

## Operation Monitoring

Operation Monitoring API refers to any operations dealing with real time information.

- **Vehicle Position**

The operation returns real time vehicle position for given line id's

<b>Endpoint</b>	<b>https://opendata-api.stib-mivb.be/OperationMonitoring/2.0/VehiclePositionByLine/{line id's}</b>
<b>Method</b>	GET
<b>MimeType</b>	application/json
<b>Arguments</b>	a comma separated list of line id's, maximum 10 id's are allowed in the list.
<b>Returned value</b>	an array of "lines" and for each requested line, an array of "vehiclePositions"

### 1. Sample of a request using Curl

```
> curl -k -X GET --header "Accept: application/json" --header "Authorization: Bearer b2ba6c7a35d667564ffa2765aec6ea07" "https://opendata-api.stibmivb.be/OperationMonitoring/2.0/VehiclePositionByLine/1"
```

### 2. Sample of a request using JQuery

```
var me = this;

// get Vehicle
Positions $.ajax({
  url: me.openDataBaseUrl + '/OperationMonitoring/2.0/VehiclePositionByLine/' + me.lineId,
  type: 'GET',
  error: function (jqXHR, textStatus)
    { // process error
    },
  beforeSend: function setHeader(xhr) {
    xhr.setRequestHeader('Accept', 'application/json');
    xhr.setRequestHeader('Authorization', 'Bearer ' + me.apiToken);
  // add the api token here
  },
  success: function (data) {
    // process the result here
    console.log('vehiclePosition: ' + data);
  },
}); // end of $.ajax({
```

### 3. Sample of the returned value

```
{
  "lines": [
    {
      "lineId": 1,
      "vehiclePositions": [
        {
          "directionId": 8161,
          "distanceFromPoint":0,
          "pointId": 8012
        },
        {
          "directionId": 8731,
          "distanceFromPoint":0,
          "pointId": 8021
        }
      ]
    }
  ]
}
```

### 4. Remarks:

- a. Note that the position of a vehicle is given in the following format:
  - "directionId": the direction of the vehicle as the terminal "pointId"
  - "distanceFromPoint": the distance (in meters) covered by a vehicle since the last point represented by the "pointId" attribute
  - "pointId": the last Stop crossed by a vehicle
  
- b. *Note about the Id's usage:*
  - The Line Id used as argument of the operation refers to the field "route\_short\_name" of the GTFS file "routes.txt"
  - The returned "directionId" and "pointId" refer to the fields "stop\_id" of the GTFS file "stops.txt"
  
- c. *Lifetime:*
  - A vehicle position has a lifetime of about 20 seconds, therefore it is not necessary to poll the service at a higher frequency.
  - The array of vehiclePositions may include some technical stops. These kind of stops are not published in the GTFS stops files, which is why you should ignore them.