PRIM functional documentation

The Regional Mobility Information Platform

Getting started with Île-de-France Mobilités real time APIs

Updated on November 15, 2023

Contents

Preamble

The role of Île-de-France Mobilités

Île-de-France Mobilités is the Organizing Authority for Sustainable Mobility (AOMD) in the Ile-de-France region.

It designs, organizes and finances public transportation for all Ile-de-France residents.

The Organization **also guarantees the quality of the passenger information (transport offer, timetables, pricing and disruption information).**

IDF Mobilités currently has an Information System dedicated to collecting, storing and distributing public transport data. This consists of about **fifteen interfaced applications**, which ultimately offering:

- A range of services for passengers through websites and mobile applications.
- Data and APIs for developers/re-users through the site prim.iledefrance-mobilites.fr

The passenger information business target must register in a **global trajectory** towards **MaaS (Mobility-as-a-Service)**. This essential step consists of **creating a Regional Mobility Information Platform (PRIM)** that:

- Aggregates the entire passenger information offering in terms of services and data;
- Feeds several Front Offices dedicated to different audiences, primarily those of Ile-de-France Mobilités, but possibly also to other customer Front Offices

Getting started with APIs

Real-time APIs from Île-de-France Mobilités source

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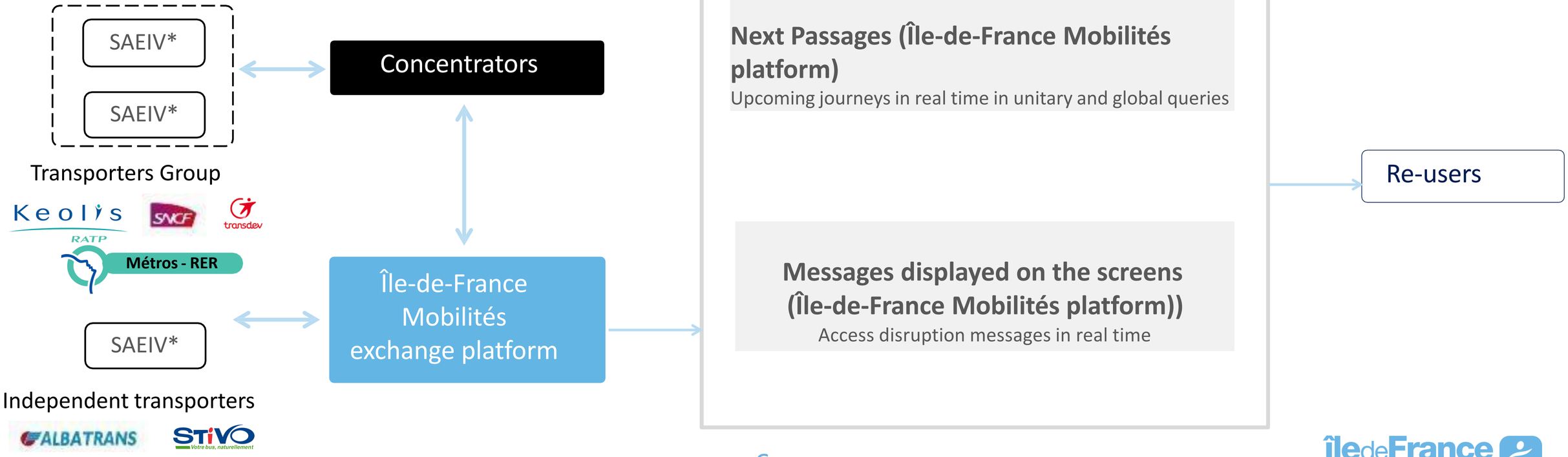
Data recovery diagrams

Île-de-France Mobilités exchange platform

1. **collects** information,
2. **distributes** it to other transporters,
3. **makes it** available to all.



