.

This action cannot be executed when the driver is not manually assigned to another vehicle – that means by not using attachDriverToVehicle. Additionally, this action cannot be executed when a different driver is not manually assigned to the respective vehicle. This can be the case if the driver for example logs on to a vehicle by using a Driver Terminal or a digital tachograph.

Note: Keep in mind that this action should only be used as a kind of exception (e.g. one-time driver assignment/detachment) and not for the regular and reoccurring driver assignment. Generally the driver assignment should only be done by using a Driver Terminal from Webfleet, PRO 2020, Remote LINK Working Time or a digital tachograph.

Technical details

| SOAP endpoint address / function name | driverManagementService#attachDriverToVehicle |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

attachDriverToVehicle requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to attachDriverToVehicle:

| Parameter | Type | Description |
|-----------|-------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| driverno | string | Identifying number of a driver. Unique within an account, case-sensitive. This parameter is required. Can be used alternatively to driveruid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |

detachDriverFromVehicle Description

Using detachDriverFromVehicle you can remove the manual assignment of a driver from a vehicle.

This action cannot be executed if the driver was not manually assigned by using attach-DriverToVehicle. This can be the case when the driver for example logged on to the vehicle using a Driver Terminal or the digital tachograph.

Note: Keep in mind that this action should only be used as a kind of exception (e.g. one-time driver assignment/detachment) and not for the regular and reoccurring driver assignment. Generally the driver assignment should only be done by using a Driver Terminal from Webfleet, PRO 2020, Remote LINK Working Time or a digital tachograph.

Technical details

| SOAP endpoint address / function name | driverManagementService#detachDriverFromVehicle |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

detachDriverFromVehicle requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to detachDriverFromVehicle:

| Parameter | Type | Description |
|-----------|-------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| driverno | string (15) | Identifying number of a driver. Unique within an account, case-sensitive. This parameter is required. Can be used alternatively to driveruid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |

getDriverRdtRules Description

getDriverRdtRules returns the rules for calculating remaining driving times, working times and infringements for a specific driver or all drivers of the account.

These rules are applied

- when retrieving remaining driving times for the driver
- when determining infringements reported by showEventReportExtern

The rules can be changed by the action updateDriverRdtRules.

getDriverRdtRules is available for accounts that have at least one vehicle for which one of the following additional services is booked:

- Remaining Driving Times
- Webfleet Tachograph Manager Plus
- Webfleet TachoShare Plus

Related actions

- <u>getRemainingDrivingTimesEU</u> calculates remaining driving times
- <u>updateDriverRdtRules</u> changes the rules for calculating driving and working times and infringements
- <u>showEventReportExtern</u> returns event notifications, including infringement notifications

Technical details

SOAP endpoint address / func- driverManagementService#getDriverRdtRules tion name

getDriverRdtRules requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to getDriverRdtRules:

| Parameter | Type | Description |
|-----------|-------------|--|
| driverno | string (15) | Identifying number of a driver. Unique within an account, case-sensitive. Can be used alternatively to driveruid. |
| driveruid | string (30) | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |

Result

Result for getDriverRdtRules:

| Parameter | Type | Description |
|-----------|-------------|--|
| driverno | string (15) | Identifying number of a driver. Unique within an account. |
| driveruid | string (30) | A unique, unchangeable identifier for the indicated driver, automatically generated. |

| Parameter | Type | Description |
|-------------------------|--|---|
| country string | string | The country determines which regulation and which rules are available for configuration. Refer to <u>updateDriverRdtRules</u> for possible combinations of country, regulation and rules. Format: ISO 3166-1 alpha-2 or NONE Allowed values: |
| | | • DE |
| | | • IT |
| | | DKNL |
| | | • AT |
| | | • GB |
| | | • IE |
| | | • CH |
| | | • FR |
| | | • SI |
| | | • PL |
| | | • BE |
| | | ESSE |
| | | • NO |
| | | • FI |
| | | • PT |
| | | • NONE |
| regulation_type string | The regulation that should be applied when calculating (remaining) driving and working times and infringements. Allowed values: | |
| | | • EU_561 |
| | | Regulation (EC) No 561/2006 - Regulation of rules on driving times, breaks and rest periods. |
| | | Applicable to all EU countries. |
| | | • ARV1_2011 |
| | | Chauffeurverordnung, ARV 1 – Verordnung über die Arbeits- und Ruhezeit der berufsmässigen Motorfahrzeugführer und -führerinnen. |
| | | Applicable to Swizerland (CH) only. • FPERSV |
| | | <u>Fahrpersonalverordnung</u> - Verordnung zur Durchführung des Fahrpersonalgesetzes. |
| | | Applicable to Germany (DE) only. |
| bus_rule | boolean | If true the 12-day rule is considered in the calculation, which is regulated by (EC) No 561/2006, Article 8(6a). |
| work- ing_time_rules | boolean | If true country specific working time rules are considered in the calculation. |

| Parameter | Туре | Description |
|-----------------|---------|---|
| employment_type | string | The type of employment. Only applicable if regulation_type ARV1_2011 is selected. Allowed values: • EMPLOYEE • SELF_EMPLOYED |
| | | If EMPLOYEE is selected, the Swiss working time regulations are considered in the calculation. Otherwise, if SELF_EMPLOYED is selected, they are not considered. |
| isDefault | boolean | If true then these are default rules. As long as no specific rule has been saved for a driver, predefined default rules are automatically used. Only after setting the rules using updateDriverRdtRules the first time, the value isDefault is always false. |

updateDriverRdtRules Description

updateDriverRdtRules changes the rules for calculating remaining driving times, working times and infringements for a specific driver of the account. The action is available for accounts that have at least one vehicle for which one of the following additional features is booked:

- Remaining Driving Times
- Webfleet Tachograph Manager Plus
- Webfleet TachoShare Plus

These rules are applied

- when retrieving remaining driving times for the driver
- when determining infringements reported by showEventReportExtern

The currently stored rules can be retrieved by the action <code>getDriverRdtRules</code>.

Related actions

- <u>getRemainingDrivingTimesEU</u> calculates remaining driving times
- <u>getDriverRdtRules</u> retrieves the rules for calculating driving and working times and infringements
- <u>showEventReportExtern</u> returns event notifications, including infringement notifications

Technical details

| SOAP endpoint address / function name | driver Management Service #update Driver Rdt Rules |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

updateDriverRdtRules requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to updateDriverRdtRules:

| Parameter | Туре | Description |
|-----------|-------------|--|
| driverno | string (15) | Identifying number of a driver. Unique within an account, case-sensitive. Can be used alternatively to driveruid. |
| driveruid | string (30) | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |
| country | string | The country determines which regulation and which rules are available for configuration. Refer to section Allowed parameter combinations for possible combinations of country and regulation_type. Format: ISO 3166-1 alpha-2 or NONE Allowed values: DE IT DK NL AT GB IE CH FR SI PL BE ES SE NO FI NONE |
| | | This parameter is mandatory. |

| Parameter | Туре | Description |
|-------------------------|---------|--|
| regulation_type | string | The regulation that should be applied when calculating (remaining) driving and working times and infringements. Allowed values: |
| | | EU_561 Regulation (EC) No 561/2006 - Regulation of rules on driving times, breaks and rest periods. Applicable to all EU countries. ARV1_2011 Chauffeurverordnung, ARV 1 - Verordnung über die Arbeits- und Ruhezeit der berufsmässigen Motorfahrzeugführer und -führerinnen. Applicable to Swizerland (CH) only. FPERSV Fahrpersonalverordnung - Verordnung zur Durchführung des Fahrpersonalgesetzes. Applicable to Germany (DE) only. |
| | | This parameter is mandatory. |
| bus_rule | boolean | If true the 12-day rule is considered in the calculation, which is regulated by (EC) No 561/2006, Article 8(6a). |
| work- ing_time_rules | boolean | If true country specific working time rules are considered in the calculation. |
| employment_type | string | The type of employment. Only applicable if regulation_type ARV1_2011 is selected. Allowed values: • EMPLOYEE • SELF_EMPLOYED |
| | | If EMPLOYEE is selected, the Swiss working time regulations are considered in the calculation. Otherwise, if SELF_EMPLOYED is selected, they are not considered. |

Allowed parameter combinations

Driving and working times rules are defined by the country, the regulation and rules. In each country only a certain regulation and a certain set of rules can be applied. The corresponding parameters country, regulation_type, bus_rules, working_time_rules and employment_type depend on each other and only specific combinations are allowed as shown in the table below.

Note: Country NONE is a special case that, if stored in combination with EU_561, allows to reset the rules of a driver to the default. This default rule configuration is the same that is automatically applied to those drivers, for which no own configuration has yet been saved.

| Country | Regulation | Туре |
|---------|------------|---|
| DE | EU_561 | bus_ruleworking_time_rules |
| DE | FPersV | • bus_rule |
| IT | EU_561 | bus_ruleworking_time_rules |
| DK | EU_561 | bus_rule |
| NL | EU_561 | bus_ruleworking_time_rules |
| АТ | EU_561 | bus_ruleworking_time_rules |
| GB | EU_561 | bus_ruleworking_time_rules |
| IE | EU_561 | bus_ruleworking_time_rules |
| СН | ARV1_2011 | bus_ruleemployment_type |
| FR | EU_561 | bus_ruleworking_time_rules |
| SI | EU_561 | • bus_rule |
| PL | EU_561 | • bus_rule |
| BE | EU_561 | • bus_rule |
| ES | EU_561 | • bus_rule |
| SE | EU_561 | • bus_rule |
| NO | EU_561 | • bus_rule |
| FI | EU_561 | bus_rule |
| PT | EU_561 | • bus_rule |
| NONE | EU_561 | |

getOptiDriveProfiles Description

This action returns a list of OptiDrive Profiles available for the account. Optionally, the result can be restricted to a single driver only.

OptiDrive Profiles are an extension of what was previously known as OptiDrive KPI weights which were configured in the account settings. The main difference is that OptiDrive Profiles are assigned per driver, which means that on the same account multiple drivers can have different configurations on how their OptiDrive score is calculated. Each account has at least one, default OptiDrive profile and each driver is always assigned to one and only one profile.

Technical details

| SOAP endpoint address / function name | optiDriveProfileService#getOptiDriveProfiles |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

getOptiDriveProfiles requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to getOptiDriveProfiles:

| Parameter | Type | Description |
|-----------|--------|---|
| driverno | string | Identifying number of a driver. Unique within an account. Can be used alternatively to driveruid. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |

Result

Result for getOptiDriveProfiles:

| Parameter | Туре | Description |
|--------------------------|-------------|---|
| profile_name | string (50) | A name of the OptiDrive profile. In case of the default OptiDrive profile it is translated. The names of other profiles are chosen by users and are not translated. |
| speed- ing_kpi_weight | int | The Speeding KPI weight in the OptiDrive score, represented as an unbounded, non-normalized value, used as a proportion in the weighted average of the overall score. |

| Parameter | Туре | Description |
|--|-----------|---|
| dri- ving_kpi_weight | int | The Driving KPI weight in the OptiDrive score, represented as an unbounded, non-normalized value, used as a proportion in the weighted average of the overall score. |
| fuel_kpi_weight | int | The Fuel KPI weight in the OptiDrive score, represented as an unbounded, non-normalized value, used as a proportion in the weighted average of the overall score. |
| coast- ing_kpi_weight | int | The Coasting KPI weight in the OptiDrive score, represented as an unbounded, non-normalized value, used as a proportion in the weighted average of the overall score. |
| high_revving_kpi_ | _wienight | The High Revving KPI weight in the OptiDrive score, represented as an unbounded, non-normalized value, used as a proportion in the weighted average of the overall score. |
| constan- t_speed_kpi_weig | int ht | The Constant Speed KPI weight in the OptiDrive score, represented as an unbounded, non-normalized value, used as a proportion in the weighted average of the overall score. |
| green_speed_kpi_ | _wieitght | The Green Speed KPI weight in the OptiDrive score, represented as an unbounded, non-normalized value, used as a proportion in the weighted average of the overall score. |
| idling_kpi_weight | int | The Idling KPI weight in the OptiDrive score, represented as an unbounded, non-normalized value, used as a proportion in the weighted average of the overall score. |
| cruise_con- trol_kpi_weight | int | The Cruise Control KPI weight in the OptiDrive score, represented as an unbounded, non-normalized value, used as a proportion in the weighted average of the overall score. |
| video_kpi_weight | int | The Video KPI weight in the OptiDrive score, represented as an unbounded, non-normalized value, used as a proportion in the weighted average of the overall score. |
| energy_consump- tion_kpi_weight | int | The Energy Consumption KPI weight in the OptiDrive score, represented as an unbounded, non-normalized value, used as a proportion in the weighted average of the overall score. |
| driver_distract- ed_video_even- t_weight | int | The Driver Distracted video event type weight in the Video KPI score. Represents the proportional impact of the video events of this type on the Video KPI score. |

| Parameter | Туре | Description |
|--|---------------|--|
| eat- ing_video_even- t_weight | int | The Eating video event type weight in the Video KPI score. Represents the proportional impact of the video events of this type on the Video KPI score. |
| smok- ing_video_even- t_weight | int | The Smoking video event type weight in the Video KPI score. Represents the proportional impact of the video events of this type on the Video KPI score. |
| seatbelt- s_video_even- t_weight | int | The Seatbelts video event type weight in the Video KPI score. Represents the proportional impact of the video events of this type on the Video KPI score. |
| mo- bile_phone_video_ t_weight | int _even- | The Mobile Phone video event type weight in the Video KPI score. Represents the proportional impact of the video events of this type on the Video KPI score. |
| driverUids | string array | JSON encoded string with an array of driverUids representing drivers assigned to this OptiDrive profile. Those drivers have their scores calculated according to configuration present in this profile. |

Addresses

showAddressReportExtern Description

This action returns a list of addresses matching the parameters and filters.

Technical details

| SOAP endpoint address / function name | addressService#showAddressReport |
|---------------------------------------|----------------------------------|
| Request limits | 6 requests / minute |

Parameters

showAddressReportExtern requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to showAddressReportExtern:

| Parameter | Type | Description |
|-----------------------|-------------|--|
| filterstring | string | An arbitrary pattern that is located in the object data. |
| addressgroup- name | string | A name of an address group. |
| ungroupedonly | string | Allows to filter on addresses that are currently not assigned to a certain address group. Only valid value is true. This parameter overrules the group name filter parameter. This parameter is optional. |
| addrnr | string (10) | Identifying number of an address. Unique within an account. |
| addruid | string | A unique, unchangable identifier for the indicated address, automatically generated. |

Result

Result for showAddressReportExtern:

| Parameter | Type | Description |
|------------|-------------|--|
| addrnr | string (10) | Identifying number of an address. Unique within an account. |
| addrname1 | string | |
| addrname2 | string | |
| addrname3 | string | |
| addrstate | string (2) | ISO 3166-1 alpha-2 code for the country (capital letters). |
| addrzip | string | |
| addrcity | string | |
| addrstreet | string | |
| addrinfo | string | |
| addrregion | string | |
| contact | string | |
| teloffice | string | |
| telmobile | string | |
| telprivate | string | |
| fax | string | |
| mailaddr | string | |
| latitude | string | Geographic latitude in the form GGG° MM′ SS.S″ N/S in the <u>WGS84</u> coordinate system. |
| longitude | string | Geographic longitude in the form GGG° MM′ SS.S″ E/ W in the <u>WGS84</u> coordinate system. |
| radius | int | Radius of the circle around the address position. Object positions within the circle are associated to this address. The nearest address is selected in case of object positions within overlapping circles of different addresses. Unit of measurement is meters. |
| visible | boolean | Controls visibility of this address on the map. If set to 1, the address will be shown on the map. |

| Parameter | Туре | Description |
|-----------|-------------|---|
| color | string | Valid values: |
| COLO | Strillg | brightblue dullorange brightorange brightpalegreen grassgreen brightpurple darkred dullazure deeppurple brightazure orangehighlight brightorangehighlight khaki |
| | | nakipaleblueturquoise |
| positiony | int | Geographic latitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . |
| positionx | int | Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| addruid | string | A unique, unchangable identifier for the indicated address, automatically generated. |
| mapcode | string (20) | A mapcode represents a location. Learn more about <u>mapcodes</u> . |

showAddressGroupReportExtern Description

Returns a list of address groups within the account matching the filter parameter.

Technical details

| SOAP endpoint address / function name | addressService#showAddressGroupReport |
|---------------------------------------|---------------------------------------|
| Request limits | 900 requests / hour |

Parameters

showAddressGroupReportExtern requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to showAddressGroupReportExtern:

| Parameter | Type | Description |
|--------------|--------|---|
| filterstring | string | An arbitrary pattern that is located in the address group name. |

Result

Result for showAddressGroupReportExtern:

| Parameter | Туре | Description |
|-----------------------|--------|--|
| addressgroup- name | string | The name of the address group as it appears in Webfleet. |
| addressgroupuid | string | A unique, unchangable identifier for the indicated address group, automatically generated. |

showAddressGroupAddressReportExtern Description

Shows a list with all associations between addresses and address groups. Each address can be in more than one address group, but must not necessarily belong to a group. The relationship between addresses and address groups is of m:n cardinality.

Technical details

| SOAP endpoint address / function name | addressService#showAddressGroupAddressReport |
|---------------------------------------|--|
| Request limits | 900 requests / hour |

Parameters

showAddressGroupAddressReportExtern requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Table 4-151: Parameters specific to showAddressGroupAddressReportExtern:

| Parameter | Type | Description |
|--------------|--------|---|
| filterstring | string | An arbitrary pattern that is located in the address group name. |

 $Result\ for\ show Address Group Address Report Extern:$

| Parameter | Туре | Description |
|-----------------------|-------------|--|
| addressgroup- name | string | The name of the address group as it appears in Webfleet. |
| addrnr | string (10) | Identifying number of an address. Unique within an account. |
| addruid | string | A unique, unchangable identifier for the indicated address, automatically generated. |
| addressgroupuid | string | A unique, unchangable identifier for the indicated address group, automatically generated. |

insertAddressExtern Description

Inserts an address record.

Technical details

| SOAP endpoint address / function name | addressService#insertAddress |
|---------------------------------------|------------------------------|
| Request limits | 900 requests / hour |

Parameters

insertAddressExtern requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to insertAddressExtern:

| Parameter | Туре | Description |
|-------------|---------------|---|
| addrnr | string (10) | Identifying number of an address, case-sensitive. Unique within an account. This parameter is mandatory. |
| addrname1 | string (50) | This parameter is mandatory. |
| addrname2 | string (50) | |
| addrname3 | string (50) | |
| addrstreet | string (50) | |
| addrzip | string (10) | |
| addrcity | string (50) | |
| addrcountry | string (2) | ISO 3166-1 alpha-2 code for the country (capital letters). |
| addrregion | string | Name (or abbreviation) of the county, district or federal state this locality belongs to. |
| contact | string (50) | |
| teloffice | string (20) | |
| telmobile | string (20) | |
| telprivate | string (20) | |
| fax | string (20) | |
| mailaddr | string (254) | |
| radius | int | Radius of the circle around the address position. Object positions within the circle are associated to this address. The nearest address is selected in case of object positions within overlapping circles of different addresses. Unit of measurement is meters. Default value is 250. |
| addrinfo | string (1000) | |
| positiony | int | Geographic latitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . |

| Parameter | Type | Description |
|-------------|-------------|--|
| positionx | int | Geographic longitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . |
| visible | boolean | Controls visibility of this address on the map. If set to 1, the address will be shown on the map. |
| color | string | The colour associated with the address. Case-sensitive. Valid values: brightblue dullorange brightorange brightpalegreen grassgreen brightpurple darkred dullazure deeppurple brightazure orangehighlight brightgreen brightorangehighlight khaki paleblue turquoise |
| addrgrpname | string (30) | Name of an address group, case-sensitive. Unique within an account. The address will be automatically associated with this group. This parameter is optional. |
| addrgrpuid | string | A unique, unchangable identifier for the indicated address group, automatically generated. |
| mapcode | string (20) | A mapcode represents a location. Either mapcode or latitude/longitude coordinates can be used, but not both. Learn more about mapcodes. |

updateAddressExtern Description

Updates an existing address record.

Note: The following parameters are deleted when using this action if they are not specified:

addrname2, addrname3, addrstreet, addrzip, addrcity, addrcountry, addrregion, contact, teloffice, telmobile, telprivate, fax, mailaddr, addrinfo, color

Technical details

| SOAP endpoint address / function name | addressService#updateAddress |
|---------------------------------------|------------------------------|
| Request limits | 900 requests / hour |

Parameters

updateAddressExtern requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to updateAddressExtern:

| Parameter | Type | Description |
|--------------------|---|---|
| addrnr string (10) | Identifying number of an address. Unique within an account. | |
| | | Note : The parameter addrnr or addruid is required. |
| addrname1 | string (50) | This parameter is required. |
| addrname2 | string (50) | |
| addrname3 | string (50) | |
| addrstreet | string (50) | |
| addrzip | string (10) | |
| addrcity | string (50) | |
| addrcountry | string (2) | ISO 3166-1 alpha-2 code for the country (capital letters). |
| addrregion | string | Name (or abbreviation) of the county, district or federal state this locality belongs to. |
| contact | string (50) | |
| teloffice | string (20) | |
| · | <u> </u> | 227 |

| Parameter | Type | Description |
|------------|---------------|--|
| telmobile | string (20) | |
| telprivate | string (20) | |
| fax | string (20) | |
| mailaddr | string (254) | |
| radius | int | Radius of the circle around the address position. Object positions within the circle are associated to this address. The nearest address is selected in case of object positions within overlapping circles of different addresses. Unit of measurement is meters. Default value is 250. |
| addrinfo | string (1000) | |
| positiony | int | Geographic latitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . |
| positionx | int | Geographic longitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . |
| visible | boolean | Controls visibility of this address on the map. If set to 1, the address will be shown on the map. |

| Parameter | Type | Description |
|--------------|-------------|---|
| color string | string | The colour associated with the address. Case-sensitive. Valid values: |
| | | brightblue dullorange brightorange brightpalegreen grassgreen brightpurple darkred dullazure deeppurple brightazure orangehighlight brightgreen brightorangehighlight khaki paleblue turquoise |
| addruid | string | A unique, unchangable identifier for the indicated address, automatically generated. Note: The parameter addrnr or addruid is required. |
| mapcode | string (20) | A mapcode represents a location. Either mapcode or latitude/longitude coordinates can be used but not both. Learn more about mapcodes. |

deleteAddressExtern Description

Deletes the specified address.

Technical details

| SOAP endpoint address / function name | addressService#deleteAddress |
|---------------------------------------|------------------------------|
| Request limits | 900 requests / hour |

Parameters

deleteAddressExtern requires the following common parameters:

- <u>Authentication parameters</u>
- <u>General parameters</u>

Parameters specific to deleteAddressExtern:

| Parameter | Type | Description |
|-----------|-------------|---|
| addrnr | string (10) | Identifying number of an address. Unique within an account. |
| addruid | string | A unique, unchangeable identifier for the indicated address, automatically generated. |

attachAddressToGroupExtern Description

Assigns an address to a specific address group.

Technical details

| SOAP endpoint address / function name | addressService#attachAddressToGroup |
|---------------------------------------|-------------------------------------|
| Request limits | 900 requests / hour |

Parameters

attachAddressToGroupExtern requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to attachAddressToGroupExtern:

| Parameter | Туре | Description |
|-------------|-------------|--|
| addrnr | string (10) | Identifying number of an address. Unique within an account. |
| addrgrpname | string (30) | Name of an address group, case-sensitive. Unique within an account. |
| addruid | string | A unique, unchangable identifier for the indicated address, automatically generated. |
| addrgrpuid | string | A unique, unchangable identifier for the indicated address group, automatically generated. |

detachAddressFromGroupExtern Description

Deletes the assignment of an address to an address group.

Technical details

| SOAP endpoint address / function name | addressService#detachAddressFromGroup |
|---------------------------------------|---------------------------------------|
| Request limits | 900 requests / hour |

Parameters

detachAddressFromGroupExtern requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to detachAddressFromGroupExtern:

| Parameter | Type | Description |
|-------------|-------------|--|
| addrnr | string (10) | Identifying number of an address, case-sensitive. Unique within an account. |
| addrgrpname | string (30) | Name of an address group, case-sensitive. Unique within an account. |
| addruid | string | A unique, unchangable identifier for the indicated address, automatically generated. |
| addrgrpuid | string | A unique, unchangable identifier for the indicated address group, automatically generated. |

insertAddressGroupExtern Description

This action creates an address group in an account.

Technical details

| SOAP endpoint address / function name | addressService#insertAddressGroup |
|---------------------------------------|-----------------------------------|
| Request limits | 900 requests / hour |

Parameters

insertAddressGroupExtern requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to insertAddressGroupExtern:

| Parameter | Type | Description |
|-------------|-------------|---|
| addrgrpname | string (30) | Name of an address group. Unique within an account. |

deleteAddressGroupExtern Description

This action deletes an address group and the assignments of all addresses assigned to that group. With this action you can also delete all addresses that are assigned to the address group.

Technical details

| SOAP endpoint address / function name | addressService#deleteAddressGroup |
|---------------------------------------|-----------------------------------|
| Request limits | 900 requests / hour |

Parameters

deleteAddressGroupExtern requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to deleteAddressGroupExtern:

| Parameter | Туре | Description |
|-----------------|-------------|--|
| addrgrpname | string (30) | Name of an address group, case-sensitive. Unique within an account. |
| deleteaddresses | boolean | If set to 1 all addresses attached to the indicated address group will be deleted in addition to the address group itself and the address assignments. |
| | | IMPORTANT : Please use carefully. All addresses assigned will be deleted without further confirmation. |
| | | This parameter is optional. |
| addrgrpuid | string | A unique, unchangable identifier for the indicated address group, automatically generated. |

Events

showEventReportExtern Description

Provides a list of event notifications.

Technical details

| SOAP endpoint address / function name | eventReportingService#showEventReport |
|---------------------------------------|---------------------------------------|
| Request limits | 1 request / minute |

Parameters

showEventReportExtern requires the following common parameters:

- Authentication parameters
- General parameters

showEventReportExtern requires the following other parameters:

• Date range filter parameters

Parameters specific to showEventReportExtern:

| Parameter | Type | Description |
|----------------|-------------------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. This parameter is optional. |
| eventlevel_cur | nonNega- tiveInteger | Event level. Valid values: • 0 - Message • 1 - Notice/Information • 2 - Warning • 3 - Alarm 1 • 4 - Alarm 2 • 5 - Alarm 3 This parameter is optional. |

| Parameter | Type | Description |
|--------------|-------------|--|
| resolved | boolean | Flags a resolved event. Valid values: |
| | | 0 - Unresolved1 - Resolved |
| | | This parameter is optional. |
| acknowledged | boolean | Flags an acknowledged event. Valid values: |
| | | 0 - Unacknowledged1 - Acknowledged |
| | | This parameter is optional. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

Result for showEventReportExtern:

| Parameter | Type | Description |
|-----------|-------------|--|
| eventid | string | |
| msgtime | string | |
| eventtime | string | |
| objectno | string (10) | Identifying number of an object. Unique within an account, case sensitive. |
| msgtext | string | |
| postext | string | |
| latitude | string | Geographic latitude in the form GGG° MM′ SS.S″ N/S in the <u>WGS84</u> coordinate system. |
| longitude | string | Geographic longitude in the form GGG° MM' SS.S" E/ W in the <u>WGS84</u> coordinate system. |
| restime | string | |
| acktime | string | |

| Parameter | Type | Description |
|----------------|-------------|--|
| eventlevel | string | The original event level this event had when it was created. Valid values: |
| | | I - Information W - Warning A - Alarm |
| alarmlevel | string | |
| eventlevel_cur | string | The current event level for this event. Valid values: |
| | | I - Information W - Warning A - Alarm |
| resuser | string | Identifies the user who resolved this event. Can be empty if user does not have the relevant rights to access user information. |
| ackuser | string | Identifies the user who acknowledged this event. Can be empty if user does not have the relevant rights to access user information. |
| latitude_mdeg | int | Geographic latitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . |
| longitude_mdeg | int | Geographic longitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| pos_time | string | The time that is related to the last known position of the vehicle when the event occured. Can be empty if user does not have the relevant rights to see positions of the respective object. |

acknowledgeEventExtern Description

Flags an event at an alarmed level as acknowledged. The event level will be set to the next lower level.

Technical details

| SOAP endpoint address / function name | eventReportingService#acknowledgeEvent |
|---------------------------------------|--|
| Request limits | 300 requests / 30 minutes |

Parameters

acknowledgeEventExtern requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to acknowledgeEventExtern:

| Parameter | Туре | Description |
|-----------|--------|-------------|
| eventid | String | |

resolveEventExtern Description

Flags an event below an alarmed level as resolved.

Technical details

| SOAP endpoint address / function name | eventReportingService#resolveEvent |
|---------------------------------------|------------------------------------|
| Request limits | 300 requests / 30 minutes |

Parameters

resolveEventExtern requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to resolveEventExtern:

| Parameter | Туре | Description |
|-----------|--------|-------------|
| eventid | string | |

getEventForwardConfigs Description

This action returns event forwarding configurations.

Technical details

| SOAP endpoint address / function name | eventReportingService#getEventForwardConfigs |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

getEventForwardConfigs requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to getEventForwardConfigs:

| Parameter | Туре | Description |
|-----------------|-------------|--|
| objectgroupname | string (50) | Name of the group of objects. This parameter is optional. |
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| | | Note : Make sure that the object you indicate using objectno belongs to the object group you have indicated using objectgroupname. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. Note: Make sure that the object you indicate using objectuid belongs to the object group you have indicated using objectgroupname. |
| eventlevel | int | The level of an event. Valid values: 1 - Notice/Information 2 - Warning 3 - Alarm 1 4 - Alarm 2 5 - Alarm 3 This parameter is optional. |

Results for getEventForwardConfigs:

| Parameter | Туре | Description |
|----------------------------|-------------|--|
| eventforwardcon- figuid | string (30) | A unique, unchangeable identifier for the indicated event forwarding configuration, automatically generated. |
| eventlevel | int | The level of an event. Valid values: |
| | | 1 - Notice/Information 2 - Warning 3 - Alarm 1 4 - Alarm 2 5 - Alarm 3 |
| objectgroupname | string (50) | Name of the group of objects. |
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. |
| recipientcount | int | The number of recipients. |

getEventForwardConfigRecipients Description

 ${\tt getEventForwardConfigRecipients}\ \ \textbf{returns}\ \ \textbf{the}\ \ \textbf{primary}\ \ \textbf{and}\ \ \textbf{all}\ \ \textbf{additional}\ \ \textbf{recipients}\ \ \textbf{of}\ \ \textbf{an}$ event forwarding configuration.

Technical details

| SOAP endpoint address / function name | eventReportingService#getEventForwardConfigRe- cipients |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

getEventForwardConfigRecipients requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to getEventForwardConfigRecipients:

| Parameter | Type | Description | | |
|-----------|------|-------------|--|--|
|-----------|------|-------------|--|--|

| eventforwardcon- figuid | string (30) | A unique unchangeable identifier for the indicated event forwarding configuration, automatically generated. |
|----------------------------|-------------|---|
| | | This parameter is mandatory. |

Results for getEventForwardConfigRecipients:

| Parameter | Type | Description |
|----------------------------|--------------|--|
| eventforwardcon- figuid | string (30) | A unique, unchangeable identifier for the indicated event forwarding configuration, automatically generated. |
| recipientname | string (200) | Name of recipient. |
| recipientaddress | string (200) | Email address of recipient. |

insertEventForwardConfig Description

Using insertEventForwardConfig you can create a new event forwarding configuration.

Technical details

| SOAP endpoint address / function name | eventReportingService#insertEventForwardConfig |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

 $\textbf{insertEventForwardConfig} \ \text{requires the following common parameters:}$

- Authentication parameters
- General parameters

Parameters specific to insertEventForwardConfig:

| Parameter | Type | Description |
|------------|------|---|
| eventlevel | int | The level of an event. Valid values: |
| | | 1 - Notice/Information 2 - Warning 3 - Alarm 1 4 - Alarm 2 5 - Alarm 3 This parameter is mandatory. |

| Parameter | Туре | Description |
|-----------------|--------------|--|
| objectgroupname | string (50) | Name of the group of objects. This parameter is optional. |
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| | | Note : Make sure that the object you indicate using objectno belongs to the object group you have indicated using objectgroupname. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| | | Note : Make sure that the object you indicate using objectuid belongs to the object group you have indicated using objectgroupname. |
| recipient | string (400) | Name and email address of recipient. |
| | 3 () | You can separate first name from last name by using a comma. |
| | | The email address must be a valid email address according to RFC5322 and RFC2606. |
| | | Separate name from email by using a semicolon. |
| | | You can indicate multiple recipients by repeating the recipient parameter. |
| | | This parameter is required. |

 $Results \ for \ insert Event Forward Config:$

| Parameter | Type | Description |
|----------------------------|-------------|--|
| eventforwardcon- figuid | string (30) | A unique, unchangeable identifier for the indicated event forwarding configuration, automatically generated. |

updateEventForwardConfig Description

Using ${\tt updateEventForwardConfig}$ you can update an existing event forwarding configuration.

Technical details

| SOAP endpoint address / function name | eventReportingService#updateEventForwardConfig |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

updateEventForwardConfig requires the following common parameters:

- <u>Authentication parameters</u>
- <u>General parameters</u>

 $Parameters\ specific\ to\ update Event Forward Config:$

| Parameter | Туре | Description | |
|----------------------------|-------------|--|--|
| eventforwardcon- figuid | string (30) | A unique, unchangeable identifier for the indicated event forwarding configuration, automatically generated. This parameter is mandatory. | |
| eventlevel | int | The level of an event. Valid values: | |
| | | 1 - Notice/Information 2 - Warning 3 - Alarm 1 4 - Alarm 2 5 - Alarm 3 | |
| | | This parameter is required. | |
| objectgroupname | string (50) | Name of the group of objects. This parameter is optional. | |
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. | |
| | | Note : Make sure that the object you indicate using objectno belongs to the object group you have indicated using objectgroupname. | |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. | |
| | | Note : Make sure that the object you indicate using objectuid belongs to the object group you have indicated using objectgroupname. | |

| Parameter | Туре | Description |
|-----------|--------------|--|
| recipient | string (400) | Name and email address of recipient. You can separate first name from family name by using a comma. |
| | | The email address must be a valid email address according to RFC5322 and RFC2606. |
| | | Separate name from email by using a semicolon. |
| | | You can indicate multiple recipients by repeating the recipient parameter. |
| | | This parameter is required. |

deleteEventForwardConfig Description

Using ${\tt deleteEventForwardConfig}$ you can delete an existing event forwarding configuration.

Technical details

| SOAP endpoint address / function name | eventReportingService#deleteEventForwardConfig |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

deleteEventForwardConfig requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to deleteEventForwardConfig:

| Parameter | Туре | Description |
|----------------------------|-------------|--|
| eventforwardcon- figuid | string (30) | A unique, unchangeable identifier for the indicated event forwarding configuration, automatically generated. This parameter is mandatory. |

Trips and working times

showTripReportExtern Description

Provides a list of trips of an object. Trips of deleted objects cannot be shown.

In order to prevent your system from being flooded with oversized responses, the result is limited to 10000 entries, if the continuous replication is used. The limit can be adjusted per account on request.

Technical details

SOAP endpoint address / function tripAndTimeReportingService#showTripReport name

|--|

Usage patterns

showTripReportExtern supports two alternative usages patterns for different application integration scenarios:

- **Continuous replication of trip records** into a local application; the replication is done by referring to a tripid retrieved from a previous call to showTripReportExtern.
- On-demand download of trip records created within a variable time period using a date range filter (<u>Date range filter parameters</u>). The date range filter applies to the end time of a trip.

For both usage patterns, either all trip records or a subset of trip records for a specific object (selected by providing filter conditions) can be downloaded.

Continuous replication

If your application requires access to all or specific trip records, a periodic call of <code>showTripReportExtern</code> can be used to retrieve all new trip records received since the last call. The recommended frequency of calls depends on the distribution of trip reports over any specific period of time as well as business requirements, but should not be more frequent than one call every 15 minutes.

Each trip record is identified by a tripid that is strictly (monotonically) increasing. While processing the downloaded results of a call to <code>showTripReportExtern</code>, store the highest tripid and provide this as a parameter to the next call.

In order to prevent your system from being flooded with oversized responses, the result is limited to 10000 entries, if you are using continuous replication. The limit can be adjusted per account on request.

Date range filter behaviour

The date range filter applies to the trip end date/time, not the date/time when the trip record was created. Due to this behaviour, there is no guarantee that all trips can be consistently downloaded by e.g. daily calls to <code>showTripReportExtern</code> (for example, trip records sent late due to unavailable GPRS coverage might be missed). Continuous replication is therefore the recommended method of retrieving trip records in near real-time.

Parameter restrictions

Before processing a request, all parameters are checked for invalid combinations and an error message is returned if an unacceptable parameter combination is detected.

- If tripid is provided, it must be valid, that is, must have been returned by previous calls to showTripReportExtern. In order to retrieve an initial value for tripid, use a one-time download covering a small time period.
- If no tripid is provided, a date range filter (<u>Date range filter parameters</u>) compliant to more restrictions (see below) must be present.
- The time period covered by date range filter (<u>Date range filter parameters</u>) may not be greater than 1 year.
- If the time period covered by date range filter (<u>Date range filter parameters</u>) is greater than 1 month (and less than or equal to 1 year), an objectno must be provided to constrain the result set.

