

# WEBFLEET.connect

## 1.53.0

### Reference Guide



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# What's new?

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Here you find an overview of what is new or has changed in WEBFLEET.connect 1.53.0.

Please find the full [revision history](#) at the end of this document.

## Miscellaneous

- New result values for getRemainingDrivingTimesEU
- Completed documentation of fuel types

# Welcome

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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:

- [Terminology](#) – In this chapter you learn understanding terms used in the context of WEBFLEET and WEBFLEET.connect products and features.
- [Programming Guide](#) – 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

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

# WEBFLEET components

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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 Webfleet 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 Solutions 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 GPRS modem. Connected navigation devices 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:

- TomTom PRO 9150
- TomTom PRO 9100
- TomTom PRO 5150, PRO 5250 (purchase of WEBFLEET-compatibility upgrade required)
- TomTom GO 9000

The connected GO devices are similar to each other but the PRO devices have different software and hence work in a different way.

## 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 8375
- TomTom PRO 8275 (TRUCK)
- TomTom PRO 8270 (TRUCK)
- TomTom PRO 7250 (TRUCK)

- TomTom PRO 7150 (TRUCK)
- TomTom PRO 7100 (TRUCK)
- TomTom GO 7000 (TRUCK)
- TomTom GO x20/x30
- TomTom GO x10

The non-connected GO devices are similar to each other but the non-connected PRO devices have different software and hence work in a different way.

## **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/ecoPLUS™ 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

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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 Solutions unit. The Webfleet Solutions 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

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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. For details 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](http://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 [Connected navigation devices](#) 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

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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

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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

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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

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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

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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

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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

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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 [Remote LINK](#) with an ID Key or PRO navigation devices.

# Vehicle maintenance

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## 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

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

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**Important!** Some of the following additional features/additional services may not be available in your country.

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# Programming Guide

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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 Solutions sales contact if you do not have access to a WEBFLEET.connect-enabled account.

# Introduction to WEBFLEET.connect

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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 [Drivers](#).

**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

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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.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**.

### 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 [WGS84](#) 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.



2. 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 unencrypted 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 [URLs](#), 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 [IETF RFC 2616](#) 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 [ISO8601](#) 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 use HTTP authentication**, neither Basic nor Digest. HTTP authentication is not required by the service as username and password are included in the URL of the requests.

**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.

## 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 you can use HTTP POST for the following actions only:

- [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 UTF-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
lang=en&account=wfcdevaccount&username=wfcuser&password=yourpwd&apikey=y-
ourapikey&action=sendDestinationOrder&objectno=0094&orderid=it-
n32&ordertext=Clean%20streets&longitude=12399200&latitude=51364460&w-
p=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*".

## Getting started with HTTP requests

For making HTTP requests, you only need a web browser.

### Preconditions

- Up-to-date web browser, for example Chrome or Firefox.
- Valid API key and credentials.

### Making an HTTP request with a browser

1. Simply type (or copy & paste) the full URL into the web browser address bar.

Here is a simple example URL that will geocode the specified location:

```
https://csv.webfleet.com/extern?lang=en&account=xxx&username=xxx&password=xxx&apikey=xxx&action=geocodeAddress&outputformat=json&freetext=Leipzig
```

**Note:** Please insert your credentials and API key before submitting.

2. Press **Enter** to submit the request.

---

Tip: The output format has been set to JSON. We recommend using the JSON format as output for these kinds of tests as this usually can be displayed inside the web browser as well.

---

The result output displayed in a web browser:

```

▼ 0:
  addrcity:      "Leipzig"
  addrcountry:   "DE"
  postext:       "Leipzig, Saxony, DE"
  formatted_longitude: "12°22'16.9\" E"
  formatted_latitude:  "51°20'22.8\" N"
  longitude:     12371363
  latitude:      51339672
  additional_information: "score=1.0;type=city"

▼ 1:
  addrcity:      "Leipzig"
  addrcountry:   "US"
  postext:       "Leipzig, North Dakota, US"
  formatted_longitude: "101°49'09.3\" W"
  formatted_latitude:  "46°30'57.8\" N"
  longitude:     -101819276
  latitude:      46516066
  additional_information: "score=0.931034505367279;type=city"

▼ 2:
  addrcity:      "Leipzig"
  addrcountry:   "CA"
  postext:       "Leipzig, Saskatchewan, CA"
  formatted_longitude: "108°40'50.1\" W"
  formatted_latitude:  "52°10'59.4\" N"
  longitude:     -108680608
  latitude:      52183185
  additional_information: "score=0.9195402264595032;type=city"

```

## HTTP request encoding

Every HTTP/HTTPS request must be a valid URL. That means that only [ASCII](#) 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 'ß' character (encoded as %DF) or the '@' sign (encoded as %40).

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

```
https://csv.webfleet.com/extern?lang=de&account=***&username=Su%DFanne%40work&password=***&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 format.

Here is how the URL should finally look like:

```
https://csv.webfleet.com/extern?lang=de&account=***&username=***&password=***&apikey=***&action=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 [SOAP](#) 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 [Using WEBFLEET.connect SOAP with Visual Basic](#) 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*

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
  xmlns:ser="http://connect.webfleet.tomtomwork.com/services">
  <soap:Header>
    <ser:disable-mtom>true</ser:disable-mtom>
  </soap:Header>
  <soap:Body>
    ... details omitted ...
  </soap:Body>
</soap:Envelope>
```

*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 [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.

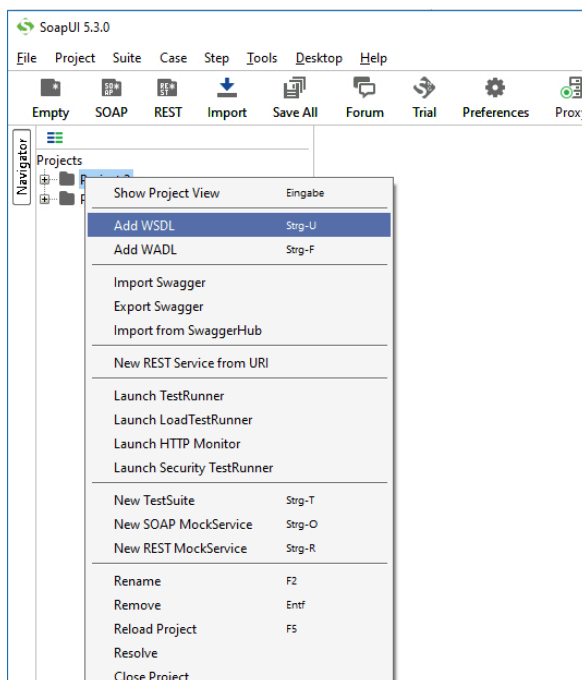
### Preconditions

- 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:

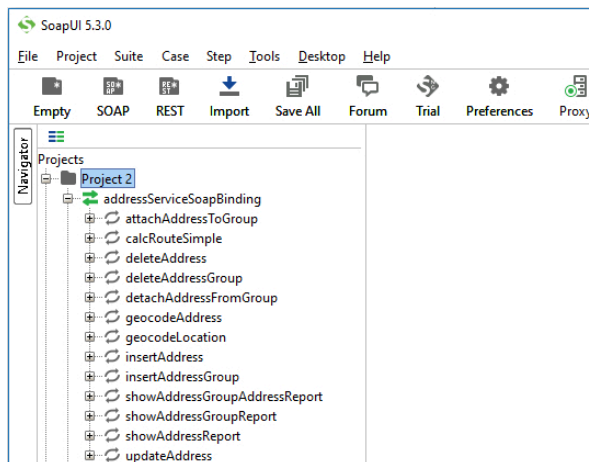
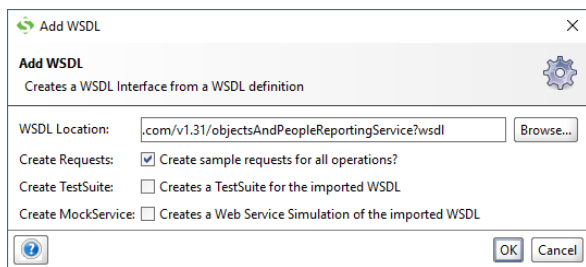
1. Create an empty project.
2. Right-click on the project
3. Click **Add WSDL**.



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.

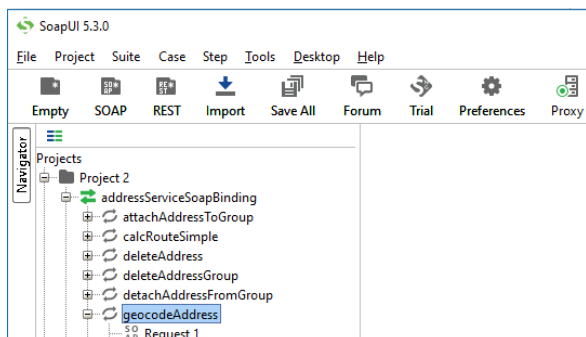
Example: <https://soap.webfleet.com/v1.33/objectsAndPeopleReportingService?wsdl>



5. Click to select an action, for example **geocodeAddress**.

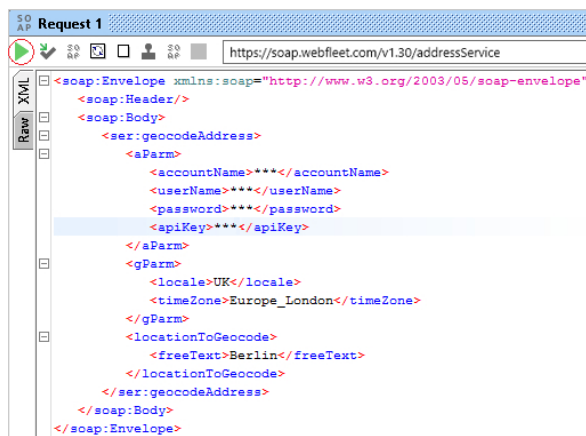
6. Create a new SOAP request.

The request window opens.

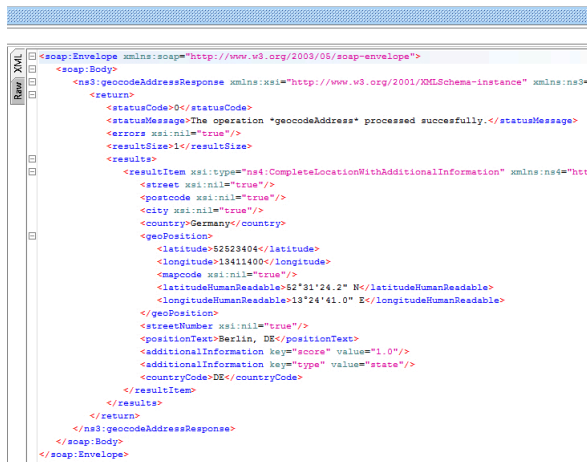


7. Enter all required parameters.

8. Click the submit button.



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 parameters         | apiKey  | apikey           |
| Parameter names                | accountName   | account          |
| Parameter structure            | <object objectNo="xxx"/>  | objectno=xxx     |
| Parameter values               | <msgClass filter="ALL"/>  | msgclass=0       |
| Parameter structure and values | <gParm><br><locale>UK</locale> <timeZone>Europe_London</timeZone><br></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:restriction>
</xs:simpleType>
```

```

<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 |
| D0        | Today              |
| Dm1       | Yesterday          |
| Dm2       | Two days ago       |
| Dm3       | Three days ago     |
| Dm4       | Four days ago      |
| Dm5       | Five days ago      |
| Dm6       | Six days ago       |
| W0        | Current week       |
| Wm1       | Last week          |
| Wm2       | Two weeks ago      |

| Parameter | Description  |
|-----------|--|
| Wm3       | Three weeks ago                                    |
| WF0       | Floating week, current day and previous seven days |
| WFm1      | Floating week, the seven calendar days before WF0  |
| WFm2      | Floating week, the seven calendar days before WFm1 |
| WFm3      | Floating week, the seven calendar days before WFm2 |
| M0        | 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                                    |
| Y0        | 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 al-

lowed 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.  |
| password     | string                 | Password for the user name.   |
| sessiontoken | string (32)            | A session identifier, that has been fetched from the server using <a href="#">createSession</a> . <code>sessiontoken</code> can be used as an alternative to <code>account</code> , <code>username</code> or <code>password</code> to authorise further requests for a limited time (see session lifetime). |
| apikey       | string (36 characters) | This value is optional.   |

### General parameters

| Parameter               | Type            | Description   |
|-------------------------|-----------------|---|
| separator<br>(CSV only) | positiveInteger | <p>A delimiter character identifier that indicates the delimiter to be used for the output columns:</p> <ul style="list-style-type: none"><li>• 1 - a <i>tab</i> character</li><li>• 2 - a <i>space</i> character</li><li>• 3 - a <i>comma</i> character</li></ul> <p>If no value is specified, a semicolon used to as the delimiter for the output columns.</p> <p>This parameter is optional.</p> |

| Parameter                  | Type    | Description  |
|----------------------------|---------|--|
| lang<br>(CSV only)         | string  | <p>Valid values are:</p> <ul style="list-style-type: none"> <li>de - German</li> <li>en - English</li> </ul> <p>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.</p>   |
| locale<br>(SOAP only)      | enum    | <p>The value specified in the general parameters element (<code>genPam</code>) <code>locale</code> determines how the the result of a SOAP request will be localised.</p> <p>For locales known to the SOAP web service see <a href="#">WSDL</a>.</p>   |
| action<br>(CSV only)       | string  | <p>Specifies the operation to be executed. See chapter Reference for a list of available operations and more information.</p>  |
| useISO8601<br>(CSV only)   | boolean | <p>If set to <code>true</code>, all date/time-relevant parameters are expected to be ISO8601-formatted and all date/time result fields will be ISO8601-formatted. See the <a href="#">ISO8601</a> specification or learn more <a href="#">here</a>. 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:</p> <pre>yyyy-MMdd'T'hh:mm:ss[.(,)]S[(((+ -)hh:mm)]Z</pre> <hr/> <p><i>Example:</i> 2007-02-02T12:12:12.500+01:00</p> <hr/> <p>If set to <code>true</code>, the result will return date time values in UTC.</p> <p>If set to <code>false</code>, the result returns the time zone configured in the specific WEBFLEET account.</p> |
| columnfilter<br>(CSV only) | string  | <p>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 <code>columnfilter</code> 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.</p>   |
| timeZone<br>(SOAP only)    | enum    | <p>The value specified in the general parameters element (<code>genPam</code>) <code>timeZone</code> defines the time zone to which date and time related result data of the SOAP request will be matched.</p> <p>For valid values see <a href="#">WSDL</a>.</p>   |
| useUTF8<br>(CSV only)      | boolean | <p>Controls how WF.connect interprets the character encoding of URL request parameters.</p> <p>If set to <code>true</code>, all parameters are expected to be UTF-8-encoded.</p> <p>If set to <code>false</code>, all parameters are interpreted as ISO-8859-1.</p> <p>Default is <code>false</code>.</p>  |

| Parameter                  | Type   | Description  |
|----------------------------|--------|--|
| outputformat<br>(CSV only) | string | Defines the response format to be used by WEBFLEET.connect.<br>Valid values: <ul style="list-style-type: none"> <li>csv (default)</li> <li>json</li> </ul> |

#### Date range filter parameters

| Parameter     | Type   | Description  |
|---------------|--------|--|
| range_pattern | string | <p>Specifies a relative date range for the data to be returned.<br/>Valid values:</p> <ul style="list-style-type: none"> <li>d0 — Today</li> <li>d-1 — Yesterday</li> <li>d-2 — Two days ago</li> <li>d-3 — Three days ago</li> <li>d-4 — Four days ago</li> <li>d-5 — Five days ago</li> <li>d-6 — Six days ago</li> <li>w0 — Current week</li> <li>w-1 — Last week</li> <li>w-2 — Two weeks ago</li> <li>w-3 — Three weeks ago</li> <li>wf0 — Floating week, current day and previous seven days</li> <li>wf-1 — Floating week, the seven calendar days before wf0</li> <li>wf-2 — Floating week, the seven calendar days before wf-1</li> <li>wf-3 — Floating week, the seven calendar days before wf-2</li> <li>m0 — Current month</li> <li>m-1 — Last month</li> <li>m-2 — Two months ago</li> <li>m-3 — Three months ago</li> <li>ud — User-defined range</li> </ul> <p><b>Note:</b> Use of this parameter rules out the usage of <code>range-from_string</code> and <code>rangeto_string</code> and vice versa except for <code>range_pattern=ud</code>.</p> <p>Requires <code>rangefrom_string</code> and <code>rangeto_string</code> to be present.</p> |



| Parameter        | Type                  | Description  |
|------------------|-----------------------|--|
| rangefrom_string | string                | <p>Lower bound for a date range (start date).</p> <p>The required format depends on the value for the lang parameter:</p> <ul style="list-style-type: none"> <li>lang = de<br/>Format: dd.MM.yyyy HH:mm:ss</li> </ul> <hr/> <p>Example: 13.07.2007 23:59:59</p> <hr/> <ul style="list-style-type: none"> <li>lang = en<br/>Format: dd/MM/yyyy HH:mm:ss</li> </ul> <hr/> <p>Example: 13/07/2007 23:59:59</p> <hr/> <ul style="list-style-type: none"> <li>lang = nl<br/>Format: d-M-yyyy H:mm:ss</li> </ul> <hr/> <p>Example: 13-07-2007 23:59:59</p> <hr/> |
| rangeto_string   | string                | Upper bound for a date range (end date).   |
| year             | nonNegativeInteger(4) | <p>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.</p> <p>Can be used as an alternative to <code>range_pattern</code>, <code>rangefrom_string</code>, <code>rangeto_string</code>.</p>   |
| month            | nonNegativeInteger(2) | <p>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.</p> <div style="background-color: #f0f0f0; padding: 5px; margin-top: 10px;"> <p><b>Note:</b> This parameter has to be used together with <code>year</code>.</p> </div> <p>Can be used as an alternative to <code>range_pattern</code>, <code>rangefrom_string</code>, <code>rangeto_string</code>.</p>   |
| day              | nonNegativeInteger(2) | <p>A range that covers the entire day that is indicated from 00:00:00 o'clock to 23:59:59 o'clock.</p> <div style="background-color: #f0f0f0; padding: 5px; margin-top: 10px;"> <p><b>Note:</b> This parameter has to be used together with <code>year</code> and <code>month</code>.</p> </div>   |

# Reference

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# Message queues

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## 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 [popQueueMessagesExtern](#) without subsequently calling [ackQueueMessagesExtern](#).

**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

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|                |                        |
|----------------|------------------------|
| Request limits | 10 requests / 24 hours |
|----------------|------------------------|

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### Parameters

**createQueueExtern** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to createQueueExtern

| Parameter | Type               | Description   |
|-----------|--------------------|---|
| msgclass  | nonNegativeInteger | Valid values are: <ul style="list-style-type: none"> <li>0 - All messages<br/>Includes tracking-only messages and 4,5,7,8</li> <li>2 - All except position messages<br/>Includes 4,5,7,8, does not include tracking-only messages.</li> <li>4 - Order related messages</li> <li>5 - Driver related messages</li> <li>7 - Status messages</li> <li>8 - Text messages</li> <li>15 - Third party messages (LINK.connect, ...)</li> </ul> |

## Result

Result for createQueueExtern:

| Parameter | Type    | Description  |
|-----------|---------|--|
| action    | string  | The name of the operation that has been executed.  |
| result    | boolean | Always <code>true</code> , 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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to deleteQueueExtern:

| Parameter | Type               | Description  |
|-----------|--------------------|--|
| msgclass  | nonNegativeInteger | Valid values are: <ul style="list-style-type: none"> <li>0 - All messages<br/>Includes tracking-only messages and 4,5,7,8.</li> <li>2 - All except position messages<br/>Includes 4,5,7,8, does not include tracking-only messages.</li> <li>4 - Order related messages</li> <li>5 - Driver related messages</li> <li>7 - Status messages</li> <li>8 - Text messages</li> <li>15 - Third party messages (LINK.connect, ...)</li> </ul> |

## Result

Result for createQueueExtern:

| Parameter | Type    | Description   |
|-----------|---------|---|
| action    | string  | The name of the operation that has been executed.   |
| result    | boolean | Always <code>true</code> .<br>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`. Calls to `popQueueMessagesExtern` and `ackQueueMessagesExtern` 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 `lang` parameter.

### Technical details

SOAP endpoint address / function name `messagesService#popQueueMessagesExtern`

Request limits 10 requests / minute

## Parameters

**popQueueMessagesExtern** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to popQueueMessagesExtern

| Parameter | Type               | Description  |
|-----------|--------------------|--|
| msgclass  | nonNegativeInteger | Valid values: <ul style="list-style-type: none"><li>• 0 - All messages<br/>Includes tracking-only messages and 4,5,7,8.</li><li>• 2 - All except position messages<br/>Includes 4,5,7,8, does not include tracking-only messages.</li><li>• 4 - Order related messages</li><li>• 5 - Driver related messages</li><li>• 7 - Status messages</li><li>• 8 - Text messages</li><li>• 15 - Third party messages (LINK.connect, ...)</li></ul> |

## Result

Result for popQueueMessagesExtern

| Parameter | Type               | Description  |
|-----------|--------------------|--|
| msgid     | string             | msgid identifies a message and is system wide unique.<br>Valid value range: $0 \leq \text{msgid} \leq 2^{64}-1$ .  |
| msg_time  | dateTime           | ISO 8601-formatted date and time in the UTC timezone, combined representation in the extended format.<br><br><i>Example: 2007-12-24T16:00:00Z</i>  |
| msg_class | nonNegativeInteger | Valid values: <ul style="list-style-type: none"><li>• 0 - unknown</li><li>• 1 - system</li><li>• 2 - text</li><li>• 3 - polling</li><li>• 4 - timer event</li><li>• 5 - GPS event</li><li>• 6 - input event</li><li>• 7 - set output</li><li>• 8 - data</li><li>• 9 - configuration</li><li>• 10 - trip</li><li>• 11 - order</li></ul> |

| Parameter     | Type               | Description  |
|---------------|--------------------|--|
| msg_type      | nonNegativeInteger | <p>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.</p> <p>The message class is equal to the field <code>msg_class</code>.</p> <p>For a comprehensive list of possible message types see <a href="#">Messages types</a>.</p> |
| msg_text      | string             | The actual text of the message.  |
| objectno      | string (10)        | <p>Identifying number of an object.</p> <p>Unique within an account, case-sensitive.</p>   |
| driverno      | string             | <p>Identifying number of a driver.</p> <p>Unique within an account.</p> <p>See <a href="#">Drivers</a> to learn more about drivers.</p>  |
| ign           | int                |  |
| inputs        | string             | This property is deprecated. Please use <code>ioname</code> in <code>surplus_data</code> instead of <code>inputs</code> .  |
| odometer      | int                |  |
| outputs       | string             |  |
| pndconn       | boolean            | Indicates the connection state of the Driver Terminal.   |
| trip_mode     | nonNegativeInteger | <p>Valid values:</p> <ul style="list-style-type: none"> <li>0 - Unknown trip type</li> <li>1 - Private trip</li> <li>2 - Business trip</li> <li>3 - Commute trip</li> <li>4 - Correction trip (user changed the odometer value manually)</li> </ul>  |
| pos_latitude  | int                | <p>Geographic latitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p>   |
| pos_longitude | int                | <p>Geographic longitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p>  |
| pos_text      | string             |  |
| pos_country   | string (2)         | <a href="#">ISO 3166-1 alpha-2 code</a> for the country (capital letters).   |
| pos_postcode  | string             |  |

| Parameter  | Type               | Description   |
|------------|--------------------|---|
| pos_params | string             | <p>A list name-value pairs that describe the position. Name and value are separated by "=", pairs are separated by ";".</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>city</li> <li>country</li> <li>direction</li> <li>distance</li> <li>highway_exit</li> <li>highway_intersection</li> <li>name1</li> <li>name2</li> <li>name3</li> <li>street</li> <li>text</li> <li>town1_country</li> <li>town1_name</li> <li>town1_part</li> <li>town1_zip</li> <li>town2_country</li> <li>town2_name</li> <li>town2_zip</li> <li>zip</li> </ul> <p><b>Note:</b> The result does not always contain all position parameters.</p> <hr/> <p><i>Example:</i> street=B2 Maximilianallee;<br/>town1_zip=04129;showzip=1;town1_name=Leipzig;</p> <hr/> |
| pos_time   | dateTime           | <p><a href="#">ISO 8601</a>-formatted date and time in the UTC timezone, combined representation in the extended format.</p> <hr/> <p><i>Example:</i> 2007-12-24T16:00:00Z</p> <hr/>  |
| pos_addrno | string (10)        | <p>Refers to the nearest address if the position is within the address radius.</p> <p>See <a href="#">Addresses</a> to learn more.</p>  |
| speed      | int                | in km/h   |
| course     | nonNegativeInteger | Compass direction in degrees (0° ... 360°):   |



| Parameter | Type               | Description  |
|-----------|--------------------|--|
| status    | string             | <p>GPS status indicator.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• <code>L</code> - No fix available.<br/>Position data refer to the last known position.</li> <li>• <code>V</code> - No fix data available.</li> <li>• <code>A</code> - Sufficient quality for a valid fix.</li> </ul>                |
| direction | nonNegativeInteger | <p>Cardinal and intercardinal compass directions, derived from course.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 1 - North</li> <li>• 2 - Northeast</li> <li>• 3 - East</li> <li>• 4 - Southeast</li> <li>• 5 - South</li> <li>• 6 - Southwest</li> <li>• 7 - West</li> <li>• 8 - Northwest</li> </ul> |
| orderno   | string (20)        | <p>Account-unique order id, case-sensitive.</p> <p>Maximum capacity is 20 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters.</p> <p>See <a href="#">Orders</a> to learn more about orders.</p>   |

| Parameter      | Type               | Description  |
|----------------|--------------------|--|
| order_state    | nonNegativeInteger | Valid values: <ul style="list-style-type: none"> <li>0 - Not yet sent</li> <li>100 - Sent</li> <li>101 - Received</li> <li>102 - Read</li> <li>103 - Accepted</li> <li>201 - Service order started</li> <li>202 - Arrived at destination</li> <li>203 - Work started</li> <li>204 - Work finished</li> <li>205 - Departed from destination</li> <li>221 - Pickup order started</li> <li>222 - Arrived at pick up location</li> <li>223 - Pick up started</li> <li>224 - Pick up finished</li> <li>225 - Departed from pick up location</li> <li>241 - Delivery order started</li> <li>242 - Arrived at delivery location</li> <li>243 - Delivery started</li> <li>244 - Delivery finished</li> <li>245 - Departed from delivery location</li> <li>298 - Resumed</li> <li>299 - Suspended</li> <li>301 - Cancelled</li> <li>302 - Rejected</li> <li>401 - Finished</li> </ul> |
| order_type     | nonNegativeInteger | Type of order.<br>Valid values: <ul style="list-style-type: none"> <li>1 - service order</li> <li>2 - pickup order</li> <li>3 - delivery order</li> </ul>  |
| dest_latitude  | int                | Geographic latitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).  |
| dest_longitude | int                | Geographic longitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).   |
| dest_text      | string             |  |
| eta            | dateTime           | <a href="#">ISO 8601</a> -formatted date and time in the UTC timezone, combined representation in the extended format.<br><br><hr/> <i>Example: 2007-12-24T16:00:00Z</i> <hr/>   |

| Parameter     | Type               | Description  |
|---------------|--------------------|--|
| distance      | nonNegativeInteger | 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)        | <p>A driver card id as used with the Digital Tachograph, prefixed with the <a href="#">ISO 3166-1 alpha-2 code</a> for the country (capital letters).</p> <p>Contains the card id for driver cards that are not assigned to a driver or for any other card type.</p> <p>Only available on card insertion and removal messages.</p>                   |
| dt_cardaction | int                | <p>Valid values:</p> <ul style="list-style-type: none"> <li>0 - inserted</li> <li>1 - removed</li> </ul>   |
| dt_cardtype   | nonNegativeInteger | <p>Valid values:</p> <ul style="list-style-type: none"> <li>0 - Unknown</li> <li>1 - Driver card</li> <li>2 - Workshop card</li> <li>3 - Control card</li> <li>4 - Company card</li> </ul>   |
| dt_slot       | nonNegativeInteger | <p>Valid values:</p> <ul style="list-style-type: none"> <li>1 - Driver</li> <li>2 - Co-Driver</li> </ul>   |
| dt_state      | int                | <p>Valid values:</p> <ul style="list-style-type: none"> <li>0 - connected</li> <li>1 - disconnected</li> </ul>   |
| workstate     | nonNegativeInteger | <p>Valid values:</p> <ul style="list-style-type: none"> <li>0 - Unknown</li> <li>1 - Free time (PND only)</li> <li>2 - Pause (PND and digital tachograph)</li> <li>3 - Standby (digital tachograph only)</li> <li>4 - Working (PND only)</li> <li>5 - Driving (digital tachograph only)</li> <li>6 - Other work (digital tachograph only)</li> </ul> |

| Parameter     | Type        | Description   |
|---------------|-------------|---|
| source_device | string      | <p>The external equipment this message originated from:</p> <ul style="list-style-type: none"> <li>• 0 - Driver Terminal</li> <li>• 1 - Digital tachograph</li> <li>• 2 - <a href="#">Remote LINK Working Time</a></li> <li>• 3 - <a href="#">Remote LINK Logbook</a></li> <li>• 4 - <a href="#">ecoPLUS</a></li> <li>• 6 - <a href="#">LINK 105</a></li> <li>• 11 - PRO 2020</li> </ul>  |
| rll_btaddress | string (17) | <p>Remote LINK Bluetooth address.</p> <p>The <a href="#">IEEE 802 MAC-48/EUI-48</a> address of a Bluetooth device, formatted as six groups of two hexadecimal digits, separated by colons (:).</p> <hr/> <p><i>Example: 00:13:6C:88:26:0B</i></p> <hr/>   |
| rll_buttonid  | string (16) | <a href="#">Remote LINK</a> /ID key identifier  |
| surplus_data  | string      | <p>A <a href="#">JSON</a>-encoded string that carries additional data items that augment certain messages.</p> <ul style="list-style-type: none"> <li>• dt_timeoffset: time difference between event_time and the Digital Tachograph's internal clock, in milliseconds.</li> <li>• ep_paireddata: ecoPLUS initiating message, containing <a href="#">parameters specific to ep_paireddata</a>.</li> <li>• ep_tripdata: Additional trip information reported by ecoPLUS, containing <a href="#">parameters specific to ep_tripdata</a>.</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• ep_snapshotdata: ecoPLUS update recording, containing <a href="#">parameters specific to ep_snapshotdata</a>.</li> <li>• invalid_waypoints: An array of the numbers of the waypoints that are not valid for a route calculation on a Driver Terminal.</li> <li>• fms_snapshotdata: FMS live data, containing <a href="#">parameters specific to fms_snapshotdata</a>.</li> </ul> <hr/> <ul style="list-style-type: none"> <li>• fms_fuel_difference: Additional data for fuel level increase/decrease messages, containing <a href="#">parameters specific to fms_fuel_difference</a>.</li> <li>• fms_tripdata: Additional trip information reported by FMS, containing <a href="#">parameters specific to fms_tripdata</a>.</li> <li>• acc_events: additional details on acceleration events, containing <a href="#">parameters specific to acc_events</a>.</li> </ul> <div> <p><b>Note:</b> This parameter is not available by default. Please contact Customer Support to activate it. Additional cost will apply.</p> </div> |

| Parameter      | Type     | Description  |
|----------------|----------|--|
|                |          | <ul style="list-style-type: none"> <li>aux_device_data_in: information about third party Bluetooth device (LINK.connect), containing <a href="#">parameters specific to aux_device_data_in</a>.</li> <li>aux_device_data_quota: information about allowed and used quota (LINK.connect), containing <a href="#">parameters specific to aux_device_data_quota</a>.</li> <li>aux_device_data_out_status: status of sent messages (LINK.connect), containing <a href="#">parameters specific to aux_device_data_out_status</a>.</li> </ul>  |
|                |          | <ul style="list-style-type: none"> <li>aux_device_data_reference: identifiers for outgoing and incoming messages (LINK.connect), containing <a href="#">parameters specific to aux_device_data_reference</a>.</li> <li>troublecodes: Information about <a href="#">diagnostic trouble codes</a>. See <a href="#">parameters specific to troublecodes</a>.</li> </ul>   |
|                |          | <ul style="list-style-type: none"> <li>app_data_in: information about application (small binary message) data, containing <a href="#">parameters specific to app_data_in</a>.</li> <li>app_data_quota: information about allowed and used quota, containing <a href="#">parameters specific to app_data_quota</a>.</li> <li>app_data_out_status: status of sent small binary messages, containing <a href="#">parameters specific to app_data_out_status</a>.</li> <li>app_data_reference: identifiers for outgoing and incoming small binary messages, containing <a href="#">parameters specific to app_data_reference</a>.</li> <li>er_tripdata: Additional trip information reported by eco reporting, containing <a href="#">parameters specific to er_tripdata</a>.</li> <li>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.</li> </ul> |
| event_time     | dateTime | <p><a href="#">ISO 8601</a>-formatted date and time in the UTC timezone, combined representation in the extended format.</p> <hr/> <p><i>Example: 2007-12-24T16:00:00Z</i></p> <hr/> <p>Contains local time of the device on which the event occurred and/or the time the message was generated.</p>   |
| start_time     | string   | The time recorded when this event started.   |
| start_latitude | int      | <p>Geographic latitude in the <a href="#">WGS84</a> coordinate system. Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p>   |

| Parameter               | Type        | Description   |
|-------------------------|-------------|---|
| start_longitude         | int         | Geographic longitude in the WGS84 coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> . |
| start_odometer          | int         | The odometer reading when this event started.   |
| end_time                | string      | The time recorded when this event ended.  |
| end_latitude            | int         | Geographic latitude in the WGS84 coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> .  |
| end_longitude           | int         | Geographic longitude in the WGS84 coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> . |
| end_odometer            | int         | The odometer reading when this event ended.   |
| trip_type               | string      | Valid values: <ul style="list-style-type: none"> <li>• G - trip (vehicle changed GPS position)</li> <li>• S - standstill</li> </ul>   |
| 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.<br>Can be used alternatively to <code>objectno</code> .  |
| driveruid               | string      | A unique, unchangeable identifier for the indicated driver, automatically generated.<br>Can be used alternatively to <code>driverno</code> .  |
| driverkey_deviceaddress | 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       | Type   | Description   |
|-----------------|--------|---|
| location_params | string | <p>This parameter is currently tested. It will become part of the new reverse geocoder that we use internally.</p> <p>Name and value are separated by "=". Pairs are separated by ";". Possible names are:</p> <ul style="list-style-type: none"> <li>• countryCode</li> <li>• countryName</li> <li>• adminLevel1Code</li> <li>• adminLevel1Name</li> <li>• adminLevel2Name</li> <li>• adminLevel3Name</li> <li>• adminLevel4Name</li> <li>• adminLevel5Name</li> <li>• locality</li> <li>• subLocality1</li> <li>• subLocality2</li> <li>• cityBlock</li> <li>• namedArea</li> <li>• neighbourHood</li> <li>• street</li> <li>• route</li> <li>• postalCode</li> <li>• extendedPostalCode</li> <li>• houseNumber</li> <li>• roadNumbers</li> <li>• speedLimit</li> <li>• roadUse</li> </ul> <p>Please note that the result does not always contain all position parameters. The parameter names are subject to modification.</p> <hr/> <p>Example: countryCode=DE;countryName=Deutschland;adminLevel1Code=SN; adminLevel1Name=Sachsen;locality=Leipzig;subLocality1=Zentrum-Ost; street=Inselstraße;postalCode=04103;houseNumber=22;speedLimit=30;roadUse=LocalStreet;</p> <hr/> |

## ackQueueMessagesExtern

### Description

Acknowledges outstanding messages retrieved with a previous call to [popQueueMessagesExtern](#).

### Technical details

SOAP endpoint address / function name messagesService#ackQueueMessagesExtern

## Parameters

**ackQueueMessagesExtern** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to **ackQueueMessagesExtern**:

| Parameter | Type               | Description  |
|-----------|--------------------|--|
| msgclass  | nonNegativeInteger | Valid values: <ul style="list-style-type: none"><li>• 0 - All messages<br/>Includes tracking-only messages and 4,5,7,8.</li><li>• 2 - All except position messages<br/>Includes 4,5,7,8, does not include tracking-only messages.</li><li>• 4 - Order related messages</li><li>• 5 - Driver related messages</li><li>• 7 - Status messages</li><li>• 8 - Text messages</li><li>• 15 - Third party messages (LINK.connect, ...)</li></ul> |

## Result

Result for **ackQueueMessagesExtern**:

| Parameter            | Type               | Description   |
|----------------------|--------------------|---|
| action               | string             | The name of the operation that has been executed.   |
| result               | boolean            | Always <code>true</code> .<br>Errors will be reported using the standard error reporting mechanism.   |
| acknowledgedMessages | nonNegativeInteger | This value is a pointer value that does not always represent the actually acknowledged messages.<br><b>Note:</b> This value is used for internal purposes only. |
| outstandingMessages  | nonNegativeInteger | 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   |
| 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   |

Message types

| <b>msg_type</b> | <b>Available in message queue</b> | <b>Description</b>   |
|-----------------|-----------------------------------|--|
| 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 Solutions |
| 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        | 0, 2, 7                           | Trip data  |
| 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   |

Message types

| msg_type      | Available in message queue | Description   |
|---------------|----------------------------|---|
| 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)<br><b>Note:</b> This device is no longer in use.  |
| 66000511      | 0, 2, 7                    | Device off (specific to TomTom GO 715)<br><b>Note:</b> 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)                                |
| 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  |
| Message types |                            |   |

| <b>msg_type</b> | <b>Available in message queue</b> | <b>Description</b>  |
|-----------------|-----------------------------------|---|
| 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        | 0, 2, 5, 7                        | Digital tachograph card (company card, workshop card, control card) removed from digital tachograph   |
| 80000776        | 0, 2, 5, 7                        | Time difference between digital tachograph and LINK device  |
| 80000777        | 0, 2, 5, 7                        | Working state changed for digital tachograph 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)  |

Message types

| <b>msg_type</b> | <b>Available in message queue</b> | <b>Description</b>  |
|-----------------|-----------------------------------|---|
| 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)   |
| 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   |
| 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                    |

Message types

| msg_type | Available in message queue | Description   |
|----------|----------------------------|---|
| 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             | <p>Mobile-terminated - LINK.connect/Binary message was sent to LINK/device.</p> <p>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.</p>  |
| 80000861 | 0, 2, 5, 7, 15             | <p>Mobile-originated - Status response for aux_device_data_out/app_device_data_out</p> <p>This message acknowledges device data sent from the integration server backend to an device. After using sendAuxDeviceData/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.</p> <p>JSON structures in surplus_data:</p> <ul style="list-style-type: none"> <li>aux_device_data_out_status/app_data_out_status</li> <li>aux_device_data_quota/app_data_quota</li> <li>aux_device_data_reference/app_data_reference</li> </ul> |
| 80000862 | 0, 2, 5, 7, 15             | <p>Mobile-originated - Contains the payload that was sent by the device.</p> <p>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.</p> <p>JSON structures in surplus_data:</p> <ul style="list-style-type: none"> <li>aux_device_data_in/app_data_in</li> <li>aux_device_data_quota/app_data_quota</li> <li>aux_device_data_reference/app_data_reference</li> </ul>   |

Message types

| msg_type | Available in message queue | Description  |
|----------|----------------------------|--|
| 80000863 | 0, 2, 5, 7, 15             | <p>Mobile-terminated - Response sent to the device after receiving third party data.</p> <p>This message acknowledges data received from the device. Integrations can use this message for tracking the message flow.</p> <p>JSON structures in surplus_data:</p> <ul style="list-style-type: none"> <li>aux_device_data_status/app_data_status</li> <li>aux_device_data_reference/app_data_reference</li> </ul> |
| 80000864 | 0, 2, 5, 7, 15             | <p>Mobile-originated/mobile-terminated - Control message.</p> <p>This is a multi-purpose control message sent to the device or received from the device.</p>   |
| 80000880 | 0, 2, 5, 7                 | <p>List of current vehicle Diagnostic Trouble Codes has changed.</p> <p>JSON structure in surplus_data:</p> <ul style="list-style-type: none"> <li>troublecodes</li> </ul>   |
| 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   |
| 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   |

Message types

| <b>msg_type</b> | <b>Available in message queue</b> | <b>Description</b>  |
|-----------------|-----------------------------------|---|
| 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                              |
| 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  |
| 80001062        | 0, 2, 5, 7                        | Vehicle Data Reporting: Cruise control switched off   |

Message types



| <b>msg_type</b> | <b>Available in message queue</b> | <b>Description</b>   |
|-----------------|-----------------------------------|--|
| 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  |
| 81100766        | 0, 2, 5, 7                        | End waiting  |
| 90000550        | 0, 2                              | Query for status of the external GPS antenna (out-bound) (specific to LINK 510/710)              |
| Message types   |                                   |  |

| <b>msg_type</b> | <b>Available in message queue</b> | <b>Description</b>  |
|-----------------|-----------------------------------|---|
| 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.<br>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   |
| 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)  |
| Message types   |                                   |   |

| <b>msg_type</b> | <b>Available in message queue</b> | <b>Description</b>   |
|-----------------|-----------------------------------|--|
| 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       | 0, 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. |
| 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)            |

Message types

| <b>msg_type</b> | <b>Available in message queue</b> | <b>Description</b>                                     |
|-----------------|-----------------------------------|--|
| 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 to destination               |
| 110000764       | 0, 2, 4                           | List of invalid order waypoints                        |
| 110000765       | 0, 2, 4                           | Appended order waypoints                               |
| 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  |

Message types

| msg_type  | Available in message queue | Description                               |
|-----------|----------------------------|---|
| 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.<br>Valid values: <ul style="list-style-type: none"> <li>0 - Acceleration</li> <li>1 - Braking</li> <li>2 - Steering left</li> <li>3 - Steering right</li> </ul>   |
| maxacc      | int   | Maximum acceleration, in milli- <i>g</i> .  |
| avgacc      | int   | Average acceleration, in milli- <i>g</i> .  |
| 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 <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees (10 <sup>-6</sup> grd).<br>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * 10 <sup>6</sup> and rounding to an integer.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> . |

| Parameter | Type     | Description   |
|-----------|----------|---|
| lon       | int      | Geographic longitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> . |
| 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.<br>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.<br>Valid values: <ul style="list-style-type: none"> <li>0 - Data was sent successfully.</li> <li>1 - Device has rejected the message, because the internal buffer is full.</li> <li>2 - The last sent but rejected message would now fit into the buffer of the device.</li> </ul> |

#### 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 | Type | 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.<br>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.<br>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.<br>Valid values: <ul style="list-style-type: none"><li>0 - data was sent successfully.</li><li>1 - LINK has rejected the message, because the internal buffer is full.</li><li>2 - the last sent but rejected message would now fit into the buffer of the LINK.</li></ul> |

#### Parameters specific to aux\_device\_data\_reference

| Parameter      | Type | Description   |
|----------------|------|---|
| correlation_id | int  | User-provided correlation ID of outgoing messages.  |
| reference_id   | int  | Internal ID provided by WEBFLEET and LINK.<br>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_distance | int  | in ml/100km, only returned if distance is greater than 0. |
| avgfuelusage_time     | int  | in ml/h   |
| 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 <code>start_odometer</code> and <code>end_odometer</code> .<br>Unit of measurement is "meters". |
| fuel_usage | float | Fuel consumption in litres<br><b>Note:</b> Max. three decimals allowed.  |
| co2        | int   | Carbon dioxide emissions in grams.   |

#### Parameters specific to fms\_fuel\_difference

| Parameter       | Type | Description   |
|-----------------|------|---|
| sloptype        | int  | Fuel jump or continuous event.<br>Valid values: <ul style="list-style-type: none"><li>0 - leap</li><li>1 - continuous</li></ul> |
| 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  | Type | Description                     |
|------------|------|---------------------------------|
| fuel_level | int  | Current fuel level in per mill. |

**Parameters specific to fms\_tripdata**

| Parameter              | Type | Description  |
|------------------------|------|--|
| fuel_usage             | int  | Fuel usage in ml.  |
| rpm_violation_duration | int  | The duration during the trip the engine speeds over a threshold, in seconds. |

**Parameters specific to troublecodes**

| Parameter | Type            | 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. |

# 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 name | objectsAndPeopleReportingService#showObjectReport |
|---------------------------------------|---|

|                |                     |
|----------------|---------------------|
| Request limits | 6 requests / minute |
|----------------|---------------------|

Use [Message queues](#) 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&username=xxx&password=xxx&apikey=xxx&lang=de&action=showObjectReportExtern&filterstring=Demo
```

