



ALPHA

Connecting the world

INTEGRATION MANUAL





Version History

REVIEW DATE	VERSION	REVIEWED BY
2019/04/30	1.0	Kenny Mochizuki Escalona



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Service description

The generic service available in Alpha allows integrating the telemetry of the authorized units to a third party system. This is available in a format:

REST API Service

The Alpha REST API service allows you to obtain the telemetry information every minute, it has two structures available for the answers:

1. Standard structure
2. GeoJSON structure

Also, you can make queries to unit records to obtain detailed information about it, as well as the one-week history query.

Services in development

Additionally, Alpha will offer 2 additional formats in its next version:

MQTT Service

The Message Queuing Telemetry Transport Protocol (or MQTT) is a real-time data transmission protocol based on TCP / IP communication. Unlike the REST API service, you can receive information in real time from your units.

GraphQL Service

GraphQL is a REST query language created by the Facebook company, this language allows you to optimize REST service queries, returning only what you want.



REST API Service

Authentication

It is done through the "Authorization" header, said value is provided by the administrator of the account.

Parameters

PARAMETER	DESCRIPTION	REQUIRED
filter	Allows you to filter the response of your request by the following values: <ul style="list-style-type: none">● name● plate● ident● vin	No
values	It allows to indicate the possible values of the filter in your request, you only have to indicate the possible values with the separator "coma" (",").	Yes, when the "filter" parameter is sent
sensor_filter	You can filter by the values of sensors received by Alpha, likewise, you can use arithmetic operators for your request. For example: <ul style="list-style-type: none">● engine.ignition.status==false● battery.level>=50● report.code!=GTSOS Check with your administrator to know the possible sensor parameters.	No
date_start	Allows you to indicate the start date in your request. You must send this parameter in the UNIX Timestamps format, measured in seconds.	Yes, when the "historical" method is used



date_end	It allows to indicate the end date in your request. You must send this parameter in the UNIX Timestamps format, measured in seconds.	Yes, when the "historical" method is used
timezone	It allows you to indicate the time zone in which you will prefer the answer, by default it will be returned in the universal time zone (UTC). Consult the method "available time zones" to obtain the possible values.	No
format	It will allow you to modify the structure of your response. It will have the possible formats: <ul style="list-style-type: none">• standard (Default)• geojson	No

Arithmetic operators available

OPERATOR	DESCRIPTION
==	Equal to
>=	Greater or equal to
<=	Less than or equal to
>	Greater than
<	Less than
!=	Different from



Examples of queries

Last known information

It will allow you to obtain the last known information of the units, in case of not having available telemetry data, it will return the values in NULL.

```
GET https://alpha.goffice.io/api/v1/rest/telemetry/last  
HEADER Authorization AlphaToken su_token
```

Data history

It will allow you to obtain the historical telemetric information of the units, in case of not having available telemetry data, it will return the values in NULL.

```
GET https://alpha.goffice.io/api/v1/rest/telemetry/history?date_start=0&date_end=1  
HEADER Authorization AlphaToken su_token
```

Use of filters

The filters will be available in the available telemetry methods, you can combine them as you wish. For example, we will perform several filtering in the "Last known information" method

```
GET  
https://alpha.goffice.io/api/v1/rest/telemetry/last?filter=plate&values=ABC123,DEF4  
56,GHI789&timezone=41&sensor_filter=engine.ignition.status==false&format=geojson  
HEADER Authorization AlphaToken su_token
```



Successful response

```
{
  "error": false,
  "reason": {},
  "data": [
    {
      "dateReceive": "1970-01-01 00:00:00",
      "unit": "Unidad 1",
      "position": {
        "latitude": 0.0000,
        "longitude": 0.0000,
        "altitude": 0.00,
        "speed": 0.00,
        "direction": 0.00,
        "hdop": 0.00,
        "satellites": 0
      },
      "sensors": {
        "engine.ignition.status": false,
        "report.code": "GTSOS",
        "vehicle.mileage": 0.0,
        // ...
      }
    },
    // ...
  ]
}
```




Queries for time zones and unit information

Time zones

```
GET https://alpha.goffice.io/api/v1/h/utilities/timezones
HEADER Authorization AlphaToken su_token
```

Successful response

```
{
  "error": false,
  "reason": {},
  "data": [
    {
      "name": "UTC",
      "identifier": 1,
      "utcOffset": "+00:00"
    },
    // ...
  ]
}
```

Units

```
GET https://alpha.goffice.io/api/v1/rest/utilities/units
HEADER Authorization AlphaToken su_token
```

Successful response

```
{
  "error": false,
  "reason": {},
  "data": [
    {
      "name": "Unidad 1",
      "plate": "ABC123",
      "ident": "12341234",
      "vin": "ABC123ABC123"
    }
  ]
}
```



```
    },  
    // ...  
  ]  
}
```



GeoJSON structure

```
{
  "error": false,
  "reason": {},
  "data": {
    "type": "FeatureCollection",
    "features": [
      {
        "type": "Feature",
        "geometry": {
          "type": "Point",
          "coordinates": [0.0000, 0.0000]
        },
        "properties": {
          "position": {
            "altitude": 0.00,
            "speed": 0.00,
            "direction": 0.00,
            "hdop": 0.00,
            "satellites": 0
          },
          "sensors": {
            "engine.ignition.status": false,
            "report.code": "GTSOS",
            "vehicle.mileage": 0.0,
            // ...
          }
        }
      },
      // ...
    ]
  }
}
```



Error Response

```
{  
  "error": true,  
  "reason": {  
    "authorization": "Invalid Token",  
    // ...  
  },  
}
```

Possible answers

REASONS	POSSIBLE CAUSES
authorization	<ul style="list-style-type: none">● You entered an invalid token● Did not enter the correct format● Did not send the requested header
filter	<ul style="list-style-type: none">● Did not enter the filter● Entered an invalid filter
values	<ul style="list-style-type: none">● Sent empty values
sensor_filter	<ul style="list-style-type: none">● You entered an invalid format for filtering● Entered an invalid arithmetic operator
date_start	<ul style="list-style-type: none">● Entered a date greater than 1 week● You entered a value out of range● He did not send the value
date_end	<ul style="list-style-type: none">● You entered a lower value than the date_start● He did not send the value
timezone	<ul style="list-style-type: none">● You entered an invalid time zone● Did not send the time zone
format	<ul style="list-style-type: none">● You entered an invalid time zone● Did not send the time zone



Support

If you need assistance with any detected error, or need more information about how to perform the service consultation process, you can do so through the following emails:

Support in system errors

support@goldenmcorp.com

Support in services integration

integrations@goldenmcorp.com

Commercial support

sales@goldenmcorp.com or your Golden M account executive