Parameters

showTripReportExtern requires the following common parameters:

- Authentication parameters
- General parameters

showTripReportExtern requires the following other parameters:

• Date range filter parameters

Parameters specific to showTripReportExtern:

| Parameter | Туре | Description |
|-----------------|-------------------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. This parameter is optional. |
| tripid | nonNegativeIn- teger | This parameter is optional. |
| driverno | string | Identifying number of a driver. Unique within an account, case-sensitive. Can be used alternatively to driveruid. |
| drivergroupname | string | Name of the group of drivers the driver is assigned to, case-sensitive. This parameter is optional. |
| objectgroupname | string | Name of the group of objects the object is assigned to, case-sensitive. This parameter is optional. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| externalid | string | For future use. This parameter is optional. |

 ${\bf Parameters\ specific\ to\ showTripReportExtern}$

| Parameter | Type | Description |
|-----------|--------|---|
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |

Parameters specific to showTripReportExtern

Result

Result for showTripReportExtern:

| Parameter | Туре | Description | |
|---------------------------------|-------------------------|---|--|
| tripid | string | | |
| tripmode | nonNegativeIn- teger | Valid values: 0 - Unknown trip type 1 - Private trip 2 - Business trip 3 - Commute trip 4 - Correction trip (user changed the odometer value manually) | |
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. | |
| objectname | string | Display name of an object. | |
| start_time | string | The time recorded when this event started. | |
| start_odometer | long | The odometer reading when this event started. | |
| start_postext | string | A detailed textual description of the location where this event started. | |
| end_time | string | The time recorded when this event endec | |
| end_odometer | long | The odometer reading when this event ended. | |
| end_postext | string | A detailed textual description of the location where this event ended. | |
| duration | int | The difference between start_time and end_time. Unit of measurement is 'seconds'. | |
| idle_time | int | The idle time during this trip. Unit of measurement is 'seconds'. | |
| distance Result for showTripRe | long | The difference between start_odometer and end_odometer. Unit of measurement is 'meters'. | |

Result for showTripReportExtern

| Parameter | Туре | Description |
|--------------------------------|--------|---|
| avg_speed | int | The average speed during this trip. |
| max_speed | int | The maximum speed during this trip. |
| fuel_usage | float | Fuel consumption in litres, max. three decimals allowed. |
| start_longitude | int | Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| start_latitude | int | Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| start_formatted_longi- tude | string | Geographic longitude in the form GGG° MM′ SS.S" E/W in the WGS84 coordinate system. |
| start_formatted_latitude | string | Geographic latitude in the form GGG° MM′ SS.S" N/S in the <u>WGS84</u> coordinate system. |
| end_longitude | int | Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |

Result for showTripReportExtern

| Parameter | Type | Description |
|----------------------------|--------|---|
| end_latitude | int | Geographic latitude in the <u>WGS84</u> coordinate system. |
| | | Unit of measurement is micro degrees (10 ⁻⁶ grd). |
| | | Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| end_formatted_longitude | string | Geographic longitude in the form GGG° MM' SS.S" E/W in the <u>WGS84</u> coordinate system. |
| end_formatted_latitude | string | Geographic latitude in the form GGG° MM′ SS.S" N/S in the WGS84 coordinate system. |
| driverno | string | Identifying number of a driver. Unique within an account. |
| drivername | string | Display name of a driver. |
| start_addrno | string | Identifying number of an address. Unique within an account. |
| end_addrno | string | Identifying number of an address. Unique within an account. |
| Docult for chawTrinDonartl | Tytorn | |

| Parameter | Type | Description |
|-------------------------|-------------|--|
| fueltype | int | Valid values: |
| | | 0 - unknown 1 - diesel 2 - gasoline 3 - lpg 4 - hybrid petrol 5 - hybrid diesel 6 - electric 7 - cng 8 - lng 9 - hydrogen 10 - plug-in hybrid electric 11 - bioethanol 12 - biodiesel_fame (Fatty acid methyl esters) 13 - biodiesel_fame_uco (Fatty acid methyl esters, Used cooking oil) 14 - hvo (Hydrotreated vegetable oil) 15 - commercial_diesel 16 - cbg (Bio-CNG) 17 - lbg (Bio-LNG) |
| co2 | int | Carbon dioxide emissions in grams. |
| ep_distance | int | Distance measured by ecoPLUS in meters. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| externalid | string | For future use. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |
| optidrive_indicator | float | The overall OptiDrive indicator. |
| speeding_indicator | float | Value of influencing variable for speeding events. Value ranges from 0 to 1. |
| drivingevents_indicator | float | Value of influencing variable for driving events. Value ranges from 0 to 1. |
| idling_indicator | float | Value of influencing variable for idling. Value ranges from 0 and 1. |

| Parameter | Туре | Description |
|-----------------------------------|-------|---|
| fuelusage_indicator | float | Value of influencing variable for fuel consumption. Value ranges from 0 and 1. |
| coasting_indicator | float | Value of influencing variable for coasting. Value ranges from 0 to 1. |
| constant_speed_indicator | float | Value of influencing variable for constant speed. Value ranges from 0 to 1. |
| green_speed_indicator | float | Value of influencing variable for green speed. Value ranges from 0 to 1. |
| high_revving_indicator | float | Value of influencing variable for high- revving. Value ranges from 0 to 1. |
| energy_usage | float | Energy consumption in kWh. Max. three decimals allowed. |
| start_battery_level | int | Electric vehicle's battery level in percent at the start of the trip. Values range from 0 to 100. |
| end_battery_level | int | Electric vehicle's battery level in percent at the end of the trip. Values range from 0 to 100. |
| start_battery_energy | float | Electric vehicle's battery energy in Wh at the start of the trip. |
| end_battery_energy | float | Electric vehicle's battery energy in Wh at the end of the trip. |
| energy_consumption_in- dicator | float | Value of influencing variable for energy consumption of electric vehicles. Value ranges from 0 to 1. |
| cruise_control_indicator | float | Value of influencing variable for cruise control. Value ranges from 0 to 1. |
| video_indicator | float | Value of influencing variable for video events. Value ranges from 0 to 1. |
| energy_consumption_dri- ving | float | Electric vehicles: Energy used for driving in kWh. |
| energy_consump- tion_other | float | Electric vehicles: Energy used for heating, climate, etc. in kWh. |

| Parameter | Туре | Description |
|-----------------|-------|--|
| enery_recovered | float | Electric vehicles: Energy recovered from braking in kWh. |

Result for showTripReportExtern

showTripSummaryReportExtern Description

This action provides daily accumulated trip information.

Technical details

| SOAP endpoint address / function name | tripAndTimeReportingService#showTripSummaryRe- port |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

showTripSummaryReportExtern requires the following common parameters:

- Authentication parameters
- General parameters

showTripSummaryReportExtern requires the following other parameters:

• <u>Date range filter parameters</u> - Maximum range is one year (but only if objectno is set.)

Parameters specific to showTripSummaryReportExtern:

| Parameter | Type | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| | | This paramater is mandatory if objectuid is not defined. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. |
| | | This parameter is mandatory if objectno is not defined. |
| | | |

Result

 $Result\ for\ show Trip Summary Report Extern:$

| Parameter | Туре | Description |
|------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectname | string | Display name of an object. |

| Parameter | Туре | Description |
|----------------|-------------|--|
| start_time | string | The time recorded when this event started. |
| start_odometer | long | The odometer reading when this event started. |
| end_time | string | The time recorded when this event ended. |
| end_odometer | long | The odometer reading when this event ended. |
| end_postext | string | A detailed textual description of the location where this event ended. |
| distance | long | The difference between start_odometer and end_odometer. Unit of measurement is 'meters'. |
| triptime | string | Cumulated trip durations in seconds. |
| operatingtime | string | Time between start_time and end_time in seconds. |
| standstill | string | |
| tours | string | |
| fuel_usage | float | Fuel consumption in litres, max. three decimals allowed. |
| co2 | int | Carbon dioxide emissions in grams. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| energy_usage | float | Energy consumption in kWh. Max. three decimals allowed. |

showTracks Description

This action retrieves a list of positions of a vehicle for a defined period.

If certain information was not available the corresponding results can be empty.

Technical details

| SOAP endpoint address / function name | tripAndTimeReportingService#showTracks |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

showTracks requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters
- <u>Date range filter parameters</u>, periods longer than 2 days are not permitted.

Parameters specific to showTracks:

| Parameter | Type | Description |
|------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| externalid | string | For future use. This parameter is optional. |

Result

Result for showTracks:

| Parameter | Type | Description |
|-------------|-------------------------|---|
| pos_time | dateTime | Date and time when the position was registered in Webfleet. |
| receivetime | dateTime | Date and time when the position was received in Webfleet. |
| latitude | int | Geographic latitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . |
| longitude | int | Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| speed | nonNega- tiveInteger | in km/h |
| course | nonNega- tiveInteger | Compass direction in degrees (0° 360°): |

| Parameter | Type | Description |
|--------------|--------|--|
| fuelusage | float | Fuel consumption in litres, max. three decimals allowed. |
| | | This is a snapshot measurement. It's the same value as shown in the trace view in Webfleet UI. |
| odometer | int | Odometer value at the position. Only available for LINK 7xx/6xx/5xx/4xx. |
| country | string | Country code. |
| state | string | Code for federal state. |
| energy_usage | float | Energy consumption (snapshot) in kWh. Max. three decimals allowed. |

updateLogbook Descriptions

This action updates some parameters of an existing logbook entry.

When using <code>updateLogbook</code>, you only need to include the parameters for which you want to change or delete the values. If you include a parameter and do not indicate a value, the existing value will be deleted.

In addition to the specific parameters listed below the parameters modifiedby and modifiedon are being automatically stored.

Technical details

| SOAP endpoint address / function name | tripAndTimeReportingService#updateLogbook |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

updateLogbook requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to updateLogbook:

| Parameter | Туре | Description |
|-----------|-------------------------|-----------------------------|
| tripid | nonNega- tiveInteger | This parameter is required. |

| Parameter | Туре | Description |
|------------|--------------------------------------|--|
| logflag | string | Indicates the trip mode. Valid values: |
| | | 1 - Private2 - Business3 - Commute |
| | | This parameter is optional. |
| logpurpose | string (max. 254 charac- ters) | A description of the purpose. This parameter is mandatory when changing the trip mode to business, otherwise optional. |
| logcontact | string (max. 254 charac- ters) | Contact details for this trip; this is typically at the visited party. This parameter is mandatory when changing the trip mode to business, otherwise optional. |
| logcomment | string (max. 254 charac- ters) | Any additional annotation for this trip. This parameter is optional. |
| reason | string (max. 254 charac- ters) | Reason for this trip. This parameter is optional. |

showLogbook Descriptions

This action returns the most recent state of logbook information for an indicated object or trip - this applies to finished trips only.

Technical details

| SOAP endpoint address / function name | tripAndTimeReportingService#showLogbook |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

showLogbook requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

showLogbook requires the following other parameters:

• <u>Date range filter parameters</u> - The maximum range is one year. The date range filter parameter is optional if tripid is specified.

Date range filter behaviour

The date range filter applies to the trip end date/time, not the date/time when the trip record was created.

Parameters specific to showLogbook:

| Parameter | Туре | Description |
|----------------|-------------------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| tripid | nonNegativeln- teger | This parameter precedes objectno. This parameter is optional. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| modified_since | string | Returns all trips that have been manually edited after the indicated date. The format depends on the value of the General parameters lang and useISO8601. • lang = de Format: dd.MM.yyyy HH:mm:ss Example: 13.07.2007 23:59:59 • lang = en Format: dd/MM/yyyy HH:mm:ss Example: 13/07/2007 23:59:59 • lang = nl Format: d-M-yyyy H:mm:ss Example: 13-07-2007 23:59:59 |
| | | This parameter is optional. |

Parameters specific to showLogbook

Result

Result for showLogbook:

| Parameter | Type | Description |
|--------------------------|-------------|--|
| tripid | string | |
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectname | string | Display name of an object. |
| Docult for showl aghable | | |

Result for showLogbook

| Parameter | Type | Description |
|----------------|---------------------------------|---|
| logflag | string | Indicates the trip mode. Valid values: |
| | | • 1 - Private |
| | | • 2 - Business |
| | | • 3 - Commute |
| | | 4 - Odometer correction |
| start_time | string | The time recorded when this event started. |
| start_odometer | long | The odometer reading when this event started. |
| start_postext | string | A detailed textual description of the location where this event started. |
| end_time | string | The time recorded when this event ended. |
| end_odometer | long | The odometer reading when this event ended. |
| end_postext | string | A detailed textual description of the location where this event ended. |
| distance | long | The difference between start_odometer and end_odometer. Unit of measurement is 'meters'. |
| logpurpose | string (max. 254 characters) | A description of the purpose. |
| logcontact | string (max. 254 characters) | Contact details for this trip; this is typically at the visited party. |
| logcomment | string (max. 254 characters) | Any additional annotation for this trip. |
| modifiedon | dateTime | ISO 8601-formatted date and time in the UTC timezone, combined representation in the extended format. |
| | | Example: 2007-12-24T16:00:00+02:00 |
| modifiedby | string | The name of the user who issues the last change. |
| driverno | string | Identifying number of a driver. Unique within an account. |
| drivername | string | Display name of a driver. |
| start_addrno | string | Identifying number of an address. Unique within an account. |

| Parameter | Туре | Description |
|-----------------|-------------|--|
| end_addrno | string | Identifying number of an address. Unique within an account. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| start_latitude | int | Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| start_longitude | int | Geographic longitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . |
| end_latitude | int | Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |

Result for showLogbook

| Parameter | Туре | Description |
|----------------------|---------|---|
| end_longitude | int | Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| avg_speed | int | The average speed during this trip. |
| max_speed | int | The maximum speed during this trip. |
| fuel_usage | float | Fuel consumption in litres. Max. three decimals allowed. |
| co2 | int | Carbon dioxide emissions in grams. |
| end_addrname1 | string | A suggested address based on end position information. |
| end_addrname2 | string | A suggested address based on end position information. |
| end_addrname3 | string | A suggested address based on end position information. |
| end_addrcontact | strings | A suggested address contact based on end position information. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |
| energy_usage | float | Energy consumption in kWh. |
| | | Max. three decimals allowed. |
| start_battery_level | int | Electric vehicle's battery level in percent at the start of the trip. Values range from 0 to 100. |
| end_battery_level | int | Electric vehicle's battery level in percent at the end of the trip. Values range from 0 to 100. |
| start_battery_energy | float | Electric vehicle's battery energy in Wh at |

| Parameter | Туре | Description |
|-------------------------------|-------|---|
| end_battery_energy | float | Electric vehicle's battery energy in Wh at the end of the trip. |
| energy_consumption_driving | float | Electric vehicles: Energy used for driving in kWh. |
| energy_consump- tion_other | float | Electric vehicles: Energy used for heating, climate, etc. in kWh. |
| energy_recovered | float | Electric vehicles: Energy recovered from braking in kWh. |

Result for showLogbook

showLogbookHistory Descriptions

This action returns a logbook history showing logbook edits including the old and new values.

Change history records are available as of 1st of January 2011.

Technical details

| SOAP endpoint address / function name | tripAndTimeReportingService#showLogbookHistory |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

showLogbookHistory requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

showLogbookHistory requires the following other parameters:

• <u>Date range filter parameters</u> - The maximum range is one year. The date range filter parameter is optional if tripid is specified.

Parameters specific to showLogbookHistory:

| Parameter | Туре | Description |
|-----------|-------------------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| tripid | nonNega- tiveInteger | This parameter precedes objectno. |

| Parameter | Type | Description |
|-----------|-------------|--|
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

Result

Result for showLogbookHistory:

| Parameter | Туре | Description |
|---------------|-------------|--|
| tripid | string | |
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectname | string | Display name of an object. |
| logpurposeold | string | The old description of the purpose. |
| logcontactold | string | The old contact details for this trip; this is typically at the visited party. |
| logcommentold | string | The old additional annotation for this trip. |
| logflagold | string | The previous trip mode. |
| logpurposenew | string | The new description of the purpose. |
| logcontactnew | string | The new contact details for this trip; this is typically at the visited party. |
| logcommentnew | string | The new additional annotation for this trip. |
| logflagnew | string | The new trip mode |
| modifiedon | dateTime | ISO 8601-formatted date and time in the UTC time- zone, combined representation in the extended for- mat. |
| | | Example: 2007-12-24T16:00:00+02:00 |
| | | |
| modifiedby | string | The name of the user who issued the last change. |
| reason | string | The reason for the edits. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

updateLogbookMode Descriptions

This action changes the driver's logbook mode on the LINK 7xx/6xx/5xx/4xx/3xx. The change of the logbook mode will become effective with the next trip. If updateLogbook-Mode is executed during a trip, this trip will be ended and a new trip using the new logbook mode will be created.

Limitations

- For LINK 3xx firmware version 1.92 or higher
- For LINK 5xx/4xx firmware version 2.0 or higher
- For LINK 6xx/7xx firmware version 4.0 or higher
- The Operational mode for the LINK device must be set to Logbook.

You can set the Operational mode for your object (LINK device) in Webfleet as follows:

- 1. Select your object.
- 2. Under Contract / Device click Configure in the details panel on the right.
- 3. Go to the **Basic settings** tab and select **Logbook** under **Function**.

Note: You cannot change the logbook mode if a digital tachograph is connected to the LINK device.

Technical details

| SOAP endpoint address / function name | tripAndTimeReportingService#updateLogbookMode |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

updateLogbookMode requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to updateLogbookMode:

| Parameter | Type | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

| Parameter | Type | Description |
|--------------|------|--|
| logbook_mode | int | The logbook mode to set on the LINK device. Valid values: |
| | | 1 - private2 - business3 - commute |
| | | This parameter is required. |

updateLogbookDriver Descriptions

updateLogbookDriver can be used to change the driver for an existing trip.

Changing the driver after a trip can cause data inconsistencies, for example when managing orders or for some reports. Therefore, this action is disabled by default. Please contact Webfleet Customer Support to enable this action for your Webfleet account.

This action cannot be used for trips of vehicles which have a tachograph connected.

Technical details

| SOAP endpoint address / function name | tripAndTimeReportingService#updateLogbookDriver |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

updateLogbookDriver requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to updateLogbookDriver:

| Parameter | Type | Description |
|-----------|-------------------------|---|
| tripid | nonNegativeIn- teger | The ID of the trip to which the driver is assigned. This parameter is required. |
| driverno | string | The driver number of the driver to be assigned to the trip. This parameter is required. |

showWorkingTimes Description

This report shows work time states changes of the (co-)driver, the locations and vehicle.

Technical details

| SOAP endpoint address / function name | tripAndTimeReportingService#showWorkingTimes |
|---------------------------------------|--|
| Request limits | 6 requests / minute |

Parameter restrictions

Before processing a request, all parameters are checked for invalid combinations and an error message is returned if an unacceptable parameter combination is detected.

• The time period covered by date range filter (<u>Date range filter parameters</u>) may not be greater than 1 month.

Parameters

showWorkingTimes requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

 $\verb|showWorkingTimes| requires the following other parameters: \\$

• <u>Date range filter parameters</u>

Parameters specific to showWorkingTimes:

| Parameter | Type | Description |
|-----------------|-------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| driverno | string | Identifying number of a driver. Unique within an account, case-sensitive. This parameter is required. Can be used alternatively to driveruid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |
| drivergroupname | string | Name of the group of drivers the driver is assigned to, case-sensitive. This parameter is optional. |
| objectgroupname | string | Name of the group of objects the driver is assigned to, case-sensitive. This parameter is optional. |

Result

Result for showWorkingTimes:

| Parameter | Type | Description |
|-----------------|-------------------------|---|
| driverno | string | Identifying number of a driver. Unique within an account. |
| drivername | string | Display name of a driver. |
| role | nonNega- tiveInteger | Valid values: 1 - Driver 2 - Co-Driver 3 - Worker |
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectname | string | Display name of an object. |
| start_time | string | The time recorded when this event started. |
| start_odometer | long | The odometer reading when this event started. |
| start_postext | string | A detailed textual description of the location where this event started. |
| start_addrno | string | Identifying number of an address. Unique within an account. |
| start_latitude | int | Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10-6 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| start_longitude | int | Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| end_time | string | The time recorded when this event ended. |
| end_odometer | long | The odometer reading when this event ended. |
| end_postext | string | A detailed textual description of the location where this event ended. |

| Parameter | Туре | Description |
|-------------------------------|-------------------------|--|
| end_addrno | string | Identifying number of an address. Unique within an account. |
| end_latitude | int | Geographic latitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . |
| end_longitude | int | Geographic longitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . |
| workstate | nonNega- tiveInteger | Valid values: 0 - Unknown 1 - Free time (PND only) 2 - Pause (PND and digital tachograph) 3 - Standby (digital tachograph only) 4 - Working (PND only) 5 - Driving (digital tachograph only) 6 - Other work (digital tachograph only) |
| end_objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| end_objectname | string | |
| externaldevice- timeoffset | string | The offset in system time between external device (currently only digital tachograph) and LINK, in seconds. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| end_objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |

showStandStills Description

This actions shows a list of all stops for a certain vehicle for a specified period.

Technical details

| SOAP endpoint address / function name | tripAndTimeReportingService#showStandStills |
|---------------------------------------|---|
| Request limits | 6 requests / minute |

Parameters

showStandStills requires the following common parameters:

- Authentication parameters
- General parameters

showStandStills requires the following other parameters:

• range pattern, see Date range filter parameters.

Parameters specific to showStandStills:

| Parameter | Type | Description |
|------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| | | Can be used alternatively to objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. |
| | | Can be used alternatively to objectno. |
| externalid | string | For future use. This parameter is optional. |

Result

Result for showStandStills:

| Parameter | Type | Description |
|------------|--------|---|
| start_time | string | The time recorded when this event started. ISO 8601-formatted date and time in the UTC time- zone, combined representation in the extended for- mat. |
| | | Example: 2007-12-24T16:00:00+02:00 |

| Parameter | Туре | Description |
|--------------------------|-------------|---|
| end_time | string | The time recorded when this event ended. ISO 8601-formatted date and time in the UTC time- zone, combined representation in the extended for- mat. |
| | | Example: 2007-12-24T16:00:00+02:00 |
| duration | int | The difference between start_time and end_time. Unit of measurement is 'seconds'. |
| latitude | int | Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| longitude | int | Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| formatted_lati- tude | string | Geographic latitude in the form GGG° MM′ SS.S″ N/S in the WGS84 coordinate system. |
| formatted_longi- tude | string | Geographic longitude in the form GGG° MM′ SS.S″ E/ W in the <u>WGS84</u> coordinate system. |
| addrno | | Identifying number of an address. Unique within an account. |
| postext | string | |
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| fuel_usage | float | Fuel consumption in litres, max. three decimals allowed. |
| co2 | int | Carbon dioxide emissions in grams. |

| Parameter | Type | Description |
|------------|-------------|--|
| fueltype | int | Valid values: |
| | | 0 - unknown 1 - diesel 2 - gasoline 3 - lpg 4 - hybrid petrol 5 - hybrid diesel 6 - electric 7 - cng 8 - lng 9 - hydrogen 10 - plug-in hybrid electric 11 - bioethanol 12 - biodiesel_fame (Fatty acid methyl esters) 13 - biodiesel_fame_uco (Fatty acid methyl esters, Used cooking oil) 14 - hvo (Hydrotreated vegetable oil) 15 - commercial_diesel 16 - cbg (Bio-CNG) 17 - lbg (Bio-LNG) |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| externalid | string | For future use. |

showIdleExceptions Description

This report shows a list of idle exceptions detected by the LINK or ecoPLUS of an object or of all objects of a object group. An idle event occurs when an object is still for more than five minutes with engine running.

The report shows all idle exceptions that have ended within the period defined with the start_time and end_time.

Technical details

| SOAP endpoint address / function name | tripAndTimeReportingService#showIdleExceptions |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameter restrictions

Before processing a request, all parameters are checked for invalid combinations and an error message is returned if an unacceptable parameter combination is detected.

- As historical data is available for 90 days only a historical time period covered by date range filter (<u>Date range filter parameters</u>) may not start earlier than 90 days in the past.
- A future time period covered by date range (<u>Date range filter parameters</u>) may not start in the future.
- If no object is specified, the time period covered by date range filter (<u>Date range filter</u> <u>parameters</u>) may not be greater than 1 day.
- If an object group is specified, the time period covered by date range filter (<u>Date range filter parameters</u>) may not be greater than 1 day.
- If an object is specified, the time period covered by date range filter (<u>Date range filter</u> <u>parameters</u>) may not be greater than 1 month.

Note: Only those idle exceptions are reported that end in the requested date and time range. The start time of the idle exception can be outside this range.

Parameters

showIdleExceptions requires the following common parameters:

- Authentication parameters
- General parameters

showIdleExceptions requires the following other parameters:

• <u>Date range filter parameters</u>

Parameters specific to showIdleExceptions:

| Parameter | Туре | Description |
|-----------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectgroupname | string | Case-sensitive. This parameter is optional. |
| driverno | string | Identifying number of a driver. Unique within an account, case-sensitive. Can be used alternatively to driveruid. |
| drivergroupname | string | Name of the group of drivers the driver is assigned to, case-sensitive. This parameter is optional. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |

Result

Result for showldleExceptions:

| Parameter | Туре | Description |
|--------------------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectname | string | Display name of an object. |
| driverno | string | Identifying number of a driver. Unique within an account. |
| drivername | string | Display name of a driver. |
| start_time | string | The time recorded when this event started. |
| end_time | string | The time recorded when this event ended. |
| idle_duration | int | Duration of idle exception interval in seconds. |
| latitude | int | Geographic latitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . |
| longitude | int | Geographic longitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . |
| formatted_lati- tude | string | Geographic latitude in the form GGG° MM′ SS.S″ N/S in the <u>WGS84</u> coordinate system. |
| formatted_longi- tude | string | Geographic longitude in the form GGG° MM′ SS.S″ E/ W in the <u>WGS84</u> coordinate system. |
| addrno | | Identifying number of an address. Unique within an account. |
| postext | string | |
| fuel_usage | float | Fuel consumption in litres, max. three decimals allowed. |
| co2 | int | Carbon dioxide emissions in grams. |

| Parameter | Type | Description |
|--------------|-------------|--|
| fueltype int | int | Valid values: |
| | | 0 - unknown 1 - diesel 2 - gasoline 3 - lpg 4 - hybrid petrol 5 - hybrid diesel 6 - electric 7 - cng 8 - lng 9 - hydrogen 10 - plug-in hybrid electric 11 - bioethanol 12 - biodiesel_fame (Fatty acid methyl esters) 13 - biodiesel_fame_uco (Fatty acid methyl esters, Used cooking oil) 14 - hvo (Hydrotreated vegetable oil) 15 - commercial_diesel 16 - cbg (Bio-CNG) 17 - lbg (Bio-LNG) |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |

getObjectKPIs Description

Using getObjectKPIs you can retrieve one or more KPIs (Key Performance Indicators) specific to an individual object.

Note: getObjectKPIs is the successor action of getKPIs. All calls to getKPIs will be redirected to getObjectKPIs.

Technical details

| SOAP endpoint address / function name | tripAndTimeReportingService#getObjectKPIs |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

getObjectKPIs requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

 ${\tt getObjectKPIs} \ \textbf{requires the following other parameters:}$

• Date range filter parameters

Parameters specific to getObjectKPIs

| Parameter | Type | Description |
|------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| kpinames | string | A comma-separated list of KPI-group names. This parameter is required. Valid values: tripstats costats coptidrive speedingevents drivingevents orders Example CSV request parameter: kpinames=tripstats, optidrive, orders |
| level | string | The level of temporal aggregation of the calculated KPIs. Defaults to range. Valid values: day month range When set to day, the result contains a KPI for each day within the requested date range. When set to month, the result contains one KPI per month (totalised for each month). When set to range, the whole result consists of a single KPI (summarized over the whole date range). This parameter is optional. |
| externalid | string | For future use. This parameter is optional. |

Result

Result for getObjectKPIs

| Parameter | Туре | Description |
|-----------------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| objectname | string | Display name of an object. |
| year | string (4) | The year the KPIs are calculated for. Format: YYYY Returned if specified in request parameter level. |
| month | string (2) | The month, the KPIs are calculated for. Format: MM Returned if specified in request parameter level. |
| day | string (2) | The day of month, the KPIs are calculated for. Format: DD Returned if specified in request parameter level. |
| externalid | string | For future use. |
| <kpi-list></kpi-list> | | The following columns depend on the requested KPI-group names. See table KPI names. |

getDriverKPIs Description

Using getDriverKPIs you can retrieve one or more KPIs (Key Performance Indicators) specific to an individual driver.

Technical details

| SOAP endpoint address / function name | tripAndTimeReportingService#getDriverKPIs |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

getDriverKPIs requires the following common parameters:

- Authentication parameters
- General parameters

 ${\tt getDriverKPIs} \ \textbf{requires the following other parameters:}$

• Date range filter parameters

Parameters specific to getDriverKPIs

| Parameter | Type | Description |
|-----------|-------------|--|
| driverno | string (15) | Identifying number of a driver. Unique within an account, case-sensitive. Can be used alternatively to driveruid. |
| driveruid | string (30) | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |
| kpinames | string | A comma-separated list of KPI-group names. This parameter is required. Valid values: tripstats coostats optidrive speedingevents drivingevents orders Example CSV request parameter: kpinames=tripstats, optidrive, orders |
| level | string | The level of temporal aggregation of the calculated KPIs. Defaults to range. Valid values: day month range When set to day, the result contains a KPI for each day within the requested date range. When set to month, the result contains one KPI per month (totalised for each month). When set to range, the whole result consists of a single KPI (summarized over the whole date range). This parameter is optional. |

Result

Table 4-221: Result for getDriverKPIs

| Parameter | Type | Description |
|-----------------------|-------------|--|
| driverno | string (15) | Identifying number of a driver. Unique within an account, case-sensitive. |
| driveruid | string (30) | A unique, unchangeable identifier for the indicated driver, automatically generated. |
| drivername | string | Display name of a driver. |
| year | string (4) | The year the KPIs are calculated for. Format: YYYY Returned if specified in request parameter level. |
| month | string (2) | The month the KPIs are calculated for. Format: MM Returned if specified in request parameter level. |
| day | string (2) | The day of month the KPIs are calculated for. Format: DD Returned if specified in request parameter level. |
| <kpi-list></kpi-list> | | The following columns depend on the requested KPI-group names. See table KPI names. |

getRemainingDrivingTimesEU Description

getRemainingDrivingTimesEU returns several Remaining Driving Times for one or multiple drivers according to the rules of the EU. The respective driver must be assigned to a vehicle for which one of the following additional features is booked:

- Remaining Driving Times
- Webfleet Tachograph Manager Plus
- Webfleet TachoShare Plus

The calculcation of <u>Remaining Driving Times</u> is based on the rules for calculating remaining driving times, working times and infringements. These rules can be configured for each driver by the action <u>updateDriverRdtRules</u>. The action <u>getDriverRdtRules</u> returns the currently configured rules for a driver.

Disclaimer: The remaining driving times supplied by Webfleet are indicative and are reliant upon the information being obtained from the tachograph and sent to Webfleet via the onboard device installed in a vehicle. The algorithms used to calculate the indicative remaining driving times are based on European driving time legislation and it is you responsibility to verify remaining driving times and any applicable national legislation.

Technical details

| SOAP endpoint address / func- | tripAndTimeReportingService#getRemainingDriving- |
|-------------------------------|--|
| tion name | TimesEU |

Parameters

getRemainingDrivingTimesEU requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to getRemainingDrivingTimesEU:

| Parameter | Туре | Description |
|-----------------|-------------|--|
| driverno | string (15) | Identifying number of a driver. Unique within an account, case-sensitive. Can be used alternatively to driveruid. |
| driveruid | string (30) | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |
| drivergroupname | string | Name of the group of drivers the driver is assigned to, case-sensitive. Can be used alternatively to drivergroupuid. |
| drivergroupuid | string (30) | A unique, unchangable identifier for the indicated driver group, automatically generated. Can be used alternatively to drivergroupname. |

Result

 $Result \ for \ getRemaining Driving Times EU:$

| Parameter | Туре | Description |
|-------------------------|-------------|---|
| driverno | string (15) | Identifying number of a driver. Unique within an account. |
| driveruid | string (30) | A unique, unchangeable identifier for the indicated driver, automatically generated. |
| drivername | string (50) | Display name of a driver. |
| reference_time datetime | datetime | Timestamp as reference for all remaining driving time values. |
| | | This value can be used to calculate the timestamp at the end of a remaining time. |
| | | <u>ISO 8601</u> -formatted date and time in the UTC time- zone, combined representation in the extended for- mat. |
| | | Example: 2007-12-24T16:00:00+02:00 |

| Parameter | Туре | Description |
|---------------------------|---------|---|
| next_break | integer | Remaining time until the latest possible start of next break in milliseconds. This is the latest possible end of the current driving or working period, limited by the remaining driving and working time of the current shift as well as the end of the shift. The value is negative if the break should have already |
| | | been started. The value is not available if the driver is on Break . |
| nex- t_break_change | integer | Indicator whether the remaining driving time until the start of next break is constant or in which direction it is currently changing. This information can be used for continuous calculation of remaining time on client side without frequent polling. Valid values: |
| | | -1 - Remaining time is decreasing. 0 - Remaining time is constant. 1 - Remaining time is increasing. |
| next_rest | integer | Remaining time until the latest possible start of next rest period in milliseconds. This is the latest possible end of the current shift, limited by the resting time requirements and the availability of daily reduced rest periods. The value is negative if the rest should have already been started. |
| | | The value is not available if the driver is on Break . |
| next_rest_change | integer | Indicator whether next_rest is constant or in which direction it is currently changing. |
| | | This information can be used for continuous calculation of remaining time on client side without frequent polling. |
| | | Valid values: |
| | | • -1 - Remaining time is decreasing. |
| | | 0 - Remaining time is constant.1 - Remaining time is increasing. |
| remain_dri- ving_today | integer | Remaining driving time of the current shift in milliseconds. This value is limited by the weekly remaining driving time, the availability of daily driving time extensions and the end of the shift. If Working hours legislation is enabled for the driver, it is also limited by the daily working time. The value is negative if the daily maximum allowed driving time has been exceeded. |

| Parameter | Туре | Description |
|---------------------------------------|--------------|---|
| remain_dri- ving_to- day_change | integer | Indicator whether remain_driving_today is constant or in which direction it is currently changing. This information can be used for continuous calculation of remaining driving time on client side without frequent polling. Valid values: -1 - Remaining time is decreasing. 0 - Remaining time is constant. 1 - Remaining time is increasing. |
| total_driving_to- day | integer | Total driving time for today in milliseconds. |
| total_driving_to- day_change | integer | Indicator whether total_driving_today is constant or in which direction it is currently changing. This information can be used for continuous calculation of the driving time on client side without frequent polling. Valid values: • 0 - Total time is constant. • 1 - Total time is increasing. |
| max_dri- ving_week | integer | Maximum weekly driving time within the current week in milliseconds. The 90 hours rule during two consecutive weeks is considered. If Working hours legislation is enabled, the value is also limited by the weekly maximum working time. |
| remain_dri- ving_week | integer | Remaining weekly driving time for the current week in milliseconds which is limited by maximum weekly driving time. The value is negative if the weekly driving time exceeds the maximum weekly driving time. |
| remain_dri- ving_week_chang | integer e | Indicator whether remain_driving_week is constant or in which direction it is currently changing. This information can be used for continuous calculation of remaining driving time on client side without frequent polling. Valid values: -1 - Remaining time is decreasing. 0 - Remaining time is constant. 1 - Remaining time is increasing. |
| remain_dri- ving_next_week | integer | Remaining driving time for the next week in milliseconds. The value can be negative. |

| Parameter | Туре | Description |
|---|---------|---|
| remain_dri- ving_nex- t_week_change | integer | Indicator whether remain_driving_next_week is constant or in which direction it is currently changing. This information can be used for continuous calculation of remaining driving time on client side without frequent polling. Valid values: |
| | | -1 - Remaining time is decreasing. 0 - Remaining time is constant. |
| | | 1 - Remaining time is increasing. |
| max_extend- ed_shifts | integer | Maximum number of allowed daily driving time extensions per week. |
| extended_shifts | integer | Number of used daily driving time extensions in current week. |
| max_re- duced_rests | integer | Maximum number of allowed reduced rests per week. |
| reduced_rests | integer | Number of used reduced rest periods in current week. |
| rest_balances | string | A string that carries a list of balances for reduced rest periods. |
| | | One rest balance consists of comma separated values: |
| | | deadline (datetime, timestamp until the balance has to be fulfilled) |
| | | duration (integer, balance amount in milliseconds) |
| | | Multiple rest balances are separated by semicolon. |
| | | Example: 2014-07-01T16:00:00Z,120000;2014-07-02T17:00:00Z,500000 |
| infringements | boolean | true if the driver has already committed social infringements. |
| max_driving_to- day | integer | Maximum driving time of the current shift in milliseconds. This value is limited by the weekly remaining driving time and the availability of daily driving time extensions. If Working hours legislation is enabled for the driver, it is also limited by the daily working time. |
| max_working_to- day | integer | Maximum daily working time of the current shift in milliseconds. This value is limited by the weekly remaining working time. This value is only available if Working hours legislation is enabled for the driver. |

| Parameter | Туре | Description |
|---|----------|--|
| remain_work- ing_today | integer | Remaining working time of the current shift in milliseconds, limited by the weekly remaining working time and the end of the shift. This value is only available if Working hours legislation is enabled for the driver. |
| total_other- work_today | integer | The total duration of activity Other work of the current shift in milliseconds. |
| total_availabili- ty_today | integer | The total duration of activity Availability of the current shift in milliseconds. |
| last_activi- ty_from_driver- card | datetime | The time at which the last activity included in the downloaded driver card data ended, including manual corrections. ISO 8601-formatted date and time in the UTC timezone, combined representation in the extended format. |
| | | Example: 2007-12-24T16:00:00+02:00 |
| nex- t_break_min_du- ration | integer | Duration of minimum uninterrupted break in milliseconds to finish the current driving or working period. |
| nex- t_rest_min_dura- tion | integer | Required minimum duration of the next rest in milliseconds. |
| current_shift_start | datetime | Start of the current shift. This value is not available if no shift has started. ISO 8601-formatted date and time in the UTC timezone, combined representation in the extended format. |
| | | Example: 2007-12-24T16:00:00+02:00 |
| latest_end_cur- rent_shift | datetime | Latest end of the current shift. This value is not available if no shift has started. ISO 8601-formatted date and time in the UTC time-zone, combined representation in the extended format. Example: 2007-12-24T16:00:00+02:00 |

| Parameter | Type | Description |
|--------------------------------|----------|--|
| earliest_start_nex- t_shift | datetime | The earliest possible start of the next shift, if the driver would immediately start the daily rest. ISO 8601-formatted date and time in the UTC timezone, combined representation in the extended format. |
| | | Example: 2007-12-24T16:00:00+02:00 |
| max_work- ing_week | integer | The maximum weekly working time of the current week in milliseconds. Limited by a weekly maximum and the average weekly working time. This value is only available if Working hours legislation is enabled for the driver. |
| remain_work- ing_week | integer | Remaining working time of the current week in milliseconds limited by the maximum weekly working time. This value is only available if Working hours legislation is enabled for the driver. |

KPI names

| KPI group | Returned column | Description |
|----------------------|--------------------------------|---|
| tripstats | tripstats_count | Number of trips that ended within the defined period. |
| | tripstats_mileage | Total mileage of all trips that ended within the defined period (in meters). |
| | tripstats_mileage- business | Total mileage of all trips that ended within the defined period in business or unknown mode (in meters). |
| | tripstats_mileagepri- vate | Total mileage of all trips that ended within the defined period in private or commute mode (in meters). |
| tripstats_drivingtii | tripstats_drivingtime | Total trip time minus the total idling time of all trips that ended within the defined period (in seconds). |
| | | Note : The first trip may start before the defined period and thus the total driving time may exceed the length of the defined period. |
| | | |

| KPI group | Returned column | Description |
|------------|--|---|
| | tripstats_usagetime | Latest end time minus earliest start time of all trips that ended within a day. If the defined period covers more than one day, usagetime is the sum of the daily usage times of all covered days. |
| | | Note : The earliest start time may be on a previous day and thus the daily usage time may exceed 24 hours. |
| ecostats | ecostats_fuelusage | Total amount of fuel consumed within the defined period (in milliliters). |
| | ecostats_co2emis- sion | Total amount of carbon dioxide emitted within the defined period (in gram). |
| | ecostats_wastedfuel | Total amount of fuel wasted while idling within the defined period (in milliliters). |
| | ecostats_idletime | Total idling time within the defined period (in seconds). |
| | ecostats_over- revvingtime | Total driving time with high RPM within the defined period (in seconds). |
| optidrive | optidrive_indicator | The value of the OptiDrive indicator for the defined period. Its value ranges from 0.0 (bad) to 1.0 (good). |
| | optidrive_indica- tor_speeding | Value of influencing variable for speeding events, ranging from 0.0 to 1.0 (good). |
| | optidrive_indica- tor_driving | Value of influencing variable for driving events, ranging from 0.0 to 1.0. |
| | optidrive_indica- tor_idling | Value of influencing variable for idling events, ranging from 0.0 to 1.0. |
| | optidrive_indica- tor_fuel | Value of influencing variable for fuel consumtion, ranging from 0.0 to 1.0. |
| | optidrive_indica- tor_energy_con- sumption | Value of influencing variable for energy consumption of electric vehicles, ranging from 0.0 to 1.0. |
| speedingev | rente edingevents_cour | ntTotal number of all speeding-exception intervals that ended within the defined period. |
| | | A speeding exception is reported if the vehicle speed was continuously over the speed limit, with a tolerance given by an account setting, for at least 30 seconds. |
| | | The speed limit is the minimum of road-speed limit and vehicle-speed limit. |
| | speedingevents_spee ingtime | edAverage length of all speeding-exception intervals that ended within the defined period (in seconds). |

| KPI group | Returned column | Description |
|--------------------|--|---|
| | speedingevents_avg_ olation | vAverage violation of the speed limit of all speed-exception intervals that ended within the defined period (in km/h). |
| dri- vingevents | drivingevents_count | Total number of driving events (braking, steering) registered within the defined period. |
| | dri- vingevents_avg_sever ity | Average severity of the driving events. The severity ranges from 1 (weak) to 5 (strong) and is dependent on the event type (braking or steering), the vehicle type, and the speed at the time when the event happened. |
| | drivingevents_brak- ing_count | Total number of braking events registered within the defined period. |
| | drivingevents_brak- ing_avg_severity | Average severity of the braking events. |
| | drivingevents_steer- ing_count | Total number of steering events registered within the defined period. |
| | drivingevents_steer- ing_avg_severity | Average severity of the steering events. |
| orders | orders_completed | Total number of all orders that have been completed within the defined period. |
| | orders_cancelled | Total number of all orders that have been cancelled or rejected within the defined period. |
| | orders_ontime | Total number of completed orders (as defined above), whose event time is less than or equal to the planned arrival time. |

Miscellaneous reports

showIOReportExtern Description

This action returns a list of events recorded with the inputs and outputs of the LINK device.