#### SOAP request

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
  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>
      <gParm>
        <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:

- [Authentication parameters](#)
- [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.<br>Only valid value is <code>true</code> .<br>This parameter overrules the group name filter parameter.<br>This parameter is optional. |
| objectno        | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to <code>objectuid</code> .  |
| objectuid       | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> .  |
| externalid      | string      | For future use.<br>This parameter is optional.  |

Parameters specific to showObjectReportExtern

## Result

Result for showObjectReportExtern:

| Parameter       | Type         | Description  |
|-----------------|--------------|--|
| objectno        | string (10)  | Identifying number of an object.<br>Unique within an account, case-sensitive.  |
| objectname      | string       | Display name of an object.   |
| objectclassname | string       |  |
| objecttype      | string       | Can be empty or contain the valid values listed in <code>vehicletype</code> , see <a href="#">updateVehicle</a> .  |
| description     | string (500) | Vehicle description  |
| lastmsgid       | string       | The ID of the last message received from or sent to this object.<br><code>msgid</code> identifies a message and is system-wide unique.<br>Possible values are in the range $0 \leq \text{msgid} \leq 2^{64}-1$ . |

Result for showObjectReportExtern

| Parameter     | Type               | Description  |
|---------------|--------------------|--|
| deleted       | boolean            |  |
| msgtime       | string             |  |
| longitude     | string             | Geographic longitude in the form GGG° MM' SS.S" E/W in the <a href="#">WGS84</a> coordinate system.  |
| latitude      | string             | Geographic latitude in the form GGG° MM' SS.S" N/ S in the <a href="#">WGS84</a> 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        | nonNegativeInteger | Compass direction in degrees (0° ... 360°).  |
| direction     | nonNegativeInteger | Cardinal and intercardinal compass directions, derived from <code>course</code> .<br>Valid values: <ul style="list-style-type: none"> <li>• 1 - North</li> <li>• 2 - Northeast</li> <li>• 3 - East</li> <li>• 4 - Southeast</li> <li>• 5 - South</li> <li>• 6 - Southwest</li> <li>• 7 - West</li> <li>• 8 - Northwest</li> </ul>  |
| quality       | string             | Not supported anymore. This was only specific to LINK classic.   |
| satellite     | string             | Not supported anymore. This was only specific to LINK classic.   |
| status        | string             | GPS signal status indicator, possible values are: <ul style="list-style-type: none"> <li>• A - ok: a current GPS fix is available with this message.</li> <li>• V - warn: a current GPS fix is available, but it might be inaccurate.</li> <li>• L - last: the GPS position is from the last known good fix, a current fix is not (yet) available.</li> <li>• 0 - invalid: no GPS fix available or GPS has no meaning for this message.</li> </ul> |

Result for showObjectReportExtern

| Parameter               | Type               | Description  |
|-------------------------|--------------------|--|
| dest_latitude           | int                | Geographic latitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).  |
| dest_longitude          | int                | Geographic longitude in the <a href="#">WGS84</a> coordinate system.<br>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.<br>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-sensitive.  |
| codrivername            | string             | Display name of a co-driver.   |
| codrivertelmobile       | string             | Mobile phone number of the co-driver.  |
| driver_currentworkstate | nonNegativeInteger | Valid values: <ul style="list-style-type: none"> <li>0 - Unknown</li> <li>1 - Free time (PND only)</li> <li>2 - Pause (PND and digital tachograph)</li> <li>3 - Standby (digital tachograph only)</li> <li>4 - Working (PND only)</li> <li>5 - Driving (digital tachograph only)</li> <li>6 - Other work (digital tachograph only)</li> </ul> <p>When no driver has signed on, <code>driver</code> is empty, the state shown indicates the current working state of the vehicle.</p> |

Result for showObjectReportExtern

| Parameter                 | Type               | Description   |
|---------------------------|--------------------|---|
| codriver_currentworkstate | nonNegativeInteger | Valid values: <ul style="list-style-type: none"> <li>0 - Unknown</li> <li>1 - Free time (PND only)</li> <li>2 - Pause (PND and digital tachograph)</li> <li>3 - Standby (digital tachograph only)</li> <li>4 - Working (PND only)</li> <li>5 - Driving (digital tachograph only)</li> <li>6 - Other work (digital tachograph only)</li> </ul> |
| rll_btaddress             | string (17)        | <a href="#">Remote LINK</a> Bluetooth address.<br>The <a href="#">IEEE 802 MAC-48/EUI-48</a> address of a Bluetooth device, formatted as six groups of two hexadecimal digits, separated by colons (:).<br><hr/> <i>Example: 00:13:6C:88:26:0B</i> <hr/>  |
| odometer                  | string             | The current odometer value in 100 meter.  |
| ignition                  | nonNegativeInteger | The current state of the ignition. <ul style="list-style-type: none"> <li>0 - Ignition off</li> <li>1 - Ignition on</li> </ul>  |
| ignition_time             | string             | The time the last ignition state was reported.  |
| dest_distance             | string             | The distance to the current navigation destination in meters.<br>If empty, no navigation destination was specified.   |
| tripmode                  | nonNegativeInteger | Valid values: <ul style="list-style-type: none"> <li>0 - Unknown trip type</li> <li>1 - Private trip</li> <li>2 - Business trip</li> <li>3 - Commute trip</li> <li>4 - Correction trip (user changed the odometer value manually)</li> </ul>  |
| standstill                | nonNegativeInteger | Indicates if the vehicle is standing still.<br>Valid values: <ul style="list-style-type: none"> <li>0 - not standing still</li> <li>1 - standing still</li> </ul>   |
| pndconn                   | nonNegativeInteger | Indicates if a navigation device is connected to the LINK device.<br>Valid values: <ul style="list-style-type: none"> <li>0 - not connected</li> <li>1 - connected</li> </ul>   |

Result for showObjectReportExtern

| Parameter               | Type        | Description  |
|-------------------------|-------------|--|
| latitude_mdeg           | int         | <p>Geographic latitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p>  |
| longitude_mdeg          | int         | <p>Geographic longitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p> |
| objectuid               | string (30) | <p>A unique, unchangeable identifier for the indicated object, automatically generated.</p> <p>Can be used alternatively to <code>objectno</code>.</p>   |
| fuellevel               | int         | <p>The current fuel level in per mill.</p> <div> <p><b>Note:</b> This information is only available for LINK 510/710 devices connected to the vehicle's FMS.</p> </div>  |
| externalid              | string      | For future use.  |
| driveruid               | string      | <p>A unique, unchangeable identifier for the indicated driver, automatically generated.</p> <p>Can be used alternatively to <code>driverno</code>.</p>   |
| codriveruid             | string      | <p>A unique, unchangeable identifier for the indicated codriver, automatically generated.</p> <p>Can be used alternatively to <code>codriver</code>.</p>   |
| driverkey_deviceaddress | string      | <p>JSON encoded string with an array of strings.</p> <p>Each string contains the address of the driver key reading device which is associated with the vehicle.</p> <hr/> <p><i>Example:</i> [ "00:21:3E:B3:8D:EA" ]</p> <hr/>   |
| fuellevel_milliliters   | string      | <p>The current fuel level in milliliters.</p> <div> <p><b>Note:</b> This information is only available for LINK 204.</p> </div>  |

Result for showObjectReportExtern

| Parameter             | Type               | Description   |
|-----------------------|--------------------|---|
| engine_operation_time | nonNegativeInteger | Returns the accumulated time of operation of the engine in seconds. |

**Note:** This information is only available for LINK devices that are connected to FMS.

Result for showObjectReportExtern

## showVehicleReportExtern

### Description

Lists all objects of type "Vehicle".

### Technical details

SOAP endpoint address / function name objectsAndPeopleReportingService#showVehicleReport

Request limits 10 requests / minute

### Parameters

**showVehicleReportExtern** requires the following common parameters:

- [Authentication parameters](#)
- [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.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to objectuid.       |
| objectuid       | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to objectno. |
| externalid      | string      | For future use.<br>This parameter is optional.   |

### Result

Result for showVehicleReportExtern:



| Parameter          | Type        | Description   |
|--------------------|-------------|---|
| objectno           | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.   |
| objectname         | string      | Display name of an object.  |
| licenseplatenumber | string      |   |
| vehicletype        | string      | Can be empty or contain the valid values listed in <code>vehicle-type</code> , see <a href="#">updateVehicle</a> .  |
| width              | string      |   |
| length             | string      |   |
| height             | string      |   |
| maxweight          | string      |   |
| netweight          | string      |   |
| netload            | string      |   |
| power              | string      |   |
| numaxes            | string      |   |
| identnumber        | string      |   |
| 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.<br>Valid values: <ul style="list-style-type: none"> <li>0 - unknown</li> <li>1 - diesel</li> <li>2 - gasoline</li> <li>3 - lpg</li> <li>4 - hybrid petrol</li> <li>5 - hybrid diesel</li> <li>6 - electric</li> </ul> |
| ep_fueltype        | int         | Fuel type determined by ecoPLUS.<br>Valid values: <ul style="list-style-type: none"> <li>1 - diesel</li> <li>2 - gasoline</li> </ul>  |

| Parameter    | Type               | Description  |
|--------------|--------------------|--|
| fl_fueltype  | int                | Fleet based fuel type.<br>Valid values: <ul style="list-style-type: none"> <li>0 - unknown</li> <li>1 - diesel</li> <li>2 - gasoline</li> <li>3 - lpg</li> <li>4 - hybrid petrol</li> <li>5 - hybrid diesel</li> <li>6 - electric</li> </ul> |
| enginesize   | nonNegativeInteger | Engine size in ccm.  |
| ep_btaddress | string (17)        | ecoPLUS Bluetooth address.<br>The <a href="#">IEEE 802 MAC-48/EUI-48</a> address of a Bluetooth device, formatted as six groups of two hexadecimal digits, separated by colons (:).<br><hr/> <i>Example: 00:13:6C:88:26:0B</i> <hr/>         |
| speedlimit   | float              | Speed limit in km/h, min: 0, max: 300  |
| vehiclecolor | string             | Valid values: <ul style="list-style-type: none"> <li>white</li> <li>grey</li> <li>black</li> <li>red</li> <li>orange</li> <li>yellow</li> <li>green</li> <li>blue</li> </ul>   |
| description  | string (500)       | Vehicle description.   |
| objectuid    | string (30)        | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> .   |
| vh_rpmlimit  | int                | Indicates the engine's maximum allowed revolutions per minute. This value is used to report RPM violations.<br>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.<br>This value is used to report RPM violations.<br>Supported by LINK 510/710 connected to FMS.  |
| externalid   | string             | For future use.  |

| Parameter       | Type               | Description   |
|-----------------|--------------------|---|
| obu_btaddress   | string (17)        | <p>The Bluetooth address of the LINK device.</p> <p>This information is currently available for LINK 510/710/410 with firmware version 3.4 or higher.</p> <p>The <a href="#">IEEE 802 MAC-48/EUI-48</a> address of a Bluetooth device, formatted as six groups of two hexadecimal digits, separated by colons.</p> <hr/> <p><i>Example: 00:13:6C:88:26:0B</i></p> <hr/> |
| fueltanksize    | int                | Size of the fuel tank in litres.  |
| ep_type         | nonNegativeInteger | <p>Type of the OBDII dongle (eco periphery).</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>1 - ecoPLUS</li> <li>2 - LINK 105</li> </ul>   |
| manufactureyear | int                | <p>The year in which the vehicle was manufactured.</p> <p>This parameter is optional.</p>   |
| fuelreference   | nonNegativeInteger | <p>Indicates to which type of fuel reference to refer to.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>0 - The reference value defined for the fleet.</li> <li>1 - The reference value defined for the individual vehicle.</li> <li>2 - ecoPLUS</li> </ul>   |

## 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 | objectsAndPeopleReportingService#showNearestVehicles |
| 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.<br>Is optional if you are using <code>latitude</code> and <code>longitude</code> to specify the destination.  |
| latitude        | int         | Geographic latitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>Transformation from degree, minutes and seconds can be done with the following calculation: $(\text{degrees} + \text{minutes}/60 + \text{seconds}/3600) * 10^6$ and rounding to an integer.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> .<br>This parameter is optional if <code>addrno</code> is indicated.  |
| longitude       | int         | Geographic longitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>Transformation from degree, minutes and seconds can be done with the following calculation: $(\text{degrees} + \text{minutes}/60 + \text{seconds}/3600) * 10^6$ and rounding to an integer.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> .<br>This parameter is optional if <code>addrno</code> is indicated. |
| priority        | int         | Defines the priority of attributes by which the results shall be sorted.<br>Valid values: <ul style="list-style-type: none"> <li>• 1 - Object state / linear distance / object number</li> <li>• 2 - Linear distance / object number</li> </ul> The default is 1.<br>This parameter is optional. <div> <b>Note:</b> The first 8 results will be returned including routed distance and estimated travel time. </div>  |
| maxdistance     | int         | Defines the maximum linear distance from the indicated location, in meters.<br>Vehicles that are further away from the location than the defined distance will not be included in the result list.<br>This parameter is optional.   |

## Result

Result for showNearestVehicles:

| Parameter      | Type        | Description  |
|----------------|-------------|--|
| objectno       | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.  |
| objectuid      | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> .   |
| objectstate    | int         | The status the vehicle currently has.<br>Valid values: <ul style="list-style-type: none"> <li>1 - available</li> <li>2 - has order</li> <li>3 - offline</li> </ul>   |
| latitude       | int         | Geographic latitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> .<br>This parameter is optional if <code>addrno</code> is indicated.  |
| longitude      | int         | Geographic longitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> .<br>This parameter is optional if <code>addrno</code> 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 <code>routedistance</code> , in seconds.  |

## showContracts

### Description

This action shows contract and device data for selected devices.

### Technical details

SOAP endpoint address / function name `objectsAndPeopleReportingService#showContracts`

## Parameters

**showContracts** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to showContracts:

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

## Result

Result for showContracts:

| Parameter       | Type        | Description  |
|-----------------|-------------|--|
| objectno        | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.  |
| contractno      | string      |  |
| begin_date      | dateTime    | <a href="#">ISO 8601</a> -formatted date and time in the UTC timezone, combined representation in the extended format.<br><br>Example: 2007-12-24T16:00:00+02:00 |
| end_date        | dateTime    | <a href="#">ISO 8601</a> -formatted date and time in the UTC timezone, combined representation in the extended format.<br><br>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      |  |

| Parameter      | Type        | Description   |
|----------------|-------------|---|
| obu_osversion  | string      |   |
| 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.<br>Can be used alternatively to <code>objectno</code> .  |
| 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.<br>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.<br>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

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

### Parameters

**updateVehicle** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to updateVehicle:

| Parameter          | Type        | Description  |
|--------------------|-------------|--|
| objectno           | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to <code>objectuid</code> .<br>If both parameters <code>objectuid</code> and <code>objectno</code> are given, then <code>objectno</code> will be updated. <code>objectno</code> is required to have between 1 and 10 characters and must not already exist. |
| vehicletype        | string      | Case-sensitive.<br>For valid values, see the <a href="#">List of vehicle types</a> at the end of this section.   |
| vehiclecolor       | string      | Case-sensitive.<br>Valid values: <ul style="list-style-type: none"> <li>• white</li> <li>• grey</li> <li>• black</li> <li>• red</li> <li>• orange</li> <li>• yellow</li> <li>• green</li> <li>• blue</li> </ul>  |
| identnumber        | string (20) |  |
| registrationdate   | string (20) |  |
| denotation         | string (30) | Changes the value of <code>objectname</code> .   |
| licenseplatenumber | string (20) |  |
| speedlimit         | float       | Speed limit in km/h. <ul style="list-style-type: none"> <li>• min: 0</li> <li>• max: 300</li> </ul> This parameter is optional.  |
| fuelconsumption    | float       | Fuel consumption in l/100km. <ul style="list-style-type: none"> <li>• min: 0</li> <li>• max: 100</li> </ul> This parameter is optional.  |



| Parameter     | Type               | Description  |
|---------------|--------------------|--|
| fueltype      | int                | Case-sensitive.<br>Valid values: <ul style="list-style-type: none"> <li>0 - unknown</li> <li>1 - diesel</li> <li>2 - gasoline</li> <li>3 - lpg</li> <li>4 - hybrid petrol</li> <li>5 - hybrid diesel</li> <li>6 - electric</li> </ul>                                |
| netweight     | float              | in kg  |
| maxweight     | float              | in kg  |
| netload       | float              | in kg  |
| maxload       | float              | in kg  |
| numaxles      | nonNegativeInteger |  |
| length        | nonNegativeInteger | in mm  |
| width         | nonNegativeInteger | in mm  |
| height        | nonNegativeInteger | in mm  |
| description   | string (500)       | Vehicle description  |
| power         | float              | in kW  |
| enginesize    | nonNegativeInteger | in ccm   |
| reset_fuelavg | boolean            | Reset switch for measured or calculated average fuel consumption. <ul style="list-style-type: none"> <li>1 - reset</li> </ul>  |
| odometer      | nonNegativeInteger | Updated odometer value in meters.  |
| objectuid     | string (30)        | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to <code>objectno</code> .<br>Can also be used to update <code>objectno</code> , please refer to the description of parameter <code>objectno</code> . |

| Parameter       | Type               | Description  |
|-----------------|--------------------|--|
| rpmlimit        | int                | <p>Indicates the engine's maximum allowed revolutions per minute.</p> <p>This value is used to report RPM violations. Supported by LINK 510/710 connected to FMS.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• <code>&lt;int value&gt;</code> sets the vehicle specific RPM limit</li> <li>• "null" or empty parameter value removes the vehicle specific RPM limit.</li> </ul> <p><b>Note:</b> If the vehicle-specific value is removed, the fleet-based value will be used for RPM violation reporting.</p> |
| ep_btaddress    | string (17)        | <p>ecoPLUS Bluetooth address.</p> <p>The <a href="#">IEEE 802 MAC-48/EUI-48</a> address of a Bluetooth device, formatted as six groups of two hexadecimal digits, separated by colons.</p> <hr/> <p><i>Example: 00:13:6C:88:26:0B</i></p> <hr/> <p><b>Note:</b> If empty, the existing value will be deleted. When omitted, the existing value will not change.</p> <p>This parameter is optional.</p>   |
| rll_btaddress   | string (17)        | <p><a href="#">Remote LINK</a> Bluetooth address.</p> <p>The <a href="#">IEEE 802 MAC-48/EUI-48</a> address of a Bluetooth device, formatted as six groups of two hexadecimal digits, separated by colons (:).</p> <hr/> <p><i>Example: 00:13:6C:88:26:0B</i></p> <hr/> <p><b>Note:</b> If empty the existing value will be deleted. When omitted the existing value will not change.</p> <p>This parameter is optional.</p>   |
| externalid      | string             | For future use.  |
| fueltanksize    | int                | Size of the fuel tank in litres.   |
| ep_type         | nonNegativeInteger | <p>Type of the OBDII dongle (eco periphery).</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 1 - ecoPLUS</li> <li>• 2 - LINK 105</li> </ul>  |
| manufactureyear | int                | <p>The year in which the vehicle was manufactured.</p> <p>This parameter is optional.</p>  |

| Parameter     | Type               | Description   |
|---------------|--------------------|---|
| fuelreference | nonNegativeInteger | Indicates to which type of fuel reference to refer to.<br>Valid values are: <ul style="list-style-type: none"> <li>0 - The reference value defined for the fleet.</li> <li>1 - The reference value defined for an individual vehicle.</li> <li>2 - ecoPLUS</li> </ul> |

## List of vehicle types

The following list shows valid values for parameter `vehicleType` 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:
  - ape (shown as "Three wheeler" in the UI)
  - barge
  - bike (shown as "Motor bike" in the UI)
  - boom\_lift
  - boom\_lift\_truck
  - bus
  - caddy (shown as "Small van" in the UI)
  - car
  - car\_station\_wagon
  - concrete\_lorry
  - containership (Shown as "Cargo ship" in the UI)
  - crane
  - deposit\_tipper
  - dump\_truck
  - dump\_truck\_open
  - excavator
  - garbage\_truck
  - heavy\_truck
  - heavytruck\_us
  - heavyweight\_truck
  - heavyweight\_truck\_trailer
  - lighttruck
  - light\_truck\_pallet
  - loader (shown as "Wheel loader" in the UI)
  - medium\_truck
  - multicar (shown as "Snow plough" in the UI)
  - multivan
  - pallet\_truck
  - pickup
  - smart
  - sprinter (shown as "Van / Light truck" in the UI)
  - street\_sweeper
  - suv



- [Authentication parameters](#)
- [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.<br>Can be used alternatively to objectgroupuid.           |
| objectgroupuid  | string | A unique, unchangeable identifier for the indicated object group, automatically generated.<br>Can be used alternatively to objectgroupname. |

## Result

Result for showObjectGroups:

| Parameter       | Type   | Description   |
|-----------------|--------|---|
| objectgroupname | string | Name of the object group.   |
| objectcount     | string | The number of objects assigned to the indicated group.<br>The number of objects that are not assigned to a group is not returned. |
| objectgroupuid  | string | A unique, unchangeable 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#showObjectGroupObjectReport |
| Request limits                        | 10 requests / minute   |

### Parameters

**showObjectGroupObjects** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to showObjectGroupObjects:

| Parameter       | Type        | Description  |
|-----------------|-------------|--|
| objectno        | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>This parameter is optional.                                 |
| objectgroupname | string      | The given entry filters the result list on the object groups with matching names, case-sensitive.<br>This parameter is optional.             |
| objectuid       | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> . |

## Result

Result for `showObjectGroupObjects`:

| Parameter       | Type        | Description  |
|-----------------|-------------|--|
| objectno        | string (10) | Identifying number of an object.<br>Unique within an account.<br>Case-sensitive.   |
| objectname      | string      | Display name of an object.   |
| objectgroupname | string      |  |
| objectuid       | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> . |
| objectgroupuid  | string      | A unique, unchangeable 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#attachObjectToGroup`

Request limits 1000 requests / hour

### Parameters

**attachObjectToGroup** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to attachObjectToGroup:

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

Request limits 100 requests / 30 minutes

### Parameters

**insertObjectGroup** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to insertObjectGroup:

| Parameter       | Type   | Description  |
|-----------------|--------|--|
| objectgroupname | string | Name of the object group, case-sensitive.<br>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 / function name objectsAndPeopleReportingService#deleteObjectGroup

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.<br>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#updateObjectGroup

|                |                           |
|----------------|---------------------------|
| 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.<br>This parameter is required. |
| objectgroupname_old | string | Name of the object group, case-sensitive.<br>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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific for switchOutput:

| Parameter   | Type        | Description  |
|-------------|-------------|--|
| objectno    | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to <code>objectuid</code> .   |
| status      | int         | Valid values: <ul style="list-style-type: none"> <li>1</li> <li>0</li> </ul> This parameter is required.   |
| objectuid   | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> .   |
| output_name | string (50) | Identifies the output to be switched. The name can be configured in the WEBFLEET user interface.<br>This parameter is optional. If omitted, the first configured output is used. It is recommended to always use the <code>output_name</code> 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#showWakeupTimers`

Request limits 10 requests / minute

### Parameters

**showWakeupTimers** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific for `showWakeupTimers`:

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

| Parameter | Type        | Description  |
|-----------|-------------|--|
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> . |

## Result

Result for `showWakeupTimers`:

| Parameter  | Type         | Description  |
|------------|--------------|--|
| objectno   | string (10)  | Identifying number of an object.<br>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.<br>Valid values: <ul style="list-style-type: none"> <li>0 - LINK set to not wake up</li> <li>1 - LINK set to wake up</li> </ul> |
| tue        | boolean      | See <code>mon</code> .   |
| wed        | boolean      | See <code>mon</code> .   |
| thu        | boolean      | See <code>mon</code> .   |
| fri        | boolean      | See <code>mon</code> .   |
| sat        | boolean      | See <code>mon</code> .   |
| sun        | boolean      | See <code>mon</code> .   |
| time1      | String (5)   | Wake up time in format <code>hh:mm</code> , in the local time zone of the user.<br>If empty, the wake up time is not set.  |
| time2      | String (5)   | See <code>time1</code> .   |
| time3      | String (5)   | See <code>time1</code> .   |
| time4      | String (5)   | See <code>time1</code> .   |
| time5      | String (5)   | See <code>time1</code> .   |

## 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 `objectsAndPeopleReportingService#updateWakeupTimers`

Request limits 10 requests / minute

### Parameters

**updateWakeupTimers** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific for `updateWakeupTimers`:

| Parameter | Type        | Description   |
|-----------|-------------|---|
| objectno  | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to <code>objectuid</code> .  |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> .  |
| mon       | boolean     | Indicates whether the LINK device is set to wake up at that day.<br>The parameter can be omitted to leave its value unchanged.<br>Valid values: <ul style="list-style-type: none"><li>• 0 - LINK set to not wake up</li><li>• 1 - LINK set to wake up</li></ul> This parameter is optional. |
| tue       | boolean     | See <code>mon</code> .  |
| wed       | boolean     | See <code>mon</code> .  |
| thu       | boolean     | See <code>mon</code> .  |
| fri       | boolean     | See <code>mon</code> .  |
| sat       | boolean     | See <code>mon</code> .  |
| sun       | boolean     | See <code>mon</code> .  |

| Parameter | Type       | Description  |
|-----------|------------|--|
| time1     | string (5) | Wake up time in format hh:mm, in the local time zone of the user.<br>If empty the existing value will be deleted.<br>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 [additional features](#) 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#getObjectFeatures |
| Request limits                        | 10 requests / minute                               |

### Parameters

getObjectFeatures requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific for getObjectFeatures:

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

| Parameter | Type   | Description  |
|-----------|--------|--|
| feature   | string | Identifies the feature (additional service): <ul style="list-style-type: none"> <li>• linkconnect</li> <li>• hdtracking</li> <li>• waypoints</li> <li>• tachodownload</li> <li>• drivingtime</li> <li>• plugins</li> <li>• orderscheduleoptimization</li> <li>• fmsdirect</li> <li>• tpms</li> </ul> |

## Result

Result for getObjectFeatures:

| Parameter   | Type        | Description  |
|-------------|-------------|--|
| objectno    | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.  |
| objectuid   | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.   |
| feature     | string      | Identifies the feature (additional service): <ul style="list-style-type: none"> <li>• linkconnect</li> <li>• hdtracking</li> <li>• waypoints</li> <li>• tachodownload</li> <li>• drivingtime</li> <li>• plugins</li> <li>• orderscheduleoptimization</li> <li>• fmsdirect</li> <li>• tpms</li> </ul> |
| volume_max  | int         | Quota limit (if applicable).   |
| volume_used | int         | Currently used quota (if applicable).  |

## 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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific for updateContractInfo:

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

## getObjectCanSignals

### Description

getObjectSignals returns the latest received CAN signal values for one or more objects in an account. This action will also be useful for FMS when LINK 610/710 are used.

### Technical details

SOAP endpoint address / function name objectsAndPeopleReportingService#getObjectSignals

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.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to objectuid. |

| Parameter | Type        | Description  |
|-----------|-------------|--|
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> . |

## Result

Result for getObjectCanSignals:

| Parameter                | Type               | Description   |
|--------------------------|--------------------|---|
| objectno                 | string (10)        | Identifying number of an object.<br>Unique within an account, case-sensitive.   |
| objectuid                | string (30)        | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> .        |
| cansignaltimestamp       | dateTime           | The time the CAN signal was read from the CAN bus of the vehicle.   |
| cansignaltypename        | string             | Corresponds to a defined list of CAN signal types. All available signals are listed in <a href="#">Appendix F</a> .                                 |
| cansignaltypedescription | string             | Description of CAN signal type  |
| cansignaldatatype        | nonNegativeInteger | <ul style="list-style-type: none"> <li>1 = Integer</li> <li>2 = Decimal</li> <li>3 = Boolean</li> </ul>   |
| 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 | nonNegativeInteger | <p>Indicates the unit of measurement in which cansignalvalue is provided.</p> <p>Valid value are:</p> <ul style="list-style-type: none"> <li>• 0 - Special use (such as bit masks etc.)</li> <li>• 1 - Kilometer per hour</li> <li>• 2 - One per minute</li> <li>• 3 - Kilometer</li> <li>• 4 - Degree Celsius</li> <li>• 5 - Volt</li> <li>• 6 - On/Off</li> <li>• 7 - Percent</li> <li>• 8 - Ampere</li> <li>• 9 - Decimeter</li> <li>• 10 - Hours</li> <li>• 11 - Kilogram</li> <li>• 12 - Kilopascal</li> <li>• 13 - Milliliter</li> <li>• 14 - Liter</li> <li>• 15 - Liter per hour</li> <li>• 16 - Meter</li> <li>• 17 - Minutes</li> <li>• 18 - Newton meter</li> <li>• 19 - Rounds per minute</li> <li>• 20 - Seconds</li> <li>• 21 - Watt-hours</li> </ul> |

## getObjectCanMalfunctions

### Description

`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#getObjectCanMalfunctions`

Request limits 6 requests / minute

### Parameters

**getObjectCanMalfunctions** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `getObjectCanMalfunctions`:

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

## Result

Result for getObjectCanMalfunctions:

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

| Parameter        | Type               | Description   |
|------------------|--------------------|---|
| malfunctiontype  | nonNegativeInteger | <p>Malfunction types.</p> <p>Valid value are:</p> <ul style="list-style-type: none"> <li>• 10 = Battery</li> <li>• 20 = Battery voltage</li> <li>• 30 = Lights</li> <li>• 40 = Exhaust system</li> <li>• 50 = Tyre pressure</li> <li>• 60 = Brake fluid</li> <li>• 70 = Coolant level</li> <li>• 80 = Engine oil level</li> <li>• 90 = Engine oil pressure</li> <li>• 100 = Diesel particulate filter</li> <li>• 110 = Coolant temperature</li> <li>• 120 = Engine cooling</li> <li>• 130 = ABS</li> <li>• 140 = Brake system</li> <li>• 150 = Airbag</li> <li>• 160 = EPC</li> <li>• 170 = ESP</li> <li>• 180 = Preheat or engine malfunction</li> <li>• 190 = Brake pads</li> </ul> |
| malfunctionlevel | nonNegativeInteger | <ul style="list-style-type: none"> <li>• 1 = OK</li> <li>• 2 = WARNING</li> <li>• 3 = ERROR</li> </ul>  |

## getElectricVehicleData

### Description

`getElectricVehicleData` returns data for all electric vehicles in the account.

### Technical details

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

### Parameters

`getElectricVehicleData` requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

## Result

Result for `getElectricVehicleData`:

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

# Orders

---

## 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.

### Parameters

`sendOrderExtern` requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `sendOrderExtern`:

| Parameter | Type         | Description  |
|-----------|--------------|--|
| objectno  | string (10)  | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to <code>objectuid</code> .   |
| orderid   | string (20)  | Account-unique order id, case-sensitive.<br>Maximum capacity is 20 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters.<br>This parameter is required. |
| ordertext | string (500) | This parameter is required.  |

| Parameter        | Type        | Description  |
|------------------|-------------|--|
| useorderstates   | string      | <p>Specifies the order states that appear in the workflow of the indicated order.</p> <p>You can specify multiple values for this parameter. Separate the values with a comma when using CSV interface.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 202 - Arrived at destination</li> <li>• 203 - Work started</li> <li>• 204 - Work finished</li> <li>• 205 - Departed from destination</li> <li>• null - The states do not appear in the workflow, even if specified differently in the account settings.</li> </ul> <p>If you do not specify this parameter, the account-specific settings are used.</p> <p>This parameter is optional.</p>   |
| orderautomations | int         | <p>Specifies the workflow step(s) when starting an order that can be automated.</p> <p>You can specify multiple values for this parameter. Separate the values with a comma when using CSV interface.</p> <hr/> <p><i>Example: orderautomations=1,2</i></p> <hr/> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 1 - accept the order</li> <li>• 2 - start the order</li> <li>• 3 - navigate to the order destination</li> <li>• 4 - skip displaying the route summary screen</li> <li>• 5 - delete the order after it has been finished</li> <li>• 6 - suppress the "continue with next order" screen</li> </ul> <p>If you do not specify this parameter, the account-specific settings are used.</p> <p>This parameter is optional.</p> <p>Available on PRO devices with firmware version 10.533 or higher.</p> |
| objectuid        | string (30) | <p>A unique, unchangeable identifier for the indicated object, automatically generated.</p> <p>Can be used alternatively to <code>objectno</code>.</p>   |

## 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&username=xxx&password=xxx&apikey=xxx&lang=de&action=sendDestinationOrderExtern&object-no=001&orderid=S-1234.001AF&ordertext=Test&addrnr=401
```

#### SOAP

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
  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>
      <gParm>
        <locale>DE</locale>
        <timeZone>Europe_Berlin</timeZone>
      </gParm>
      <dstOrderToSend orderNo="S-1234.001AF" orderType="" scheduledCompletion-
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&username=xxx&password=xxx&apikey=xxx&lang=de&action=sendDestinationOrderExtern&object-no=001&orderid=S-1234.002AF&ordertext=Test&addrnr=401&useISO8601=true&orderdate=2009-06-05T+02:00&ordertime=16:30:00
```

#### SOAP

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
  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>
        <timeZone>Europe_Berlin</timeZone>
      </gParm>
      <dstOrderToSend orderNo="S-1234.002AF" scheduledCompletionDateAnd-
Time="2009-06-05T16:30:00">
        <orderText>Test</orderText>
        <addrNoToUseAsDestination>401</addrNoToUseAsDestination>
      </dstOrderToSend>
      <object objectNo="001"/>
    </ser:sendDestinationOrder>
  </soap:Body>
</soap:Envelope>
```

#### 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&username=xxx&password=xxx&apikey=xxx&lang=de&action=sendDestinationOrderExtern&object-no=001&orderid=S-1234.003AF&ordertext=Test&latitude=51365338&longitude=12398799&country=DE&zip=04129&city=Leipzig&street=Maximilianallee 4
```

#### SOAP

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
  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>
        <timeZone>Europe_Berlin</timeZone>
      </gParm>
      <dstOrderToSend orderNo="S-1234.003AF" scheduledCompletionDateAnd-
Time="">
        <orderText>Test</orderText>
        <explicitDestination>
          <street>Maximilianallee 4</street>
        </explicitDestination>
      </dstOrderToSend>
    </ser:sendDestinationOrder>
  </soap:Body>
</soap:Envelope>
```



```

    <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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to sendDestinationOrderExtern:

| Parameter | Type               | Description   |
|-----------|--------------------|---|
| objectno  | string (10)        | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to <code>objectuid</code> .  |
| orderid   | string (20)        | Account-unique order id, case-sensitive.<br>Maximum capacity is 20 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters.<br>This parameter is required.                                    |
| ordertext | string (500)       | This parameter is required.   |
| ordertype | nonNegativeInteger | Type of order.<br>Valid values: <ul style="list-style-type: none"> <li>• 1 - service order</li> <li>• 2 - pickup order</li> <li>• 3 - delivery order</li> </ul> If empty or not present, the default is service order.<br>This parameter is optional. |
| orderdate | date               | Scheduled date of fulfilment for this order.<br>If empty or not present, the default is the current day (calculated using the time zone defined on the WEBFLEET account).<br>This parameter is optional.  |
| ordertime | time               | Scheduled time of fulfilment for this order. If empty or not present, the default is 00:00.<br>This parameter is optional.  |

| Parameter        | Type               | Description   |
|------------------|--------------------|---|
| arrivaltolerance | nonNegativeInteger | <p>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 <code>ordertime</code> are interpreted as follows:</p> <ul style="list-style-type: none"> <li>show as standard if:<br/> <math display="block">t_{\text{eta}} &lt; t_{\text{order}}</math> </li> <li>show as warning if:<br/> <math display="block">t_{\text{order}} &lt; t_{\text{eta}} &lt; t_{\text{order}} + \text{arrivaltolerance}</math> </li> <li>show as alarm if:<br/> <math display="block">t_{\text{order}} + \text{arrivaltolerance} &lt; t_{\text{eta}}</math> </li> </ul> <p>Unit of measurement is minutes.<br/>Valid values:</p> <ul style="list-style-type: none"> <li>0</li> <li>15</li> <li>30</li> <li>60</li> <li>120</li> </ul> <p>Requires <code>ordertime</code> and <code>orderdate</code>.<br/>This parameter is optional.</p> |
| notify_enabled   | boolean            | <p>If set to 1 enables generation of an event (<a href="#">Events</a>) as soon as the ETA is lower than <code>notify_leadtime</code>.<br/>This parameter is optional.</p>   |
| notify_leadtime  | nonNegativeInteger | <p>Time in minutes before arrival at destination at which an event (<a href="#">Events</a>) is generated if <code>notify_enabled</code> is set to 1.<br/>This parameter is optional.</p>  |
| contact          | string (50)        | <p>Name of a contact person for this order.<br/>This parameter is optional.</p>   |
| contacttel       | string (20)        | <p>Phone number of the contact person for this order. Must conform to the following format:</p> <pre>\+?([\d /\(\)\-])+</pre> <p>(a sequence of numbers and <code>()/-</code> that may be preceded by a <code>+</code>).<br/>This parameter is optional.</p>  |

| Parameter | Type        | Description  |
|-----------|-------------|--|
| addrnr    | string (10) | <p>Use an address identified by <code>addrnr</code> as returned by <a href="#">showAddressReportExtern</a>. The address must be geocoded.</p> <p>Case-sensitive.</p> <div style="border: 1px solid #ccc; background-color: #f9f9f9; padding: 10px; margin-top: 10px;"> <p><b>Note:</b> If <code>addrnr</code> is provided, other parameters describing the destination (<code>longitude</code>, <code>latitude</code>, <code>country</code>, <code>zip</code>, <code>city</code>, <code>street</code>, <code>contact</code>, <code>contactTel</code>) are ignored and replaced by the respective values from the address record identified by <code>addrnr</code>.</p> </div> <p>This parameter is optional.</p> |
| longitude | int         | <p>Geographic longitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: <math>(\text{degrees} + \text{minutes}/60 + \text{seconds}/3600) * 10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p>  |
| latitude  | int         | <p>Geographic latitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: <math>(\text{degrees} + \text{minutes}/60 + \text{seconds}/3600) * 10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p>   |
| country   | string (2)  | <p><a href="#">ISO 3166-1 alpha-2 code</a> for the country (capital letters). Country of the destination address; used only for display to the driver.</p>   |
| zip       | string (10) | <p>Post code of the destination address; used only for display to the driver.</p>  |
| city      | string (50) | <p>City of the destination address; used only for display to the driver.</p>   |
| street    | string (50) | <p>Street and house number of the destination address; used only for display to the driver.</p>  |

| Parameter      | Type   | Description   |
|----------------|--------|---|
| useorderstates | string | <p>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.</p> <p>Valid values:</p> <p><code>null</code> - Below states do not appear in workflow, even if specified differently in the account settings.</p> <p>For <code>ordertype = 1</code>:</p> <ul style="list-style-type: none"> <li>• 202 - Arrived at destination</li> <li>• 203 - Work started</li> <li>• 204 - Work finished</li> <li>• 205 - Departed from destination</li> </ul> <p>For <code>ordertype = 2</code>:</p> <ul style="list-style-type: none"> <li>• 222 - Arrived at pick up location</li> <li>• 223 - Pick up started</li> <li>• 224 - Pick up finished</li> <li>• 225 - Departed from pick up location</li> </ul> <p>For <code>ordertype = 3</code>:</p> <ul style="list-style-type: none"> <li>• 242 - Arrived at delivery location</li> <li>• 243 - Delivery started</li> <li>• 244 - Delivery finished</li> <li>• 245 - Departed from delivery location</li> </ul> <p><b>Note:</b> If you do not specify the parameter, the account specific settings are used.</p> <p>This parameter is optional.</p> |

| Parameter        | Type | Description   |
|------------------|------|---|
| orderautomations | int  | <p>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.</p> <hr/> <p><i>Example: orderautomations=1,2</i></p> <hr/> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 1 - accept the order</li> <li>• 2 - start the order</li> <li>• 3 - navigate to the order destination</li> <li>• 4 - skip displaying the route summary screen</li> <li>• 5 - delete the order after it has been finished</li> <li>• 6 - suppress the "continue with next order" screen</li> </ul> <div style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;"> <p><b>Note:</b> If you do not specify the parameter, the account specific settings are used.</p> </div> <p>This parameter is optional.<br/>Available on PRO devices with firmware version 10.533 or higher.</p> |

| Parameter | Type        | Description  |
|-----------|-------------|--|
| wp        | string      | <p>Contains details for a waypoint for orders with pre-defined routes (itinerary) in the following format.</p> <pre>&lt;latitude&gt;,&lt;longitude&gt;,[&lt;description&gt;],[&lt;notify&gt;],[&lt;visible&gt;]</pre> <p>For details of the parameters contained, see <a href="#">Parameters in wp</a>.</p> <p>The number of waypoints per order is limited:</p> <ul style="list-style-type: none"> <li>The following devices support up to <b>1000</b> waypoints per order: <ul style="list-style-type: none"> <li>TomTom PRO 7100/7150</li> <li>TomTom PRO 9100/9150</li> <li>TomTom PRO 5150</li> </ul> </li> <li>The following devices support up to <b>250</b> waypoints per order: <ul style="list-style-type: none"> <li>PRO 8475</li> <li>PRO 8375</li> <li>TomTom PRO 8270/8275</li> </ul> </li> <li>The following devices <b>do not</b> support waypoints: <ul style="list-style-type: none"> <li>TomTom PRO 5250, TomTom PRO 7250</li> </ul> </li> </ul> <p>The number of waypoints/vehicle/month is limited to 20,000. If you exceed this limit this action will return with response code 25001.</p> <p>This parameter is optional.</p> |
| objectuid | string (30) | <p>A unique, unchangeable identifier for the indicated object, automatically generated.</p> <p>Can be used alternatively to <code>objectno</code>.</p>   |
| mapcode   | string (20) | <p>A mapcode represents a location.</p> <p>Either <code>mapcode</code> or <code>latitude/longitude</code> coordinates can be used, but not both.</p> <p>Learn more about <a href="#">mapcodes</a>.</p>   |

## updateOrderExtern

### Description

Updates an order that was submitted with `sendOrderExtern`.

### Technical details

SOAP endpoint address / function name `ordersService#updateOrder`

## Parameters

**updateOrderExtern** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to updateOrderExtern:

| Parameter        | Type         | Description  |
|------------------|--------------|--|
| orderid          | string (20)  | Account-unique order id, case-sensitive.<br>Maximum capacity is 20 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters.<br>This parameter is required.   |
| ordertext        | string (500) | This parameter is required.  |
| orderautomations | int          | <p>Specifies the workflow step(s) when starting an order that can be automated.</p> <p>You can specify multiple values for this parameter. Separate the values with a comma when using CSV interface.</p> <hr/> <p><b>Important:</b> Updating the order automation exclusively affects orders that are being sent to the device.</p> <hr/> <p><i>Example: orderautomations=1,2</i></p> <hr/> <p>Valid values:</p> <ul style="list-style-type: none"><li>• 1 - accept the order</li><li>• 2 - start the order</li><li>• 3 - navigate to the order destination</li><li>• 4 - skip displaying the route summary screen</li><li>• 5 - delete the order after it has been finished</li><li>• 6 - suppress the "continue with next order" screen</li></ul> <div><p><b>Note:</b> If you do not specify this parameter, the account-specific settings are used.</p></div> <p>This parameter is optional.</p> <p>Available on PRO devices with firmware version 10.533 or higher.</p> |

## updateDestinationOrderExtern

### Description

Updates an order that was submitted with `sendDestinationOrderExtern` or with `insertDestinationOrderExtern`.

