Vehicle Data Interface (VDI)

Pre-condition:
In order to use the service Vehicle Data Interface the customer needs an MPRO-Account (also referred to as a CIAM-Account). Further this service requires that the target system must be able to send and receive REST based JSON files.

Purchase:
Upon logging in into the MPRO Portal with the MPRO-Account, the customer can purchase the service Vehicle Data Interface via the e-shop.

Please note that there are two versions of the Vehicle Data Interface available

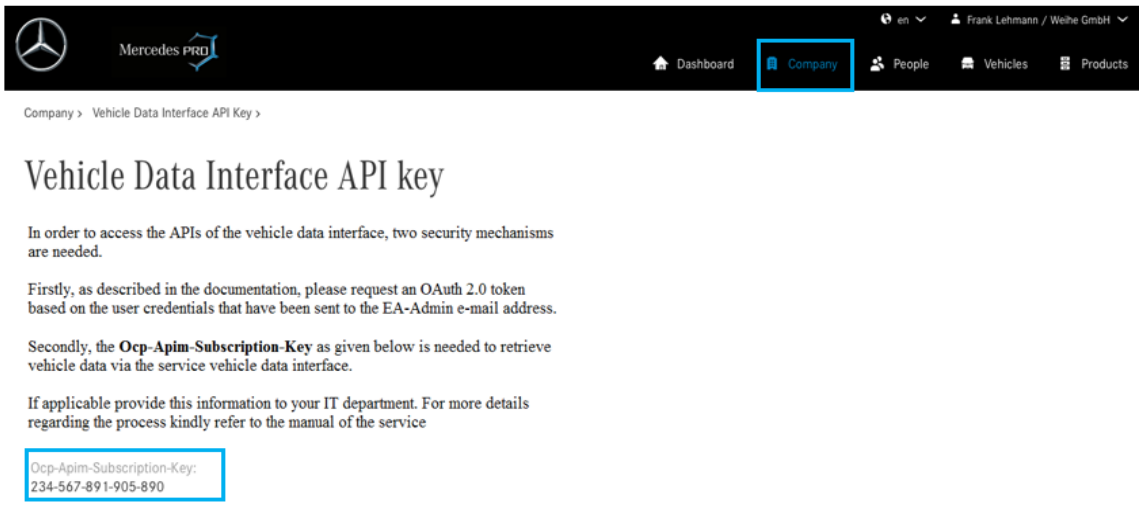
a) Vehicle Data Interface (light) including interfaces for retrieving
   - Standard Vehicle Data
   - Position Data

b) Vehicle Data Interface (extended) including interfaces for retrieving
   - Standard Vehicle Data
   - Position Data
   - Issue Data
   - Fuel Data
   - Service Data
   - Eco Data
   - Status data

For more details, please refer to Appendix A and Appendix D which includes a detailed list and description of the available data points for each interface (A) and vehicle (D). Please note that in some countries the light version may not be available.

In order to access the APIs for VDI, two security mechanisms are needed.

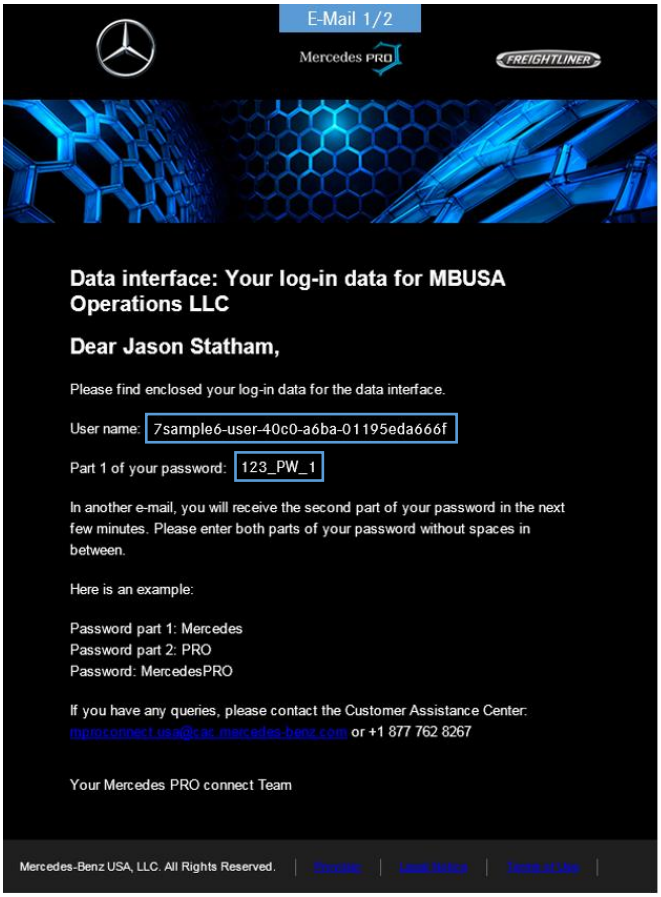
Firstly, after successfully purchasing and activating the service for a vehicle in the MPRO Portal, the Ocp-Apim-Subscription-Key will be displayed in the “Company” tab – exemplified and marked in blue in the screenshot below:

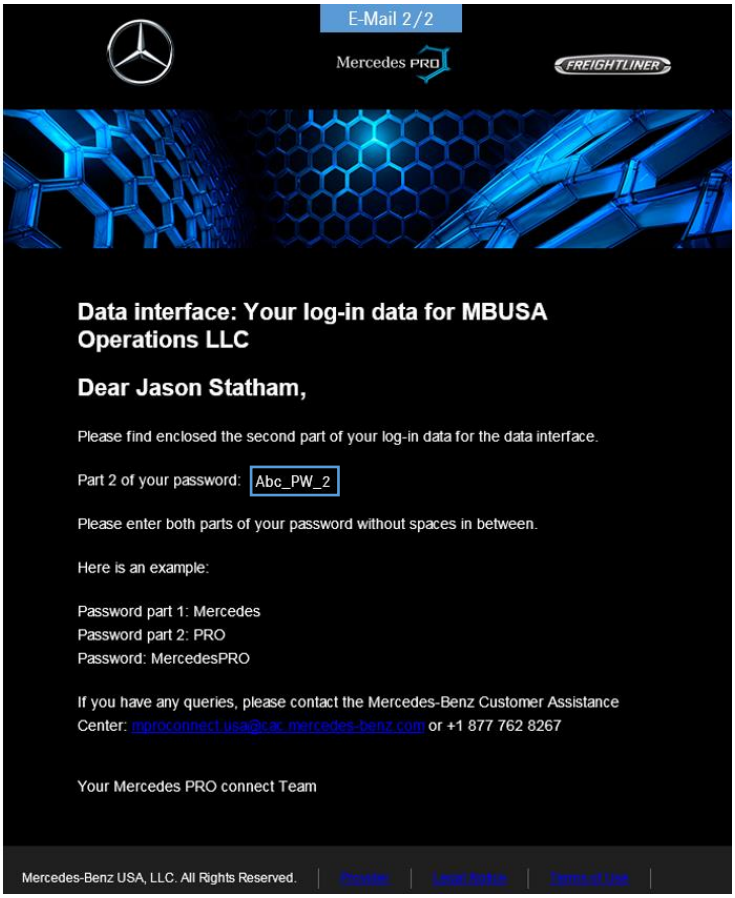


Secondly, after purchasing the service the customer will receive two emails with the necessary credentials for initially setting up a connection to the technical interfaces behind the Vehicle Data Interface (VDI) service. These two emails will include the following information:

- Client ID
- Client Secret (the required password, which is split up into two separate e-mails containing the Part 1 and Part 2 of the Client Secret)

These emails contain the Client ID (username) and the Secret (password). An example of the two emails sent to the customer can be found below:





User (client id): 7sample6-user-40c0-a6ba-01195eda666f
Password (user secret): 123_PW_1Abc_PW_2

Please note that the emails mentioned above will be sent to the first enterprise admin (master admin) added to the fleet, i.e., not necessarily to the same person that assigned the VDI product to the vehicle.

Create access tokens

The information provided above is required in order to generate a OAuth access/bearer token that is needed for accessing the technical interfaces. If applicable, this document should be forwarded to your IT-department in charge of your system.