Technical details

| SOAP endpoint address / function name | tripAndTimeReportingService#showIOReport |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

showlOReportExtern requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

showIOReportExtern requires the following other parameters:

• Date range filter parameters

Parameters specific to showIOReportExtern:

| Parameter | Туре | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| iofilter | string | Name of a digital input. Can be specified multiple times to get combinations of all the specified inputs. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

Result

Result for showIOReportExtern:

| Parameter | Туре | Description |
|----------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Maximum capacity is 40 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters. |
| objectname | string | Display name of an object. |
| start_time | string | The time recorded when this event started. |
| start_odometer | int | The odometer reading when this event started. |
| start_postext | string | A detailed textual description of the location where this event started. |
| end_time | string | The time recorded when this event ended. |
| end_odometer | int | The odometer reading when this event ended. |
| end_postext | string | A detailed textual description of the location where this event ended. |
| reference | string | Name of the input or output channel. |
| distance | int | The difference between start_odometer and end_odometer. Unit of measurement is 'meters'. |
| duration | int | The difference between start_time and end_time. Unit of measurement is 'seconds'. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

showAccelerationEvents Description

This action shows unwanted driver behaviour. It shows a list of events with information on excessive acceleration, breaking or cornering, based on a threshold defined by the user. These events only cover short time periods, e.g. two to four seconds for a sharp turn.

Technical details

| SOAP endpoint address / function name | tripAndTimeReportingService#showAcceleration- Events |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameter restrictions

Before processing a request, all parameters are checked for invalid combinations and an error message is returned if an unacceptable parameter combination is detected.

One of the following parameters is mandatory:

- objectno
- objectuid
- objectgroupname
- driverno
- driveruid
- drivergroupname

Parameters

showAccelerationEvents requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

 $\verb|showAccelerationEvents|| \textbf{requires the following other parameters:}|$

• Date range filter parameters

Parameters specific to showAccelerationEvents:

| Parameter | Туре | Description |
|-----------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| driverno | string | Identifying number of a driver. Unique within an account. Search for the specified driver number. Can be used alternatively to driveruid. |
| drivergroupname | string | Name of the group of drivers the driver is assigned to, case-sensitive. This parameter is optional. |

| Parameter | Туре | Description |
|-------------------|-------------|--|
| avg_accel | int | Acceleration in milli-g. This value is the lower threshold used for including acceleration events with an average acceleration higher than indicated. Use this value to limit the size of the result list and receive events with more relevant severity. Varies between a minimum of 0 and a maximum of approx.1100. |
| | | # 449 - very low severity 450 to 549 - low severity 550 to 649 - medium severity 650 to 749 - high severity # 750 - very high severity The result may not include average acceleration in the very low severity range. This parameter is optional. |
| accelerationtypes | int | Specifies which acceleration types will be reported. You can specify multiple values for this parameter. Separate the values by comma when using the CSV interface. Valid values: • 0 - acceleration (can be enabled on request) • 1 - brake • 2 - steering left • 3 - steering right When you do not indicate the parameter the types 1,2 and 3 will be returned. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| externalid | string | For future use. This parameter is optional. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |

Result

Result for showAccelerationEvents:

| Parameter | Туре | Description |
|------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectname | string | Display name of an object. |

| Parameter | Type | Description |
|----------------|--------|--|
| driverno | string | Identifying number of a driver. Unique within an account. |
| drivername | string | Display name of a driver. |
| start_time | Date | Event start. ISO 8601-formatted date and time in the UTC timezone, combined representation in the extended format. |
| | | Example: 2007-12-24T16:00:00+02:00 |
| end_time | Date | Event end. ISO 8601-formatted date and time in the UTC time- zone, combined representation in the extended for- mat. Example: 2007-12-24T16:00:00+02:00 |
| | | Example. 2007-12-241 lb.00.00+02.00 |
| start_speed | float | The speed measured at the start of the acceleration event in km/h. |
| end_speed | float | The speed measured at the end of the acceleration event in km/h. |
| max_accelspeed | float | The speed at which the maximum acceleration during the acceleration event was measured in km/h. |
| avg_accel | int | Acceleration in milli- <i>g</i> . Varies between a minimum of 0 and a maximum of 2000. |
| | | # 449 - very low severity 450 to 549 - low severity 550 to 649 - medium severity 650 to 749 - high severity # 750 - very high severity |
| max_accel | int | Acceleration in milli-g. |

| Parameter | Туре | Description | |
|----------------|-------------------------|---|--|
| accel_dir | int | Direction of the acceleration in relation to the vehicle, in degrees. • 0 - min • 360 - max Understand the values as follows: | |
| | | 315-45 - forward acceleration (can be enabled on request) 45-135 - cornering to the left 135-225 - braking 225-315 - cornering to the right | |
| accel_type | nonNega- tiveInteger | Possible values are: • 0 - acceleration (can be enabled on request) • 1 - brake • 2 - steering left • 3 - steering right | |
| latitude | int | Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. | |
| longitude | int | Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See Geographic coordinate conversion on Wikipedia. | |
| postext | string | Position at event end time. | |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. | |
| duration | int | The duration of the event, in milliseconds. | |
| severity | float | Severity of the event. Dependent on event type (braking or steering), vehicle type, and speed. Ranges from1.0 to 5.0. | |
| roadspeedlimit | float | The actual road speed limit taken from the map data in km/h. | |

| Parameter | Type | Description |
|------------|--------|--|
| externalid | string | For future use. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |

showSpeedingEvents Description

This action shows unwanted driver behaviour. It shows a list of trips or part of trips with information on excessive speeding.

Technical details

| SOAP endpoint address / function name | tripAndTimeReportingService#showSpeedingEvents |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameter restrictions

Before processing a request, all parameters are checked for invalid combinations and an error message is returned if an unacceptable parameter combination is detected.

One of the following parameters is mandatory:

- objectno
- objectuid
- objectgroupname
- driverno
- driveruid
- drivergroupname

Parameters

showSpeedingEvents requires the following common parameters:

- Authentication parameters
- General parameters

showSpeedingEvents requires the following other parameters:

• Date range filter parameters

Parameters specific to showSpeedingEvents:

| Parameter | Type | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |

| Parameter | Type | Description |
|-----------------|-------------|---|
| driverno | string | Identifying number of a driver. Unique within an account. Search for the specified driver number. Can be used alternatively to driveruid. |
| objectgroupname | string | A name of an object group. |
| drivergroupname | string | Name of the group of drivers the driver is assigned to, case-sensitive. This parameter is optional. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| externalid | string | For future use. This parameter is optional. |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |

Result

Result for showSpeedingEvents:

| Parameter | Туре | Description |
|-----------------|-------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectname | string | Display name of an object. |
| driverno | string | Identifying number of a driver. Unique within an account. |
| drivername | string | Display name of a driver. |
| start_time | string | The time recorded when this event started. |
| start_longitude | int | Geographic longitude in the WGS84 coordinate system. |
| | | Unit of measurement is micro degrees (10 ⁻⁶ grd). |
| | | Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. |
| | | See <u>Geographic coordinate conversion on Wikipedia</u> . |

| start_latitude int Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10° grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10° and rounding to an integer. See Geographic coordinate conversion on Wikipedia. start_postext string A detailed textual description of the location where this event started. end_time string The time recorded when this event ended. end_longitude int Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10° grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10° and rounding to an integer. See Geographic coordinate conversion on Wikipedia. end_latitude int Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10° grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10° and rounding to an integer. See Geographic coordinate conversion on Wikipedia. end_postext string A detailed textual description of the location where this event ended. max_speed int Maximum speed driven during the speeding event. avg_speed int The average speed driven during the speeding event. object_speedlimit float The speed limit defined for the vehicle in km/h. object_speedlimit float Information about actual speed limits for the specific road taken from map data in km/h. object_speedlimit float Information about actual speed limits for the specific road taken from map data in km/h. object_uid string (30) A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to object_no. duration int The duration of the event, in milliseconds. | Parameter | Туре | Description |
|--|-------------------|-------------|---|
| end_time string The time recorded when this event ended. end_longitude int Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10° grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10° and rounding to an integer. See Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10° grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10° and rounding to an integer. See Geographic coordinate conversion on Wikipedia. end_postext string A detailed textual description of the location where this event ended. max_speed int Maximum speed driven during the speeding event. win_speed string Minimum speed driven during the speeding event. The average speed driven during the speeding event. object_speedlimit float The speed limit defined for the vehicle in km/h. road_speedlimit float Information about actual speed limits for the specific road taken from map data in km/h. objectuid string (30) A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. duration int The duration of the event, in milliseconds. distance int The distance the vehicle was speeding, in meters. | start_latitude | int | Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. |
| end_longitude int Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10-6 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. end_latitude int Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10-6 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. end_postext string A detailed textual description of the location where this event ended. max_speed int Maximum speed driven during the speeding event. win_speed string Minimum speed driven during the speeding event. avg_speed int The average speed driven during the speeding event. object_speedlimit float The speed limit defined for the vehicle in km/h. road_speedlimit float Information about actual speed limits for the specific road taken from map data in km/h. objectuid string (30) A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. duration int The duration of the event, in milliseconds. | start_postext | string | · |
| tem. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. end_latitude int Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. end_postext string A detailed textual description of the location where this event ended. max_speed int Maximum speed driven during the speeding event. avg_speed int The average speed driven during the speeding event. object_speedlimit float The speed limit defined for the vehicle in km/h. road_speedlimit float Information about actual speed limits for the specific road taken from map data in km/h. objectuid string (30) A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. duration int The distance the vehicle was speeding, in meters. | end_time | string | The time recorded when this event ended. |
| Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. end_postext string A detailed textual description of the location where this event ended. max_speed int Maximum speed driven during the speeding event. min_speed string Minimum speed driven during the speeding event. avg_speed int The average speed driven during the speeding event. object_speedlimit float The speed limit defined for the vehicle in km/h. road_speedlimit float Information about actual speed limits for the specific road taken from map data in km/h. objectuid string (30) A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. duration int The duration of the event, in milliseconds. distance int The distance the vehicle was speeding, in meters. | end_longitude | int | tem. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. |
| this event ended. max_speed int Maximum speed driven during the speeding event. min_speed string Minimum speed driven during the speeding event. avg_speed int The average speed driven during the speeding event. object_speedlimit float The speed limit defined for the vehicle in km/h. road_speedlimit float Information about actual speed limits for the specific road taken from map data in km/h. objectuid string (30) A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. duration int The duration of the event, in milliseconds. distance int The distance the vehicle was speeding, in meters. | end_latitude | int | Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. |
| min_speed string Minimum speed driven during the speeding event. avg_speed int The average speed driven during the speeding event. object_speedlimit float The speed limit defined for the vehicle in km/h. road_speedlimit float Information about actual speed limits for the specific road taken from map data in km/h. objectuid string (30) A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. duration int The duration of the event, in milliseconds. distance int The distance the vehicle was speeding, in meters. | end_postext | string | |
| avg_speed int The average speed driven during the speeding event. object_speedlimit float The speed limit defined for the vehicle in km/h. road_speedlimit float Information about actual speed limits for the specific road taken from map data in km/h. objectuid string (30) A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. duration int The duration of the event, in milliseconds. distance int The distance the vehicle was speeding, in meters. | max_speed | int | Maximum speed driven during the speeding event. |
| object_speedlimit float The speed limit defined for the vehicle in km/h. road_speedlimit float Information about actual speed limits for the specific road taken from map data in km/h. objectuid string (30) A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. duration int The duration of the event, in milliseconds. distance int The distance the vehicle was speeding, in meters. | min_speed | string | Minimum speed driven during the speeding event. |
| road_speedlimit float Information about actual speed limits for the specific road taken from map data in km/h. objectuid string (30) A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. duration int The duration of the event, in milliseconds. distance int The distance the vehicle was speeding, in meters. | avg_speed | int | The average speed driven during the speeding event. |
| road taken from map data in km/h. objectuid string (30) A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. duration int The duration of the event, in milliseconds. distance int The distance the vehicle was speeding, in meters. | object_speedlimit | float | The speed limit defined for the vehicle in km/h. |
| object, automatically generated. Can be used alternatively to objectno. duration int The duration of the event, in milliseconds. distance int The distance the vehicle was speeding, in meters. | road_speedlimit | float | |
| distance int The distance the vehicle was speeding, in meters. | objectuid | string (30) | object, automatically generated. |
| | duration | int | The duration of the event, in milliseconds. |
| externalid string For future use. | distance | int | The distance the vehicle was speeding, in meters. |
| | externalid | string | For future use. |

| Parameter | Type | Description |
|-----------------|--------|--|
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to driverno. |
| area_speedlimit | float | Information about speed limits for Webfleet areas in km/h. |

showDigitalInputStateMileage Description

This action returns all possible switching state combinations of digital inputs along with the mileage for each combination.

Technical details

| SOAP endpoint address / function name | tripAndTimeReportingService#showDigitalInputS- tateMileage |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

showDigitalInputStateMileage requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

 $\verb|showDigitalInputStateMileage|| \textbf{requires the following other parameters:}|$

• Date range filter parameters

Parameters specific to showDigitalInputStateMileage:

| Parameter | Туре | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| iofilter | string | Name of a digital input. Can be specified multiple times to get combinations of all the specified inputs. This parameter is mandatory, i.e. at least one iofilter must be specified. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

Parameters specific to showDigitalInputStateMileage

Result

Result for showDigitalInputStateMileage:

| Parameter | Type | Description |
|-----------|--------|---|
| names | string | Names of the digital inputs. Separated by comma. |
| statuses | string | States of the inputs (ON/OFF), separated by comma. |
| distance | int | The distance driven with the specific input combination. Unit of measurement is 'meters'. |

 $Result\ for\ show Digital Input State Mileage$

getChargerConnections Description

getChargerConnections returns information about charger connections for a single object or for all objects in the account for a selected time period.

Parameters

getChargerConnections requires the following common parameters:

- Authentication parameters
- General parameters

getChargerConnections requires the following other parameters:

• Date range filter parameters

Parameters specific to getChargerConnections:

| Parameter | Туре | Description |
|-----------|-------------|--|
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |

Result

Result for getChargerConnections:

| Parameter | Type | Description |
|------------|-------------|--|
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| driveruid | string (30) | Identifier of the driver who has started charging. |
| start_time | string | Date and time of the charging event start. |

| Parameter | Туре | Description |
|--------------------------|--------|--|
| end_time | string | Date and time of the charging event end. |
| longitude | int | Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| latitude | int | Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| location | string | |
| start_battery_lev- el | float | Battery level in percentages at which the charging started. |
| end_battery_level | float | Battery level in percentages at which the charging finished. |
| odometer | int | Odometer value (in meters) at which the charging started. |
| distance | int | Distance since last charge (in meters). |
| range_start | int | Vehicle range when the charger is connected. |
| range_end | int | Vehicle range when the charger is disconnected. |
| cycle_no | int | Counter of charger connections since activation in Webfleet electric vehicles service. |
| kwh_charged | float | Amount of energy charged. Unit is KWh. |

getCrashLog Description

Using this action you can retrieve all crash log data reported by a LINK device.

Supported devices:

- LINK 410
- LINK 510/530
- LINK 610/640
- LINK 710/740
- LINK 210/240/245

Technical details

| SOAP endpoint address / function name | tripAndTimeReportingService#getCrashLog |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameter restrictions

Before processing a request, all parameters are checked for invalid combinations and an error message is returned if an unacceptable parameter combination is detected.

One of the following parameters is mandatory:

- objectno
- objectuid

Parameters

getCrashLog requires the following common parameters:

- Authentication parameters
- General parameters

getCrashLog requires the following other parameters, maximum range is 2 days:

• Date range filter parameters

Parameters specific to getCrashLog:

| Parameter | Type | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

Result

Result for getCrashLog:

| Parameter | Туре | Description |
|------------|----------|-----------------------------------|
| sampletime | datetime | Sample time. |
| ассх | integer | Acceleration on X axis. |
| ассх | integer | Acceleration on Y axis. |
| accz | integer | Acceleration on Z axis. |
| speed | integer | Speed in km/h. Optional. |
| enginerpm | integer | Revolutions per minute. Optional. |
| | | |

| Parameter | Туре | Description |
|----------------|---------|---|
| engineload | integer | Engine load in %. Optional. |
| throttlepos | integer | Throttle position in %. Optional. |
| latitude | integer | Geographic latitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . Optional. |
| longitude | integer | Geographic longitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . Optional. |
| country | string | Country code, e.g. "NL", "AT", "GB". Optional. |
| state | string | Federal state (US only). Optional. |
| roadspeedlimit | integer | The actual road speed limit taken from the map data in km/h. Optional. |
| roadtype | integer | Road type classification, can be one of the following. Optional. O - Motorway 1 - Major road of high importance 2 - Major road 3 - Secondary road 4 - Connecting road 5 - Local road of major importance 6 - Local road 7 - Destination road 8 - Other road 9 - Ferry 10 - Ferry railroad 11 - Railroad 12 - Reference line |
| incity | boolean | Indicates if the vehicle was driving on an urban road (true) or not (false). Optional. |

Note: Parameters roadspeedlimit, roadtype, incity are not available by default. Please contact Customer Support to activate it. Additional cost will apply.

getLoadData Description

getLoadData retrieves load data from a trailer for a defined period.

Receving trailer data is supported by LINK 350.

Technical details

| SOAP endpoint address / function name | tripAndTimeReportingService#getLoadData |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

getLoadData requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters
- <u>Date range filter parameters</u>, periods longer than 3 months are not permitted.

Parameters specific to getLoadData:

| Parameter | Туре | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

Result

Result for getLoadData:

| Parameter | Type | Description |
|-----------|-------------|--|
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. |
| load | long | Trailer's load in kilograms. |
| speed | long | Speed in km/h. |
| timestamp | dateTime | Timestamp of registered load event. |

Geocoding and routing

geocodeAddress Description

Geocodes the address provided as request parameters and returns all possible matches, one per line.

Technical details

| SOAP endpoint address / function name | addressService#geocodeAddress |
|---------------------------------------|-------------------------------|
| Request limits | 900 requests / hour |

Validating the response

If the request returns one or multiple matches, the result needs to be validated, e.g. by comparing it to the input parameters, because the result might not be as expected (e.g. due to typing errors) and could result in driving to the wrong destination if used without validation.

Parameters

geocodeAddress requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to geocodeAddress:

| Туре | Description |
|-------------|--|
| string (50) | |
| string (10) | |
| string (10) | |
| string (50) | |
| string (2) | ISO 3166-1 alpha-2 code for the country (capital letters). |
| | string (10) string (10) string (50) |

| Parameter | Type | Description |
|-----------------------|---|--|
| freetext string (512) | Address to geocode in unstructured format. This string can contain all parts of the address separated using spaces. | |
| | | Example: Oosterdoksstraat 114 Amsterdam NL |
| | Note : When you use freetext search we recommend not to use the structured parameters. The closer a freetext query is to a structured formatted address the better results you will achieve. Using freetext search you can also search for POIs. This depends on the country and the availablility of POI information. | |

Result

Result for geocodeAddress:

| Parameter | Туре | Description |
|--------------------------|-------------|---|
| addrstreet | string (50) | |
| addrstreetnumber | string (10) | |
| addrzip | string (10) | |
| addrcity | string (50) | |
| addrcountry | string (2) | ISO 3166-1 alpha-2 code for the country (capital letters). |
| | | This parameter is required. |
| postext | string | |
| formatted_longi- tude | string | Geographic longitude in the form GGG° MM' SS.S" E/W in the WGS84 coordinate system. |
| formatted_lati- tude | string | Geographic latitude in the form GGG° MM′ SS.S″ N/S in the WGS84 coordinate system. |
| longitude | int | Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |

| Parameter | Type | Description |
|-----------------------------|------|---|
| latitude | int | Geographic latitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . |
| additional_infor- mation | | Contains the following, separated by a semicolon: score - Value between 1 and 0, where 1 is best score and 0 is worst. It is possible that multiple records are returned with the same score. The score is not a mea- sure of absolute accuracy. If a query returns only ap- proximate matches, the best of those will be given a score of 1.0. type - The information returned can give you an idea of which type of match the geocoder has found. Im- portant: Don't rely on the possible value, as they can change without further notice. |

calcRouteSimpleExtern Description

Determines the route from a start location to an end location and calculates the resulting estimated time of arrival for a specific route-type. Optionally IQ Routes and/or HD Traffic information can be included.

Note: If you use this action together with our SOAP interface, please make sure you specify the start time to avoid it being set to the beginning of the day, which is usually already in the past.

Technical details

| SOAP endpoint address / function name | addressService#calcRouteSimple |
|---------------------------------------|--------------------------------|
| Request limits | 6 requests / minute |

Parameters

calcRouteSimpleExtern requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to calcRouteSimpleExtern:

| Parameter | Type | Description |
|----------------|-------------------------|---|
| route_type | nonNega- tiveInteger | Defines type of route type for calculation of estimated time of arrival. Valid values: |
| | | • 0 - Quickest |
| | | • 1 - Shortest |
| | | 2 - Avoid motorway |
| | | 3 - Walk (deprecated) A Ricycle (deprecated) |
| | | 4 - Bicycle (deprecated) |
| | | Defaults to 0. |
| | | This parameter is optional. |
| use_traffic | nonNega- tiveInteger | Defines if traffic information needs to be taken into account for calculating the route and estimated time of arrival. Default: |
| | | • if start datetime is used - 0 |
| | | • if start_datetime is not used - 1 |
| | | Valid values: |
| | | • 0 - don't use traffic |
| | | • 1 - use traffic |
| | | 1 doc traine |
| | | Note : If use_traffic is set to 1, the current traffic situation is used to calculate the best route and the estimated time of arrival. This works only if the departure time is less than 30 minutes in the future. |
| | | This parameter is optional. |
| start_datetime | dateTime | Defines the departure date and time. If specified, over rules start_day and start_time. |
| | | Defaults to the current day and time. |
| start_day | string | Defines the weekday of departure. |
| | - | If start_day is specified it is used together with start_time, overruling the default of start_date-time. Case-sensitive. Valid values: |
| | | |
| | | montue |
| | | • wed |
| | | • thu |
| | | • fri |
| | | • sat |
| | | • sun |
| | | • today |
| | | Defaults to the current day. |

| Parameter | Туре | Description |
|-----------------|-------------------------|--|
| start_time | string | Defines the departure time. If start_time is specified, it is used together with start_day overruling the default of start_datetime. Defaults to the current time. |
| use_tollroads | nonNega- tiveInteger | Defines if toll roads should be avoided for and the route calculation. Possible values are: • 0 - Avoid toll roads • 1 - Include toll roads Defaults to 1. |
| start_latitude | int | Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See Geographic coordinate conversion on Wikipedia. This parameter is required. |
| start_longitude | int | Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See Geographic coordinate conversion on Wikipedia. This parameter is required. |
| end_latitude | int | Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. This parameter is required. |
| end_longitude | int | Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See Geographic coordinate conversion on Wikipedia. This parameter is required. |

| Parameter | Type | Description |
|-------------|--------|--|
| travel_mode | string | Determines the travel mode for the calculation of the estimated time of arrival. |
| | | Valid values: • car |
| | | truckbicyclepedestrian |
| | | This parameter is optional. Defaults to car. |

Result

Result for calcRouteSimpleExtern:

| Parameter | Type | Description |
|-----------------|--------|---|
| end_datetime | string | The calculated arrival date and time. Empty if no start_datetime is specified and start_day or start_time is specified. |
| end_day | string | Valid values: |
| | | mon tue wed thu fri sat sun Empty if start_datetime is specified. |
| end_time | string | The calculated arrival time. Empty if start_datetime is specified. |
| distance | int | Distance to destination (in meters). |
| time | string | The calculated duration of a trip from the departure location to the destination location. The unit of measurement is 'seconds'. |
| delay | string | Estimated delay for a trip due to traffic. The unit of measurement is 'seconds'. |
| timezone_offset | string | Timezone offset. The unit of measurement is 'seconds'. |

Configuration and security

showSettings Description

showSettings shows a number of Webfleet settings.

Currently showSettings returns OptiDrive indicator related account settings only. The settings indicate the weight given to each influencing variable used for the calculation of the OptiDrive indicator.

In Webfleet, when you move a slider of a variable under **Settings** in the **Reporting** tab, the given weight in relation to the weight of the other three variables is indicated in brackets.

Technical details

| SOAP endpoint address / function name | configurationAndSecurityService#showSettings |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

showSettings requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to showSettings:

| Parameter | Type | Description |
|-----------------|--------|--|
| target_username | string | The username of the Webfleet user for whom the user specific settings shall be retrieved in addition to the account-wide settings. |
| | | Note : If not specified, settings will be returned on account level. |
| | | This parameter is optional. |

Result

Result for showSettings:

| Parameter | Туре | Description |
|------------------|-------|--|
| od_weight_idling | float | The weight given to idling information used for the calculation of the OptiDrive indicator. |
| | | The value indicates the total influence of the available information in relation to the other three variables influencing the OptiDrive indicator. |

| Parameter | Туре | Description |
|------------------------------------|--------|--|
| od_weight_speed-ing | float | The weight given to speeding information used for the calculation of the OptiDrive indicator. The value indicates the total influence of the available information in relation to the other three variables influencing the OptiDrive indicator. |
| od_weight_dri- vingevents | float | The weight given to information about driving events used for the calculation of the OptiDrive indicator. The value indicates the total influence of the available information in relation to the other three variables influencing the OptiDrive indicator. |
| od_weight_fu- elusage | float | The weight given to fuel consumption information used for the calculation of the OptiDrive indicator. The value indicates the total influence of the available information in relation to the other three variables influencing the OptiDrive indicator. |
| distanceunit | string | The preferred distance unit set in the application, for example Webfleet user interface. Valid values: • km • mi Note: All values returned by WEBFLEET.connect actions deliver metric values no matter which distanceunit is set. |
| timezone | string | Valid values are known time zones, for example: • Europe/Berlin • Europe/London • America/Toronto • |
| block_pwdattack | int | Valid values: 1 - enabled 0 - disabled Note: If set to 1, the user's login credential will be blocked after having entered a wrong password multiple times. This is a security feature that protects credentials against password attacks. |
| order_destination- notification | int | Indicates if a notification is created when the object approaches the order destination. Valid values: 1 - enabled 0 - disabled |

| Parameter | Туре | Description |
|--|-------|---|
| order_destination- notification_min- utes | int | The time before arrival when a notification is created automatically, in minutes. |
| order_desti- nationnotifica- tion_eventlevel | int | The eventlevel of the notification, see <u>Parameters</u> <u>specific to showEventReportExtern</u> . |
| order_defaultype | int | Valid values: |
| | | • 1 - service order |
| | | • 2 - pickup order |
| | | • 3 - delivery order |
| order_rejectional- | int | Valid values: |
| lowed | | • 1 - enabled |
| | | • 0 - disabled |
| fuelconsumption | float | This is the fleet's reference value for fuel consumption reporting in I/100km. |
| | | May be empty if not used. |
| fueltype | int | Valid values: |
| | | • 0 - unknown |
| | | • 1 - diesel |
| | | • 2 - gasoline |
| | | • 3 - lpg |
| speedlimit | float | Speed limit on account level used for reports, in km/h. |
| speedlimit_toler- ance | int | This value indicates the percentage above the speed limit that vehicles are allowed to travel before Webfleet records that the vehicle is breaking the speed limit. |
| | | The values range from 0 100. |
| od_weight_coast-ing | float | The weight given to coasting information used for the calculation of the OptiDrive indicator. |
| | | The value indicates the total influence of the available information in relation to the other variables influencing the OptiDrive indicator. |
| od_weight_con- stantspeed | float | The weight given to constant speed information used for the calculation of the OptiDrive indicator. |
| | | The value indicates the total influence of the available information in relation to the other variables influencing the OptiDrive indicator. |

| Parameter | Type | Description |
|----------------------------|-------|--|
| od_weight_green- speed | float | The weight given to green speed information used for the calculation of the OptiDrive indicator. |
| | | The value indicates the total influence of the available information in relation to the other variables influencing the OptiDrive indicator. |
| od_weight_high- revving | float | The weight given to gear shifting (high revving) information used for the calculation of the OptiDrive indicator. |
| | | The value indicates the total influence of the available information in relation to the other variables influencing the OptiDrive indicator. |
| energy_consump- tion | float | This is the fleet's reference value for energy consumption reporting in kWh/100km. May be empty if not used. |

createSession Description

Using createSession a session on the server will be created. The result structure contains a sessiontoken, also see <u>Authentication parameters</u>. For the lifetime of the session that is usually ~60 minutes, this token can be used alternatively to account, username or password to authorise further requests to WEBFLEET.connect.

Technical details

| SOAP endpoint address / function name | configurationAndSecurityService#createSession |
|---------------------------------------|---|
| Request limits | 10 requests / hour |

Parameters

createSession requires the following common parameters:

- Authentication parameters
- General parameters

Result

Result for createSession:

| Parameter | Туре | Description |
|-------------------------|-------------------------|---|
| sessiontoken | string (32) | A server-generated alphanumeric random string. Within the session lifetime, the <u>Authentication parameters</u> account, username and password can be omitted for further requests. Instead, only the new request parameter sessiontoken is needed to identify the user's session. Note: sessiontoken is bound to the IP address of the client, that requested this sessiontoken. Therefore the sessiontoken cannot be used from other computers. |
| timetolive | nonNega- tiveInteger | Maximum lifetime of the session in seconds. After this time, the sessiontoken becomes invalid, no matter if requests happened in the meantime. Typical value: 3600 (60 minutes) |
| timetoidle | nonNega- tiveInteger | Maximum time between two requests in seconds. The idle-timeout is used by the server to detect unused sessions. Typical value: 3600 (60 minutes) |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. This value is returned, when the user is assigned to one object only. Can be used alternatively to objectno. |
| externalid | string | For future use. |
| passwordexpira- tion | dateTime | The expiration time of the password. ISO 8601-formatted date and time in UTC timezone, combined representation in the extended format. |
| | | Example: 2013-06-24T16:00:00Z |
| | | Empty if the setting password expiration is disabled or no timestamp of the last password change exists. |

terminateSession Description

Using terminateSession you can invalidate a session that was created using <u>createSession</u>. After that you can create a new session.

Technical details

SOAP endpoint address / func- configurationAndSecurityService#terminateSession tion name

Parameters

terminateSession requires the following common parameters:

- Authentication parameters, sessiontoken is required
- General parameters

Note: terminateSession does not require any specific parameters. You only need to indicate sessiontoken of the session that you want to invalidate, see <u>Authentication parameters</u>.

showAccountOrderStates

Description

showAccountOrderStates retrieves the list of order states and their properties. The properties indicate if the respective order state appears in the order workflow and whether a notification shall be created when the respective order state was reported. These settings apply to all newly created orders within the Webfleet account.

The settings of properties of order states correspond to the settings you can make in the Webfleet user interface.

Technical details

| SOAP endpoint address / function name | configurationAndSecurityService#showAccountOrderStates |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

showAccountOrderStates requires the following common parameters:

- Authentication parameters
- General parameters

Result

Result for showAccountOrderStates:

| Parameter | Туре | Description |
|----------------|------|--|
| orderstate int | int | The state of the progress of an order. Valid values: |
| | | 101 - Received 102 - Read 103 - Accepted 201 - Service order started 202 - Arrived at destination 203 - Work started 204 - Work finished 205 - Departed from destination 207 - Electronic proof of delivery (ePOD) 222 - Arrived at pick up location 223 - Pick up started 224 - Pick up finished 225 - Departed from pick up location 227 - Electronic proof of delivery (ePOD) 242 - Arrived at delivery location 243 - Delivery started 244 - Delivery finished 245 - Departed from delivery location 247 - Electronic proof of delivery (ePOD) 298 - Resumed 299 - Suspended 301 - Cancelled 302 - Rejected 401 - Finished The following order states are handled according to the settings made for order started 221 - Pickup order started 221 - Delivery order started 241 - Delivery order started |

| Parameter | Type | Description |
|-------------|------|---|
| enabled int | int | Indicates whether the respective order state appears in the order workflow on the navigation device. Valid values: |
| | | 0 - false1 - true |
| | | The following order states can be enabled or disabled |
| | | 202 - Arrived at destination 203 - Work started 204 - Work finished 205 - Departed from destination 207 - Electronic proof of delivery (ePOD) 222 - Arrived at pick up location 223 - Pick up started 224 - Pick up finished 225 - Departed from pick up location 227 - Electronic proof of delivery (ePOD) 242 - Arrived at delivery location 243 - Delivery started 244 - Delivery finished 245 - Departed from delivery location 247 - Electronic proof of delivery (ePOD) |
| eventlevel | int | Event level. Valid values: • <empty> - No event is created. • 2 - Warning</empty> |

updateAccountOrderState Description

updateAccountOrderState updates the properties of an order state. This update applies to all newly created orders within an account. Previously created orders are not affected by this change.

Note: If you want to update the properties of multiple order states for the whole account you have to update each order state separately.

Technical details

| SOAP endpoint address / function name | configurationAndSecurityService#updateAccountOrderState |
|---------------------------------------|---|
| Request limits | 50 requests / hour |

Parameters

updateAccountOrderState requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to updateAccountOrderState:

| Parameter | Type | Description |
|------------|------|---|
| orderstate | int | The state of the progress of an order. Valid values: |
| | | 101 - Received 102 - Read 103 - Accepted 201 - Service order started 202 - Arrived at destination 203 - Work started 204 - Work finished 205 - Departed from destination 207 - Electronic proof of delivery (ePOD) 222 - Arrived at pick up location 223 - Pick up started 224 - Pick up finished 225 - Departed from pick up location 227 - Electronic proof of delivery (ePOD) 242 - Arrived at delivery location 243 - Delivery started 244 - Delivery finished 245 - Departed from delivery location 247 - Electronic proof of delivery (ePOD) 298 - Resumed 299 - Suspended 301 - Cancelled 302 - Rejected 401 - Finished The following order states are handled according to the settings made for order state 201: |
| | | 221 - Pickup order started 241 - Delivery order started This parameter is required. |
| | | s paramotor to required |

| Parameter | Type | Description |
|-------------|------|---|
| enabled int | int | Indicates whether the respective order state appears in the order workflow on the navigation device. Valid values are: |
| | | 0 - false1 - true |
| | | The following order states can be enabled or disabled: |
| | | 202 - Arrived at destination 203 - Work started 204 - Work finished 205 - Departed from destination 207 - Electronic proof of delivery (ePOD) 222 - Arrived at pick up location 223 - Pick up started 224 - Pick up finished 225 - Departed from pick up location 227 - Electronic proof of delivery (ePOD) 242 - Arrived at delivery location 243 - Delivery started 244 - Delivery finished 245 - Departed from delivery location 247 - Electronic proof of delivery (ePOD) |
| eventlevel | int | This parameter is required. Event level. |
| evenilievei | IIIC | Valid values: |
| | | <empty></empty>2 - Warning |
| | | This parameter is optional. |

showAccountOrderAutomations Description

showAccountOrderAutomations retrieves the list of order automation steps. These properties indicate if an order shall be automatically accepted, started, navigated to etc. or if the driver shall be asked to actively confirm the steps. These settings apply to all newly created orders within the Webfleet account.

The settings of the order workflow control correspond to the settings you can make in the Webfleet user interface.

Technical details

| SOAP endpoint address / func- | configurationAndSecurityService#showAccountOrder- |
|-------------------------------|---|
| tion name | Automations |

Parameters

showAccountOrderAutomations requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Result

Result for showAccountOrderAutomations:

| Parameter | Type | Description |
|------------|------|---|
| automation | int | Workflow step that can be automated. Valid values: |
| | | 1 - accept the order 2 - start the order 3 - navigate to the order destination 4 - skip displaying the route summary screen 5 - delete the order after it has been finished 6 - suppress the 'continue with next order' screen |
| enabled | int | Indicates whether the respective step is automated. Valid values: |
| | | 0 - false1 - true, the step is automated |

updateAccountOrderAutomation Description

updateAccountOrderAutomation updates the properties of the workflow steps of orders. This update applies to all newly created orders within an account. Previously created orders are not affected by this change. You can update multiple workflow steps by running the action for each step separately.

Technical details

| SOAP endpoint address / function name | configurationAndSecurityService#updateAccountOrderAutomation |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

updateAccountOrderAutomation requires the following common parameters:

- <u>Authentication parameters</u>
- <u>General parameters</u>

Parameters specific to updateAccountOrderAutomation:

| Parameter | Type | Description |
|-----------------|------|---|
| orderautomation | int | Workflow step that can be automated. Valid values: |
| | | 1 - accept the order 2 - start the order 3 - navigate to the order destination 4 - skip displaying the route summary screen 5 - delete the order after it has been finished 6 - suppress the 'continue with next order' screen Available on PRO devices with firmware version 10.533 or higher. This parameter is required. |
| enabled | int | Indicates whether the respective step is automated. Valid values: |
| | | 0 - false1 - true, workflow step is automated |
| | | This parameter is required. |

getAccountStatusMessages Description

getAccountStatusMessages returns the predefined status messages for the Webfleet account. This includes both free text and order related status messages which are visible as predefined messages on the navigation device. By default the units synchronise these account status messages.

For a configuration for individual objects refer to getStatusMessages.

Technical details

| SOAP endpoint address / function name | configurationAndSecurityService#getAccountSta- tusMessages |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

getAccountStatusMessages requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Result

Result for getAccountStatusMessages:

| Parameter | Type | Description |
|------------|-------------------------|---|
| type | string | Indicates the type of status message. Valid values: |
| | | textorder |
| index | nonNega- tiveInteger | The index of the predefined message Range: 1 15 |
| text | string | The text of the predefined status message. |
| eventlevel | nonNega- tiveInteger | The level of the reported event. Valid values: • <empty> - just the message • 1 - Notice/information • 2 - Warning • 3 - Alarm 1</empty> |
| | | 4 - Alarm 25 - Alarm 3 |

getStatusMessages Description

getStatusMessages returns the predefined status messages for a single object. This applies to both free text and order related status messages which are visible as predefined messages on the navigation device. By default these messages are synchronised with the status messages in the Webfleet account.

For account-wide configuration please refer to getAccountStatusMessages.

Technical details

| SOAP endpoint address / function name | configurationAndSecurityService#getStatusMessages |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

getStatusMessages requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to getStatusMessages:

| Parameter | Туре | Description |
|-----------|-------------|---|
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. If objectno is not indicated this parameter is mandatory. |
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. If objectuid is not indicated this parameter is mandatory. |

Result

Result for getStatusMessages:

| Parameter | Type | Description |
|------------|-------------------------|--|
| type | string | Indicates the type of status message. Valid values: |
| | | textorder |
| index | nonNega- tiveInteger | The index of the predefined message. Range: 1 15 |
| text | string | The text of the predefined status message. |
| eventlevel | nonNega- tiveInteger | The level of the reported event. Valid values: |
| | | <empty> - just the message</empty> 1 - Notice/information 2 - Warning 3 - Alarm 1 4 - Alarm 2 5 - Alarm 3 |

setVehicleConfig Description

Using $\mathtt{setVehicleConfig}$ you can change one or more LINK specific configurations at once.