*SAEIV = (Travel Operation and Information Support System)

Information on distributed data

The standards portal for public transport supply data:
http://www.normes-donnees-tc.org/

These services offer data about:

- The next passages for all the lines available on the network
- The next passages at a particular stop
- Traffic information and network disruptions

Data available on the APIs Next passages:
To find out the data relating to the repositories (stops and lines), available on the Île-de-France Mobilités portal, follow this link.

The list of available data is updated weekly.

Data profile: SIRI Lite

Time format: yyyy-mm-dd 'T' hh:mm:ss.SSSZ

Object identification

Line identification

The identifier of a **"LineRef"** line must be passed in the form :

STIF:Line::CXXXXX: with **CXXXXX** the line identifier in the **Référentiel Île-de-France Mobilités**

Exemples :

•For RER line B, the line identifier in the Île-de-France Mobilités repository is **C01743,** so the *pattern* is **"STIF:Line::C01743:".**

•For the Phébus A bus line, the line identifier in the Référentiel Île-de-France Mobilité is **C00692,** so the *pattern* is **"STIF:Line::C00692:".**

Stop identification

The **"MonitoringRef_ZDE"** stop identifier must be passed in the form :

STIF:StopPoint:Q:XXXXX: with **XXXXX t**he identifier of the référentiel des arrêts

Examples.

- For the "Gare de Massy-Palaiseau" stop on RER line B, the repository identifier is **412833,** the pattern is **"STIF:StopPoint:Q:412833:".**

Getting started with APIs

Real-time APIs

« Next Passages » APIs from source Île-de-France Mobilités

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Focus on « Next Passages » APIs: global and unitary queries

Estimate deviation

The next passages are forecast data and therefore, by definition, a discrepancy may be encountered between the estimate and the actual passage.

Accuracy deteriorates over time, particularly beyond 20 minutes for the bus and 30 minutes for rail modes.

Passage times

If the vehicle has not started its journey, the system provides the passage times planned by the operator the day before the current day.

Data depth

For all modes, data is available to a maximum depth of three hours for transporters who allow it..

Passage forecasts

Bus mode: predicted passage at a stop based on the location of the bus, considering previous journeys.

Rail mode: predicted passage through a stop based on vehicle location.

Parameters
Answer

ArR :Boarding area

ZdA : Stop area

ZdC : Transfer Zone

Query structure - Call parameters

Next passages service - Unit query

Stop (required)

This service allows you to obtain the next passage times in real time for a given stop.

The tolerated call parameters are all the stop levels described in the Île-de-France stop repository(arrets.xls), i.e. .

- ARr, boarding zone (formerly ZDER): "STIF:StopPoint:Q:[ArRId]:".

Example Platform M4 - Châtelet: STIF:StopPoint:22092: (forward) and STIF:StopPoint:463158: (return)

A platform contains 2 different boarding zone identifiers (ArRId): one for the forward direction and one for the return direction.
A query on a platform will return the next passages in a single direction.

For RER and Transilien stations, SNCF fills in data at a fictitious ArR representing the entire station.
--> Prefer queries to ZdA / ZdC

- ZdA (Monomodal stop area) : « STIF:StopArea:SP:[ZdAId]: ».

Example Metro - Châtelet stop area: STIF:StopArea:SP:42587.

- *ZdC (multimodal transfer zone) « STIF:StopArea:SP:[ZdCId]: »*

Example Transfer zone - Châtelet: STIF:StopArea:SP:71264.

- The Stop Repository: Stops dataset displays the reference stops in the Île-de-France stop repository.
- The Stop Repository: Relations dataset displays all relations between objects in the Île-de-France stop repository.
- The Perimeter of available real-time data dataset displays the list of stops by line/transporter concerned by this service.

Parameters

Answer

ArR :Boarding area

ZdA : Stop area

ZdC : Transfer Zone

Query structure - Call parameters

Next passages service - Unit query

Line (optional)

This service allows you to obtain the next timetable in real time for a given stop on a given line.

The tolerated call parameters are the lines described in the Île-de-France lines repository (referentiel-des-lignes.xls), i.e. .