## Technical details

SOAP endpoint address / function name    ordersService#updateDestinationOrder

Request limits                                    300 requests / 30 minutes

## Parameters

**updateDestinationOrderExtern** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to updateDestinationOrderExtern:

| Parameter | Type         | Description  |
|-----------|--------------|--|
| orderid   | string (20)  | Account-unique order id, case-sensitive.<br>Maximum capacity is 20 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters.<br>This parameter is required. |
| ordertext | string (500) | This parameter is optional.  |
| orderdate | date         | Scheduled date of fulfilment for this order.<br>If empty or not present, the default is the current day (calculated using the time zone defined on the WEBFLEET account).<br>This parameter is optional.           |
| ordertime | time         | Scheduled time of fulfilment for this order.<br>If empty or not present, the default is 00:00.<br>This parameter is optional.  |



| Parameter        | Type               | Description   |
|------------------|--------------------|---|
| arrivaltolerance | nonNegativeInteger | <p>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 <code>ordertime</code> are interpreted as follows:</p> <ul style="list-style-type: none"> <li>show as standard if:<br/> <math display="block">t_{\text{eta}} &lt; t_{\text{order}}</math> </li> <li>show as warning if:<br/> <math display="block">t_{\text{order}} &lt; t_{\text{eta}} &lt; t_{\text{order}} + \text{arrivaltolerance}</math> </li> <li>show as alarm if:<br/> <math display="block">t_{\text{order}} + \text{arrivaltolerance} &lt; t_{\text{eta}}</math> </li> </ul> <p>Unit of measurement is minutes.<br/>Valid values:</p> <ul style="list-style-type: none"> <li>0</li> <li>15</li> <li>30</li> <li>60</li> <li>120</li> </ul> <p>Requires <code>ordertime</code> and <code>orderdate</code>.<br/>This parameter is optional.</p> |
| contact          | string (50)        | <p>Name of a contact person for this order.<br/>This parameter is optional.</p>   |
| contacttel       | string (20)        | <p>Phone number of the contact person for this order.<br/>Must conform to the following format:</p> <pre>\+?([\d /\(\)\-])+</pre> <p>(a sequence of numbers and <code>()/-</code> that may be preceded by a <code>+</code>).<br/>This parameter is optional.</p>  |
| addrnr           | string (10)        | <p>Use an address identified by <code>addrnr</code> as returned by <a href="#">showAddressReportExtern</a>. The address must be geocoded.<br/>Case-sensitive.</p> <p><b>Note:</b> If <code>addrnr</code> is provided, other parameters describing the destination (<code>longitude</code>, <code>latitude</code>, <code>country</code>, <code>zip</code>, <code>city</code>, <code>street</code>, <code>contact</code>, <code>contactTel</code>) are ignored and replaced by the respective values from the address record identified by <code>addrnr</code>.</p> <p>This parameter is optional.</p>  |

| Parameter | Type        | Description  |
|-----------|-------------|--|
| longitude | int         | <p>Geographic longitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p> |
| latitude  | int         | <p>Geographic latitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p>  |
| country   | string (2)  | <p><a href="#">ISO 3166-1 alpha-2 code</a> for the country (capital letters).</p> <p>Country of the destination address; used only for display to the driver.</p>  |
| zip       | string (10) | <p>Post code of the destination address; used only for display to the driver.</p>  |
| city      | string (50) | <p>City of the destination address; used only for display to the driver.</p>   |
| street    | string (50) | <p>Street and house number of the destination address; used only for display to the driver.</p>  |

| Parameter        | Type | Description   |
|------------------|------|---|
| orderautomations | int  | <p>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.</p> <hr/> <p><b>Important:</b> Updating the order automation exclusively affects orders that are being sent to the device.</p> <hr/> <p><i>Example: orderautomations=1,2</i></p> <hr/> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 1 - accept the order</li> <li>• 2 - start the order</li> <li>• 3 - navigate to the order destination</li> <li>• 4 - skip displaying the route summary screen</li> <li>• 5 - delete the order after it has been finished</li> <li>• 6 - suppress the "continue with next order" screen</li> </ul> <div style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;"> <p><b>Note:</b> If you do not specify this parameter, the account-specific settings are used.</p> </div> <p>This parameter is optional.<br/>Available on PRO devices with firmware version 10.533 or higher.PRO 8475</p> |

| Parameter | Type        | Description   |
|-----------|-------------|---|
| wp        | string      | <p>Contains details for a waypoint for orders with pre-defined routes (itinerary) in the following format. This parameter is optional.</p> <pre>&lt;latitude&gt;,&lt;longitude&gt;,[&lt;description&gt;],[&lt;notify&gt;],[&lt;visible&gt;]</pre> <p>For details of the parameters contained, see <a href="#">Parameters in wp</a> in <a href="#">sendDestinationOrderExtern</a>.</p> <p>The number of waypoints per order is limited:</p> <ul style="list-style-type: none"> <li>The following devices support up to <b>1000</b> waypoints per order: <ul style="list-style-type: none"> <li>TomTom PRO 7100/7150</li> <li>TomTom PRO 9100/9150</li> <li>TomTom PRO 5150</li> </ul> </li> <li>The following devices support up to <b>250</b> waypoints per order: <ul style="list-style-type: none"> <li>PRO 8475</li> <li>PRO 8375</li> <li>TomTom PRO 8270/8275</li> </ul> </li> <li>The following devices <b>do not</b> support waypoints: <ul style="list-style-type: none"> <li>TomTom PRO 5250, TomTom PRO 7250</li> </ul> </li> </ul> <p><b>Note:</b> The number of waypoints/vehicle/month is limited to 20,000.</p> |
| mapcode   | string (20) | <p>A mapcode represents a location. Either mapcode or latitude/longitude coordinates can be used but not both. Learn more about <a href="#">mapcodes</a>.</p>   |

## 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 name | ordersService#insertDestinationOrder |
| 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.<br>Maximum capacity is 20 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters.<br>This parameter is required.                                   |
| ordertext | string (500)       | This parameter is required.  |
| ordertype | nonNegativeInteger | Type of order.<br>Valid values: <ul style="list-style-type: none"><li>• 1 - service order</li><li>• 2 - pickup order</li><li>• 3 - delivery order</li></ul><br>If empty or not present, the default is service order.<br>This parameter is optional. |
| orderdate | date               | Scheduled date of fulfilment for this order.<br>If empty or not present, the default is the current day (calculated using the time zone defined on the WEBFLEET account).<br>This parameter is optional.   |
| ordertime | time               | Scheduled time of fulfilment for this order.<br>If empty or not present, the default is 00:00.<br>This parameter is optional.  |

| Parameter        | Type               | Description   |
|------------------|--------------------|---|
| arrivaltolerance | nonNegativeInteger | <p>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 <code>ordertime</code> are interpreted as follows:</p> <ul style="list-style-type: none"> <li>show as standard if:<br/> <math display="block">t_{\text{eta}} &lt; t_{\text{order}}</math> </li> <li>show as warning if:<br/> <math display="block">t_{\text{order}} &lt; t_{\text{eta}} &lt; t_{\text{order}} + \text{arrivaltolerance}</math> </li> <li>show as alarm if:<br/> <math display="block">t_{\text{order}} + \text{arrivaltolerance} &lt; t_{\text{eta}}</math> </li> </ul> <p>Unit of measurement is minutes.<br/>Valid values:</p> <ul style="list-style-type: none"> <li>0</li> <li>15</li> <li>30</li> <li>60</li> <li>120</li> </ul> <p>Requires <code>ordertime</code> and <code>orderdate</code>.<br/>This parameter is optional.</p> |
| notify_enabled   | boolean            | <p>If set to 1 enables generation of an event (<a href="#">Events</a>) as soon as the ETA is lower than <code>notify_leadtime</code>.<br/>This parameter is optional.</p>   |
| notify_leadtime  | nonNegativeInteger | <p>Time in minutes before arrival at destination at which an event (<a href="#">Events</a>) is generated if <code>notify_enabled</code> is set to 1.<br/>This parameter is optional.</p>  |
| contact          | string (50)        | <p>Name of a contact person for this order.<br/>This parameter is optional.</p>   |
| contacttel       | string (20)        | <p>Phone number of the contact person for this order.<br/>Must conform to the following format:</p> <pre>\+?([\d /\(\)\-])+</pre> <p>(a sequence of numbers and <code>()/-</code> that may be preceded by a <code>+</code>).<br/>This parameter is optional.</p>  |

| Parameter | Type        | Description  |
|-----------|-------------|--|
| addrnr    | string (10) | <p>Use an address identified by <code>addrnr</code> as returned by <a href="#">showAddressReportExtern</a>.</p> <p>The address must be geocoded. Case-sensitive.</p> <div> <p><b>Note:</b> If <code>addrnr</code> is provided, other parameters describing the destination (<code>longitude</code>, <code>latitude</code>, <code>country</code>, <code>zip</code>, <code>city</code>, <code>street</code>, <code>contact</code>, <code>contactTel</code>) are ignored and replaced by the respective values from the address record identified by <code>addrnr</code>.</p> </div> <p>This parameter is optional.</p> |
| longitude | int         | <p>Geographic longitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: <math>(\text{degrees} + \text{minutes}/60 + \text{seconds}/3600) * 10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p>  |
| latitude  | int         | <p>Geographic latitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: <math>(\text{degrees} + \text{minutes}/60 + \text{seconds}/3600) * 10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p>   |
| country   | string (2)  | <p><a href="#">ISO 3166-1 alpha-2 code</a> for the country (capital letters).</p> <p>Country of the destination address; used only for display to the driver.</p>  |
| zip       | string (10) | <p>Post code of the destination address; used only for display to the driver.</p>  |
| city      | string (50) | <p>City of the destination address; used only for display to the driver.</p>   |
| street    | string (50) | <p>Street and house number of the destination address; used only for display to the driver.</p>  |

| Parameter | Type        | Description   |
|-----------|-------------|---|
| wp        | string      | <p>Contains details for a waypoint for orders with pre-defined routes (itinerary) in the following format. This parameter is optional.</p> <pre>&lt;latitude&gt;,&lt;longitude&gt;,[&lt;description&gt;],[&lt;notify&gt;],[&lt;visible&gt;]</pre> <p>For details of the parameters contained, see <a href="#">Parameters in wp</a> in <a href="#">sendDestinationOrderExtern</a>.</p> <p>The number of waypoints per order is limited:</p> <ul style="list-style-type: none"> <li>The following devices support up to <b>1000</b> waypoints per order: <ul style="list-style-type: none"> <li>TomTom PRO 7100/7150</li> <li>TomTom PRO 9100/9150</li> <li>TomTom PRO 5150</li> </ul> </li> <li>The following devices support up to <b>250</b> waypoints per order: <ul style="list-style-type: none"> <li>PRO 8475</li> <li>PRO 8375</li> <li>TomTom PRO 8270/8275</li> </ul> </li> <li>The following devices <b>do not</b> support waypoints: <ul style="list-style-type: none"> <li>TomTom PRO 5250, TomTom PRO 7250</li> </ul> </li> </ul> <p><b>Note:</b> The number of waypoints/vehicle/month is limited to 20,000.</p> |
| objectuid | string (30) | <p>A unique, unchangeable identifier for the indicated object, automatically generated.</p> <p>Can be used alternatively to <code>objectno</code>.</p>  |
| mapcode   | string (20) | <p>A mapcode represents a location.</p> <p>Either <code>mapcode</code> or <code>latitude/longitude</code> coordinates can be used but not both.</p> <p>Learn more about <a href="#">mapcodes</a>.</p>   |

## cancelOrderExtern

### Description

Cancels orders that were submitted using one of `sendDestinationOrderExtern`, `insertDestinationOrderExtern` 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.<br>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 `ordersService#assignOrder`

Request limits

300 requests / 30 minutes

## Parameters

**assignOrderExtern** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to assignOrderExtern:

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

| Parameter        | Type        | Description   |
|------------------|-------------|---|
| objectno         | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>This <code>objectno</code> names the object that will receive the order. Required if the order is not linked to an object yet.<br>This parameter is optional.  |
| orderautomations | int         | Specifies the workflow step(s) when starting an order that can be automated.<br>You can specify multiple values for this parameter. Separate the values with a comma when using CSV interface.<br><hr/> <i>Example: <code>orderautomations=1,2</code></i> <hr/><br>Valid values: <ul style="list-style-type: none"> <li>• 1 - accept the order</li> <li>• 2 - start the order</li> <li>• 3 - navigate to the order destination</li> <li>• 4 - skip displaying the route summary screen</li> <li>• 5 - delete the order after it has been finished</li> <li>• 6 - suppress the "continue with next order" screen</li> </ul> <div style="border: 1px solid #ccc; padding: 5px; margin-top: 10px;"> <b>Note:</b> If you do not specify this parameter, the account-specific settings are used. </div><br>This parameter is optional.<br>Available on PRO devices with firmware version 10.533 or higher. |
| objectuid        | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> .  |

## reassignOrderExtern

### Description

Reassigns an order that was submitted using one of [sendDestinationOrderExtern](#), [insertDestinationOrderExtern](#) 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 | ordersService#reassignOrder |
| Request limits                        | 300 requests / 30 minutes   |

### Parameters

**reassignOrderExtern** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `reassignOrderExtern`:

| Parameter                     | Type        | Description   |
|-------------------------------|-------------|---|
| <code>orderid</code>          | string (20) | Account-unique order id, case-sensitive.<br>Maximum capacity is 20 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters.<br>This parameter is required.  |
| <code>objectid</code>         | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>This <code>objectid</code> (which is equal to <code>objectno</code> ) names the object that will receive the order.<br>This parameter is required.   |
| <code>orderautomations</code> | int         | Specifies the workflow step(s) when starting an order that can be automated.<br>You can specify multiple values for this parameter. Separate the values with a comma when using CSV interface.<br><hr/> <i>Example: <code>orderautomations=1,2</code></i> <hr/><br>Valid values: <ul style="list-style-type: none"> <li>• 1 - accept the order</li> <li>• 2 - start the order</li> <li>• 3 - navigate to the order destination</li> <li>• 4 - skip displaying the route summary screen</li> <li>• 5 - delete the order after it has been finished</li> <li>• 6 - suppress the "continue with next order" screen</li> </ul> If you do not specify this parameter, the account-specific settings are used.<br>This parameter is optional.<br>Available on PRO devices with firmware version 10.533 or higher. |
| <code>objectuid</code>        | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectid</code> .  |

## 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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to deleteOrderExtern:

| Parameter    | Type        | Description   |
|--------------|-------------|---|
| orderid      | string (20) | Account-unique order id, case-sensitive.<br>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.<br>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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to clearOrdersExtern:

| Parameter | Type        | Description   |
|-----------|-------------|---|
| objectno  | string (10) | Identifying number of an object.<br>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.<br>Defaults to 0.                     |
| objectuid    | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>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*

#### CSV

```
https://csv.webfleet.com/extern?account=xxx&username=xxx&password=xxx&apikey=xxx&lang=de&action=showOrderReportExtern&range_pattern=w-1
```

#### SOAP

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
  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>
      <gParm>
        <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 order-date 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&username=xxx&password=xxx&apikey=xxx&lang=de&action=showOrderReportExtern&objectno=001&useISO8601=true&range_pattern=ud&range-from_string=2009-06-11T00:00:00&rangeto_string=2009-06-11T23:59:59
```

#### SOAP

```
<soap:Envelope xmlns:soap="http://www.w3.org/2003/05/soap-envelope"
  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>
      <gParm>
        <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:

- [Date range filter parameters](#)

Parameters specific to `showOrderReportExtern`:

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

| Parameter       | Type               | Description  |
|-----------------|--------------------|--|
| objectgroupname | string             | Case-sensitive.<br>This parameter is optional.   |
| orderid         | string (20)        | Account-unique order id, case-sensitive.<br>Maximum capacity is 20 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters.<br>This parameter is optional. |
| ordertype       | nonNegativeInteger | Type of order.<br>Valid values: <ul style="list-style-type: none"> <li>1 - service order</li> <li>2 - pickup order</li> <li>3 - delivery order</li> </ul> This parameter is optional.                              |
| objectuid       | string (30)        | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> .   |

## Result

Result for showOrderReportExtern:

| Parameter  | Type               | 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.<br>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 (500)       |   |
| ordertype  | nonNegativeInteger | Type of order.<br>Valid values: <ul style="list-style-type: none"> <li>1 - service order</li> <li>2 - pickup order</li> <li>3 - delivery order</li> </ul>                           |
| objectno   | string (10)        | Identifying number of an object.<br>Unique within an account, case-sensitive.   |
| objectname | string             | Display name of an object.  |

| Parameter       | Type               | Description   |
|-----------------|--------------------|---|
| longitude       | int                | <p>Geographic longitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p>  |
| latitude        | int                | <p>Geographic latitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p>   |
| destination     | string             |   |
| orderstate      | nonNegativeInteger | <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 0 - Not yet sent</li> <li>• 100 - Sent</li> <li>• 101 - Received</li> <li>• 102 - Read</li> <li>• 103 - Accepted</li> <li>• 201 - Service order started</li> <li>• 202 - Arrived at destination</li> <li>• 203 - Work started</li> <li>• 204 - Work finished</li> <li>• 205 - Departed from destination</li> <li>• 221 - Pickup order started</li> <li>• 222 - Arrived at pick up location</li> <li>• 223 - Pick up started</li> <li>• 224 - Pick up finished</li> <li>• 225 - Departed from pick up location</li> <li>• 241 - Delivery order started</li> <li>• 242 - Arrived at delivery location</li> <li>• 243 - Delivery started</li> <li>• 244 - Delivery finished</li> <li>• 245 - Departed from delivery location</li> <li>• 298 - Resumed</li> <li>• 299 - Suspended</li> <li>• 301 - Cancelled</li> <li>• 302 - Rejected</li> <li>• 401 - Finished</li> </ul> |
| orderstate_time | string             |   |



| Parameter              | Type               | Description   |
|------------------------|--------------------|---|
| orderstate_longitude   | int                | Geographic longitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> . |
| orderstate_latitude    | int                | Geographic latitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> .  |
| orderstate_posttext    | string             |   |
| orderstate_msgtext     | string             | String containing the message text of the last order related message.   |
| planned_arrival_time   | time               | Scheduled time of fulfillment for this order.<br>If empty or not present, the default is 00:00.   |
| estimated_arrival_time | time               | Scheduled time of fulfillment for this order.<br>If empty or not present, the default is 00:00.   |
| arrivaltolerance       | time               |   |
| notify_enabled         | boolean            |   |
| notify_leadtime        | nonNegativeInteger |   |
| delay_warnings         | nonNegativeInteger | Warning state based on planned and estimated arrival time and the arrival time tolerance value. Possible values are: <ul style="list-style-type: none"> <li>1 - Estimated delay within tolerance.</li> <li>2 - Estimated delay above tolerance.</li> </ul>  |
| contact                | string             | Name of the contact person.   |
| contacttel             | string (20)        | Phone number of the contact person for this order.  |
| driverno               | string             | Identifying number of a driver. Unique within an account. See <a href="#">Drivers</a> to learn more about drivers.<br>Assigned to the driver who reported working on the order most recently.   |
| drivername             | string             | Display name of a driver.<br>Assigned to the driver who reported working on the order most recently.  |
| drivertelmobile        | string             | Mobile phone number of the driver. Associated to the order.<br>Assigned to the driver who reported working on the order most recently.  |

| Parameter     | Type               | Description   |
|---------------|--------------------|---|
| waypointcount | nonNegativeInteger | The number of waypoints in an itinerary order.  |
| addrnr        | string (10)        | Identifying number of an address. Unique within an account.<br>Number of the destination address. Only returned when the order destination is identified by the address number. |
| country       | string (2)         | <a href="#">ISO 3166-1 alpha-2 code</a> for the country (capital letters).<br>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.<br>Can be used alternatively to <code>objectno</code> .                                    |
| driveruid     | string             | A unique, unchangeable identifier for the indicated driver, automatically generated.<br>Can be used alternatively to <code>driverno</code> .                                    |
| mapcode       | string (20)        | A mapcode represents a location.<br>Learn more about <a href="#">mapcodes</a> .   |

## 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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to showOrderWaypoints:

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

## Result

Result for showOrderWaypoints:

| Parameter           | Type        | Description   |
|---------------------|-------------|---|
| waypointnumber      | string      | Automatically generated ordering number.  |
| latitude            | int         |   |
| longitude           | int         |   |
| formatted_latitude  | string      | Human readable formatted latitude.<br>Geographic latitude in the form GGG° MM' SS.S" N/S in the <a href="#">WGS84</a> coordinate system.  |
| formatted_longitude | string      | Human readable formatted longitude<br>Geographic longitude in the form GGG° MM' SS.S" E/W in the <a href="#">WGS84</a> coordinate system.   |
| description         | string (20) | Short waypoint description.   |
| notify              | Boolean     | Indicates whether the driver gets a notification when the waypoint is passed.<br>Default is 1.<br>Valid values: <ul style="list-style-type: none"> <li>0 - false</li> <li>1 - true (driver will be notified when passing this waypoint)</li> </ul>          |
| visible             | Boolean     | Indicates whether the waypoint is visible on the navigation device.<br>Default is 1.<br>Valid values: <ul style="list-style-type: none"> <li>0 - false</li> <li>1 - true (waypoint is visible in the list of waypoints on the navigation device)</li> </ul> |
| state               | int         | Indicates whether the waypoint was valid for a route calculation on the navigation device.<br>Valid values: <ul style="list-style-type: none"> <li>0 - normal</li> <li>1 - rejected</li> </ul>  |

## Parameters in wp

| Parameter   | Type        | Description   |
|-------------|-------------|---|
| latitude    | int         | <p>Geographic latitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p> <p>This parameter is required.</p>  |
| longitude   | int         | <p>Geographic longitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p> <p>This parameter is required.</p> |
| description | string (20) | <p>Short waypoint description.</p> <p>This parameter is optional.</p>   |
| notify      | Boolean     | <p>Indicates whether the driver gets a notification when the waypoint is passed.</p> <p>Default is 1.</p> <p>Valid values:</p> <ul style="list-style-type: none"><li>• 0 - false</li><li>• 1 - true (driver will be notified when passing the waypoint)</li></ul> <p>This parameter is optional.</p> <div><b>Note:</b> These parameters are not supported and will be ignored for the following devices:</div> <div>PRO 8270/8275</div>                   |

| Parameter | Type    | Description  |
|-----------|---------|--|
| visible   | Boolean | <p>Indicates whether the waypoint is visible on the navigation device.</p> <p>Default is 1.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 0 - false</li> <li>• 1 - true (waypoint is visible in the list of waypoints on the navigation device)</li> </ul> <p>This parameter is optional.</p> <p><b>Note:</b> These parameters are not supported and will be ignored for the following devices:</p> <p>PRO 8270/8275</p> |

# 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.<br>Unique within an account, case-sensitive.  |
| messagetext | string (500) |  |
| objectuid   | string (30)  | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> . |

## clearTextMessagesExtern

### Description

Removes all text messages from the device.

### Technical details

|                                       |                                   |
|---------------------------------------|-----------------------------------|
| SOAP endpoint address / function name | messagesService#clearTextMessages |
|---------------------------------------|-----------------------------------|

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

## Parameters

**clearTextMessagesExtern** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to clearTextMessagesExtern:

| Parameter | Type        | Description  |
|-----------|-------------|--|
| objectno  | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to objectuid.       |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>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](#)
- [Date range filter parameters](#) (lower limit is 14x24h back)

Parameters specific to showMessages:

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

| Parameter | Type        | Description  |
|-----------|-------------|--|
| category  | int         | Valid values: <ul style="list-style-type: none"> <li>1 - text messages</li> <li>2 - order status messages</li> <li>3 - text status messages</li> </ul> This parameter is optional. |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> .<br>This parameter is optional.        |

## Result

Result for showMessages:

| Parameter    | Type        | Description  |
|--------------|-------------|--|
| msgid        | int         | Identifies a message and is unique within the system.<br>Possible values are in the range $0 \leq \text{msgid} \leq 2^{64}-1$  |
| msg_time     | dateTime    | <a href="#">ISO 8601</a> -formatted date and time in the UTC timezone, combined representation in the extended format.<br><hr/> <b>Example: 2007-12-24T16:00:00+02:00</b> <hr/>                      |
| msg_flag     | string      | <ul style="list-style-type: none"> <li>Valid values:</li> <li>S = sent</li> <li>R = received</li> </ul>  |
| msg_category | int         | <ul style="list-style-type: none"> <li>Valid values:</li> <li>1 - text messages</li> <li>2 - order status messages</li> <li>3 - text status messages</li> </ul>                                      |
| msg_text     | string      | The text of the message.   |
| msg_refid    | int         | The message ID reference to the original message (if available).   |
| msg_reftype  | int         | <ul style="list-style-type: none"> <li>Valid values:</li> <li>1 - received</li> <li>2 - read</li> <li>3 - discarded</li> </ul> <p>Only in use if <code>msg_refid</code> exists, otherwise empty.</p> |
| objectno     | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.  |



| Parameter     | Type        | Description   |
|---------------|-------------|---|
| pos_time      | dateTime    | <a href="#">ISO 8601</a> -formatted date and time in the UTC timezone, combined representation in the extended format.<br><hr/> Example: 2007-12-24T16:00:00+02:00  |
| pos_latitude  | int         | Geographic latitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> .  |
| pos_longitude | int         | Geographic longitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> . |
| pos_text      | string      | A detailed textual description of the location.   |
| objectuid     | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> .  |

## 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 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 `sendBinaryMessage` should be covered by the data volume of the selected LINK.connect tariff.

### Technical details

SOAP endpoint address / function name `messagesService#sendBinaryMessages`

## Parameters

**sendBinaryMessages** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `sendBinaryMessage`:

| Parameter     | Type                | Description   |
|---------------|---------------------|---|
| objectno      | string (10)         | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to <code>objectuid</code> .  |
| objectuid     | string (30)         | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> .  |
| appid         | string (128)        | An identifier to mark the application on the destination device.<br><br><b>Note:</b> Use package style for example <code>com.vendor.application.part</code><br><br>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.<br>This parameter is optional. |
| data          | base64 (raw (2560)) | Base64 encoded user payload, max. 2.5 KB.<br>The data is not interpreted by WEBFLEET.<br>This parameter is required.  |

## resetBinaryMessages

### Description

If the driver terminal does not respond to outgoing data sent using [sendBinaryMessage](#) 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 `messagesService#resetBinaryMessages`

|                |                      |
|----------------|----------------------|
| 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.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to <code>objectuid</code> .       |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> . |

## 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 |
|----------------|----------------------|

## Parameters

**clearBinaryMessages** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `clearBinaryMessages`:

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

# Drivers

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## 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    objectsAndPeopleReportingService#showDriverReport

---

|                |                      |
|----------------|----------------------|
| 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.<br>Unique within an account.<br>Search for the specified driver number.<br>Can be used alternatively to <code>driveruid</code> .  |
| ungroupedonly | string | Allows to filter on drivers that are currently not assigned to a certain driver group.<br>Only valid value is <code>true</code> .<br>This parameter overrules the group name filter parameter.<br>This parameter is optional. |
| driveruid     | string | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to <code>driverno</code> .   |

## Result

Result for showDriverReportExtern:

| Parameter   | Type         | Description  |
|-------------|--------------|--|
| driverno    | string (10)  | Account-unique driver number, case-sensitive.                              |
| name1       | string (50)  |  |
| name2       | string (50)  |  |
| name3       | string (50)  |  |
| addrno      | string (10)  | Identifying number of an address.<br>Unique within an account.             |
| state       | string (2)   | <a href="#">ISO 3166-1 alpha-2 code</a> for the country (capital letters). |
| zip         | string (10)  |  |
| city        | string (250) |  |
| street      | string (250) |  |
| telmobile   | string (50)  |  |
| telprivate  | string (50)  |  |
| email       | string (50)  |  |
| description |              |  |
| company     | string (250) |  |

| Parameter                 | Type               | Description   |
|---------------------------|--------------------|---|
| objectno                  | string (10)        | Identifying number of an object.<br>Unique within an account, case sensitive.<br>Identifies the driver currently signed on to this object.  |
| signontime                | dateTime           | The time when the driver signed on to this object.<br><a href="#">ISO 8601</a> -formatted date and time in the UTC timezone, combined representation in the extended format.<br><hr/> <b>Example:</b> 2007-12-24T16:00:00+02:00 <hr/>   |
| dt_cardid                 | string (16)        | A driver card id as used with the digital tachograph.   |
| dt_cardcountry            | string (2)         | <a href="#">ISO 3166-1 alpha-2 code</a> for the country (capital letters).  |
| rll_buttonid              | string (16)        | Remote LINK/ID key identifier   |
| signonrole                | nonNegativeInteger | Valid values: <ul style="list-style-type: none"> <li>1 - Driver</li> <li>2 - Co-Driver</li> <li>3 - Worker</li> </ul>   |
| current_workstate         | nonNegativeInteger | Valid values: <ul style="list-style-type: none"> <li>0 - Unknown</li> <li>1 - Free time (PND only)</li> <li>2 - Pause (PND and digital tachograph)</li> <li>3 - Standby (digital tachograph only)</li> <li>4 - Working (PND only)</li> <li>5 - Driving (digital tachograph only)</li> <li>6 - Other work (digital tachograph only)</li> </ul> |
| current_working-timestart | dateTime           | <a href="#">ISO 8601</a> -formatted date and time in the UTC timezone, combined representation in the extended format.<br><hr/> <b>Example:</b> 2007-12-24T16:00:00+02:00 <hr/>   |
| current_working-timeend   | dateTime           | <a href="#">ISO 8601</a> -formatted date and time in the UTC timezone, combined representation in the extended format.<br><hr/> <b>Example:</b> 2007-12-24T16:00:00+02:00 <hr/>   |
| current_workingtime       | duration           | ISO 8601-formatted duration.<br><hr/> <b>Example:</b> PT362S represents a duration of 362 seconds, as does PT6M2S. <hr/><br>Accumulated working time if <code>current_workstate</code> indicates a non-working state.   |

| Parameter        | Type                                  | Description  |
|------------------|---------------------------------------|--|
| addr_latitude    | int                                   | <p>Geographic latitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p>                                  |
| addr_longitude   | int                                   | <p>Geographic longitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p>                                 |
| manualassignment | int                                   | <p>Indicates whether the driver is assigned to the current vehicle manually by using <code>attachDriverToVehicle</code> or automatically by the driver who has logged on using a navigation device or digital tachograph.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>0 - automatically</li> <li>1 - manually</li> <li>&lt;empty&gt; - if no vehicle is assigned or the information is not available</li> </ul>                    |
| pin              | nonNegativeInteger (20)<br>([1-9]\d*) | The PIN that a driver uses to log in to the Driver Terminal.   |
| objectuid        | string (30)                           | <p>A unique, unchangeable identifier for the indicated object, automatically generated.</p> <p>Can be used alternatively to <code>objectno</code>.</p>   |
| driveruid        | string                                | <p>A unique, unchangeable identifier for the indicated driver, automatically generated.</p> <p>Can be used alternatively to <code>driverno</code>.</p>   |
| driver_keys      | string                                | <p>JSON encoded string with an array of JSON objects composed by the driver keys, associated with the driver.</p> <p>The JSON objects have following format:</p> <pre>{   "driver_key_type": &lt;number&gt;,   "driver_key_value": &lt;string&gt; }</pre> <p>Valid values:</p> <ul style="list-style-type: none"> <li>1 - Remote LINK</li> <li>2 - Generic identifier</li> </ul> <p><i>Usage example:</i> RFID used with PRO 2020 Driver Terminal.</p> |



## insertDriverExtern

### Description

This action creates a driver.

### Technical details

SOAP endpoint address / function name driverManagementService#insertDriver

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

### Parameters

**insertDriverExtern** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to insertDriverExtern:

| Parameter   | Type          | Description   |
|-------------|---------------|---|
| driverno    | string (10)   | Account-unique driver number, case-sensitive.<br>This parameter is required.  |
| name        | string (50)   | This parameter is required.   |
| name2       | string (50)   | Additional driver name.<br>This parameter is optional.  |
| name3       | string (50)   | Additional driver name.<br>This parameter is optional.  |
| company     | string (250)  |   |
| description | string (4000) |   |
| addrno      | string (10)   | Identifying number of an address.<br>Unique within an account.<br>The following conditions apply: <ul style="list-style-type: none"><li>• If <code>addrno</code> is indicated and it shows a valid address number, the corresponding address will be assigned to the driver.</li><li>• If <code>addrno</code> is indicated and the value is empty, the relation between an assigned address and the driver will be deleted.</li><li>• If <code>addrno</code> is empty and at least one of the free text address components <code>country</code>, <code>zip</code>, <code>city</code> and <code>street</code> is indicated, the stored address relation for this driver will be removed and the value of the address component will be attached to the driver.</li></ul> |
| country     | string (2)    | <a href="#">ISO 3166-1 alpha-2 code</a> for the country (capital letters).  |
| zip         | string (10)   |   |

| Parameter      | Type                               | Description   |
|----------------|------------------------------------|---|
| city           | string (250)                       |   |
| street         | string (250)                       |   |
| telmobile      | string (50)                        |   |
| telprivate     | string (50)                        |   |
| pin            | nonNegativeInteger (20) ([1-9]\d*) | Identifying number used for driver identification.<br>To be used for all devices except LINK (classic) and TomTom GO 715.<br>This parameter is optional.  |
| email          | string (50)                        |   |
| dt_cardid      | string (16)                        | A driver card id as used with the digital tachograph.<br>This parameter is optional.  |
| dt_cardcountry | string (2)                         | <a href="#">ISO 3166-1 alpha-2 code</a> for the country (capital letters).<br>This parameter is optional.   |
| rll_buttonid   | string (16)                        | Remote LINK/ID key identifier.<br>Usage details: <ul style="list-style-type: none"> <li>the ID key provided must be 'available', that is, not assigned to any other driver</li> <li>to remove the ID key assignment, provide an empty parameter</li> <li>to assign a new ID key, first remove the old assignment</li> <li>if the parameter is not part of the request, the current assignment is left unchanged</li> </ul> This parameter is optional.  |
| driver_key     | String                             | Driver key identifier composed by driver key type and driver key value.<br>The value must follow the format:<br><code>driverkeytype,driverkeyvalue</code><br>Usage details: <ul style="list-style-type: none"> <li>the driver key provided must not be assigned to any other driver</li> <li>to remove a driver key assignment, <code>driverkeytype</code> followed by an empty <code>driverkeyvalue</code> must be provided</li> <li>to change multiple driver keys you can specify the <code>driver_key</code> parameter multiple times</li> </ul> Valid values for <code>driverkeytype</code> : <ul style="list-style-type: none"> <li>1 - Remote LINK</li> <li>2 - Generic Identifier, which is used for example for RFID used with PRO 2020 Driver Terminal</li> </ul> |

## updateDriverExtern

### Description

This action updates driver details.

### Technical details

SOAP endpoint address / function name driverManagementService#updateDriver

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

### Parameters

**updateDriverExtern** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to updateDriverExtern:

| Parameter   | Type          | Description   |
|-------------|---------------|---|
| driverno    | string (10)   | New driver number to be set for the driver identified by <code>driverno_old</code> or <code>driveruid</code> , 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: <ul style="list-style-type: none"><li>• If <code>addrno</code> is indicated and it shows a valid address number, the corresponding address will be assigned to the driver.</li><li>• If <code>addrno</code> is indicated and the value is empty, the relation between an assigned address and the driver will be deleted.</li><li>• If <code>addrno</code> is empty and at least one of the free text address components <code>country</code>, <code>zip</code>, <code>city</code> and <code>street</code> is indicated, the stored address relation for this driver will be removed and the value of the address component will be attached to the driver.</li></ul> |
| country     | string (2)    | <a href="#">ISO 3166-1 alpha-2 code</a> for the country (capital letters).  |
| zip         | string (10)   |   |

| Parameter      | Type                               | Description   |
|----------------|------------------------------------|---|
| city           | string (250)                       |   |
| street         | string (250)                       |   |
| telmobile      | string (50)                        |   |
| telprivate     | string (50)                        |   |
| pin            | nonNegativeInteger (20) ([1-9]\d*) | Identifying number used for driver identification.<br>To be used for all devices except LINK (classic) and TomTom GO 715.   |
| email          | string (50)                        |   |
| dt_cardid      | string (16)                        | A driver card id as used with the digital tachograph.<br>This parameter is optional.  |
| dt_cardcountry | string (2)                         | <a href="#">ISO 3166-1 alpha-2 code</a> for the country (capital letters).<br>This parameter is optional.   |
| rll_buttonid   | string (16)                        | Remote LINK/ID key identifier<br>Usage details: <ul style="list-style-type: none"> <li>the ID key provided must be 'available', that is, not assigned to any other driver</li> <li>to remove the ID key assignment, provide an empty parameter</li> <li>to assign a new ID key, first remove the old assignment</li> <li>if the parameter is not part of the request, the current assignment is left unchanged</li> </ul> This parameter is optional. |
| driverno_old   | string (10)                        | Account-unique driver number, case-sensitive.<br>Either <code>driverno_old</code> or <code>driveruid</code> is required.  |
| driveruid      | string                             | A unique, unchangeable identifier for the indicated driver, automatically generated.<br>Either <code>driverno_old</code> or <code>driveruid</code> is required.   |

| Parameter  | Type   | Description  |
|------------|--------|--|
| driver_key | String | <p>Driver key identifier composed of driver key type and driver key value.</p> <p>The value must follow the format:<br/> <code>driverkeytype,driverkeyvalue</code></p> <p>Usage details:</p> <ul style="list-style-type: none"> <li>the driver key provided must not be assigned to any other driver</li> <li>to remove a driver key assignment, <code>driverkeytype</code> followed by an empty <code>driverkeyvalue</code> must be provided</li> <li>to change multiple driver keys you can specify the <code>driver_key</code> parameter multiple times</li> </ul> <p>Valid values for <code>driverkeytype</code>:</p> <ul style="list-style-type: none"> <li>1 - Remote LINK</li> <li>2 - Generic Identifier, which is used for example for RFID used with PRO 2020 Driver Terminal</li> </ul> |

## deleteDriverExtern

### Description

This action deletes the indicated driver.

### Technical details

SOAP endpoint address / function name `driverManagementService#deleteDriver`

Request limits 10 requests / minute

### Parameters

**deleteDriverExtern** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `deleteDriverExtern`:

| Parameter | Type        | Description  |
|-----------|-------------|--|
| driverno  | string (10) | <p>Account-unique driver number, case-sensitive.</p> <p>This parameter is required.</p> <p>Can be used alternatively to <code>driveruid</code>.</p>    |
| driveruid | string      | <p>A unique, unchangeable identifier for the indicated driver, automatically generated.</p> <p>Can be used alternatively to <code>driverno</code>.</p> |

## 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 `showOptiDriveIndicator` is calculated from pre-aggregated values per calendar day. The aggregated results produced by `showOptiDriveIndicator` are based on information for each driver across multiple vehicles.

### Technical details

SOAP endpoint address / function name `tripAndTimeReportingService#showOptiDriveIndicator`

Request limits 10 requests / minute

### Parameters

**showOptiDriveIndicator** requires the following common parameters:

- [Authentication parameters](#)
- [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   |
|------------------------------|-------------|---|
| <code>driverno</code>        | string (10) | Identifying number of a driver.<br>Unique within an account, case-sensitive.<br>This parameter is optional.         |
| <code>drivergroupname</code> | string      | Name of the group of drivers the driver is assigned to, case-sensitive.<br>This parameter is optional.              |
| <code>driveruid</code>       | string      | A unique, unchangeable identifier for the indicated driver, automatically generated.<br>This parameter is optional. |

### Result

Result for `showOptiDriveIndicator`:

| Parameter             | Type   | Description  |
|-----------------------|--------|--|
| <code>driverno</code> | string | Identifying number of a driver.<br>Unique within an account. |

| Parameter               | Type    | Description   |
|-------------------------|---------|---|
| drivename               | string  | Display name of a driver.   |
| totaldrivingtime        | integer | The total driving time of the driver in the defined period in seconds.  |
| optidrive_indicator     | float   | The overall OptiDrive indicator.  |
| trend                   | float   | <p>Value ranges from -1 to 1.</p> <p>Indicates the development of the OptiDrive value of the past showing whether the driver's driving style was increasing, stable or decreasing.</p> <p>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.</p> <hr/> <p><i>Example 1: A value of 0.1 indicates only a slight increase of the OptiDrive indicator.</i></p> <hr/> <p><i>Example 2: A value of -0.9 indicates a heavy decrease of the OptiDrive indicator.</i></p> <hr/> |
| totaldistance           | integer | Total distance driven in defined period in meters.  |
| speeding_indicator      | float   | <p>Value of influencing variable for speeding events.</p> <p>Value ranges from 0 to 1.</p>  |
| speeding_time           | integer | Total time of speeding events in seconds.   |
| speeding_avgexcess      | float   | <p>The average speed limit excess of all speeding events within defined period, in km/h.</p> <hr/> <p><i>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.</i></p> <hr/>   |
| speeding_avglimit       | float   | <p>The average of effective speed limits during all speeding events in km/h.</p> <hr/> <p><i>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.</i></p> <hr/>  |
| speeding_count          | integer | Number of speeding events registered during the defined period.   |
| drivingevents_indicator | float   | <p>Value of influencing variable for driving events.</p> <p>Value ranges from 0 to 1.</p>   |
| drivingevents_count     | integer | Number of driving events registered during defined period.  |

| Parameter                                 | Type               | Description  |
|---|--------------------|--|
| drivingevents_avg-severity                | float              | The average severity of driving events in percent.   |
| idling_indicator                          | float              | Value of influencing variable for idling.<br>Value ranges from 0 to 1.   |
| idling_time                               | integer            | Time spent idling during defined period, in seconds.   |
| idling_watsedfuel                         | integer            | Total amount of fuel wasted while idling within the defined period.  |
| fuelusage_indicator                       | float              | Value of influencing variable for fuel consumption.<br>Value ranges from 0 to 1.   |
| fuelusage_total                           | integer            | Total amount of fuel used by driver within the defined period in millilitres.  |
| fuelusage_reference                       | 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.<br>Can be used alternatively to <code>driverid</code> .         |
| coasting_indicator                        | float              | Value of influencing variable for coasting.<br>Value ranges from 0 to 1.   |
| coasting_reference_time                   | nonNegativeInteger | Potential coasting time in seconds, i.e. the sum of coasting and braking time.   |
| coasting_time                             | nonNegativeInteger | Actual coasting time in seconds.   |
| coasting_distance                         | nonNegativeInteger | Actual coasting distance in meters.  |
| constant_speed_indicator                  | float              | Value of influencing variable for constant speed.<br>Value ranges from 0 to 1.   |
| constant_speed_reference_time             | nonNegativeInteger | Potential driving time in seconds at which constant speed was evaluated.   |
| constant_speed_time                       | nonNegativeInteger | Actual driving time with constant speed, in seconds.   |
| constant_speed_reference_time_urban       | nonNegativeInteger | Potential driving time with constant speed in urban areas, in seconds.   |
| constant_speed_reference_time_extra_urban | nonNegativeInteger | Potential driving time with constant speed in extra urban areas, in seconds  |
| constant_speed_reference_time_motorway    | nonNegativeInteger | Potential driving time with constant speed on motorway, in seconds.  |



| Parameter                       | Type               | Description   |
|---------------------------------|--------------------|---|
| constant_speed_time_urban       | nonNegativeInteger | Actual driving time with constant speed in urban areas, in seconds.   |
| constant_speed_time_extra_urban | nonNegativeInteger | Actual driving time with constant speed in extra urban areas, in seconds.   |
| constant_speed_time_motorway    | nonNegativeInteger | Actual driving time with constant speed on motorways, in seconds.   |
| green_speed_indicator           | float              | Value of influencing variable for green speed.<br>Value ranges from 0 to 1.   |
| green_speed_reference_time      | nonNegativeInteger | The actual time of a trip the green speed reference value would apply, in seconds.<br><br><i>Example: The time where the speed limit was greater than &gt; 80 km/h.</i> |
| green_speed_time                | nonNegativeInteger | Driving time with speed lower than/equal to current green speed limit (never greater than <code>green_speed_reference_time</code> ), in seconds.                        |
| high_revving_indicator          | float              | Value of influencing variable for highrevving.<br>Value ranges from 0 to 1.   |
| high_revving_reference_time     | nonNegativeInteger | Driving time in which RPM data was reported, in seconds.  |
| high_revving_time               | nonNegativeInteger | Actual time in which the high-revving was reported, in seconds.   |

## showDriverGroups

### Description

This action retrieves a list of all driver groups.