Technical details

 ${\tt SOAP\ endpoint\ address\ /\ func-configuration And Security Service \#set Vehicle Configtion\ name}$

Parameters

setVehicleConfig requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to setVehicleConfig:

| Parameter | Type | Description |
|----------------------------|-------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Indicate either objectno or objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Indicate either objectno or objectuid. |
| ign_trip- start_timeout | int | Timeout before starting the trip automatically after the device detects the ignition is switched on, in sec- onds. Valid values are: 0, 30, 60, 120, 180, 240, 300 This parameter is optional. |
| ign_tripstop_time- out | int | Timeout before ending the trip automatically when the device detects standstill or is undocked. Valid values are: 0, 60, 120, 180, 240, 300, 600, 900, 1200, 1800, 2700, 3600 This parameter is optional. |
| standstill_timeout | int | Minimal standstill duration. Valid values are: 60, 120, 180, 240, 300, 600, 900, 1200, 1800, 2700, 3600 This parameter is optional. |

getVehicleConfig Description

Using getVehicleConfig you can retrieve LINK specific configuration settings for individual vehicles or all vehicles in the Webfleet account.

Technical details

| SOAP endpoint address / function name | configurationAndSecurityService#getVehicleConfig |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

getVehicleConfig requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to getVehicleConfig:

| Parameter | Type | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. This parameter is optional. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. This parameter is optional. |

Result

Result for getVehicleConfig:

| Parameter | Туре | Description |
|----------------------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. |
| ign_trip- start_timeout | int | Timeout before starting the trip automatically after the device detects the ignition is switched on, in sec- onds. Valid values are: 0, 30, 60, 120, 180, 240, 300 |
| ign_tripstop_time- out | int | Timeout before ending the trip automatically when the device detects standstill or is undocked. Valid values are: 0, 60, 120, 180, 240, 300, 600, 900, 1200, 1800, 2700, 3600 |
| standstill_timeout | int | Minimal standstill duration. Valid values are: 60, 120, 180, 240, 300, 600, 900, 1200, 1800, 2700, 3600 |

setStatusMessages Description

setStatusMessages sets predefined text and order status messages for a specific object. These messages are visible as predefined messages on the driver terminal.

Setting predefined status messages for the Webfleet account can be done using <u>setAccountStatusMessages</u>.

Technical details

| SOAP endpoint address / function name | configuration And Security Service #set Status Messages |
|---------------------------------------|---|
| Request limits | 50 request / 8 hours |

Parameters

setStatusMessages requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to setStatusMessages:

| Parameter | Туре | Description |
|-----------------------------|-------------------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Indicate either objectno or objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Indicate either objectno or objectuid. |
| resettoaccount | boolean | Valid values: 1 - The object specific status messages are reset to the account defaults and the status messages will be used from the Webfleet account 0 - Status messages remain object specific. This parameter is optional. |
| ts_txt_1 ts_txt_2 ts_txt_15 | string (60) | The text of the text status message on index 1, 2 15. These parameters are optional. |
| ts_el_1 ts_el_2 ts_el_15 | nonNega- tiveInteger | The text of the event level on index 1, 2 15. Valid values: 1 - Notice/Information 2 - Warning 3 - Alarm 1 4 - Alarm 2 5 - Alarm 3 These parameters are optional. Note: If not specified, the status message is not associated with any event level. |

| Parameter | Туре | Description |
|-----------------------------|-------------------------|---|
| os_txt_1 os_txt_2 os_txt_15 | string (60) | The order status message text on index 1, 2 15. These parameters are optional. |
| os_el_1 os_el_2 os_el_15 | nonNega- tiveInteger | The event level of the order status message on index 1, 2 15. Valid values: 1 - Notice/Information 2 - Warning 3 - Alarm 1 4 - Alarm 2 5 - Alarm 3 These parameters are optional. Note: If not indicated the status message is not associated with any event level. |

setAccountStatusMessages Description

setAccountStatusMessages sets the predefined order and text status messages for a whole Webfleet account. For object specific configurations use setStatusMessages.

Technical details

| SOAP endpoint address / function name | configuration And Security Service #set Account Status Messages |
|---------------------------------------|---|
| Request limits | 1 request / 4 hours |

Parameters

setAccountStatusMessages requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to setAccountStatusMessages:

| Parameter | Туре | Description |
|----------------------|-------------|--|
| ts_txt_1 ts_txt_2 | string (60) | The text of the text status message on index 1, 2 15. These parameters are optional. |
| ts_txt_15 | | |

| Parameter | Туре | Description |
|-----------------------------|-------------------------|---|
| ts_el_1 ts_el_2 | nonNega- tiveInteger | The text of the event level on index 1, 2 15. Possible values for event levels are: |
| ts_el_15 | | 1 - Notice/Information 2 - Warning 3 - Alarm 1 4 - Alarm 2 5 - Alarm 3 These parameters are optional. If not indicated the status message is not associated with any event level. |
| os_txt_1 os_txt_2 os_txt_15 | string (60) | The order status message text on index 1, 2 15. These parameters are optional. |
| os_el_1 os_el_2 | nonNega- tiveInteger | The event level of the order status message on index 1, 2 15. Possible values for event levels are: |
| os_el_15 | | 1 - Notice/Information 2 - Warning 3 - Alarm 1 4 - Alarm 2 5 - Alarm 3 These parameters are optional. If not indicated the status message is not associated with any event level. |

User management

showUsers Description

This actions returns a list of all existing users within the account along with the last recorded login time.

Technical details

| SOAP endpoint address / function name | user Management Service #show Users |
|---------------------------------------|-------------------------------------|
| Request limits | 10 requests / minute |

Parameters

showUsers requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to showUsers:

| Parameter | Туре | Description |
|-----------------|-------------------------------------|--|
| username_filter | string (max. 50 charac- ters) | Filter used to match any user name in the account containing the indicated string, also as substring. This parameter is optional. |
| realname_filter | string (max. 50 charac- ters) | Filter used to match any real name of a user in the account containing the indicated string, also as substring. This parameter is optional. |
| company_filter | string (max. 50 charac- ters) | Filter used to match any company name in the account containing the indicated string, also as substring. This parameter is optional. |

Result

Result for showUsers:

| Parameter | Туре | Description |
|-----------|---------------------------|-------------|
| username | string (50 characters) | |

| Parameter | Туре | Description |
|-------------|-----------------------------|--|
| realname | string (50 characters) | The real name of a user |
| company | string (50 characters) | |
| email | string (255) | The e-mail address of the user. This parameter is optional. |
| validfrom | dateTime | ISO 8601-formatted date and time in the UTC time- zone, combined representation in the extended for- mat. |
| | | Example: 2007-12-24T16:00:00+02:00 |
| | | Empty if no start date is set. |
| validto | dateTime | ISO 8601-formatted date and time in the UTC time- zone, combined representation in the extended for- mat. |
| | | Example: 2007-12-24T16:00:00+02:00 |
| | | Empty if no end date is set. |
| lastlogin | dateTime | ISO 8601-formatted date and time in the UTC time- zone, combined representation in the extended for- mat. |
| | | Example: 2007-12-24T16:00:00+02:00 |
| | | Empty if no end date is set. |
| profile | string (50 characters) | The profile of the user. Valid values: |
| | | guest_login_onlystandard_login_onlygueststandardexpertadmin |
| profilename | string | The label used for the value of profile. Returned in the language of the request. |
| userinfo | string (4000 characters) | Additional information about the user. |

| Parameter | Type | Description | |
|---------------------|-------------|--|--|
| password expiration | dateTime | The expiration time of the password. ISO 8601-formatted date and time in the UTC time-zone, combined representation in the extended format. | |
| | | Example: 2007-12-24T16:00:00+02:00 | |
| | | Empty if the setting password expiration is disabled or no timestamp of the last password change exists. | |
| useruid | string (30) | A unique unchangeable identifier for the user which is automatically generated by Webfleet. | |

changePassword Description

Using ${\tt changePassword}$ you can change the password of your own user account.

Technical details

| SOAP endpoint address / function name | user Management Service # change Password |
|---------------------------------------|---|
| Request limits | 10 requests / hour |

Parameters

changePassword requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to changePassword:

| Parameter | Type | Description |
|-------------|--------|---|
| oldpassword | string | The current password of your user account. This parameter is mandatory. |
| newpassword | string | The new password. This parameter is mandatory. |

insertUser Description

Using insertUser you can create a new Webfleet user within the current account.

Note: This action can only be executed by users that have the 'Administrator' profile.

Technical details

SOAP endpoint address / function userManagementService#insertUser name

| est limits 10 requests / minute |
|---------------------------------|
|---------------------------------|

Parameters

insertUser requires the following common parameters:

- Authentication parameters
- <u>General parameters</u>

Parameters specific to insertUser:

| Parameter | Type | Description |
|------------------------------|---------------|---|
| new_username | string (50) | User name of the newly created user. This parameter is mandatory. It must be unique within the Webfleet account. |
| new_password | string (255) | The password of the newly created user. You can leave this empty to let Webfleet create a new random password. The generated password will be sent to the email address of the newly created user. This parameter is optional. |
| require_pass- word_change | boolean | If this parameter is set to true, the new user is forced to change the password when they log on to Webfleet for the first time. This parameter affects the Webfleet user interface only, but not WEBFLEET.connect. Default is true. This parameter is optional. |
| realname | string (50) | The full name of the user. This parameter is mandatory. |
| info | string (500) | A descriptive text. This parameter is optional. |
| company | string (50) | The name of the company. This parameter is optional. |
| email | string (255) | The e-mail address of the user. This parameter is mandatory. |
| Parameters specific to | n insertliser | |

Parameters specific to insertUser

| Parameter | Туре | Description |
|----------------|-------------|---|
| validfrom | datetime | Defines the start date of the validity of the user account. You can omit this parameter if not needed. Default is null. This parameter is optional. |
| validto | datetime | Defines the end date of the validity of the user account. You can omit this parameter if not needed. Default is null. This parameter is optional. |
| profile | string (50) | The profile of the user, see <u>showUsers</u> . Valid values: |
| | | guest_login_only guest standard_login_only standard expert admin invoices_user report_recipient This parameter is required. See below table for possible combinations with interfacestyle. |
| interfacestyle | string (50) | The interface style of the user which is used by the Webfleet user interface. The default value is 'standard'. Valid values are: • standard • bigmap • invoices • reportrecipient This parameter is optional. See below table for possible combinations with profile. |

Parameters specific to insertUser

Profile and interface style

The following combinations of profile and interfacestyle are possible:

| | standard | bigmap | invoices | reportrecipient |
|------------------|----------|--------|----------|-----------------|
| guest_login_only | X | | | |
| guest | X | | | |

| | standard | bigmap | invoices | reportrecipient |
|---------------------|----------|--------|----------|-----------------|
| standard_login_only | Х | X | | |
| standard | X | | | |
| export | Х | | | |
| admin | Х | | | |
| invoices_user | | | X | |
| report_recipient | | | | Х |

updateUser Description

Using updateUser you can update the details of a Webfleet user within the current account.

Note: This action can only be executed by users that have the 'Administrator' profile.

Technical details

| SOAP endpoint address / function name | userManagementService#updateUser |
|---------------------------------------|----------------------------------|
| Request limits | 10 requests / minute |

Parameters

updateUser requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to updateUser:

| Parameter | Туре | Description |
|-----------------|-------------|---|
| target_useruid | string (30) | A unique, unchangeable identifier for the user, automatically generated by Webfleet. The useruid is returned by showUsers . It is mandatory to specify target_useruid and/or target_username. |
| target_username | string (50) | User name of the user. It is mandatory to specify target_useruid and/or target_username. |
| new_username | string (50) | User name of the newly created user. It is required only if the user name shall be changed. This parameter is optional. |

| Parameter | Туре | Description |
|------------------------------|--------------|---|
| new_password | string (255) | Defines a new password for the user. You can omit this parameter to not change the password. This parameter is optional. |
| generate_pass- word | boolean | Generates a password for the user. If set to true a new random password will be generated by Webfleet. The password will be sent to the email address of the user. Omit this parameter to not change the password. This parameter is optional. |
| require_pass- word_change | boolean | If this parameter is set to true, the user is forced to change the password when they log on to Webfleet for the first time. This parameter affects the Webfleet user interface only, but not WEBFLEET.connect. This parameter is optional. |
| realname | string (50) | The full name of the user. This parameter is optional. |
| info | string (500) | A descriptive text. This parameter is optional. |
| company | string (50) | The name of the company. This parameter is optional. |
| email | string (255) | The e-mail address of the user. This parameter is optional. |
| validfrom | datetime | Defines the start date of the validity of the user account. You can omit this parameter if not needed. Default is null. This parameter is optional. |
| validto | datetime | Defines the end date of the validity of the user account. You can omit this parameter if not needed. Default is null. This parameter is optional. |

| Parameter | Type | Description |
|----------------|-------------|---|
| profile | string (50) | The profile of the user, see <u>showUsers</u> . Valid values: |
| | | guest_login_only guest standard_login_only standard expert admin invoices_user report_recipient This parameter is optional. See table for possible combinations with interfaces- |
| interfacestyle | string (50) | tyle, <u>insertUser</u> . The interface style of the user which is used by the |
| | | Webfleet user interface. The default value is 'standard'. Valid values are: |
| | | standardbigmapinvoicesreportrecipient |
| | | This parameter is optional. See table for possible combinations with profile, insertUser. |

deleteUser Description

Using deleteUser you can delete a Webfleet user within the current account.

Note: This action can only be executed by users that have the 'Administrator' profile.

Technical details

| SOAP endpoint address / function name | userManagementService#deleteUser |
|---------------------------------------|----------------------------------|
| Request limits | 10 requests / minute |

Parameters

deleteUser requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to deleteUser:

| Parameter | Туре | Description |
|-----------------|-------------|---|
| target_username | string (50) | User name of the user. It is mandatory to specify target_useruid or target_username. |
| target_useruid | string (30) | A unique, unchangeable identifier for the user, automatically generated by Webfleet. The useruid is returned by showUsers . It is mandatory to specify target_useruid or target_username. |

getUserRights Description

This action returns the currently configured access right levels for a specified user. The result contains profile default rights and individually configured rights.

Note: This action can only be executed by users that have the 'Administrator' profile.

Technical details

| SOAP endpoint address / function name | user Management Service #get User Rights |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

getUserRights requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to getUserRights:

| Parameter | Туре | Description |
|-----------------|-------------|---|
| target_username | string (50) | User name of the user. It is mandatory to indicate target_useruid and/or target_username. |
| target_useruid | string (30) | A unique, unchangeable identifier for the user, automatically generated by Webfleet. The useruid is returned by showUsers . It is mandatory to specify target_useruid and/or target_username. |

Result

Result for getUserRights:

| Parameter | Type | Description |
|------------|--------|---|
| rightlevel | string | The name of the right level, see <u>List of supported right levels</u> . |
| entityuid | string | The UID of an entity the right applies to. Can be empty for global rights. |
| entitytype | string | The type of entity the right applies to. Valid values: • object • objectgroup |
| | | driverdrivergroupaddressaddressgroup |

setUserRight Description

This action adds a right level to an individual user. Right levels can only be changed for users with the standard or bigmap interface style (interfacestyle). For users with the bigmap interface style only the right levels address_read_access and object_tracking can be set/removed in combination with an entityuid.

Note: This action can only be executed by users that have the 'Administrator' profile.

Technical details

| SOAP endpoint address / function name | userManagementService#setUserRight |
|---------------------------------------|------------------------------------|
| Request limits | 10 requests / minute |

Parameters

setUserRight requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to setUserRight:

| Parameter | Туре | Description |
|-----------------|-------------|--|
| target_username | string (50) | User name of the user. It is mandatory to specify target_useruid and/or target_username. |

| Parameter | Type | Description |
|----------------|--|--|
| target_useruid | string (30) | A unique, unchangeable identifier for the user, automatically generated by Webfleet. The useruid is returned by showUsers . It is mandatory to specify target_useruid and/or target_username. |
| rightlevel | string | The name of the right level, see <u>List of supported right levels</u> . |
| entityuid | string | The UID of the entity the right applies to. |
| | | Note : You can only assign right levels to entities when they are supported by the entitytype of the indicated entityuid. For example, you cannot assign the right level object_full_access to an entity of the entity type driver. |
| | Omit this parameter for global rights. | |

resetUserRights Description

Using resetUserRights you can reset the user access right levels to the profile defaults. All individual configured rights will be lost after executing this function.

Note: This action can only be executed by users that have the 'Administrator' profile.

Technical details

| SOAP endpoint address / function name | userManagementService#resetUserRights |
|---------------------------------------|---------------------------------------|
| Request limits | 10 requests / minute |

Parameters

resetUserRights requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to resetUserRights:

| Parameter | Туре | Description |
|-----------------|-------------|---|
| target_username | string (50) | User name of the user. It is mandatory to specify target_useruid and/or target_username. |

| Parameter | Type | Description |
|----------------|-------------|--|
| target_useruid | string (30) | A unique, unchangeable identifier for the user, automatically generated by Webfleet. The useruid is returned by showUsers. |
| | | <pre>It is mandatory to specify target_useruid and/or target_username.</pre> |

removeUserRight Description

This action removes a right level from an individual user. Right levels can only be removed from users with the standard or bigmap interface style (interfacestyle). For users with the bigmap interface style only the right levels address_read_access and object_tracking can be removed in combination with an entityuid.

Note: This action can only be executed by users that have the 'Administrator' profile.

Technical details

| SOAP endpoint address / function name | userManagementService#removeUserRight |
|---------------------------------------|---------------------------------------|
| Request limits | 10 requests / minute |

Parameters

removeUserRight requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to removeUserRight:

| Parameter | Type | Description |
|-----------------|-------------|---|
| target_username | string (50) | User name of the user. It is mandatory to specify target_useruid and/or target_username. |
| target_useruid | string (30) | A unique, unchangeable identifier for the user, automatically generated by Webfleet. The useruid is returned by showUsers . It is mandatory to specify target_useruid and/or target_username. |
| rightlevel | string | The name of the right level, see <u>List of supported right levels</u> . |

| Parameter | Type | Description |
|------------------|--|-------------|
| entityuid string | The UID of the entity the right applies to. | |
| | Note : You can only remove right levels from entities when they are supported by the entitytype of the indicated entityuid. For example, you cannot remove the right level object_full_access from an entity of the entity type driver. | |
| | Omit this parameter for global rights. | |

Supported right levels List of supported right levels

Some of the right levels can be set only on global basis as where other right levels can be set on individual basis, per entity, or on a global basis. In this context, 'entity' means a vehicle, address, or driver (or associated group). If a right level it set to global, all associated entities are affected.

List of supported right levels

| Parameter | Basis | Description |
|--|--------|--|
| external_access | Global | Allowed to access WEBFLEET.connect API. |
| full_access_ac- countsettings | Global | Allowed to change account settings. |
| edit_usersettings | Global | User can change own settings. |
| change_password | Global | User can change his own password. |
| trip_data_access | Global | Access to trip related data. |
| areas_full_access | Global | Read/Write access to areas. |
| areas_read_ac- cess | Global | Read access to areas. |
| orders_full_access | Global | Full access to order management functions. |
| orders_read_ac- cess | Global | Read access to orders. |
| read_access_or- ders_when_vehi- cle_assigned | Global | Read access to orders which have a vehicle assigned. |
| full_access_or- ders_when_vehi- cle_assigned | Global | Full access to orders which have a vehicle assigned. |
| external_tacho- graph_interface | Global | Access to the tachograph page |

| Parameter | Basis | Description |
|--|------------------|--|
| object_full_access | Entity Global | Full read/write access to vehicles, messaging, tracking, change group association etc. |
| object_expert_access | Entity Global | Full read/write access to vehicles, messaging, tracking |
| object_stan- dard_access | Entity Global | Read access to vehicles, messaging, tracking |
| object_tracking | Entity Global | Read access to vehicles, tracking, read messages |
| object_locating | Entity Global | Read access to vehicles, view position |
| object_locat- ing_and_messag- ing | Entity Global | Read access to vehicles, view position, messaging |
| object_locat- ing_and_commu- nication | Entity Global | Read access to vehicles, view position, messaging |
| object_messaging | Entity Global | Read access to vehicles, messaging, no position info |
| object_read_ac- cess | Entity Global | Read access to vehicles, view position |
| address_ad- min_access | Entity Global | Full edit access to addresses including address group assignments |
| address_edit_ac- cess | Entity Global | Edit access to addresses |
| address_read_ac- cess | Entity Global | Read access to addresses |
| driver_admin_ac- cess | Entity Global | Full edit access to drivers, including driver group assignments |
| driver_edit_ac- cess | Entity Global | Edit access to drivers |
| driver_read_ac- cess | Entity Global | Read access to drivers |
| enable_de- vice_configura- tion_management | Global | Allows to manage configurations for mobile devices. This right level is only available for specific users. |
| report_read_ac- cess | Global | Grants read access to reports. |

| Parameter | Basis | Description |
|-------------------------|--------|--|
| report_edit_ac- cess | Global | Allows to edit and create reports. Only available when the right level report_read_access is set. |
| camera_read_ac- cess | Global | Grants read access to Webfleet Video. |
| camera_full_ac- cess | Global | Grants full access to Webfleet Video. |

Vehicle Maintenance

insertMaintenanceSchedule Description

This action creates a new maintenance schedule and task for a specific object. When you have created a new maintenance schedule, an ID for it will be returned.

Technical details

| SOAP endpoint address / function name | vehicleMaintenanceService#insertMaintenanceSchedule |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

insertMaintenanceSchedule requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to insertMaintenanceSchedule:

| Parameter | Type | Description |
|--------------------------|---------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| schedulename | string (100) | The name of the maintenance schedule. This parameter is required. |
| scheduledescrip- tion | string (2000) | Description of the maintenance schedule. This parameter is optional. |

| Parameter | Type | Description |
|--------------------------------------|---|---|
| scheduletype nonNega- tiveInteger | Indicates the icon for the specific maintenance schedule shown in Webfleet. This parameter is required. Valid values: | |
| | | 0 - Renew Oil 1 - Change tires 2 - Check engine 3 - General 4 - License 5 - Brake disc 6 - Gas 7 - Lights 8 - Air condition 9 - Battery 10 - Inspection 11 - Car lift 12 - Steering wheel 13 - Key 14 - Air bag 15 - Car jack 16 - Gears 17 - Water 18 - Voltage 19 - ABS 20 - Heater 21 - Handbrake 22 - Parking 23 - Temperature 24 - Wiper 25 - Diagnostic trouble code 26 - CAN warning |

| Parameter | Туре | Description |
|--------------------------|-------------------------|---|
| ruletype | nonNega- tiveInteger | Describes the rules if and how a maintenance task shall be repeated. This parameter is required. Valid values: |
| | | 0 - Single shot - Task will not be repeated. 1 - Continuous fixed interval - Task will be repeated in a fixed interval that was reported at the end of the previous task, independent from mileage or time when the task was carried out. 2 - Continuous sequential interval - Task will be repeated in an interval depending on the state of the |
| | | peated in an interval depending on the state of the last completed task. |
| | | Example: A Task will be repeated after 2000 km driving after the previous maintenance task has ended. |
| intervaltime | nonNega- tiveInteger | Indicates the interval in months. Valid values: 1 120 This parameter is required if intervalodometer is missing and ruletype is 1 or 2. |
| intervalodometer | nonNega- tiveInteger | Indicates the interval in meters. Valid values: 1 1,000,000,000 This parameter is required if intervaltime is missing and ruletype is 1 or 2. |
| remindingtime | nonNega- tiveInteger | Indicates the time a reminder shall show up in Webfleet previous to the due date, in days. Valid values: 1 180 This parameter is optional. |
| remindingodome- ter | nonNega- tiveInteger | Indicates the mileage a reminder shall show up in Webfleet previous to the mileage when the task is due, in meters. Valid values: 1 100,000,000 This parameter is optional. |
| plannedexectime | date | Indicates the next due date of the maintenance work. This parameter is required if plannedexecodometer is missing. |
| plannedexe- codometer | nonNega- tiveInteger | Indicates the mileage after which the maintenance is due, in meters. Valid values: 1 10,000,000,000 This parameter is required if plannedexectime is missing. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

| Parameter | Туре | Description |
|------------------|-------------------------|---|
| intervaltimetype | nonNega- tiveInteger | The type of time interval. Valid values: • 0 - days • 1 - weeks • 2 - months • 3 - years |

Result

Result for insertMaintenanceSchedule:

| Parameter | Туре | Description |
|------------|-------------------------|---|
| scheduleid | nonNega- tiveInteger | Maintenance schedule specific identifier. Unique within an account. |

updateMaintenanceSchedule Description

This action updates an existing maintenance schedule by using scheduleid.

When using updateMaintenanceSchedule, you only need to include the parameters for which you want to change or delete the values. If you include a parameter and do not indicate a value, the existing value will be deleted.

To delete a numeric value in SOAP use the setNull member.

Technical details

| SOAP endpoint address / function name | vehicleMaintenanceService#updateMainte- nanceSchedule |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

updateMaintenanceSchedule requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to updateMaintenanceSchedule:

| Parameter | Туре | Description |
|------------|-------------------------|---|
| scheduleid | nonNega- tiveInteger | Maintenance schedule specific identifier. Unique within an account. This parameter is required. |

| Parameter | Туре | Description |
|--------------------------|-------------------------|--|
| schedulename | string (100) | The name of the maintenance schedule. This parameter is optional. |
| scheduledescrip- tion | string (2000) | Description of the maintenance schedule. This parameter is optional. |
| scheduletype | nonNega- tiveInteger | Indicates the icon for the specific maintenance schedule shown in Webfleet. This parameter is optional. Valid values: • 0 - Renew Oil • 1 - Change tires • 2 - Check engine • 3 - General • 4 - License • 5 - Brake disc • 6 - Gas • 7 - Lights • 8 - Air condition • 9 - Battery • 10 - Inspection • 11 - Car lift • 12 - Steering wheel • 13 - Key • 14 - Air bag • 15 - Car jack • 16 - Gears • 17 - Water • 18 - Voltage • 19 - ABS • 20 - Heater • 21 - Handbrake • 22 - Parking • 23 - Temperature • 24 - Wiper • 25 - Diagnostic trouble code • 26 - CAN warning |

| Parameter | Туре | Description |
|------------------------|-------------------------|--|
| ruletype | nonNega- tiveInteger | Describes the rules if and how a maintenance task shall be repeated. This parameter is optional. Valid values: |
| | | 0 - Single shot - Task will not be repeated. 1 - Continuous fixed interval - Task will be repeated in a fixed interval that was reported at the end of the previous task, independant from mileage or time when the task was carried out. 2 - Continuous sequential interval - Task will be repeated in an interval depending on the state of the last completed task. |
| | | Example: Task will be repeated after 2000 km driving after the previous maintenance task has ended. |
| intervaltime | nonNega- tiveInteger | Indicates the interval in months. Valid values: 1 120 This parameter is optional. You can only delete the value of the parameter when there is a valid value for intervalodometer. |
| intervalodometer | nonNega- tiveInteger | Indicates the interval in meters. Valid values: 1 1,000,000,000 You can only delete the value of the parameter when there is a valid value for intervaltime. |
| remindingtime | nonNega- tiveInteger | Indicates the time a reminder shall show up in Webfleet previous to the due date, in days. Valid values: 1 180 This parameter is optional. |
| remindingodome- ter | nonNega- tiveInteger | Indicates the mileage a reminder shall show up in Webfleet previous to the mileage when the task is due, in meters. Valid values: 1 100,000,000 This parameter is optional. |
| plannedexectime | date | Indicates the next due date of the maintenance work. This parameter is optional. You can only delete the value of the parameter when there is a valid value for plannedexecodometer. |
| | | Note : The parameter must include a time as well as the date. |

| Parameter | Type | Description |
|--------------------------|-------------------------|--|
| plannedexe- codometer | nonNega- tiveInteger | Indicates the mileage after which the maintenance is due, in meters. Valid values: 1 10,000,000,000 This parameter is optional. You can only delete the value of the parameter when there is a valid value for plannedexectime. |
| intervaltimetype | nonNega- tiveInteger | The type of time interval. Valid values: • 0 - days • 1 - weeks • 2 - months • 3 - years |

deleteMaintenanceSchedule Description

This action deletes an existing maintenance schedule and all related tasks. Tasks that have already been read or completed are not being deleted.

Technical details

| SOAP endpoint address / function name | vehicleMaintenanceService#deleteMaintenanceSchedule |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

deleteMaintenanceSchedule requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to deleteMaintenanceSchedule:

| Parameter | Туре | Description |
|------------|-------------------------|---|
| scheduleid | nonNega- tiveInteger | Maintenance schedule specific identifier. Unique within an account. This parameter is required. |

showMaintenanceSchedules Description

This action retrieves a list of maintenance schedules.

Technical details

| SOAP endpoint address / function name | vehicleMaintenanceService#showMaintenanceSchedules |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

showMaintenanceSchedules requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to showMaintenanceSchedules:

| Parameter | Type | Description |
|-----------------|-------------------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. This parameter is optional. |
| objectgroupname | string | Case-sensitive. This parameter is optional. |
| scheduleid | nonNega- tiveInteger | Maintenance schedule specific identifier. Unique within an account. This parameter is optional. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

Result

Result for showMaintenanceSchedules:

| Parameter | Туре | Description |
|--------------------------|-------------------------|--|
| scheduleid | nonNega- tiveInteger | Maintenance schedule specific identifier. Unique within an account. |
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| schedulename | string (100) | The name of the maintenance schedule. |
| scheduledescrip- tion | string (2000) | Description of the maintenance schedule. |

| Parameter | Type | Description |
|-----------|-------------------------|---|
| | nonNega- tiveInteger | Indicates the icon for the specific maintenance schedule shown in Webfleet. Valid values: |
| | | 0 - Renew Oil 1 - Change tires 2 - Check engine 3 - General 4 - License 5 - Brake disc 6 - Gas 7 - Lights 8 - Air condition 9 - Battery 10 - Inspection 11 - Car lift 12 - Steering wheel 13 - Key 14 - Air bag 15 - Car jack 16 - Gears 17 - Water 18 - Voltage 19 - ABS 20 - Heater 21 - Handbrake 22 - Parking 23 - Temperature 24 - Wiper 25 - Diagnostic trouble code 26 - CAN warning |

| Parameter | Туре | Description |
|--------------------------|-------------------------|--|
| ruletype | nonNega- tiveInteger | Describes the rules if and how a maintenance task shall be repeated. This parameter is required. Valid values: |
| | | 0 - Single shot - Task will not be repeated. 1 - Continuous fixed interval - Task will be repeated in a fixed interval that was reported at the end of the previous task, independant from mileage or time when the task was carried out. 2 - Continuous sequential interval - Task will be repeated in an interval depending on the state of the last completed task. |
| | | Example: Task will be repeated after 2000 km driving after the previous maintenance task has ended. |
| intervaltime | nonNega- tiveInteger | Indicates the interval in months. |
| intervalodometer | nonNega- tiveInteger | Indicates the interval in meters. |
| remindingtime | nonNega- tiveInteger | Indicates the time a reminder shall show up in Webfleet previous to the due date, in days. |
| remindingodome- ter | nonNega- tiveInteger | Indicates the mileage a reminder shall show up in Webfleet previous to the mileage when the task is due, in meters. |
| plannedexectime | date | Indicates the next due date of the maintenance work. |
| plannedexe- codometer | nonNega- tiveInteger | Indicates the mileage after which the maintenance is due, in meters. |
| firstexectime | date | Indicates the date when the maintenance task was carried out first. |
| firstexecodometer | nonNega- tiveInteger | Indicates the mileage at which the maintenance task was carried out first, in meters. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| creationtype | int | Describes how the maintenance schedule was created. Possible values are: • 0 - manually by user • 1 - automatically by vehicle diagnostic system |

| Parameter | Type | Description |
|------------------|-------------------------|---|
| intervaltimetype | nonNega- tiveInteger | The type of time interval. Valid values: • 0 - days • 1 - weeks • 2 - months • 3 - years |

showMaintenanceTasks Description

This action retrieves a list of maintenance tasks.

Technical details

| SOAP endpoint address / function name | vehicle Maintenance Service #show Maintenance Tasks |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

showMaintenanceTasks requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

showMaintenanceTasks requires the following other parameters:

• <u>Date range filter parameters</u>

The date range applies to:

- plannedexectime if status has the value O or is not set.
- readtime if status has the value 1 or is not set.
- ° completedtime if status has the value 2 or is not set.

Parameters specific to showMaintenanceTasks:

| Parameter | Type | Description |
|-----------------|-------------------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. This parameter is optional. |
| objectgroupname | string | Case-sensitive. This parameter is optional. |
| scheduleid | nonNega- tiveInteger | Maintenance schedule specific identifier. Unique within an account. This parameter is optional. |

| Parameter | Type | Description |
|-----------|-------------------------|--|
| taskid | nonNega- tiveInteger | Maintenance task specific identifier. Unique within an account. This parameter is optional. |
| status | nonNega- tiveInteger | Status of the task. Valid values: • 0 - new • 1 - read • 2 - completed This parameter is optional. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| duetype | int | Filter for tasks that are overdue or tasks with a exceeded reminder. Valid values: |
| | | 0 - no filter 1 - tasks with exceeded reminder 2 - tasks that are overdue |
| | | This parameter is optional. |

| Parameter | Type | Description |
|--------------|---------|---|
| scheduletype | Integer | Indicates the icon for the specific maintenance schedule shown in Webfleet. Valid values: |
| | | 0 - Renew Oil 1 - Change tires 2 - Check engine 3 - General 4 - License 5 - Brake disc 6 - Gas 7 - Lights 8 - Air condition 9 - Battery 10 - Inspection 11 - Car lift 12 - Steering wheel 13 - Key 14 - Air bag 15 - Car jack 16 - Gears 17 - Water 18 - Voltage 19 - ABS 20 - Heater 21 - Handbrake 22 - Parking 23 - Temperature 24 - Wiper 25 - Diagnostic trouble code 26 - CAN warning |

Result

Result for showMaintenanceTasks:

| Parameter | Type | Description |
|-----------------|-------------------------|--|
| taskid | nonNega- tiveInteger | Maintenance task specific identifier. Unique within an account. |
| scheduleid | nonNega- tiveInteger | Maintenance schedule specific identifier. Unique within an account. |
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| plannedexectime | date | Indicates the next due date of the maintenance work. |

| Parameter | Type | Description |
|--------------------------|-------------------------|--|
| plannedexe- codometer | nonNega- tiveInteger | Indicates the mileage after which the maintenance is due, in meters. |
| remindingtime | date | Indicates the date a reminder shall show up in Webfleet previous to the due date. |
| remindingodome- ter | nonNega- tiveInteger | Indicates the mileage a reminder shall show up in Webfleet previous to the mileage when the task is due, in meters. |
| readusername | string | Username of who read the maintenance task. |
| readtime | date | Time when the maintenance task was read. |
| readodometer | nonNega- tiveInteger | Vehicle mileage when the maintenance task was read, in meters. |
| completeduser- name | string | Username of who completed the maintenance task. |
| completedtime | date | Time when the maintenance task was completed. |
| completedodome- ter | nonNega- tiveInteger | Vehicle mileage when the maintenance task was completed, in meters. |
| status | nonNega- tiveInteger | Status of the task. Valid values: • 0 - new • 1 - read • 2 - completed |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| schedulename | string(100) | The name of the maintenance schedule. |

| Parameter | Type | Description |
|--------------------------|-------------------------|---|
| scheduletype | nonNega- tiveInteger | Indicates the icon for the specific maintenance schedule shown in Webfleet. Valid values: |
| | | 0 - Renew Oil 1 - Change tires 2 - Check engine 3 - General 4 - License 5 - Brake disc 6 - Gas 7 - Lights 8 - Air condition 9 - Battery 10 - Inspection 11 - Car lift 12 - Steering wheel 13 - Key 14 - Air bag 15 - Car jack 16 - Gears 17 - Water 18 - Voltage 19 - ABS 20 - Heater 21 - Handbrake 22 - Parking 23 - Temperature 24 - Wiper |
| schedulecreation type | - int | Describes how the maintenance schedule was created. Valid values: • 0 - manually by user |
| | | 1 - automatically by vehicle diagnostic system |

resolveMaintenanceTask Description

This action resolves a maintenance task depending on the specified status.

Technical details

| SOAP endpoint address / function name | vehicle Maintenance Service #resolve Maintenance Task |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

resolveMaintenanceTask requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to resolveMaintenanceTask:

| Parameter | Type | Description |
|-----------|-------------------------|---|
| taskid | nonNega- tiveInteger | Maintenance task specific identifier. Unique within an account. This parameter is required. |
| status | nonNega- tiveInteger | Status of the task. Valid values: |
| | | 1 - read2 - completed |
| | | This parameter is required. |

getDiagnosticFaults Description

The <code>getDiagnosticFaults</code> action retrieves diagnostic event data for a specified object (e.g., a vehicle or asset). These events may include various technical issues, system warnings, or other relevant conditions affecting the operational status of the object.

Technical details

| SOAP endpoint address / function name | vehicle Maintenance Service #get Diagnostic Faults |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

getDiagnosticFaults requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters
- <u>Date range filter parameters</u>, periods longer than 24 hours are not permitted.

Parameters specific to getDiagnosticFaults:

| Parameter | Type | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. This parameter is optional. |

| Parameter | Type | Description |
|-----------|-------------|--|
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

Result

Result for getDiagnosticFaults:

| Parameter | Туре | Description |
|-----------------|-------------|--|
| objectUid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. |
| objectName | string | Name of the object |
| severity | string | Severity level (e.g., info, warning, critical) |
| event | string | Description of the diagnostic event |
| eventType | string | Type of event |
| category | string | Event category |
| status | string | Status of the event (e.g., active, resolved) |
| eventTime | dateTime | Timestamp when the event occurred |
| lastUpdateTime | dateTime | Timestamp of the last update |
| resolveTime | dateTime | Timestamp when the event was resolved |
| odometer | long | Vehicle odometer reading |
| occurrenceCount | long | Number of occurrences |
| latitude | int | Latitude coordinate of the event |
| longitude | int | Longitude coordinate of the event |
| posText | string | Human-readable location description |
| signalld | string | Identifier of the signal associated with the event |
| | | |

Reporting

getArchivedReportList Description

getArchivedReportList lists information about the reports stored in the Webfleet Reports Archive of a specific user. It returns meta information of the reports such as ID, name, file size, creation time, etc.

It does not fetch the report data (PDF or CSV). Use <u>getArchivedReport</u> to retrieve the actual PDF or CSV files.

Technical details

| SOAP endpoint address / function name | reportingService#getArchivedReportList |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

getArchivedReportList requires the following common parameters:

- Authentication parameters
- General parameters
- Date range filter parameters

Result

Result for getArchivedReportList:

| Parameter | Type | Description |
|--------------|-------------------------|---|
| reportid | nonNega- tiveInteger | Identifying number of the report file. |
| reportname | string (500) | Display name of the report file. |
| format | string | Name of the file format. Valid values: • pdf • csv |
| creationtime | dateTime | Date and time, the report file has been created. |
| expirytime | dateTime | Date and time of when the report will be deleted automatically. |

| Parameter | Type | Description |
|-----------|-------------------------|--|
| size | nonNega- tiveInteger | The file size of the report file, in kB. |

getArchivedReport Description

Using getArchivedReport you can retrieve a PDF or CSV report that is stored in the Webfleet Reports Archive of a specific user.