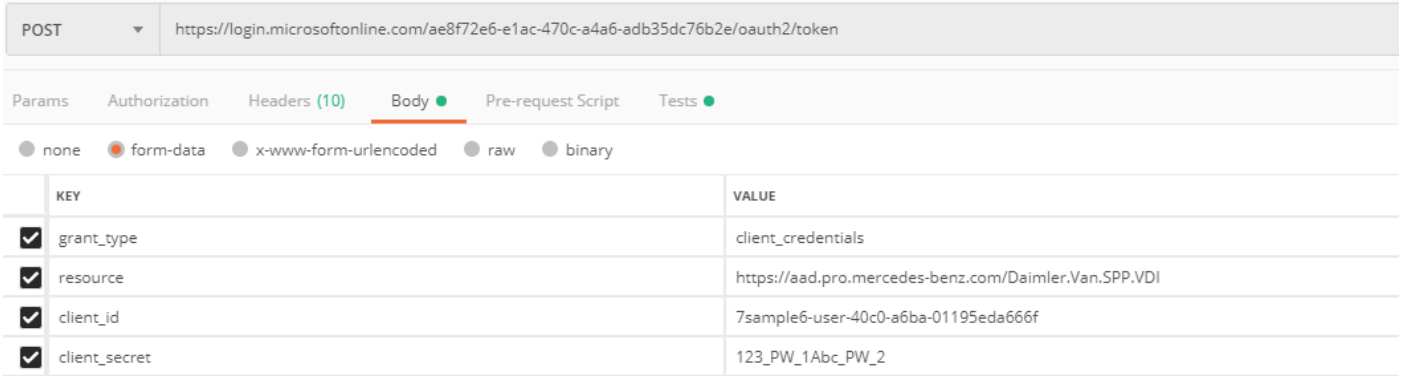
You can create access tokens for the VDI via the following token endpoint:

https://login.microsoftonline.com/ae8f72e6-e1ac-470c-a4a6-adb35dc76b2e/oauth2/token

An overview of the request headers and body is given in the table below. Note that the value of the body parameters (client_id and client_secret) marked in blue are required and are the same credentials provided in the two emails sent to the customer.

HEADERS	
KEY	**VALUE**
Content-Type	application/x-www-form-urlencoded
BODY	
KEY	**VALUE**
grant_type:	client_credentials
Resource:	https://aad.pro.mercedes-benz.com/Daimler.Van.SPP.VDI
client_id:	7sample6-user-40c0-a6ba-01195eda666f
client_secret:	123_PW_1Abc_PW_2

Note that the values of the **grant_type** and **resource** must be given exactly as shown in the table. A screenshot of a Postman request with the data specified in the table before is depicted below:



A possible response to the request depicted above is as follows:

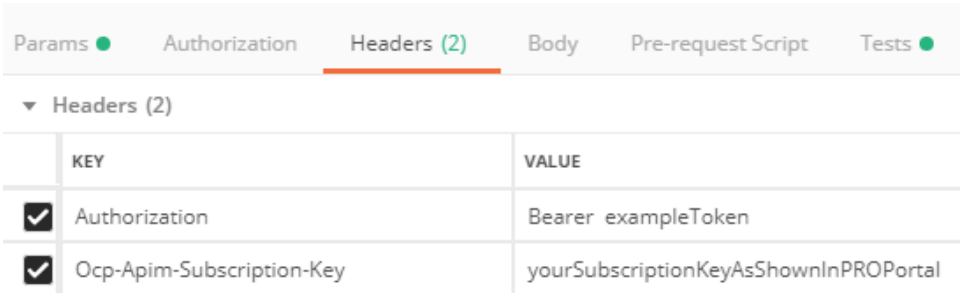

```
{
    "token_type": "Bearer",
    "expires_in": "3600",
    "ext_expires_in": "3600",
    "expires_on": "1559142216",
    "not_before": "1559138316",
    "resource": "https://aad.pro.mercedes-benz.com/Daimler.Van.SPP.VDI",
    "access_token": "exampleToken"
}
```

Important:

The value of the received access_token (referred to as the access_token_value), will be used in the authorization header of all VDI API requests. The value of the Authorization header is formed as follows: “Bearer “+access_token_value.

Additionally, if the value of the received access_token_value is “exampleToken” (as in the printscreen above), then the authorization header value will be “Bearer exampleToken”.

An example of any of the headers of any VDI request (as listed in Appendix B and Appendix C) is shown on the next page.



For more details regarding calls to the different interfaces in order to retrieve vehicle data, please refer to Appendix B (standard version) and Appendix C (light version) which includes sample requests and code samples.

Please note that you can only retrieve data for the last 14 days. For data retrieval, we recommend a data pull interval of 120 seconds.

If you have any further questions or encounter any issues when trying to establish a connection with the technical interfaces, please contact the Customer Assistant Center via +1 877 762 8267

Appendix A

List of Data Points for VDI

List of available data points for the new Mercedes-Benz Sprinter/Freightliner Sprinter via the service Vehicle Data Interface (VDI)

Data Point Name	Description	Version		API Endpoints							GeneralStatusData Category
		API - Light Version	API -Extended Version	StandardVehicleData	PositionData	ConsumptionData	IssueData	ServiceData	EcoData	GeneralStatusData	
Vin	Vehicle Identification Number	X	X	X							
brand	Brand of the vehicle (String)	X	X	X							
type	Type of the vehicle (String)	X	X	X							
model	Model of the vehicle (String)	X	X	X							
fuelType	Fuel type (String)	X	X	X		X					
gearboxType	Type of the gearbox (String)	X	X	X							
licensePlate	License Plate of the vehicle (String)	X	X	X							
gpsLatitude[5]	GPS Latitude (in °)	X	X		X						
gpsLongitude[5]	GPS Longitude (in °)	X	X		X						
gpsHeading[5]	GPS Heading (in °)	X	X		X						
odometer	Total distance of the vehicle (in km)		X							X	vehicleStatus
serviceIntervalDistance[1]	Distance to be traveled until next service (in km)		X					X			
distanceStart	Average distance since start (in km)		X							X	tripStatus
distanceReset	Average distance since reset (in km)		X							X	tripStatus
tirePressureFrontLeft[3]	Pressure level of the front left tire (in kPa)		X							X	tireStatus
tirePressureFrontRight[3]	Pressure level of the front right tire (in kPa)		X							X	tireStatus
tirePressureRearLeft[3]	Pressure level of the rear left tire (in kPa)		X							X	tireStatus

tirePressureRearRight[3]	Pressure level of the rear right tire (in kPa)		X							X	tireStatus
liquidConsumptionStart	Average liquid consumption since start (in l/km)		X			X					
liquidConsumptionReset	Average liquid consumption since reset (in l/km)		X			X					
electricConsumptionStart[2]	Average electric energy consumption since start (in kWh)		X			X					
electricConsumptionReset[2]	Average electric energy consumption since reset (in kWh)		X			X					
chargingPower[2]	Charging power of electrical vehicle (in kW)		X			X					
distanceElectricalStart[2]	Distance since start (in km)		X							X	tripStatus
distanceElectricalReset[2]	Distance since reset (in km)		X							X	tripStatus
socProfile[2]	Array with tupels of state of charge and time offset related to the timestamp of the attribute		X			X					
currentSpeedFromIC	Current speed of the vehicle (in km/h)		X							X	tripStatus
rangeLiquid	Remaining range for available fuel level (in km)		X			X					
serviceIntervalDays[1]	Number of days left until next service (in days)		X					X			
serviceWarning	Service Warning		X				X	X			
serviceContent	Service content		X					X			
averageSpeedStart	Average speed since start (in km/h)		X							X	tripStatus
averageSpeedReset	Average speed since reset (in km/h)		X							X	tripStatus
tireWarningLamp	Warning tire lamp from IC		X				X				
rangeElectric[2]	Remaining range for electric engine (in km)		X			X					
departureTime[2]	Departure time counted in minutes from midnight depending on IC time in vehicle (in minutes)		X							X	evStatus