### Technical details

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

### Parameters

**showDriverGroups** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to showDriverGroups:

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

## Result

Result for showDriverGroups:

| 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 `driverid` and `drivergroupname`, only according matches are returned.

### Technical details

SOAP endpoint address / function name `driverManagementService#showDriverGroupDrivers`

Request limits 10 requests / minute

### Parameters

**showDriverGroupDrivers** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to showDriverGroupDrivers:

| Parameter       | Type   | Description   |
|-----------------|--------|---|
| driverid        | string | Identifying number of a driver.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to <code>driveruid</code> . |
| drivergroupname | string | The given entry filters the result list on driver groups with matching names, case-sensitive.<br>This parameter is optional.          |

| Parameter | Type   | Description  |
|-----------|--------|--|
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated.<br>Can be used alternatively to <code>driverno</code> . |

## Result

Result for `showDriverGroupDrivers`:

| Parameter       | Type   | Description  |
|-----------------|--------|--|
| driverno        | string | Identifying number of a driver.<br>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.<br>Can be used alternatively to <code>driverno</code> . |

## 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.<br>This parameter is required. |

| Parameter | Type   | Description  |
|-----------|--------|--|
| driverno  | string | Identifying number of a driver.<br>Unique within an account, case-sensitive.<br>This parameter is required.<br>Can be used alternatively to <code>driveruid</code> . |
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated.<br>Can be used alternatively to <code>driverno</code> .                         |

## 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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `detachDriverFromGroup`:

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

## insertDriverGroup

### Description

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

## Technical details

SOAP endpoint address / function name driverManagementService#insertDriverGroup

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

## Parameters

**insertDriverGroup** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to insertDriverGroup:

| Parameter       | Type   | Description  |
|-----------------|--------|--|
| drivergroupname | string | Name of the driver group, case-sensitive.<br>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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to deleteDriverGroup:

| Parameter       | Type   | Description  |
|-----------------|--------|--|
| drivergroupname | string | Name of the driver group, case-sensitive.<br>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 |
|----------------|----------------------|

## Parameters

**updateDriverGroup** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `updateDriverGroup`:

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

## 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 `attachDriverToVehicle`. 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 Solutions, 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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `detachDriverFromVehicle`:

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

## 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

- [getRemainingDrivingTimesEU](#) – calculates remaining driving times
- [updateDriverRdtRules](#) – changes the rules for calculating driving and working times and infringements
- [showEventReportExtern](#) – returns event notifications, including infringement notifications

### Technical details

SOAP endpoint address / function name `driverManagementService#getDriverRdtRules`

Request limits 10 requests / minute



## Parameters

**getDriverRdtRules** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `getDriverRdtRules`:

| Parameter | Type        | Description  |
|-----------|-------------|--|
| driverno  | string (10) | Identifying number of a driver.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to <code>driveruid</code> .        |
| driveruid | string (30) | A unique, unchangeable identifier for the indicated driver, automatically generated.<br>Can be used alternatively to <code>driverno</code> . |

## Result

Result for `getDriverRdtRules`:

| Parameter | Type        | Description  |
|-----------|-------------|--|
| driverno  | string (10) | Identifying number of a driver.<br>Unique within an account.                         |
| driveruid | string (30) | A unique, unchangeable identifier for the indicated driver, automatically generated. |

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

| Parameter       | Type    | Description   |
|-----------------|---------|---|
| employment_type | string  | <p>The type of employment.</p> <p>Only applicable if <code>regulation_type</code> ARV1_2011 is selected.</p> <p>Allowed values:</p> <ul style="list-style-type: none"> <li>• EMPLOYEE</li> <li>• SELF_EMPLOYED</li> </ul> <p>If EMPLOYEE is selected, the Swiss working time regulations are considered in the calculation. Otherwise, if SELF_EMPLOYED is selected, they are not considered.</p> |
| isDefault       | boolean | <p>If <code>true</code> then these are default rules.</p> <p>As long as no specific rule has been saved for a driver, predefined default rules are automatically used. Only after setting the rules using <code>updateDriverRdtRules</code> the first time, the value <code>isDefault</code> is always <code>false</code>.</p>  |

## 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 `getDriverRdtRules`.

### Related actions

- [getRemainingDrivingTimesEU](#) – calculates remaining driving times
- [getDriverRdtRules](#) – retrieves the rules for calculating driving and working times and infringements
- [showEventReportExtern](#) – returns event notifications, including infringement notifications

### Technical details

SOAP endpoint address / function name `driverManagementService#updateDriverRdtRules`

Request limits 10 requests / minute

### Parameters

`updateDriverRdtRules` requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to updateDriverRdtRules:

| Parameter | Type        | Description  |
|-----------|-------------|--|
| driverno  | string (10) | Identifying number of a driver.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to driveruid.  |
| driveruid | string (30) | A unique, unchangeable identifier for the indicated driver, automatically generated.<br>Can be used alternatively to driverno.   |
| country   | string      | <p>The country determines which regulation and which rules are available for configuration. Refer to section <b>Allowed parameter combinations</b> for possible combinations of <code>country</code> and <code>regulation_type</code>.</p> <p>Format: ISO 3166-1 alpha-2 or NONE</p> <p>Allowed values:</p> <ul style="list-style-type: none"> <li>• DE</li> <li>• IT</li> <li>• DK</li> <li>• NL</li> <li>• AT</li> <li>• GB</li> <li>• IE</li> <li>• CH</li> <li>• FR</li> <li>• SI</li> <li>• PL</li> <li>• BE</li> <li>• ES</li> <li>• SE</li> <li>• NO</li> <li>• FI</li> <li>• PT</li> <li>• NONE</li> </ul> <p>This parameter is mandatory.</p> |

| Parameter          | Type    | Description   |
|--------------------|---------|---|
| regulation_type    | string  | <p>The regulation that should be applied when calculating (remaining) driving and working times and infringements.</p> <p>Allowed values:</p> <ul style="list-style-type: none"> <li>EU_561<br/> <a href="#">Regulation (EC) No 561/2006</a> – Regulation of rules on driving times, breaks and rest periods.<br/> Applicable to all EU countries.</li> <li>ARV1_2011<br/> <a href="#">Chauffeurverordnung, ARV 1</a> – Verordnung über die Arbeits- und Ruhezeit der berufsmässigen Motorfahrzeugführer und -führerinnen.<br/> Applicable to Switzerland (CH) only.</li> <li>FPERSV<br/> <a href="#">Fahrpersonalverordnung</a> – Verordnung zur Durchführung des Fahrpersonalgesetzes.<br/> Applicable to Germany (DE) only.</li> </ul> <p>This parameter is mandatory.</p> |
| bus_rule           | boolean | If <code>true</code> the 12-day rule is considered in the calculation, which is regulated by (EC) No 561/2006, Article 8(6a).   |
| working_time_rules | boolean | If <code>true</code> country specific working time rules are considered in the calculation.   |
| employment_type    | string  | <p>The type of employment.</p> <p>Only applicable if <code>regulation_type</code> ARV1_2011 is selected.</p> <p>Allowed values:</p> <ul style="list-style-type: none"> <li>EMPLOYEE</li> <li>SELF_EMPLOYED</li> </ul> <p>If EMPLOYEE is selected, the Swiss working time regulations are considered in the calculation. Otherwise, if SELF_EMPLOYED is selected, they are not considered.</p>   |

## 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 | Type   |
|---------|------------|--|
| DE      | EU_561     | <ul style="list-style-type: none"> <li>bus_rule</li> <li>working_time_rules</li> </ul> |
| DE      | FPersV     | <ul style="list-style-type: none"> <li>bus_rule</li> </ul>                             |
| IT      | EU_561     | <ul style="list-style-type: none"> <li>bus_rule</li> <li>working_time_rules</li> </ul> |
| DK      | EU_561     | <ul style="list-style-type: none"> <li>bus_rule</li> </ul>                             |
| NL      | EU_561     | <ul style="list-style-type: none"> <li>bus_rule</li> <li>working_time_rules</li> </ul> |
| AT      | EU_561     | <ul style="list-style-type: none"> <li>bus_rule</li> <li>working_time_rules</li> </ul> |
| GB      | EU_561     | <ul style="list-style-type: none"> <li>bus_rule</li> <li>working_time_rules</li> </ul> |
| IE      | EU_561     | <ul style="list-style-type: none"> <li>bus_rule</li> <li>working_time_rules</li> </ul> |
| CH      | ARV1_2011  | <ul style="list-style-type: none"> <li>bus_rule</li> <li>employment_type</li> </ul>    |
| FR      | EU_561     | <ul style="list-style-type: none"> <li>bus_rule</li> <li>working_time_rules</li> </ul> |
| SI      | EU_561     | <ul style="list-style-type: none"> <li>bus_rule</li> </ul>                             |
| PL      | EU_561     | <ul style="list-style-type: none"> <li>bus_rule</li> </ul>                             |
| BE      | EU_561     | <ul style="list-style-type: none"> <li>bus_rule</li> </ul>                             |
| ES      | EU_561     | <ul style="list-style-type: none"> <li>bus_rule</li> </ul>                             |
| SE      | EU_561     | <ul style="list-style-type: none"> <li>bus_rule</li> </ul>                             |
| NO      | EU_561     | <ul style="list-style-type: none"> <li>bus_rule</li> </ul>                             |
| FI      | EU_561     | <ul style="list-style-type: none"> <li>bus_rule</li> </ul>                             |
| PT      | EU_561     | <ul style="list-style-type: none"> <li>bus_rule</li> </ul>                             |
| NONE    | EU_561     |  |

# Addresses

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## 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.   |
| addressgroupname | string      | A name of an address group.  |
| ungroupedonly    | string      | Allows to filter on addresses that are currently not assigned to a certain address group.<br>Only valid value is <code>true</code> .<br>This parameter overrules the group name filter parameter.<br>This parameter is optional. |
| addrnr           | string (10) | Identifying number of an address.<br>Unique within an account.   |
| addruuid         | 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.<br>Unique within an account. |
| addrname1 | string      |  |

| Parameter  | Type       | Description  |
|------------|------------|--|
| addrname2  | string     |  |
| addrname3  | string     |  |
| addrstate  | string (2) | <a href="#">ISO 3166-1 alpha-2 code</a> 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 <a href="#">WGS84</a> coordinate system.                   |
| longitude  | string     | Geographic longitude in the form GGG° MM' SS.S" E/W in the <a href="#">WGS84</a> coordinate system.                  |
| radius     | int        | Describes the perimeter around the address's location within that object locations are associated with this address. |
| 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      | Valid values: <ul style="list-style-type: none"> <li>• brightblue</li> <li>• dullorange</li> <li>• brightorange</li> <li>• brightpalegreen</li> <li>• grassgreen</li> <li>• brightpurple</li> <li>• darkred</li> <li>• dullazure</li> <li>• deeppurple</li> <li>• brightazure</li> <li>• orangehighlight</li> <li>• brightgreen</li> <li>• brightorangehighlight</li> <li>• khaki</li> <li>• paleblue</li> <li>• turquoise</li> </ul> |
| positiony | int         | Geographic latitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> .  |
| positionx | int         | Geographic longitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> .   |
| addruuid  | string      | A unique, unchangable identifier for the indicated address, automatically generated.  |
| mapcode   | string (20) | A mapcode represents a location.<br>Learn more about <a href="#">mapcodes</a> .   |

## showAddressGroupReportExtern

### Description

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

### Technical details

SOAP endpoint address / function name addressService#showAddressGroupReport

## Parameters

showAddressGroupReportExtern requires the following common parameters:

- [Authentication parameters](#)
- [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        | Type   | Description   |
|------------------|--------|---|
| addressgroupname | string | The name of the address group as it appears in WEBFLEET.                                    |
| addressgroupuid  | string | A unique, unchangeable 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:

- [Authentication parameters](#)
- [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

Result for showAddressGroupAddressReportExtern:

| Parameter        | Type        | Description  |
|------------------|-------------|--|
| addressgroupname | string      | The name of the address group as it appears in WEBFLEET.                                   |
| addrnr           | string (10) | Identifying number of an address. Unique within an account.                                |
| addruuid         | 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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to insertAddressExtern:

| Parameter  | Type        | Description   |
|------------|-------------|---|
| addrnr     | string (10) | Identifying number of an address, case-sensitive. Unique within an account.<br>This parameter is mandatory. |
| addname1   | string (50) | This parameter is mandatory.  |
| addname2   | string (50) |   |
| addname3   | string (50) |   |
| addrstreet | string (50) |   |
| addrzip    | string (10) |   |
| addrcity   | string (50) |   |

| Parameter   | Type          | Description   |
|-------------|---------------|---|
| addrcountry | string (2)    | <a href="#">ISO 3166-1 alpha-2 code</a> for the country (capital letters).  |
| addrregion  | string        | Name (or abbreviation) of the county, district or federal state this locality belongs to.   |
| contact     | string (50)   |   |
| telloffice  | string (20)   |   |
| telmobile   | string (20)   |   |
| telprivate  | string (20)   |   |
| fax         | string (20)   |   |
| mailaddr    | string (254)  |   |
| radius      | int           | Describes the perimeter around the address's location within that object locations are associated with this address.  |
| addrinfo    | string (1000) |   |
| positiony   | int           | Geographic latitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> .  |
| positionx   | int           | Geographic longitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> . |
| 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      | <p>The colour associated with the address.</p> <p>Case-sensitive.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• brightblue</li> <li>• dullorange</li> <li>• brightorange</li> <li>• brightpalegreen</li> <li>• grassgreen</li> <li>• brightpurple</li> <li>• darkred</li> <li>• dullazure</li> <li>• deeppurple</li> <li>• brightazure</li> <li>• orangehighlight</li> <li>• brightgreen</li> <li>• brightorangehighlight</li> <li>• khaki</li> <li>• paleblue</li> <li>• turquoise</li> </ul> |
| addrgrpname | string (30) | <p>Name of an address group, case-sensitive. Unique within an account.</p> <p>The address will be automatically associated with this group.</p> <p>This parameter is optional.</p>   |
| addrgrpuid  | string      | A unique, unchangable identifier for the indicated address group, automatically generated.   |
| mapcode     | string (20) | <p>A mapcode represents a location.</p> <p>Either <code>mapcode</code> or <code>latitude/longitude</code> coordinates can be used, but not both.</p> <p>Learn more about <a href="#">mapcodes</a>.</p>   |

## 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

## 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.<br><b>Note:</b> The parameter <code>addrnr</code> or <code>addruid</code> is required. |
| addname1    | string (50)   | This parameter is required.  |
| addname2    | string (50)   |  |
| addname3    | string (50)   |  |
| addrstreet  | string (50)   |  |
| addrzip     | string (10)   |  |
| addrcity    | string (50)   |  |
| addrcountry | string (2)    | <a href="#">ISO 3166-1 alpha-2 code</a> 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           | Describes the perimeter around the address's location within that object locations are associated with this address.                               |
| addrinfo    | string (1000) |  |

| Parameter | Type        | Description  |
|-----------|-------------|--|
| positiony | int         | <p>Geographic latitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p>  |
| positionx | int         | <p>Geographic longitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p>   |
| visible   | boolean     | Controls visibility of this address on the map. If set to 1, the address will be shown on the map.   |
| color     | string      | <p>The colour associated with the address.</p> <p>Case-sensitive.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• brightblue</li> <li>• dullorange</li> <li>• brightorange</li> <li>• brightpalegreen</li> <li>• grassgreen</li> <li>• brightpurple</li> <li>• darkred</li> <li>• dullazure</li> <li>• deeppurple</li> <li>• brightazure</li> <li>• orangehighlight</li> <li>• brightgreen</li> <li>• brightorangehighlight</li> <li>• khaki</li> <li>• paleblue</li> <li>• turquoise</li> </ul> |
| addruid   | string      | <p>A unique, unchangable identifier for the indicated address, automatically generated.</p> <div> <p><b>Note:</b> The parameter <code>addrnr</code> or <code>addruid</code> is required.</p> </div>  |
| mapcode   | string (20) | <p>A mapcode represents a location.</p> <p>Either <code>mapcode</code> or <code>latitude/longitude</code> coordinates can be used but not both.</p> <p>Learn more about <a href="#">mapcodes</a>.</p>  |

## 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:

- [Authentication parameters](#)
- [General parameters](#)

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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to attachAddressToGroupExtern:

| Parameter | Type        | Description   |
|-----------|-------------|---|
| addrnr    | string (10) | Identifying number of an address. Unique within an account. |



| Parameter   | Type        | Description  |
|-------------|-------------|--|
| addrgrpname | string (30) | Name of an address group, case-sensitive. Unique within an account.                        |
| addruuid    | 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:

- [Authentication parameters](#)
- [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.                        |
| addruuid    | 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       | Type        | 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.<br><br><b>IMPORTANT:</b> Please use carefully. All addresses assigned will be deleted without further confirmation.<br><br>This parameter is optional. |

| Parameter  | Type   | Description  |
|------------|--------|--|
| 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.<br>This parameter is optional.   |
| eventlevel_cur | nonNegativeInteger | Event level.<br>Valid values: <ul style="list-style-type: none"><li>• 0 - Message</li><li>• 1 - Notice/Information</li><li>• 2 - Warning</li><li>• 3 - Alarm 1</li><li>• 4 - Alarm 2</li><li>• 5 - Alarm 3</li></ul><br>This parameter is optional. |
| resolved       | boolean            | Flags a resolved event.<br>Valid values: <ul style="list-style-type: none"><li>• 0 - Unresolved</li><li>• 1 - Resolved</li></ul><br>This parameter is optional.   |

| Parameter    | Type        | Description  |
|--------------|-------------|--|
| acknowledged | boolean     | Flags an acknowledged event.<br>Valid values: <ul style="list-style-type: none"> <li>0 - Unacknowledged</li> <li>1 - Acknowledged</li> </ul> This parameter is optional. |
| objectuid    | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> .                             |

## Result

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 <a href="#">WGS84</a> coordinate system.  |
| longitude  | string      | Geographic longitude in the form GGG° MM' SS.S" E/W in the <a href="#">WGS84</a> coordinate system.   |
| restime    | string      |   |
| acktime    | string      |   |
| eventlevel | string      | The original event level this event had when it was created.<br>Valid values: <ul style="list-style-type: none"> <li>I - Information</li> <li>W - Warning</li> <li>A - Alarm</li> </ul> |
| alarmlevel | string      |   |

| Parameter      | Type        | Description   |
|----------------|-------------|---|
| eventlevel_cur | string      | The current event level for this event.<br>Valid values: <ul style="list-style-type: none"> <li>• I - Information</li> <li>• W - Warning</li> <li>• A - Alarm</li> </ul>  |
| resuser        | string      | Identifies the user who resolved this event.<br>Can be empty if user does not have the relevant rights to access user information.  |
| ackuser        | string      | Identifies the user who acknowledged this event.<br>Can be empty if user does not have the relevant rights to access user information.  |
| latitude_mdeg  | int         | Geographic latitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> .  |
| longitude_mdeg | int         | Geographic longitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> . |
| objectuid      | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> .  |
| pos_time       | string      | The time that is related to the last known position of the vehicle when the event occurred.<br>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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to acknowledgeEventExtern:

| Parameter | Type   | 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 | Type   | 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                    | Type        | Description  |
|------------------------------|-------------|--|
| <code>objectgroupname</code> | string (50) | Name of the group of objects.<br>This parameter is optional.   |
| <code>objectno</code>        | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to <code>objectuid</code> .<br><br><b>Note:</b> Make sure that the object you indicate using <code>objectno</code> belongs to the object group you have indicated using <code>objectgroupname</code> .        |
| <code>objectuid</code>       | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> .<br><br><b>Note:</b> Make sure that the object you indicate using <code>objectuid</code> belongs to the object group you have indicated using <code>objectgroupname</code> . |
| <code>eventlevel</code>      | int         | The level of an event.<br>Valid values: <ul style="list-style-type: none"> <li>• 1 - Notice/Information</li> <li>• 2 - Warning</li> <li>• 3 - Alarm 1</li> <li>• 4 - Alarm 2</li> <li>• 5 - Alarm 3</li> </ul> This parameter is optional.   |

## Result

Results for `getEventForwardConfigs`:

| Parameter                          | Type        | Description  |
|------------------------------------|-------------|--|
| <code>eventforwardconfig-id</code> | string (30) | A unique, unchangeable identifier for the indicated event forwarding configuration, automatically generated. |



| Parameter       | Type        | Description  |
|-----------------|-------------|--|
| eventlevel      | int         | The level of an event.<br>Valid values: <ul style="list-style-type: none"> <li>1 - Notice/Information</li> <li>2 - Warning</li> <li>3 - Alarm 1</li> <li>4 - Alarm 2</li> <li>5 - Alarm 3</li> </ul> |
| objectgroupname | string (50) | Name of the group of objects.  |
| objectno        | string (10) | Identifying number of an object.<br>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

`getEventForwardConfigRecipients` returns the primary and all additional recipients of an event forwarding configuration.

### Technical details

SOAP endpoint address / function name `eventReportingService#getEventForwardConfigRecipients`

Request limits 10 requests / minute

### Parameters

**getEventForwardConfigRecipients** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `getEventForwardConfigRecipients`:

| Parameter             | Type        | Description   |
|-----------------------|-------------|---|
| eventforwardconfig-id | string (30) | A unique unchangeable identifier for the indicated event forwarding configuration, automatically generated.<br>This parameter is mandatory. |

### Result

Results for `getEventForwardConfigRecipients`:

| Parameter             | Type         | Description  |
|-----------------------|--------------|--|
| eventforwardconfig-id | 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

`insertEventForwardConfig` requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `insertEventForwardConfig`:

| Parameter       | Type        | Description   |
|-----------------|-------------|---|
| eventlevel      | int         | <p>The level of an event.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 1 - Notice/Information</li> <li>• 2 - Warning</li> <li>• 3 - Alarm 1</li> <li>• 4 - Alarm 2</li> <li>• 5 - Alarm 3</li> </ul> <p>This parameter is mandatory.</p> |
| objectgroupname | string (50) | <p>Name of the group of objects.</p> <p>This parameter is optional.</p>   |

| Parameter | Type         | Description   |
|-----------|--------------|---|
| objectno  | string (10)  | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to objectuid.<br><br><b>Note:</b> Make sure that the object you indicate using <code>objectno</code> belongs to the object group you have indicated using <code>objectgroupname</code> .   |
| objectuid | string (30)  | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> .<br><br><b>Note:</b> Make sure that the object you indicate using <code>objectuid</code> belongs to the object group you have indicated using <code>objectgroupname</code> .  |
| recipient | string (400) | Name and email address of recipient.<br>You can separate first name from last name by using a comma.<br>The email address must be a valid email address according to RFC5322 and RFC2606.<br>Separate name from email by using a semicolon.<br>You can indicate multiple recipients by repeating the <code>recipient</code> parameter.<br>This parameter is required. |

## Result

Results for `insertEventForwardConfig`:

| Parameter             | Type        | Description  |
|-----------------------|-------------|--|
| eventforwardconfig-id | string (30) | A unique, unchangeable identifier for the indicated event forwarding configuration, automatically generated. |

## updateEventForwardConfig

### Description

Using `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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to updateEventForwardConfig:

| Parameter             | Type        | Description  |
|-----------------------|-------------|--|
| eventforwardconfig-id | string (30) | A unique, unchangeable identifier for the indicated event forwarding configuration, automatically generated.<br>This parameter is mandatory.   |
| eventlevel            | int         | The level of an event.<br>Valid values: <ul style="list-style-type: none"><li>• 1 - Notice/Information</li><li>• 2 - Warning</li><li>• 3 - Alarm 1</li><li>• 4 - Alarm 2</li><li>• 5 - Alarm 3</li></ul><br>This parameter is required.  |
| objectgroupname       | string (50) | Name of the group of objects.<br>This parameter is optional.   |
| objectno              | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to objectuid.<br><br><b>Note:</b> Make sure that the object you indicate using <code>objectno</code> belongs to the object group you have indicated using <code>objectgroupname</code> .        |
| objectuid             | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to objectno.<br><br><b>Note:</b> Make sure that the object you indicate using <code>objectuid</code> belongs to the object group you have indicated using <code>objectgroupname</code> . |

| Parameter | Type         | Description  |
|-----------|--------------|--|
| recipient | string (400) | <p>Name and email address of recipient.</p> <p>You can separate first name from family name by using a comma.</p> <p>The email address must be a valid email address according to RFC5322 and RFC2606.</p> <p>Separate name from email by using a semicolon.</p> <p>You can indicate multiple recipients by repeating the <code>recipient</code> parameter.</p> <p>This parameter is required.</p> |

## deleteEventForwardConfig

### Description

Using `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             | Type        | Description   |
|-----------------------|-------------|---|
| eventforwardconfig-id | string (30) | <p>A unique, unchangeable identifier for the indicated event forwarding configuration, automatically generated.</p> <p>This parameter is mandatory.</p> |

# 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 name | tripAndTimeReportingService#showTripReport |
| Request limits                        | 1 request / minute                         |

### 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 ([Date range filter parameters](#)). 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 `showTripReportExtern` 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 `showTripReportExtern`, 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 `showTripReportExtern` (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 ([Date range filter parameters](#)) compliant to more restrictions (see below) must be present.
- The time period covered by date range filter ([Date range filter parameters](#)) may not be greater than 1 year.
- If the time period covered by date range filter ([Date range filter parameters](#)) 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                    | Type               | Description   |
|------------------------------|--------------------|---|
| <code>objectno</code>        | string (10)        | Identifying number of an object. Unique within an account, case-sensitive.<br>This parameter is optional.                                 |
| <code>tripid</code>          | nonNegativeInteger | This parameter is optional.   |
| <code>driverno</code>        | string             | Identifying number of a driver. Unique within an account, case-sensitive. Can be used alternatively to <code>driveruid</code> .           |
| <code>drivergroupname</code> | string             | Name of the group of drivers the driver is assigned to, case-sensitive.<br>This parameter is optional.                                    |
| <code>objectgroupname</code> | string             | Name of the group of objects the object is assigned to, case-sensitive.<br>This parameter is optional.                                    |
| <code>objectuid</code>       | string (30)        | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to <code>objectno</code> . |
| <code>externalid</code>      | string             | For future use. This parameter is optional.   |
| <code>driveruid</code>       | string             | A unique, unchangeable identifier for the indicated driver, automatically generated. Can be used alternatively to <code>driverno</code> . |

Parameters specific to `showTripReportExtern`

## Result

Result for `showTripReportExtern`:

| Parameter                       | Type               | Description  |
|---------------------------------|--------------------|--|
| tripid                          | string             |  |
| tripmode                        | nonNegativeInteger | Valid values: <ul style="list-style-type: none"> <li>0 - Unknown trip type</li> <li>1 - Private trip</li> <li>2 - Business trip</li> <li>3 - Commute trip</li> <li>4 - Correction trip (user changed the odometer value manually)</li> </ul> |
| 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                  | int                | The odometer reading when this event started.  |
| start_posttext                  | 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_posttext                    | string             | A detailed textual description of the location where this event ended.   |
| duration                        | int                | The difference between <code>start_time</code> and <code>end_time</code> .<br>Unit of measurement is "seconds".  |
| idle_time                       | int                | The idle time during this trip. Unit of measurement is "seconds".  |
| distance                        | int                | The difference between <code>start_odometer</code> and <code>end_odometer</code> . Unit of measurement is "meters".  |
| 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.   |
| Result for showTripReportExtern |                    |  |



| Parameter                 | Type   | Description  |
|---------------------------|--------|--|
| start_longitude           | int    | <p>Geographic longitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p> |
| start_latitude            | int    | <p>Geographic latitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p>  |
| start_formatted_longitude | string | Geographic longitude in the form GGG° MM' SS.S" E/W in the <a href="#">WGS84</a> coordinate system.  |
| start_formatted_latitude  | string | Geographic latitude in the form GGG° MM' SS.S" N/ S in the <a href="#">WGS84</a> coordinate system.  |
| end_longitude             | int    | <p>Geographic longitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p> |
| end_latitude              | int    | <p>Geographic latitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p>  |
| end_formatted_longitude   | string | Geographic longitude in the form GGG° MM' SS.S" E/W in the <a href="#">WGS84</a> coordinate system.  |
| end_formatted_latitude    | string | Geographic latitude in the form GGG° MM' SS.S" N/ S in the <a href="#">WGS84</a> coordinate system.  |
| driverno                  | string | <p>Identifying number of a driver.</p> <p>Unique within an account.</p>  |
| drivername                | string | Display name of a driver.  |

Result for showTripReportExtern

| Parameter                | Type        | Description  |
|--------------------------|-------------|--|
| start_addrno             | string      | Identifying number of an address.<br>Unique within an account.   |
| end_addrno               | string      | Identifying number of an address.<br>Unique within an account.   |
| fueltype                 | int         | Valid values: <ul style="list-style-type: none"> <li>0 - unknown</li> <li>1 - diesel</li> <li>2 - gasoline</li> <li>3 - lpg</li> <li>4 - hybrid petrol</li> <li>5 - hybrid diesel</li> <li>6 - electric</li> </ul> |
| 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.<br>Can be used alternatively to <code>objectno</code> .   |
| externalid               | string      | For future use.  |
| driveruid                | string      | A unique, unchangeable identifier for the indicated driver, automatically generated.<br>Can be used alternatively to <code>driverno</code> .   |
| optidrive_indicator      | float       | The overall OptiDrive indicator.   |
| speeding_indicator       | float       | Value of influencing variable for speeding events.<br>Value ranges from 0 to 1.  |
| drivingevents_indicator  | float       | Value of influencing variable for driving events.<br>Value ranges from 0 to 1.   |
| idling_indicator         | float       | Value of influencing variable for idling.<br>Value ranges from 0 and 1.  |
| fuelusage_indicator      | float       | Value of influencing variable for fuel consumption.<br>Value ranges from 0 and 1.  |
| coasting_indicator       | float       | Value of influencing variable for coasting.<br>Value ranges from 0 to 1.   |
| constant_speed_indicator | float       | Value of influencing variable for constant speed.<br>Value ranges from 0 to 1.   |
| green_speed_indicator    | float       | Value of influencing variable for green speed.<br>Value ranges from 0 to 1.  |

Result for showTripReportExtern

| Parameter              | Type  | Description  |
|------------------------|-------|--|
| high_revving_indicator | float | Value of influencing variable for high-revving.<br>Value ranges from 0 to 1. |

Result for showTripReportExtern

## showTripSummaryReportExtern

### Description

This action provides daily accumulated trip information.

### Technical details

SOAP endpoint address / function name tripAndTimeReportingService#showTripSummaryReport

Request limits 10 requests / minute

### Parameters

**showTripSummaryReportExtern** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

showTripSummaryReportExtern requires the following other parameters:

- [Date range filter parameters](#) - 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.<br>This paramater is mandatory if objectuid is not defined.          |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>This parameter is mandatory if objectno is not defined. |

### Result

Result for showTripSummaryReportExtern:

| Parameter  | Type        | Description   |
|------------|-------------|---|
| objectno   | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive. |
| objectname | string      | Display name of an object.  |
| start_time | string      | The time recorded when this event started.                                    |

| Parameter      | Type        | Description  |
|----------------|-------------|--|
| start_odometer | int         | The odometer reading when this event started.  |
| end_time       | string      | The time recorded when this event ended.   |
| end_odometer   | int         | The odometer reading when this event ended.  |
| end_posttext   | string      | A detailed textual description of the location where this event ended.   |
| distance       | int         | 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.<br>Can be used alternatively to <code>objectno</code> . |

## 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:

- [Authentication parameters](#)
- [General parameters](#)
- [Date range filter parameters](#), periods longer than 2 days are not permitted.

Parameters specific to showTracks:

| Parameter  | Type        | Description  |
|------------|-------------|--|
| objectno   | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to objectuid.       |
| objectuid  | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to objectno. |
| externalid | string      | For future use.<br>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 <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> .  |
| longitude   | int                | Geographic longitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> . |
| speed       | nonNegativeInteger | in km/h   |
| course      | nonNegativeInteger | Compass direction in degrees (0° ... 360°):   |
| fuel_usage  | float              | Fuel consumption in litres, max. three decimals allowed.  |
| odometer    | int                | Odometer value at the position.<br>Only available for LINK 7xx/6xx/5xx/4xx.   |
| country     | string             | Country code.   |
| state       | string             | Code for federal state.   |

# updateLogbook

## Descriptions

This action updates some parameters of an existing logbook entry.

When using `updateLogbook`, 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  | Type                         | Description  |
|------------|------------------------------|--|
| tripid     | nonNegativeInteger           | This parameter is required.  |
| logflag    | string                       | Indicates the trip mode.<br>Valid values: <ul style="list-style-type: none"><li>• 1 - Private</li><li>• 2 - Business</li><li>• 3 - Commute</li></ul> This parameter is optional. |
| logpurpose | string (max. 254 characters) | A description of the purpose.<br>This parameter is optional.   |
| logcontact | string (max. 254 characters) | Contact details for this trip; this is typically at the visited party.<br>This parameter is optional.  |
| logcomment | string (max. 254 characters) | Any additional annotation for this trip.<br>This parameter is optional.  |
| reason     | string (max. 254 characters) | Reason for this trip.<br>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:

- [Authentication parameters](#)
- [General parameters](#)

showLogbook requires the following other parameters:

- [Date range filter parameters](#) - 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 | Type               | Description   |
|-----------|--------------------|---|
| objectno  | string (10)        | Identifying number of an object. Unique within an account, case-sensitive.<br>Can be used alternatively to <code>objectuid</code> .       |
| tripid    | nonNegativeInteger | This parameter precedes <code>objectno</code> .<br>This parameter is optional.  |
| objectuid | string (30)        | A unique, unchangeable identifier for the indicated object, automatically generated. Can be used alternatively to <code>objectno</code> . |

Parameters specific to showLogbook

| Parameter      | Type   | Description   |
|----------------|--------|---|
| modified_since | string | <p>Returns all trips that have been manually edited after the indicated date.</p> <p>The format depends on the value of the <a href="#">General parameters</a> lang and useISO8601.</p> <ul style="list-style-type: none"> <li>lang = de<br/>Format: dd.MM.yyyy HH:mm:ss</li> <li>lang = en<br/>Format: dd/MM/yyyy HH:mm:ss</li> <li>lang = nl<br/>Format: d-M-yyyy H:mm:ss</li> </ul> <p>Example: 13.07.2007 23:59:59</p> <p>Example: 13/07/2007 23:59:59</p> <p>Example: 13-07-2007 23:59:59</p> <p>This parameter is optional.</p> |

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.   |
| logflag        | string      | <p>Indicates the trip mode.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>1 - Private</li> <li>2 - Business</li> <li>3 - Commute</li> <li>4 - Odometer correction</li> </ul> |
| 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.   |

Result for showLogbook



| Parameter      | Type                         | Description  |
|----------------|------------------------------|--|
| end_time       | string                       | The time recorded when this event ended.   |
| end_odometer   | int                          | The odometer reading when this event ended.  |
| end_posttext   | string                       | A detailed textual description of the location where this event ended.   |
| distance       | int                          | 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                     | <a href="#">ISO 8601</a> -formatted date and time in the UTC time-zone, combined representation in the extended format.<br><hr/> 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.  |
| drivename      | 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.  |
| 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 <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> . |

Result for showLogbook

| Parameter       | Type    | Description   |
|-----------------|---------|---|
| start_longitude | int     | Geographic longitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> . |
| end_latitude    | int     | Geographic latitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> .  |
| end_longitude   | int     | Geographic longitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> . |
| 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.<br>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.<br>Can be used alternatively to <code>driverno</code> .  |

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:

- [Authentication parameters](#)
- [General parameters](#)

**showLogbookHistory** requires the following other parameters:

- [Date range filter parameters](#) - The maximum range is one year. The date range filter parameter is optional if `tripid` is specified.

Parameters specific to **showLogbookHistory**:

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

### Result

Result for **showLogbookHistory**:

| Parameter     | Type        | Description   |
|---------------|-------------|---|
| tripid        | string      |   |
| objectno      | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive. |
| objectname    | string      | Display name of an object.  |
| logpurposeold | string      | The old description of the purpose.   |

| Parameter     | Type        | Description  |
|---------------|-------------|--|
| 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    | <a href="#">ISO 8601</a> -formatted date and time in the UTC timezone, combined representation in the extended format.<br><hr/> 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.<br>Can be used alternatively to <code>objectno</code> .                       |

## 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 `updateLogbookMode` 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

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|                |                      |
|----------------|----------------------|
| 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.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to objectuid.  |
| objectuid    | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to objectno.  |
| logbook_mode | int         | The logbook mode to set on the LINK device.<br>Valid values: <ul style="list-style-type: none"><li>• 1 - private</li><li>• 2 - business</li><li>• 3 - commute</li></ul> 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 Solutions Customer Support to enable this action for your WEBFLEET account.

This action cannot be used for trips of vehicles which have a tachograph connected.

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## Technical details

SOAP endpoint address / function name tripAndTimeReportingService#updateLogbookDriver

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

---

## Parameters

updateLogbookDriver requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to updateLogbookDriver:

| Parameter | Type               | Description  |
|-----------|--------------------|--|
| tripid    | nonNegativeInteger | The ID of the trip to which the driver is assigned.<br>This parameter is required.         |
| driverno  | string             | The driver number of the driver to be assigned to the trip.<br>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.

- At least one of the filter parameters objectno or driverno must be provided.
- The time period covered by date range filter ([Date range filter parameters](#)) may not be greater than 1 month.

## Parameters

showWorkingTimes requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

showWorkingTimes requires the following other parameters:

- [Date range filter parameters](#)

Parameters specific to showWorkingTimes:

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

## Result

Result for showWorkingTimes:

| Parameter      | Type               | Description   |
|----------------|--------------------|---|
| driverno       | string             | Identifying number of a driver.<br>Unique within an account.  |
| drivername     | string             | Display name of a driver.   |
| role           | nonNegativeInteger | Valid values: <ul style="list-style-type: none"> <li>1 - Driver</li> <li>2 - Co-Driver</li> <li>3 - Worker</li> </ul> |
| objectno       | string (10)        | Identifying number of an object.<br>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 | int                | The odometer reading when this event started.   |

| Parameter       | Type               | Description   |
|-----------------|--------------------|---|
| start_posttext  | 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 <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> .  |
| start_longitude | int                | Geographic longitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> . |
| end_time        | string             | The time recorded when this event ended.  |
| end_odometer    | int                | The odometer reading when this event ended.   |
| end_posttext    | string             | A detailed textual description of the location where this event ended.  |
| end_addrno      | string             | Identifying number of an address.<br>Unique within an account.  |
| end_latitude    | int                | Geographic latitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> .  |
| end_longitude   | int                | Geographic longitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> . |
| workstate       | nonNegativeInteger | Valid values: <ul style="list-style-type: none"> <li>0 - Unknown</li> <li>1 - Free time (PND only)</li> <li>2 - Pause (PND and digital tachograph)</li> <li>3 - Standby (digital tachograph only)</li> <li>4 - Working (PND only)</li> <li>5 - Driving (digital tachograph only)</li> <li>6 - Other work (digital tachograph only)</li> </ul>                                   |



| Parameter                 | Type        | Description  |
|---------------------------|-------------|--|
| end_objectno              | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.  |
| end_objectname            | string      |  |
| externaldevicetime-offset | 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.<br>Can be used alternatively to <code>objectno</code> . |
| end_objectuid             | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> . |
| driveruid                 | string      | A unique, unchangeable identifier for the indicated driver, automatically generated.<br>Can be used alternatively to <code>driverno</code> . |

## 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.<br>Can be used alternatively to <code>objectuid</code> . |

| Parameter  | Type        | Description  |
|------------|-------------|--|
| objectuid  | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> . |
| externalid | string      | For future use.<br>This parameter is optional.   |

## Result

Result for showStandStills:

| Parameter           | Type   | Description   |
|---------------------|--------|---|
| start_time          | string | The time recorded when this event started.<br><a href="#">ISO 8601</a> -formatted date and time in the UTC timezone, combined representation in the extended format.<br><hr/> Example: 2007-12-24T16:00:00+02:00 <hr/>  |
| end_time            | string | The time recorded when this event ended.<br><a href="#">ISO 8601</a> -formatted date and time in the UTC timezone, combined representation in the extended format.<br><hr/> Example: 2007-12-24T16:00:00+02:00 <hr/>  |
| duration            | int    | The difference between <code>start_time</code> and <code>end_time</code> . Unit of measurement is "seconds".  |
| latitude            | int    | Geographic latitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> .  |
| longitude           | int    | Geographic longitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> . |
| formatted_latitude  | string | Geographic latitude in the form GGG° MM' SS.S" N/S in the <a href="#">WGS84</a> coordinate system.  |
| formatted_longitude | string | Geographic longitude in the form GGG° MM' SS.S" E/W in the <a href="#">WGS84</a> coordinate system.   |
| addrno              |        | Identifying number of an address. Unique within an account.   |
| postext             | string |   |

| Parameter  | Type        | Description  |
|------------|-------------|--|
| 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.   |
| fueltype   | int         | Valid values: <ul style="list-style-type: none"> <li>• 0 - unknown</li> <li>• 1 - diesel</li> <li>• 2 - gasoline</li> <li>• 3 - lpg</li> <li>• 4 - hybrid petrol</li> <li>• 5 - hybrid diesel</li> <li>• 6 - electric</li> </ul> |
| objectuid  | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> .   |
| 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 ([Date range filter parameters](#)) may not start earlier than 90 days in the past.
- A future time period covered by date range ([Date range filter parameters](#)) may not start in the future.
- If no object is specified, the time period covered by date range filter ([Date range filter parameters](#)) may not be greater than 1 day.