Technical details

| SOAP endpoint address / function name | reportingService#getArchivedReport |
|---------------------------------------|------------------------------------|
| Request limits | 10 requests / minute |

Parameters

getArchivedReport requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to getArchivedReport:

| Parameter | Type | Description |
|-----------|-------------------------|--|
| reportid | nonNega- tiveInteger | Identifying number of the report file as returned by getArchivedReportList . This parameter is mandatory. |

deleteArchivedReport Description

Using deleteArchivedReport you can delete an archived report file from the Webfleet Reports Archive of a specific user.

Technical details

| SOAP endpoint address / function name | reportingService#deleteArchivedReport |
|---------------------------------------|---------------------------------------|
| Request limits | 10 requests / minute |

Parameters

deleteArchivedReport requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to deleteArchivedReport:

| Parameter | Type | Description |
|-----------|-------------------------|---|
| reportid | nonNega- tiveInteger | Identifying number of the report file as returned by getArchivedReportList . This parameter is required. |

getReportList Description

 ${\tt getReportList} \ \ \textbf{returns a list of reports, that can be created on demand and that} \\ \textbf{are assigned to the current Webfleet user. Reports can be created on demand using } \\ \textbf{sendReportViaMail or createReport.}$

Technical details

| SOAP endpoint address / function name | reportingService#getReportList |
|---------------------------------------|--------------------------------|
| Request limits | 10 requests / minute |

Parameters

getReportList requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to getReportList:

| Parameter | Type | Description |
|------------|--------------|---|
| reporttype | string (100) | A type that helps to filter for the report names to be returned. Each report can be associated to several types of reports. This parameter is optional. Omit this parameter to retrieve the complete list of available reports. |
| | | |

Result

Result for getReportList:

| Parameter | Туре | Description |
|------------|--------------|----------------------------------|
| reportname | string (500) | Display name of the report file. |

| Parameter | Туре | Description |
|-------------|--------|---|
| reporttypes | string | Comma-separated list of report types the report is associated with. |

createReport Description

Using createReport you can create a new PDF or CSV report on demand.

Technical details

| SOAP endpoint address / function name | reportingService#createReport |
|---------------------------------------|-------------------------------|
| Request limits | 5 requests / 10 minutes |

Note: The returned CSV file uses a different style than returned by other WEBFLEET.connect actions. This is because the reports are not created by WEBFLEET.connect but by the Webfleet user interface.

Parameters

createReport requires the following common parameters:

- Authentication parameters
- General parameters
- <u>Date range filter parameters</u>, the maximum period length is 12 months.

Parameters specific to createReport:

| Parameter | Type | Description |
|------------|--------------|--|
| reportname | string (500) | Display name of the report file. This parameter is required. |
| format | string | Name of the file format. Valid values: |
| | | pdfcsv |
| | | Defaults to pdf if not specified. |
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. This parameter is optional. |

| Parameter | Туре | Description |
|-----------------|-------------|---|
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. This parameter is optional. |
| objectgroupname | string | A name of an object group. This parameter is optional. |
| driverno | string | Identifying number of a driver. Unique within an account. This parameter is optional. |
| drivergroupname | string | Name of the group of drivers the driver is assigned to, case-sensitive. This parameter is optional. |
| orderno | string (20) | Account-unique order id, case-sensitive. This parameter is optional. |

sendReportViaMail Description

Using ${\tt sendReportViaMail}$ you can create a new PDF or CSV report on demand and send it to an indicated email address.

Technical details

| SOAP endpoint address / function name | reportingService#sendReportViaMail |
|---------------------------------------|------------------------------------|
| Request limits | 5 requests / 10 minutes |

Parameters

sendReportViaMail requires the following common parameters:

- Authentication parameters
- General parameters
- <u>Date range filter parameters</u>, the maximum period length is 12 months.

Parameters specific to sendReportViaMail:

| Parameter | Туре | Description |
|------------|--------------|--|
| reportname | string (500) | Display name of the report file. This parameter is mandatory. |

| Parameter | Type | Description |
|-----------------|-------------|---|
| format | string | Name of the file format. Valid values: |
| | | pdfcsv |
| | | Defaults to pdf if not indicated. |
| email | string | The email address to which the created report will be sent. |
| | | This parameter is required. |
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. This parameter is optional. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. This parameter is optional. |
| objectgroupname | string | A name of an object group. This parameter is optional. |
| driverno | string | Identifying number of a driver. Unique within an account. This parameter is optional. |
| drivergroupname | string | Name of the group of drivers the driver is assigned to, case-sensitive. This parameter is optional. |
| orderno | string (20) | Account-unique order id, case-sensitive. This parameter is optional. |

Areas

getAreas Description

This actions returns a list of all areas that are currently configured within the account.

Technical details

| SOAP endpoint address / function name | areaService#getAreas |
|---------------------------------------|----------------------|
| Request limits | 10 requests / minute |

Parameters

getAreas requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to getAreas

| Parameter | Туре | Description |
|--------------------|-------------|---|
| areano | string (50) | Identification number of an area. Unique within an account, case-sensitive. |
| | | Note : Indicate either areano or areauid; do not use both parameters in combination. |
| areauid string (30 | string (30) | A unique, unchangeable identifier for the area, automatically generated by Webfleet. |
| | | Note : Indicate either areano or areauid; do not use both parameters in combination. |
| | | |
| active | boolean | Indicator for whether an area is enabled. Valid values: |
| | | 0 —area disabled1 —area enabled |
| | | Omit this parameter to retrieve all areas. This parameter is optional. |

Result

Result for getAreas:

| Parameter | Туре | Description |
|-------------------|--------------|--|
| areano | string (50) | Identification number of an area. Unique within an account, case-sensitive. |
| areauid | string (30) | A unique, unchangeable identifier for the area, automatically generated by Webfleet. |
| areaname | string (254) | Display name of the area. |
| type | int | Classifies the geometric shape of this area. Valid values: |
| | | 1 - rectangle2 - circle3 - polygon4 - corridor |
| active | boolean | Indicator for whether an area is enabled. Valid values are: |
| | | 0 - area disabled1 - area enabled |
| validfrom | date | Start date of a period to limit the validity of the area. |
| validto | date | End date of a period to limit the validity of the area. |
| notificationmode | int | Describes the type of activity for which events shall be created. Valid values are: |
| | | 0 - inside/outside1 - enter/leave |
| | | Note : If the area is configured as 'inside/outside', recurrent events will be created as long as the vehicle is located inside/outside the area. If the area is configured as 'enter/leave', only a single event will be created when the vehicle passes the border of the area. |
| eventlevel_inside | int | Notification level (urgency) of the created event, when the vehicle is located inside of the area. Valid values: |
| | | Valid Values. <empty> - No message</empty> 1 - Notice 2 - Warning 3 - Alarm 1 4 - Alarm 2 5 - Alarm 3 Value is only set if notificationmode = 0. |

| Parameter | Type | Description |
|-------------------------|------------|---|
| eventlevel_out- side | int | Notification level (urgency) of the created event, when the vehicle is located outside of the area. For valid values refer to the list for eventlevel_in-side. Value is only set if notificationmode = 0. |
| eventlevel_enter | int | Notification level (urgency) of the created event, when the vehicle enters the area. For valid values refer to the list for eventlevel_in-side. Value is only set if notificationmode = 1. |
| eventlevel_leave | int | Notification level (urgency) of the created event, when the vehicle leaves the area. For valid values refer to the list for eventlevel_in-side. Value is only set if notificationmode = 1. |
| latitude | int | Geographic latitude of the geometric centre of the shape. Only set if area is a circle or rectangle. For polygon and corridor, please use getAreaPoints to retrieve a list of all coordinates. Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| longitude | int | See description for latitude for analogue use for longitude. |
| radius | int | Radius of the area in meters. Only set if the area is a circle. |
| width | int | Width of the area in meters. Only set if area is a rectangle or corridor. |
| height | int | Height of the area in meters. Only set if area is a rectangle. |
| pointcount | int | The number of points of the area. Only set if area is a polygon or corridor. |
| color | string (6) | The color of the area as a 6-digit hex RGB-color code. |

insertArea Description

insertArea creates a new geographic area.

Technical details

| SOAP endpoint address / function name | areaService#insertArea |
|---------------------------------------|------------------------|
| Request limits | 10 requests / minute |

Parameters

insertArea requires the following common parameters:

- Authentication parameters
- <u>General parameters</u>

Parameters specific to insertArea:

| Parameter | Туре | Description |
|------------------|--------------|---|
| areano | string (50) | Identification number of an area. Unique within an account, case-sensitive. This parameter is required. |
| areaname | string (254) | Display name of the area. This parameter is required. |
| type | int | Classifies the geometric shape of this area. Valid values: |
| | | 1 - rectangle 2 - circle 3 - polygon 4 - corridor |
| | | This parameter is required. |
| active | boolean | Indicator for whether an area is enabled. Valid values: |
| | | 0 - area disabled1 - area enabled |
| | | Default value is 1. This parameter is optional. |
| validfrom | date | Start date of a period to limit the validity of the area. This parameter is optional. |
| validto | date | End date of a period to limit the validity of the area. This parameter is optional. |
| notificationmode | int | Describes the type of activity for which events shall be created. The value defaults to 1 (enter/leave). When the vehicle passes the border of area one event is created. This parameter is optional. |

| Parameter | Type | Description |
|------------------|------|---|
| eventlevel_enter | int | Notification level (urgency) of the created event, when the vehicle enters the area. Valid values: |
| | | <empty> - No message</empty> 1 - Notice 2 - Warning 3 - Alarm 1 4 - Alarm 2 5 - Alarm 3 |
| | | Value is only set if notificationmode = 1. Default value is <empty>. This parameter is optional.</empty> |
| eventlevel_leave | int | Notification level (urgency) of the created event, when the vehicle leaves the area. Valid values: |
| | | <empty> - No message</empty> 1 - Notice 2 - Warning 3 - Alarm 1 4 - Alarm 2 5 - Alarm 3 |
| | | Value is only set if notificationmode = 1. Default value is <empty>. This parameter is optional.</empty> |
| latitude | int | Geographic latitude of the geometric centre of the shape (rectangle or circle). Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. Mandatory for rectangle and circle. For polygon and corridor, please use the parameter point multiple times to submit each point of the complex shape. |
| longitude | int | See description for latitude for analogue use for longitude. |
| radius | int | Radius of the area in meters. Only set if the area is a circle. This parameter is mandatory for circle. |

| Parameter | Туре | Description |
|-----------|------------|---|
| width | int | Width of the area in meters. Only set if area is a rectangle or corridor. |
| | | This parameter is mandatory for rectangle and corridor. |
| height | int | Height of the area in meters. Only set if area is a rectangle. |
| | | This parameter is mandatory for rectangle. |
| point | string | Comma-separated latitude/longitude pair, which describes a single point of the polygon or corridor (in WGS84 notation). |
| | | <latitude>,<longitude></longitude></latitude> |
| | | Repeat this parameter for each point in the shape. |
| | | Note : Use HTTP-POST if the generated request URL is longer than 2000 characters. |
| | | This parameter is mandatory for polygon and corridor. |
| color | string (6) | The color of the area as a 6-digit hex RGB-color code. This parameter is optional. The default value is 3366FF. The following colors are available within the Webfleet GUI: |
| | | |
| | | Yellow = ECE55E |
| | | Orange = FF8946 |
| | | Magenta = DC267F |
| | | Green = 519900 |
| | | Light blue = 01CDEC |
| | | Blue = 3366FF |
| | | Purple = 332288 |
| | | Fulple = 332200 |

deleteArea Description

 ${\tt deleteArea}$ deletes an area. All possibly existing vehicle assignments and schedules for this area will be deleted, too.

Technical details

| SOAP endpoint address / function name | areaService#deleteArea |
|---------------------------------------|------------------------|
| Request limits | 10 requests / minute |

Parameters

deleteArea requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to deleteArea:

| Parameter | Туре | Description |
|-----------|--|---|
| areano | string (50) | Identification number of an area. Unique within an account, case-sensitive. |
| | | Note : Specifiy either areano or areauid; do not use both parameters in combination. |
| areauid | uid string (30) | A unique, unchangeable identifier for the area, automatically generated by Webfleet. |
| | Note : Specify either areano or areauid; do not use both parameters in combination. | |

updateArea Description

updateArea updates the details of an existing geographic area.

Technical details

| SOAP endpoint address / function name | areaService#updateArea |
|---------------------------------------|------------------------|
| Request limits | 10 requests / minute |

Parameters

updateArea requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to updateArea

| Parameter | Туре | Description |
|------------------|--------------|---|
| areano | string (50) | Identification number of an area. Unique within an account, case-sensitive. |
| | | Note : It is mandatory to indicate at least areano or areauid to identify the area that needs to be updated. Indicate both when areano shall be updated. |
| areauid | string (30) | A unique, unchangeable identifier for the area, automatically generated by Webfleet. |
| | | Note : It is mandatory to indicate at least areano or areauid to identify the area that needs to be updated. Indicate both when areano shall be updated. |
| areaname | string (254) | Display name of the area. This parameter is optional. |
| type | int | Classifies the geometric shape of this area. Valid values: |
| | | • 1 - rectangle |
| | | 2 - circle3 - polygon |
| | | • 4 - corridor |
| | | This parameter is optional. |
| active | boolean | Indicator for whether an area is enabled. Valid values: |
| | | 0 - area disabled1 - area enabled |
| | | This parameter is optional. |
| validfrom | date | Start date of a period to limit the validity of the area. This parameter is optional. |
| validto | date | End date of a period to limit the validity of the area. This parameter is optional. |
| notificationmode | int | Describes the type of activity for which events shall be created. The value defaults to 1 (enter/leave). When the vehicle passes the border of area one event is created. This parameter is optional. |

| Parameter | Type | Description |
|------------------|------|---|
| eventlevel_enter | int | Notification level (urgency) of the created event, when the vehicle enters the area. Valid values: |
| | | <empty> - No message</empty> |
| | | • 1 - Notice |
| | | • 2 - Warning |
| | | • 3 – Alarm 1 |
| | | 4 - Alarm 25 - Alarm 3 |
| | | • 5 - Alami 3 |
| | | Value is only set if notificationmode = 1. |
| | | Default value is <empty>.</empty> |
| | | This parameter is optional. |
| eventlevel_leave | int | Notification level (urgency) of the created event, when the vehicle leaves the area. |
| | | Valid values: |
| | | <empty> - No message</empty> |
| | | • 1 - Notice |
| | | • 2 - Warning |
| | | • 3 – Alarm 1 |
| | | • 4 - Alarm 2 |
| | | • 5 – Alarm 3 |
| | | Value is only set if notificationmode = 1. |
| | | Default value is <empty>.</empty> |
| | | This parameter is optional. |
| latitude | int | Geographic latitude of the geometric centre of the shape (rectangle or circle). |
| | | Geographic latitude in the WGS84 coordinate system. |
| | | Unit of measurement is micro degrees (10 ⁻⁶ grd). |
| | | Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. |
| | | See Geographic coordinate conversion on Wikipedia. |
| | | This parameter is optional. |
| | | For polygon and corridor, please use the parameter point multiple times to submit each point of the complex shape. |
| longitude | int | See description for latitude for analogue use for longitude. |
| radius | int | Radius of the area in meters. |
| | | Only set if the area is a circle. |
| | | This parameter is optional. |
| | | |

| Parameter | Туре | Description |
|-----------|------------|---|
| width | int | Width of the area in meters. Only set if area is a rectangle or corridor. This parameter is optional. |
| height | int | Height of the area in meters. Only set if area is a rectangle. This parameter is optional. |
| point | string | Comma-separated latitude/longitude pair, which describes a single point of the polygon or corridor (in WGS84 notation). |
| | | <latitude>,<longitude></longitude></latitude> |
| | | Repeat this parameter for each point in the shape. |
| | | Note : Use HTTP-POST if the generated request URL is longer than 2000 characters. |
| | | This parameter is optional. |
| color | string (6) | The color of the area as a 6-digit hex RGB-color code. This parameter is optional. The following colors are available within the Webfleet GUI: |
| | | |
| | | Yellow = ECE55E |
| | | Orange = FF8946 |
| | | Magenta = DC267F |
| | | Green = 519900 |
| | | Light blue = 01CDEC |
| | | Blue = 3366FF |
| | | Purple = 332288 |
| | | |

getAreaPoints Description

This action returns a list of coordinates describing the geometric form and location of an area. getAreasPoints is only useful for areas in the shape of polygons or corridors.

Technical details

| SOAP endpoint address / function name | areaService#getAreasPoints |
|---------------------------------------|----------------------------|
| Request limits | 10 requests / minute |

Parameters

getAreaPoints requires the following common parameters:

- <u>Authentication parameters</u>
- <u>General parameters</u>

Parameters specific to getAreasPoints:

| Parameter | Type | Description |
|---------------------|-------------|--|
| areano | string (50) | Identification number of an area. Unique within an account, case-sensitive. |
| | | Note : Specify either areano or areauid; do not use both parameters in combination. |
| areauid string (30) | string (30) | A unique, unchangeable identifier for the area, automatically generated by Webfleet. |
| | | Note : Specify either areano or areauid; do not use both parameters in combination. |
| active boo | boolean | Indicator for whether an area is enabled. |
| | | Valid values: |
| | | • 0 - area disabled |
| | | • 1 - area enabled |
| | | Omit parameter to retrieve all areas. |
| | | This parameter is optional. |

Result

Result for getAreasPoints

| Parameter | Туре | Description |
|-----------|-------------|--|
| areano | string (50) | Identification number of an area. Unique within an account, case-sensitive. |
| areauid | string (30) | A unique, unchangeable identifier for the area, automatically generated by Webfleet. |

| Parameter | Type | Description |
|-----------|------|---|
| latitude | int | Geographic latitude of a single point of the corridor or polygon. |
| | | Geographic latitude in the <u>WGS84</u> coordinate system. |
| | | Unit of measurement is micro degrees (10-6 grd). |
| | | Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. |
| | | See <u>Geographic coordinate conversion on Wikipedia</u> . |
| longitude | int | See description for latitude for analogue use for longitude. |

getAreaAssignments Description

getAreaAssignments returns a list of vehicles and object groups, that are assigned to an area. Assignments can be used to limit the validity of the area to specific vehicles or object groups.

Technical details

| SOAP endpoint address / function name | area Service #get Area Assignments |
|---------------------------------------|------------------------------------|
| Request limits | 10 requests / minute |

Parameters

getAreaAssignments requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to getAreaAssignments:

| Parameter | Туре | Description |
|-----------|-------------|---|
| areano | string (50) | Identification number of an area. Unique within an account, case-sensitive. Indicate either areano or areauid; do not use both parameters in combination. |
| areauid | string (30) | A unique, unchangeable identifier for the area, automatically generated by Webfleet. Indicate either areano or areauid; do not use both parameters in combination. |

| Parameter | Type | Description |
|-----------------|-------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. This parameter is optional. Indicate either objectno or objectuid; do not use both parameters in combination. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. This parameter is optional. Indicate either objectno or objectuid; do not use both parameters in combination. |
| objectgroupname | string (50) | A name of an object group. This parameter is optional. |

Result

Result for getAreaAssignments:

| Parameter | Type | Description |
|-----------------|-------------|--|
| areano | string (50) | Identification number of an area. Unique within an account, case-sensitive. |
| areauid | string (30) | A unique, unchangeable identifier for the area, automatically generated by Webfleet. |
| assignmentuid | string (30) | A unique, unchangeable identifier for the assignment, automatically generated by Webfleet. |
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Value is set if the area is assigned to this vehicle, objectgroupname is empty in this case. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Value is set if the area is assigned to this vehicle, objectgroupname is empty in this case. |
| objectgroupname | string (50) | A name of an object group. Value is set if the area is assigned to this group. objectno and objectuid are empty in this case. |

insertAreaAssignment Description

insertAreaAssignment adds a new assignment of a vehicle or object group to a specified area. Assignments can be used to limit the validity of the area to individual vehicles or object groups.

Technical details

| SOAP endpoint address / function name | area Service # insert Area Assignment |
|---------------------------------------|---------------------------------------|
| Request limits | 10 requests / minute |

Parameters

insertAreaAssignment requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to insertAreaAssignment:

| Parameter | Туре | Description |
|-------------------|-------------|---|
| areano | string (50) | Identification number of an area. |
| | | Unique within an account, case-sensitive. |
| | | This parameter is optional. |
| | | Note : Indicate either areano or areauid; do not use both parameters in combination. |
| areauid | string (30) | A unique, unchangeable identifier for the area, automatically generated by Webfleet. |
| | | This parameter is optional. |
| | | Note : Indicate either areano or areauid; do not use both parameters in combination. |
| objectno | string (10) | Identifying number of an object. |
| | oug () | Unique within an account, case-sensitive. |
| | | Note : It is required to indicate either objectno, objectuid, or objectgroupname; do not combine two or all of these parameters. |
| | | |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. |
| | | Note :It is required to indicate either objectno, objectuid, or objectgroupname; do not combine two or all of these parameters. |
| object group name | string (50) | A name of an object group. |
| | | Note: It is required to indicate either objectno, objectuid, or objectgroupname; do not combine two or all of these parameters. |

deleteAreaAssignment Description

deleteAreaAssignment deletes one or more vehicle or objectgroup assignments of an area.

Technical details

| SOAP endpoint address / function name | area Service # delete Area Assignment |
|---------------------------------------|---------------------------------------|
| Request limits | 10 requests / minute |

Parameters

deleteAreaAssignment requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to deleteAreaAssignment:

| Parameter | Type | Description |
|----------------------|-------------|--|
| areano | string (50) | Identification number of an area. Unique within an account, case-sensitive. |
| | | Note : Indicate either areano or areauid; do not use both parameters in combination. |
| areauid | string (30) | A unique, unchangeable identifier for the area, automatically generated by Webfleet. |
| | | Note : Indicate either areano or areauid; do not use both parameters in combination. |
| assignmentuid string | string (30) | A unique, unchangeable identifier for the assignment, automatically generated by Webfleet. |
| | | Repeat this parameter for each assignment that shall be deleted. Use HTTP-POST if the generated request URL is longer than 2000 characters. This parameter is required. |
| | | |

getAreaSchedules Description

getAreaSchedules returns a list of days and times for which the area shall be effective. Schedules can be used to limit the validity of areas to specific days or time periods.

Technical details

| SOAP endpoint address / function name | areaService#getAreaSchedules |
|---------------------------------------|------------------------------|
| Request limits | 10 requests / minute |

Parameters

getAreaSchedules requires the following common parameters:

- <u>Authentication parameters</u>
- <u>General parameters</u>

Parameters specific to getAreaSchedules:

| Parameter | Type | Description |
|---------------------|--|---|
| areano string (50) | string (50) | Identification number of an area. Unique within an account, case-sensitive. |
| | Note: Indicate either areano or areauid; do not use both parameters in combination. | |
| areauid string (30) | A unique, unchangeable identifier for the area, automatically generated by Webfleet. | |
| | | Note : Indicate either areano or areauid; do not use both parameters in combination. |

Result

Result for getAreaSchedules:

| Parameter | Туре | Description |
|-------------|-------------|--|
| areano | string (50) | Identification number of an area. Unique within an account, case-sensitive. |
| areauid | string (30) | A unique, unchangeable identifier for the area, automatically generated by Webfleet. |
| scheduleuid | string (30) | A unique, unchangeable identifier for the schedule, automatically generated by Webfleet. |
| mon | boolean | Indicates if the area is activated on this day. Valid values: |
| | | 0 - area disabled1 - area enabled |
| tue | boolean | See mon. |

| Parameter | Type | Description |
|------------|------------|---|
| wed | boolean | See mon. |
| thu | boolean | See mon. |
| fri | boolean | See mon. |
| sat | boolean | See mon. |
| sun | boolean | See mon. |
| start_time | string (5) | Time of day, the activation of the area starts on each of the days above. Format hh: mm, in the local time zone of the user. |
| end_time | string (5) | Time of day, the activation of the area ends on each of the days above. Format hh:mm, in the local time zone of the user. |

insertAreaSchedule Description

insertAreaSchedule adds a list of weekdays and times for which the area shall be effective. Schedules can be used to limit the validity of areas in a temporal way.

Technical details

| SOAP endpoint address / function name | areaService#insertAreaSchedule |
|---------------------------------------|--------------------------------|
| Request limits | 10 requests / minute |

Parameters

insertAreaSchedule requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to insertAreaSchedule:

| Parameter | Туре | Description |
|--------------------|-------------|---|
| areano string (50) | string (50) | Identification number of an area. Unique within an account, case-sensitive. |
| | | Note : Indicate either areano or areauid; do not use both parameters in combination. |

| Parameter | Type | Description |
|------------|-------------|---|
| areauid | string (30) | A unique, unchangeable identifier for the area, automatically generated by Webfleet. |
| | | Note : Indicate either areano or areauid; do not use both parameters in combination. |
| | | |
| mon | boolean | Indicates if the area is activated on this day. Valid values: |
| | | • 0 - area disabled |
| | | • 1 - area enabled |
| | | This parameter is optional. |
| tue | boolean | See mon. |
| wed | boolean | See mon. |
| thu | boolean | See mon. |
| fri | boolean | See mon. |
| sat | boolean | See mon. |
| sun | boolean | See mon. |
| start_time | string (5) | Time of day, the activation of the area starts on each of the days above. |
| | | Format hh:mm, in the local time zone of the user. |
| | | Default value is 00:00. |
| | | This parameter is optional. |
| end_time | string (5) | Time of day, the activation of the area ends on each of the days above. |
| | | Format hh:mm, in the local time zone of the user. |
| | | Default value is 23:59. |
| | | This parameter is optional. |

deleteAreaSchedule Description

deteleAreaSchedule deletes one or more schedules of an area.

Technical details

| SOAP endpoint address / function name | areaService#deleteAreaSchedule |
|---------------------------------------|--------------------------------|
| Request limits | 10 requests / minute |

Parameters

deleteAreaSchedule requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to deleteAreaSchedule:

| Parameter | Туре | Description |
|-----------------------|-------------|---|
| areano | string (50) | Identification number of an area. Unique within an account, case-sensitive. |
| | | Note : Specify either areano or areauid; do not use both parameters in combination. |
| areauid | string (30) | A unique, unchangeable identifier for the area, automatically generated by Webfleet. |
| | | Note : Specify either areano or areauid; do not use both parameters in combination. |
| | | |
| scheduleuid string (3 | string (30) | A unique, unchangeable identifier for the schedule, automatically generated by Webfleet. |
| | | Repeat this parameter for each assignment that shall be deleted. Use HTTP-POST if the generated request URL is longer than 2000 characters. |
| | | This parameter is required. |

LINK.connect

For documentation of the LINK.connect functionality and integration between third party devices and LINK devices, terms and abbreviations used please refer to the LINK.connect Reference document at https://www.webfleet.com/webfleet/partners/integration/developer-resources/

API key mandatory

Note: All LINK.connect-related functions require a dedicated API key.

Always use a dedicated API for the LINK.connect integration solution that you will develop.

sendAuxDeviceData Description

sendAuxDeviceData sends the given opaque payload data to the specified thrid party device using the indicated Webfleet unit/LINK device.

Maximum allowed data size is 2560 byte raw opaque payload data. The base64 encoding required for transmission of opaque payload through the web service API does not count as raw payload data size.

There can only be one pending aux device data message for a LINK at a time. Further calls to sendAuxDeviceData for the same LINK will be rejected until the data is transferred to the LINK.

To track the status of the opaque payload message once sent, please use the WEBFLEET.connect Queue Service.

Technical details

| SOAP endpoint address / function name | auxDeviceDataService#sendAuxDeviceData |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

sendAuxDeviceData requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to sendAuxDeviceData:

| Parameter | Type | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. This parameter is required. |

| Parameter | Туре | Description |
|---------------|--------------|--|
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. This parameter is required. |
| data | base64(raw(2 | 56a)e64 encoded user payload. the data is not interpreted by Webfleet. |
| deviceid | string | Identifier of the aux device. In case of Bluetooth, this is the Bluetooth adapter MAC address (Bluetooth device address) in the 6 byte notation separated by colon, e.g. 11:22:33:44:55:66 |
| correlationid | int | An arbitrary identifier which helps to identify the Webfleet messages in the message queue service that belong to this request. Should be unique in the integration server backend. Optional. |

LINK to aux device connection handling when sending opaque payload

The LINK will try to connect to the specified aux device, if the device is not already connected. If the LINK is not paired to the aux device yet, it will initiate a Bluetooth pairing if needed. The configured PIN is used for pairing.

Data will be transferred to the aux device when a Bluetooth connection exists. If the LINK is unable to establish this connection the opaque payload will remain in the LINK's opaque payload data message queue, reducing the size of this queue.

getLocalAuxDeviceConfig Description

 ${\tt getLocalAuxDeviceConfig}\ returns\ the\ stored\ and\ applicable\ configuration\ of\ a\ Webfleet\ unit\ regarding\ Bluetooth\ connectivity.$

Technical details

| SOAP endpoint address / function name | auxDeviceDataService#getLocalAuxDeviceConfig |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

getLocalAuxDeviceConfig requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to getLocalAuxDeviceConfig:

| Parameter | Type | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. This parameter is optional. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. This parameter is optional. |

Result

Result for getLocalAuxDeviceConfig:

| Parameter | Type | Description |
|----------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. |
| servicename | string (32) | Local Bluetooth service name of the LINK. |
| serviceuuid | UUID(128) | Local Bluetooth service UUID in 128 bit UUID format. |
| authentication | boolean | Flag indicating whether authentication for local SPP service is enabled. |
| addgpsfix | boolean | Flag indicating whether the LINK adds GPS data to every opaque payload data message. |
| addtimestamp | boolean | Flag indicating whether the LINK adds a time stamp to every opaque payload data message. |
| addodometer | boolean | Flag indicating whether the LINK adds the current odometer value to every opaque payload data message. |

configureLocalAuxDevice Description

configureLocalAuxDevice allows the integration server backend to change configuration settings relating to aux devices. Currently the settings are specific to Bluetooth.

Note: All configuration parameters are optional. Parameters not specified in the request will not be changed.

Technical details

SOAP endpoint address / func- auxDeviceDataService#configureLocalAuxDevice tion name

Parameters

configureLocalAuxDevice requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to configureLocalAuxDevice:

| Parameter | Type | Description |
|----------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| | | Note: Either objectno or objectuid is required. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. |
| | | Note: Either objectno or objectuid is required. |
| servicename | string (32) | Local Bluetooth service name of the LINK. |
| serviceuuid | UUID(128) | Local Bluetooth service UUID in 128 bit UUID format. |
| authentication | boolean | Flag indicating whether authentication for local SPP service is enabled. When set to 1 authentication for local SPP service is enabled. |
| addgpsfix | boolean | Flag indicating whether the LINK adds GPS data to every opaque payload data message. When set to 1 the LINK will add GPS data to every opaque payload data message. |
| addtimestamp | boolean | Flag indicating whether the LINK adds a time stamp to every opaque payload data message. When set to 1 the LINK will add a time stamp to every opaque payload data message. |
| addodometer | boolean | Flag indicating whether the LINK adds the current odometer value to every opaque payload data message. When set to 1 the LINK will add the current odometer value to every opaque payload data message. |

getRemoteAuxDeviceConfig Description

 ${\tt getRemoteAuxDeviceConfig}\ returns\ the\ stored\ and\ applicable\ configuration\ of\ a\ Webfleet\ unit\ regarding\ Bluetooth\ remote\ aux\ devices.$

Technical details

| SOAP endpoint address / function name | auxDeviceDataService#getRemoteAuxDeviceConfig |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

getRemoteAuxDeviceConfig requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to getRemoteAuxDeviceConfig:

| Parameter | Туре | Description |
|-----------|-------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Either of objectno or objectuid is mandatory. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Either of objectno or objectuid is mandatory. |

Result

Result for getRemoteAuxDeviceConfig:

| Parameter | Туре | Description |
|-----------|-------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. |
| configid | int | Identifies the remote aux device configuration. Every remote device configuration for a LINK must have a unique identifier. |
| deviceid | string | Identifier of the remote aux device. In the case of Bluetooth, this is the Bluetooth adapter MAC address (Bluetooth device address) in the 6 byte notation. Separated by colon, e.g. 11:22:33:44:55:66. |

| Parameter | Type | Description |
|-----------------|--------------|---|
| friendlyname | string (248) | A name for the remote device that is easier to read for humans. Maximum length is 248 bytes UTF-8. |
| | | Plaximum length is 240 bytes on o. |
| servicename | string (32) | Remote device SPP service name. |
| serviceuuid | UUID(128) | Remote device SPP service UUID in 128 bit UUID format. |
| channel | int | RFCOMM channel ID (130). |
| pin | string(16) | Bluetooth PIN to be used for pairing. When set to an empty value, no PIN will be used. Maximum length is 16 bytes UTF-8. |
| sppbuffersize | int | SPP buffer threshold of the LINK for conversion of SPP data streams (from aux device to LINK) to opaque payload messages. Maximum 1024 Byte. |
| sppflushtimeout | int | SPP buffer timeout (ms) of the LINK for conversion of SPP data streams (from aux device to LINK) to opaque payload messages. Maximum 5000 ms. |

configureRemoteAuxDevice Description

 ${\tt configureRemoteAuxDevice} \ allows \ the \ integration \ server \ backend \ to \ change \ configuration \ settings \ relating \ to \ a \ remote \ aux \ device.$

Currently the settings are specific to Bluetooth. All configuration parameters are optional. Parameters not specified in the request will not be changed. To remove a value, specify null or use an empty parameter value.

Technical details

| SOAP endpoint address / function name | auxDeviceDataService#configureRemoteAuxDevice |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

configureRemoteAuxDevice requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to configureRemoteAuxDevice:

| Parameter | Type | Description |
|-----------------|--------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| | | Note : Either objectno or objectuid is required. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. |
| | | Note : Either objectno or objectuid is required. |
| configid | int | Identifies the remote aux device configuration. Every remote device configuration for a LINK must have a unique identifier. |
| | | The maximum allowed number of remote device configurations per LINK is 5. Valid values: 0 4 |
| deviceid | string | Identifier of the remote aux device. In the case of Bluetooth, this is the Bluetooth adapter MAC address (Bluetooth device address) in the 6 byte notation. Separated by colon, e.g. 11:22:33:44:55:66 |
| | | Note: Either deviceid or friendlyname is required. |
| friendlyname | string (248) | Remote device Friendly name. Maximum length is 248 bytes UTF-8. |
| | | Note: Either deviceid or friendlyname is required. |
| servicename | string (32) | Remote device SPP service name. |
| serviceuuid | UUID(128) | Remote device SPP service UUID in 128 bit UUID format. |
| channel | int | RFCOMM channel ID (130). |
| pin | string(16) | Bluetooth PIN to be used for pairing. When set to an empty value, no PIN will be used. Maximum length is 16 bytes UTF-8. |
| sppbuffersize | int | SPP buffer threshold of the LINK for conversion of SPP data streams (from aux device to LINK) to opaque payload messages. Maximum 1024 Byte. |
| sppflushtimeout | int | SPP buffer timeout (ms) of the LINK for conversion of SPP data streams (from aux device to LINK) to opaque payload messages. Maximum 5000 ms. |

removeRemoteAuxDeviceConfig Description

removeRemoteAuxDeviceConfig removes a remote aux device configuration.

Technical details

| SOAP endpoint address / function name | auxDeviceDataService#removeRemoteAuxDeviceConfig |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

removeRemoteAuxDeviceConfig requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to removeRemoteAuxDeviceConfig:

| Parameter | Туре | Description |
|-----------|-------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Either of objectno or objectuid is mandatory. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Either of objectno or objectuid is mandatory. |
| configid | int | Identifies the remote aux device configuration. Every remote device configuration for a LINK must have a unique identifier. The maximum allowed number of remote device configurations per LINK is 5. Valid values: 0 4. This parameter is required. |

clearAuxDeviceDataQueue Description

clearAuxDeviceDataQueue removes data from the outgoing queue of the LINK. This can be used to remove stale data for third party devices that do not exist anymore or that are unlikely to connect anymore. The LINK does not remove outgoing data by itself because it cannot decide if a third party device will connect sometime.

Technical details

| SOAP endpoint address / func- | auxDeviceDataService#clearAuxDeviceDataQueue |
|-------------------------------|--|
| tion name | |

Parameters

clearAuxDeviceDataQueue requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to clearAuxDeviceDataQueue:

| Parameter | Type | Description |
|-----------------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| | | Note: Either objectno or objectuid is mandatory. |
| objectuid string (30) | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. |
| | | Note: Either objectno or objectuid is mandatory. |
| deviceid | string | Identifier of the remote aux device. In the case of Bluetooth, this is the Bluetooth adapter MAC address (Bluetooth device address) in the 6 byte notation. Separated by colon, e.g. 11:22:33:44:55:66 This parameter is optional. |

resetAuxDeviceData Description

If the LINK does not respond to outgoing aux device data sent with sendAuxDeviceData ta the transfer status is incomplete. In such cases resetAuxDeviceData must be used to reset the outgoing data transfer and get back to a consistent state between integration server backend and aux device. This is important because you cannot send new data until the current transfer is completed or cancelled/reset. If the opaque payload to be delivered with the original send is still important from the view of LINK.connect integration solution, the integration server backend should repeat the sendAuxDeviceData operation after the reset.

Technical details

| SOAP endpoint address / function name | auxDeviceDataService#resetAuxDeviceData |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

resetAuxDeviceData requires the following common parameters:

- <u>Authentication parameters</u>
- <u>General parameters</u>

Parameters specific to resetAuxDeviceData:

| Parameter | Туре | Description |
|----------------------|--|--|
| objectno string (10) | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| | Note : Either objectno or objectuid is mandatory. | |
| objectuid string (30 | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. |
| | | Note : Either objectno or objectuid is mandatory. |
| | | |

Plugins

insertExternalEvent Description

insertExternalEvent allows integrators to create own events for vehicles. The events are handled in the same way like internal events created by Webfleet. The user of the Webfleet user interface can see notifications for the events and is able to acknowledge and/or resolve them. Also notification forwarding and reporting works as usual.

Use cases are for example warnings for external temperature or tire pressure sensors. Gathering of the data and decisions about warnings or alarm levels is up to the 3rd party integrator.

Prerequisites

- 1. The integrator needs to register a Webfleet Plugin. The plugin is tied to the API key.
- 2. The Webfleet customer needs to purchase the additional feature **Webfleet Plugin** to have the plugin data available in Webfleet. This is booked per vehicle (object).

Please refer to the Webfleet Plugin developer guide for more information.

Technical details

| SOAP endpoint address / function name | pluginsService#insertExternalEvent |
|---------------------------------------|------------------------------------|
| Request limits | 5 requests / minute |

Parameters

insertExternalEvent requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to insertExternalEvent:

| Parameter | Туре | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| data | string | JSON containing the event payload. The content is validated against the JSON schema. |

setExternalObjectData Description

setExternalObjectData allows integrators to specify arbitrary data for a vehicle in a well-defined JSON format. The data is shown on the Webfleet user interface. The intended use is to display measured data from sensors or other equipment, such as temperature, tire pressure, cargo load etc. Gathering such data is up to the 3rd party integrator.

Prerequisites

- 1. The integrator needs to register a Webfleet Plugin. The plugin is tied to the API key.
- 2. The Webfleet customer needs to book the additional feature Webfleet Plugin to have the plugin data available in Webfleet. This is booked per vehicle (object).

Please refer to the Webfleet Plugin developer guide for more information.