endOfChargeTime[2]	End of charge time counted in minutes from midnight depending on IC time in vehicle (in minutes)		X			X					
maxRange[2]	Max. electrical range with 100 % charge (in km)		X			X					
engineOilTemperature	Engine oil temperature (in °C)		X							X	engineStatus
engineCoolantTemperature	Engine coolant temperature (in °C)		X							X	engineStatus
tankLevelPercent	Current fuel level (%)		X			X					
tankLevelAdBlue[4]	Catalyst fuel level		X			X					
warningBrakeLiningWear	Warning of the brakelining wear		X				X				
warningBrakeFluid	Warning of the the brake fluid		X				X				
parkBrakeStatus	Shows if the park break is active or not (TRUE/FALSE)		X							X	vehicleStatus
warningCoolantLevelLow	Warning coolant level		X				X				
warningWashWater	Shows if the wash water level too low (TRUE/FALSE)		X				X				
lightSwitchPosition	Position of the light switch (enum: AUTO, LOW_BEAM, PARK_LAMP_LEFT, PARK_LAMP_RIGHT, SIDELIGHTS)		X							X	vehicleStatus
warningLowBattery	Warning battery state		X				X				
batteryState	Battery state (enum: GREEN, YELLOW, RED)		X							X	vehicleStatus
tirePressureScope	Pressure scope of tires (enum: NEITHER, PRW, RDK)		X							X	tireStatus
tireWarningsRdk	Warning tire		X				X				
speedUnitFromIC	Speed unit of the IC (KM/H, MPH)		X							X	vehicleStatus

temperatureUnitHU	Temperature unit of the vehicle head unit (enum: CELSIUS, FAHRENHEIT)		X							X	vehicleStatus
timeFormatHU	Time format of the vehicle head unit (enum: 12h, 24h)		X							X	vehicleStatus
ecoScoreFreeWhl	ECOscore rating free wheeling (%)		X						X		
ecoScoreAccel	ECOscore rating acceleration (%)		X						X		
ecoScoreConst	ECOscore rating constancy (%)		X						X		
ecoScoreBonusRange	ECOscore rating bonus range (expressed in km)		X						X		
deckLidStatus	Opening state of the decklid (enum: CLOSE, OPEN)		X							X	doorStatus
windowPositionFrontRight	Opening state of the front left window (enum: CLOSE, OPEN, INTERMEDIATE)		X							X	windowStatus
windowPositionFrontLeft	Opening state of the front right window (enum: CLOSE, OPEN, INTERMEDIATE)		X							X	windowStatus
auxHeatStatus	State of auxiliary heating (enum: SNA, HEATING_NORMAL, VENTILATE_NORMAL, HEATING_AUX, POST_HEATING, POST_VENTILATE, HEATING_PSEUDO_AUX)		X							X	vehicleStatus
chargingActive[2]	Is charging in progress indicator		X			X					
chargingStatus[2]	Status of charging progress		X			X					
departureTimeMode[2]	Activation mode of planned departure time for electrical vehicle (enum: INACTIVE, ADHOC_ACTIVE, WEEKLYSET_ACTIVE)		X							X	evStatus
departureTimeSoc[2]	Planned state of charge at planned departure time for electrical vehicle (%)		X							X	evStatus

precondAtDeparture [2]	Activation state of preconditioning for electrical vehicle at planned departure time (enum: INACTIVE, ACTIVE)		X							X	evStatus
precondError[2]	Error indicator for preconditioning of electrical vehicle (enum: NO_REQ_CHG, PRECON_NOT_POS, PRECON_AVL, CHARGE_NOT_FINISH, PRECON_ERROR)		X							X	evStatus
precondActive[2]	Preconditioning 2/3 active		X							X	evStatus
departureTimeWeekday[2]	Preset weekday for planned departure time for electrical vehicle (enum: MONDAY, TUESDAY, WEDNESDAY, THURSDAY, FRIDAY, SATURDAY, SUNDAY)		X							X	evStatus
smartCharging[2]	Status optimized/intelligent charging		X			X					
liquidRangeSkipIndication	Shows if the liquid range is displayed or not in the head unit (enum: DISPLAY, SKIP)		X							X	vehicleStatus
electricalRangeSkipIndication	Shows if the electric range is displayed or not in the head unit (enum: DISPLAY, SKIP)		X							X	vehicleStatus
soc[2]	Status of charge (%)		X			X					
doorStatusFrontLeft	Door status front left		X							X	doorStatus
doorStatusFrontRight	Door status front right		X							X	doorStatus
doorStatusRearLeft	Door status rear left		X							X	doorStatus
doorStatusRearRight	Door status rear right		X							X	doorStatus

doorLockStatusVehicle	Door lock state of the vehicle (enum: UNLOCK, INT_LOCK, EXT_LOCK, SEL_UNLOCK)		X							X	doorStatus
doorLockStatusFrontLeft	Door lock status front left		X							X	doorStatus
doorLockStatusFrontRight	Door lock status front right		X							X	doorStatus
doorLockStatusRearLeft	Door lock status rear left		X							X	doorStatus
doorLockStatusRearRight	Door lock status rear right		X							X	doorStatus
doorLockStatusDeckLid	Status of the deck lid (enum: CLOSE, OPEN)		X							X	doorStatus

Please note: The availability of data points depends on vehicle equipment options.

1 – either Serviceintervaldays or Serviceintervaldistance is received

2 – only available for electric drive (currently not available in the US)

3 – only available if tire pressure sensors are equipped (equipment ID: RY2)

4 – only available if AdBlue is equipped (equipment ID: KP6)

5 – location data updates every 120 seconds

Appendix B

Vehicle Data Interface (extended)

The following will give you an overview of all the APIs included in the Vehicle Data Interface (extended).

Except for the StandardVehicleData – which does not accept the startDate and latestOnly parameters, all other API requests use the same request parameters and headers as detailed below:

Request parameters

vin	string
startDate (optional)	string
latestOnly (optional)	boolean
$top (optional)	string
$skip (optional)	string

Request headers

X-CorrelationId (optional)	string
X-TrackingId (optional)	string
Ocp-Apim-Subscription-Key	string
Authorization	string

- latestOnly true: Returns only the latest known value for each of the signals. latestOnly false: Returns a list of signals as received starting with the date specified in startDate and up until the present time.
- If latestOnly is set to "false" (or not set) the field startDate is mandatory.
- The format of the startDate is YYYY-MM-DD**T**HH:MM:SS (note that only the non-bold characters are variable; an example of a valid startDate is: 2019-01-16T09:41:49.
- The X-CorrelationId and X-TrackingId headers are optional and can be used for debugging purposes alone. You can choose your company name as the X-CorrelationId and an arbitrary process name for the X-TrackingId. In case of troubleshooting, we can track your request within our systems using these two parameters.

All VDI interfaces return responses according to the following principles:

- 200 OK: The interface was called successfully and the results could be retrieved as specified
- 400 Bad Request
    - CategoryNotFoundException - A category was not found for a specific class
    - StartDateLessLastValidDataException - The startDate is older than 14 days.
    - LatestOnlyOrStartDateNotSetException - LatestOnly is not set or set to false or the startDate is not set
- 403 Forbidden: The user does not have the correct permissions
- 408
    - Timeout - Request timed out
    - OperationCanceled - Request canceled

For more information regarding Vehicle Data Interface Light, please refer to Appendix C.

Note: In the next sections, we present each interface by detailing its request URL, the schema of the response and some examples. Please note that the semantics of the request URL is the following:

- A parameter that is indicated using {} is mandatory (e.g., vin={vin}). The curly braces will need to be removed in the actual request (e.g., vin = WDZ00000000000000)
- A parameter that is indicated using [&] is optional (e.g., [&startDate]). The brackets and the ampersand will also need to be removed in the actual request and replaced with a corresponding “key=value” pair (e.g., startDate=2019-01-23T23:00:00)

I. PositionData

This allows the retrieving of position signal data for a given VIN (Vehicle Identification Number) from the start date until present.