- If an object group is specified, the time period covered by date range filter ([Date range filter parameters](#)) may not be greater than 1 day.
- If an object is specified, the time period covered by date range filter ([Date range filter parameters](#)) 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:

- [Date range filter parameters](#)

Parameters specific to **showIdleExceptions**:

| Parameter       | Type        | Description  |
|-----------------|-------------|--|
| objectno        | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to <code>objectuid</code> .       |
| objectgroupname | string      | Case-sensitive. This parameter is optional.  |
| driverno        | string      | Identifying number of a driver.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to <code>driveruid</code> .        |
| drivergroupname | string      | Name of the group of drivers the driver is assigned to, case-sensitive.<br>This parameter is optional.                                       |
| objectuid       | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> . |
| driveruid       | string      | A unique, unchangeable identifier for the indicated driver, automatically generated.<br>Can be used alternatively to <code>driverno</code> . |

## Result

Result for **showIdleExceptions**:

| Parameter  | Type        | 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          | 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         | <p>Geographic latitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p>  |
| longitude           | int         | <p>Geographic longitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p> |
| formatted_latitude  | string      | Geographic latitude in the form GGG° MM' SS.S" N/S in the <a href="#">WGS84</a> coordinate system.   |
| formatted_longitude | string      | Geographic longitude in the form GGG° MM' SS.S" E/W in the <a href="#">WGS84</a> coordinate system.  |
| addrno              |             | <p>Identifying number of an address.</p> <p>Unique within an account.</p>  |
| postext             | string      |  |
| fuel_usage          | float       | Fuel consumption in litres, max. three decimals allowed.   |
| co2                 | int         | Carbon dioxide emissions in grams.   |
| fueltype            | int         | <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 0 - unknown</li> <li>• 1 - diesel</li> <li>• 2 - gasoline</li> <li>• 3 - lpg</li> <li>• 4 - hybrid petrol</li> <li>• 5 - hybrid diesel</li> <li>• 6 - electric</li> </ul>  |
| objectuid           | string (30) | <p>A unique, unchangeable identifier for the indicated object, automatically generated.</p> <p>Can be used alternatively to <code>objectno</code>.</p>   |

| Parameter | Type   | Description  |
|-----------|--------|--|
| driveruid | string | A unique, unchangeable identifier for the indicated driver, automatically generated.<br>Can be used alternatively to <code>driverno</code> . |

## 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:

- [Authentication parameters](#)
- [General parameters](#)

`getObjectKPIs` 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.<br>Can be used alternatively to <code>objectuid</code> .          |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> . |

| Parameter  | Type   | Description   |
|------------|--------|---|
| kpinames   | string | <p>A comma-separated list of KPI-group names.<br/>This parameter is required.<br/>Valid values:</p> <ul style="list-style-type: none"> <li>• tripstats</li> <li>• ecostats</li> <li>• optidrive</li> <li>• speedingevents</li> <li>• drivingevents</li> <li>• orders</li> </ul> <hr/> <p><i>Example CSV request parameter:</i> kpinames=tripstats,optidrive,orders</p> <hr/>  |
| level      | string | <p>The level of temporal aggregation of the calculated KPIs.<br/>Defaults to <code>range</code>.<br/>Valid values:</p> <ul style="list-style-type: none"> <li>• day</li> <li>• month</li> <li>• range</li> </ul> <p>When set to <code>day</code>, the result contains a KPI for each day within the requested date range.<br/>When set to <code>month</code>, the result contains one KPI per month (totalised for each month).<br/>When set to <code>range</code>, the whole result consists of a single KPI (summarized over the whole date range).<br/>This parameter is optional.</p> |
| externalid | string | For future use. This parameter is optional.   |

## Result

Result for getObjectKPIs

| Parameter  | Type        | Description  |
|------------|-------------|--|
| objectno   | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.  |
| objectuid  | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> . |
| objectname | string      | Display name of an object.   |
| year       | string (4)  | The year the KPIs are calculated for.<br>Format: YYYY<br>Returned if specified in request parameter <code>level</code> .                     |

| Parameter  | Type       | Description  |
|------------|------------|--|
| month      | string (2) | The month, the KPIs are calculated for.<br>Format: MM<br>Returned if specified in request parameter <code>level</code> .     |
| day        | string (2) | The day of month, the KPIs are calculated for. Format: DD<br>Returned if specified in request parameter <code>level</code> . |
| externalid | string     | For future use.  |
| <kpi-list> |            | The following columns depend on the requested KPI-group names.<br>See table <a href="#">KPI names</a> .                      |

## 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](#)

`getDriverKPIs` requires the following other parameters:

- [Date range filter parameters](#)

Parameters specific to `getDriverKPIs`

| Parameter | Type        | Description  |
|-----------|-------------|--|
| driverno  | string (10) | Identifying number of a driver.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to <code>driveruid</code> .        |
| driveruid | string (30) | A unique, unchangeable identifier for the indicated driver, automatically generated.<br>Can be used alternatively to <code>driverno</code> . |



| Parameter | Type   | Description   |
|-----------|--------|---|
| kpinames  | string | <p>A comma-separated list of KPI-group names.<br/>This parameter is required.<br/>Valid values:</p> <ul style="list-style-type: none"> <li>• tripstats</li> <li>• ecostats</li> <li>• optidrive</li> <li>• speedingevents</li> <li>• drivingevents</li> <li>• orders</li> </ul> <hr/> <p><i>Example CSV request parameter:</i> kpinames=tripstats,optidrive,orders</p> <hr/>  |
| level     | string | <p>The level of temporal aggregation of the calculated KPIs.<br/>Defaults to <code>range</code>.<br/>Valid values:</p> <ul style="list-style-type: none"> <li>• day</li> <li>• month</li> <li>• range</li> </ul> <p>When set to <code>day</code>, the result contains a KPI for each day within the requested date range.<br/>When set to <code>month</code>, the result contains one KPI per month (totalised for each month).<br/>When set to <code>range</code>, the whole result consists of a single KPI (summarized over the whole date range).<br/>This parameter is optional.</p> |

## Result

Table 4-221: Result for getDriverKPIs

| Parameter  | Type        | Description  |
|------------|-------------|--|
| driverno   | string (10) | Identifying number of a driver.<br>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)  | <p>The year the KPIs are calculated for.<br/>Format: YYYY<br/>Returned if specified in request parameter <code>level</code>.</p> |

| Parameter  | Type       | Description  |
|------------|------------|--|
| month      | string (2) | The month the KPIs are calculated for.<br>Format: MM<br>Returned if specified in request parameter <code>level</code> .        |
| day        | string (2) | The day of month the KPIs are calculated for.<br>Format: DD<br>Returned if specified in request parameter <code>level</code> . |
| <kpi-list> |            | The following columns depend on the requested KPI-group names.<br>See table <a href="#">KPI names</a> .                        |

## 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 calculation of remaining driving times 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 [updateDriverRdtRules](#). The action [getDriverRdtRules](#) returns the currently configured rules for a driver.

**Disclaimer:** The remaining driving times supplied by Webfleet Solutions 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.

### Technical details

SOAP endpoint address / function name `tripAndTimeReportingService#getRemainingDrivingTimesEU`

Request limits 10 requests / minute

### Parameters

`getRemainingDrivingTimesEU` requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `getRemainingDrivingTimesEU`:

| Parameter       | Type        | Description   |
|-----------------|-------------|---|
| driverno        | string (10) | Identifying number of a driver.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to <code>driveruid</code> .                     |
| driveruid       | string (30) | A unique, unchangeable identifier for the indicated driver, automatically generated.<br>Can be used alternatively to <code>driverno</code> .              |
| drivergroupname | string      | Name of the group of drivers the driver is assigned to, case-sensitive.<br>Can be used alternatively to <code>drivergroupuid</code> .                     |
| drivergroupuid  | string (30) | A unique, unchangeable identifier for the indicated driver group, automatically generated.<br>Can be used alternatively to <code>drivergroupname</code> . |

## Result

Result for `getRemainingDrivingTimesEU`:

| Parameter      | Type        | Description  |
|----------------|-------------|--|
| driverno       | string (10) | Identifying number of a driver.<br>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    | Timestamp as reference for all remaining driving time values.<br>This value can be used to calculate the timestamp at the end of a remaining time.<br><a href="#">ISO 8601</a> -formatted date and time in the UTC timezone, combined representation in the extended format.<br><hr/> <b>Example:</b> 2007-12-24T16:00:00+02:00 <hr/>  |
| 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.<br>The value is negative if the break should have already been started.<br>The value is not available if the driver is on <b>Break</b> . |

| Parameter                    | Type    | Description   |
|------------------------------|---------|---|
| next_break_change            | integer | <p>Indicator whether the remaining driving time until the start of next break is constant or in which direction it is currently changing.</p> <p>This information can be used for continuous calculation of remaining time on client side without frequent polling.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• -1 - Remaining time is decreasing.</li> <li>• 0 - Remaining time is constant.</li> <li>• 1 - Remaining time is increasing.</li> </ul> |
| next_rest                    | integer | <p>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.</p> <p>The value is negative if the rest should have already been started.</p> <p>The value is not available if the driver is on <b>Break</b>.</p>  |
| next_rest_change             | integer | <p>Indicator whether <code>next_rest</code> is constant or in which direction it is currently changing.</p> <p>This information can be used for continuous calculation of remaining time on client side without frequent polling.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• -1 - Remaining time is decreasing.</li> <li>• 0 - Remaining time is constant.</li> <li>• 1 - Remaining time is increasing.</li> </ul>                                   |
| remain_driving_today         | integer | <p>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 <b>Working hours legislation</b> is enabled for the driver, it is also limited by the daily working time.</p> <p>The value is negative if the daily maximum allowed driving time has been exceeded.</p>  |
| remain_driving_to-day_change | integer | <p>Indicator whether <code>remain_driving_today</code> is constant or in which direction it is currently changing.</p> <p>This information can be used for continuous calculation of remaining driving time on client side without frequent polling.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• -1 - Remaining time is decreasing.</li> <li>• 0 - Remaining time is constant.</li> <li>• 1 - Remaining time is increasing.</li> </ul>                |
| total_driving_today          | integer | Total driving time for today in milliseconds.   |

| Parameter                       | Type    | Description  |
|---------------------------------|---------|--|
| total_driving_to-day_change     | integer | <p>Indicator whether <code>total_driving_today</code> is constant or in which direction it is currently changing.</p> <p>This information can be used for continuous calculation of the driving time on client side without frequent polling.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 0 - Total time is constant.</li> <li>• 1 - Total time is increasing.</li> </ul>  |
| max_driving_week                | integer | <p>Maximum weekly driving time within the current week in milliseconds. The 90 hours rule during two consecutive weeks is considered. If <b>Working hours legislation</b> is enabled, the value is also limited by the weekly maximum working time.</p>  |
| remain_driving_week             | integer | <p>Remaining weekly driving time for the current week in milliseconds which is limited by maximum weekly driving time.</p> <p>The value is negative if the weekly driving time exceeds the maximum weekly driving time.</p>  |
| remain_driving_week_change      | integer | <p>Indicator whether <code>remain_driving_week</code> is constant or in which direction it is currently changing.</p> <p>This information can be used for continuous calculation of remaining driving time on client side without frequent polling.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• -1 - Remaining time is decreasing.</li> <li>• 0 - Remaining time is constant.</li> <li>• 1 - Remaining time is increasing.</li> </ul>      |
| remain_driving_next_week        | integer | <p>Remaining driving time for the next week in milliseconds.</p> <p>The value can be negative.</p>   |
| remain_driving_next_week_change | integer | <p>Indicator whether <code>remain_driving_next_week</code> is constant or in which direction it is currently changing.</p> <p>This information can be used for continuous calculation of remaining driving time on client side without frequent polling.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• -1 - Remaining time is decreasing.</li> <li>• 0 - Remaining time is constant.</li> <li>• 1 - Remaining time is increasing.</li> </ul> |
| max_extended_shifts             | integer | <p>Maximum number of allowed daily driving time extensions per week.</p>   |
| extended_shifts                 | integer | <p>Number of remaining daily driving time extensions in current week.</p>  |
| max_reduced_rests               | integer | <p>Maximum number of allowed reduced rests per week.</p>   |
| reduced_rests                   | integer | <p>Number of remaining reduced rest periods in current week.</p>   |

| Parameter                     | Type     | Description   |
|-------------------------------|----------|---|
| rest_balances                 | string   | <p>A string that carries a list of balances for reduced rest periods. One rest balance consists of comma separated values:</p> <ul style="list-style-type: none"> <li><code>deadline</code> (datetime, timestamp until the balance has to be fulfilled)</li> <li><code>duration</code> (integer, balance amount in milliseconds)</li> </ul> <p>Multiple rest balances are separated by semicolon.</p> <hr/> <p><i>Example:</i><br/> 2014-07-01T16:00:00Z,120000;2014-07-02T17:00:00Z,500000</p> <hr/> |
| infringements                 | boolean  | <code>true</code> if the driver has already committed social infringements.   |
| max_driving_today             | 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 <b>Working hours legislation</b> is enabled for the driver, it is also limited by the daily working time.   |
| max_working_today             | 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 <b>Working hours legislation</b> is enabled for the driver.  |
| remain_working_today          | integer  | <p>Remaining working time of the current shift in milliseconds, limited by the weekly remaining working time and the end of the shift.</p> <p>This value is only available if <b>Working hours legislation</b> is enabled for the driver.</p>   |
| total_otherwork_today         | integer  | The total duration of activity <b>Other work</b> of the current shift in milliseconds.  |
| total_availability_today      | integer  | The total duration of activity <b>Availability</b> of the current shift in milliseconds.  |
| last_activity_from_drivercard | datetime | <p>The time at which the last activity included in the downloaded driver card data ended, including manual corrections.</p> <p><a href="#">ISO 8601</a>-formatted date and time in the UTC timezone, combined representation in the extended format.</p> <hr/> <p>Example: 2007-12-24T16:00:00+02:00</p> <hr/>  |
| next_break_min_duration       | integer  | Duration of minimum uninterrupted break in milliseconds to finish the current driving or working period.  |
| next_rest_min_duration        | integer  | Required minimum duration of the next rest in milliseconds.   |

| Parameter                 | Type     | Description  |
|---------------------------|----------|--|
| current_shift_start       | datetime | <p>Start of the current shift.</p> <p>This value is not available if no shift has started.</p> <p><a href="#">ISO 8601</a>-formatted date and time in the UTC timezone, combined representation in the extended format.</p> <hr/> <p>Example: 2007-12-24T16:00:00+02:00</p> <hr/>              |
| latest_end_current_shift  | datetime | <p>Latest end of the current shift.</p> <p>This value is not available if no shift has started.</p> <p><a href="#">ISO 8601</a>-formatted date and time in the UTC timezone, combined representation in the extended format.</p> <hr/> <p>Example: 2007-12-24T16:00:00+02:00</p> <hr/>         |
| earliest_start_next_shift | datetime | <p>The earliest possible start of the next shift, if the driver would immediately start the daily rest.</p> <p><a href="#">ISO 8601</a>-formatted date and time in the UTC timezone, combined representation in the extended format.</p> <hr/> <p>Example: 2007-12-24T16:00:00+02:00</p> <hr/> |
| max_working_week          | integer  | <p>The maximum weekly working time of the current week in milliseconds. Limited by a weekly maximum and the average weekly working time.</p> <p>This value is only available if <b>Working hours legislation</b> is enabled for the driver.</p>  |
| remain_working_week       | integer  | <p>Remaining working time of the current week in milliseconds limited by the maximum weekly working time.</p> <p>This value is only available if <b>Working hours legislation</b> is enabled for the driver.</p>   |

## 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_mileagebusiness | Total mileage of all trips that ended within the defined period in business or unknown mode (in meters). |
|           | tripstats_mileageprivate  | Total mileage of all trips that ended within the defined period in private or commute mode (in meters).  |

| KPI group                          | Returned column              | Description   |
|------------------------------------|------------------------------|---|
|                                    | tripstats_drivingtime        | <p>Total trip time minus the total idling time of all trips that ended within the defined period (in seconds).</p> <p><b>Note:</b> The first trip may start before the defined period and thus the total driving time may exceed the length of the defined period.</p>  |
|                                    | tripstats_usagetime          | <p>Latest end time minus earliest start time of all trips that ended within a day.</p> <p>If the defined period covers more than one day, <code>usagetime</code> is the sum of the daily usage times of all covered days.</p> <p><b>Note:</b> The earliest start time may be on a previous day and thus the daily usage time may exceed 24 hours.</p>       |
| ecostats                           | ecostats_fuelusage           | Total amount of fuel consumed within the defined period (in milliliters).   |
|                                    | ecostats_co2emission         | 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_overrevvingtime     | 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_indicator_speeding | Value of influencing variable for speeding events, ranging from 0.0 to 1.0 (good).  |
|                                    | optidrive_indicator_driving  | Value of influencing variable for driving events, ranging from 0.0 to 1.0.  |
|                                    | optidrive_indicator_idling   | Value of influencing variable for idling events, ranging from 0.0 to 1.0.   |
|                                    | optidrive_indicator_fuel     | Value of influencing variable for fuel consumption, ranging from 0.0 to 1.0.  |
| speedingeventsspeedingevents_count |                              | <p>Total number of all speeding-exception intervals that ended within the defined period.</p> <p>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.</p> <p>The speed limit is the minimum of road-speed limit and vehicle-speed limit.</p> |
|                                    | speedingevents_speedingtime  | Average length of all speeding-exception intervals that ended within the defined period (in seconds).   |



| KPI group     | Returned column                     | Description   |
|---------------|-------------------------------------|---|
|               | speedingevents_avg_violation        | Average violation of the speed limit of all speed-exception intervals that ended within the defined period (in km/h).   |
| drivingevents | drivingevents_count                 | Total number of driving events (braking, steering) registered within the defined period.  |
|               | drivingevents_avg_severity          | Average severity of the driving events.<br>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_braking_count         | Total number of braking events registered within the defined period.  |
|               | drivingevents_braking_avg_severity  | Average severity of the braking events.   |
|               | drivingevents_steering_count        | Total number of steering events registered within the defined period.   |
|               | drivingevents_steering_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

**showIOReportExtern** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

`showIOReportExtern` requires the following other parameters:

- [Date range filter parameters](#)

Parameters specific to `showIOReportExtern`:

| Parameter | Type        | Description  |
|-----------|-------------|--|
| objectno  | string (10) | Identifying number of an object.<br>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.<br>Can be used alternatively to <code>objectno</code> . |

### Result

Result for `showIOReportExtern`:

| Parameter | Type        | Description  |
|-----------|-------------|--|
| objectno  | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Maximum capacity is 40 bytes, actual number of characters depends on the byte count consumed by the UTF-8 encoding of those characters. |

| Parameter      | Type        | Description  |
|----------------|-------------|--|
| 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.<br>Unit of measurement is "meters".  |
| duration       | int         | The difference between start_time and end_time.<br>Unit of measurement is "seconds".   |
| objectuid      | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> . |

## 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#showAccelerationEvents`

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:

- [Authentication parameters](#)
- [General parameters](#)

**showAccelerationEvents** requires the following other parameters:

- [Date range filter parameters](#)

Parameters specific to **showAccelerationEvents**:

| Parameter       | Type        | Description  |
|-----------------|-------------|--|
| objectno        | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.  |
| driverno        | string      | Identifying number of a driver. Unique within an account. Search for the specified driver number.<br>Can be used alternatively to <code>driveruid</code> .   |
| drivergroupname | string      | Name of the group of drivers the driver is assigned to, case-sensitive.<br>This parameter is optional.   |
| avg_accel       | int         | Acceleration in milli-g.<br>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.<br>Varies between a minimum of 0 and a maximum of approx. 1100. <ul style="list-style-type: none"> <li>• <math>\leq 449</math> - very low severity</li> <li>• 450 to 549 - low severity</li> <li>• 550 to 649 - medium severity</li> <li>• 650 to 749 - high severity</li> <li>• <math>\geq 750</math> - very high severity</li> </ul> The result may not include average acceleration in the very low severity range.<br>This parameter is optional. |

| Parameter         | Type        | Description   |
|-------------------|-------------|---|
| accelerationtypes | int         | <p>Specifies which acceleration types will be reported.</p> <p>You can specify multiple values for this parameter. Separate the values by comma when using the CSV interface.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>0 - acceleration (can be enabled on request)</li> <li>1 - brake</li> <li>2 - steering left</li> <li>3 - steering right</li> </ul> <p>When you do not indicate the parameter the types 1,2 and 3 will be returned.</p> |
| objectuid         | string (30) | <p>A unique, unchangeable identifier for the indicated object, automatically generated.</p> <p>Can be used alternatively to <code>objectno</code>.</p>  |
| externalid        | string      | For future use. This parameter is optional.   |
| driveruid         | string      | <p>A unique, unchangeable identifier for the indicated driver, automatically generated.</p> <p>Can be used alternatively to <code>driverno</code>.</p>  |

## Result

Result for showAccelerationEvents:

| Parameter  | Type        | Description  |
|------------|-------------|--|
| objectno   | string (10) | <p>Identifying number of an object.</p> <p>Unique within an account, case-sensitive.</p>   |
| 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 | Date        | <p>Event start.</p> <p><a href="#">ISO 8601</a>-formatted date and time in the UTC timezone, combined representation in the extended format.</p> <hr/> <p>Example: 2007-12-24T16:00:00+02:00</p> <hr/> |
| end_time   | Date        | <p>Event end.</p> <p><a href="#">ISO 8601</a>-formatted date and time in the UTC timezone, combined representation in the extended format.</p> <hr/> <p>Example: 2007-12-24T16:00:00+02:00</p> <hr/>   |

| Parameter      | Type               | Description   |
|----------------|--------------------|---|
| 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                | <p>Acceleration in milli-g.<br/>Varies between a minimum of 0 and a maximum of 2000.</p> <ul style="list-style-type: none"> <li>• ≤ 449 - very low severity</li> <li>• 450 to 549 - low severity</li> <li>• 550 to 649 - medium severity</li> <li>• 650 to 749 - high severity</li> <li>• ≥ 750 - very high severity</li> </ul>   |
| max_accel      | int                | Acceleration in milli-g.  |
| accel_dir      | int                | <p>Direction of the acceleration in relation to the vehicle, in degrees.</p> <ul style="list-style-type: none"> <li>• 0 - min</li> <li>• 360 - max</li> </ul> <p>Understand the values as follows:</p> <ul style="list-style-type: none"> <li>• 315–45 - forward acceleration (can be enabled on request)</li> <li>• 45–135 - cornering to the left</li> <li>• 135–225 - braking</li> <li>• 225–315 - cornering to the right</li> </ul> |
| accel_type     | nonNegativeInteger | <p>Possible values are:</p> <ul style="list-style-type: none"> <li>• 0 - acceleration (can be enabled on request)</li> <li>• 1 - brake</li> <li>• 2 - steering left</li> <li>• 3 - steering right</li> </ul>  |
| latitude       | int                | <p>Geographic latitude in the <a href="#">WGS84</a> coordinate system.<br/>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).<br/>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.<br/>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p>                            |
| longitude      | int                | <p>Geographic longitude in the <a href="#">WGS84</a> coordinate system.<br/>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).<br/>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.<br/>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p>                           |

| Parameter      | Type        | Description  |
|----------------|-------------|--|
| postext        | string      | Position at event end time.  |
| objectuid      | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> . |
| duration       | int         | The duration of the event, in milliseconds.  |
| severity       | float       | Severity of the event.<br>Dependent on event type (braking or steering), vehicle type, and speed.<br>Ranges from 1.0 to 5.0.                 |
| roadspeedlimit | float       | The actual road speed limit taken from the map data in km/h.   |
| externalid     | string      | For future use.  |
| driveruid      | string      | A unique, unchangeable identifier for the indicated driver, automatically generated.<br>Can be used alternatively to <code>driverno</code> . |

## 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   |
|------------------------------|-------------|---|
| <code>objectno</code>        | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.   |
| <code>driverno</code>        | string      | Identifying number of a driver.<br>Unique within an account. Search for the specified driver number.<br>Can be used alternatively to <code>driveruid</code> . |
| <code>objectgroupname</code> | string      | A name of an object group.  |
| <code>drivergroupname</code> | string      | Name of the group of drivers the driver is assigned to, case-sensitive.<br>This parameter is optional.  |
| <code>objectuid</code>       | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> .                  |
| <code>externalid</code>      | string      | For future use. This parameter is optional.   |
| <code>driveruid</code>       | string      | A unique, unchangeable identifier for the indicated driver, automatically generated.<br>Can be used alternatively to <code>driverno</code> .                  |

## Result

Result for `showSpeedingEvents`:

| Parameter               | Type        | Description  |
|-------------------------|-------------|--|
| <code>objectno</code>   | string (10) | Identifying number of an object. Unique within an account, case-sensitive. |
| <code>objectname</code> | string      | Display name of an object.   |
| <code>driverno</code>   | string      | Identifying number of a driver. Unique within an account.                  |
| <code>drivername</code> | string      | Display name of a driver.  |
| <code>start_time</code> | string      | The time recorded when this event started.                                 |



| Parameter         | Type        | Description   |
|-------------------|-------------|---|
| start_longitude   | int         | Geographic longitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> . |
| start_latitude    | int         | Geographic latitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> .  |
| start_posttext    | 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 <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> . |
| end_latitude      | int         | Geographic latitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> .  |
| end_posttext      | 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.<br>Can be used alternatively to <code>objectno</code> .  |
| duration          | int         | The duration of the event, in milliseconds.   |
| distance          | int         | The distance the vehicle was speeding, in meters.   |

| Parameter  | Type   | Description  |
|------------|--------|--|
| externalid | string | For future use.  |
| driveruid  | string | A unique, unchangeable identifier for the indicated driver, automatically generated.<br>Can be used alternatively to <code>driverno</code> . |

## 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#showDigitalInputStateMileage |
| Request limits                        | 10 requests / minute                                     |

### Parameters

showDigitalInputStateMileage requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

showDigitalInputStateMileage requires the following other parameters:

- [Date range filter parameters](#)

Parameters specific to showDigitalInputStateMileage:

| Parameter | Type        | Description  |
|-----------|-------------|--|
| objectno  | string (10) | Identifying number of an object.<br>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.<br>Can be used alternatively to <code>objectno</code> . |

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 showDigitalInputStateMileage |        |   |

# 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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to geocodeAddress:

| Parameter        | Type        | 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). |

| Parameter  | Type         | Description  |
|--|--------------|--|
| freetext   | string (512) | Address to geocode in unstructured format. This string can contain all parts of the address separated using spaces.<br><br><i>Example:</i> Oosterdoksstraat 114 Amsterdam NL |
| <p><b>Note:</b> 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 availability of POI information.</p> |              |  |

## Result

Result for geocodeAddress:

| Parameter           | Type        | Description  |
|---------------------|-------------|--|
| addrstreet          | string (50) |  |
| addrstreetnumber    | string (10) |  |
| addrzip             | string (10) |  |
| addrcity            | string (50) |  |
| addrcountry         | string (2)  | <a href="#">ISO 3166-1 alpha-2 code</a> for the country (capital letters). This parameter is required.   |
| postext             | string      |  |
| formatted_longitude | string      | Geographic longitude in the form GGG° MM' SS.S" E/W in the <a href="#">WGS84</a> coordinate system.  |
| formatted_latitude  | string      | Geographic latitude in the form GGG° MM' SS.S" N/S in the <a href="#">WGS84</a> coordinate system.   |
| longitude           | int         | Geographic longitude in the <a href="#">WGS84</a> 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 <a href="#">Geographic coordinate conversion on Wikipedia</a> . |
| latitude            | int         | Geographic latitude in the <a href="#">WGS84</a> 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 <a href="#">Geographic coordinate conversion on Wikipedia</a> .  |

| Parameter              | Type | Description  |
|------------------------|------|--|
| additional_information |      | <p>Contains the following, separated by a semicolon:</p> <p><code>score</code> - 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 measure of absolute accuracy. If a query returns only approximate matches, the best of those will be given a score of 1.0.</p> <p><code>type</code> - The information returned can give you an idea of which type of match the geocoder has found. Important: Don't rely on the possible value, as they can change without further notice.</p> |

## 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 | nonNegativeInteger | <p>Defines type of route type for calculation of estimated time of arrival.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 0 - Quickest</li> <li>• 1 - Shortest</li> <li>• 2 - Avoid motorway</li> <li>• 3 - Walk</li> <li>• 4 - Bicycle</li> </ul> <p>Defaults to 0.</p> <p>This parameter is optional.</p> |

| Parameter      | Type               | Description   |
|----------------|--------------------|---|
| use_traffic    | nonNegativeInteger | <p>Defines if traffic information needs to be taken into account for calculating the route and estimated time of arrival.</p> <p>Default:</p> <ul style="list-style-type: none"> <li>if <code>start_datetime</code> is used - 0</li> <li>if <code>start_datetime</code> is not used - 1</li> </ul> <p>Valid values:</p> <ul style="list-style-type: none"> <li>0 - don't use traffic</li> <li>1 - use traffic</li> </ul> <div style="background-color: #f0f0f0; padding: 10px; margin-top: 10px;"> <p><b>Note:</b> If <code>use_traffic</code> 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.</p> </div> <p>This parameter is optional.</p> |
| start_datetime | dateTime           | <p>Defines the departure date and time. If specified, over rules <code>start_day</code> and <code>start_time</code>.</p> <p>Defaults to the current day and time.</p>   |
| start_day      | string             | <p>Defines the weekday of departure.</p> <p>If <code>start_day</code> is specified it is used together with <code>start_time</code>, overruling the default of <code>start_datetime</code>. Case-sensitive.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>mon</li> <li>tue</li> <li>wed</li> <li>thu</li> <li>fri</li> <li>sat</li> <li>sun</li> <li>today</li> </ul> <p>Defaults to the current day.</p>   |
| start_time     | string             | <p>Defines the departure time.</p> <p>If <code>start_time</code> is specified, it is used together with <code>start_day</code> overruling the default of <code>start_datetime</code>.</p> <p>Defaults to the current time.</p>  |
| use_tollroads  | nonNegativeInteger | <p>Defines if toll roads should be avoided for and the route calculation.</p> <p>Possible values are:</p> <ul style="list-style-type: none"> <li>0 - Avoid toll roads</li> <li>1 - Include toll roads</li> </ul> <p>Defaults to 1.</p>  |

| Parameter       | Type | Description   |
|-----------------|------|---|
| start_latitude  | int  | <p>Geographic latitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p> <p>This parameter is required.</p>  |
| start_longitude | int  | <p>Geographic longitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p> <p>This parameter is required.</p> |
| end_latitude    | int  | <p>Geographic latitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p> <p>This parameter is required.</p>  |
| end_longitude   | int  | <p>Geographic longitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grd).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: (degrees + minutes/60 + seconds/3600) * <math>10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p> <p>This parameter is required.</p> |

## Result

Result for calcRouteSimpleExtern:

| Parameter    | Type   | Description  |
|--------------|--------|--|
| end_datetime | string | <p>The calculated arrival date and time.</p> <p>Empty if no <code>start_datetime</code> is specified and <code>start_day</code> or <code>start_time</code> is specified.</p> |



| Parameter       | Type   | Description  |
|-----------------|--------|--|
| end_day         | string | Valid values: <ul style="list-style-type: none"> <li>• mon</li> <li>• tue</li> <li>• wed</li> <li>• thu</li> <li>• fri</li> <li>• sat</li> <li>• sun</li> </ul> Empty if <code>start_datetime</code> is specified. |
| end_time        | string | The calculated arrival time.<br>Empty if <code>start_datetime</code> 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.<br>The unit of measurement is "seconds".  |
| delay           | string | Estimated delay for a trip due to traffic.<br>The unit of measurement is "seconds".  |
| timezone_offset | string | Timezone offset.<br>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.<br><b>Note:</b> If not specified, settings will be returned on account level. This parameter is optional. |

### Result

Result for showSettings:

| Parameter        | Type  | Description   |
|------------------|-------|---|
| od_weight_idling | float | The weight given to idling information used for the calculation of the OptiDrive indicator.<br>The value indicates the total influence of the available information in relation to the other three variables influencing the OptiDrive indicator. |

| Parameter                     | Type   | Description  |
|-------------------------------|--------|--|
| od_weight_speeding            | float  | <p>The weight given to speeding information used for the calculation of the OptiDrive indicator.</p> <p>The value indicates the total influence of the available information in relation to the other three variables influencing the OptiDrive indicator.</p>   |
| od_weight_drivingevents       | float  | <p>The weight given to information about driving events used for the calculation of the OptiDrive indicator.</p> <p>The value indicates the total influence of the available information in relation to the other three variables influencing the OptiDrive indicator.</p>   |
| od_weight_fuelusage           | float  | <p>The weight given to fuel consumption information used for the calculation of the OptiDrive indicator.</p> <p>The value indicates the total influence of the available information in relation to the other three variables influencing the OptiDrive indicator.</p>   |
| distanceunit                  | string | <p>The preferred distance unit set in the application, for example WEBFLEET user interface.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>km</li> <li>mi</li> </ul> <p><b>Note:</b> All values returned by WEBFLEET.connect actions deliver metric values no matter which distanceunit is set.</p>       |
| timezone                      | string | <p>Valid values are known time zones, for example:</p> <ul style="list-style-type: none"> <li>Europe/Berlin</li> <li>Europe/London</li> <li>America/Toronto</li> <li>...</li> </ul>  |
| block_pwdattack               | int    | <p>Valid values:</p> <ul style="list-style-type: none"> <li>1 - enabled</li> <li>0 - disabled</li> </ul> <p><b>Note:</b> 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.</p> |
| order_destinationnotification | int    | <p>Indicates if a notification is created when the object approaches the order destination.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>1 - enabled</li> <li>0 - disabled</li> </ul>   |

| Parameter                                | Type  | Description   |
|--|-------|---|
| order_destinationnotification_minutes    | int   | The time before arrival when a notification is created automatically, in minutes.   |
| order_destinationnotification_eventlevel | int   | The eventlevel of the notification, see <a href="#">Parameters specific to showEventReportExtern</a> .  |
| order_defaulttype                        | int   | Valid values: <ul style="list-style-type: none"> <li>1 - service order</li> <li>2 - pickup order</li> <li>3 - delivery order</li> </ul>   |
| order_rejectionallowed                   | int   | Valid values: <ul style="list-style-type: none"> <li>1 - enabled</li> <li>0 - disabled</li> </ul>   |
| fuelconsumption                          | float | This is the fleet's reference value for fuel consumption reporting in l/100km.<br>May be empty if not used.   |
| fueltype                                 | int   | Valid values: <ul style="list-style-type: none"> <li>0 - unknown</li> <li>1 - diesel</li> <li>2 - gasoline</li> <li>3 - lpg</li> </ul>  |
| speedlimit                               | float | Speed limit on account level used for reports, in km/h.   |
| speedlimit_tolerance                     | 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.<br>The values range from 0 ... 100.   |
| od_weight_coasting                       | float | The weight given to coasting information used for the calculation of the OptiDrive indicator.<br>The value indicates the total influence of the available information in relation to the other variables influencing the OptiDrive indicator.       |
| od_weight_constant-speed                 | float | The weight given to constant speed information used for the calculation of the OptiDrive indicator.<br>The value indicates the total influence of the available information in relation to the other variables influencing the OptiDrive indicator. |
| od_weight_green-speed                    | float | The weight given to green speed information used for the calculation of the OptiDrive indicator.<br>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_high-revving | float | The weight given to gear shifting (high revving) information used for the calculation of the OptiDrive indicator.<br>The value indicates the total influence of the available information in relation to the other variables influencing the OptiDrive indicator. |

## createSession

### Description

Using createSession a session on the server will be created. The result structure contains a `sessiontoken`, also see [Authentication parameters](#). 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    | Type               | Description  |
|--------------|--------------------|--|
| sessiontoken | string (32)        | A server-generated alphanumeric random string. Within the session lifetime, the <a href="#">Authentication parameters</a> <code>account</code> , <code>username</code> and <code>password</code> can be omitted for further requests. Instead, only the new request parameter <code>sessiontoken</code> is needed to identify the user's session.<br><br><b>Note:</b> <code>sessiontoken</code> is bound to the IP address of the client, that requested this <code>sessiontoken</code> . Therefore the <code>sessiontoken</code> cannot be used from other computers. |
| timetolive   | nonNegativeInteger | Maximum lifetime of the session in seconds.<br>After this time, the <code>sessiontoken</code> becomes invalid, no matter if requests happened in the meantime.<br>Typical value: 3600 (60 minutes)   |

| Parameter          | Type               | Description   |
|--------------------|--------------------|---|
| timetoidle         | nonNegativeInteger | Maximum time between two requests in seconds.<br>The idle-timeout is used by the server to detect unused sessions.<br>Typical value: 1800 (30 minutes)  |
| objectuid          | string (30)        | A unique, unchangeable identifier for the indicated object, automatically generated.<br>This value is returned, when the user is assigned to one object only.<br>Can be used alternatively to <code>objectno</code> .   |
| externalid         | string             | For future use.   |
| passwordexpiration | dateTime           | The expiration time of the password. ISO 8601-formatted date and time in UTC timezone, combined representation in the extended format.<br><br><hr/> <i>Example: 2013-06-24T16:00:00Z</i> <hr/><br>Empty if the setting <b>password expiration</b> is disabled or no timestamp of the last password change exists. |

## terminateSession

### Description

Using `terminateSession` you can invalidate a session that was created using [createSession](#). After that you can create a new session.

### Technical details

SOAP endpoint address / function name `configurationAndSecurityService#terminateSession`

Request limits `10 requests / minute`

### 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 [Authentication parameters](#).

## 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  | Type | Description  |
|------------|------|--|
| orderstate | int  | <p>The state of the progress of an order.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 101 - Received</li> <li>• 102 - Read</li> <li>• 103 - Accepted</li> <li>• 201 - Service order started</li> <li>• 202 - Arrived at destination</li> <li>• 203 - Work started</li> <li>• 204 - Work finished</li> <li>• 205 - Departed from destination</li> <li>• 222 - Arrived at pick up location</li> <li>• 223 - Pick up started</li> <li>• 224 - Pick up finished</li> <li>• 225 - Departed from pick up location</li> <li>• 242 - Arrived at delivery location</li> <li>• 243 - Delivery started</li> <li>• 244 - Delivery finished</li> <li>• 245 - Departed from delivery location</li> <li>• 298 - Resumed</li> <li>• 299 - Suspended</li> <li>• 301 - Cancelled</li> <li>• 302 - Rejected</li> <li>• 401 - Finished</li> </ul> <p>The following order states are handled according to the settings made for order state 201:</p> <ul style="list-style-type: none"> <li>• 221 - Pickup order started</li> <li>• 241 - Delivery order started</li> </ul> |



| Parameter  | Type | Description   |
|------------|------|---|
| enabled    | int  | <p>Indicates whether the respective order state appears in the order workflow on the navigation device.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>0 - false</li> <li>1 - true</li> </ul> <p>The following order states can be enabled or disabled:</p> <ul style="list-style-type: none"> <li>202 - Arrived at destination</li> <li>203 - Work started</li> <li>204 - Work finished</li> <li>205 - Departed from destination</li> <li>222 - Arrived at pick up location</li> <li>223 - Pick up started</li> <li>224 - Pick up finished</li> <li>225 - Departed from pick up location</li> <li>242 - Arrived at delivery location</li> <li>243 - Delivery started</li> <li>244 - Delivery finished</li> <li>245 - Departed from delivery location</li> </ul> |
| eventlevel | int  | <p>Event level.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>&lt;empty&gt; - No event is created.</li> <li>2 - Warning</li> </ul>  |

## 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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `updateAccountOrderState`:

| Parameter  | Type | Description  |
|------------|------|--|
| orderstate | int  | <p>The state of the progress of an order.</p> <p>Valid values:</p> <ul style="list-style-type: none"><li>• 101 - Received</li><li>• 102 - Read</li><li>• 103 - Accepted</li><li>• 201 - Service order started</li><li>• 202 - Arrived at destination</li><li>• 203 - Work started</li><li>• 204 - Work finished</li><li>• 205 - Departed from destination</li><li>• 222 - Arrived at pick up location</li><li>• 223 - Pick up started</li><li>• 224 - Pick up finished</li><li>• 225 - Departed from pick up location</li><li>• 242 - Arrived at delivery location</li><li>• 243 - Delivery started</li><li>• 244 - Delivery finished</li><li>• 245 - Departed from delivery location</li><li>• 298 - Resumed</li><li>• 299 - Suspended</li><li>• 301 - Cancelled</li><li>• 302 - Rejected</li><li>• 401 - Finished</li></ul> <p>The following order states are handled according to the settings made for order state 201:</p> <ul style="list-style-type: none"><li>• 221 - Pickup order started</li><li>• 241 - Delivery order started</li></ul> <p>This parameter is required.</p> |

| Parameter  | Type | Description  |
|------------|------|--|
| enabled    | int  | <p>Indicates whether the respective order state appears in the order workflow on the navigation device.</p> <p>Valid values are:</p> <ul style="list-style-type: none"> <li>0 - false</li> <li>1 - true</li> </ul> <p>The following order states can be enabled or disabled:</p> <ul style="list-style-type: none"> <li>202 - Arrived at destination</li> <li>203 - Work started</li> <li>204 - Work finished</li> <li>205 - Departed from destination</li> <li>222 - Arrived at pick up location</li> <li>223 - Pick up started</li> <li>224 - Pick up finished</li> <li>225 - Departed from pick up location</li> <li>242 - Arrived at delivery location</li> <li>243 - Delivery started</li> <li>244 - Delivery finished</li> <li>245 - Departed from delivery location</li> </ul> <p>This parameter is required.</p> |
| eventlevel | int  | <p>Event level.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>&lt;empty&gt;</li> <li>2 - Warning</li> </ul> <p>This parameter is optional.</p>   |

## 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 / function name | configurationAndSecurityService#showAccountOrderAutomations |
|---------------------------------------|---|

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

## Parameters

**showAccountOrderAutomations** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

## Result

Result for showAccountOrderAutomations:

| Parameter  | Type | Description  |
|------------|------|--|
| automation | int  | Workflow step that can be automated.<br>Valid values: <ul style="list-style-type: none"><li>• 1 - accept the order</li><li>• 2 - start the order</li><li>• 3 - navigate to the order destination</li><li>• 4 - skip displaying the route summary screen</li><li>• 5 - delete the order after it has been finished</li><li>• 6 - suppress the "continue with next order" screen</li></ul> |
| enabled    | int  | Indicates whether the respective step is automated.<br>Valid values: <ul style="list-style-type: none"><li>• 0 - false</li><li>• 1 - true, the step is automated</li></ul>   |

## 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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to updateAccountOrderAutomation:

| Parameter       | Type | Description   |
|-----------------|------|---|
| orderautomation | int  | <p>Workflow step that can be automated.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 1 - accept the order</li> <li>• 2 - start the order</li> <li>• 3 - navigate to the order destination</li> <li>• 4 - skip displaying the route summary screen</li> <li>• 5 - delete the order after it has been finished</li> <li>• 6 - suppress the "continue with next order" screen</li> </ul> <p>Available on PRO devices with firmware version 10.533 or higher.</p> <p>This parameter is required.</p> |
| enabled         | int  | <p>Indicates whether the respective step is automated.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 0 - false</li> <li>• 1 - true, workflow step is automated</li> </ul> <p>This parameter is required.</p>  |

## 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#getAccountStatusMessages`

Request limits 10 requests / minute

### Parameters

**getAccountStatusMessages** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

### Result

Result for `getAccountStatusMessages`:

| Parameter  | Type               | Description  |
|------------|--------------------|--|
| type       | string             | Indicates the type of status message.<br>Valid values: <ul style="list-style-type: none"> <li>• text</li> <li>• order</li> </ul>   |
| index      | nonNegativeInteger | The index of the predefined message<br>Range: 1 ... 15   |
| text       | string             | The text of the predefined status message.   |
| eventlevel | nonNegativeInteger | The level of the reported event.<br>Valid values: <ul style="list-style-type: none"> <li>• &lt;empty&gt; - just the message</li> <li>• 1 - Notice/information</li> <li>• 2 - Warning</li> <li>• 3 - Alarm 1</li> <li>• 4 - Alarm 2</li> <li>• 5 - Alarm 3</li> </ul> |

## 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 | Type        | Description  |
|-----------|-------------|--|
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>If <code>objectno</code> is not indicated this parameter is mandatory. |

| Parameter | Type        | Description  |
|-----------|-------------|--|
| objectno  | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>If <code>objectuid</code> is not indicated this parameter is mandatory. |

## Result

Result for `getStatusMessages`:

| Parameter  | Type               | Description   |
|------------|--------------------|---|
| type       | string             | Indicates the type of status message.<br>Valid values: <ul style="list-style-type: none"> <li><code>text</code></li> <li><code>order</code></li> </ul>  |
| index      | nonNegativeInteger | The index of the predefined message.<br>Range: 1 ... 15   |
| text       | string             | The text of the predefined status message.  |
| eventlevel | nonNegativeInteger | The level of the reported event.<br>Valid values: <ul style="list-style-type: none"> <li><code>&lt;empty&gt;</code> - just the message</li> <li>1 - Notice/information</li> <li>2 - Warning</li> <li>3 - Alarm 1</li> <li>4 - Alarm 2</li> <li>5 - Alarm 3</li> </ul> |

## setVehicleConfig

### Description

Using `setVehicleConfig` you can change one or more LINK specific configurations at once.