Technical details

| SOAP endpoint address / function name | pluginsService#setExternalObjectData |
|---------------------------------------|--------------------------------------|
| Request limits | 10 requests / minute |

Parameters

setExternalObjectData requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to setExternatObjactData:

| Parameter | Type | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| data | string | JSON containing the event payload. The content is validated against the JSON schema. |

Cold Chain

getCurrentColdChainSensorData Description

 ${\tt getCurrentColdChainSensorData} \ \ {\tt returns} \ \ {\tt current} \ \ {\tt sensor} \ \ {\tt data} \ \ {\tt along} \ \ {\tt with} \ \ {\tt some} \ \ {\tt related} \ \ {\tt information}.$

Sensor data is not only related to temperature. It also includes reefer unit data like fuel level or engine hours.

This action deprecates <u>getCurrentTemperatureData</u> which will be removed in a later release.

Technical details

| SOAP endpoint address / function name | coldChainDataService#getCurrentColdChainSensor- Data |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

getCurrentColdChainSensorData requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters

Parameters specific to getCurrentColdChainSensorData:

| Parameter | Туре | Description |
|-----------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. This parameter is optional. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. This parameter is optional. |
| objectgroupname | string | The given entry filters the result list on the object groups with matching names. Can be used alternatively to objectgroupuid. This parameter is optional. |

| Parameter | Type | Description |
|----------------|--------|--|
| objectgroupuid | string | A unique, unchangeable identifier for the indicated object group, automatically generated. |
| | | Can be used alternatively to objectgroupname. |
| | | This parameter is optional. |

Result

 $Result\ for\ getCurrentColdChainSensorData:$

| Parameter | Туре | Description |
|------------|-------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| timestamp | dateTime | Timestamp of the sensor measurement. |
| sensorType | string | The type of sensor. • TEMPERATURE • FUEL_LEVEL • ENGINE_HOURS • ELECTRICAL_HOURS |
| sensorName | string | Name of the sensor. This name can be changed in the Webfleet UI. |
| sensorCode | string | The content of the sensorCode depends on the sensor type and temperature sensor type. For ONE_WIRE it contains the ROM code of the sensor. This is a unique serial number of the hardware. For BLE_TEMPERATURE it contains the Bluetooth address of the sensor. For THERMOGRAPH it contains the sensor ID connected to the thermograph (e.g. '1', '2', etc.). For other sensor types this contains a generated identifier, which is unquie for the object (e.g. 'GENERIC_1'). |
| latitude | int | Latitude when the sensor value was obtained. Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |

| Parameter | Type | Description |
|----------------------------|--------|--|
| longitude | int | Longitude when the sensor value was obtained. Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| postext | | A detailed textual description of the location of the measurement. |
| temperatureSen- sorType | string | ONE_WIRE - One-Wire sensor THERMOGRAPH - Sensor of a thermograph connected to LINK device BLE_TEMPERATURE - Bluetooth Low Energy temperature sensor SUPPLY_AIR - The air temperature after compressor, before going into the compartment RETURN_AIR - The temperature of air leaving the compartment GENERIC - Generic type Only available for data with sensorType TEMPERATURE. |
| temperature | float | Temperature measurement (in °C). Only available for data with sensorType TEMPERA-TURE. |
| fuelLevel | float | Reefer unit fuel level in percent. Only available for data with sensorType FUEL_LEVEL. |
| engineHours | float | Total hours the engine of the reefer unit was running. Only available for data with sensorType EN-GINE_HOURS. |
| electricalHours | float | Hours the engine of the reefer unit was running in electrical mode. Only available for data with sensorType ELECTRI-CAL_HOURS. |

${\tt getHistoricalColdChainSensorData} \\ {\tt Description}$

 ${\tt getHistoricalColdChainSensorData}\ \textbf{returns}\ \textbf{sensor}\ \textbf{data}\ \textbf{for an object within a specific time range}.$

Sensor data is not only related to temperature. It also includes reefer unit data like fuel level or engine hours.

This action deprecates <u>getHistoricalTemperatureData</u> which will be removed in a later release.

Technical details

| SOAP endpoint address / function name | coldChainDataService#getHistoricalColdChainSensor- Data |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

getCurrentColdChainSensorData requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters
- <u>Date range filter parameters</u>, periods longer than 7 days are not permitted.

Parameters specific to getHistoricalColdChainSensorData:

| Parameter | Type | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

Result

Result for getHistoricalColdChainSensorData:

| Parameter | Type | Description |
|------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| timestamp | dateTime | Timestamp of the sensor measurement. |
| sensorType | string | The type of sensor. TEMPERATURE FUEL_LEVEL ENGINE_HOURS ELECTRICAL_HOURS |

| Parameter | Type | Description |
|-----------------|--------|---|
| sensorName | string | Name of the sensor. This name can be changed in the Webfleet UI. |
| sensorCode | string | The content of the sensorCode depends on the sensor type and temperature sensor type. |
| | | For ONE_WIRE it contains the ROM code of the sensor. This is a unique serial number of the hardware. |
| | | For BLE_TEMPERATURE it contains the Bluetooth address of the sensor. |
| | | For THERMOGRAPH it contains the sensor ID connected to the thermograph (e.g. '1', '2', etc.). |
| | | For other sensor types this contains a generated identifier, which is unquue for the object (e.g. 'GENERIC_1'). |
| latitude | int | Latitude when the sensor value was obtained. |
| | | Geographic latitude in the WGS84 coordinate system. |
| | | Unit of measurement is micro degrees (10 ⁻⁶ grd). |
| | | Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. |
| | | See <u>Geographic coordinate conversion on Wikipedia</u> . |
| longitude | int | Longitude when the sensor value was obtained. |
| | | Geographic longitude in the <u>WGS84</u> coordinate system. |
| | | Unit of measurement is micro degrees (10-6 grd). |
| | | Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. |
| | | See Geographic coordinate conversion on Wikipedia. |
| postext | | A detailed textual description of the location of the measurement. |
| temperatureSen- | string | ONE WIRE - One-Wire sensor |
| sorType | | THERMOGRAPH - Sensor of a thermograph connected to LINK device |
| | | BLE_TEMPERATURE - Bluetooth Low Energy temper- ature sensor |
| | | SUPPLY_AIR - The air temperature after compressor, before going into the compartment |
| | | RETURN_AIR - The temperature of air leaving the compartment |
| | | GENERIC - Generic type |
| | | Only available for data with sensorType TEMPERATURE. |
| temperature | float | Temperature measurement (in °C). |
| | | Only available for data with sensorType TEMPERATURE. |

| Parameter | Type | Description |
|-----------------|-------|---|
| fuelLevel | float | Reefer unit fuel level in percent. Only available for data with sensorType FUEL_LEVEL. |
| engineHours | float | Total hours the engine of the reefer unit was running. Only available for data with sensorType EN- GINE_HOURS. |
| electricalHours | float | Hours the engine of the reefer unit was running in electrical mode. Only available for data with sensorType ELECTRI-CAL_HOURS. |

getCurrentColdChainStateData Description

getCurrentColdChainStateData returns current state data along with some related information.

With this action you can get the current state of doors as well as reefer unit state data.

This action deprecates <u>getCurrentRefrigeratedDoorStatusData</u> which will be removed in a later release.

Technical details

| SOAP endpoint address / function name | coldChainDataService#getCurrentColdChainStateData |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

getCurrentColdChainStateData requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to getCurrentColdChainSensorData:

| Parameter | Туре | Description |
|-----------|-------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. This parameter is optional. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. This parameter is optional. |

| Parameter | Type | Description |
|-----------------|--------|--|
| objectgroupname | string | The given entry filters the result list on the object groups with matching names. |
| | | Can be used alternatively to objectgroupuid. |
| | | This parameter is optional. |
| objectgroupuid | string | A unique, unchangeable identifier for the indicated object group, automatically generated. |
| | | Can be used alternatively to objectgroupname. |
| | | This parameter is optional. |

Result

 $Result\ for\ getCurrentColdChainStateData:$

| Parameter | Туре | Description |
|-----------|-------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| timestamp | dateTime | Timestamp of the state change. |
| latitude | int | Latitude when the sensor value was obtained. Geographic latitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . |
| longitude | int | Longitude when the sensor value was obtained. Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| postext | | A detailed textual description of the location of the measurement. |

| Parameter | Туре | Description |
|--------------------------|--------|---|
| stateDataType | string | The type of state data. DOOR FUEL_TANK_SIZE POWER_MODE REEFER_UNIT_STATE SETPOINT UNIT_OPERATIONAL_MODE ZONE_OPERATIONAL_MODE |
| reeferUnitState | string | Current state of the reefer unit. ON OFF UNKNOWN Only available for data with stateDataType REEFER_UNIT_STATE. |
| unitOpera- tionalMode | string | Operational mode of the cooling unit. CONTINUOUS CYCLE_SENTRY UNKNOWN Only available for data with stateDataType UNIT_OPERATIONAL_MODE. |
| powerMode | string | Power mode of the cooling unit engine. DIESEL ELECTRIC CRYO UNKNOWN Only available for data with stateDataType POWER_MODE. |
| setPointTempera- ture | float | Setpoint temperature for the zone specified in result parameter zone. Only available for data with stateDataType SET-POINT. |
| doorCode | string | The doorcode is a generated door identifier, unique for an object. Only available for data with stateDataType DOOR. |
| doorName | string | Name of the door. Only available for data with stateDataType DOOR. |

| Parameter | Type | Description |
|--------------------------|--------|--|
| doorStatus | string | Door status. OPEN CLOSED Only available for data with stateDataType DOOR. |
| fuelTankSize | int | Fuel tank size in litres. Only available for data with stateDataType FU-EL_TANK_SIZE. |
| zoneOpera- tionalMode | string | Operational mode of the zone specified in result parameter zone. COOLING DEFROSTING HEATING UNKNOWN Only available for data with stateDataType ZONE_OPERATIONAL_MODE. |
| zone | int | The zone (compartment) which the state data belongs to. Only available for data with stateDataType ZONE_OPERATIONAL_MODE or SETPOINT. |

getHistoricalColdChainStateData Description

 ${\tt getHistoricalColdChainStateData} \ \ {\tt returns} \ \ {\tt current} \ \ {\tt state} \ \ {\tt data} \ \ {\tt changes} \ \ {\tt for} \ \ {\tt an} \ \ {\tt object} \\ \ \ {\tt within} \ \ {\tt a} \ \ {\tt specific} \ \ {\tt time} \ \ {\tt range}.$

With this action you can get the history state changes of doors as well as reefer unit state data.

This action deprecates <u>getHistoricalRefrigeratedDoorStatusData</u> which will be removed in a later release.

Technical details

| SOAP endpoint address / function name | coldChainDataService#getHistoricalColdChainState- Data |
|---------------------------------------|---|
| Request limits | 10 requests / minute |

Parameters

getHistoricalColdChainStateData requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters
- <u>Date range filter parameters</u>, periods longer than 7 days are not permitted.

Parameters specific to getCurrentColdChainSensorData:

| Parameter | Туре | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |

Result

Result for getHistoricalColdChainStateData:

| Parameter | Туре | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| timestamp | dateTime | Timestamp of the state change. |
| latitude | int | Latitude when the sensor value was obtained. Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| longitude | int | Longitude when the sensor value was obtained. Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| postext | | A detailed textual description of the location of the measurement. |

| Parameter | Туре | Description |
|--------------------------|--------|---|
| stateDataType | string | The type of state data. DOOR FUEL_TANK_SIZE POWER_MODE REEFER_UNIT_STATE SETPOINT UNIT_OPERATIONAL_MODE ZONE_OPERATIONAL_MODE |
| reeferUnitState | string | Current state of the reefer unit. ON OFF UNKNOWN Only available for data with stateDataType REEFER_UNIT_STATE. |
| unitOpera- tionalMode | string | Operational mode of the cooling unit. CONTINUOUS CYCLE_SENTRY UNKNOWN Only available for data with stateDataType UNIT_OPERATIONAL_MODE. |
| powerMode | string | Power mode of the cooling unit engine. DIESEL ELECTRIC CRYO UNKNOWN Only available for data with stateDataType POWER_MODE. |
| setPointTempera- ture | float | Setpoint temperature for the zone specified in result parameter zone. Only available for data with stateDataType SET-POINT. |
| doorCode | string | The doorcode is a generated door identifier, unique for an object. Only available for data with stateDataType DOOR. |
| doorName | string | Name of the door. Only available for data with stateDataType DOOR. |

| Parameter | Туре | Description |
|--------------------------|--------|--|
| doorStatus | string | Door status. OPEN CLOSED Only available for data with stateDataType DOOR. |
| fuelTankSize | int | Fuel tank size in litres. Only available for data with stateDataType FU-EL_TANK_SIZE. |
| zoneOpera- tionalMode | string | Operational mode of the zone specified in result parameter zone. COOLING DEFROSTING HEATING UNKNOWN Only available for data with stateDataType ZONE_OPERATIONAL_MODE. |
| zone | int | The zone (compartment) which the state data belongs to. Only available for data with stateDataType ZONE_OPERATIONAL_MODE or SETPOINT. |

getCurrentTemperatureData Description

 ${\tt getCurrentTemperatureData}\ \textbf{returns}\ \textbf{current}\ \textbf{temperature}\ \textbf{data}\ \textbf{along}\ \textbf{with}\ \textbf{some}\ \textbf{related}\ \textbf{information}.$

This action is deprecated. Please use <u>getCurrentColdChainSensorData</u> instead.

Technical details

| SOAP endpoint address / function name | coldChainDataService#getCurrentTemperatureData |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

getCurrentTemperatureData requires the following common parameters:

- Authentication parameters
- General parameters

Parameters specific to getCurrentTemperatureData:

| Parameter | Type | Description |
|-----------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. This parameter is optional. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. This parameter is optional. |
| objectgroupname | string | The given entry filters the result list on the object groups with matching names. Can be used alternatively to objectgroupuid. This parameter is optional. |
| objectgroupuid | string | A unique, unchangeable identifier for the indicated object group, automatically generated. Can be used alternatively to objectgroupname. This parameter is optional. |

Result

Result for getCurrentTemperatureData:

| Parameter | Type | Description |
|------------|-------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| sensorcode | string | The content of the sensorcode depends on the sensor type. For ONE_WIRE it contains the ROM code of the sensor. This is a unique serial number of the hardware. |
| | | For BLE_TEMPERATURE it contains the Bluetooth address of the sensor. |
| | | For THERMOGRAPH it contains the sensor ID connected to the thermograph (e.g. '1', '2', etc.). |
| | | For other sensor types this contains a generated identifier, which is unqiue for the object (e.g. 'GENERIC_1'). |
| sensorname | string | Name of the sensor. This name can be changed in the Webfleet UI. |

| Parameter | Type | Description |
|-------------|----------|--|
| sensortype | string | ONE_WIRE - One-Wire sensor THERMOGRAPH - Sensor of a thermograph connected to LINK device BLE_TEMPERATURE - Bluetooth Low Energy temperature sensor SUPPLY_AIR - The air temperature after compressor, before going into the compartment RETURN_AIR - The temperature of air leaving the compartment GENERIC - Generic type |
| temperature | float | Temperature measurement (in °C). |
| timestamp | dateTime | Timestamp of the temperature measurement. |
| latitude | int | Latitude when temperature was obtained. Geographic latitude in the <u>WGS84</u> coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See <u>Geographic coordinate conversion on Wikipedia</u> . |
| longitude | int | Longitude when temperature was obtained. Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| postext | | A detailed textual description of the location of the temperature measurement. |

getHistoricalTemperatureData Description

getHistoricalTemperatureData returns temperature data for an object within a specific time range.

This action is deprecated. Please use <u>getHistoricalColdChainSensorData</u> instead.

Technical details

SOAP endpoint address / function name

cold Chain Data Service #get Historical Temperature Data

Parameters

getHistoricalTemperatureData requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters
- <u>Date range filter parameters</u>, periods longer than 7 days are not permitted.

Parameters specific to getHistoricalTemperatureData:

| Parameter | Туре | Description |
|------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| sensorcode | string | Can be used to restrict the result to a specific sensor. This parameter is optional. |
| sensorname | string | Can be used to restrict the result to a specific sensor. This parameter is optional. |

Result

Result for getHistoricalTemperatureData:

| Parameter | Type | Description |
|------------|-------------|---|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| sensorcode | string | The content of the sensorcode depends on the sensor type. For ONE_WIRE it contains the ROM code of the sensor. This is a unique serial number of the hardware. For BLE_TEMPERATURE it contains the Bluetooth address of the sensor. For THERMOGRAPH it contains the sensor ID connected to the thermograph (e.g. '1', '2', etc.). For other sensor types this contains a generated identifier, which is unquie for the object (e.g. 'GENERIC_1'). |

| Parameter | Type | Description |
|-------------|----------|---|
| sensorname | string | Name of the sensor. This name can be changed in the Webfleet UI. |
| sensortype | string | ONE_WIRE - One-Wire sensor THERMOGRAPH - Sensor of a thermograph connected to LINK device BLE_TEMPERATURE - Bluetooth Low Energy temperature sensor SUPPLY_AIR - The air temperature after compressor, before going into the compartment RETURN_AIR - The temperature of air leaving the compartment GENERIC - Generic type |
| temperature | float | Temperature measurement (in °C). |
| timestamp | dateTime | Timestamp of the temperature measurement. |
| latitude | int | Latitude when temperature was obtained. Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| longitude | int | Longitude when temperature was obtained. Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10 ⁻⁶ grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 ⁶ and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| postext | | A detailed textual description of the location of the temperature measurement. |

${\tt getCurrentRefrigeratedDoorStatusData} \\ {\tt Description}$

 ${\tt getCurrentRefrigeratedDoorStatusData} \ \ {\tt returns} \ \ the \ current \ status \ of \ refrigerated \ doors \ along \ with \ some \ related \ information.$

This action is deprecated. Please use getCurrentColdChainStateData instead.

Technical details

| SOAP endpoint address / function name | coldChainDataService#getCurrentRefrigeratedDoorS- tatusData |
|---------------------------------------|--|
| Request limits | 10 requests / minute |

Parameters

getCurrentRefrigeratedDoorStatusData requires the following common parameters:

- <u>Authentication parameters</u>
- <u>General parameters</u>

Parameters specific to getCurrentRefrigeratedDoorStatusData:

| Parameter | Туре | Description |
|-----------------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. This parameter is optional. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. This parameter is optional. |
| objectgroupname | string | The given entry filters the result list on the object groups with matching names. Can be used alternatively to objectgroupuid. This parameter is optional. |
| objectgroupuid | string | A unique, unchangeable identifier for the indicated object group, automatically generated. Can be used alternatively to objectgroupname. This parameter is optional. |

Result

 $Result\ for\ getCurrent Refrigerated Door Status Data:$

| Parameter | Type | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| doorcode | string | The doorcode is a generated door identifier, unique for an object. |

| Parameter | Type | Description |
|-----------|----------|--|
| doorname | string | Name of the door. |
| status | string | The status of the door at the time specified by the timestamp. |
| | | OPEN - The door is openCLOSED - The door is closed |
| timestamp | dateTime | Timestamp when door was opened or closed. |
| latitude | int | Latitude when door changed its state. Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| longitude | int | Longitude when door changed its state. Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10-6 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| postext | | A detailed textual description of the location of the door status change. |

${\tt getHistoricalRefrigeratedDoorStatusData} \\ {\tt Description}$

 ${\tt getHistoricalRefrigeratedDoorStatusData} \ \ {\tt returns} \ \ {\tt changes} \ \ {\tt in} \ \ {\tt the} \ \ {\tt status} \ \ {\tt of} \ \ {\tt refrigerated} \ \ {\tt doors} \ \ {\tt for} \ \ {\tt an} \ \ {\tt object} \ \ {\tt within} \ \ {\tt a} \ \ {\tt specific} \ \ {\tt time} \ \ {\tt range}.$

This action is deprecated. Please use <u>getHistoricalColdChainStateData</u> instead.

Technical details

| SOAP endpoint address / function name | coldChainDataService#getHistoricalRefrigerated- DoorStatusData |
|---------------------------------------|---|
| Request limits | 1000 requests / 24 hours |

Parameters

getHistoricalRefrigeratedDoorStatusData requires the following common parameters:

- <u>Authentication parameters</u>
- General parameters
- <u>Date range filter parameters</u>, periods longer than 7 days are not permitted.

 $Parameters\ specific\ to\ getHistorical Refrigerated Door Status Data:$

| Parameter | Type | Description |
|-----------|-------------|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. Can be used alternatively to objectuid. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. |
| doorcode | string | Can be used to restrict the result to a specific door. This parameter is optional. |
| doorname | string | Can be used to restrict the result to a specific door. This parameter is optional. |

Result

Result for getHistoricalRefrigeratedDoorStatusData:

| Parameter | Type | Description | |
|-----------|-------------|--|--|
| objectno | string (10) | Identifying number of an object. Unique within an account, case-sensitive. | |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to objectno. | |
| doorcode | string | The doorcode is a generated door identifier, unique for an object. | |
| doorname | string | Name of the door. | |
| status | string | The status of the door at the time specified by the timestamp. • OPEN - The door is open | |
| | | CLOSED - The door is closed | |
| timestamp | dateTime | Timestamp when door was opened or closed. | |

| Parameter | Type | Description |
|-----------|------|---|
| latitude | int | Latitude when door changed its state. Geographic latitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| longitude | int | Longitude when door changed its state. Geographic longitude in the WGS84 coordinate system. Unit of measurement is micro degrees (10-6 grd). Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 106 and rounding to an integer. See Geographic coordinate conversion on Wikipedia. |
| postext | | A detailed textual description of the location of the door status change. |

Appendix A Operation response codes

Response codes

| Response code | Message | Description |
|---------------|--|--|
| 0 | The operation was successful. | |
| 1 | Your last action could not be processed | A system error has occurred. |
| 8 | A constraint violation oc- curred. No detailed infor- mation available. | |
| 9 | One of the entered values is too large. Please check your input. | |
| 20 | Your last action could not be processed. | A system error has occurred. |
| 40 | Your last action could not be processed. | A system error has occurred. |
| 45 | Access denied. You have insufficient permissions to perform this function. | |
| 47 | The time period you have entered is invalid. Please enter a valid time period. | Invalid time period. |
| 55 | Action is not valid | Indicates that the API method supplied as the parameter action is not available. Check your parameter for typos. |
| 60 | General error. | |
| 63 | Document contains no data | Indicates that the result set is empty for the specific combination of parameters provided for the request. |
| 123 | Unknown macro command or unit not initialised. | |
| 1100 | User name already exists for this account. | |
| 1101 | User invalid (does not exist). | |
| 1105 | Password must be given. | Either the password is empty or the parameter was not part of your request. You need to provide a password. |

| Response code | Message | Description |
|---------------|---|--|
| 1106 | Authentication failed. check account/user- name/password. | Either the account or the username supplied does not exist or the password is wrong. |
| 1112 | The input field 'Username' must not be empty. | |
| 1114 | User profile missing or invalid. | |
| 1115 | New password missing. | |
| 1123 | New password must not be the username. | |
| 1124 | New password too short (at least 5 characters required). | |
| 1125 | Password not allowed (blacklisted). | |
| 1126 | New password must not be the account name. | |
| 1127 | Old password missing. | |
| 1128 | New password too simple. | |
| 1129 | New password must not be a part of the users real name. | |
| 1130 | The account is temporary blocked. | |
| 1132 | The account is not valid anymore. | |
| 1140 | The user is not valid any- more. | |
| 1143 | API key is invalid | |
| 1144 | Session invalid or expired. | |
| 1146 | Password expired | |
| 1147 | Interface style invalid. | The used interface style parameter is not a valid interface style. |
| 1148 | User profile for interface style invalid. | The user profile for the interface style of this user is invalid. |
| 1220 | Right level does not fit to given entity. | |
| | | 415 |

| Response code | Message | Description |
|---------------|--|--|
| 1221 | Unknown right level. | |
| 1223 | Right level is not allowed for the user. | Changing the given right level for the given user is not allowed. |
| 2109 | The provided object number doesn't exist. | objectno is invalid. |
| 2110 | Invalid objectgroupname | objectgroupname is invalid. |
| 2112 | Specify either objectno or objectuid, not both. | |
| 2210 | Contract not valid | The contract for the object used in the request is not valid (e.g. has expired). |
| 2307 | The referenced event forwarding configuration does not exist within the account. | |
| 2308 | The event forward configuration is missing. | |
| 2501 | Please enter a date of execution. | Missing order date |
| 2502 | Please enter an order text. | Missing order text |
| 2503 | Deficient address data | The address format is invalid. |
| 2504 | The entered time of arrival has an invalid format. | Invalid arrival time format. |
| 2505 | Invalid duration format | The duration format is invalid. |
| 2506 | Please enter the coordinates of the order destination. | Missing order destination coordinates. |
| 2507 | The entered order destination coordinates have an invalid format. | Invalid format of order destination coordinates. |
| 2508 | Invalid format order num- ber | The order number format is invalid. |
| 2509 | The provided order number doesn't exist. | |
| 2510 | Order was already sent. | |
| 2511 | Missing object number. | |
| 2512 | Invalid street address. | |
| | | |

| Response code | Message | Description |
|---------------|--|---|
| 2513 | The entered telephone number has an invalid format. | |
| 2514 | Incomplete destination description. | |
| 2515 | Duplicate Order number. | Use <u>sendDestinationOrderExtern</u> or <u>update-OrderExtern</u> if you need to modify an existing order. |
| 2516 | The selected order number is invalid or not unique. | |
| 2517 | Updating the order type of an already existing order is not supported. | |
| 2600 | Maximum message text length (UTF-8 format) ex- ceeded | |
| 2601 | Maximum order text length (UTF-8 format) exceeded | |
| 2602 | Maximum order number length exceeded | |
| 2603 | Feature not supported. | |
| 2604 | The feature sendText is not supported by this unit | The addressed device is either used with a tariff that doesn't include messaging or hasn't been configured properly (PND not paired during initialization). |
| 2605 | The feature sendOrder is not supported by this unit | The addressed device is either used with a tariff that doesn't include messaging or hasn't been configured properly (PND not paired during initialization). |
| 2607 | Order state is invalid or missing. | |
| 2608 | Order state cannot be disabled. | |
| 2609 | Event level not supported. | |
| 2610 | Order state has to be enabled or disabled. | |
| 2611 | Order state not supported. | |
| 2614 | Invalid waypoint parame- ter. | |

| Response code | Message | Description |
|---------------|---|--|
| 2615 | Itinerary orders not supported for this unit type. | The unit does not support orders with itineraries. |
| 2616 | Too many waypoints. | The amount of waypoints is too large. |
| 2617 | Itinerary distance is too long. | The overall straight line distance of the order's itinerary is too long. |
| 2618 | Waypoint description text is too long. | |
| 2622 | This order state is invalid for deletion. | |
| 2623 | Shared order status link not found. | |
| 2624 | The route feature is not available for this unit. | |
| 26257 | The order number length is invalid. | |
| 2628 | The order has exceeded the maximum allowable number of documents that can be added. | |
| 2629 | The route limit for the objects has been exceeded. | |
| 2630 | Clearing orders failed. | |
| 2631 | The order relation is invalid. | |
| 2632 | The order relation target is invalid. | |
| 2633 | The order relation assign- ment is missing. | |
| 2634 | The order relation is circular. | |
| 2635 | The order relation type is invalid. | |
| 2636 | The suggested execution date is invalid. | |
| 2637 | The arrival tolerance is invalid. | |
| 2638 | The execution date is invalid. | |

| Response code | Message | Description |
|---------------|---|-------------|
| 2639 | The order type is invalid. | |
| 2640 | The route parameters are invalid. | |
| 2641 | Cannot decode base64 encoded document file of the order. | |
| 2642 | Order document file content must be not empty or null. | |
| 2643 | Document filename of the order must be not empty or null. | |
| 2644 | Maximum allowed docu- ment file size of order is ex- ceeded. | |
| 2645 | The given file extension is not supported. | |
| 2646 | Order document ID missing or has invalid UUID format. | |
| 2647 | The order document doesn't exist. | |
| 2648 | The order document thumbnail doesn't exist. | |
| 32000 | Feature plugins not booked for this vehicle. | |
| 32001 | Invalid JSON data. | |
| 32002 | No plugin registered for the API key. | |
| 32003 | Invalid schema version number in JSON data. | |
| 32004 | Invalid external URL in JSON element href. | |
| 32005 | Missing parameter data. It must contain a JSON string. | |
| 32006 | Object is currently tied to external data of another plugin. Try again later when those external data have expired. | |
| | | 41 |

| Response code | Message | Description |
|---------------|--|--|
| 32007 | The total size of all trans- lation strings exceeds the limit. | |
| 33022 | Unknown output name | The output name used in the request is not configured for the LINK device. |
| 4000 | An address by the same key exists already in the account. | |
| 4001 | The address does not exist. | |
| 4002 | An address with the same identification does already exist. | |
| 4003 | The address group does not exist. | |
| 4004 | A group of the same name / identification does already exist. | |
| 4006 | A name must be provided for an address. | |
| 4007 | A number identifying an address within an account must be provided. | |
| 4008 | The name of an address group can not be NULL or empty | |
| 4009 | The micro degree value of a geo-coordinate (latitude, longitude) is outside the allowed range. The allowed range is a non-null value of - 180000000 to +180000000 micro degrees. | |
| 4010 | A unique, non-null Identifier for an address group within an account must be given! | |
| 4107 | Invalid accountname | |
| 6210 | areano already exists. | |
| 6211 | areano parameter missing or invalid. | |

| Response code | Message | Description |
|---------------|--|-------------|
| 6212 | areaname parameter miss- ing or invalid. | |
| 6213 | radius parameter missing or invalid. | |
| 6214 | width parameter missing or invalid. | |
| 6215 | height parameter missing or invalid. | |
| 6218 | Please specify at least one weekday for scheduled activation of this area. | |
| 6219 | Format of time parameter invalid. please specify the time in HH:mm format. | |
| 6221 | Specify either areano or areauid to identify the area. | |
| 6222 | Area not found. | |
| 6223 | area type parameter miss- ing or invalid. | |
| 6224 | validfrom parameter invalid. | |
| 6225 | validto parameter invalid. | |
| 6226 | area contains an invalid geo-position. | |
| 6227 | area contains an invalid event level. | |
| 6228 | assignmentuid parameter missing or invalid. | |
| 6229 | Specify one of objectno, objectuid or objectgroup-name. | |
| 6230 | scheduleuid parameter missing or invalid. | |
| 6231 | End time must be greater than start time. | |
| 6232 | Area assignment already exists. | |

| Response code | Message | Description |
|---------------|---|---|
| 6233 | Specify either areano or areauid, not both. | |
| 6234 | area assignment does not exist. | |
| 6235 | Area schedule does not exist. | |
| 6236 | Maxiumum number of points exceeded. | |
| 6237 | Maximum count of available of areas exceeded. | |
| 6238 | Color parameter invalid. | The used color parameter is not a valid 6-digit hex RGB-color code. |
| 8000 | General system error. | |
| 8011 | Request quota reached. More than <i>n</i> requests in <i>t</i> seconds are not permitted | Your request exceeds the quota defined for that request type or that request group. See Request limits. |
| 8014 | External requests are not allowed for that account/user. Please make sure that an API key is used and the user has the WEBFLEET.connect access right. | See Access to WEBFLEET.connect with API Key. |
| 8015 | Account / username busy processing other request. | Requests using the same account-username pair must always be serialised and may not overlap. Occurs if you did not wait long enough for a response from the previous request and prematurely terminated the connection. The recommended timeout for requests is 300 seconds. Requests may be retried after a 10 second wait interval, but might fail again until the initial request has timed out. |
| 8104 | Action missing or invalid. | |
| 8105 | Language missing or invalid. | |
| 9000 | Your last WEBFLEET.con- nect action could not be processed. | |

| Response code | Message | Description |
|---------------|---|---|
| 9001 | invalid parameter (range_pattern) | The range_pattern is invalid for this operation, please see the operation's documentation for the allowed range. |
| 9002 | missing parameter (range_pattern) | The range_pattern is missing for this operation, please see the operation's documentation for the allowed range. |
| 9003 | missing parameter (object- no) | |
| 9004 | invalid parameters (range- from_string, range- to_string) | The time period given by range- from_string and rangeto_string exceeds the allowed time range for this operation and parameter combination, please see the documentation for the allowed range. |
| 9005 | invalid parameter (msgid) | The msgid is not known to the system - the message might have been deleted after being outdated. |
| 9006 | missing parameter(s) (range_pattern and/or msgid) | You need to provide either a msgid or date range filter parameters (see <u>Date range filter parameters</u>) |
| 9007 | <pre>invalid parameter (range- from_string)</pre> | The use of range_pattern requires values for rangefrom_string and rangeto_string. |
| 9008 | <pre>invalid parameter (range- to_string)</pre> | The use of range_pattern requires values for rangefrom_string and rangeto_string. |
| 9009 | <pre>invalid parameters (range- from_string must be a date before range- to_string)</pre> | |
| 9010 | <pre>invalid orderstate (must be 0 100 101 102 103 201 202 203 204 205 221 222 223 224 225 241 242 243 244 245 298 299 301 302 401)</pre> | |
| 9011 | <pre>invalid ordertype (must be 1 2 3)</pre> | |
| 9012 | missing parameter(s) (or- derid, objectid) | |
| 9013 | wrong state, order not re- assignable | |
| 9014 | no valid contract for object | |

| Response code | Message | Description |
|------------------|--|-------------|
| 9015 | no valid id given | |
| 9016 | no trip id, objectno and/or date range given | |
| 9017 | For the date range given an objectno also needs to be given. | |
| 9018 | driver does not exist | |
| 9019 | driver group does not exist | |
| 9020 | driver name is missing | |
| 9021 | driver number is missing or invalid | |
| 9022 | driver group name is miss- ing or invalid | |
| 9023 | driver pin must be not empty and must be a num- ber | |
| 9024 | driver code must be a number | |
| 9025 | driver number must be unique | |
| 9026 | driver group name must be unique | |
| 9027 | country of driver invalid | |
| 9028 | driver group not unique or not existing | |
| 9029 | driver not unique or not existing | |
| 9030 | driver already in group | |
| 9031 | driver not in group | |
| 9032 | driver company invalid | |
| 9033 | driver description invalid | |
| 9034 | driver zip invalid | |
| 9035 | driver city invalid | |
| 9036 | driver street invalid | |

| Response code | Message | Description |
|---------------|--|---|
| 9037 | driver mobile invalid | |
| 9038 | driver private telephone invalid | |
| 9039 | driver email invalid | |
| 9040 | driver code not unique | |
| 9041 | tachograph card id invalid | |
| 9042 | tachograph card country invalid | |
| 9044 | tachograph card is already assigned to other driver | |
| 9047 | driver is already assigned to other ibutton | The driver was already assigned a button id. Remove the assignment first by providing an empty button id. |
| 9048 | ibutton already assigned to other driver | The button id is already assigned to another driver. Remove this assignment first by updating the other driver with an empty button id. |
| 9050 | Driver is already assigned non-manually | |
| 9051 | There's a driver already assigned to the vehicle non- manually | |
| 9052 | Driver is not assigned to the specific vehicle. | |
| 9053 | Manual driver detach not possible for non-manual assignments. | |
| 9054 | Conflicting driver parame- ters (driverno vs. driver- groupname) | |
| 9055 | Specify either driverNo or driverUid, not both. | |
| 9056 | Specify either driverGroup- Name or driverGroupUid, not both | |
| 9058 | Remaining driving time feature not enabled for driver's unit. | Also occurres if the driver is not attached to any unit. |
| 9060 | event does not exist | |
| | | |

| Response code | Message | Description |
|---------------|--|--|
| 9061 | event is not on alarm level | Use <u>resolveEventExtern</u> to flag this event as resolved. |
| 9062 | event is not below alarm level | Use <u>acknowledgeEventExtern</u> to flag this event as acknowledged before resolving it. |
| 9063 | eventid invalid | |
| 9064 | event already resolved | |
| 9065 | event already acknowl- edged | |
| 9066 | event level unknown | The event level parameter eventlevel_cur provided is not within the defined range. |
| 9067 | event state unknown | One of the event state parameters (resolved, acknowledged) provided is not within the defined range. |
| 9069 | The driver key is invalid | |
| 9070 | The driver key type is not assigned to this driver | |
| 9071 | The driver key is already assigned to another driver | |
| 9080 | order does not exist | |
| 9081 | order not yet assigned to unit | |
| 9082 | order is assigned to an oth- er unit already | |
| 9083 | orderid parameter missing or invalid | |
| 9084 | Driver assignment is not allowed | The tariff for the object does not include driver-related functionality. |
| 9100 | object does not exist | |
| 9101 | objectno parameter miss- ing or invalid | |
| 9102 | Invalid object group name | |
| 9104 | date-rage is unparsable | |
| 9107 | licence plate number para- meter invalid | |
| 9114 | This operation is presently not supported. | |
| | ' | 426 |

| i | Object group name is missing or invalid. object-no is not part of this | |
|--------|--|--|
| 0107 | object-no is not part of this | |
| | object group name | Both objectno and objectgroupname are given and the objectno and objectgroupname exist, but the objectno is not part of the objectgroup. |
| 9124 | Object already in group. | |
| | Object group name is missing or invalid or not unique. | |
| | Object no is missinig or invalid or not unique. | |
| | Object group already ex- ists. | |
| | Odometer parameter in- valid. | |
| t | Conflicting object parame- ters (objectno/objectuid vs. objectgroupname) | |
| | manufacturedyear para- meter invalid | This message is returned if the indicated year is not an 4 digit integer value. |
| | This action is not applicable with an order in this state. | |
| r | Invalid HTTP request method. Only HTTP-GET requests are supported. | |
| 9152 | Output status invalid. | |
| 9155 | Message category invalid. | |
| | The geo position (lat/long) is invalid. | |
| | Address geo position is invalid. | The geo-position of the address is invalid. |
| | The parameter for modified since time is invalid. | |
| 9170 | The email format is invalid. | |
| | Maximum data amount for an email is exceeded. | |
| 9172 F | Filter parameter invalid. | |

| Response code | Message | Description |
|---------------|--|---|
| 9173 | No report configuration found. | |
| 9174 | No report template found. | |
| 9176 | Report generation failed. | |
| 9177 | Report name parameter invalid. | |
| 9179 | Report type parameter invalid. | |
| 9180 | Report format parameter invalid. | |
| 9181 | Report ID parameter miss- ing or invalid. | |
| 9182 | Report does not exist. | |
| 9183 | Invalid fuel tank size. | |
| 9184 | Invalid parameter (referencence). | |
| 9195 | The request parameters for this request are invalid. Please make sure you provide parameters that adhere to the required structure (see documentation or) and the minimum amount of request data as documented. | Invalid parameter(s). |
| 9196 | Some or all request parameters are missing or incomplete. The request can not be processed. | Missing or incomplete parameter(s). |
| 9197 | The current combination of parameters can not be processed as-is. Please provide fewer / differently combined parameters. | Invalid combination of parameter(s). |
| 9198 | The current request with the parameters given processed successfully, but with an empty result. | Indicates that the result set is empty for the specific combination of parameters provided for the request. |
| 9199 | An upstream system did not respond properly. At the moment we are unable to service this request. | |

| Response code | Message | Description |
|---------------|--|---|
| 9200 | Maximum period length exceeded (range_pattern) | |
| 9300 | Date invalid, since it lies in the future or >90 days in past. | |
| 9301 | Invalid day. | |
| 9302 | non-numeric value | |
| 9303 | value out of range | This error code is returned for SOAP errors. See also Operation response codes for queues |
| 9304 | no duplicates allowed. | |
| 9305 | geofence-area-id duplicate entry. | |
| 9306 | unknown entry. | |
| 9310 | invalid geographical coor- dinate, see WGS84 stan- dards | |
| 9311 | invalid or unknown ge- ofence-assignment-id | |
| 9312 | invalid or unknown ge- ofence-area-id | |
| 9500 | Address street parameter invalid | |
| 9501 | Address street number parameter invalid. | |
| 9504 | Message: address country code parameter invalid or missing | |
| 9514 | Unable to calculate an appropriate route. | |
| 9517 | empty geocoding result | |
| 9538 | Address not valid | |
| 9543 | name1 parameter invalid | |
| 9544 | name2 parameter invalid | |
| 9545 | name3 parameter invalid | |