Request URL

```
https://van-advance-api-us.pro.mercedes-benz.com/B2BVIDIExtended/spp/api/vehicles/positionData?vin={vin}[&startDate][&latestOnly][&$top][&$skip]
```

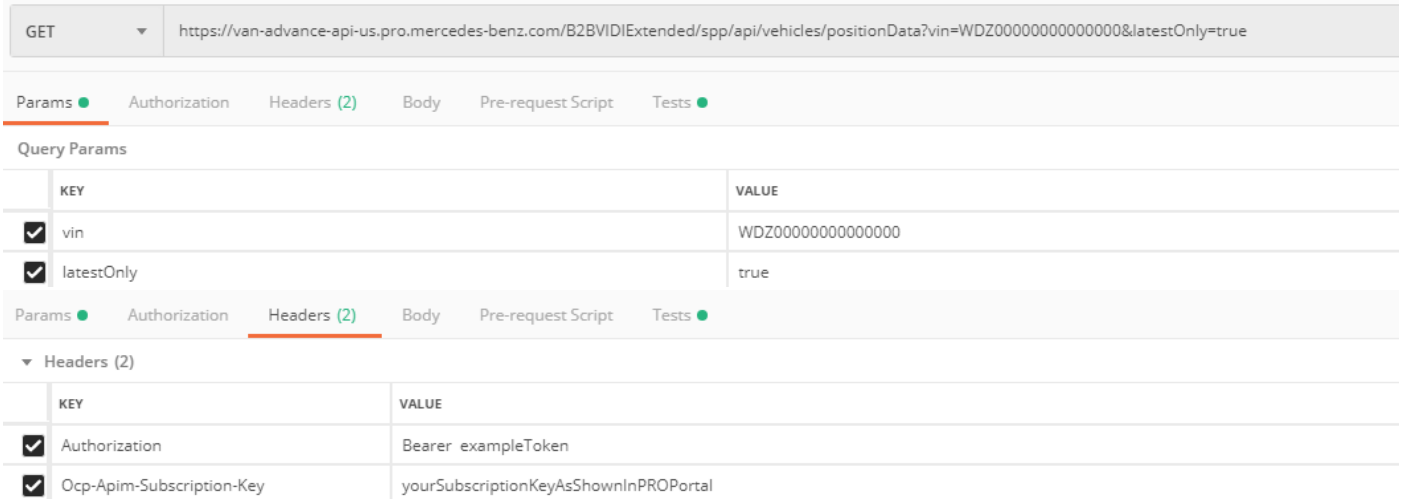
Reponse Schema

The schema of a successful response (200 OK) is as follows:

```
  "type": "object",
  "properties": {
    "items": {
      "type": "array",
      "items": {
        "type": "object",
        "properties": {
          "vin": {
            "type": "string"
          },
          "attributeName": {
            "type": "string"
          },
          "category": {
            "type": "string"
          },
          "timestamp": {
            "format": "date-time",
            "type": "string"
          },
          "value": {
            "type": "string"
          }
        }
      }
    },
    "nextPageLink": {
      "type": "string"
    },
    "count": {
      "format": "int64",
      "type": "integer"
    }
  }
}
```

Examples:

An example of a Postman request for this API is given below:



An example response of the request from above is depicted below:


```
{
    "items": [
        {
            "vin": "WDZ00000000000000",
            "attributeName": "gpsLongitude",
            "category": "noCategory",
            "timestamp": "2019-05-16T19:44:45",
            "value": "1.515564"
        },
        {
            "vin": "WDZ00000000000000",
            "attributeName": "gpsHeading",
            "category": "noCategory",
            "timestamp": "2019-05-16T19:44:45",
            "value": "91"
        },
        {
            "vin": "WDZ00000000000000",
            "attributeName": "gpsLatitude",
            "category": "noCategory",
            "timestamp": "2019-05-16T19:44:45",
            "value": "41.265463"
        }
    ],
    "nextPageLink": null,
    "count": 3
}
```


An example of a cURL request to retrieve the latest two positions, received from the vehicle in the time interval between the 1st of December 2018 at 23:00 and up until the present moment is given below:

```
curl -X GET \
  'https://van-advance-api-us.pro.mercedes-benz.com/B2BVIDIExtended/spp/api/vehicles/positionData?vin=WDZ
00000000000000&latestOnly=false&startDate=2018-12-01T23:00:00&$top=2' \
  -H 'Authorization: Bearer exampleToken' \
  -H 'Ocp-Apim-Subscription-Key: yourSubcriptionKeyAsShownInPROPortal' \
  -H 'X-CorrelationId: test' \
  -H 'X-TrackingId: test'
```

II. GetStandardData

Retrieves a list of standard attributes describing the vehicle with the specified VIN (e.g., model, type, gearbox type, etc.).

Note that the latestOnly and startDate attributes are in this case not available, as the retrieved data is not dynamic.

Request URL

```
https://van-advance-api-us.pro.mercedes-benz.com/B2BVIDIExtended/spp/api/vehicles/standardVehicleData?vin={vin}[&$top][&$skip]
```

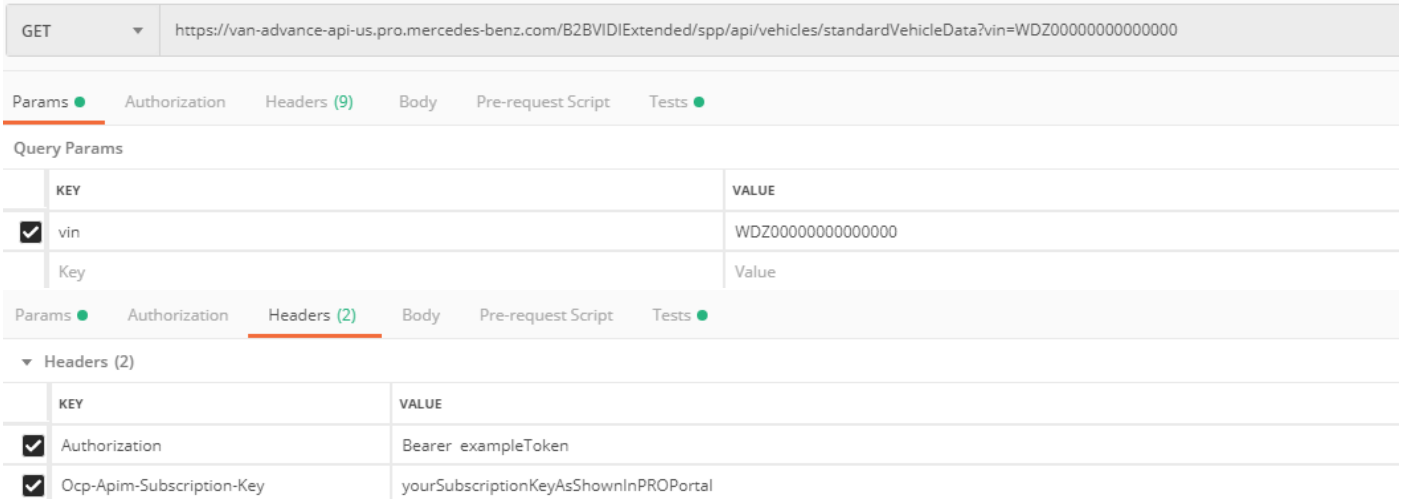
Reponse Schema

The schema of a successful response (200 OK) is as follows:

```
{
 "type": "object",
 "properties": {
   "items": {
     "type": "array",
     "items": {
       "type": "object",
       "properties": {
         "vin": {
           "type": "string"
         },
         "brand": {
           "type": "string"
         },
         "type": {
           "type": "string"
         },
         "model": {
           "type": "string"
         },
         "fuelType": {
           "type": "string"
         },
         "gearboxType": {
           "type": "string"
         },
         "licensePlate": {
           "type": "string"
         }
       }
     }
   },
   "nextPageLink": {
     "type": "string"
   },
   "count": {
     "format": "int64",
     "type": "integer"
   }
 }
}
```

Examples:

An example of a Postman request for this API is given below:



An example response of the request from above is depicted below:


```
{
    "items": [
        {
            "vin": "WDZ00000000000000",
            "brand": "mb",
            "type": null,
            "model": "Sprinter",
            "fuelType": "n.a.",
            "gearboxType": "NotAssigned",
            "licensePlate": "TESTPLATE"
        }
    ],
    "nextPageLink": null,
    "count": 1
}
```


An example of a cURL request for requesting standard data is given below:

```
curl -X GET \
  'https://van-advance-api-us.pro.mercedes-benz.com/B2BVIDIExtended/spp/api/vehicles/standardVehicleData?
vin=WDZ00000000000000' \
  -H 'Authorization: Bearer exampleToken' \
  -H 'Ocp-Apim-Subscription-Key: yourSubscriptionKeyAsShownInPROPortal' \
  -H 'X-CorrelationId: test' \
  -H 'X-TrackingId: test'
```

III. ServiceData

Enables the retrieval of service data for a vehicle identified by its Vehicle Identification Number (VIN) from the start date until present.