- ID_Line, commercial line reference identifier: "STIF:Line::[ID_Line]:".

Example RER C line: STIF:Line::C01727.

The Repository of public transport lines in Île-de-France - active and soon to be active lines dataset lists the commercial public transport lines (train, RER, metro, tramway, bus and coach) operating in the Paris region.

Parameters

Answer

ArR :Boarding area

ZdA : Stop area

ZdC : Transfer Zone

Query structure - Call parameters

Next passages service – Global query

ALL (required)

This service allows you to obtain the next passage times in real time for all stops on the network.

The only tolerated call parameter is: ALL.

Example: LineRef=ALL

The query wizard available on the PRIM portal cannot be used for the global query, due to the size of its response.
We recommend that you request this API through a query interface or a script (e.g. page 12).

The **Perimeter of available real-time data** dataset shows the list of stops by line/transporter concerned by this service.

Sample answers - Quay level (return)

Parameters
Answer

ArR :Boarding area
ZdA : Stop area
ZdC : Transfer Zone

Query

https://prim.iledefrance-mobilites.fr/marketplace/stop-monitoring?MonitoringRef=STIF:StopPoint:Q:463158:

Response
Part 1


```
"StopMonitoringDelivery": [
 {
  "ResponseTimestamp": "2022-05-24T12:13:37Z",
  "Version": "2.0",
  "Status": "true",
  "MonitoredStopVisit": [
   {
    "RecordedAtTime": "2022-05-24T12:13:14.876Z",
    "ItemIdentifier": "RATP-SIV:Item::20220524.182.R.C01374.PALS.IDFM.C01374.R.RATP.50026977:LOC",
    "MonitoringRef": {
     "value": "STIF:StopPoint:Q:463158:"
    },
    "MonitoredVehicleJourney": {
     "LineRef": {
      "value": "STIF:Line::C01374:"
     },
     "OperatorRef": {
      "value": "RATP-SIV:Operator::RATP.OCTAVE.4.4:"
     },
     "FramedVehicleJourneyRef": {
      "DataFrameRef": {
       "value": "any"
      },
      "DatedVehicleJourneyRef": "RATP-SIV:VehicleJourney::20220524.182.R.C01374:LOC"
     },
     "DirectionName": [
      {
       "value": "PORTE DE CLIGNANCOURT"
      }
     ],
```


Response time.

Description of stop passages.

Date and time the data was produced.

Identifier of the stop concerned by the query.

Journey description.

Line identifier

Responses to **queries** about multi-line stops (monomodal or **multimodal zones**) should be filtered on **the "LineRef".**

Operator identifier.

Journey identification.

Context for identifying the journey.

Identifier of the journey itself.

Direction name .

The time displayed in the ResponseTimestamp **field is expressed in local (summer GMT+02, winter GMT+01).**
All other times in the response are in GMT

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Sample answers - Quay level (return)

Parameters
Answer

ArR :Boarding area
ZdA : Stop area
ZdC : Transfer Zone

Query

https://prim.iledefrance-mobilites.fr/marketplace/stop-monitoring?MonitoringRef=STIF:StopPoint:Q:463158:

Response
Part 2


```
"DestinationRef": {
          "value": "STIF:StopPoint:Q:22141:"
        },
        "DestinationName": [
         {
          "value": "Porte de Clignancourt"
         }
        ],
        "JourneyNote": [
         {
          "value": ""
         }
        ],
        "MonitoredCall": {
         "StopPointName": [
          {
           "value": "Châtelet"
          }
         ],
         "VehicleAtStop": false,
         "DestinationDisplay": [
          {
           "value": "Porte de Clignancourt"
          }
         ],
         "ExpectedArrivalTime": "2022-05-24T12:17:14.876Z",
         "ExpectedDepartureTime": "2022-05-24T12:17:14.876Z",
         "DepartureStatus": "onTime"
        }
       }
      },
```


Identifier of the last stop in the journey.

Name of the destination stop.

Additional text describing the journey.

Timetable information for the stop in question.