| Response code | Message | Description |
|---------------|--|---------------------------|
| 9546 | addrregion parameter invalid | |
| 9547 | contact parameter invalid | |
| 9548 | fax parameter invalid | |
| 9549 | mailaddr parameter invalid | |
| 9550 | teloffice parameter invalid | |
| 9551 | telmobile parameter invalid | |
| 9552 | telprivate parameter invalid | |
| 9601 | Driving license number is missing or it exceeds 20 characters | |
| 9602 | Driving license issuing state is missing or it exceeds 30 characters | |
| 9603 | Driving license country code is missing, invalid or it exceeds 5 characters | Country code invalid |
| 9604 | The issue date cannot exceed the expiry date for the driving license | |
| 9605 | Driving license issue date is missing or invalid | Wrong date format |
| 9606 | Driving license expiry date is invalid | Wrong date format |
| 9607 | The driving license must have at least one driving license type | |
| 9608 | The driving license type must be one of these: A,A1,B,B1,BE,C,C1,C1E,CE,D,D | License type code invalid |
| 9609 | The initial date cannot exceed the final date for the driving license type | |
| 9610 | Driving license type initial date is missing or invalid | Wrong date format |

| Response code | Message | Description |
|---------------|---|---|
| 9611 | Driving license type final date is invalid | Wrong date format |
| 9612 | One of the driving license types informed has invalid values | Any mandatory field of driving license type is missing or it has wrong fromat |
| 9074 | Remaining Driving Time configuration invalid. Please check possible configuration options. | |
| 9075 | Remaining Driving Time configuration: Country missing or invalid. | |
| 9076 | Remaining Driving Time configuration: Regulation type missing or invalid. | |
| 9077 | Remaining Driving Time configuration: Employment type missing or invalid. | |
| 10000 | Operation time-out, retry later. | Resource currently busy, try again later. |
| 10020 | Operation service error | Returned when calling downstream service. |
| 10100 | Request intercepted and blocked by application security manager (request id = <some id="">).</some> | This error is returned when the format of the HTTP request is invalid. |
| 20003 | User name missing or invalid. | |
| 20004 | Password missing or invalid. | |
| 20005 | Real name missing. | |
| 20006 | Company name missing or invalid. | |
| 20007 | Info parameter is invalid. | |
| 20008 | Own user cannot be modified or deleted. | |
| 20009 | Specify either username or useruid, not both. | |
| 20010 | Specify either username or useruid to identify the user. | |

| Response code | Message | Description |
|---------------|---|-------------|
| 20101 | Object no, object group name, driver no or driver group name missing or in- valid. | |
| 20100 | driverno or objectno or both are missing or invalid | |
| 21007 | UID invalid | |
| 22015 | Logbook flag is invalid | |
| 22016 | Logbook purpose is invalid | |
| 22017 | Logbook contact is invalid | |
| 22018 | Logbook comment is invalid | |
| 22020 | Logbook modification reason invalid | |
| 22023 | Aggregation level invalid. | |
| 22024 | KPI name(s) invalid. | |
| 22036 | The new driver is already assigned to other trips for the same period | |
| 23003 | ecoPLUS BT address invalid. | |
| 23004 | Remote LINK Bluetooth address invalid. | |
| 23005 | Invalid config value. | |
| 23007 | The request parameter is invalid. | |
| 23008 | Wakeup-timers parameter missing or invalid. | |
| 24000 | Tracking feature disabled | |
| 25000 | Contract has expired | |
| 25001 | The allowed monthly quota has been exceeded | |
| 26001 | Schedule does not exist | |
| 26002 | Schedule type parameter missing or invalid | |

| Response code | Message | Description |
|---------------|---|-------------|
| 26003 | Rule type parameter miss- ing or invalid | |
| 26007 | Resolution status parame- ter invalid | |
| 26009 | Schedule name parameter missing or invalid | |
| 26010 | Schedule description para- meter invalid | |
| 26013 | Reminding time parameter missing or invalid | |
| 26014 | Reminding odometer para- meter missing or invalid | |
| 26015 | Interval odometer parame- ter missing or invalid | |
| 26016 | Interval time parameter missing or invalid | |
| 26018 | Next execution odometer parameter missing or invalid | |
| 26019 | Task does not exist | |
| 27001 | Cannot decode binary mes- sage data. | |
| 27002 | Sending of binary message data not enabled for this unit. | |
| 27003 | Binary message data miss- ing. | |
| 27004 | Maximum size of data exceeded. | |
| 27005 | Maximum length of application identifier exceeded. | |
| 27006 | The application ID contains invalid characters. | |
| 27007 | The application ID is missing. | |
| 27008 | Another binary mesage data transfer is already in progress. | |

| Response code | Message | Description |
|---------------|--|-------------|
| 28000 | The size of the aux data is too large. | |
| 28002 | There's already another aux data transfer in progress. Additional data can only be sent when the LINK has acknowledged the previously sent data. | |
| 28003 | Data parameter missing. | |
| 28004 | The SPP buffer size is invalid. | |
| 28005 | The SPP flush timeout is invalid. | |
| 28006 | Cannot decode auxiliary device data. The base64 encoding may be wrong. | |
| 28007 | Service name is too long. | |
| 28008 | Service UUID has an invalid format. | |
| 28009 | Aux device data feature is not enabled for this unit. | |
| 28010 | Config ID for remote device configuration is missing or invalid. | |
| 28011 | Config ID for remote device configuration too large. | |
| 28012 | Device ID missing. | |
| 28013 | Device ID has an invalid format. | |
| 28014 | RFCOMM channel number is invalid | |
| 28015 | Bluetooth PIN too long | |
| 28016 | Bluetooth PIN has invalid characters | |
| 28017 | Bluetooth device name (friendly name) invalid | |
| 28018 | Remote BD_ADDR or friendly name is required | |

| Response code | Message | Description |
|------------------|---|-------------|
| 29000 | Unable to retrieve unit configuration | |
| 29001 | No dedicated status message available | |
| 29002 | Object is already synchro- nized with account defaults | |
| 29003 | Message text parameter is too long | |
| 29004 | Message parameter is missing | |
| 29005 | Message in message para- meter is invalid | |
| 29006 | Message parameter or reset flag missing | |
| 29007 | Specify either message parameter or reset flag, not both | |
| 29008 | Index is invalid | |
| 29009 | Multiple messages with the same index defined | |

Response codes - Queues

| Response code | Message | Description |
|-------------------|--|--|
| WFCQ_E0001 | queue database doesn't exist for {0} | |
| WFC- Q_E0006 | skipped creation of queue, exists already | Returned by <u>createQueueExtern</u> if a queue for that msgclass already exists for that user. The creation has been skipped and no changes were made to the existing queue. |
| WFC- Q_E0007 | queue to acknowledge doesn't exist | The operation ackQueueMessagesExtern could not be executed as there is no queue for the msgclass provided. |
| WFCQ_E0022 | queue to pop doesn't exist | There is no queue for the msgclass provided. A queue needs be created with create-QueueExtern before trying to retrieve messages from it. |
| WFCQ_E0033 | Hint: can contain multiple error messages | Please check the returned error message for further details. |
| WFCQ_E0034 | queue unknown, no sub- scription(s) found | |
| WFCQ_E0035 | authentication failed | The username does not exist or the password does not validate. |
| WFCQ_E0037 | queue doesn't exist, skip- ping deletion | A queue that has not been created (<u>create-QueueExtern</u>) first cannot be deleted. |
| WFCQ_E0041 | account unknown | The account name does not exist. |
| WFCQ_E0043 | shutdown was already initi- ated, no more calls allowed | |
| WFCQ_E0053 | error due to being finally unable to resolve a dead- lock while processing tx | |
| WFC- QCS_E0000 | 'action' unknown | The operation named in the action is not available. |
| WFC- QCS_E0001 | one or more of 'action parameter missing', 'account parameter missing', 'username parameter missing', 'password parameter missing', 'msgclass parameter missing' | |
| WFC- QCS_E0003 | empty result | |

| Response code | Message | Description |
|----------------------------|--|---|
| WFC- QCSWS_UN- KNOWN | problems processing your request, please try again later | There are (likely transient) problems, that prevent the operation from completing successfully. |

Appendix B: Resources

WEBFLEET.connect resources

- WEBFLEET.connect <u>developer resources</u>
 Download the latest documentation, libraries, examples and localised activation forms.
- WEBFLEET.connect <u>API-key request</u>
 Request an API key to gain access to Webfleet APIs.
- WEBFLEET.connect <u>discussion group</u>
 Turn to this discussion group if you have general questions or if you want to get in touch with other developers.
- Webfleet Solutions technical support
 Use the online support to access FAQs, user guides and to contact our customer support team.

Other resources

- Wikipedia article about WGS84
- Wikipedia article about Geographic coordinate conversion
- RFC 2616 Hypertext Transfer Protocol HTTP/1.1
- RFC 1738 Uniform Resource Locators (URL)
- Simple Object Access Protocol (SOAP)
- Web Services Description Language (WSDL)
- SOAP Message Transmission Optimization Mechanism (MTOM)
- ISO 8601
- Wikipedia article about ISO 8601
- JSON website
- Mapcode website
- ISO 3166-1 alpha-2 codes
- IEEE guidelines for unique identifiers

Appendix C: Superseded functionality

Table: Superseded functionality

| Affected functionality | Announce- ment date End of Life date | Alternatives |
|------------------------|---|--|
| SOAP version 1.9 | 2012-08-06 2012-09-30 | All requests to the removed version will be forwarded to the latest compatible SOAP version automatically. No changes in existing integration should be required. Please stop new integrations on this version. |
| SOAP version 1.8 | 2012-04-20 2012-07-31 | All requests to the removed version will be forwarded to the latest compatible SOAP version automatically. No changes in existing integration should be required. Please stop new integrations on this version. |

| Affected functionality | Announce- ment date End of Life date | Alternatives |
|--|---|---|
| SOAP version 1.6 and 1.7 | 2012-04-20 2012-07-12 | All requests to the removed version will be forwarded to the latest compatible SOAP version automatically. No changes in existing integration should be required. Please stop new integrations on this version. |
| showLogbookReportExtern | 2011-11-09 2013-11-09 | showLogbook - Requests to showLog- bookReportExtern will be forwarded to showLogbook as of announcement date. |
| SOAP version 1.5 | 2011-08-23 2011-10-13 | All requests to the removed version will be forwarded to the latest compatible SOAP version automatically. No changes in existing integration should be required. Please stop new integrations on this version. |
| SOAP version 1.4 | 2011-08-23 2011-09-12 | All requests to the removed version will be forwarded to the latest compatible SOAP version automatically. No changes in existing integration should be required. Please stop new integrations on this version. |
| SOAP version 1.1 and 1.2 | 2011-05-30 2011-06-15 | All requests to the removed versions will be forwarded to the latest compatible SOAP version automatically. No changes in existing integration should be required. Please stop new integrations on these versions. |
| SOAP versions 1.0 and 1.3 | 2011-05-30 2011-07-01 | All requests to the removed versions will be forwarded to the latest compatible SOAP version automatically. No changes in existing integration should be required. Please stop new integrations on these versions. |
| showObjectGroupReportEx- tern | 2011-05-30 2013-05-30 | showObjectGroups, requests to showObjectGroupReportExtern will be forwarded to showObjectGroups as of 2011-05-30. |
| showObjectGroupObjectRe- portExtern | 2011-05-30 2013-05-30 | showObjectGroupObjects, requests to showObjectGroupObjectReportExtern will be forwarded to showObjectGroupObjects as of 2011-05-30. |
| showObjectAcceleratioin- Events | 201-05-30 2014-05-30 | showAccelerationEvents, requests to showObjectAccelerationEvents will be forwarded to showAccelerationEvents as of 2014-05-30. |

| Affected functionality | Announce- ment date End of Life date | Alternatives |
|---|---|---|
| showObjectSpeedingEvents | 2011-05-30 2014-05-30 | showSpeedingEvents, requests to showObjectSpeedingEvents will be forwarded to showSpeedingEvents as of 2014-05-30. |
| geocodeAddressExtern geocodeLocation (SOAP) | 2010-12-15 2012-12-15 | geocodeAddress, requests to geocodeAddressExtern are currently handled separately from geocodeAddress. We are planning to forward those requests to geocodeAddress in future and will inform you about this change. The corresponding SOAP function geocodeLocation will expire accordingly. |
| Endpoint URLs: http(s)://connec- t.webfleet.tomtomwork.com https://soap.connec- t.webfleet.tomtomwork.com | 2010-09-30 2013-06-30 | Announced with rebranding of TomTom WORK to TomTom Telematics. Alternatives, see Making HTTP requests, Making SOAP requests |
| showTrailerReportExtern | 2010-09-02 2011-09-02 | No alternative, support for object category trailer was stopped several years ago |
| showPersonReportExtern | 2010-09-02 2011-09-02 | no alternative, support for tracking and lo- cating people was stopped several years ago |
| showStoplistReportExtern | 2010-06-17 2011-06-17 | showStandStills, inverted showTripReportExtern |
| showWorkingTimeDriverRe- portExtern | 2010-02-18 2012-02-18 | showWorkingTimes |
| showWorkingTimeObjectRe- portExtern | 2010-02-18 2012-02-18 | <u>showWorkingTimes</u> |
| showUsageTimeDriverRepor- tExtern | 2010-02-18 2012-02-18 | No direct alternative. Please contact customer support to discuss your use case to define alternative approaches. |
| showUsageTimeObjectRepor- tExtern | 2010-02-18 2012-02-18 | No direct alternative. Please contact customer support to discuss your use case to define alternative approaches. |
| showOrderMessageReportEx- tern | 2010-01-06 2013-01-06 | Make use of the <u>Message queues</u> system. |

Appendix D: Solving known issues

Using WEBFLEET.connect SOAP with Visual Basic

When you are using WEBFLEET.connect SOAP with Visual Basic you may encounter some naming conflicts. This is because Visual Basic is not case-sensitive with names. To prevent naming conflicts, you have to edit the WSDL file manually.

For the addressService:

- 1. Download the WSDL file for the addressService and store it locally.
- 2. Find the line <:portType name="address"> and replace address with address if.
- 3. Find this line <: binding name='addressServiceSoapBinding' type="tns:address"> and replace 'address' with 'address if'.

Now you can create a new service reference using this file without naming conflicts.

For the ordersService:

- 1. Download the WSDL file for the ordersService and store it locally.
- 2. Find the line <xs:simpleType name="RouteType"> and replace RouteType by RouteTypes.
- 3. Find the line <xs:element default='Quickest' minOccurs='0' name='route-Type' nillable='true' type='ns1:RouteTypes'/> and replace ns1:RouteType by ns1:RouteTypes.

Now you can create a new service reference using this file without naming conflicts.

SOAP message size quota in Visual Studio

By default, Visual Studio restricts the maximum size for SOAP messages to 65536 bytes. In many cases this is too small for production use.

You can increase the size by adjusting the appropriate values in the file **app.config** in your Visual Studio project:

• In element httpsTransport, change the values of the attributes maxReceivedMes-sageSize and maxBufferSize to a higher value.

Note: Use the same value for both attributes.

• In element mtomMessageEncoding, insert attribute maxBufferSize.

Note: Set it to the same value as for the attributes above.

Appendix E: Using MTOM with SOAP

MTOM is a technique to send binary data in SOAP messages. Binary data means XML data type xs:base64Binary.

Without MTOM, this data would be inlined as a Base64-encoded string. Using MTOM this data is sent as a binary attachment (multipart MIME). The SOAP message contains a reference to the attachment part.

There is a size overhead for the reference to the attachment and for the multipart MIME message. For binary content less than ~1kB per SOAP message it is not worth to use MTOM. It is better to inline base64 encoded data directly instead.

MTOM in the WEBFLEET.connect SOAP API

WEBFLEET.connect is configured to use SOAP 1.2 MTOM binding. This means that all clients must use MTOM binding, too — even if MTOM is not used for a specific request.

Defining binary data in WS parameters

On the server side using byte arrays in JAXB annotated classed will produce xs:base64Binary data type in WSDLs.

The WSDL then has impact on client code generation for some programming languages, such as Java. It is especially useful for very large data (Mbytes) because it allows streaming.

Java Client Code Generation

Given these examples from the server backend used to generate WSDLs:

Code sample: Example from server backend

1.

```
@XmlElement
public byte[] userData1;
2.
@XmlElement
```

```
@XmlElement
@XmlMimeType("application/octet-stream")
public byte[] userData2;
```

Java

Java's wsimport will generate client code like this:

Code sample: Java generated code

1.

```
protected byte[] userData1;
```

2.

```
@XmlMimeType("application/octet-stream")
protected DataHandler userData2;
```

Visual Studio

Visual Studio will generate code like this (Property setter/getters omitted):

Code sample: Visual Studio generated code

1.

private byte[] userData1Field;

2.

private byte[] userData2Field;

Data handling

As you can see, Java will generate a DataHandler for the member annotated with a content type. This can be useful for very large data. In most cases it is more convenient to operate on simple byte arrays. Using a DataHandler has no impact on MTOM vs. inlined base64. The pure byte arrays can also be transported using MTOM.

.NET does not generate any streaming handler code.

Note: Streaming is not covered here in this article. It would require to use <code>DataHandler</code> on the server side, too.

Activating MTOM depending on data size

Due to the message size overhead for SOAP attachments we advise to activate MTOM only for binary data larger than ~1Kbytes.

Java - server side

On the server side it is possible to control the threshold for MTOM attachments via annotations on the SEI. The following example will activate MTOM for outgoing binary data larger or equal than 1kB. Smaller binary content will be inlined as base64 encoded string.

Code sample: Activate MTOM for outgoing binary data larger than 1KB

```
@BindingType(value = javax.xml.ws.soap.SOAPBinding.SOAP12HTTP_MTOM_BINDING)
@MTOM(threshold = 1024)
public interface MessagesService {
}
```

Java - client side

Here is an example how to use a threshold on binary data sent to the server:

Code sample: Threshold on binary data sent to server

```
MessagesService service = new MessagesService();
MTOMFeature mtom = new MTOMFeature(true, 1024);
Messages messagesPort = service.getMessagesPort(mtom);
```

.NET

.NET has no adjustable threshold. .NET will enable MTOM automatically if the binary content is above a certain size. This seems to be around 800 or 900 bytes.

Testing with soapUI

MTOM must be enabled in soapUI.

For more information please see https://www.soapui.org/soap-and-wsdl/headers-and-attachments.html#2-Attachments-and-Inline-Files

Appendix F CAN signal types

CAN signal types

| WARNING_BULB_DEFECT_GROUP_D SWITCHEDPOWERSUPPLY WARNING_BULB_DEFECT_GROUP_B | (On/Off) (On/Off) |
|---|---|
| | |
| WARNING BULB DEFECT GROUP B | (On/Off) |
| ************************************** | • |
| WARNING_BULB_DEFECT_GROUP_C | (On/Off) |
| WARNING_BULB_DEFECT_GROUP_J | (On/Off) |
| WARNING_BULB_DEFECT_GROUP_A | (On/Off) |
| WARNING_BULB_DEFECT_GROUP_F | (On/Off) |
| WARNING_BULB_DEFECT_GROUP_H | (On/Off) |
| WARNING_BULB_DEFECT_GROUP_E | (On/Off) |
| WARNING_BULB_DEFECT_GROUP_G | (On/Off) |
| WARNING_BULB_DEFECT_GROUP_I | (On/Off) |
| FUEL_LEVEL | Amount of fuel available in the fuel tank (L) |
| FUEL_CONSUMPTION | Amount of fuel consumed by the engine (mL) |
| CHARGER_CONNECTED | Battery charger is connected (electrical vehicles) (On/Off) |
| CHARGING | Battery is charging (electric/hybrid vechicles) (On/Off) |
| SYN_WARNING_BRAKE_FLUID_LEV- EL_LOW | Brake Fluid Level Low (debounced) |
| SYN_WARNING_COOLANT_LEVEL_LOW | Coolant Level Low (debounced) |
| SYN_MIL_ABS | Defect ABS (debounced) |
| SYN_MIL_AIRBAG | Defect Airbag (debounced) |
| SYN_MIL_BRAKING_SYSTEM | Defect Braking System (debounced) |
| SYN_WARNING_BULB_DEFECTIVE | Defect Bulb (debounced) |
| SYN_MIL_CHARGE_CIRCUIT | Defect Charge Circuit (debounced) |
| SYN_MIL_DIESEL_ENGINE | Defect Diesel Engine (debounced) |
| SYN_WARNING_DIESEL_PARTICU- LATE_FILTER | Defect Diesel Particulate Filter (DPF) (de- bounced) |

| SYN_MIL_ELECTRONIC_POWER_CON- TROLDefect Electronic Power Control (de- bounced)SYN_MIL_ELECTRONIC_STABILITY_PRO- GRAMDefect Electronic Stability Program (de- bounced)SYN_MIL_EMISSION_CONTROL_SYSTEMDefect Emission Control System (de- bounced)SYN_MIL_ENGINE_COOLINGDefect Engine Cooling (debounced)MILEAGE_TO_INSPECTIONDistance to go before the vehicle needs an inspection (km)MILEAGE_TO_OIL_SERVICEDistance to go before the vehicle needs oil service (km)TRIP_METERDistance travelled during trip (m)WARNING_OIL_PRESSURE_LOWEngine oil pressure is low (On/Off)DOOR_FRONT_LEFTFront left door is opened (On/Off)DOOR_FRONT_RIGHTFront right door is open (On/Off) |
|---|
| GRAM bounced) SYN_MIL_EMISSION_CONTROL_SYSTEM Defect Emission Control System (debounced) SYN_MIL_ENGINE_COOLING Defect Engine Cooling (debounced) MILEAGE_TO_INSPECTION Distance to go before the vehicle needs an inspection (km) MILEAGE_TO_OIL_SERVICE Distance to go before the vehicle needs oil service (km) TRIP_METER Distance travelled during trip (m) WARNING_OIL_PRESSURE_LOW Engine oil pressure is low (On/Off) DOOR_FRONT_LEFT Front left door is opened (On/Off) |
| SYN_MIL_ENGINE_COOLING Defect Engine Cooling (debounced) MILEAGE_TO_INSPECTION Distance to go before the vehicle needs an inspection (km) MILEAGE_TO_OIL_SERVICE Distance to go before the vehicle needs oil service (km) TRIP_METER Distance travelled during trip (m) WARNING_OIL_PRESSURE_LOW Engine oil pressure is low (On/Off) DOOR_FRONT_LEFT Front left door is opened (On/Off) |
| MILEAGE_TO_INSPECTION Distance to go before the vehicle needs an inspection (km) MILEAGE_TO_OIL_SERVICE Distance to go before the vehicle needs oil service (km) TRIP_METER Distance travelled during trip (m) WARNING_OIL_PRESSURE_LOW Engine oil pressure is low (On/Off) DOOR_FRONT_LEFT Front left door is opened (On/Off) |
| inspection (km) MILEAGE_TO_OIL_SERVICE Distance to go before the vehicle needs oil service (km) TRIP_METER Distance travelled during trip (m) WARNING_OIL_PRESSURE_LOW Engine oil pressure is low (On/Off) DOOR_FRONT_LEFT Front left door is opened (On/Off) |
| TRIP_METER Distance travelled during trip (m) WARNING_OIL_PRESSURE_LOW Engine oil pressure is low (On/Off) DOOR_FRONT_LEFT Front left door is opened (On/Off) |
| WARNING_OIL_PRESSURE_LOW Engine oil pressure is low (On/Off) DOOR_FRONT_LEFT Front left door is opened (On/Off) |
| DOOR_FRONT_LEFT Front left door is opened (On/Off) |
| |
| DOOR_FRONT_RIGHT Front right door is open (On/Off) |
| |
| WARNING_FUEL_LEVEL_LOW Fuel level is low (On/Off) |
| HOOD Hood of the car is opened (On/Off) |
| DAYS_TO_INSPECTION Number of days before the vehicle needs an inspection (-) |
| DAYS_TO_OIL_SERVICE Number of days before the vehicle needs oil service (-) |
| SYN_WARNING_OIL_LEVEL_CHECK Oil level check (debounced) |
| SYN_WARNING_OIL_LEVEL_HIGH Oil level high (debounced) |
| SYN_WARNING_OIL_LEVEL_LOW Oil level low (debounced) |
| SYN_WARNING_OIL_PRESSURE_LOW Oil pressure low (debounced) |
| DOOR_LOCKED_REAR_LEFT |
| DOOR_LOCKED_REAR_RIGHT |
| TRUNK_LOCKED On = locked (On/Off) |
| DOOR_LOCKED_FRONT_LEFT |
| DOOR_LOCKED_FRONT_RIGHT |
| WARNING_BULB_DEFECTIVE One of the lighting bulbs is defective (On/Off) |
| PARKING_BRAKE Parking brake is applied (On/Off) |

| CAN signal types | Description |
|--|---|
| SYN_SWITCHED_POWER | Powersupply is active (On/Off) (derived) |
| MIL_EMISSION_CONTROL_SYSTEM | Problem with the emission control system (On/Off) |
| RANGE_FUEL_UNIT | Range Fuel Unit |
| SYN_ELECTRIC_RANGE | Range until next recharge (km) (derived) |
| ELECTRIC_RANGE | Range until next recharge (km miles) |
| SYN_FUEL_RANGE | Range until next refuel (km) (derived) |
| FUEL_RANGE | Range until next refuel (km miles) |
| SYN_TOTAL_RANGE | Range until next refuel or recharge (km) (derived) |
| TOTAL_RANGE | Range until next refuel or recharge (km miles) |
| DOOR_REAR_LEFT | Rear left door is opened (On/Off) |
| DOOR_RIGHT_REAR | Rear right door is opened (On/Off) |
| STATE_OF_CHARGE | State of charge of the battery pack (%) |
| ENGINE_COOLANT_TEMPERATURE | Temperature of the engines coolant fluid (°C) |
| WARNING_BRAKE_FLUID_LEVEL_LOW | The brake fluid level is low (On/Off) |
| WARNING_BRAKE_PAD | The brake pads are worn (On/Off) |
| ELECTRONIC_PARKING_BRAKE | The electronic parking brake is enabled (On/Off) |
| WARNING_COOLANT_LEVEL_LOW | The engine coolant level is low (On/Off) |
| WARNING_OIL_LEVEL_LOW | The engine oil level is low (On/Off) |
| WARNING_TYRE_PRESSURE_LOW | The pressure of one of the tyres is low (On/Off) |
| WARNING_WINDSCREEN_WASHER_FLUID EL_LOW |)_LIEE/windscreen washer fluid level is low (On/Off) |
| MIL_AIRBAG | There is a problem with one of the airbags (On/Off) |
| MIL_ABS | There is a problem with the ABS (On/Off) |
| MIL_BRAKING_SYSTEM | There is a problem with the braking system (On/Off) |
| MIL_CHARGE_CIRCUIT | There is a problem with the charge circuit (On/Off) |

| CAN signal types | Description |
|--|---|
| MIL_DIESEL_ENGINE | There is a problem with the diesel engine (On/Off) |
| WARNING_DIESEL_PARTICULATE_FILTER | There is a problem with the diesel particulate filter (On/Off) |
| MIL_ELECTRONIC_POWER_CONTROL | There is a problem with the electronic power control (On/Off) |
| MIL_ELECTRONIC_STABILITY_PROGRAM | There is a problem with the electronic stability program (On/Off) |
| MIL_ENGINE_COOLING | There is a problem with the engine cooling system (On/Off) |
| TOW_BAR_CONNECTED | Tow bar is connected (On/Off) |
| TRUNK | Trunk is open (On/Off) |
| SYN_WARNING_TYRE_PRESSURE_LOW | Tyre pressure low (debounced) |
| VEHICLE_LOCKED | Vehicle is locked (On/Off) |
| SPEED | Vehicle speed (km/h) |
| BATTERY_VOLTAGE | Voltage of the battery pack (in electric and/or hybrid vehicles) (V) |
| WARNING_OIL_LEVEL_CHECK | Warning Oil Level Check (On/Off) |
| WARNING_OIL_LEVEL_HIGH | Warning Oil Level High (On/Off) |
| SYN_ZERO_EMISSION_DISTANCE | Zero Emission Distance (km) (derived) |
| AMBIENT_AIR_TEMPERATURE | Temperature outside the vehicle (°C) |
| AVERAGE_ENERGYCONSUMP- TION_FROM_RESET | Energy Consumption From Reset |
| AVERAGE_ENERGY_CONSUMP- TION_FROM_START | Average Energy Consumption From Start |
| CHARGER_CONNECTED_AND_CHARGING | The charger for the electric vehicle is connected and charging (in electric and/or PHEV vehicles) |
| CHARGER_CONNECTED_LOCK | The charger for the electric vehicle is locked (On/Off) |
| DTC_BATTERY_OVERVOLTAGE | DTC - HV Battery overvoltage (on/off) |
| DTC_BATTERY_UNDERVOLTAGE | DTC - HV Battery undervoltage (on/off) |
| DTC_BMS_FAULT | DTC - HV Battery Management System fault (on/off) |
| DTC_BRAKING_PEDAL | DTC - Braking pedal (on/off) |
| | 155 |

| CAN signal types | Description |
|---|---|
| DTC_CONTACTOR_DOWN | DTC - Contactor down (on/off) |
| DTC_CONTROLLER_OVERTEMPERATURE | DTC - Controller overtemperature (on/off) |
| DTC_CURRENT_SENSOR_FAULT | DTC - Current sensor fault (on/off) |
| DTC_MOTOR_OVERTEMPERATURE | DTC - Motor overtemperature (on/off) |
| DTC_OVERCURRENT | DTC - Overcurrent (on/off) |
| DTC_PRECHARGE | DTC - Precharge (on/off) |
| DTC_ROTATION_SENSOR_FAULT | DTC - Rotation sensor fault (on/off) |
| DTC_THROTTLE_FAULT | DTC - Throttle fault (on/off) |
| ELECTRIC_MOTOR_TEMPERATURE | Temperature of an electric motor (°C) |
| ELECTRIC_RANGE_MAX | Value shows maximum theoretical range. This value is always higher than real range |
| ERROR_CODE_ELEKTRAMOBILYS | Error code from Elektra Mobilys Scooter |
| ERROR_CODE_URBANMOBILITY | Error code from Urban Mobility Scooter |
| FMS_ADBLUE_LEVEL_INDICATOR | FMS dashboard warning indicator for low AdBlue level |
| FMS_AFTERTREATMENT_1_DIESEL_EX- HAUST_FLUID_TANK_1_LEVEL | Ratio of volume of diesel exhaust fluid (%) |
| AFTERTREATMEN- T_SCR_CATALYST_TANK_LEVEL_LITERS | AdBlue level in liters |
| AFTERTREATMEN- T_SCR_CATALYST_TANK_RANGE | AdBlue range (km) |
| FMS_AMBIENT_AIR_TEMPERATURE | Temperature of air surrounding vehicle (degree Celsius) |
| FMS_BAT- TERY_CHARGING_CONDITION_INDICA- TOR | FMS dashboard warning indicator for bat- tery charging condition failure |
| FMS_BELLOW_PRESSURE_FRON- T_AXLE_LEFT | Bellow pressure information (kPa) |
| FMS_BELLOW_PRESSURE_FRON- T_AXLE_RIGHT | Bellow pressure information (kPa) |
| FMS_BEL- LOW_PRESSURE_REAR_AXLE_LEFT | Bellow pressure information (kPa) |
| FMS_BEL- LOW_PRESSURE_REAR_AXLE_RIGHT | Bellow pressure information (kPa) |

| CAN signal types | Description |
|--|---|
| FMS_BRAKE_SYSTEM_FAILURE_INDICATOR | FMS dashboard warning indicator for brake failure/brake system malfunction |
| FMS_CRUISE_ACTIVE | Cruise control state (On/Off) |
| FMS_DEFECT_AIRBAG_INDICATOR | FMS dashboard warning indicator for defect airbag |
| FMS_DOOR_STATUS | Summary of all door status |
| FMS_EMISSION_SYSTEM_FAILURE_INDI- CATOR | FMS dashboard warning indicator for engine emission system failure |
| FMS_ENGINE_COOLANT_LEVEL_INDICATOR | FMS dashboard warning indicator for low coolant level |
| FMS_ENGINE_COOLANT_TEMPERATURE | Temperature of liquid found in engine cooling system (°C) |
| FMS_ENGINE_HOURS | Accumulated time of operation of engine (h) |
| FMS_ENGINE_MIL_INDICATOR | FMS dashboard warning indicator for engine/MIL indicator |
| FMS_ENGINE_OIL_INDICATOR | FMS dashboard warning indicator for engine oil |
| FMS_ENGINE_OIL_LEVEL_INDICATOR | FMS dashboard warning indicator for low engine oil level |
| FMS_FUEL_LEVEL_PERCENTAGE | Ratio of volume of fuel to the total volume of fuel storage container (%) |
| FMS_GROSS_COMBINATION_VEHI- CLE_WEIGHT | The total weight of the truck and all attached trailers (kg) |
| FMS_MILEAGE_TO_SERVICE | The distance which can be travelled before the next service inspection is required (km) |
| FMS_PARKING_BRAKE | Switch signal which indicates when the parking brake is set (True/False) |
| FMS_PTO_ENGAGEMENT | At least one PTO engaged |
| FMS_PTO_STATE | Indicate the current state or mode of operation by the power takeoff device (On/Off) |
| FMS_SERVICE_BREAK_AIR_PRESSURE_1 | Pneumatic pressure in the service brake circuit or reservoir (kPa) |
| FMS_SERVICE_BREAK_AIR_PRESSURE_2 | Pneumatic pressure in the service brake circuit or reservoir (kPa) |
| FMS_TIRE_FAILURE_INDICATOR | FMS dashboard warning indicator for tire failures |

| CAN signal types | Description |
|---|---|
| FMS_TRANSMISSION_FAILURE_INDICATOR | FMS dashboard warning indicator for trans- mission failures |
| FMS_VEHICLE_MOTION | Indicates whether motion of the vehicle is detected or not (Yes/No) |
| FMS_VEHICLE_OVERSPEED | Indicates whether the vehicle is exceeding the legal speed limit set in the tachograph (Yes/No) |
| FMS_WORN_BRAKE_LININGS_INDICATOR | FMS dashboard warning indicator for worn brake linings |
| FUEL_LEVEL_PERCENTAGE | The percentage of available fuel in the tank (%) |
| ISOLATION_RESISTANCE | Resistance of the insulation of a battery |
| MIL_BATTERY_CELL_TOO_HIGH | MIL Battery cell is too high (on/off) |
| MIL_BATTERY_CELL_TOO_LOW | MIL Battery cell is too low (on/off) |
| MIL_BMS_INTERNAL_FAILURE | MIL BMS internal communication failure (on/off) |
| MIL_CHARGER_BATTERY_CONNEC- TION_FAILURE | MIL Charger battery connection failure (on/off) |
| MIL_CHARGER_COMMUNI- CATION_FAILURE | MIL Charger communication failure (on/off) |
| MIL_CHARGER_HARDWARE_FAILURE | MIL Charger hardware failure (on/off) |
| MIL_CHARGER_INPUT_VOLTAGE_FAULT | MIL Charger input voltage fault (on/off) |
| MIL_CHARGER_OUTPUT_OVERCURRENT | MIL Charger output overcurrent (on/off) |
| MIL_CHARGER_START_ERROR | MIL Charger start error (on/off) |
| MIL_CHARGER_TEMPERATURE_FAILURE | MIL Charger temperature failure (on/off) |
| MIL_CHARGER_VOLTAGE_LIMIT_FAULT | MIL Charger voltage limit fault (on/off) |
| MIL_DIFFERENCE_IN_BATTERY_TEMPER-ATURE | MIL Difference in battery temperature (on/off) |
| MIL_DIFFERENCE_IN_BATTERY_VOLT-AGE | MIL Difference in battery voltage (on/off) |
| MILEAGE_TO_SERVICE | Distance to go before the vehicle needs service (km) |
| MIL_HIGH_CELL_VOLTAGE | MIL High cell voltage (on/off) |
| MIL_HIGH_DISCHARGE_CURRENT | MIL High discharge current (on/off) |

| CAN signal types | Description |
|---|---|
| MIL_INSULATION_RESIS- TANCE_TOO_LOW | MIL Insulation resistance too low (on/off) |
| MIL_LARGE_DIFFERENCE_IN_BAT- TERY_TEMPERATURE | MIL Large difference in battery temperature (on/off) |
| MIL_LARGE_DIFFERENCE_IN_BAT- TERY_VOLTAGE | MIL Large difference in battery voltage (on/off) |
| MIL_LOW_CELL_VOLTAGE | MIL Low cell voltage (on/off) |
| MIL_OVERCOOLING_ALERT | MIL Overcooling alert (on/off) |
| MIL_OVERHEAT_ALERT | MIL Overheat alert (on/off) |
| MIL_PARK_ASSIST_REAR_OUT- ER_LEFT_SENSOR_FAIL | MIL Assist - Park Control - Rear outer left sensor fail (on/off) |
| MIL_PARK_ASSIST_REAR_OUT- ER_RIGHT_SENSOR_FAIL | MIL Assist - Park Control - Rear outer right sensor fail (on/off) |
| MIL_PRE_CHARGE_FAULT | MIL Pre-charge fault (on/off) |
| MIL_SEVERE_DISCHARGE_OVERCUR- RENT | MIL Severe discharge overcurrent (on/off) |
| MIL_SEVERE_OVER_TEMPERATURE | MIL Severe over temperature alarm (on/off) |
| MIL_STATE_OF_CHARGE_LOW | MIL State of Charge low (on/off) |
| MIL_STATE_OF_CHARGE_VERY_LOW | MIL State of Charge very low (on/off) |
| MIL_TOTAL_VOLTAGE_TOO_HIGH | MIL Total voltage too high (on/off) |
| MIL_TOTAL_VOLTAGE_TOO_LOW | MIL Total voltage too low (on/off) |
| REMAINING_CHARGE_TIME | Remaining Charge Time (in electric and/or plugin hybrid vehicles) (min) |
| SYN_BATTERY_VOLTAGE | Battery Voltage (debounced) |
| TRIP_AVERAGE_ENERGY_CONSUMPTION | Average energy consumption from a trip computer. Value is resetable. |