Request URL

```
https://van-advance-api-us.pro.mercedes-benz.com/B2BVIDIExtended/spp/api/vehicles/serviceData?vin={vin}[&startDate][&latestOnly][&$top][&$skip]
```

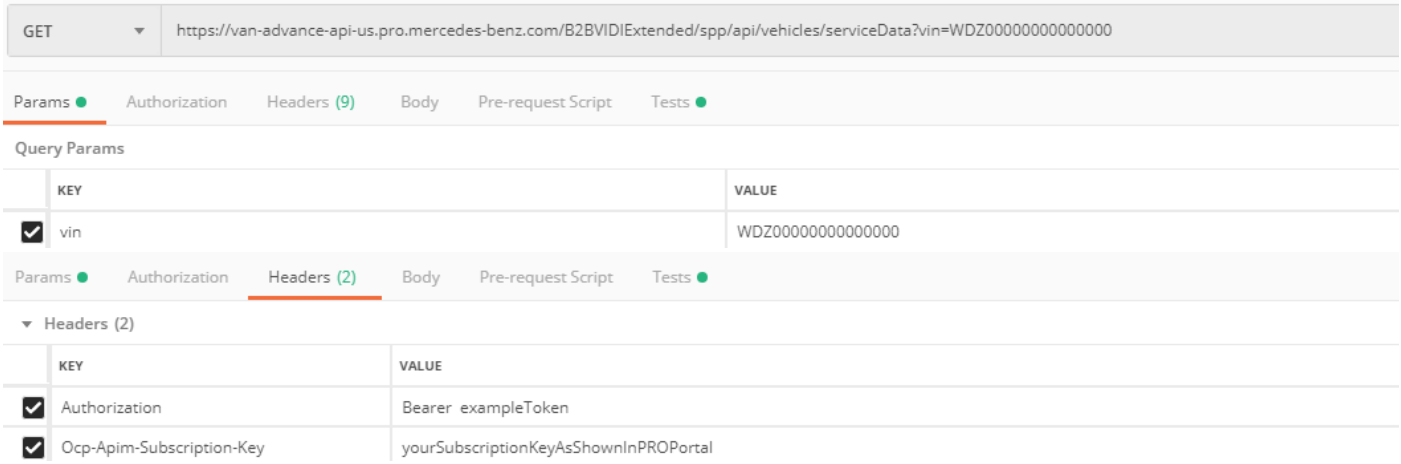
Reponse Schema

The schema of a successful response (200 OK) is as follows:


```
{
  "type": "object",
  "properties": {
    "items": {
      "type": "array",
      "items": {
        "type": "object",
        "properties": {
          "vin": {
            "type": "string"
          },
          "attributeName": {
            "type": "string"
          },
          "category": {
            "type": "string"
          },
          "timestamp": {
            "format": "date-time",
            "type": "string"
          },
          "value": {
            "type": "string"
          }
        }
      }
    },
    "nextPageLink": {
      "type": "string"
    },
    "count": {
      "format": "int64",
      "type": "integer"
    }
  }
}
```

Examples:

An example of a Postman request for this API is given below:



An example response of the request from above is depicted below:


```
{
    "items": [
        {
            "vin": "WDZ00000000000000",
            "attributeName": "serviceIntervalDays",
            "category": "noCategory",
            "timestamp": "2019-05-16T10:30:00",
            "value": "661"
        },
        {
            "vin": "WDZ00000000000000",
            "attributeName": "serviceIntervalDistance",
            "category": "noCategory",
            "timestamp": null,
            "value": "N/A"
        },
        {
            "vin": "WDZ00000000000000",
            "attributeName": "serviceContent",
            "category": "noCategory",
            "timestamp": null,
            "value": "N/A"
        },
        {
            "vin": "WDZ00000000000000",
            "attributeName": "serviceWarning",
            "category": "noCategory",
            "timestamp": null,
            "value": "N/A"
        }
    ],
    "nextPageLink": null,
    "count": 4
}
```


An example of a cURL request for requesting standard data is given below:

```
curl -X GET \
  'https://van-advance-api-us.pro.mercedes-benz.com/B2BVIDIExtended/spp/api/vehicles/serviceData?vin=WDZ0
0000000000000&latestOnly=true' \
  -H 'Authorization: Bearer exampleToken' \
  -H 'Ocp-Apim-Subscription-Key: yourSubscriptionKeyAsShownInPROPortal' \
  -H 'X-CorrelationId: test' \
  -H 'X-TrackingId: test'
```

IV. IssueData

Enables the retrieval of issues (warnings) for a vehicle identified by its Vehicle Identification Number (VIN) from the start date until present.

Request URL

```
https://van-advance-api-us.pro.mercedes-benz.com/B2BVIDIExtended/spp/api/vehicles/issueData?vin={vin}[&startDate][&latestOnly][&$top][&$skip]
```

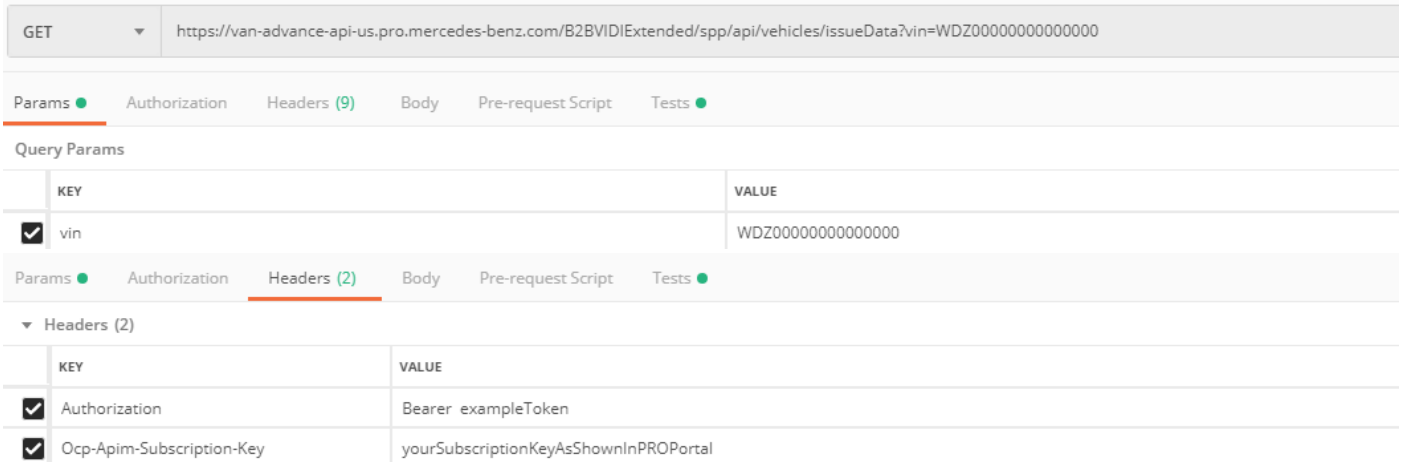
Reponse Schema

The schema of a successful response (200 OK) is as follows:

```
{
  "type": "object",
  "properties": {
    "items": {
      "type": "array",
      "items": {
        "type": "object",
        "properties": {
          "vin": {
            "type": "string"
          },
          "attributeName": {
            "type": "string"
          },
          "category": {
            "type": "string"
          },
          "timestamp": {
            "format": "date-time",
            "type": "string"
          },
          "value": {
            "type": "string"
          }
        }
      }
    },
    "nextPageLink": {
      "type": "string"
    },
    "count": {
      "format": "int64",
      "type": "integer"
    }
  }
}
```

Examples:

An example of a Postman request for this API is given below:



An example response of the request from above is depicted below:


```
{
    "items": [
        {...}
        {
            "vin": "WDZ00000000000000",
            "attributeName": "tireWarningLamp",
            "category": "noCategory",
            "timestamp": "2019-05-21T17:08:30",
            "value": "NO_WARN"
        },
        {
            "vin": "WDZ00000000000000",
            "attributeName": "warningWashWater",
            "category": "noCategory",
            "timestamp": "2019-05-21T17:08:30",
            "value": "FALSE"
        },
        {
            "vin": "WDZ00000000000000",
            "attributeName": "warningBrakeLiningWear",
            "category": "noCategory",
            "timestamp": "2019-05-21T17:08:30",
            "value": "FALSE"
        },
        {
            "vin": "WDZ00000000000000",
            "attributeName": "tireWarningsRdk",
            "category": "noCategory",
            "timestamp": "2019-05-21T17:08:30",
            "value": "NO_WARN"
        }
    ],
    "nextPageLink": null,
    "count": 8
}
```


Note: In the Figure above, the text “{…}” symbolizes that the retrieved entries for the issues warningLowBattery, serviceWarning, warningBrakeFluid and tireWarningLamp were blended out, for brevity reasons.