### Technical details

|                                       |   |
|---------------------------------------|---|
| SOAP endpoint address / function name | <code>configurationAndSecurityService#setVehicleConfig</code> |
| Request limits                        | 30 requests / hour  |

### Parameters

`setVehicleConfig` requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to setVehicleConfig:

| Parameter             | Type        | Description   |
|-----------------------|-------------|---|
| objectno              | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Indicate either <code>objectno</code> or <code>objectuid</code> .  |
| objectuid             | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Indicate either <code>objectno</code> or <code>objectuid</code> .   |
| ign_tripstart_timeout | int         | Timeout before starting the trip automatically after the device detects the ignition is switched on, in seconds.<br>Valid values are: 0, 30, 60, 120, 180, 240, 300<br>This parameter is optional.              |
| ign_tripstop_timeout  | int         | Timeout before ending the trip automatically when the device detects standstill or is undocked.<br>Valid values are: 0, 60, 120, 180, 240, 300, 600, 900, 1200, 1800, 2700, 3600<br>This parameter is optional. |
| standstill_timeout    | int         | Minimal standstill duration.<br>Valid values are: 60, 120, 180, 240, 300, 600, 900, 1200, 1800, 2700, 3600<br>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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `getVehicleConfig`:



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

## Result

Result for getVehicleConfig:

| Parameter             | Type        | Description  |
|-----------------------|-------------|--|
| objectno              | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.  |
| objectuid             | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.   |
| ign_tripstart_timeout | int         | Timeout before starting the trip automatically after the device detects the ignition is switched on, in seconds.<br>Valid values are: 0, 30, 60, 120, 180, 240, 300              |
| ign_tripstop_timeout  | int         | Timeout before ending the trip automatically when the device detects standstill or is undocked.<br>Valid values are: 0, 60, 120, 180, 240, 300, 600, 900, 1200, 1800, 2700, 3600 |
| standstill_timeout    | int         | Minimal standstill duration.<br>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 [setAccountStatusMessages](#).

### Technical details

|                                       |   |
|---------------------------------------|---|
| SOAP endpoint address / function name | configurationAndSecurityService#setStatusMessages |
| Request limits                        | 50 request / 8 hours                              |

## Parameters

**setStatusMessages** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to setStatusMessages:

| Parameter                                | Type               | Description  |
|--|--------------------|--|
| objectno                                 | string (10)        | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Indicate either <code>objectno</code> or <code>objectuid</code> .   |
| objectuid                                | string (30)        | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Indicate either <code>objectno</code> or <code>objectuid</code> .  |
| reset                                    | boolean            | Valid values: <ul style="list-style-type: none"><li>• 1 - The object specific status messages are reset to the account defaults and the status messages will be used from the WEBFLEET account</li><li>• 0 - Status messages remain object specific.</li></ul> <p>This parameter is optional.</p>  |
| ts_txt_1<br>ts_txt_2<br>...<br>ts_txt_15 | string (60)        | The text of the text status message on index 1, 2 ... 15.<br>These parameters are optional.  |
| ts_el_1<br>ts_el_2<br>...<br>ts_el_15    | nonNegativeInteger | The text of the event level on index 1, 2 ... 15.<br>Valid values: <ul style="list-style-type: none"><li>• 1 - Notice/Information</li><li>• 2 - Warning</li><li>• 3 - Alarm 1</li><li>• 4 - Alarm 2</li><li>• 5 - Alarm 3</li></ul> <p>These parameters are optional.</p> <div><b>Note:</b> If not specified, the status message is not associated with any event level.</div> |
| os_txt_1<br>os_txt_2<br>...<br>os_txt_15 | string (60)        | The order status message text on index 1, 2 ... 15.<br>These parameters are optional.  |

| Parameter  | Type               | Description  |
|--|--------------------|--|
| os_el_1  | nonNegativeInteger | The event level of the order status message on index 1, 2 ... 15.<br>Valid values:   |
| os_el_2  |                    |  |
| ...  |                    |  |
| os_el_15   |                    |  |
|  |                    |  |
|  |                    | <ul style="list-style-type: none"> <li>1 - Notice/Information</li> <li>2 - Warning</li> <li>3 - Alarm 1</li> <li>4 - Alarm 2</li> <li>5 - Alarm 3</li> </ul> |
| These parameters are optional.   |                    |  |
| <b>Note:</b> 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 | configurationAndSecurityService#setAccountStatusMessages |
| Request limits                        | 1 request / 4 hours                                      |

### Parameters

**setAccountStatusMessages** requires the following common parameters:

- **Authentication parameters**
- **General parameters**

Parameters specific to `setAccountStatusMessages`:

| Parameter | Type        | Description   |
|-----------|-------------|---|
| ts_txt_1  | string (60) | The text of the text status message on index 1, 2 ... 15.<br>These parameters are optional. |
| ts_txt_2  |             |   |
| ...       |             |   |
| ts_txt_15 |             |   |
|           |             |   |

| Parameter                                | Type               | Description   |
|--|--------------------|---|
| ts_el_1<br>ts_el_2<br>...<br>ts_el_15    | nonNegativeInteger | <p>The text of the event level on index 1, 2 ... 15.</p> <p>Possible values for event levels are:</p> <ul style="list-style-type: none"> <li>• 1 - Notice/Information</li> <li>• 2 - Warning</li> <li>• 3 - Alarm 1</li> <li>• 4 - Alarm 2</li> <li>• 5 - Alarm 3</li> </ul> <p>These parameters are optional.</p> <p>If not indicated the status message is not associated with any event level.</p>                 |
| os_txt_1<br>os_txt_2<br>...<br>os_txt_15 | string (60)        | <p>The order status message text on index 1, 2 ... 15.</p> <p>These parameters are optional.</p>  |
| os_el_1<br>os_el_2<br>...<br>os_el_15    | nonNegativeInteger | <p>The event level of the order status message on index 1, 2 ... 15.</p> <p>Possible values for event levels are:</p> <ul style="list-style-type: none"> <li>• 1 - Notice/Information</li> <li>• 2 - Warning</li> <li>• 3 - Alarm 1</li> <li>• 4 - Alarm 2</li> <li>• 5 - Alarm 3</li> </ul> <p>These parameters are optional.</p> <p>If not indicated the status message is not associated with any event level.</p> |

## 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 | userManagementService#showUsers |
| Request limits                        | 10 requests / minute            |

## Parameters

**showUsers** requires the following common parameters:

- Authentication parameters
- General parameters

### Parameters specific to showUsers:

| Parameter       | Type                        | Description  |
|-----------------|-----------------------------|--|
| username_filter | string (max. 50 characters) | Filter used to match any user name in the account containing the indicated string, also as substring.<br>This parameter is optional.           |
| realname_filter | string (max. 50 characters) | Filter used to match any real name of a user in the account containing the indicated string, also as substring.<br>This parameter is optional. |
| company_filter  | string (max. 50 characters) | Filter used to match any company name in the account containing the indicated string, also as substring.<br>This parameter is optional.        |

## Result

Result for showUsers:

| Parameter | Type                   | Description             |
|-----------|------------------------|-------------------------|
| username  | string (50 characters) |                         |
| realname  | string (50 characters) | The real name of a user |
| company   | string (50 characters) |                         |

| Parameter          | Type                     | Description  |
|--------------------|--------------------------|--|
| email              | string (255)             | The e-mail address of the user.<br>This parameter is optional.   |
| validfrom          | dateTime                 | <a href="#">ISO 8601</a> -formatted date and time in the UTC timezone, combined representation in the extended format.<br><hr/> Example: 2007-12-24T16:00:00+02:00 <hr/> Empty if no start date is set.  |
| validto            | dateTime                 | <a href="#">ISO 8601</a> -formatted date and time in the UTC timezone, combined representation in the extended format.<br><hr/> Example: 2007-12-24T16:00:00+02:00 <hr/> Empty if no end date is set.  |
| lastlogin          | dateTime                 | <a href="#">ISO 8601</a> -formatted date and time in the UTC timezone, combined representation in the extended format.<br><hr/> Example: 2007-12-24T16:00:00+02:00 <hr/> Empty if no end date is set.  |
| profile            | string (50 characters)   | The profile of the user.<br>Valid values: <ul style="list-style-type: none"> <li>• <code>guest_login_only</code></li> <li>• <code>standard_login_only</code></li> <li>• <code>guest</code></li> <li>• <code>standard</code></li> <li>• <code>expert</code></li> <li>• <code>admin</code></li> </ul>                              |
| 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.   |
| passwordexpiration | dateTime                 | The expiration time of the password.<br><a href="#">ISO 8601</a> -formatted date and time in the UTC timezone, combined representation in the extended format.<br><hr/> Example: 2007-12-24T16:00:00+02:00 <hr/> Empty if the setting <b>password expiration</b> is disabled or no timestamp of the last password change exists. |
| userid             | string (30)              | A unique unchangeable identifier for the user which is automatically generated by WEBFLEET.  |

## changePassword

### Description

Using `changePassword` you can change the password of your own user account.

### Technical details

SOAP endpoint address / function name `userManagementService#changePassword`

|                |                    |
|----------------|--------------------|
| 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.<br>This parameter is mandatory. |
| newpassword | string | The new password.<br>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 name `userManagementService#insertUser`

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

### Parameters

**insertUser** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `insertUser`:

| Parameter               | Type         | Description   |
|-------------------------|--------------|---|
| new_username            | string (50)  | User name of the newly created user.<br>This parameter is mandatory.<br>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.<br>The generated password will be sent to the email address of the newly created user.<br>This parameter is optional.  |
| require_password_change | boolean      | If this parameter is set to <code>true</code> , the new user is forced to change the password when they log on to WEBFLEET for the first time.<br>This parameter affects the WEBFLEET user interface only, but not WEBFLEET.connect.<br>Default is <code>true</code> .<br>This parameter is optional. |
| realname                | string (50)  | The full name of the user.<br>This parameter is mandatory.  |
| info                    | string (500) | A descriptive text.<br>This parameter is optional.  |
| company                 | string (50)  | The name of the company.<br>This parameter is optional.   |
| email                   | string (255) | The e-mail address of the user.<br>This parameter is mandatory.   |
| validfrom               | datetime     | Defines the start date of the validity of the user account. You can omit this parameter if not needed.<br>Default is null.<br>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.<br>Default is null.<br>This parameter is optional.   |

Parameters specific to insertUser



| Parameter      | Type        | Description  |
|----------------|-------------|--|
| profile        | string (50) | <p>The profile of the user, see <a href="#">showUsers</a>.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• guest_login_only</li> <li>• guest</li> <li>• standard_login_only</li> <li>• standard</li> <li>• expert</li> <li>• admin</li> <li>• invoices_user</li> <li>• report_recipient</li> </ul> <p>This parameter is required.</p> <p>See below table for possible combinations with <code>interfacestyle</code>.</p> |
| interfacestyle | string (50) | <p>The interface style of the user which is used by the WEBFLEET user interface.</p> <p>The default value is "standard".</p> <p>Valid values are:</p> <ul style="list-style-type: none"> <li>• standard</li> <li>• bigmap</li> <li>• invoices</li> <li>• reportrecipient</li> </ul> <p>This parameter is optional.</p> <p>See below table for possible combinations with <code>profile</code>.</p>   |

Parameters specific to insertUser

### Profile and interface style

The following combinations of `profile` and `interfacestyle` are possible:

|                            | standard | bigmap | invoices | reportrecipient |
|----------------------------|----------|--------|----------|-----------------|
| <b>guest_login_only</b>    | x        |        |          |                 |
| <b>guest</b>               | x        |        |          |                 |
| <b>standard_login_only</b> | x        | x      |          |                 |
| <b>standard</b>            | x        |        |          |                 |
| <b>export</b>              | x        |        |          |                 |
| <b>admin</b>               | x        |        |          |                 |
| <b>invoices_user</b>       |          |        | x        |                 |
| <b>report_recipient</b>    |          |        |          | x               |

## 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               | Type         | Description   |
|-------------------------|--------------|---|
| target_userid           | string (30)  | A unique, unchangeable identifier for the user, automatically generated by WEBFLEET. The <code>userid</code> is returned by <a href="#">showUsers</a> .<br>It is mandatory to specify <code>target_userid</code> and/or <code>target_username</code> .                        |
| target_username         | string (50)  | User name of the user.<br>It is mandatory to specify <code>target_userid</code> and/or <code>target_username</code> .   |
| new_username            | string (50)  | User name of the newly created user.<br>It is required only if the user name shall be changed.<br>This parameter is optional.   |
| new_password            | string (255) | Defines a new password for the user.<br>You can omit this parameter to not change the password.<br>This parameter is optional.  |
| generate_password       | boolean      | Generates a password for the user.<br>If set to <code>true</code> a new random password will be generated by WEBFLEET. The password will be sent to the email address of the user.<br>Omit this parameter to not change the password.<br>This parameter is optional.          |
| require_password_change | boolean      | If this parameter is set to <code>true</code> , the user is forced to change the password when they log on to WEBFLEET for the first time.<br>This parameter affects the WEBFLEET user interface only, but not <code>WEBFLEET.connect</code> .<br>This parameter is optional. |

| Parameter      | Type         | Description   |
|----------------|--------------|---|
| realname       | string (50)  | The full name of the user.<br>This parameter is optional.   |
| info           | string (500) | A descriptive text.<br>This parameter is optional.  |
| company        | string (50)  | The name of the company.<br>This parameter is optional.   |
| email          | string (255) | The e-mail address of the user.<br>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.<br>Default is null.<br>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.<br>Default is null.<br>This parameter is optional.   |
| profile        | string (50)  | The profile of the user, see <a href="#">showUsers</a> .<br>Valid values: <ul style="list-style-type: none"> <li>• guest_login_only</li> <li>• guest</li> <li>• standard_login_only</li> <li>• standard</li> <li>• expert</li> <li>• admin</li> <li>• invoices_user</li> <li>• report_recipient</li> </ul> This parameter is optional.<br>See table for possible combinations with <code>interfacestyle</code> , <a href="#">insertUser</a> . |
| interfacestyle | string (50)  | The interface style of the user which is used by the WEBFLEET user interface.<br>The default value is "standard".<br>Valid values are: <ul style="list-style-type: none"> <li>• standard</li> <li>• bigmap</li> <li>• invoices</li> <li>• reportrecipient</li> </ul> This parameter is optional.<br>See table for possible combinations with <code>profile</code> , <a href="#">insertUser</a> .  |

## 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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `deleteUser`:

| Parameter       | Type        | Description  |
|-----------------|-------------|--|
| target_username | string (50) | User name of the user.<br>It is mandatory to specify <code>target_userid</code> or <code>target_username</code> .  |
| target_userid   | string (30) | A unique, unchangeable identifier for the user, automatically generated by WEBFLEET. The <code>userid</code> is returned by <a href="#">showUsers</a> .<br>It is mandatory to specify <code>target_userid</code> or <code>target_username</code> . |

## 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 `userManagementService#getUserRights`

Request limits 10 requests / minute

### Parameters

**getUserRights** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to getUserRights:

| Parameter       | Type        | Description  |
|-----------------|-------------|--|
| target_username | string (50) | User name of the user.<br>It is mandatory to indicate target_userid and/or target_username.  |
| target_userid   | string (30) | A unique, unchangeable identifier for the user, automatically generated by WEBFLEET. The userid is returned by <a href="#">showUsers</a> .<br>It is mandatory to specify target_userid and/or target_username. |

## Result

Result for getUserRights:

| Parameter  | Type   | Description   |
|------------|--------|---|
| rightlevel | string | The name of the right level, see <a href="#">List of supported right levels</a> .   |
| 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.<br>Valid values: <ul style="list-style-type: none"> <li>• object</li> <li>• objectgroup</li> <li>• driver</li> <li>• drivergroup</li> <li>• address</li> <li>• addressgroup</li> </ul> |

## 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

## Parameters

**setUserRight** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to setUserRight:

| Parameter       | Type        | Description  |
|-----------------|-------------|--|
| target_username | string (50) | User name of the user.<br>It is mandatory to specify target_userid and/or target_username.   |
| target_userid   | string (30) | A unique, unchangeable identifier for the user, automatically generated by WEBFLEET. The userid is returned by <a href="#">showUsers</a> .<br>It is mandatory to specify target_userid and/or target_username.   |
| rightlevel      | string      | The name of the right level, see <a href="#">List of supported right levels</a> .  |
| entityuid       | string      | The UID of the entity the right applies to.<br><br><b>Note:</b> 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.<br><br>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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to resetUserRights:

| Parameter       | Type        | Description  |
|-----------------|-------------|--|
| target_username | string (50) | User name of the user.<br>It is mandatory to specify target_userid and/or target_username.   |
| target_userid   | string (30) | A unique, unchangeable identifier for the user, automatically generated by WEBFLEET. The userid is returned by <a href="#">showUsers</a> .<br>It is mandatory to specify target_userid and/or target_username. |

## 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.<br>It is mandatory to specify target_userid and/or target_username.   |
| target_userid   | string (30) | A unique, unchangeable identifier for the user, automatically generated by WEBFLEET. The userid is returned by <a href="#">showUsers</a> .<br>It is mandatory to specify target_userid and/or target_username. |

| Parameter  | Type   | Description   |
|------------|--------|---|
| rightlevel | string | The name of the right level, see <a href="#">List of supported right levels</a> . |
| 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 is 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_accountsettings   | 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_access             | Global           | Read access to areas.  |
| orders_full_access            | Global           | Full access to order management functions.   |
| orders_read_access            | Global           | Read access to orders.   |
| external_tachograph_interface | Global           | Access to the tachograph page  |
| object_full_access            | Entity<br>Global | Full read/write access to vehicles, messaging, tracking, change group association etc. |
| object_expert_access          | Entity<br>Global | Full read/write access to vehicles, messaging, tracking                                |
| object_standard_access        | Entity<br>Global | Read access to vehicles, messaging, tracking   |



| Parameter                              | Basis            | Description   |
|--|------------------|---|
| object_tracking                        | Entity<br>Global | Read access to vehicles, tracking, read messages  |
| object_locating                        | Entity<br>Global | Read access to vehicles, view position  |
| object_locating_and_messaging          | Entity<br>Global | Read access to vehicles, view position, messaging   |
| object_locating_and_communication      | Entity<br>Global | Read access to vehicles, view position, messaging   |
| object_messaging                       | Entity<br>Global | Read access to vehicles, messaging, no position info  |
| object_read_access                     | Entity<br>Global | Read access to vehicles, view position  |
| address_admin_access                   | Entity<br>Global | Full edit access to addresses including address group assignments   |
| address_edit_access                    | Entity<br>Global | Edit access to addresses  |
| address_read_access                    | Entity<br>Global | Read access to addresses  |
| driver_admin_access                    | Entity<br>Global | Full edit access to drivers, including driver group assignments   |
| driver_edit_access                     | Entity<br>Global | Edit access to drivers  |
| driver_read_access                     | Entity<br>Global | Read access to drivers  |
| enable_device_configuration_management | Global           | Allows to manage configurations for mobile devices.<br>This right level is only available for specific users.     |
| report_read_access                     | Global           | Grants read access to reports.  |
| report_edit_access                     | Global           | Allows to edit and create reports.<br>Only available when the right level <code>report_read_access</code> is set. |

# 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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to insertMaintenanceSchedule:

| Parameter           | Type          | Description  |
|---------------------|---------------|--|
| objectno            | string (10)   | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to <code>objectuid</code> . |
| schedulename        | string (100)  | The name of the maintenance schedule.<br>This parameter is required.   |
| scheduledescription | string (2000) | Description of the maintenance schedule.<br>This parameter is optional.  |

| Parameter    | Type               | Description  |
|--------------|--------------------|--|
| scheduletype | nonNegativeInteger | <p>Indicates the icon for the specific maintenance schedule shown in WEBFLEET.</p> <p>This parameter is required.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 0 - Renew Oil</li> <li>• 1 - Change tires</li> <li>• 2 - Check engine</li> <li>• 3 - General</li> <li>• 4 - License</li> <li>• 5 - Brake disc</li> <li>• 6 - Gas</li> <li>• 7 - Lights</li> <li>• 8 - Air condition</li> <li>• 9 - Battery</li> <li>• 10 - Inspection</li> <li>• 11 - Car lift</li> <li>• 12 - Steering wheel</li> <li>• 13 - Key</li> <li>• 14 - Air bag</li> <li>• 15 - Car jack</li> <li>• 16 - Gears</li> <li>• 17 - Water</li> <li>• 18 - Voltage</li> <li>• 19 - ABS</li> <li>• 20 - Heater</li> <li>• 21 - Handbrake</li> <li>• 22 - Parking</li> <li>• 23 - Temperature</li> <li>• 24 - Wiper</li> </ul> |
| ruletype     | nonNegativeInteger | <p>Describes the rules if and how a maintenance task shall be repeated.</p> <p>This parameter is required.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 0 - Single shot - Task will not be repeated.</li> <li>• 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.</li> <li>• 2 - Continuous sequential interval - Task will be repeated in an interval depending on the state of the last completed task.</li> </ul> <p><i>Example: A Task will be repeated after 2000 km driving after the previous maintenance task has ended.</i></p>   |

| Parameter           | Type               | Description   |
|---------------------|--------------------|---|
| intervaltime        | nonNegativeInteger | Indicates the interval in months.<br>Valid values: 1 ... 120<br>This parameter is required if intervalodometer is missing and ruletype is 1 or 2.                                     |
| intervalodometer    | nonNegativeInteger | Indicates the interval in meters.<br>Valid values: 1 ... 1,000,000,000<br>This parameter is required if intervaltime is missing and ruletype is 1 or 2.                               |
| remindingtime       | nonNegativeInteger | Indicates the time a reminder shall show up in WEBFLEET previous to the due date, in days.<br>Valid values: 1 ... 180<br>This parameter is optional.                                  |
| remindingodometer   | nonNegativeInteger | Indicates the mileage a reminder shall show up in WEBFLEET previous to the mileage when the task is due, in meters.<br>Valid values: 1 ... 100,000,000<br>This parameter is optional. |
| plannedexectime     | date               | Indicates the next due date of the maintenance work.<br>This parameter is required if plannedexecodometer is missing.   |
| plannedexecodometer | nonNegativeInteger | Indicates the mileage after which the maintenance is due, in meters.<br>Valid values: 1 ... 10,000,000,000<br>This parameter is required if plannedexectime is missing.               |
| objectuid           | string (30)        | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to objectno.  |
| intervaltimetype    | nonNegativeInteger | The type of time interval.<br>Valid values: <ul style="list-style-type: none"> <li>• 0 - days</li> <li>• 1 - weeks</li> <li>• 2 - months</li> <li>• 3 - years</li> </ul>              |

## Result

Result for insertMaintenanceSchedule:

| Parameter  | Type               | Description   |
|------------|--------------------|---|
| scheduleid | nonNegativeInteger | 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#updateMaintenanceSchedule`

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

### Parameters

**updateMaintenanceSchedule** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `updateMaintenanceSchedule`:

| Parameter           | Type               | Description   |
|---------------------|--------------------|---|
| scheduleid          | nonNegativeInteger | Maintenance schedule specific identifier.<br>Unique within an account.<br>This parameter is required. |
| schedulename        | string (100)       | The name of the maintenance schedule.<br>This parameter is optional.                                  |
| scheduledescription | string (2000)      | Description of the maintenance schedule.<br>This parameter is optional.                               |

| Parameter    | Type               | Description  |
|--------------|--------------------|--|
| scheduletype | nonNegativeInteger | <p>Indicates the icon for the specific maintenance schedule shown in WEBFLEET.</p> <p>This parameter is optional.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 0 - Renew Oil</li> <li>• 1 - Change tires</li> <li>• 2 - Check engine</li> <li>• 3 - General</li> <li>• 4 - License</li> <li>• 5 - Brake disc</li> <li>• 6 - Gas</li> <li>• 7 - Lights</li> <li>• 8 - Air condition</li> <li>• 9 - Battery</li> <li>• 10 - Inspection</li> <li>• 11 - Car lift</li> <li>• 12 - Steering wheel</li> <li>• 13 - Key</li> <li>• 14 - Air bag</li> <li>• 15 - Car jack</li> <li>• 16 - Gears</li> <li>• 17 - Water</li> <li>• 18 - Voltage</li> <li>• 19 - ABS</li> <li>• 20 - Heater</li> <li>• 21 - Handbrake</li> <li>• 22 - Parking</li> <li>• 23 - Temperature</li> <li>• 24 - Wiper</li> </ul> |
| ruletype     | nonNegativeInteger | <p>Describes the rules if and how a maintenance task shall be repeated.</p> <p>This parameter is optional.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 0 - Single shot - Task will not be repeated.</li> <li>• 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.</li> <li>• 2 - Continuous sequential interval - Task will be repeated in an interval depending on the state of the last completed task.</li> </ul> <p><i>Example: Task will be repeated after 2000 km driving after the previous maintenance task has ended.</i></p>   |

| Parameter   | Type               | Description  |
|---|--------------------|--|
| intervaltime  | nonNegativeInteger | Indicates the interval in months.<br>Valid values: 1 ... 120<br>This parameter is optional.<br>You can only delete the value of the parameter when there is a valid value for <code>intervalodometer</code> .  |
| intervalodometer  | nonNegativeInteger | Indicates the interval in meters.<br>Valid values: 1 ... 1,000,000,000<br>You can only delete the value of the parameter when there is a valid value for <code>intervaltime</code> .   |
| remindingtime   | nonNegativeInteger | Indicates the time a reminder shall show up in WEBFLEET previous to the due date, in days.<br>Valid values: 1 ... 180<br>This parameter is optional.   |
| remindingodometer   | nonNegativeInteger | Indicates the mileage a reminder shall show up in WEBFLEET previous to the mileage when the task is due, in meters.<br>Valid values: 1 ... 100,000,000<br>This parameter is optional.  |
| plannedexectime   | date               | Indicates the next due date of the maintenance work.<br>This parameter is optional.<br>You can only delete the value of the parameter when there is a valid value for <code>plannedexecodometer</code> .   |
| <b>Note:</b> The parameter must include a time as well as the date. |                    |  |
| plannedexecodometer   | nonNegativeInteger | Indicates the mileage after which the maintenance is due, in meters.<br>Valid values: 1 ... 10,000,000,000<br>This parameter is optional.<br>You can only delete the value of the parameter when there is a valid value for <code>plannedexectime</code> . |
| intervaltimetype  | nonNegativeInteger | The type of time interval.<br>Valid values: <ul style="list-style-type: none"> <li>0 - days</li> <li>1 - weeks</li> <li>2 - months</li> <li>3 - years</li> </ul>   |

## 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  | Type               | Description  |
|------------|--------------------|--|
| scheduleid | nonNegativeInteger | Maintenance schedule specific identifier. Unique within an account.<br>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.<br>Unique within an account, case-sensitive.<br>This parameter is optional. |
| objectgroupname | string      | Case-sensitive.<br>This parameter is optional.   |



| Parameter  | Type               | Description  |
|------------|--------------------|--|
| scheduleid | nonNegativeInteger | Maintenance schedule specific identifier.<br>Unique within an account.<br>This parameter is optional.  |
| objectuid  | string (30)        | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> . |

## Result

Result for showMaintenanceSchedules:

| Parameter           | Type               | Description   |
|---------------------|--------------------|---|
| scheduleid          | nonNegativeInteger | Maintenance schedule specific identifier.<br>Unique within an account.        |
| objectno            | string (10)        | Identifying number of an object.<br>Unique within an account, case-sensitive. |
| schedulename        | string (100)       | The name of the maintenance schedule.   |
| scheduledescription | string (2000)      | Description of the maintenance schedule.                                      |

| Parameter    | Type               | Description   |
|--------------|--------------------|---|
| scheduletype | nonNegativeInteger | <p>Indicates the icon for the specific maintenance schedule shown in WEBFLEET.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 0 - Renew Oil</li> <li>• 1 - Change tires</li> <li>• 2 - Check engine</li> <li>• 3 - General</li> <li>• 4 - License</li> <li>• 5 - Brake disc</li> <li>• 6 - Gas</li> <li>• 7 - Lights</li> <li>• 8 - Air condition</li> <li>• 9 - Battery</li> <li>• 10 - Inspection</li> <li>• 11 - Car lift</li> <li>• 12 - Steering wheel</li> <li>• 13 - Key</li> <li>• 14 - Air bag</li> <li>• 15 - Car jack</li> <li>• 16 - Gears</li> <li>• 17 - Water</li> <li>• 18 - Voltage</li> <li>• 19 - ABS</li> <li>• 20 - Heater</li> <li>• 21 - Handbrake</li> <li>• 22 - Parking</li> <li>• 23 - Temperature</li> <li>• 24 - Wiper</li> </ul> |
| ruletype     | nonNegativeInteger | <p>Describes the rules if and how a maintenance task shall be repeated.</p> <p>This parameter is required.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 0 - Single shot - Task will not be repeated.</li> <li>• 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.</li> <li>• 2 - Continuous sequential interval - Task will be repeated in an interval depending on the state of the last completed task.</li> </ul> <p><i>Example: Task will be repeated after 2000 km driving after the previous maintenance task has ended.</i></p>  |
| intervaltime | nonNegativeInteger | Indicates the interval in months.   |

| Parameter           | Type               | Description   |
|---------------------|--------------------|---|
| intervalodometer    | nonNegativeInteger | Indicates the interval in meters.   |
| remindingtime       | nonNegativeInteger | Indicates the time a reminder shall show up in WEBFLEET previous to the due date, in days.  |
| remindingodometer   | nonNegativeInteger | 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.  |
| plannedexecodometer | nonNegativeInteger | 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   | nonNegativeInteger | 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.<br>Can be used alternatively to <code>objectno</code> .  |
| creationtype        | int                | Describes how the maintenance schedule was created. Possible values are: <ul style="list-style-type: none"> <li>0 - manually by user</li> <li>1 - automatically by vehicle diagnostic system</li> </ul> |
| intervaltimetype    | nonNegativeInteger | The type of time interval.<br>Valid values: <ul style="list-style-type: none"> <li>0 - days</li> <li>1 - weeks</li> <li>2 - months</li> <li>3 - years</li> </ul>  |

## showMaintenanceTasks

### Description

This action retrieves a list of maintenance tasks.

### Technical details

|                                       |  |
|---------------------------------------|--|
| SOAP endpoint address / function name | vehicleMaintenanceService#showMaintenanceTasks |
| Request limits                        | 10 requests / minute                           |

## Parameters

**showMaintenanceTasks** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

**showMaintenanceTasks** requires the following other parameters:

- [Date range filter parameters](#)

The date range applies to:

- `plannedexectime` if `status` has the value 0 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   |
|------------------------------|--------------------|---|
| <code>objectno</code>        | string (10)        | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>This parameter is optional.  |
| <code>objectgroupname</code> | string             | Case-sensitive.<br>This parameter is optional.  |
| <code>scheduleid</code>      | nonNegativeInteger | Maintenance schedule specific identifier.<br>Unique within an account.<br>This parameter is optional.   |
| <code>taskid</code>          | nonNegativeInteger | Maintenance task specific identifier.<br>Unique within an account.<br>This parameter is optional.   |
| <code>status</code>          | nonNegativeInteger | Status of the task.<br>Valid values: <ul style="list-style-type: none"><li>• 0 - new</li><li>• 1 - read</li><li>• 2 - completed</li></ul> This parameter is optional. |
| <code>objectuid</code>       | string (30)        | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> .                          |

| Parameter    | Type    | Description   |
|--------------|---------|---|
| duetype      | int     | <p>Filter for tasks that are overdue or tasks with a exceeded reminder.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 0 - no filter</li> <li>• 1 - tasks with exceeded reminder</li> <li>• 2 - tasks that are overdue</li> </ul> <p>This parameter is optional.</p>   |
| scheduletype | Integer | <p>Indicates the icon for the specific maintenance schedule shown in WEBFLEET.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 0 - Renew Oil</li> <li>• 1 - Change tires</li> <li>• 2 - Check engine</li> <li>• 3 - General</li> <li>• 4 - License</li> <li>• 5 - Brake disc</li> <li>• 6 - Gas</li> <li>• 7 - Lights</li> <li>• 8 - Air condition</li> <li>• 9 - Battery</li> <li>• 10 - Inspection</li> <li>• 11 - Car lift</li> <li>• 12 - Steering wheel</li> <li>• 13 - Key</li> <li>• 14 - Air bag</li> <li>• 15 - Car jack</li> <li>• 16 - Gears</li> <li>• 17 - Water</li> <li>• 18 - Voltage</li> <li>• 19 - ABS</li> <li>• 20 - Heater</li> <li>• 21 - Handbrake</li> <li>• 22 - Parking</li> <li>• 23 - Temperature</li> <li>• 24 - Wiper</li> </ul> |

## Result

Result for showMaintenanceTasks:

| Parameter | Type               | Description   |
|-----------|--------------------|---|
| taskid    | nonNegativeInteger | <p>Maintenance task specific identifier.</p> <p>Unique within an account.</p> |

| Parameter           | Type               | Description   |
|---------------------|--------------------|---|
| scheduleid          | nonNegativeInteger | Maintenance schedule specific identifier.<br>Unique within an account.  |
| objectno            | string (10)        | Identifying number of an object.<br>Unique within an account, case-sensitive.   |
| plannedexectime     | date               | Indicates the next due date of the maintenance work.  |
| plannedexecodometer | nonNegativeInteger | 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.   |
| remindingodometer   | nonNegativeInteger | 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        | nonNegativeInteger | Vehicle mileage when the maintenance task was read, in meters.  |
| completedusername   | string             | Username of who completed the maintenance task.   |
| completedtime       | date               | Time when the maintenance task was completed.   |
| completedodometer   | nonNegativeInteger | Vehicle mileage when the maintenance task was completed, in meters.   |
| status              | nonNegativeInteger | Status of the task.<br>Valid values: <ul style="list-style-type: none"> <li>• 0 - new</li> <li>• 1 - read</li> <li>• 2 - completed</li> </ul> |
| objectuid           | string (30)        | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> .  |
| schedulename        | string(100)        | The name of the maintenance schedule.   |

| Parameter            | Type               | Description   |
|----------------------|--------------------|---|
| scheduletype         | nonNegativeInteger | <p>Indicates the icon for the specific maintenance schedule shown in WEBFLEET.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 0 - Renew Oil</li> <li>• 1 - Change tires</li> <li>• 2 - Check engine</li> <li>• 3 - General</li> <li>• 4 - License</li> <li>• 5 - Brake disc</li> <li>• 6 - Gas</li> <li>• 7 - Lights</li> <li>• 8 - Air condition</li> <li>• 9 - Battery</li> <li>• 10 - Inspection</li> <li>• 11 - Car lift</li> <li>• 12 - Steering wheel</li> <li>• 13 - Key</li> <li>• 14 - Air bag</li> <li>• 15 - Car jack</li> <li>• 16 - Gears</li> <li>• 17 - Water</li> <li>• 18 - Voltage</li> <li>• 19 - ABS</li> <li>• 20 - Heater</li> <li>• 21 - Handbrake</li> <li>• 22 - Parking</li> <li>• 23 - Temperature</li> <li>• 24 - Wiper</li> </ul> |
| schedulecreationtype | int                | <p>Describes how the maintenance schedule was created.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• 0 - manually by user</li> <li>• 1 - automatically by vehicle diagnostic system</li> </ul>  |

## resolveMaintenanceTask

### Description

This action resolves a maintenance task depending on the specified status.

### Technical details

SOAP endpoint address / function name vehicleMaintenanceService#resolveMaintenanceTask

Request limits 10 requests / minute

## Parameters

**resolveMaintenanceTask** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to resolveMaintenanceTask:

| Parameter | Type               | Description   |
|-----------|--------------------|---|
| taskid    | nonNegativeInteger | Maintenance task specific identifier.<br>Unique within an account.<br>This parameter is required.   |
| status    | nonNegativeInteger | Status of the task.<br>Valid values: <ul style="list-style-type: none"><li>• 1 - read</li><li>• 2 - completed</li></ul> This parameter is required. |



# 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 [getArchivedReport](#) 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     | nonNegativeInteger | Identifying number of the report file.  |
| reportname   | string (500)       | Display name of the report file.  |
| format       | string             | Name of the file format.<br>Valid values: <ul style="list-style-type: none"><li>• pdf</li><li>• csv</li></ul> |
| creationtime | dateTime           | Date and time, the report file has been created.  |
| expirytime   | dateTime           | Date and time of when the report will be deleted automatically.   |
| size         | nonNegativeInteger | 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  | nonNegativeInteger | Identifying number of the report file as returned by <a href="#">getArchivedReportList</a> .<br>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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `deleteArchivedReport`:

| Parameter | Type               | Description   |
|-----------|--------------------|---|
| reportid  | nonNegativeInteger | Identifying number of the report file as returned by <a href="#">getArchivedReportList</a> .<br>This parameter is required. |

## getReportList

### Description

`getReportList` returns a list of reports, that can be created on demand and that are assigned to the current WEBFLEET user. Reports can be created on demand using `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.<br>This parameter is optional.<br>Omit this parameter to retrieve the complete list of available reports. |

### Result

Result for `getReportList`:

| Parameter   | Type         | Description   |
|-------------|--------------|---|
| reportname  | string (500) | Display name of the report file.                                    |
| 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](#)
- [Date range filter parameters](#), the maximum period length is 12 months.

Parameters specific to createReport:

| Parameter       | Type         | Description   |
|-----------------|--------------|---|
| reportname      | string (500) | Display name of the report file.<br>This parameter is required.   |
| format          | string       | Name of the file format.<br>Valid values: <ul style="list-style-type: none"><li>• pdf</li><li>• csv</li></ul> Defaults to pdf if not specified.               |
| objectno        | string (10)  | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to objectuid.<br>This parameter is optional.       |
| objectuid       | string (30)  | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to objectno.<br>This parameter is optional. |
| objectgroupname | string       | A name of an object group.<br>This parameter is optional.   |
| driverno        | string       | Identifying number of a driver.<br>Unique within an account.<br>This parameter is optional.   |
| drivergroupname | string       | Name of the group of drivers the driver is assigned to, case-sensitive.<br>This parameter is optional.  |

| Parameter | Type        | Description   |
|-----------|-------------|---|
| orderno   | string (20) | Account-unique order id, case-sensitive.<br>This parameter is optional. |

## sendReportViaMail

### Description

Using `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](#)
- [Date range filter parameters](#), the maximum period length is 12 months.