Revision history

WEBFLEET.connect

Webfleet, WEBFLEET.connect 1.73.0

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Revision history

| Revi- sion | Date | Description | Author |
|---------------|------------|---|--------|
| 1.0.0 | 2004-10-08 | Initial release | UM |
| 1.1.2 | 2005-08-22 | Added <u>showTripReportExtern</u> and added the field fuel_usage to <u>showTripSummaryReportExtern</u> output | CS |
| 1.1.3 | 2005-09-29 | Added sendDestinationOrderExtern | IM |
| 1.1.4 | 2005-09-30 | Added methods to deal with addresses (<u>Addresses</u>) | ML |
| 1.1.5 | 2005-09-30 | Added parameter addrgrpname to <u>insertAddressExtern</u> , added <u>updateAddressExtern</u> . | ML |
| 1.1.6 | 2006-04-05 | Editorial changes. | IM |

| Revi- sion | Date | Description | Author |
|---------------|------------|--|--------|
| 1.1.7 | 2006-04-07 | Initial release after conversion to DocBook. | IM |
| 1.1.8 | 2006-06-29 | Extended parameter set for <u>sendDestina-</u> <u>tionOrderExtern</u> - added support for GO x10. | IM |
| 1.1.9 | 2006-08-22 | Changed the size of the order text parameter for sendDestinationOrderExtern, Renamed parameter from radium to radius for insertAddressExtern (docu- mentation fix) | IM |
| 1.2.0 | 2006-11-07 | Added methods for order management: <u>insertDestinationOrderExtern</u> , <u>updateOrderExtern</u> , <u>updateOrderExtern</u> , <u>updateOrderExtern</u> , updateOrderExtern and <u>cancelOrderExtern</u> . Added some notes regarding performance impacts to showMessageReportExtern. | IM |
| 1.2.1 | 2006-11-24 | Corrected the range_pattern for user-defined from du to ud. Changed the parameter addrstate to addrcountry for insertAddressExtern and updateAddressExtern . | IM |
| 1.2.2 | 2006-12-08 | Added value documentation for tripmode for showTripReportExtern . Added value documentation for status, msgstatus and msgtype for showMessageReportExtern. | IM |
| 1.2.3 | 2007-01-23 | Minor editorial changes. | IM |
| 1.3.1 | 2007-05-07 | Extensions to showObjectReportExtern , now returns most recent position data in addition to object details. Added geocoding . | IM |
| 1.3.2 | 2007-07-17 | Changed DNS hostname for WEBFLEET.connect to csv.business.tomtom.com. Added documentation of parameter constraints for showMessageReportExtern. Removed filter parameter objectgroupname from several report methods that return message-based data. | IM |
| 1.3.3 | 2007-07-20 | Added examples and corrections to the date format requirements for rangefrom_string and range-to_string. Changed the result column name for showOrderReportExtern from orderno to orderid. Added some more explanations on how to make HTTP requests. | IM |
| 1.3.4 | 2007-10-10 | Added showOrderMessageReportExtern. Removed userstate from the result set documentation for showMessageReportExtern (for backward compatibility, the column might still be part of the result, but the contents - if any - should be considered as reserved). Minor additions to the documentation of some result columns. | IM |
| 1.3.5 | 2007-10-12 | Added reassignOrderExtern | IM |

| Revi- sion | Date | Description | Author |
|---------------|------------|---|--------|
| 1.3.6 | 2008-01-24 | New request limits (<u>Request limits</u>) based on functional groups. Updated documentation for showMessageReportExtern with new explanations for msgid-based replication and parameter limits. | IM |
| 1.3.7 | 2008-05-08 | Updated documentation for showTripReportExtern with new explanations for tripid-based replication and interpretation of date range filters. | IM |
| 1.3.8 | 2008-07-29 | Updated documentation for insertAddressExtern and updateAddressExtern - added description for the parameter visible. Updated documentation for objectno/objectid and orderno/orderid with details about parameter size. Updated documentation for userstate result element for showOrderMessageReportExtern. Updated Creating a user and assigning rights for the new Webfleet UI. Added useISO8601 to the general parameters (General parameters). | IM |
| 1.4.0 | 2008-10-28 | Added new details to showObjectReportExtern on page 56: current destination navigated to, eta, current order (if any) and matched address number for the vehicle's current position (all subject to support by the connected device). Added a new section about queue-based access to messages (Overview of queues). Removed documentation for showMessageReportExtern because its use is deprecated and will not be available after 2008-12-31. Added appendixes with operation result codes and recommended resources. | IM |
| 1.5.0 | 2009-02-16 | Added support for address colours to <u>insertAddressextern</u> , <u>updateAddressExtern</u> and <u>showAddressReportExtern</u> . Extended the filter parameter set for <u>showEventReportExtern</u> and added methods to flag events as acknowledged and as resolved. Added a set of methods for driver management, see <u>Orders</u> . Updated result columns for the object a driver is currently signed onto to <u>showDriverReportExtern</u> . | IM |
| 1.5.1 | 2009-06-18 | Added support for address regions to <u>insertAddressextern</u> , <u>updateAddressExtern</u> and <u>showAddress-ReportExtern</u> . Added examples to <u>sendDestinationOrderExtern</u> and <u>showOrderReportExtern</u> . | IM |
| 1.5.2 | 2009-07-02 | Added <u>deleteOrderExtern</u> . | IM |

| Revi- sion | Date | Description | Author |
|---------------|------------|--|--------|
| 1.6.0 | 2010-01-06 | Minor editorial changes. Added new groups to request limits for driver and event methods. Added section Making SOAP requests. Added documentation for parameter restrictions on showTripReportExtern. Added support for the digital tachograph to showObjectReportExtern, popQueueMessagesExtern and all driver management methods. Removed documentation for showOrderMessageReportExtern (its use is still supported but it should not be used in new work anymore). | IM |
| 1.6.1 | 2010-02-18 | Added new methods: <u>clearOrdersExtern</u> , <u>clearT-extMessagesExtern</u> . Replaced working and usage time reports with <u>showWorkingTimes</u> . | IM |
| 1.6.2 | 2010-02-25 | Added a clarification regarding supported date/time formats to showWorkingTimes . Expanded the list of documented error codes in Appendix A, Operation Return Codes. | IM |
| 1.7.0 | 2010-05-20 | Updated the request limit table with new limits for queue access and queue management methods. Expanded the list of documented error codes in Appendix A: Operation response codes. Added new data elements for the TomTom Remote LINK (see Drivers, popQueueMessagesExtern). Added new method to support inventory of devices: showContracts. Added updateVehicle. | IM |
| 1.7.1 | 2010-06-17 | Removed documentation for <code>showOrderMessageRe-portExtern</code> and <code>showStoplistReportExtern</code> (their use is still supported but it should not be used in new work anymore). Clarification on the message classes that can be used for queue creation. Updated the user creation guide to point out that full permissions on orders might be necessary for certain methods to succeed. | IM |
| 1.7.2 | 2010-09-02 | Clarification on the data size for objectno (10 characters). Added working time information to showDriverReportExtern. Added event_time to popQueueMessagesExtern. Fixed and expanded the source_device enumeration for popQueueMessagesExtern. Added Bluetooth address of a paired Remote LINK device (rll_btaddress) to showObjectReportExtern. Clarification on the supported devices for deleteOrderExtern. Removed documentation for showPersonReportExtern and showTrailerReportExtern (their use is still supported but it should not be used in new work anymore). | IM |

| Revi- sion | Date | Description | Author |
|---------------|------------|---|--------|
| 1.7.3 | 2010-12-15 | Removed function <code>geocodeAddressExtern</code> from the Reference document and added <code>geocodeAddress</code> . Added new action <code>calcRouteSimpleExtern</code> . Added new result parameter to <code>showWorkingTimes</code> . Added new section <code>Trips</code> and working times and new actions <code>showSpeedingEvents</code> , <code>showAcceleration-Events</code> , <code>showStandStills</code> , <code>showIdleExceptions</code> . Added new parameters to <code>updateVehicle</code> . Added new JSON objects to <code>surplus_data</code> and new message classes to <code>popQueueMessagesExtern</code> . Added parameters to <code>showTripReportExtern</code> . Added parameters to <code>showTripSummaryReportExtern</code> . Added parameters to <code>showVehicleReportExtern</code> . Corrected parameter namin in <code>showDriverReportExtern</code> . Renamed chapters and changed order. Other minor editorial changes. | RH |
| 1.7.4 | 2011-02-24 | Changed description for avg_accel and description of showAccelerationEvents. Updated result list for showTripSummaryReportExtern. Updated parameters list for updateDestinationOrderExtern. Added advise on the use of HTTP authentication in Making HTTP requests. Edited parameter names for showEventReportExtern. Added new parameters to showTripReportExtern. Added description for pin and code for Drivers commands. Extended list of Messages types for popQueueMessagesExtern. Extended list of Operation response codes. Extended information about case-sensitivity of inbound parameters of multiple commands. Added limits for calcRouteSimpleExtern to Default request limit configuration. | RH |

| Revi- sion | Date | Description | Author |
|---------------|------------|--|--------|
| 1.8.0 | 2011-05-24 | New end point URLs see Making requests to WEBFLEET.connect. Added new authentication parameter apikey to Common parameters. Extended the list values for date range filter parameter range_pattern in Common parameters. Replaced old function showObjectSpeedingEvents with new function showObjectAccelerationEvents. Replaced old function showObjectAccelerationEvents with new function showOccelerationEvents. Added query and result parameters to showIdleExceptions. Added parameter to showOrderReportExtern. Added result parameters to showObjectReportExtern. Added new functions showObjectGroups, showObjectGroupObjects, attachObjectToGroup, detachObjectFromGroup, insertObjectGroup, deleteObjectGroup, updateObjectGroup. Removed old functions showObjectGroupReportExtern and showObjectGroupObjectReportExtern. Added new chapter Configuration and security with new function showSettings. Added new function showOptiDriveIndicator. Exended list of Response codes. Added new results to showVehicleReportExtern. Added list of sperseded functionality Appendix C: Superseded functionality indicating the announcement date, the date of end of life and possible alternatives. | |

| Revi- sion | Date | Description | Author |
|---------------|------------|---|--------|
| 1.9.0 | 2011-08-23 | New functions attachDriverToGroup, detachDriver-FromGroup, deleteDriverGroup, insertDriverGroup, showDriverGroups, showDriverGroup, showDriverGroup, showDriverGroupDrivers, updateDriverGroup, showUsers in the newly introduced chapter User management. Removed showLogbookReportExtern. New parameter to filter on entities that are not assigned to certain entity groups for showObjectReportExtern, showDriverReportExtern and showAddressReportExtern. Extended result list for showObjectReportExtern with drivername, codrivername and pos_time. New result objectcount in showObjectGroups. Unformatted latitude/longitude results with showAddressReportExtern. Updated Appendix C: Superseded functionality, please read carefully. Added important notes to Making HTTP requests. Introduced new general parameter columnfilter to be used with all functions, see General parameters. Added technical details, such as SOAP function name and endpoint address and request limits to each function. Most important outbound messages relating to text messages and order messages are now available in the queue system, see Message queues. Other miscellaneous edits. Added note about how orders appear on the TomTom navigation device to sendOrderExtern and sendDestinationOrderExtern. Added instructions for integrators working with SOAP and Visual Basic with regards to WEBFLEET.connect addresses and MTOM encoding support, see Making SOAP requests. Added error codes to Response codes. Added a new section called Terminology explaining terms used in the context Webfleet, WEBFLEET.connect, and Webfleet solutions, products, and features.Edits to the list of Messages types. Information about Synchronising driver lists. | RH |

| Revi- sion | Date | Description | Author |
|---------------|------------|--|--------|
| 1.10.0 | 2011-11-09 | New functions insertMaintenanceSchedule, updateMaintenanceSchedule, deleteMaintenanceSchedule, showMaintenanceSchedule, showMaintenanceTask, updateLogbook, showLogbook, showLogbookHistory. Added co2 to result list of showTripSummaryReportExtern. showWorkingTimes supports now all time/date values listed in Date range filter parameters. Contact and driver details that relate to an order are included in the result of showOrderReportExtern. Added drivertelmobile and codrivertelmobile to the result list of showObjectReportExtern. Added new parameter addrno to insertDriverExtern, updateDriverExtern and showDriverReportExtern. Added parameters addrno, positiony and positionx to showDriverReportExtern. The working state of a vehicle is indicated even when no driver has signed on using showObjectReportExtern. Added information about input and return date formats to Making HTTP requests, Making SOAP requests and General parameters. Distinction between SOAP and CSV General parameters. Distinction between SOAP and CSV General parameters. Superseded functionality - geocodeLocation will be superseded together with geocodeAddressExtern. Superseded functionality - showLogbookReportExtern will be superseded. Added new error codes to Appendix A: Operation return codes. | RH |
| 1.10.1 | 2011-11-09 | Adjusted maximum values for parameters interval- odometer, remindingodometer, plannedexecodome- ter of <u>insertMaintenanceSchedule</u> and <u>updateMain-</u> <u>tenanceSchedule</u> . Minor other edits. | RH |
| 1.11.0 | 2012-01-30 | Added new functions showAccountOrderStates , switchOutput , showAccountOrderStates , showAccountOrderStates , showDriverToverExtern and sparter . Added new parame-account namealassignment to result list of showDriverReportExtern . Added new parameter useorderstates that defines the order states that appear in the order workflow per order to sendOrderExtern and sendOrderExtern<td>RH</td> | RH |

| Revi- sion | Date | Description | Author |
|---------------|------------|---|--------|
| 1.12.0 | 2012-04-13 | Added new parameter target_username and result columns to showSettings. Added showAccountOrderAutomations and updateAccountOrder-Automation. Added parameter orderautomations to sendOrderExtern, sendDestinationOrderExtern, assignOrderExtern, reassignOrderExtern, update-OrderExtern, updateDestinationOrderExtern. Added parameter odometer to updateVehicle. Added parameter objectuid to showObjectReportExtern, showVehicleReportExtern, showContracts, updateVehicle, showObjectGroupObjects, attachObjectToGroup, detachObjectFromGroup, switchOutput. Added result objectuid to showObjectReportExtern, showVehicleReportExtern, showContracts, showObjectGroupObjects. Added parameter objectuid to showTracks. geocodeAddress parameter provider can now also be the new TomTom Geo Coder Version 2. | RH |
| 1.12.1 | 30.05.2012 | Introduces the support of the LINK 510 (see Messages types and switchOutput) and other minor edits. | RH |
| 1.12.2 | 15.06.2012 | Introduction of itinerary orders: Added waypoint parameter wp (waypoint) to sendDestinationOrderExtern , updateDestinationOrderExtern, insertDestinationOrderExtern. New action showOrderWaypoints . Edits to list of Messages types and Response codes . Making HTTP requests - added HTTP POST support for a limited number of actions) | RH |

| Revi- sion | Date | Description | Author |
|---------------|------------|--|--------|
| 1.13.0 | 06.08.2012 | Added FMS and acceleration surplus_data to popQueueMessagesExtern. New result order_addrno in popQueueMessagesExtern. showOrderReportExtern - Added destination address details to result list. showNearestVehicles delivers a list of vehicles that are within a defined distance to a specific location. showWakeupTimers delivers a list of days and times when the LINK 3xx/510 is set to automatically wake up. updateWakeupTimers let s you define new and change existing days and times when the LINK 3xx/510 device shall automatically wake up. Added new parameter rpmlimit to updateVehicle that sets a maximum number of revolutions per minute for the vehicle sengine that is being used for reporting on rpm violations. Added new results vh_rpmlimit and fl_rpmlimit to showVehicleReportExtern. Added new result fuellevel to showObjectReportExtern. showDriverReportExtern - Added new result pin that is used by the driver to logon to the Driver Terminal. updateLogbookMode changes the logbook mode on the LINK 3xx/510 device. Added new parameter acceleration_types to showAccelerationEvents. Added the parameter objectuid as an alternative to objectno tosendOrderExtern, insertDestinationOrderExtern, sendDestinationOrderExtern, sendDestinationOrderExtern, showOrder-ReportExtern, attachDriverToVehicle, detachDriver-FromVehicle, showTripReportExtern, showLogbookHistory, showWorkingTimes, showStandStills, showIdle-Exceptions, sendTextMessageExtern, clearTextMessageExtern, insertMaintenanceSchedule, show-MaintenanceSchedules, showMaintenanceSchedules, showMorkingTimes, showOrderReportExtern, showOrderReportExtern, showDriverReportExtern, showDriveReportExtern, showHripReportExtern, showDriveReportExtern, showHripReportExtern, showLogbookHistory, showWorkingTimes, showSpeedingEvents, showWorkingTimes, showSpeedingEvents, showWorkingTimes, showStandStills, showIdleExceptions, popQueueMessagesExtern, showPriverReportExtern, showMorkingTimes, showStandStills, showIdleExceptions, popQueueMessagesExtern, showPriverReportExtern, showEventReportExte | |
| | | <u>eration return codes</u> . | |

| Revi- sion | Date | Description | Author |
|---------------|------------|---|--------|
| 1.14.0 | 06.11.2012 | New action getObjectKPIs. New parameter modified_since and new results start_latitude, start_longitude, end_latitude, end_longitude, avg_speed, max_speed, fuel_usage, co2, end_addrname1, end_addrname2, end_addrname3, end_addrcontact for showLogbook. showTracks has the new result parameters odometer, country, state. Added information on limitations to the description of updateLogbookMode. New actions createSession, terminateSession, changePassword. Added new parameter sessiontoken to Authentication parameters. Extended type-list within in the result additional_information of geocodeAddress. showAccelerationEvents has new results duration, severity and roadspeedlimit. showSpeedingEvents has new results duration and distance. For showOrderReportExtern, Date range filter parameters are not required if orderid is indicated. New Date range filter parameters sessiontoken, 2020, month, day. Updated Operation response codes. Updated the description of accel_dir in showAccelerationEvents. | RH |
| 1.15.1 | 13.03.2013 | Added new section LINK.connect. Added new actions sendAuxDeviceData, getLocalAuxDeviceConfig, configureLocalAuxDevice, getRemoteAuxDeviceConfig, configureRemoteAuxDevice, removeRemoteAuxDeviceConfig, clearAuxDeviceDataQueue, resetAuxDeviceData. Added to popQueueMessagesExtern new LINK.connect related message types to Messages types and added new JSON objects. Added new section Reporting. Added new actions getArchivedReportList, getArchivedReport, deleteArchivedReport, getReportList, createReport, sendReportViaMail. Added new section Appendix E: Using MTOM with SOAP. Added new parameter deleteaddresses to deleteAddressGroupExtern, that deletes all addresses assigned to the indicated address group too. The odometer value can now be updated for navigation devices too using updateVehicle. Added new result referenceno to showContracts. Edits to Appendix A: Operation return codes. | RH |

| Revi- sion | Date | Description | Author |
|---------------|------------|--|--------|
| 1.16.0 | 10.04.2013 | Added actions showMessages, getObjectFeatures. Added new property dur to table Parameters specific to acc_events in popQueueMessagesExtern. Updated updateDestinationOrderExtern - ordertext is optional. Introduced new parameter/result driveruid/codriveruid to popQueueMessagesExtern, showObjectReportExtern, show-DriverReportExtern, updateDriverExtern, deleteDriverExtern, showOptiDriveIndicator, showDriver-GroupDrivers, attachDriverToGroup, detachDriver-FromGroup, attachDriverToVehicle, detachDriver-FromVehicle, showTripReportExtern, showWorkingTimes, showIdleExceptions, showAcceleration-Events, showSpeedingEvents. Introduced new parameter/result externalid to createSession, showVehicleReportExtern, showObjectReportExtern, showTripReportExtern, showStandStills, showTracks, showAccelerationEvents, showSpeedingEvents, getObjectKPls. Parameter msgclass has an additional value for LINK.connect messages in the following actions createQueueExtern, deleteQueueExtern, popQueueMessagesExtern, ackQueueMessagesExtern. | RH |
| 1.17.0 | 21.08.2013 | Introduced new action updateContractInfo which allows to assign and change an customer specific reference number per object. Introduced new parameter freetext to geocodeAddress . Introduced new parameter ep_btaddess and rll_btaddress to updateVehicle . Introduced new result password-expiration for showUsers , createSession . Introduced new result creationtype for showMainte-nanceSchedules . Added troublecodes to surplus_data in popQueueMessagesExtern and JSON structure Parameters specific to troublecodes. New msg_type sonousement show of current vehicle Diagnostic Trouble Codes has changed. Introduced new result obu_btaddress to showVehicleReportExtern . Introduced driveruid to result list of showOptiDriveIndicator , showOptiDriveIndicator , showOrtipReportExtern , showDriverGroupDrivers , showOrtipReportExtern , showOrderReportExtern . <a href<="" td=""><td>RH</td> | RH |
| 1.18.0 | 21.08.2013 | Introduced new chapter <u>Areas</u> with the following actions: <u>getAreas</u> , <u>getAreaPoints</u> , <u>deleteArea</u> , <u>insertArea</u> , <u>updateArea</u> , <u>getAreaAssignments</u> , <u>insertAreaAssignment</u> , <u>deleteAreaAssignment</u> , <u>deleteAreaSchedule</u> , <u>deleteAreaSchedule</u> . | RH |

| Revi- sion | Date | Description | Author |
|---------------|------------|--|--------|
| 1.19.0 | 15.02.2014 | Introduced new functions <u>insertUser</u> , <u>updateUser</u> , <u>deleteUser</u> , <u>getUserRights</u> , <u>setUserRight</u> , <u>removeUserRight</u> , <u>getStatusMessages</u> , <u>setVehicleConfig</u> , <u>getAccountStatusMessages</u> . Added new result useruid to <u>showUsers</u> . Added new parameters drivergroupname and objectgroupname to <u>showWorkingTimes</u> . Added new parameters addrnr and addruid and result addruid to <u>showAddressReportExtern</u> . Introduced result addressgroupuid to <u>showAddressGroupReportExtern</u> . Added parameter addruid to <u>updateAddressExtern</u> . In <u>insertDriverExtern</u> the parameters code and pin are optional. <u>showDriverGroups</u> returns drivergroupuid. WEBFLEET.connect supports JSON throughout the whole range of functions. To define the response format the parameter outputformat was introduced to the list of <u>General parameters</u> . | |
| 1.19.1 | 31.03.2014 | TomTom Business Solutions was renamed to Tom- Tom Telematics. | RH |
| 1.20.0 | 02.04.2014 | The following functions are new getEventForward-Configs, getEventForwardConfigRecipients, insertEventForwardConfig, updateEventForwardConfig, deleteEventForwardConfig, resetUserRights. Added output parameters addruid and addressgroupuid to showAddressGroupAddressReportExtern. Added addruid to updateAddressExtern, deleteAddressExtern, attachAddressToGroupExtern, detachAddressFromGroupExtern. Added parameter addrgrpuid to insertAddressExtern, attachAddressToGroupExtern, deleteAddressGroupExtern. Parameters notify_enabled and notify_leadtime in updateDestinationOrderExtern are not supported anymore. Added new paramter duetype to showMaintenanceTasks. Added right level edit_usersettings to List of supported right levels | RH |
| 1.21.0 | 01.08.2014 | Webfleet error codes are now also returned in HTTP header fields, Making HTTP requests. Added new result pnd_mapversion to showContracts. Added new parameter ep_type to updateVehicle and showVehicleReportExtern. | RH |
| 1.21.1 | 15.08.2014 | The process of requesting access to APIs has changed, <u>Access to WEBFLEET.connect with API Key</u> | RH |

| Revi- sion | Date | Description | Author |
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| 1.23.0 | 05.11.2014 | Introduced sendBinaryMessage, resetBinaryMessages and clearBinaryMessages. Introduced sendBinaryMessages and clearBinaryMessages and clearBinaryMessages that allow to send and manage messages transmitting raw binary data that can be used by third party apps installed on the driver terminal. popQueueMessagesExtern: Added new surplus_data relevant for the transfer of binary data for third party apps installed on the driver terminal. Introduced getRemainingDrivingTimesEU that assists fleet managers to determine remaining driving times of their truck drivers. Introduced getDriverKPIs and getObjectKPIs to retrieve the Key Performance Indicators of individual drivers or objects. getObjectKPIs will be redirected to getKPIs. All calls to getKPIs will be redirected to getObjectKPIs. With the new parameter (and result) color in getAreas, insertArea, updateArea you can define and retrieve the colour of an area as a 6-digit hex RGB-color code. The actions insertUser and updateUser come with the new parameter interfacestyle, that lets you define which type of interface a user is supposed to see/use in Webfleet. The new profile values invoices_user and report_recipient have been added to the actions insertUser and updateUser. Extended the List of supported right levels to include the rights levels report_read_access, enable_device_configuration_management and report_edit_access. Added new result msisch to showContracts. Added objectgroupid to the results of showObjectGroupDjects and to the list of parameters of showObjectGroupDjects and to the list of parameters of showObjectGroups. The new getVehicle-Config lets you retrieve LINK specific configurations. Introduced setStatusMessages and setAccountStatusMessages to set the predefined text and order status messages for individual vehicles and for the Webfleet account. The newly introduced mapcode parameter offers an alternative to longitude and latitude when determining locations using sendDestinationOrderExtern, insertDestinationOrderExtern, updateDestinationOrderExtern, ins | RH |
| 1.24.0 | 19.01.2015 | Assigning the relevant WEBFLEET.connect user rights to Webfleet users in the Webfleet user interface has changed. The instructions in <u>Creating a user and assigning rights</u> have been amended to reflect these developments. <u>showEventReportExtern</u> : Added new result pos_time that indicates the time of the last known position when the event occured. | RH |

| Revi- sion | Date | Description | Author |
|---------------|------------|--|--------|
| 1.25.0 | 28.04.2015 | We have extended the result list for showOp-tiDrivelndicator to include all relevant parameters for OptiDrive 360 . | RH |
| | | We have extended the result list for <u>showSettings</u> to include the four new parameters that show the weights of coasting, constant speed, green speed and gear shift. | |
| 1.26.0 | 16.12.2015 | Itinerary orders - PRO 7100/7150, PRO 9100/9150 and PRO 5150 support up to 1000 waypoints/order. PRO 8270/8275 support up to 250 waypoints/order. PRO 5250, PRO 7250 do not support itinerary orders. The affected functions are: sendDestinationOrderEx-tern , updateDestinationOrderExtern, insertDestinationOrderExtern. showVehicleReportExtern and updateVehicle have the new optional parameter <a href="mailto:mailto</td><td>RH</td></tr><tr><td>1.27.0</td><td>31.03.2016</td><td>Using showMaintenanceTasks you can retrieve all relevant information on the next maintenance tasks as it is shown in the Webfleet user interface. There is no need to make additional calls using showMaintenanceSchedules anymore. For this we have added the parameter scheduletype and we have added schedulename, scheduletype and schedulecreationtype to the result list. Improved support of various driver authentication devices by Adding parameter driver_key to insert-DriverExtern and updateDriver authentication devices by Adding parameter driver key to insert-Driver Extern and updateDriver Extern; Adding driver key to insert-Driver Extern; Adding driver Adding driver key to insert and update and | |

| Revi- sion | Date | Description | Author |
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| 1.28.0 | 01.05.2016 | Using showMaintenanceTasks you can retrieve all relevant information on the next maintenance tasks as it is shown in the Webfleet user interface. There is no need to make additional calls using showMaintenanceSchedules anymore. For this we have added the parameter scheduletype and we have added schedulename, scheduletype and schedulecre-ationtype to the result list. | RH |
| | | Improved support of various driver authetication devices by: | |
| | | Adding parameter driver_key to <u>insertDriverEx-tern</u> and <u>updateDriverExtern</u> | |
| | | Adding driver_keys to result list of <u>showDriver-ReportExtern</u> | |
| | | Adding driverkey_deviceaddress to the result list of <u>showObjectReportExtern</u> | |
| | | Adding driverkey_deviceaddress and dri- verkey to the result list of popQueueMessage- sExtern | |
| | | Minor edits and improvements | |
| 1.29.0 | 30.06.2016 | showUsers returns the email address of the user. Minor edits and improvements | RH |
| 1.30.1 | 01.09.2016 | showTripReportExtern returns the following OptiDrive 360 related parameters: optidrive_indicator, speeding_indicator, drivingevents_indicator, idling_indicator, fuelusage_indicator, coasting_indicator, constant_speed_indicator, green_speed_indicator, high_revving_indicator showObjectReportExtern returns the parameter fuelLevelMilliliters. | RH |
| 1.31.0 | 30.11.2016 | Introduced the new fuelreference parameter to both showVehicleReportExtern and updateVehicle. Using this parameter you select which source shall be used as fuel reference. | RH |
| | | <u>geocodeAddress</u> - parameter provider not supported anymore. | |
| | | <u>insertDriverExtern</u> and <u>updateDriverExtern</u> support both driver key types Remote LINK and RFID used with the PRO 2020 Driver Terminal. | |
| | | <pre>endpoints have changed from soap.business.tom- tom.com to soap.telematics.tomtom.com and from csv.business.tomtom.com to csv.telematic- s.tomtom.com</pre> | |
| 1.32.0 | 01.09.2017 | Migrated document from legacy system. Various edits and improvements. Not released due to impending bug fix. | CH |

| Revi- sion | Date | Description | Author |
|--------------------|------------|--|--------|
| 1.33.0 | 05.10.2017 | Added chapters <u>Getting started with HTTP requests</u> and <u>Getting started with SOAP requests</u> to Programming Guide. | CH |
| | | Removed colour ivory. This affects <u>showVehicleReportExtern</u> and <u>updateVehicle</u> . | |
| | | The <u>list of message types</u> was updated. It now shows the full msg_type numbers. Additionally, you can see now on which message queues a message is available. | |
| | | Double entries in the parameter tables of popQueueMessagesExtern have been removed. | |
| | | Added note on usage for <u>updateAddressExtern</u> . If certain parameters are not specified in a request, these parameters are deleted. | |
| | | showDriverReportExtern: The parameter dri- ver_keys only appears in a response. It was moved from the Parameters to the Result table. | |
| | | The colour ivory has been removed. This affects showVehicleReportExtern and updateVehicle. | |
| | | The GO 715 device has been discontinued. Information on this device was removed. | |
| | | Added the value '3 - Worker' to the parameter role in the Result table of <u>showWorkingTimes</u> . | |
| | | Added the value '3 - Worker' to the parameter signonrole in the Result table of <u>showDriverReportExtern</u> . | |
| | | Minor edits and improvements. | |
| 1.35.0 | 26.02.2018 | <pre>popQueueMessagesExtern - introduced the new pa- rameter location_params, which is currently being tested.</pre> | RH |
| | | The <u>list of message types</u> was updated (Acceleration event and Working time event). | |
| | | <pre>showObjectReportExtern - renamed parameter fu- elLevelMilliliters to fuellevel_milliliters Minor edits and improvements.</pre> | |
| 1.37.0 | 12.07.2018 | Added the new topic <u>HTTP request encoding</u> <u>showOrderWaypoints</u> - parameter orderid is mandatory Minor edit and improvements | RH |
| 1.39.0 | 09.10.2018 | Added the new chapter <u>Plugins</u> including the actions | RH |
| | | <u>insertExternalEvent</u> and <u>setExternalObjectData</u> to be used for the addtional feature Webfleet Plugin . | |
| 1.40.1 | 08.01.2019 | Enhanced SOAP documentation - added new <u>SOAP</u> <u>parameters</u> topic, added SOAP request examples to <u>showObjectReportExtern</u> , <u>sendDestinationOrderExtern</u> and <u>showOrderReportExtern</u> | RH |
| 1.40.1 - update | 01.02.2019 | Minor editoral changes. | RH |

| Revi- sion | Date | Description | Author |
|--------------------|------------|---|--------|
| 1.40.1 - update | 19.02.2019 | Added some <u>message types</u> . | RH |
| 1.42.0 | 09.04.2019 | Removed unsupported inside/outside value for notificationmode from insertArea and updateArea. Added new surplus data to popQueueMessageExtern. er_tripdata provides additional trip information for optimal eco reporting. | RH |
| 1.43.0 | 20.05.2019 | The handling of rights to see position time and user information for showEventReportExtern has changed and can return empty results for pos_time , ackuser and resuser paramters. | RH |
| 1.44.0 | 16.07.2019 | Minor changes. | RH |
| 1.45.0 | 01.08.2019 | Introducing two new actions <u>getDriverRdtRules</u> and <u>updateDriverRdtRules</u> Minor changes and edits. | RH |
| 1.46.0 | 21.10.2019 | Introducing new return value engine_operation_time to action showObjectReportExtern . updateVehicle introduces the option to update the vehicle objectno. | RH |
| 1.47.0 | 29.01.2020 | location parameter not supported anymore in all actions related to addresses. Introduced new message types on cruise control, engine status and engine oil and coolant temperature. The new surplus data ioname for popQueueMessegesextern provides the name of the input or output when switched on or off. Introducing the two new actions getObjectCanSignals and getObjectCanMalfunctions, that let you retrieve the latest received CAN signal values for one or more objects in an account and the current state of CAN based malfunctions of an object. Using the newly introduced parameter output_name for action switchOutput you can specify the output instead of relying on the order that is pre-configured. URLs, endpoints and references to the company and products have been amended according to the migration from TomTom Telematics to Webfleet Soutions. | RH |
| 1.48.0 | 01.04.2020 | Introduced new action showDigitalInputStateMileage to retrieve all possible switching state combinations of digital inputs along with mileage information. Minor other edits. | RH |

| Revi- sion | Date | Description | Author |
|---------------|------------|---|--------|
| 1.49.0 | 27.07.2020 | Disabling MTOM - You can <u>enforce non-MTOM responses</u> in the SOAP API. <u>vehicleUpdate</u> supports all vehicle types that are available in the vehicle icon gallery in Webfleet. Some vehicle types are not supported for all colours. | RH |
| 1.50.0 | 28.08.2020 | Introduced new action <u>getElectricVehicleData</u> . Introduced new action <u>updateLogbookDriver</u> . Added missing features for action <u>getObjectFeatures</u> . | HR |
| 1.51.0 | 09.12.2020 | Documented parameter restrictions for actions showAccelerationEvents and showSpeedingEvents. Removed documentation about how to create users using Webfleet classic. Added PRO 8375 and PRO 8475 to sendDestinationOrderExtern, updateDestinationOrderExtern, insertDestinationOrderExtern. Adapted description for response code 25001. | HR |
| 1.53.0 | 25.05.2021 | Documented new result values of action getRemain-ingDrivingTimesEU . Added the fuel type values for electric and hybrid vehicles to showVehicleReportExtern and updateVehicle . | HR |
| 1.55.0 | 30.11.2021 | Introduced new action getActiveAssetCouplings Documented new malfunction codes for getObject- CanMalfunctions Documented new return parameters for getObject- Features Documented new parameters for insertDriverExtern, updateDriverExtern and showDriverReportExtern | HR |

| Revi- sion | Date | Description | Author |
|---------------|------------|---|--------|
| 1.56.0 | 17.03.2022 | Extended information about HD Tracking at <u>Tracking</u> and tracing | МО |
| | | Documented message types at Message types | |
| | | Extended description of parameter engine_operation_time of action showObjectReportExtern | |
| | | Added documentation of parameter identnumber for actions showVehicleReportExtern , updateVehicle | |
| | | Documented new parameter accelerationvehicle- type for actions showVehicleReportExtern , updat-evehicle | |
| | | Added PRO 7350 and PRO 5350 to documentation of parameter WP for actions sendDestinationOrderEx- | |
| | | tern, updateDestinationOrderExternand insertDestinationOrderExtern | |
| | | Documented that use of orders waypoint parameters notify and visible is discouraged at Parameters in wp | |
| | | Documented that LINK.connect feature is necessary to use action <u>sendBinaryMessage</u> | |
| | | Fixed typo in parameter idling_wastedfuel for action showOptiDriveIndicator | |
| | | Documented new result parameter drivergroupuid for action showDriverGroupDrivers | |
| | | Extended documentation of parameter radius for action <u>insertAddressExtern</u> and <u>updateAddressExtern</u> | |
| | | Documented new result parameter energy_usage for actions showTripReportExtern , <a hr<="" td=""><td></td> | |
| | | Documented new result parameter energy_consumption for action showSettings | |
| | | Removed filter restriction for action showWorking- Times | |
| | | Corrected name of parameter resettoaccount for action setStatusMessages | |
| | | Documented missing scheduletype 25 & 26 for actions insertMaintenanceSchedule, updateMaintenanceSchedule, showMaintenanceSchedules and | |
| | | showMaintenanceTasks Documented missing response code 9500 at Response codes | |
| 1.57.0 | 22.07.2022 | Added new action getChargerConnections | |
| | | New odometer properties for several endpoints | |
| | | Renamed licence parameters to correct values in <u>insertDriverExtern</u> and <u>updateDriverExtern</u> | |
| | | Added documentation on how to delete driver license in updateDriverExtern | |
| 1.58.0 | 19.09.2022 | Added documentation for HTTP Basic Auth. | |
| | | Streamlined documentation for driver license data | |
| | | Added missing CAN signals to documentation | |

| Revi- sion | Date | Description | Author |
|---------------|------------|---|--------|
| 1.62.0 | 07.06.2023 | Documented new driver number length limit. Added getCrashLog documentation. Fixed getRemainingDrivingTimesEU documentation. Added notes regarding missing order destination to sendOrderExtern documentation. | |
| 1.63.0 | 10.07.2023 | Removed unsupported value RPM from CAN signal types list. Added new actions getOrderStatusPageURLand removeOrderStatusPageURL Removed documentation for unsupported pos_params parameter for action popQueueMessagesExtern. Added 3 new parameters to action getElectricVehicleData | |
| 1.64.0 | 11.08.2023 | Added new actions for order attachments, down-loadOrderAttachment, downloadOrderAttachment-Thumbnail, uploadOrderAttachment, getOrderAttachmentsMetadata, deleteOrderAttachment. Added new action getLoadData. New return value area_speedlimit for showSpeedingEvents. Added new access rights for Webfleet Video. Added new fuel types. Added some new error response codes. Minor adaptions and fixes. | HR |
| 1.65.0 | 06.02.2024 | New return values related to electric vehicles for showTripReportExtern and showLogbook . Added new parameter travel_mode to | |

| Revi- sion | Date | Description | Author |
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| 1.67.0 | 16.10.2024 | New action getOptiDriveProfiles. Added feature names vehiclechecklist, proappnav, coldchain, oemconnect to action getObjectFeatures. Added cruise_control_indicator and video_indicator to actions showTripReportExtern and showOptiDriveIndicator. Added deprecation notice for credentials in URLs. Minor documentation corrections. | HR |
| 1.67.1 | 27.01.2025 | Added <u>hints</u> about asynchronous order processing. | HR |
| 1.69.0 | 14.03.2025 | Action sendDestinationOrderExtern has a new parameter for ePOD support. Added new order states for ePOD to result of showOrderReportExtern. A new parameter for getActiveAssetCouplings allows to return the previous coupling. Minor documentation changes. EOL notice for URL credentials Added new CAN signal types for AdBlue level and AdBlue range. | HR |
| 1.70.0 | 20.05.2025 | Added new actions getOrderEpodand downloadOrderEpodSignature. Added new order states for ePOD to sendDestinationOrderExtern. Clarify default behaviour for parameters notify_leadtime and notify_enabled for sendDestinationOrderExtern. Results of showTripReportExtern and showLogbook now contain energy consumption and recovery. Trip messages in message queues now contain energy consumption/recovery and battery levels. New action getTelemetryDeviceBatteryState returns the battery state of telematics devices which can operate in battery-powered mode (e.g. LINK 340, LINK 350). | HR |
| 1.71.0 | 16.06.2025 | Added new action downloadOrderEpodPhoto. Added ePOD related order states to updateAccountOrderState and showAccountOrderStates. Removed BETA test hints from ePOD related documentation. Added new Cold Chain related actions getCurrentTemperatureData, getHistoricalTemperatureData, getCurrentRefrigeratedDoorStatusData and getHistoricalRefrigeratedDoorStatusData. Added description about how certain parameters affect routing behaviour in Work App for sendDestinationOrderExtern, insertDestinationOrderExtern and updateDestinationOrderExtern. | HR |

| Revi- sion | Date | Description | Author |
|---------------|------------|---|--------|
| 1.72.0 | 07.10.2025 | New action getObjectDTCs returns diagnostic trouble code (DTC) information for an object. New action getDiagnosticFaults retrieves diagnostic event data for an object. New actions to manage loaded goods: createOrder-LoadedGoods , updateOrderLoadedGoods , <a href="mailto:delta-de</td><td>HR</td></tr><tr><td></td><td>New parameter contactemail in <u>insertDestina-tionOrderExtern</u>, <u>updateDestinationOrderExtern</u> and <u>sendDestinationOrderExtern</u>.</td><td></td></tr><tr><td></td><td>New actions <u>getCurrentColdChainSensorData</u>, <u>getCurrentColdChainStateData</u>, <u>getHistoricalColdChainSensorData</u>, <u>getHistoricalColdChainStateData</u>. Documented under which conditions parameters are mandatory in <u>updateLogbook</u>.</td><td></td></tr><tr><td></td><td>Adapted various code examples to reflect deprecation of URL credentials for CSV/JSON API.</td><td></td></tr><tr><td rowspan=3>1.73.0</td><td>09.12.2025</td><td>New fuel types for show1ele ReportExtern, update update eVehicle , show1ele | |