An example of a cURL request for requesting standard data is given below:

```
curl -X GET \
'https://van-advance-api-us.pro.mercedes-benz.com/B2BVIDIExtended/spp/api/vehicles/issueData?vin=WDB00000
000000000&latestOnly=true' \
  -H 'Authorization: Bearer exampleToken' \
  -H 'Ocp-Apim-Subscription-Key: yourSubscriptionKeyAsShownInPROPortal' \
  -H 'X-CorrelationId: test' \
  -H 'X-TrackingId: test'
```

V. ConsumptionData

Allows for retrieving consumption data of a given VIN (Vehicle Identification Number) from the start date until present.

Request URL

```
https://van-advance-api-us.pro.mercedes-benz.com/B2BVIDIExtended/spp/api/vehicles/consumptionData?vin={vin}[&startDate][&latestOnly][&$top][&$skip]
```

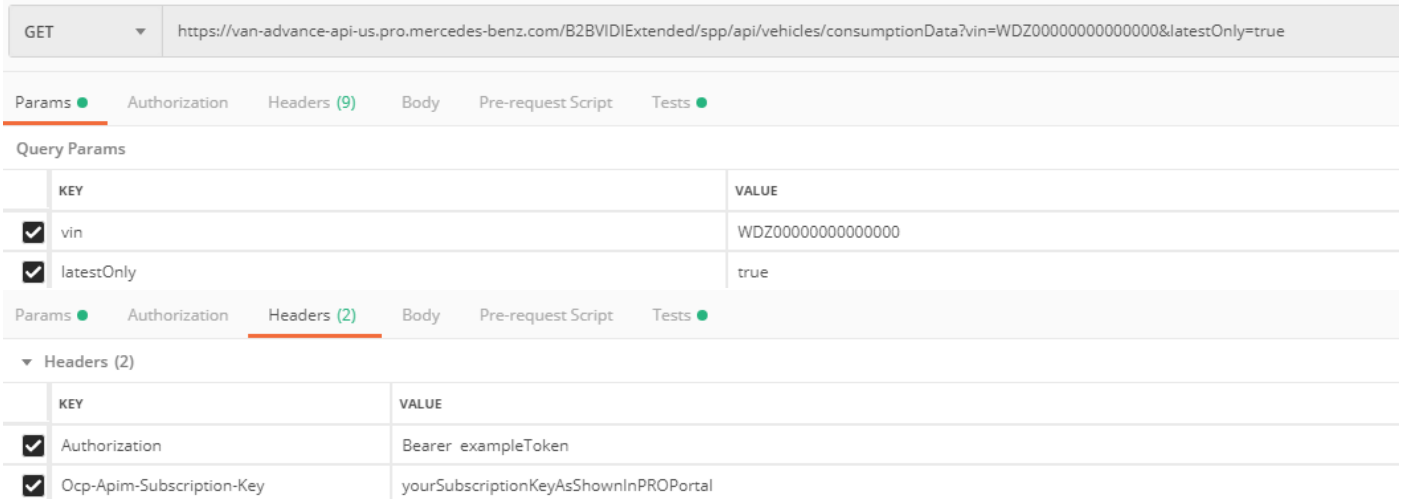
Response Schema

The schema of a successful response (200 OK) is as follows:

```
{
  "type": "object",
  "properties": {
    "items": {
      "type": "array",
      "items": {
        "type": "object",
        "properties": {
          "vin": {
            "type": "string"
          },
          "attributeName": {
            "type": "string"
          },
          "category": {
            "type": "string"
          },
          "timestamp": {
            "format": "date-time",
            "type": "string"
          },
          "value": {
            "type": "string"
          }
        }
      }
    },
    "nextPageLink": {
      "type": "string"
    },
    "count": {
      "format": "int64",
      "type": "integer"
    }}}
```

Examples:

An example of a Postman request for this API is given below:



An example response of the request from above is depicted below:


```
{
    "items": [
        {...}
        {
            "vin": "WDZ00000000000000",
            "attributeName": "fuelType",
            "category": "noCategory",
            "timestamp": null,
            "value": "Diesel"
        },
        {
            "vin": "WDZ00000000000000",
            "attributeName": "rangeLiquid",
            "category": "noCategory",
            "timestamp": "2019-05-21T17:08:30",
            "value": "620"
        },
        {
            "vin": "WDZ00000000000000",
            "attributeName": "tankLevelPercent",
            "category": "noCategory",
            "timestamp": "2019-05-21T17:08:30",
            "value": "100"
        },
        {
            "vin": "WDZ00000000000000",
            "attributeName": "tankLevelAdBlue",
            "category": "noCategory",
            "timestamp": "2019-05-21T17:08:30",
            "value": "70"
        }
    ],
    "nextPageLink": null,
    "count": 17
}
```


Note: In the Figure above, the text "{…}" symbolizes that some of the retrieved data points associated to this API (as depicted in the table in Appendix A) were shortened (more data points are provided in the output).

An example of a cURL request for requesting consumption data is given below:

```
curl -X GET \
'https://van-advance-api-us.pro.mercedes-benz.com/B2BVIDIExtended/spp/api/vehicles/consumptionData?vin=WDZ00000000000000&latestOnly=true' \
  -H 'Authorization: Bearer exampleToken' \
  -H 'Ocp-Apim-Subscription-Key: yourSubscriptionKeyAsShownInPROPortal' \
  -H 'X-CorrelationId: test' \
  -H 'X-TrackingId: test'
```

VI. EcoData

Allows for retrieving the Eco Data for a given VIN (Vehicle Identification Number) from the start date until present.

Request URL

```
https://van-advance-api-us.pro.mercedes-benz.com/B2BVIDIExtended/spp/api/vehicles/ecoData?vin={vin}[&startDate][&latestOnly][7$top][&$skip]
```

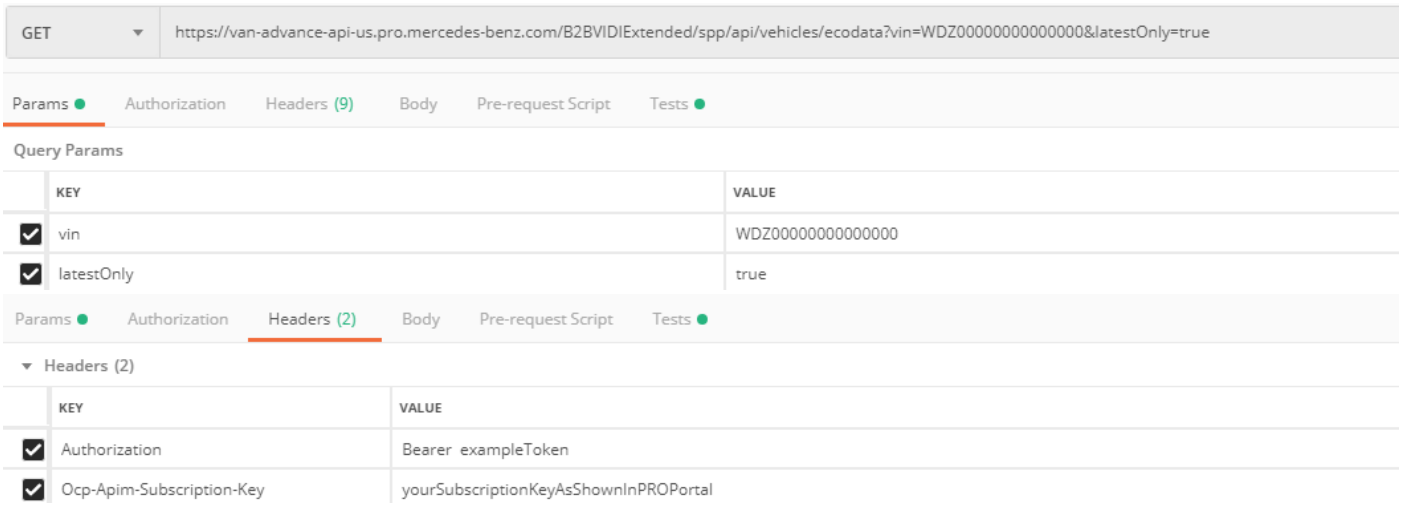
Reponse Schema

The schema of a successful response (200 OK) is as follows:

```
{
  "type": "object",
  "properties": {
    "items": {
      "type": "array",
      "items": {
        "type": "object",
        "properties": {
          "vin": {
            "type": "string"
          },
          "attributeName": {
            "type": "string"
          },
          "category": {
            "type": "string"
          },
          "timestamp": {
            "format": "date-time",
            "type": "string"
          },
          "value": {
            "type": "string"
          }
        }
      }
    },
    "nextPageLink": {
      "type": "string"
    },
    "count": {
      "format": "int64",
      "type": "integer"
    }
  }
}
```