Parameters specific to `sendReportViaMail`:

| Parameter  | Type         | Description   |
|------------|--------------|---|
| reportname | string (500) | Display name of the report file.<br>This parameter is mandatory.  |
| format     | string       | Name of the file format.<br>Valid values: <ul style="list-style-type: none"> <li>• pdf</li> <li>• csv</li> </ul> Defaults to pdf if not indicated.                          |
| email      | string       | The email address to which the created report will be sent.<br>This parameter is required.  |
| objectno   | string (10)  | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to <code>objectuid</code> .<br>This parameter is optional.       |
| objectuid  | string (30)  | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> .<br>This parameter is optional. |

| Parameter       | Type        | Description  |
|-----------------|-------------|--|
| objectgroupname | string      | A name of an object group.<br>This parameter is optional.  |
| driverno        | string      | Identifying number of a driver.<br>Unique within an account.<br>This parameter is optional.            |
| drivergroupname | string      | Name of the group of drivers the driver is assigned to, case-sensitive.<br>This parameter is optional. |
| orderno         | string (20) | Account-unique order id, case-sensitive.<br>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 | Type        | Description  |
|-----------|-------------|--|
| areano    | string (50) | Identification number of an area.<br>Unique within an account, case-sensitive.<br><br><b>Note:</b> Indicate either <code>areano</code> or <code>areauuid</code> ; do not use both parameters in combination.                     |
| areauuid  | string (30) | A unique, unchangeable identifier for the area, automatically generated by WEBFLEET.<br><br><b>Note:</b> Indicate either <code>areano</code> or <code>areauuid</code> ; do not use both parameters in combination.               |
| active    | boolean     | Indicator for whether an area is enabled.<br>Valid values: <ul style="list-style-type: none"><li>0 —area disabled</li><li>1 —area enabled</li></ul><br>Omit this parameter to retrieve all areas.<br>This parameter is optional. |

## Result

Result for getAreas:

| Parameter         | Type         | Description  |
|-------------------|--------------|--|
| areano            | string (50)  | Identification number of an area.<br>Unique within an account, case-sensitive.   |
| areaid            | 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.<br>Valid values: <ul style="list-style-type: none"> <li>1 - rectangle</li> <li>2 - circle</li> <li>3 - polygon</li> <li>4 - corridor</li> </ul>   |
| active            | boolean      | Indicator for whether an area is enabled. Valid values are: <ul style="list-style-type: none"> <li>0 - area disabled</li> <li>1 - area enabled</li> </ul>  |
| 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.<br>Valid values are: <ul style="list-style-type: none"> <li>0 - inside/outside</li> <li>1 - enter/leave</li> </ul> <div> <p><b>Note:</b> 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.</p> </div> |
| eventlevel_inside | int          | Notification level (urgency) of the created event, when the vehicle is located inside of the area.<br>Valid values: <ul style="list-style-type: none"> <li>&lt;empty&gt; - No message</li> <li>1 - Notice</li> <li>2 - Warning</li> <li>3 - Alarm 1</li> <li>4 - Alarm 2</li> <li>5 - Alarm 3</li> </ul> <p>Value is only set if <code>notificationmode = 0</code>.</p>  |



| Parameter          | Type       | Description   |
|--------------------|------------|---|
| eventlevel_outside | int        | Notification level (urgency) of the created event, when the vehicle is located outside of the area.<br>For valid values refer to the list for <code>eventlevel_inside</code> .<br>Value is only set if <code>notificationmode = 0</code> .  |
| eventlevel_enter   | int        | Notification level (urgency) of the created event, when the vehicle enters the area.<br>For valid values refer to the list for <code>eventlevel_inside</code> .<br>Value is only set if <code>notificationmode = 1</code> .   |
| eventlevel_leave   | int        | Notification level (urgency) of the created event, when the vehicle leaves the area.<br>For valid values refer to the list for <code>eventlevel_inside</code> .<br>Value is only set if <code>notificationmode = 1</code> .   |
| 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 <a href="#">getAreaPoints</a> to retrieve a list of all coordinates.<br>Geographic latitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>Transformation from degree, minutes and seconds can be done with the following calculation: $(\text{degrees} + \text{minutes}/60 + \text{seconds}/3600) * 10^6$ and rounding to an integer.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> . |
| longitude          | int        | See description for <code>latitude</code> 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](#)
- [General parameters](#)

Parameters specific to insertArea:

| Parameter        | Type         | Description   |
|------------------|--------------|---|
| areano           | string (50)  | Identification number of an area.<br>Unique within an account, case-sensitive.<br>This parameter is required.   |
| areaname         | string (254) | Display name of the area.<br>This parameter is required.  |
| type             | int          | Classifies the geometric shape of this area.<br>Valid values: <ul style="list-style-type: none"><li>• 1 – rectangle</li><li>• 2 – circle</li><li>• 3 – polygon</li><li>• 4 – corridor</li></ul> This parameter is required. |
| active           | boolean      | Indicator for whether an area is enabled.<br>Valid values: <ul style="list-style-type: none"><li>• 0 – area disabled</li><li>• 1 – area enabled</li></ul> Default value is 1.<br>This parameter is optional.                |
| validfrom        | date         | Start date of a period to limit the validity of the area.<br>This parameter is optional.  |
| validto          | date         | End date of a period to limit the validity of the area.<br>This parameter is optional.  |
| notificationmode | int          | Describes the type of activity for which events shall be created.<br>The value defaults to 1 (enter/leave).<br>When the vehicle passes the border of area one event is created.<br>This parameter is optional.              |

| Parameter        | Type | Description  |
|------------------|------|--|
| eventlevel_enter | int  | <p>Notification level (urgency) of the created event, when the vehicle enters the area.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• &lt;empty&gt; – No message</li> <li>• 1 – Notice</li> <li>• 2 – Warning</li> <li>• 3 – Alarm 1</li> <li>• 4 – Alarm 2</li> <li>• 5 – Alarm 3</li> </ul> <p>Value is only set if <code>notificationmode = 1</code>.<br/>Default value is &lt;empty&gt;.<br/>This parameter is optional.</p>   |
| eventlevel_leave | int  | <p>Notification level (urgency) of the created event, when the vehicle leaves the area.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• &lt;empty&gt; – No message</li> <li>• 1 – Notice</li> <li>• 2 – Warning</li> <li>• 3 – Alarm 1</li> <li>• 4 – Alarm 2</li> <li>• 5 – Alarm 3</li> </ul> <p>Value is only set if <code>notificationmode = 1</code>.<br/>Default value is &lt;empty&gt;.<br/>This parameter is optional.</p>   |
| latitude         | int  | <p>Geographic latitude of the geometric centre of the shape (rectangle or circle).</p> <p>Geographic latitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grad).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: <math>(\text{degrees} + \text{minutes}/60 + \text{seconds}/3600) * 10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p> <p>Mandatory for rectangle and circle.</p> <p>For polygon and corridor, please use the parameter <code>point</code> multiple times to submit each point of the complex shape.</p> |
| longitude        | int  | See description for <code>latitude</code> for analogue use for longitude.  |
| radius           | int  | <p>Radius of the area in meters. Only set if the area is a circle.</p> <p>This parameter is mandatory for circle.</p>  |
| width            | int  | <p>Width of the area in meters. Only set if area is a rectangle or corridor.</p> <p>This parameter is mandatory for rectangle and corridor.</p>  |

| Parameter | Type       | Description  |
|-----------|------------|--|
| height    | int        | Height of the area in meters. Only set if area is a rectangle.<br>This parameter is mandatory for rectangle.   |
| point     | string     | <p>Comma-separated latitude/longitude pair, which describes a single point of the polygon or corridor (in WGS84 notation).</p> <p><code>&lt;latitude&gt;,&lt;longitude&gt;</code></p> <p>Repeat this parameter for each point in the shape.</p> <p><b>Note:</b> Use HTTP-POST if the generated request URL is longer than 2000 characters.</p> <p>This parameter is mandatory for polygon and corridor.</p>  |
| color     | string (6) | <p>The color of the area as a 6-digit hex RGB-color code.</p> <p>This parameter is optional.</p> <p>The default value is 3366FF.</p> <p>The following colors are available within the WEBFLEET GUI:</p>  <p>The color codes for these colors are:</p> <p>990000, CC0000, FF0000, FF6666, FF9999, FFCC-<br/>CC,<br/>DD6633, FF6600, FF9900, FFCC00, FFFF00,<br/>FFFF99,<br/>006600, 009900, 00CC00, 00FF00, 99FF66,<br/>CCFF99,<br/>006666, 009988, 00AA99, 00CCAA, 00DDCC,<br/>00FFEE,<br/>0000CC, 0033FF, 3366FF, 3399FF, 66CCFF,<br/>99DDFF,<br/>660066, 990099, CC00CC, FF00FF, FF99FF, FFC-<br/>CFF</p> |

## deleteArea

### Description

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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to deleteArea:

| Parameter | Type        | Description   |
|-----------|-------------|---|
| areano    | string (50) | Identification number of an area.<br>Unique within an account, case-sensitive.<br><br><b>Note:</b> Specify either <code>areano</code> or <code>areauuid</code> ; do not use both parameters in combination.       |
| areauuid  | string (30) | A unique, unchangeable identifier for the area, automatically generated by WEBFLEET.<br><br><b>Note:</b> Specify either <code>areano</code> or <code>areauuid</code> ; 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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to updateArea

| Parameter        | Type         | Description   |
|------------------|--------------|---|
| areano           | string (50)  | <p>Identification number of an area.<br/>Unique within an account, case-sensitive.</p> <p><b>Note:</b> It is mandatory to indicate at least <code>areano</code> or <code>areaid</code> to identify the area that needs to be updated. Indicate both when <code>areano</code> shall be updated.</p>      |
| areaid           | string (30)  | <p>A unique, unchangeable identifier for the area, automatically generated by WEBFLEET.</p> <p><b>Note:</b> It is mandatory to indicate at least <code>areano</code> or <code>areaid</code> to identify the area that needs to be updated. Indicate both when <code>areano</code> shall be updated.</p> |
| areaname         | string (254) | <p>Display name of the area.<br/>This parameter is optional.</p>  |
| type             | int          | <p>Classifies the geometric shape of this area.<br/>Valid values:</p> <ul style="list-style-type: none"> <li>1 - rectangle</li> <li>2 - circle</li> <li>3 - polygon</li> <li>4 - corridor</li> </ul> <p>This parameter is optional.</p>   |
| active           | boolean      | <p>Indicator for whether an area is enabled.<br/>Valid values:</p> <ul style="list-style-type: none"> <li>0 - area disabled</li> <li>1 - area enabled</li> </ul> <p>This parameter is optional.</p>   |
| validfrom        | date         | <p>Start date of a period to limit the validity of the area.<br/>This parameter is optional.</p>  |
| validto          | date         | <p>End date of a period to limit the validity of the area.<br/>This parameter is optional.</p>  |
| notificationmode | int          | <p>Describes the type of activity for which events shall be created.<br/>The value defaults to 1 (enter/leave).<br/>When the vehicle passes the border of area one event is created.<br/>This parameter is optional.</p>  |

| Parameter        | Type | Description  |
|------------------|------|--|
| eventlevel_enter | int  | <p>Notification level (urgency) of the created event, when the vehicle enters the area.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• &lt;empty&gt; – No message</li> <li>• 1 – Notice</li> <li>• 2 – Warning</li> <li>• 3 – Alarm 1</li> <li>• 4 – Alarm 2</li> <li>• 5 – Alarm 3</li> </ul> <p>Value is only set if <code>notificationmode = 1</code>.<br/>Default value is &lt;empty&gt;.<br/>This parameter is optional.</p>   |
| eventlevel_leave | int  | <p>Notification level (urgency) of the created event, when the vehicle leaves the area.</p> <p>Valid values:</p> <ul style="list-style-type: none"> <li>• &lt;empty&gt; – No message</li> <li>• 1 – Notice</li> <li>• 2 – Warning</li> <li>• 3 – Alarm 1</li> <li>• 4 – Alarm 2</li> <li>• 5 – Alarm 3</li> </ul> <p>Value is only set if <code>notificationmode = 1</code>.<br/>Default value is &lt;empty&gt;.<br/>This parameter is optional.</p>   |
| latitude         | int  | <p>Geographic latitude of the geometric centre of the shape (rectangle or circle).</p> <p>Geographic latitude in the <a href="#">WGS84</a> coordinate system.</p> <p>Unit of measurement is micro degrees (<math>10^{-6}</math> grad).</p> <p>Transformation from degree, minutes and seconds can be done with the following calculation: <math>(\text{degrees} + \text{minutes}/60 + \text{seconds}/3600) * 10^6</math> and rounding to an integer.</p> <p>See <a href="#">Geographic coordinate conversion on Wikipedia</a>.</p> <p>This parameter is optional.</p> <p>For polygon and corridor, please use the parameter <code>point</code> multiple times to submit each point of the complex shape.</p> |
| longitude        | int  | See description for <code>latitude</code> for analogue use for longitude.  |
| radius           | int  | <p>Radius of the area in meters.</p> <p>Only set if the area is a circle.</p> <p>This parameter is optional.</p>   |
| width            | int  | <p>Width of the area in meters. Only set if area is a rectangle or corridor.</p> <p>This parameter is optional.</p>  |

| Parameter | Type       | Description  |
|-----------|------------|--|
| height    | int        | Height of the area in meters. Only set if area is a rectangle.<br>This parameter is optional.  |
| point     | string     | <p>Comma-separated <code>latitude/longitude</code> pair, which describes a single point of the polygon or corridor (in WGS84 notation).</p> <pre>&lt;latitude&gt;,&lt;longitude&gt;</pre> <p>Repeat this parameter for each point in the shape.</p> <p><b>Note:</b> Use HTTP-POST if the generated request URL is longer than 2000 characters.</p> <p>This parameter is optional.</p>  |
| color     | string (6) | <p>The color of the area as a 6-digit hex RGB-color code.<br/>This parameter is optional.<br/>The following colors are available within the WEBFLEET GUI:</p>  <p>The color codes for these colors are:</p> <pre>990000, CC0000, FF0000, FF6666, FF9999, FFCC- CC, DD6633, FF6600, FF9900, FFCC00, FFFF00, FFFF99, 006600, 009900, 00CC00, 00FF00, 99FF66, CCFF99, 006666, 009988, 00AA99, 00CCAA, 00DDCC, 00FFEE, 0000CC, 0033FF, 3366FF, 3399FF, 66CCFF, 99DDFF, 660066, 990099, CC00CC, FF00FF, FF99FF, FFC- CFF</pre> |

## getAreaPoints

### Description

This action returns a list of coordinates describing the geometric form and location of an area. `getAreaPoints` 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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `getAreasPoints`:

| Parameter | Type        | Description  |
|-----------|-------------|--|
| areano    | string (50) | Identification number of an area.<br>Unique within an account, case-sensitive.<br><br><b>Note:</b> Specify either <code>areano</code> or <code>areaid</code> ; do not use both parameters in combination.                      |
| areaid    | string (30) | A unique, unchangeable identifier for the area, automatically generated by WEBFLEET.<br><br><b>Note:</b> Specify either <code>areano</code> or <code>areaid</code> ; do not use both parameters in combination.                |
| active    | boolean     | Indicator for whether an area is enabled.<br>Valid values: <ul style="list-style-type: none"><li>• 0 - area disabled</li><li>• 1 - area enabled</li></ul> Omit parameter to retrieve all areas.<br>This parameter is optional. |

## Result

Result for `getAreasPoints`

| Parameter | Type        | Description  |
|-----------|-------------|--|
| areano    | string (50) | Identification number of an area. Unique within an account, case-sensitive.          |
| areaid    | 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.<br>Geographic latitude in the <a href="#">WGS84</a> coordinate system.<br>Unit of measurement is micro degrees ( $10^{-6}$ grd).<br>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.<br>See <a href="#">Geographic coordinate conversion on Wikipedia</a> . |
| longitude | int  | See description for <code>latitude</code> 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 `areaService#getAreaAssignments`

Request limits 10 requests / minute

### Parameters

`getAreaAssignments` requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `getAreaAssignments`:

| Parameter | Type        | Description  |
|-----------|-------------|--|
| areano    | string (50) | Identification number of an area.<br>Unique within an account, case-sensitive.<br>Indicate either <code>areano</code> or <code>areaid</code> ; do not use both parameters in combination.                                |
| areaid    | string (30) | A unique, unchangeable identifier for the area, automatically generated by WEBFLEET.<br>Indicate either <code>areano</code> or <code>areaid</code> ; do not use both parameters in combination.                          |
| objectno  | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>This parameter is optional. Indicate either <code>objectno</code> or <code>objectid</code> ; do not use both parameters in combination. |

| Parameter       | Type        | Description  |
|-----------------|-------------|--|
| objectuid       | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>This parameter is optional. Indicate either <code>objectno</code> or <code>objectuid</code> ; do not use both parameters in combination. |
| objectgroupname | string (50) | A name of an object group.<br>This parameter is optional.  |

## Result

Result for `getAreaAssignments`:

| Parameter       | Type        | Description   |
|-----------------|-------------|---|
| areano          | string (50) | Identification number of an area.<br>Unique within an account, case-sensitive.  |
| areaid          | 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.<br>Unique within an account, case-sensitive.<br>Value is set if the area is assigned to this vehicle, <code>objectgroupname</code> is empty in this case.        |
| objectuid       | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Value is set if the area is assigned to this vehicle, <code>objectgroupname</code> is empty in this case. |
| objectgroupname | string (50) | A name of an object group.<br>Value is set if the area is assigned to this group. <code>objectno</code> and <code>objectuid</code> 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 | areaService#insertAreaAssignment |
| Request limits                        | 10 requests / minute             |

## Parameters

**insertAreaAssignment** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to insertAreaAssignment:

| Parameter       | Type        | Description  |
|-----------------|-------------|--|
| areano          | string (50) | Identification number of an area.<br>Unique within an account, case-sensitive.<br>This parameter is optional.<br><br><b>Note:</b> Indicate either <code>areano</code> or <code>areaid</code> ; do not use both parameters in combination.                                    |
| areaid          | string (30) | A unique, unchangeable identifier for the area, automatically generated by WEBFLEET.<br>This parameter is optional.<br><br><b>Note:</b> Indicate either <code>areano</code> or <code>areaid</code> ; do not use both parameters in combination.                              |
| objectno        | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.<br><br><b>Note:</b> It is required to indicate either <code>objectno</code> , <code>objectuid</code> , or <code>objectgroupname</code> ; do not combine two or all of these parameters.        |
| objectuid       | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br><br><b>Note:</b> It is required to indicate either <code>objectno</code> , <code>objectuid</code> , or <code>objectgroupname</code> ; do not combine two or all of these parameters. |
| objectgroupname | string (50) | A name of an object group.<br><br><b>Note:</b> It is required to indicate either <code>objectno</code> , <code>objectuid</code> , or <code>objectgroupname</code> ; 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 `areaService#deleteAreaAssignment`

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

## Parameters

**deleteAreaAssignment** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to deleteAreaAssignment:

| Parameter     | Type        | Description   |
|---------------|-------------|---|
| areano        | string (50) | Identification number of an area.<br>Unique within an account, case-sensitive.<br><br><b>Note:</b> Indicate either <code>areano</code> or <code>areaid</code> ; do not use both parameters in combination.  |
| areaid        | string (30) | A unique, unchangeable identifier for the area, automatically generated by WEBFLEET.<br><br><b>Note:</b> Indicate either <code>areano</code> or <code>areaid</code> ; do not use both parameters in combination.  |
| assignmentuid | string (30) | A unique, unchangeable identifier for the assignment, automatically generated by WEBFLEET.<br>Repeat this parameter for each assignment that shall be deleted.<br>Use HTTP-POST if the generated request URL is longer than 2000 characters.<br>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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to getAreaSchedules:

| Parameter  | Type        | Description  |
|--|-------------|--|
| areano   | string (50) | Identification number of an area.<br>Unique within an account, case-sensitive.       |
| <b>Note:</b> Indicate either <code>areano</code> or <code>areaid</code> ; do not use both parameters in combination. |             |  |
| areaid   | string (30) | A unique, unchangeable identifier for the area, automatically generated by WEBFLEET. |
| <b>Note:</b> Indicate either <code>areano</code> or <code>areaid</code> ; do not use both parameters in combination. |             |  |

## Result

Result for getAreaSchedules:

| Parameter   | Type        | Description  |
|-------------|-------------|--|
| areano      | string (50) | Identification number of an area.<br>Unique within an account, case-sensitive.   |
| areaid      | 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.<br>Valid values: <ul style="list-style-type: none"> <li>• 0 - area disabled</li> <li>• 1 - area enabled</li> </ul> |
| tue         | boolean     | See <code>mon</code> .   |
| wed         | boolean     | See <code>mon</code> .   |
| thu         | boolean     | See <code>mon</code> .   |
| fri         | boolean     | See <code>mon</code> .   |
| sat         | boolean     | See <code>mon</code> .   |
| sun         | boolean     | See <code>mon</code> .   |

| Parameter  | Type       | Description  |
|------------|------------|--|
| start_time | string (5) | Time of day, the activation of the area starts on each of the days above.<br>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.<br>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 | Type        | Description  |
|-----------|-------------|--|
| areano    | string (50) | Identification number of an area.<br>Unique within an account, case-sensitive.<br><br><b>Note:</b> Indicate either <code>areano</code> or <code>areaid</code> ; do not use both parameters in combination.       |
| areaid    | string (30) | A unique, unchangeable identifier for the area, automatically generated by WEBFLEET.<br><br><b>Note:</b> Indicate either <code>areano</code> or <code>areaid</code> ; do not use both parameters in combination. |

| Parameter  | Type       | Description  |
|------------|------------|--|
| mon        | boolean    | Indicates if the area is activated on this day.<br>Valid values: <ul style="list-style-type: none"> <li>0 - area disabled</li> <li>1 - area enabled</li> </ul> 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.<br>Format hh:mm, in the local time zone of the user.<br>Default value is 00:00.<br>This parameter is optional.   |
| end_time   | string (5) | Time of day, the activation of the area ends on each of the days above.<br>Format hh:mm, in the local time zone of the user.<br>Default value is 23:59.<br>This parameter is optional.     |

## deleteAreaSchedule

### Description

deleteAreaSchedule 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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to deleteAreaSchedule:



| Parameter   | Type        | Description   |
|-------------|-------------|---|
| areano      | string (50) | <p>Identification number of an area.<br/>Unique within an account, case-sensitive.</p> <p><b>Note:</b> Specify either <code>areano</code> or <code>areaid</code>; do not use both parameters in combination.</p>  |
| areaid      | string (30) | <p>A unique, unchangeable identifier for the area, automatically generated by WEBFLEET.</p> <p><b>Note:</b> Specify either <code>areano</code> or <code>areaid</code>; do not use both parameters in combination.</p>   |
| scheduleuid | string (30) | <p>A unique, unchangeable identifier for the schedule, automatically generated by WEBFLEET.</p> <p>Repeat this parameter for each assignment that shall be deleted. Use HTTP-POST if the generated request URL is longer than 2000 characters.</p> <p>This parameter is required.</p> |

# LINK.connect

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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 third 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.<br>Unique within an account, case-sensitive.<br>This parameter is required.        |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>This parameter is required. |

| Parameter     | Type              | Description  |
|---------------|-------------------|--|
| data          | base64(raw(2560)) | Base64 encoded user payload. the data is not interpreted by WEBFLEET.  |
| deviceid      | string            | Identifier of the aux device.<br>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.<br>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

`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.<br>Unique within an account, case-sensitive.<br>This parameter is optional. |

| Parameter | Type        | Description   |
|-----------|-------------|---|
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>This parameter is optional. |

## Result

Result for getLocalAuxDeviceConfig:

| Parameter      | Type        | Description  |
|----------------|-------------|--|
| objectno       | string (10) | Identifying number of an object.<br>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 / function name `auxDeviceDataService#configureLocalAuxDevice`

Request limits 10 requests / minute

### Parameters

**configureLocalAuxDevice** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to configureLocalAuxDevice:

| Parameter  | Type        | Description  |
|--|-------------|--|
| objectno   | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.  |
| <b>Note:</b> Either <code>objectno</code> or <code>objectuid</code> is required. |             |  |
| objectuid  | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.   |
| <b>Note:</b> Either <code>objectno</code> or <code>objectuid</code> 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.<br>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.<br>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.<br>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.<br>When set to 1 the LINK will add the current odometer value to every opaque payload data message. |

## getRemoteAuxDeviceConfig

### Description

`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 | Type        | Description   |
|-----------|-------------|---|
| objectno  | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Either of <code>objectno</code> or <code>objectuid</code> is mandatory.        |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Either of <code>objectno</code> or <code>objectuid</code> is mandatory. |

## Result

Result for **getRemoteAuxDeviceConfig**:

| Parameter    | Type         | Description  |
|--------------|--------------|--|
| objectno     | string (10)  | Identifying number of an object.<br>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.<br>Every remote device configuration for a LINK must have a unique identifier.   |
| deviceid     | string       | Identifier of the remote aux device.<br>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. |
| friendlyname | string (248) | A name for the remote device that is easier to read for humans.<br>Maximum length is 248 bytes UTF-8.  |
| 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 (1..30).   |
| pin          | string(16)   | Bluetooth PIN to be used for pairing.<br>When set to an empty value, no PIN will be used. Maximum length is 16 bytes UTF-8.  |
| sppbufferize | int          | SPP buffer threshold of the LINK for conversion of SPP data streams (from aux device to LINK) to opaque payload messages.<br>Maximum 1024 Byte.  |

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

`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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `configureRemoteAuxDevice`:

| Parameter | Type        | Description   |
|-----------|-------------|---|
| objectno  | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.<br><br><b>Note:</b> Either <code>objectno</code> or <code>objectuid</code> is required.   |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br><br><b>Note:</b> Either <code>objectno</code> or <code>objectuid</code> is required.  |
| configid  | int         | Identifies the remote aux device configuration. Every remote device configuration for a LINK must have a unique identifier.<br>The maximum allowed number of remote device configurations per LINK is 5.<br>Valid values: 0 ... 4 |

| Parameter   | Type         | Description  |
|---|--------------|--|
| 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 |
| <b>Note:</b> Either deviceid or friendlyname is required. |              |  |
| friendlyname  | string (248) | Remote device Friendly name.<br>Maximum length is 248 bytes UTF-8.   |
| <b>Note:</b> 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 (1..30).   |
| pin   | string(16)   | Bluetooth PIN to be used for pairing.<br>When set to an empty value, no PIN will be used.<br>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.<br>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.<br>Maximum 5000 ms.   |

## removeRemoteAuxDeviceConfig

### Description

removeRemoteAuxDeviceConfig removes a remote aux device configuration.

### Technical details

SOAP endpoint address / function name auxDataService#removeRemoteAuxDeviceConfig

Request limits 10 requests / minute

### Parameters

removeRemoteAuxDeviceConfig requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to removeRemoteAuxDeviceConfig:



| Parameter | Type        | Description   |
|-----------|-------------|---|
| objectno  | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Either of <code>objectno</code> or <code>objectuid</code> is mandatory.  |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Either of <code>objectno</code> or <code>objectuid</code> is mandatory.   |
| configid  | int         | Identifies the remote aux device configuration.<br>Every remote device configuration for a LINK must have a unique identifier. The maximum allowed number of remote device configurations per LINK is 5.<br>Valid values: 0 ... 4.<br>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 / function name `auxDeviceDataService#clearAuxDeviceDataQueue`

Request limits 10 requests / minute

### Parameters

**clearAuxDeviceDataQueue** requires the following common parameters:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `clearAuxDeviceDataQueue`:

| Parameter   | Type        | Description   |
|---|-------------|---|
| objectno  | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive. |
| <b>Note:</b> Either <code>objectno</code> or <code>objectuid</code> is mandatory. |             |   |

| Parameter   | Type        | Description  |
|---|-------------|--|
| objectuid   | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.   |
| <b>Note:</b> Either <code>objectno</code> or <code>objectuid</code> is mandatory. |             |  |
| deviceid  | string      | Identifier of the remote aux device.<br>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<br>This parameter is optional. |

## resetAuxDeviceData

### Description

If the LINK does not respond to outgoing aux device data sent with [sendAuxDeviceData](#) 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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to `resetAuxDeviceData`:

| Parameter   | Type        | Description  |
|---|-------------|--|
| objectno  | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.        |
| <b>Note:</b> Either <code>objectno</code> or <code>objectuid</code> is mandatory. |             |  |
| objectuid   | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated. |
| <b>Note:</b> Either <code>objectno</code> or <code>objectuid</code> is mandatory. |             |  |

# Plugins

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## 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 | Type        | Description  |
|-----------|-------------|--|
| objectno  | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to <code>objectuid</code> .       |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to <code>objectno</code> . |
| data      | string      | JSON containing the event payload.<br>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:

- [Authentication parameters](#)
- [General parameters](#)

Parameters specific to setExternalObjectData:

| Parameter | Type        | Description  |
|-----------|-------------|--|
| objectno  | string (10) | Identifying number of an object.<br>Unique within an account, case-sensitive.<br>Can be used alternatively to objectuid.       |
| objectuid | string (30) | A unique, unchangeable identifier for the indicated object, automatically generated.<br>Can be used alternatively to objectno. |
| data      | string      | JSON containing the event payload.<br>The content is validated against the JSON schema.  |

# **Appendix A Operation response codes**

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# 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 occurred.<br>No detailed information 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 <code>action</code> 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.                   |
| 1106          | Authentication failed. check account/username/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.                                  |   |

| Response code | Message  | Description  |
|---------------|--|--|
| 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 anymore.                           |  |
| 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.                |  |
| 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.  |

| Response code | Message  | Description  |
|---------------|--|--|
| 2112          | Specify either objectno or objec-<br>tuid, not both.                                     |  |
| 2210          | Contract not valid   | The contract for the object used in the request is not<br>valid (e.g. has expired).  |
| 2307          | The referenced event forward-<br>ing configuration does not exist<br>within the account. |  |
| 2308          | The event forward configuration<br>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<br>an invalid format.                                    | Invalid arrival time format.   |
| 2505          | Invalid duration format  | The duration format is invalid.  |
| 2506          | Please enter the coordinates of<br>the order destination.                                | Missing order destination coordinates.   |
| 2507          | The entered order destination<br>coordinates have an invalid for-<br>mat.                | Invalid format of order destination coordinates.   |
| 2508          | Invalid format order number  | The order number format is invalid.  |
| 2509          | The provided order number<br>doesn't exist.  |  |
| 2510          | Order was already sent.  |  |
| 2511          | Missing object number.   |  |
| 2512          | Invalid street address.  |  |
| 2513          | The entered telephone number<br>has an invalid format.                                   |  |
| 2514          | Incomplete destination descrip-<br>tion.   |  |
| 2515          | Duplicate Order number.  | Use <a href="#">sendDestinationOrderExtern</a> or <a href="#">updateOrderEx-<br/>tern</a> if you need to modify an existing order. |
| 2516          | The selected order number is in-<br>valid or not unique.                                 |  |
| 2517          | Updating the order type of an al-<br>ready existing order is not sup-<br>ported.         |  |



| Response code | Message   | Description   |
|---------------|---|---|
| 2600          | Maximum message text length (UTF-8 format) exceeded |   |
| 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 parameter.                         |   |
| 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.              |   |
| 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.          |   |

| Response code | Message  | Description  |
|---------------|--|--|
| 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.  |  |
| 32007         | The total size of all translation 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 missing 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 week-day 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 areauuid to identify the area.                     |             |
| 6222          | Area not found.   |             |
| 6223          | area type parameter missing 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 objectgroupname.                      |             |
| 6230          | scheduleuid parameter missing or invalid.                                   |             |
| 6231          | End time must be greater than start time.                                   |             |
| 6232          | Area assignment already exists.   |             |
| 6233          | Specify either areano or areauuid, not both.                                |             |
| 6234          | area assignment does not exist.   |             |

| Response code | Message   | Description   |
|---------------|---|---|
| 6235          | Area schedule does not exist.   |   |
| 6236          | Maximum 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 $n$ requests in $t$ seconds are not permitted  | Your request exceeds the quota defined for that request type or that request group.<br>See <a href="#">Request limits</a> .   |
| 8014          | External requests are not allowed for that account/user. Either the account has to be activated for external request or the user has no permission. | See <a href="#">Access to WEBFLEET.connect with API Key</a> .   |
| 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.<br><br>The recommended timeout for requests is 300 seconds.<br><br>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.connect action could not be processed.   |   |
| 9001          | invalid parameter (range_pattern)   | The <code>range_pattern</code> is invalid for this operation, please see the operation's documentation for the allowed range.   |
| 9002          | missing parameter (range_pattern)   | The <code>range_pattern</code> is missing for this operation, please see the operation's documentation for the allowed range.   |
| 9003          | missing parameter (objectno)  |   |
| 9004          | invalid parameters (rangefrom_string, rangeto_string)   | The time period given by <code>rangefrom_string</code> and <code>rangeto_string</code> exceeds the allowed time range for this operation and parameter combination, please see the documentation for the allowed range.   |

| Response code | Message  | Description  |
|---------------|--|--|
| 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 <a href="#">Date range filter parameters</a> ) |
| 9007          | invalid parameter (range-from_string)  | The use of range_pattern requires values for rangefrom_string and rangeto_string.                                      |
| 9008          | invalid parameter (range-to_string)  | The use of range_pattern requires values for rangefrom_string and rangeto_string.                                      |
| 9009          | invalid parameters (range-from_string must be a date before rangeto_string)  |  |
| 9010          | 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) |  |
| 9011          | invalid ordertype (must be 1 2 3)  |  |
| 9012          | missing parameter(s) (orderid, objectid)   |  |
| 9013          | wrong state, order not re-assignable   |  |
| 9014          | no valid contract for object   |  |
| 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 missing or invalid  |  |
| 9023          | driver pin must be not empty and must be a number  |  |

| Response code | Message   | Description   |
|---------------|---|---|
| 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   |   |
| 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 |   |

| Response code | Message   | Description   |
|---------------|---|---|
| 9052          | Driver is not assigned to the specific vehicle.               |   |
| 9053          | Manual driver detach not possible for non-manual assignments. |   |
| 9054          | Conflicting driver parameters (driverno vs. drivergroupname)  |   |
| 9056          | Specify either driverGroupName or driverGroupUid, not both    |   |
| 9058          | Remaining driving time feature not enabled for driver's unit. | Also occurs if the driver is not attached to any unit.  |
| 9060          | event does not exist  |   |
| 9061          | event is not on alarm level                                   | Use <a href="#">resolveEventExtern</a> to flag this event as resolved.  |
| 9062          | event is not below alarm level                                | Use <a href="#">acknowledgeEventExtern</a> to flag this event as acknowledged before resolving it.                                |
| 9063          | eventid invalid   |   |
| 9064          | event already resolved  |   |
| 9065          | event already acknowledged                                    |   |
| 9066          | event level unknown   | The event level parameter <code>eventlevel_cur</code> provided is not within the defined range.                                   |
| 9067          | event state unknown   | One of the event state parameters ( <code>resolved</code> , <code>acknowledged</code> ) 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 other unit already                    |   |
| 9083          | orderid parameter missing or invalid                          |   |
| 9100          | object does not exist   |   |

| Response code | Message  | Description  |
|---------------|--|--|
| 9101          | objectno parameter missing or invalid                                  |  |
| 9102          | Invalid object group name  |  |
| 9104          | date-range is unparsable   |  |
| 9107          | licence plate number parameter invalid                                 |  |
| 9114          | This operation is presently not supported.                             |  |
| 9122          | Object group name is missing or invalid.                               |  |
| 9123          | 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.   |  |
| 9125          | Object group name is missing or invalid or not unique.                 |  |
| 9126          | Object no is missing or invalid or not unique.                         |  |
| 9127          | Object group already exists.   |  |
| 9130          | Odometer parameter invalid.  |  |
| 9131          | Conflicting object parameters (objectno/objectuid vs. objectgroupname) |  |
| 9135          | manufactureyear parameter invalid                                      | This message is returned if the indicated year is not an 4 digit integer value.  |
| 9150          | This action is not applicable with an order in this state.             |  |
| 9152          | Output status invalid.   |  |
| 9155          | Message category invalid.  |  |
| 9160          | The geo position (lat/long) is invalid.                                |  |
| 9161          | Address geo position is invalid.                                       | The geo-position of the address is invalid.  |
| 9162          | The parameter for modified since time is invalid.                      |  |
| 9170          | The email format is invalid.   |  |



| Response code | Message  | Description   |
|---------------|--|---|
| 9171          | Maximum data amount for an email is exceeded.  |   |
| 9172          | Filter parameter invalid.  |   |
| 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 missing or invalid.  |   |
| 9182          | Report does not exist.   |   |
| 9184          | Invalid parameter (referenceno).   |   |
| 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.  |   |
| 9200          | Maximum period length exceeded (range_pattern)   |   |
| 9300          | Date invalid, since it lies in the future or >90 days in past.   |   |

| Response code | Message   | Description  |
|---------------|---|--|
| 9301          | Invalid day.  |  |
| 9302          | non-numeric value   |  |
| 9303          | value out of range  | This error code is returned for SOAP errors.<br>See also <a href="#">Operation response codes for queues</a> |
| 9304          | no duplicates allowed.  |  |
| 9305          | geofence-area-id duplicate entry.                             |  |
| 9306          | unknown entry.  |  |
| 9310          | invalid geographical coordinate,<br>see WGS84 standards       |  |
| 9311          | invalid or unknown geofence-as-<br>signment-id                |  |
| 9312          | invalid or unknown ge-<br>ofence-area-id                      |  |
| 9501          | Address street number parame-<br>ter invalid.                 |  |
| 9504          | Message: address country code<br>parameter invalid or missing |  |
| 9514          | Unable to calculate an appropri-<br>ate route.                |  |
| 9517          | empty geocoding result  |  |
| 9538          | Address not valid   |  |
| 9543          | name1 parameter invalid                                       |  |
| 9544          | name2 parameter invalid                                       |  |
| 9545          | name3 parameter invalid                                       |  |
| 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                                  |  |

| Response code | Message  | Description  |
|---------------|--|--|
| 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>).  | 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 userid, not both.   |  |
| 20010         | Specify either username or userid to identify the user.                                    |  |
| 20101         | Object no, object group name, driver no or driver group name missing or invalid.           |  |
| 20100         | driverno or objectno or both are missing or invalid  |  |
| 21007         | UID invalid  |  |
| 22015         | Logbook flag is invalid  |  |
| 22016         | Logbook purpose is invalid   |  |

| Response code | Message   | Description |
|---------------|---|-------------|
| 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   |             |
| 25001         | The allowed monthly quota has been exceeded                           |             |
| 26001         | Schedule does not exist   |             |
| 26002         | Schedule type parameter missing or invalid                            |             |
| 26003         | Rule type parameter missing or invalid                                |             |
| 26007         | Resolution status parameter invalid                                   |             |
| 26009         | Schedule name parameter missing or invalid                            |             |
| 26010         | Schedule description parameter invalid                                |             |
| 26013         | Reminding time parameter missing or invalid                           |             |
| 26014         | Reminding odometer parameter missing or invalid                       |             |
| 26015         | Interval odometer parameter missing or invalid                        |             |

| Response code | Message  | Description |
|---------------|--|-------------|
| 26016         | Interval time parameter missing or invalid   |             |
| 26018         | Next execution odometer parameter missing or invalid   |             |
| 26019         | Task does not exist  |             |
| 27001         | Cannot decode binary message data.   |             |
| 27002         | Sending of binary message data not enabled for this unit.  |             |
| 27003         | Binary message data missing.   |             |
| 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 message data transfer is already in progress.   |             |
| 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.  |             |

| Response code | Message  | Description |
|---------------|--|-------------|
| 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                      |             |
| 29000         | Unable to retrieve unit configuration                            |             |
| 29001         | No dedicated status message available                            |             |
| 29002         | Object is already synchronized with account defaults             |             |
| 29003         | Message text parameter is too long                               |             |
| 29004         | Message parameter is missing                                     |             |
| 29005         | Message in message parameter 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}   |  |
| WFCQ_E0006       | skipped creation of queue, exists already  | Returned by <a href="#">createQueueExtern</a> 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. |
| WFCQ_E0007       | queue to acknowledge doesn't exist   | The operation <a href="#">ackQueueMessagesExtern</a> 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 <a href="#">createQueueExtern</a> 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 subscription(s) found  |  |
| WFCQ_E0035       | authentication failed  | The username does not exist or the password does not validate.   |
| WFCQ_E0037       | queue doesn't exist, skipping deletion   | A queue that has not been created ( <a href="#">createQueueExtern</a> ) first cannot be deleted.   |
| WFCQ_E0041       | account unknown  | The account name does not exist.   |
| WFCQ_E0043       | shutdown was already initiated, no more calls allowed  |  |
| WFCQ_E0053       | error due to being finally unable to resolve a deadlock while processing tx  |  |
| WFCQCS_E0000     | "action" unknown   | The operation named in the action is not available.  |
| WFCQCS_E0001     | one or more of "action parameter missing", "account parameter missing", "username parameter missing", "password parameter missing", "msgclass parameter missing" |  |
| WFCQCS_E0003     | empty result   |  |
| WFCQCSWS_UNKNOWN | problems processing your request, please try again later   | There are (likely transient) problems, that prevent the operation from completing successfully.  |

# **Appendix B: Resources**

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# WEBFLEET.connect resources

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- WEBFLEET.connect [developer resources](#)  
Download the latest documentation, libraries, examples and localised activation forms.
- WEBFLEET.connect [API-key request](#)  
Request an API key to gain access to WEBFLEET APIs.
- WEBFLEET.connect [discussion group](#)  
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

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- [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

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Table: Superseded functionality

| Affected functionality   | Announcement date<br>End of Life date | Alternatives   |
|--------------------------|---------------------------------------|--|
| SOAP version 1.9         | 2012-08-06<br>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.<br>Please stop new integrations on this version. |
| SOAP version 1.8         | 2012-04-20<br>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.<br>Please stop new integrations on this version. |
| SOAP version 1.6 and 1.7 | 2012-04-20<br>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.<br>Please stop new integrations on this version. |

| Affected functionality                         | Announcement date<br>End of Life date | Alternatives   |
|--|---------------------------------------|--|
| showLogbookReportExtern                        | 2011-11-09<br>2013-11-09              | <a href="#">showLogbook</a> - Requests to showLogbookReportExtern will be forwarded to showLogbook as of announcement date.  |
| SOAP version 1.5                               | 2011-08-23<br>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.<br>Please stop new integrations on this version.   |
| SOAP version 1.4                               | 2011-08-23<br>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.<br>Please stop new integrations on this version.   |
| SOAP version 1.1 and 1.2                       | 2011-05-30<br>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.<br>Please stop new integrations on these versions.  |
| SOAP versions 1.0 and 1.3                      | 2011-05-30<br>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.<br>Please stop new integrations on these versions.  |
| showObjectGroupReportExtern                    | 2011-05-30<br>2013-05-30              | <a href="#">showObjectGroups</a> , requests to showObjectGroupReportExtern will be forwarded to showObjectGroups as of 2011-05-30.   |
| showObjectGroupObjectReportExtern              | 2011-05-30<br>2013-05-30              | <a href="#">showObjectGroupObjects</a> , requests to showObjectGroupObjectReportExtern will be forwarded to showObjectGroupObjects as of 2011-05-30.   |
| showObjectAccelerationEvents                   | 2011-05-30<br>2014-05-30              | <a href="#">showAccelerationEvents</a> , requests to showObjectAccelerationEvents will be forwarded to showAccelerationEvents as of 2014-05-30.  |
| showObjectSpeedingEvents                       | 2011-05-30<br>2014-05-30              | <a href="#">showSpeedingEvents</a> , requests to showObjectSpeedingEvents will be forwarded to showSpeedingEvents as of 2014-05-30.  |
| geocodeAddressExtern<br>geocodeLocation (SOAP) | 2010-12-15<br>2012-12-15              | <a href="#">geocodeAddress</a> , 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.<br>The corresponding SOAP function geocodeLocation will expire accordingly. |

| Affected functionality   | Announcement date<br>End of Life date | Alternatives  |
|--|---------------------------------------|---|
| Endpoint URLs:<br>http(s)://connect.webfleet.tomtom-work.com<br>https://soap.connect.webfleet.tomtomwork.com | 2010-09-30<br>2013-06-30              | Announced with rebranding of TomTom WORK to TomTom Telematics.<br>Alternatives, see <a href="#">Making HTTP requests</a> , <a href="#">Making SOAP requests</a> |
| showTrailerReportExtern  | 2010-09-02<br>2011-09-02              | No alternative, support for object category trailer was stopped several years ago   |
| showPersonReportExtern   | 2010-09-02<br>2011-09-02              | no alternative, support for tracking and locating people was stopped several years ago  |
| showStoplistReportExtern   | 2010-06-17<br>2011-06-17              | <a href="#">showStandStills</a> , inverted <a href="#">showTripReportExtern</a>   |
| showWorkingTimeDriverReportExtern  | 2010-02-18<br>2012-02-18              | <a href="#">showWorkingTimes</a>  |
| showWorkingTimeObjectReportExtern  | 2010-02-18<br>2012-02-18              | <a href="#">showWorkingTimes</a>  |
| showUsageTimeDriverReportExtern  | 2010-02-18<br>2012-02-18              | No direct alternative. Please contact customer support to discuss your use case to define alternative approaches.   |
| showUsageTimeObjectReportExtern  | 2010-02-18<br>2012-02-18              | No direct alternative. Please contact customer support to discuss your use case to define alternative approaches.   |
| showOrderMessageReportExtern   | 2010-01-06<br>2013-01-06              | Make use of the <a href="#">Message queues</a> system.  |

# **Appendix D: Solving known issues**

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# Using WEBFLEET.connect SOAP with Visual Basic

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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

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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 `maxReceivedMessageSize` 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

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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

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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
@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 `DataHandler` 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

| CAN signal types                      | Description   |
|---------------------------------------|---|
| WARNING_BULB_DEFECT_GROUP_D           | (On/Off)  |
| SWITCHEDPOWERSUPPLY                   | (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 vehicles) (On/Off)     |
| SYN_WARNING_BRAKE_FLUID_LEVEL_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_PARTICULATE_FILTER | Defect Diesel Particulate Filter (DPF) (debounced)          |
| SYN_MIL_ELECTRONIC_POWER_CONTROL      | Defect Electronic Power Control (debounced)                 |
| SYN_MIL_ELECTRONIC_STABILITY_PROGRAM  | Defect Electronic Stability Program (debounced)             |

| CAN signal types                | Description  |
|---------------------------------|--|
| 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)                        |
| RPM                             | Engine speed (RPM)   |
| 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           | On = locked (On/Off)                                       |
| DOOR_LOCKED_REAR_RIGHT          | On = locked (On/Off)                                       |
| TRUNK_LOCKED                    | On = locked (On/Off)                                       |
| DOOR_LOCKED_FRONT_LEFT          | On = locked (On/Off)                                       |
| DOOR_LOCKED_FRONT_RIGHT         | On = locked (On/Off)                                       |
| WARNING_BULB_DEFECTIVE          | One of the lighting bulbs is defective (On/Off)            |
| PARKING_BRAKE                   | Parking brake is applied (On/Off)                          |
| SYN_SWITCHED_POWER              | Powersupply is active (On/Off) (derived)                   |
| MIL_EMISSION_CONTROL_SYSTEM     | Problem with the emission control system (On/Off)          |

| CAN signal types                          | Description   |
|---|---|
| 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_LEVEL_LOW | The 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)               |
| 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) |



| <b>CAN signal types</b>       | <b>Description</b>   |
|-------------------------------|--|
| 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)                                |