Name of stop point.

The value "true" indicates that the vehicle is stationary. Default value: "false".

Destination as displayed on the vehicle's windvane of the vehicle at this stop (or on the local display).

SAE estimated time of arrival.

SAE estimated departure time.

Characterization of the expected departure time (or measured if the vehicle is at the platform). Default: “onTime”.

If the passage is deleted, the value is "cancelled"..

Times are expressed in GMT in the response.

Taking the response into account

AimedArrival/ DepartureTime

Theoretical departure and arrival times established the day before by the transporter, taking into account the availability of drivers and vehicles. These times are not always available.

ExpectedArrival/ DepartureTime

Predictions of next passage times considering **the real position** of the vehicle, the time remaining to reach a stop and the travel times observed on previous journeys.

Arrival/ DepartureStatus

Characterize expected (or measured if the vehicle is docked) departure or arrival times.
These fields can take the following values:

- **onTime :** At the expected time
- **early** : In advance
- **delayed**
- **cancelled :** Passage to a canceled stop (does not concern the entire journey).
- **missed :**The vehicle didn't stop when it should have, but the journey continued.
- **arrived**
- **departed**
- **notExpected :**Unplanned (case of TAD not yet triggered)
- **noReport :** Not communicated. Default Value: « onTime ».

The API response contains data from 30 minutes before the time of the query and up to 2 hours afterwards.

Taking the answer into account

DirectionRef

There is no shared repository at Île-de-France Mobilités level, so this field is optional. However, the **"DestinationRef"** field (terminus of the journey) is always filled in.

DatedvehicleJourney Ref

The journey ID **uniquely identifies** a journey for all transporter.
In a response to a global query, the journey is reconstructed because we obtain the next passages at all the stops of this journey.

VehicleFeatureRef

Indicates **train length**.
This field can take two values.

- The value **"shortTrain"** indicates a short train.
- The value **'longTrain"** indicates a long train.

However, this field is optional for transporters, so if it does not appear in the response, this means that the transporter has not transmitted the information.

RATP doesn't provide journey identifiers, but a technical counter with no link to the notion of journey.
As a result, in the response to a global query, for the same line and the same direction, we obtain all the vehicles stopping at the same time, whatever the stop. As a result, in global query responses, **RATP journeys are not correctly reconstructed**. However, the next stops are all indicated in the response.

Getting started with APIs

Real-time APIs

The « Messages displayed on screens » API from source Île-de-France Mobilités

Focus on the "Messages displayed on screens" API»

Media

For SNCF and the OPTILE bus network, the real-time APIs do not have access to the information provided on the media (website, Twitter, etc.).

Station screens

RATP : All traffic information available in RER and metro stations and on RATP media.

SNCF: Information available on screens in stations.
Bus: Information available on screens at bus stops.

We do not receive traffic information for RATP bus lines.

Query structure - Call parameters

Stop

This service provides real-time traffic information displayed on the screens at a given stop.
Example Saint-Rémy-Lès-Chevreuse station: STIF:StopPoint:Q:412844.

Line

This service provides real-time traffic information displayed on the screens for a given line.
Example RER C line: STIF:Line::C01727.

The ALL call parameter provides real-time traffic information displayed on the screens of all lines in the network.
Example: LineRef=ALL

Channel

This service identifies the channel for which you wish to obtain real-time traffic information displayed on the screens. If this field is not present, the query concerns all channels.
Example: InfoChannelRef=Information OR Disruption OR Commercial

To query the API you can either specify the "StopPointRef" or "LineRef" field **but not both at the same time.**
One of these two fields is required because the "InfoChannelRef" field cannot be queried alone.

Support & Documentation

Support & Documentation

The PRIM Support team will help you use these services through the various documentations provided.
Support can be reached by e-mail or through the "Slack" instant discussion forum.

Do you have a question?
A suggestion for improvement?
Don't hesitate to contact us via our
support e-mail: contact-prim@iledefrance-mobilites.fr

Prim platform presentation (PDF)