Examples:

An example of a Postman request for this API is given below:



An example response of the request from above is depicted below:


```
{
    "items": [
        {
            "vin": "WDZ00000000000000",
            "attributeName": "ecoScoreConst",
            "category": "noCategory",
            "timestamp": "2019-05-21T17:23:30",
            "value": "81"
        },
        {
            "vin": "WDZ00000000000000",
            "attributeName": "ecoScoreFreeWhl",
            "category": "noCategory",
            "timestamp": "2019-05-21T17:23:29",
            "value": "68"
        },
        {
            "vin": "WDZ00000000000000",
            "attributeName": "ecoScoreBonusRange",
            "category": "noCategory",
            "timestamp": "2019-05-21T17:23:27",
            "value": "1.6"
        },
        {
            "vin": "WDZ00000000000000",
            "attributeName": "ecoScoreAccel",
            "category": "noCategory",
            "timestamp": "2019-05-21T17:23:22",
            "value": "80"
        }
    ],
    "nextPageLink": null,
    "count": 4
}
```


An example of a cURL request for requesting standard data is given below:

```
curl -X GET \
'https://van-advance-api-us.pro.mercedes-benz.com/B2BVIDIExtended/spp/api/vehicles/ecodata?vin=WDZ00000000000000&latestOnly=true' \
  -H 'Authorization: Bearer exampleToken' \
  -H 'Ocp-Apim-Subscription-Key: yourSubscriptionKeyAsShownInPROPortal' \
  -H 'X-CorrelationId: test' \
  -H 'X-TrackingId: test'
```

VII. GeneralStatusData

Allows for retrieving status data for a given VIN (Vehicle Identification Number) from the start date until present.

Request URL

```
https://van-advance-api-us.pro.mercedes-benz.com/B2BVIDIExtended/spp/api/vehicles/generalStatusData?vin={vin}[&category][&startDate][&latestOnly][&$top][&$skip]
```

Please note, that the request to retrieve GeneralStatusData allows the specification of an additional request parameter: *category*. The category parameter specifies which attributes should be returned in the response (kindly see Appendix A for further information).

Alternatively, if "category" is omitted in the call, the API response with all data points of GeneralStatusData.

If a given attribute was not retrieved from the vehicle and/or its value is unknown, the attribute will be retrieved nonetheless and its value will be "N/A". If the parameter category is not specified in the request, all the data points associated to the GeneralStatusData will be retrieved instead.

As also depicted in the data points table in Appendix A, the possible categories that can be retrieved using the "category" parameter are:

- doorStatus
- engineStatus
- evStatus
- tireStatus
- tripStatus
- vehicleStatus
- windowStatus

Reponse Schema

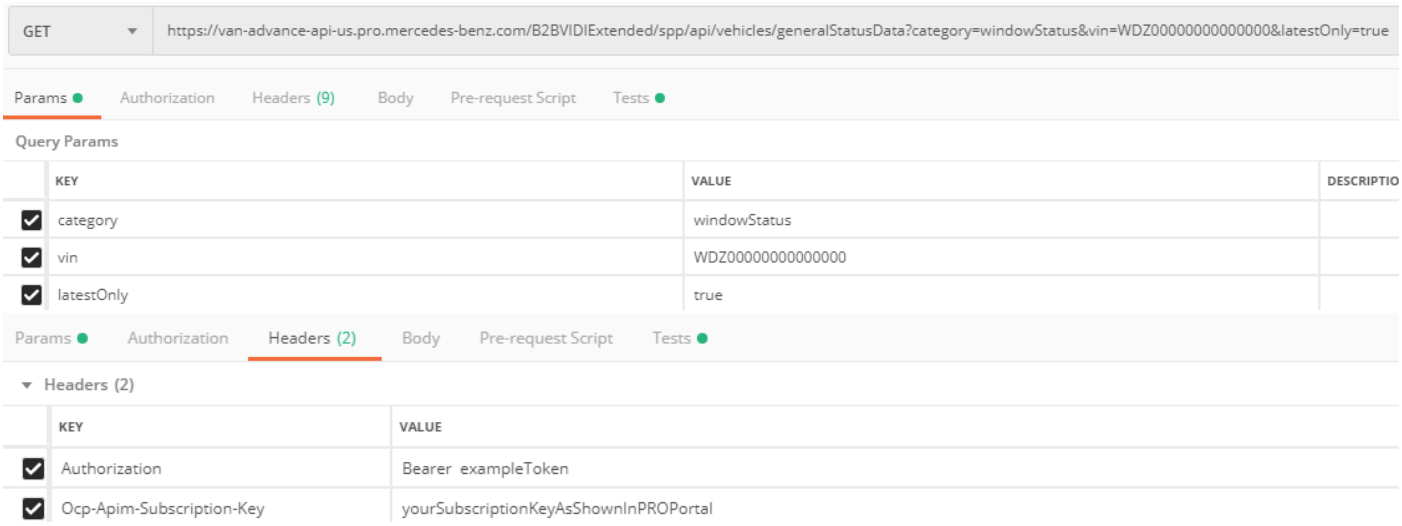
The schema of a successful response (200 OK) is as follows:

```
{
  "type": "object",
  "properties": {
    "items": {
      "type": "array",
      "items": {
        "type": "object",
        "properties": {
          "vin": {
            "type": "string"
          },
          "attributeName": {
            "type": "string"
          },
          "category": {
            "type": "string"
          },
          "timestamp": {
            "format": "date-time",
            "type": "string"
          },
          "value": {
```

```
            "type": "string"
          }
        }
      }
    },
    "nextPageLink": {
      "type": "string"
    },
    "count": {
      "format": "int64",
      "type": "integer"
    }
  }
}
```


Examples:

An example of a Postman request for this API to retrieve the data points in the category windowStatus is given below



An example response of the request from above is depicted below:


```
{
    "items": [
        {
            "vin": "WDZ00000000000000",
            "attributeName": "windowPositionFrontRight",
            "category": "noCategory",
            "timestamp": "2019-05-21T17:23:30",
            "value": "CLOSE"
        },
        {
            "vin": "WDZ00000000000000",
            "attributeName": "windowPositionFrontLeft",
            "category": "noCategory",
            "timestamp": "2019-05-21T17:23:22",
            "value": "CLOSE"
        }
    ],
    "nextPageLink": null,
    "count": 2
}
```


An example of a cURL request for requesting windowStatus data is given below:

```
curl -X GET \
'https://van-advance-api-us.pro.mercedes-benz.com/B2BVIDIExtended/spp/api/vehicles/generalStatusData?cate
gory=windowStatus&vin=WDZ00000000000000&latestOnly=true' \
  -H 'Authorization: Bearer exampleToken' \
  -H 'Ocp-Apim-Subscription-Key: yourSubscriptionKeyAsShownInPROPortal' \
  -H 'X-CorrelationId: test' \
  -H 'X-TrackingId: test'
```

Similarly, to retrieve instead the tripStatus, the following cURL request should be issued instead:

```
curl -X GET \
'https://van-advance-api-us.pro.mercedes-benz.com/B2BVIDIExtended/spp/api/vehicles/generalStatusData?cate
gory=tripStatus&vin=WDZ00000000000000&latestOnly=true' \
  -H 'Authorization: Bearer exampleToken' \
  -H 'Ocp-Apim-Subscription-Key: yourSubscriptionKeyAsShownInPROPortal' \
  -H 'X-CorrelationId: test' \
  -H 'X-TrackingId: test'
```

Last, if all status data should be retrieved, the following cURL would be issued:

```
curl -X GET \
'https://van-advance-api-us.pro.mercedes-benz.com/B2BVIDIExtended/spp/api/vehicles/generalStatusData?vin=
WDZ00000000000000&latestOnly=true' \
  -H 'Authorization: Bearer exampleToken' \
  -H 'Ocp-Apim-Subscription-Key: yourSubscriptionKeyAsShownInPROPortal' \
  -H 'X-CorrelationId: test' \
  -H 'X-TrackingId: test'
```

Appendix C

Vehicle Data Interface (light)

This is the light version of B2B service for the new Sprinter that provides a REST API for Mercedes-Benz/Freightliner Sprinter customers that allows for retrieving vehicle signals not only via VMT/App but also via a technical interface. The request differs from the information presented in Appendix B for PositionData and StandardData.