# Revision history

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## WEBFLEET.connect

Webfleet Solutions, WEBFLEET.connect 1.53.0

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## Revision history

| Revision | Date       | Description   | Author |
|----------|------------|---|--------|
| 1.0.0    | 2004-10-08 | Initial release   | UM     |
| 1.1.2    | 2005-08-22 | Added <a href="#">showTripReportExtern</a> and added the field fuel_usage to <a href="#">showTripSummaryReportExtern</a> output | CS     |
| 1.1.3    | 2005-09-29 | Added sendDestinationOrderExtern  | IM     |
| 1.1.4    | 2005-09-30 | Added methods to deal with addresses ( <a href="#">Addresses</a> )  | ML     |
| 1.1.5    | 2005-09-30 | Added parameter addrgrpname to <a href="#">insertAddressExtern</a> , added <a href="#">updateAddressExtern</a> .                | ML     |
| 1.1.6    | 2006-04-05 | Editorial changes.  | IM     |
| 1.1.7    | 2006-04-07 | Initial release after conversion to DocBook.  | IM     |

| Revision | Date       | Description  | Author |
|----------|------------|--|--------|
| 1.1.8    | 2006-06-29 | Extended parameter set for <a href="#">sendDestinationOrderExtern</a> - added support for GO x10.  | IM     |
| 1.1.9    | 2006-08-22 | Changed the size of the order text parameter for <a href="#">sendDestinationOrderExtern</a> , Renamed parameter from radium to radius for <a href="#">insertAddressExtern</a> (documentation fix)  | IM     |
| 1.2.0    | 2006-11-07 | Added methods for order management: <a href="#">insertDestinationOrderExtern</a> , <a href="#">updateOrderExtern</a> , <a href="#">updateDestinationOrderExtern</a> and <a href="#">cancelOrderExtern</a> . Added some notes regarding performance impacts to <a href="#">showMessageReportExtern</a> .  | 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 <a href="#">insertAddressExtern</a> and <a href="#">updateAddressExtern</a> .   | IM     |
| 1.2.2    | 2006-12-08 | Added value documentation for tripmode for <a href="#">showTripReportExtern</a> . Added value documentation for status, msgstatus and msgtype for <a href="#">showMessageReportExtern</a> .  | IM     |
| 1.2.3    | 2007-01-23 | Minor editorial changes.   | IM     |
| 1.3.1    | 2007-05-07 | Extensions to <a href="#">showObjectReportExtern</a> , now returns most recent position data in addition to object details. Added <a href="#">geocodeAddress</a> for 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 <a href="#">showMessageReportExtern</a> . 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 rangeto_string. Changed the result column name for <a href="#">showOrderReportExtern</a> from orderno to orderid. Added some more explanations on how to make HTTP requests.   | IM     |
| 1.3.4    | 2007-10-10 | Added <a href="#">showOrderMessageReportExtern</a> . Removed user-state from the result set documentation for <a href="#">showMessageReportExtern</a> (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 <a href="#">reassignOrderExtern</a>  | IM     |
| 1.3.6    | 2008-01-24 | New request limits ( <a href="#">Request limits</a> ) based on functional groups. Updated documentation for <a href="#">showMessageReportExtern</a> with new explanations for msgid-based replication and parameter limits.  | IM     |
| 1.3.7    | 2008-05-08 | Updated documentation for <a href="#">showTripReportExtern</a> with new explanations for tripid-based replication and interpretation of date range filters.  | IM     |

| Revision | Date       | Description  | Author |
|----------|------------|--|--------|
| 1.3.8    | 2008-07-29 | Updated documentation for <a href="#">insertAddressExtern</a> and <a href="#">updateAddressExtern</a> - added description for the parameter visible. Updated documentation for objectno/objectid and order-no/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 ( <a href="#">General parameters</a> ).   | IM     |
| 1.4.0    | 2008-10-28 | Added new details to <a href="#">showObjectReportExtern</a> 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 ( <a href="#">Overview of queues</a> ). 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 <a href="#">insertAddressExtern</a> , <a href="#">updateAddressExtern</a> and <a href="#">showAddressReportExtern</a> . Extended the filter parameter set for <a href="#">showEventReportExtern</a> and added methods to flag events as acknowledged and as resolved. Added a set of methods for driver management, see <a href="#">Orders</a> . Updated result columns for the object a driver is currently signed onto to <a href="#">showDriverReportExtern</a> .  | IM     |
| 1.5.1    | 2009-06-18 | Added support for address regions to <a href="#">insertAddressExtern</a> , <a href="#">updateAddressExtern</a> and <a href="#">showAddressReportExtern</a> . Added examples to <a href="#">sendDestinationOrderExtern</a> and <a href="#">showOrderReportExtern</a> .  | IM     |
| 1.5.2    | 2009-07-02 | Added <a href="#">deleteOrderExtern</a> .  | IM     |
| 1.6.0    | 2010-01-06 | Minor editorial changes. Added new groups to request limits for driver and event methods. Added section <a href="#">Making SOAP requests</a> . Added documentation for parameter restrictions on <a href="#">showTripReportExtern</a> . Added support for the digital tachograph to <a href="#">showObjectReportExtern</a> , <a href="#">popQueueMessagesExtern</a> 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: <a href="#">clearOrdersExtern</a> , <a href="#">clearTextMessagesExtern</a> . Replaced working and usage time reports with <a href="#">showWorkingTimes</a> .   | IM     |
| 1.6.2    | 2010-02-25 | Added a clarification regarding supported date/time formats to <a href="#">showWorkingTimes</a> . Expanded the list of documented error codes in Appendix A, Operation Return Codes.   | IM     |

| Revision | Date       | Description   | Author |
|----------|------------|---|--------|
| 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 <a href="#">Appendix A: Operation response codes</a> . Added new data elements for the TomTom Remote LINK (see <a href="#">Drivers</a> , <a href="#">popQueueMessagesExtern</a> ). Added new method to support inventory of devices: <a href="#">showContracts</a> . Added <a href="#">updateVehicle</a> .  | IM     |
| 1.7.1    | 2010-06-17 | Removed documentation for <code>showOrderMessageReportExtern</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 <code>objectno</code> (10 characters). Added working time information to <a href="#">showDriverReportExtern</a> . Added <code>event_time</code> to <a href="#">popQueueMessagesExtern</a> . Fixed and expanded the <code>source_device</code> enumeration for <code>popQueueMessagesExtern</code> . Added Bluetooth address of a paired Remote LINK device ( <code>rll_btaddress</code> ) to <a href="#">showObjectReportExtern</a> . Clarification on the supported devices for <a href="#">deleteOrderExtern</a> . Removed documentation for <code>showPersonReportExtern</code> and <code>showTrailerReportExtern</code> (their use is still supported but it should not be used in new work anymore).  | IM     |
| 1.7.3    | 2010-12-15 | Removed function <code>geocodeAddressExtern</code> from the Reference document and added <a href="#">geocodeAddress</a> . Added new action <a href="#">calcRouteSimpleExtern</a> . Added new result parameter to <a href="#">showWorkingTimes</a> . Added new section <a href="#">Trips and working times</a> and new actions <a href="#">showSpeedingEvents</a> , <a href="#">showAccelerationEvents</a> , <a href="#">showStandStills</a> , <a href="#">showIdleExceptions</a> . Added new parameters to <a href="#">updateVehicle</a> . Added new JSON objects to <code>surplus_data</code> and new message classes to <a href="#">popQueueMessagesExtern</a> . Added parameters to <a href="#">showTripReportExtern</a> . Added parameters to <a href="#">showTripSummaryReportExtern</a> . Added parameters to <a href="#">showVehicleReportExtern</a> . Corrected parameter name in <a href="#">showDriverReportExtern</a> . Renamed chapters and changed order. Other minor editorial changes. | RH     |
| 1.7.4    | 2011-02-24 | Changed description for <code>avg_accel</code> and description of <a href="#">showAccelerationEvents</a> . Updated result list for <a href="#">showTripSummaryReportExtern</a> . Updated parameters list for <a href="#">updateDestinationOrderExtern</a> . Added advise on the use of HTTP authentication in <a href="#">Making HTTP requests</a> . Edited parameter names for <a href="#">showEventReportExtern</a> . Added new parameters to <a href="#">showTripReportExtern</a> . Added description for <code>pin</code> and code for <a href="#">Drivers</a> commands. Extended list of <a href="#">Messages types</a> for <a href="#">popQueueMessagesExtern</a> . Extended list of <a href="#">Operation response codes</a> . Extended information about case-sensitivity of inbound parameters of multiple commands. Added limits for <a href="#">calcRouteSimpleExtern</a> to Default request limit configuration.  | RH     |

| Revision | Date       | Description   | Author |
|----------|------------|---|--------|
| 1.8.0    | 2011-05-24 | <p>New end point URLs see <a href="#">Making requests to WEBFLEET.connect</a>. Added new authentication parameter <code>apikey</code> to <a href="#">Common parameters</a>. Extended the list values for date range filter parameter <code>range_pattern</code> in <a href="#">Common parameters</a>. Replaced old function <code>showObjectSpeedingEvents</code> with new function <a href="#">showSpeedingEvents</a>. Replaced old function <code>showObjectAccelerationEvents</code> with new function <a href="#">showAccelerationEvents</a>. Added query and result parameters to <a href="#">showIdleExceptions</a>. Added parameter to <a href="#">showOrderReportExtern</a>. Added result parameters to <a href="#">showObjectReportExtern</a>. Added new functions <a href="#">showObjectGroups</a>, <a href="#">showObjectGroupObjects</a>, <a href="#">attachObjectToGroup</a>, <a href="#">detachObjectFromGroup</a>, <a href="#">insertObjectGroup</a>, <a href="#">deleteObjectGroup</a>, <a href="#">updateObjectGroup</a>. Removed old functions <code>showObjectGroupReportExtern</code> and <code>showObjectGroupObjectReportExtern</code>. Added new chapter <a href="#">Configuration and security</a> with new function <a href="#">showSettings</a>. Added new function <a href="#">showOptiDriveIndicator</a>. Extended list of <a href="#">Response codes</a>. Added new results to <a href="#">showVehicleReportExtern</a>. Added list of superseded functionality <a href="#">Appendix C: Superseded functionality</a> indicating the announcement date, the date of end of life and possible alternatives.</p>   | RH     |
| 1.9.0    | 2011-08-23 | <p>New functions <a href="#">attachDriverToGroup</a>, <a href="#">detachDriverFromGroup</a>, <a href="#">deleteDriverGroup</a>, <a href="#">insertDriverGroup</a>, <a href="#">showDriverGroups</a>, <a href="#">showDriverGroupDrivers</a>, <a href="#">updateDriverGroup</a>, <a href="#">showUsers</a> in the newly introduced chapter <a href="#">User management</a>. Removed <code>showLogbookReportExtern</code>. New parameter to filter on entities that are not assigned to certain entity groups for <a href="#">showObjectReportExtern</a>, <a href="#">showDriverReportExtern</a> and <a href="#">showAddressReportExtern</a>. Extended result list for <a href="#">showObjectReportExtern</a> with <code>drivename</code>, <code>codrivename</code> and <code>pos_time</code>. New result <code>objectcount</code> in <a href="#">showObjectGroups</a>. Unformatted latitude/longitude results with <a href="#">showAddressReportExtern</a>. Updated <a href="#">Appendix C: Superseded functionality</a>, please read carefully. Added important notes to <a href="#">Making HTTP requests</a>. Introduced new general parameter <code>columnfilter</code> to be used with all functions, see <a href="#">General parameters</a>. Added technical details, such as SOAP function name and end-point 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 <a href="#">Message queues</a>. Other miscellaneous edits. Added note about how orders appear on the TomTom navigation device to <a href="#">sendOrderExtern</a> and <a href="#">sendDestinationOrderExtern</a>. Added instructions for integrators working with SOAP and Visual Basic with regards to WEBFLEET.connect addresses and MTOM encoding support, see <a href="#">Making SOAP requests</a>. Added error codes to <a href="#">Response codes</a>. Added a new section called <a href="#">Terminology</a> explaining terms used in the context WEBFLEET, WEBFLEET.connect, and WEBFLEET solutions, products, and features. Edits to the list of <a href="#">Messages types</a>. Information about <a href="#">Synchronising driver lists</a>.</p> | RH     |

| Revision | Date       | Description   | Author |
|----------|------------|---|--------|
| 1.10.0   | 2011-11-09 | New functions <a href="#">insertMaintenanceSchedule</a> , <a href="#">updateMaintenanceSchedule</a> , <a href="#">deleteMaintenanceSchedule</a> , <a href="#">showMaintenanceSchedules</a> , <a href="#">showMaintenanceTasks</a> , <a href="#">resolveMaintenanceTask</a> , <a href="#">updateLogbook</a> , <a href="#">showLogbook</a> , <a href="#">showLogbookHistory</a> . Added <code>co2</code> to result list of <a href="#">showTripSummaryReportExtern</a> . <a href="#">showWorkingTimes</a> supports now all time/date values listed in <a href="#">Date range filter parameters</a> . Contact and driver details that relate to an order are included in the result of <a href="#">showOrderReportExtern</a> . Added <code>drivertelmobile</code> and <code>codrivertelmobile</code> to the result list of <a href="#">showObjectReportExtern</a> . Added new parameter <code>addrno</code> to <a href="#">insertDriverExtern</a> , <a href="#">updateDriverExtern</a> and <a href="#">showDriverReportExtern</a> . Added parameters <code>addrno</code> , <code>positiony</code> and <code>positionx</code> to <a href="#">showDriverReportExtern</a> . The working state of a vehicle is indicated even when no driver has signed on using <a href="#">showObjectReportExtern</a> . Added information about input and return date formats to <a href="#">Making HTTP requests</a> , <a href="#">Making SOAP requests</a> and <a href="#">General parameters</a> . Distinction between SOAP and CSV <a href="#">General parameters</a> . <a href="#">Superseded functionality</a> - <code>geocodeLocation</code> will be superseded together with <code>geocodeAddressExtern</code> . <a href="#">Superseded functionality</a> - <code>showLogbookReportExtern</code> will be superseded. Added new error codes to <a href="#">Appendix A: Operation return codes</a> . | RH     |
| 1.10.1   | 2011-11-09 | Adjusted maximum values for parameters <code>intervalodometer</code> , <code>remindingodometer</code> , <code>plannedexecodometer</code> of <a href="#">insertMaintenanceSchedule</a> and <a href="#">updateMaintenanceSchedule</a> . Minor other edits.  | RH     |
| 1.11.0   | 2012-01-30 | Added new functions <a href="#">showAccountOrderStates</a> , <a href="#">updateAccountOrderState</a> , <a href="#">switchOutput</a> , <a href="#">showTracks</a> , <a href="#">attachDriverToVehicle</a> , <a href="#">detachDriverFromVehicle</a> . Added new parameters <code>name2</code> and <code>name3</code> to <a href="#">insertDriverExtern</a> and <a href="#">updateDriverExtern</a> . Added new column <code>manualassignment</code> to result list of <a href="#">showDriverReportExtern</a> . Added new parameter <code>useorderstates</code> that defines the order states that appear in the order workflow per order to <a href="#">sendOrderExtern</a> and <a href="#">sendDestinationOrderExtern</a> . Added two new parameters <code>latitude_mdeg</code> and <code>longitude_mdeg</code> , with unit of measurement in micro degrees, to the result list of <a href="#">showObjectReportExtern</a> and <a href="#">showEventReportExtern</a> . Added <code>useUTF8</code> parameter to <a href="#">General parameters</a> . Added to the list of terms explained in the <a href="#">Terminology</a> chapter the section <a href="#">Vehicle maintenance</a> including the definitions of <a href="#">Maintenance schedule</a> and <a href="#">Maintenance task</a> . Other minor editorial changes.   | RH     |

| Revision | Date       | Description  | Author |
|----------|------------|--|--------|
| 1.12.0   | 2012-04-13 | Added new parameter <code>target_username</code> and result columns to <a href="#">showSettings</a> . Added <a href="#">showAccountOrderAutomations</a> and <a href="#">updateAccountOrderAutomation</a> . Added parameter <code>orderautomations</code> to <a href="#">sendOrderExtern</a> , <a href="#">sendDestinationOrderExtern</a> , <a href="#">assignOrderExtern</a> , <a href="#">reassignOrderExtern</a> , <a href="#">updateOrderExtern</a> , <a href="#">updateDestinationOrderExtern</a> . Added parameter <code>odometer</code> to <a href="#">updateVehicle</a> . Added parameter <code>objectuid</code> to <a href="#">showObjectReportExtern</a> , <a href="#">showVehicleReportExtern</a> , <a href="#">showContracts</a> , <a href="#">updateVehicle</a> , <a href="#">showObjectGroupObjects</a> , <a href="#">attachObjectToGroup</a> , <a href="#">detachObjectFromGroup</a> , <a href="#">switchOutput</a> . Added result <code>objectuid</code> to <a href="#">showObjectReportExtern</a> , <a href="#">showVehicleReportExtern</a> , <a href="#">showContracts</a> , <a href="#">showObjectGroupObjects</a> . Added parameter <code>objectuid</code> to <a href="#">showTracks</a> . <a href="#">geocodeAddress</a> parameter <code>provider</code> 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 <a href="#">Messages types</a> and <a href="#">switchOutput</a> ) and other minor edits.   | RH     |
| 1.12.2   | 15.06.2012 | Introduction of itinerary orders: Added waypoint parameter <code>wp</code> (waypoint) to <a href="#">sendDestinationOrderExtern</a> , <a href="#">updateDestinationOrderExtern</a> , <a href="#">insertDestinationOrderExtern</a> . New action <a href="#">showOrderWaypoints</a> . Edits to list of <a href="#">Messages types</a> and <a href="#">Response codes</a> . <a href="#">Making HTTP requests</a> - added HTTP POST support for a limited number of actions)   | RH     |



| Revision | Date       | Description  | Author |
|----------|------------|--|--------|
| 1.13.0   | 06.08.2012 | <p>Added FMS and acceleration surplus_data to <a href="#">popQueueMessagesExtern</a>. New result order_addrno in <a href="#">popQueueMessagesExtern</a>. <a href="#">showOrderReportExtern</a> - Added destination address details to result list. <a href="#">showNearestVehicles</a> delivers a list of vehicles that are within a defined distance to a specific location. <a href="#">showWakeupTimers</a> delivers a list of days and times when the LINK 3xx/510 is set to automatically wake up. <a href="#">updateWakeupTimers</a> 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 <a href="#">updateVehicle</a> that sets a maximum number of revolutions per minute for the vehicle s engine that is being used for reporting on rpm violations. Added new results vh_rpmlimit and fl_rpmlimit to <a href="#">showVehicleReportExtern</a>. Added new result fuellevel to <a href="#">showObjectReportExtern</a>. <a href="#">showDriverReportExtern</a> - Added new result pin that is used by the driver to logon to the Driver Terminal. <a href="#">updateLogbookMode</a> changes the logbook mode on the LINK 3xx/510 device. Added new parameter acceleration_types to <a href="#">showAccelerationEvents</a>. Added the parameter objectuid as an alternative to objectno to <a href="#">sendOrderExtern</a>, <a href="#">insertDestinationOrderExtern</a>, <a href="#">sendDestinationOrderExtern</a>, <a href="#">assignOrderExtern</a>, <a href="#">reassignOrderExtern</a>, <a href="#">clearOrdersExtern</a>, <a href="#">showOrderReportExtern</a>, <a href="#">attachDriverToVehicle</a>, <a href="#">detachDriverFromVehicle</a>, <a href="#">showTripReportExtern</a>, <a href="#">showTripSummaryReportExtern</a>, <a href="#">showLogbook</a>, <a href="#">showLogbookHistory</a>, <a href="#">showWorkingTimes</a>, <a href="#">showStandStills</a>, <a href="#">showIdleExceptions</a>, <a href="#">sendTextMessageExtern</a>, <a href="#">clearTextMessagesExtern</a>, <a href="#">insertMaintenanceSchedule</a>, <a href="#">showMaintenanceSchedules</a>, <a href="#">showMaintenanceTasks</a>, <a href="#">showIOReportExtern</a>, <a href="#">showAccelerationEvents</a>, <a href="#">showSpeedingEvents</a>, <a href="#">showEventReportExtern</a>. Added new result objectuid to <a href="#">showOrderReportExtern</a>, <a href="#">showDriverReportExtern</a>, <a href="#">showTripReportExtern</a>, <a href="#">showTripSummaryReportExtern</a>, <a href="#">showLogbook</a>, <a href="#">showLogbookHistory</a>, <a href="#">showWorkingTimes</a>, <a href="#">showStandStills</a>, <a href="#">showIdleExceptions</a>, <a href="#">popQueueMessagesExtern</a>, <a href="#">showMaintenanceSchedules</a>, <a href="#">showMaintenanceTasks</a>, <a href="#">showIOReportExtern</a>, <a href="#">showAccelerationEvents</a>, <a href="#">showSpeedingEvents</a>, <a href="#">showEventReportExtern</a>. Added new error codes to <a href="#">Appendix A: Operation return codes</a>.</p> | RH     |

| Revision | Date       | Description  | Author |
|----------|------------|--|--------|
| 1.14.0   | 06.11.2012 | New action <a href="#">getObjectKPIs</a> . New parameter <code>modified_since</code> and new results <code>start_latitude</code> , <code>start_longitude</code> , <code>end_latitude</code> , <code>end_longitude</code> , <code>avg_speed</code> , <code>max_speed</code> , <code>fuel_usage</code> , <code>co2</code> , <code>end_addrname1</code> , <code>end_addrname2</code> , <code>end_addrname3</code> , <code>end_addrcontact</code> for <a href="#">showLogbook</a> . <a href="#">showTracks</a> has the new result parameters <code>odometer</code> , <code>country</code> , <code>state</code> . Added information on limitations to the description of <a href="#">updateLogbookMode</a> . New actions <a href="#">createSession</a> , <a href="#">terminateSession</a> , <a href="#">changePassword</a> . Added new parameter <code>sessiontoken</code> to <a href="#">Authentication parameters</a> . Extended type-list within in the result <code>additional_information</code> of <a href="#">geocodeAddress</a> . <a href="#">showAccelerationEvents</a> has new results <code>duration</code> , <code>severity</code> and <code>roadspeedlimit</code> . <a href="#">showSpeedingEvents</a> has new results <code>duration</code> and <code>distance</code> . For <a href="#">showOrderReportExtern</a> , <a href="#">Date range filter parameters</a> are not required if <code>orderid</code> is indicated. New <a href="#">Date range filter parameters</a> <code>sessiontoken</code> , <code>2020</code> , <code>month</code> , <code>day</code> . Updated <a href="#">Operation response codes</a> . Updated the description of <code>accel_dir</code> in <a href="#">showAccelerationEvents</a> . | RH     |
| 1.15.1   | 13.03.2013 | Added new section <a href="#">LINK.connect</a> . Added new actions <a href="#">sendAuxDeviceData</a> , <a href="#">getLocalAuxDeviceConfig</a> , <a href="#">configureLocalAuxDevice</a> , <a href="#">getRemoteAuxDeviceConfig</a> , <a href="#">configureRemoveAuxDevice</a> , <a href="#">removeRemoteAuxDeviceConfig</a> , <a href="#">clearAuxDeviceDataQueue</a> , <a href="#">resetAuxDeviceData</a> . Added to <a href="#">popQueueMessagesExtern</a> new LINK.connect related message types to <a href="#">Messages types</a> and added new JSON objects. Added new section <a href="#">Reporting</a> . Added new actions <a href="#">getArchivedReportList</a> , <a href="#">getArchivedReport</a> , <a href="#">deleteArchivedReport</a> , <a href="#">getReportList</a> , <a href="#">createReport</a> , <a href="#">sendReportViaMail</a> . Added new section <a href="#">Appendix E: Using MTOM with SOAP</a> . Added new parameter <code>deleteaddresses</code> to <a href="#">deleteAddressGroupExtern</a> , that deletes all addresses assigned to the indicated address group too. The <code>odometer</code> value can now be updated for navigation devices too using <a href="#">updateVehicle</a> . Added new result <code>referenceno</code> to <a href="#">showContracts</a> . Edits to <a href="#">Appendix A: Operation return codes</a> .  | RH     |
| 1.16.0   | 10.04.2013 | Added actions <a href="#">showMessages</a> , <a href="#">getObjectFeatures</a> . Added new property <code>dur</code> to table <a href="#">Parameters specific to acc_events</a> in <a href="#">popQueueMessagesExtern</a> . Updated <a href="#">updateDestinationOrderExtern</a> - <code>ordertext</code> is optional. Introduced new parameter/result <code>driveruid/codriveruid</code> to <a href="#">popQueueMessagesExtern</a> , <a href="#">showObjectReportExtern</a> , <a href="#">showDriverReportExtern</a> , <a href="#">updateDriverExtern</a> , <a href="#">deleteDriverExtern</a> , <a href="#">showOptiDriveIndicator</a> , <a href="#">showDriverGroupDrivers</a> , <a href="#">attachDriverToGroup</a> , <a href="#">detachDriverFromGroup</a> , <a href="#">attachDriverToVehicle</a> , <a href="#">detachDriverFromVehicle</a> , <a href="#">showTripReportExtern</a> , <a href="#">showWorkingTimes</a> , <a href="#">showIdleExceptions</a> , <a href="#">showAccelerationEvents</a> , <a href="#">showSpeedingEvents</a> . Introduced new parameter/result <code>externalid</code> to <a href="#">createSession</a> , <a href="#">showVehicleReportExtern</a> , <a href="#">showObjectReportExtern</a> , <a href="#">showTripReportExtern</a> , <a href="#">showStandStills</a> , <a href="#">showTracks</a> , <a href="#">showAccelerationEvents</a> , <a href="#">showSpeedingEvents</a> , <a href="#">getObjectKPIs</a> . Parameter <code>msgclass</code> has an additional value for LINK.connect messages in the following actions <a href="#">createQueueExtern</a> , <a href="#">deleteQueueExtern</a> , <a href="#">popQueueMessagesExtern</a> , <a href="#">ackQueueMessagesExtern</a> .    | RH     |

| Revision | Date       | Description  | Author |
|----------|------------|--|--------|
| 1.17.0   | 21.08.2013 | Introduced new action <a href="#">updateContractInfo</a> which allows to assign and change an customer specific reference number per object. Introduced new parameter <code>freetext</code> to <a href="#">geocodeAddress</a> . Introduced new parameter <code>ep_btaddress</code> and <code>rll_btaddress</code> to <a href="#">updateVehicle</a> . Introduced new result <code>passwordexpiration</code> for <a href="#">showUsers</a> , <a href="#">createSession</a> . Introduced new result <code>creationtype</code> for <a href="#">showMaintenanceSchedules</a> . Added <code>troublecodes</code> to <code>surplus_data</code> in <a href="#">popQueueMessagesExtern</a> and JSON structure <a href="#">Parameters specific to troublecodes</a> . New <code>msg_type 80000880</code> indicating that the list of current vehicle Diagnostic Trouble Codes has changed. Introduced new result <code>obu_btaddress</code> to <a href="#">showVehicleReportExtern</a> . Introduced <code>driveruid</code> to result list of <a href="#">showOptiDriveIndicator</a> , <a href="#">showDriverGroupDrivers</a> , <a href="#">showTripReportExtern</a> , <a href="#">showLogbook</a> , <a href="#">showWorkingTimes</a> , <a href="#">showIdleExceptions</a> , <a href="#">showAccelerationEvents</a> , <a href="#">showSpeedingEvents</a> , <a href="#">showOrderReportExtern</a> . Added <a href="#">SOAP message size quota in Visual Studio to Appendix D: Solving known issues</a> . | RH     |
| 1.18.0   | 21.08.2013 | Introduced new chapter <a href="#">Areas</a> with the following actions: <a href="#">getAreas</a> , <a href="#">getAreaPoints</a> , <a href="#">deleteArea</a> , <a href="#">insertArea</a> , <a href="#">updateArea</a> , <a href="#">getAreaAssignments</a> , <a href="#">insertAreaAssignment</a> , <a href="#">deleteAreaAssignment</a> , <a href="#">getAreaSchedules</a> , <a href="#">insertAreaSchedule</a> , <a href="#">deleteAreaSchedule</a> .   | RH     |
| 1.19.0   | 15.02.2014 | Introduced new functions <a href="#">insertUser</a> , <a href="#">updateUser</a> , <a href="#">deleteUser</a> , <a href="#">getUserRights</a> , <a href="#">setUserRight</a> , <a href="#">removeUserRight</a> , <a href="#">getStatusMessages</a> , <a href="#">setVehicleConfig</a> , <a href="#">getAccountStatusMessages</a> . Added new result <code>userid</code> to <a href="#">showUsers</a> . Added new parameters <code>drivergroupname</code> and <code>objectgroupname</code> to <a href="#">showWorkingTimes</a> . Added new parameters <code>addrnr</code> and <code>addruid</code> and result <code>addruid</code> to <a href="#">showAddressReportExtern</a> . Introduced result <code>addressgroupuid</code> to <a href="#">showAddressGroupReportExtern</a> . Added parameter <code>addruid</code> to <a href="#">updateAddressExtern</a> . In <a href="#">insertDriverExtern</a> the parameters <code>code</code> and <code>pin</code> are optional. <a href="#">showDriverGroups</a> returns <code>drivergroupuid</code> . WEBFLEET-connect supports JSON throughout the whole range of functions. To define the response format the parameter <code>outputformat</code> was introduced to the list of <a href="#">General parameters</a> .  | RH     |
| 1.19.1   | 31.03.2014 | TomTom Business Solutions was renamed to TomTom Telematics.  | RH     |
| 1.20.0   | 02.04.2014 | The following functions are new <a href="#">getEventForwardConfigs</a> , <a href="#">getEventForwardConfigRecipients</a> , <a href="#">insertEventForwardConfig</a> , <a href="#">updateEventForwardConfig</a> , <a href="#">deleteEventForwardConfig</a> , <a href="#">resetUserRights</a> . Added output parameters <code>addruid</code> and <code>addressgroupuid</code> to <a href="#">showAddressGroupAddressReportExtern</a> . Added <code>addruid</code> to <a href="#">updateAddressExtern</a> , <a href="#">deleteAddressExtern</a> , <a href="#">attachAddressToGroupExtern</a> , <a href="#">detachAddressFromGroupExtern</a> . Added parameter <code>addrgrpuid</code> to <a href="#">insertAddressExtern</a> , <a href="#">attachAddressToGroupExtern</a> , <a href="#">detachAddressFromGroupExtern</a> , <a href="#">deleteAddressGroupExtern</a> . Parameters <code>notify_enabled</code> and <code>notify_leadtime</code> in <a href="#">updateDestinationOrderExtern</a> are not supported anymore. Added new parameter <code>duetype</code> to <a href="#">showMaintenanceTasks</a> . Added right level <code>edit_usersettings</code> to <a href="#">List of supported right levels</a>  | RH     |

| Revision | Date       | Description   | Author |
|----------|------------|---|--------|
| 1.21.0   | 01.08.2014 | WEBFLEET error codes are now also returned in HTTP header fields, <a href="#">Making HTTP requests</a> . Added new result <code>pnd_mapversion</code> to <a href="#">showContracts</a> . Added new parameter <code>ep_type</code> to <a href="#">updateVehicle</a> and <a href="#">showVehicleReportExtern</a> .  | RH     |
| 1.21.1   | 15.08.2014 | The process of requesting access to APIs has changed, <a href="#">Access to WEBFLEET.connect with API Key</a>   | RH     |
| 1.23.0   | 05.11.2014 | Introduced <a href="#">sendBinaryMessage</a> , <a href="#">resetBinaryMessages</a> and <a href="#">clearBinaryMessages</a> . Introduced <a href="#">sendBinaryMessage</a> , <a href="#">resetBinaryMessages</a> and <a href="#">clearBinaryMessages</a> that allow to send and manage messages transmitting raw binary data that can be used by third party apps installed on the driver terminal. <a href="#">popQueueMessagesExtern</a> : Added new <code>surplus_data</code> relevant for the transfer of binary data for third party apps installed on the driver terminal. Introduced <a href="#">getRemainingDrivingTimesEU</a> that assists fleet managers to determine remaining driving times of their truck drivers. Introduced <a href="#">getDriverKPIs</a> and <a href="#">getObjectKPIs</a> to retrieve the Key Performance Indicators of individual drivers or objects. <a href="#">getObjectKPIs</a> is the successor action of <code>getKPIs</code> . All calls to <code>getKPIs</code> will be redirected to <a href="#">getObjectKPIs</a> . With the new parameter (and result) <code>color</code> in <a href="#">getAreas</a> , <a href="#">insertArea</a> , <a href="#">updateArea</a> you can define and retrieve the colour of an area as a 6-digit hex RGB-color code. The actions <a href="#">insertUser</a> and <a href="#">updateUser</a> come with the new parameter <code>interfacestyle</code> , that lets you define which type of interface a user is supposed to see/use in WEBFLEET. The new profile values <code>invoices_user</code> and <code>report_recipient</code> have been added to the actions <a href="#">insertUser</a> and <a href="#">updateUser</a> . Extended the <a href="#">List of supported right levels</a> to include the rights levels <code>report_read_access</code> , <code>enable_device_configuration_management</code> and <code>report_edit_access</code> . Added new result <code>msisdn</code> to <a href="#">showContracts</a> . Added <code>objectgroupid</code> to the results of <a href="#">showObjectGroupObjects</a> and to the list of parameters of <a href="#">showObjectGroups</a> . The new <a href="#">getVehicleConfig</a> lets you retrieve LINK specific configurations. Introduced <a href="#">setStatusMessages</a> and <a href="#">setAccountStatusMessages</a> to set the predefined text and order status messages for individual vehicles and for the WEBFLEET account. The newly introduced <code>mapcode</code> parameter offers an alternative to longitude and latitude when determining locations using <a href="#">sendDestinationOrderExtern</a> , <a href="#">insertDestinationOrderExtern</a> , <a href="#">updateDestinationOrderExtern</a> , <a href="#">insertAddressExtern</a> , <a href="#">updateAddressExtern</a> . Added new result value <code>mapcode</code> to <a href="#">showOrderReportExtern</a> , <a href="#">showAddressReportExtern</a> . | 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 <a href="#">Creating a user and assigning rights</a> have been amended to reflect these developments. <a href="#">showEventReportExtern</a> : Added new result <code>pos_time</code> that indicates the time of the last known position when the event occurred.  | RH     |

| Revision | Date       | Description  | Author |
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| 1.25.0   | 28.04.2015 | <p>We have extended the result list for <a href="#">showOptiDriveIndicator</a> to include all relevant parameters for <b>OptiDrive 360</b>.</p> <p>We have extended the result list for <a href="#">showSettings</a> to include the four new parameters that show the weights of coasting, constant speed, green speed and gear shift.</p>   | RH     |
| 1.26.0   | 16.12.2015 | <p><b>Itinerary orders</b> - 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: <a href="#">send-DestinationOrderExtern</a>, <a href="#">updateDestinationOrderExtern</a>, <a href="#">insert-DestinationOrderExtern</a>.</p> <p><a href="#">showVehicleReportExtern</a> and <a href="#">updateVehicle</a> have the new optional parameter <code>manufactureyear</code> that indicates the year a specific vehicle was manufactured.</p> <p>With the new parameter <code>intervaltimetype</code> in <a href="#">insertMaintenanceSchedule</a> and <a href="#">updateMaintenanceSchedule</a> you can define maintenance schedules timely more flexible. <code>interval-timetype</code> lets you differentiate between days, weeks, months and year. <code>intervaltimetype</code> has been added to the result list of <a href="#">showMaintenanceSchedules</a> too.</p> <p>Minor edits and improvements.</p> | RH     |
| 1.27.0   | 31.03.2016 | <p>Using <a href="#">showMaintenanceTasks</a> 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 <a href="#">showMaintenanceSchedules</a> anymore. For this we have added the parameter <code>scheduletype</code> and we have added <code>schedulename</code>, <code>scheduletype</code> and <code>scheduled-creationtype</code> to the result list.</p> <p>Improved support of various driver authentication devices by Adding parameter <code>driver_key</code> to <a href="#">insertDriverExtern</a> and <a href="#">updateDriverExtern</a>; Adding <code>driver_keys</code> to result list of <a href="#">show-DriverReportExtern</a>; Adding <code>driverkey_deviceaddress</code> to the result list of <a href="#">showObjectReportExtern</a>; Adding <code>driverkey_deviceaddress</code> and <code>driverkey</code> to the result list of <a href="#">popQueueMessagesExtern</a>.</p> <p>Minor edits and improvements.</p>                   | RH     |

| Revision | Date       | Description  | Author |
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| 1.28.0   | 01.05.2016 | <p>Using <a href="#">showMaintenanceTasks</a> 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 <a href="#">showMaintenanceSchedules</a> anymore. For this we have added the parameter <code>schedulename</code>, <code>schedulename</code> and <code>schedulename</code> to the result list.</p> <p>Improved support of various driver authentication devices by:</p> <ul style="list-style-type: none"> <li>• Adding parameter <code>driver_key</code> to <a href="#">insertDriverExtern</a> and <a href="#">updateDriverExtern</a></li> <li>• Adding <code>driver_keys</code> to result list of <a href="#">showDriverReportExtern</a></li> <li>• Adding <code>driverkey_deviceaddress</code> to the result list of <a href="#">showObjectReportExtern</a></li> <li>• Adding <code>driverkey_deviceaddress</code> and <code>driverkey</code> to the result list of <a href="#">popQueueMessagesExtern</a></li> <li>• Minor edits and improvements</li> </ul> | RH     |
| 1.29.0   | 30.06.2016 | <p><a href="#">showUsers</a> returns the email address of the user.</p> <p>Minor edits and improvements</p>  | RH     |
| 1.30.1   | 01.09.2016 | <p><a href="#">showTripReportExtern</a> returns the following OptiDrive 360 related parameters: <code>optidrive_indicator</code>, <code>speeding_indicator</code>, <code>drivingevents_indicator</code>, <code>idling_indicator</code>, <code>fuelusage_indicator</code>, <code>coasting_indicator</code>, <code>constant_speed_indicator</code>, <code>green_speed_indicator</code>, <code>high_revving_indicator</code></p> <p><a href="#">showObjectReportExtern</a> returns the parameter <code>fuelLevelMilliliters</code>.</p>   | RH     |
| 1.31.0   | 30.11.2016 | <p>Introduced the new <code>fuelreference</code> parameter to both <a href="#">showVehicleReportExtern</a> and <a href="#">updateVehicle</a>. Using this parameter you select which source shall be used as fuel reference.</p> <p><a href="#">geocodeAddress</a> - parameter <code>provider</code> not supported anymore.</p> <p><a href="#">insertDriverExtern</a> and <a href="#">updateDriverExtern</a> support both driver key types Remote LINK and RFID used with the PRO 2020 Driver Terminal.</p> <p>endpoints have changed from <code>soap.business.tomtom.com</code> to <code>soap.telematics.tomtom.com</code> and from <code>csv.business.tomtom.com</code> to <code>csv.telematics.tomtom.com</code></p>   | RH     |
| 1.32.0   | 01.09.2017 | <p>Migrated document from legacy system.</p> <p>Various edits and improvements.</p> <p><b>Not released</b> due to impending bug fix.</p>   | CH     |

| Revision        | Date       | Description  | Author |
|-----------------|------------|--|--------|
| 1.33.0          | 05.10.2017 | <p>Added chapters <a href="#">Getting started with HTTP requests</a> and <a href="#">Getting started with SOAP requests</a> to Programming Guide.</p> <p>Removed colour <code>ivory</code>. This affects <a href="#">showVehicleReportExtern</a> and <a href="#">updateVehicle</a>.</p> <p>The <a href="#">list of message types</a> was updated. It now shows the full <code>msg_type</code> numbers. Additionally, you can see now on which message queues a message is available.</p> <p>Double entries in the parameter tables of <a href="#">popQueueMessage-sExtern</a> have been removed.</p> <p>Added note on usage for <a href="#">updateAddressExtern</a>. If certain parameters are not specified in a request, these parameters are deleted.</p> <p><a href="#">showDriverReportExtern</a>: The parameter <code>driver_keys</code> only appears in a response. It was moved from the <b>Parameters</b> to the <b>Result</b> table.</p> <p>The colour <code>ivory</code> has been removed. This affects <a href="#">showVehicleReportExtern</a> and <a href="#">updateVehicle</a>.</p> <p>The GO 715 device has been discontinued. Information on this device was removed.</p> <p>Added the value "3 – Worker" to the parameter <code>role</code> in the <b>Result</b> table of <a href="#">showWorkingTimes</a>.</p> <p>Added the value "3 – Worker" to the parameter <code>signonrole</code> in the <b>Result</b> table of <a href="#">showDriverReportExtern</a>.</p> <p>Minor edits and improvements.</p> | CH     |
| 1.35.0          | 26.02.2018 | <p><a href="#">popQueueMessagesExtern</a> - introduced the new parameter <code>location_params</code>, which is currently being tested.</p> <p>The <a href="#">list of message types</a> was updated (Acceleration event and Working time event).</p> <p><a href="#">showObjectReportExtern</a> - renamed parameter <code>fuelLevelMilliliters</code> to <code>fuellevel_milliliters</code></p> <p>Minor edits and improvements.</p>   | RH     |
| 1.37.0          | 12.07.2018 | <p>Added the new topic <a href="#">HTTP request encoding</a></p> <p><a href="#">showOrderWaypoints</a> - parameter <code>orderid</code> is mandatory</p> <p>Minor edit and improvements</p>  | RH     |
| 1.39.0          | 09.10.2018 | <p>Added the new chapter <a href="#">Plugins</a> including the actions <a href="#">insertExternalEvent</a> and <a href="#">setExternalObjectData</a> to be used for the additional feature <b>WEBFLEET Plugin</b>.</p>   | RH     |
| 1.40.1          | 08.01.2019 | <p>Enhanced SOAP documentation - added new <a href="#">SOAP parameters</a> topic, added SOAP request examples to <a href="#">showObjectReportExtern</a>, <a href="#">sendDestinationOrderExtern</a> and <a href="#">showOrderReportExtern</a></p>  | RH     |
| 1.40.1 - update | 01.02.2019 | <p>Minor editorial changes.</p>  | RH     |
| 1.40.1 - update | 19.02.2019 | <p>Added some <a href="#">message types</a>.</p>   | RH     |

| Revision | Date       | Description  | Author |
|----------|------------|--|--------|
| 1.42.0   | 09.04.2019 | Removed unsupported inside/outside value for <code>notificationmode</code> from <a href="#">insertArea</a> and <a href="#">updateArea</a> . Added new surplus data to <a href="#">popQueueMessageExtern</a> . <code>er_tripdata</code> 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 <a href="#">showEventReportExtern</a> has changed and can return empty results for <code>pos_time</code> , <code>ackuser</code> and <code>resuser</code> parameters.  | RH     |
| 1.44.0   | 16.07.2019 | Minor changes.   | RH     |
| 1.45.0   | 01.08.2019 | Introducing two new actions <a href="#">getDriverRdtRules</a> and <a href="#">updateDriverRdtRules</a><br>Minor changes and edits.   | RH     |
| 1.46.0   | 21.10.2019 | Introducing new return value <code>engine_operation_time</code> to action <a href="#">showObjectReportExtern</a> .<br><a href="#">updateVehicle</a> introduces the option to update the vehicle objectno.  | RH     |
| 1.47.0   | 29.01.2020 | <code>location</code> parameter not supported anymore in all actions related to <a href="#">addresses</a> .<br>Introduced new <a href="#">message types</a> on cruise control, engine status and engine oil and coolant temperature.<br>The new surplus data <code>ioname</code> for <a href="#">popQueueMessagesExtern</a> provides the name of the input or output when switched on or off.<br>Introducing the two new actions <a href="#">getObjectCanSignals</a> and <a href="#">getObjectCanMalfunctions</a> , 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.<br>Using the newly introduced parameter <code>output_name</code> for action <a href="#">switchOutput</a> you can specify the output instead of relying on the order that is pre-configured.<br>URLs, endpoints and references to the company and products have been amended according to the migration from TomTom Telematics to Webfleet Solutions. | RH     |
| 1.48.0   | 01.04.2020 | Introduced new action <a href="#">showDigitalInputStateMileage</a> to retrieve all possible switching state combinations of digital inputs along with mileage information.<br>Minor other edits.   | RH     |
| 1.49.0   | 27.07.2020 | Disabling MTOM – You can <a href="#">enforce non-MTOM responses</a> in the SOAP API.<br><a href="#">vehicleUpdate</a> 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 <a href="#">getElectricVehicleData</a> .<br>Introduced new action <a href="#">updateLogbookDriver</a> .<br>Added missing features for action <a href="#">getObjectFeatures</a> .   | HR     |



| Revision | Date       | Description  | Author |
|----------|------------|--|--------|
| 1.51.0   | 09.12.2020 | <p>Documented parameter restrictions for actions <a href="#">showAccelerationEvents</a> and <a href="#">showSpeedingEvents</a>.</p> <p>Removed documentation about how to create users using WEBFLEET classic.</p> <p>Added PRO 8375 and PRO 8475 to sendDestinationOrderExtern, updateDestinationOrderExtern, insertDestinationOrderExtern.</p> <p>Adapted description for response code 25001.</p> | HR     |
| 1.53.0   | 25.05.2021 | <p>Documented new result values of action <a href="#">getRemainingDrivingTimesEU</a>.</p> <p>Added the fuel type values for electric and hybrid vehicles to <a href="#">showVehicleReportExtern</a> and <a href="#">updateVehicle</a>.</p>   | HR     |