PositionData

Allows for retrieving the position signal data for a given VIN (Vehicle Identification Number) from the start date until present.

Request URL

```
https://van-advance-api-us.pro.mercedes-benz.com/B2BVIDILight/spp/api/vehicles/positionData?vin={vin}[&startDate][&latestOnly][&$top][&$skip]
```

I. StandardData

Allows for retrieving standard data for a given VIN (Vehicle Identification Number) from the start date until present.

Request URL

```
https://van-advance-api-us.pro.mercedes-benz.com/B2BVIDILight/spp/api/vehicles/standardVehicleData?vin={vin}[&$top][&$skip]
```

Appendix D

List of Data Points for VDI

List of available data points for the new Mercedes-Benz Sprinter via the service Vehicle Data Interface (VDI)

Data Point	Data Point Description	Sprinter	Vito
Vin	Vehicle Identification Number	X	X
brand	Brand of the vehicle (String)	X	X
type	Type of the vehicle (String)	X	X
model	Model of the vehicle (String)	X	X
fuelType	Fuel type (String)	X	X
gearboxType	Type of the gearbox (String)	X	X
licensePlate	License Plate of the vehicle (String)	X	X
gpsLatitude	GPS Latitude (in °)	X	X
gpsLongitude	GPS Longitude (in °)	X	X
gpsHeading	GPS Heading (in °)	X	X
odometer	Total distance of the vehicle (in km)	X	X
serviceIntervalDistance	Distance to be traveled until next service (in km)	X	X
distanceStart	Average distance since start (in km)	X	X
distanceReset	Average distance since reset (in km)	X	X
tirePressureFrontLeft	Pressure level of the front left tire (in kPa)	X	X
tirePressureFrontRight	Pressure level of the front right tire (in kPa)	X	X
tirePressureRearLeft	Pressure level of the rear left tire (in kPa)	X	X
tirePressureRearRight	Pressure level of the rear right tire (in kPa)	X	X
liquidConsumptionStart	Average liquid consumption since start (in l/km)	X	X
liquidConsumptionReset	Average liquid consumption since reset (in l/km)	X	X
electricConsumptionStart	Average electric energy consumption since start (in kWh)		
electricConsumptionReset	Average electric energy consumption since reset (in kWh)		
chargingPower	Charging power of electrical vehicle (in kW)		
distanceElectricalStart	Distance since start (in km)		
distanceElectricalReset	Distance since reset (in km)		
socProfile	Array with tupels of state of charge and time offset related to the timestamp of the attribute		
currentSpeedFromIC	Current speed of the vehicle (in km/h)	X	
rangeLiquid	Remaining range for available fuel level (in km)	X	X
serviceIntervalDays	Number of days left until next service (in days)	X	X
serviceWarning	Service Warning	X	X
serviceContent	Service Content	X	X
averageSpeedStart	Average speed since start (in km/h)	X	
averageSpeedReset	Average speed since reset (in km/h)	X	
tireWarningLamp	Warning tire lamp from IC	X	X
rangeElectric	Remaining range for electric engine (in km)		

departureTime	Departure time counted in minutes from midnight depending on IC time in vehicle (in minutes)		
endOfChargeTime	End of charge time counted in minutes from midnight depending on on IC time in vehicle (in minutes)		
maxRange	Max. electrical range with 100 % charge (in km)		
engineOilTemperature	Engine oil temperature (in °C)	X	X
engineCoolantTemperature	Engine coolant temperature (in °C)	X	X
doorLockStatusVehicle	Door lock state of the vehicle (enum: UNLOCK, INT_LOCK, EXT_LOCK, SEL_UNLOCK)	X	X
tankLevelPercent	Current fuel level (%)	X	X
tankLevelAdBlue	Catalyst fuel level	X	X
warningBrakeLiningWear	Warning of the brakelining wear	X	X
warningBrakeFluid	Warning of the the brake fluid	X	X
parkBrakeStatus	Shows if the park break is active or not (TRUE/FALSE)	X	X
warningCoolantLevelLow	Warning coolant level	X	X
warningWashWater	Shows if the wash water level too low (TRUE/FALSE)	X	X
lightSwitchPosition	Position of the light switch (enum: AUTO, LOW_BEAM, PARK_LAMP_LEFT, PARK_LAMP_RIGHT, SIDELIGHTS)	X	X
warningLowBattery	Warning battery state	X	
batteryState	Battery state (enum: GREEN, YELLOW, RED)	X	
tirePressureScope	Pressure scope of tires (enum: NEITHER, PRW, RDK)	X	X
tireWarningsRdk	Warning tire	X	X
speedUnitFromIC	Speed unit of the IC (KM/H, MPH)	X	X
temperatureUnitHU	Temperature unit of the vehicle head unit (enum: CELSIUS, FAHRENHEIT)	X	
timeFormatHU	Time format of the vehicle head unit (enum: 12h, 24h)	X	
ecoScoreFreeWhl	ECOscore rating free wheeling (%)	X	X
ecoScoreAccel	ECOscore rating acceleration (%)	X	X
ecoScoreConst	ECOscore rating constancy (%)	X	X
ecoScoreBonusRange	ECOscore rating bonus range (expressed in km)	X	X
deckLidStatus	Opening state of the decklid (enum: CLOSE, OPEN)	X	X
windowPositionFrontLeft	Opening state of the front left window (enum: CLOSE, OPEN, INTERMEDIATE)	X	X
windowPositionFrontRight	Opening state of the front right window (enum: CLOSE, OPEN, INTERMEDIATE)	X	X
auxHeatStatus	State of auxiliary heating (enum: SNA, HEATING_NORMAL, VENTILATE_NORMAL, HEATING_AUX, POST_HEATING, POST_VENTILATE, HEATING_PSEUDO_AUX)	X	X
chargingActive	Is charging in progress indicator		
chargingStatus	Status of charging progress		
departureTimeMode	Activation mode of planned departure time for electrical vehicle (enum: INACTIVE, ADHOC_ACTIVE, WEEKLYSET_ACTIVE)		
departureTimeSoc	Planned state of charge at planned departure time for electrical vehicle (%)		
precondAtDeparture	Activation state of preconditioning for electrical vehicle at planned departure time (enum: INACTIVE, ACTIVE)		

precondError	Error indicator for preconditioning of electrical vehicle (enum: NO_REQ_CHG, PRECON_NOT_POS, PRECON_AVL, CHARGE_NOT_FINISH, PRECON_ERROR)		
precondActive	Preconditioning 2/3 active		
departureTimeWeekday	Preset weekday for planned departure time for electrical vehicle (enum: MONDAY, TUESDAY, WEDNESDAY, THURSDAY, FRIDAY, SATURDAY, SUNDAY)		
smartCharging	Status optimized/intelligent charging		
liquidRangeSkipIndication	Shows if the liquid range is displayed or not in the head unit (enum: DISPLAY, SKIP)	X	
electricalRangeSkipIndication	Shows if the electric range is displayed or not in the head unit (enum: DISPLAY, SKIP)		
soc	Status of charge (%)		
doorStatusFrontLeft	Door status front left	X	X
doorStatusFrontRight	Door status front right	X	X
doorStatusRearLeft	Door status rear left	X	X
doorStatusRearRight	Door status rear right	X	X
doorLockStatusFrontLeft	Door lock status front left	X	X
doorLockStatusFrontRight	Door lock status front right	X	X
doorLockStatusRearLeft	Door lock status rear left	X	X
doorLockStatusRearRight	Door lock status rear right	X	X
doorLockStatusDeckLid	Status of the deck lid (enum: CLOSE, OPEN)	X	X