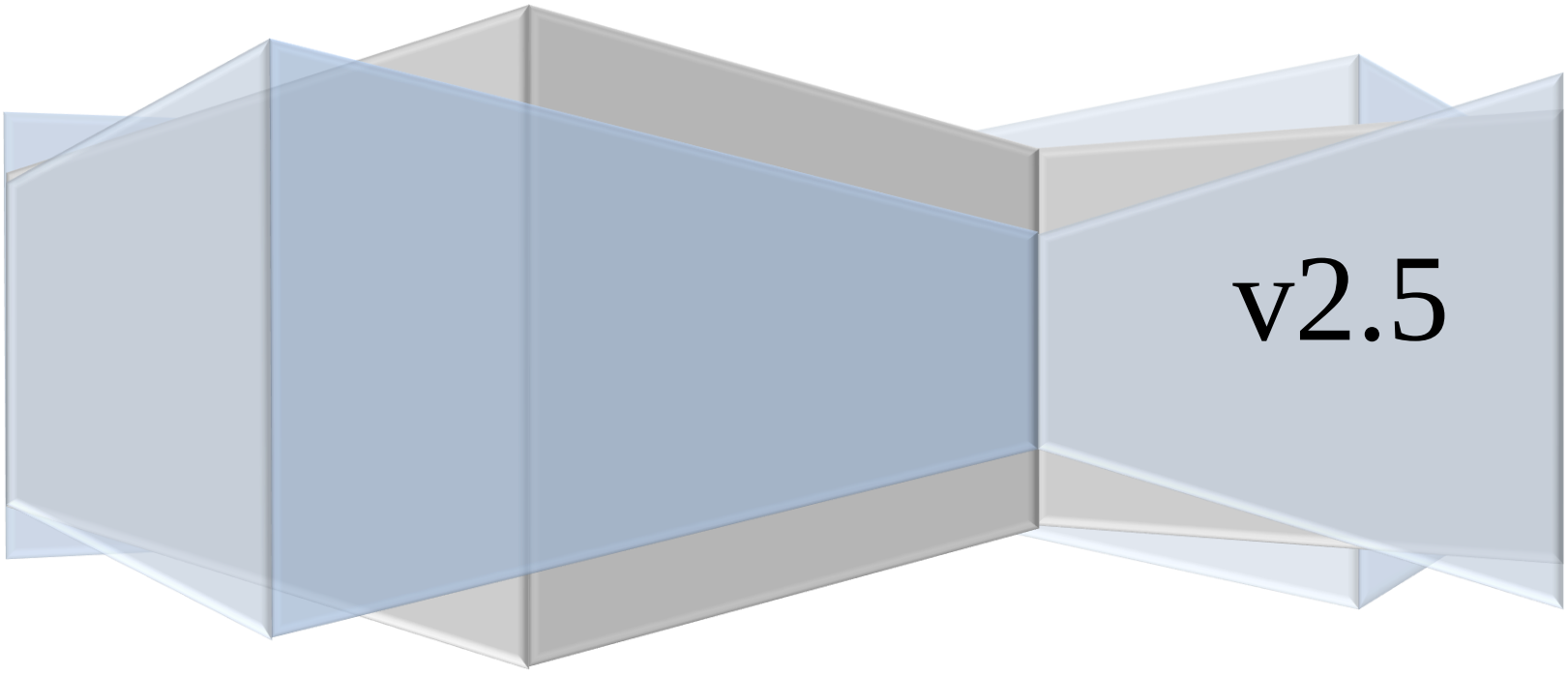
NJ TRANSIT

Real-time Rail Data Web Services



Contents

Introduction

NJ Transit's Real Time Data Web Services allows 3rd parties to access to our real-time data through an API interface in various formats. These formats provide access to our latest updates which include full screen, banner, and inline messages that are applied to a station or a specific train. Soon, it also will provide approximate GPS location data. (Some error has intentionally been introduced.)

Web calls are for the real-time data and not for scheduled trips for trains that have not left their origin. Third parties should not be constantly requesting data but only when there is a specific request. For schedule data beyond the next 19 departures from a station, the developer should be using the GTFS data or our new StationScheduleXML feed. For position data on each train the users should use the new VehicleDataXML feed.

We urge developers to closely examine the data tag descriptions and appendixes in this document in order to provide the most accurate information. For any questions with the real-time data interface, we can be contacted at ProductionPasscomm@njtransit.com. Any questions about the GTFS schedule data should be made to the Customer Service Helpdesk from 8:30am to 5pm at **(973) 275-5555**.

User Portal

We have developed a new user portal that will allow quick access to the web services, various RSS feeds, documentation, usage statistics, GTFS-RT (Feed and documentation below is provided by TRANSCOM)

Sign Up

To sign up, go to our portal at https://datasource.njtransit.com/ and click on "Register New User". Fill in all the required information and once you register you will receive an e-mail with your Test and Production API credentials.

NOTE: User access limits are set to allow reasonable daily usage. These limits will not allow further accesses to the web service for the remainder of the day. After midnight these will be reset to zero. **There will be a 40,000 limit per day for the current and vehicle data and 10 accesses per day for the full schedule.**

Front End Site

The front end site will allow you to enter your API username and password to get sample data for each type of service.

The URLs below are also accessible through our User Portal.

Web Services Production URL:
http://traindata.njtransit.com:8092/NJTTrainData.asmx

Web Services Test URL:
http://njttraindata_tst.njtransit.com:8090/njttraindata.asmx

Method Calls

There are 11 types of method calls:

- getStationListXML (list all stations in XML format)
- getTrainScheduleJSON (list train schedule for a given station in JSON format, data is much the same as DepartureVision with train stop list information)
- getTrainScheduleXML (list current real-time train schedule for the next 19 trains at one station for a given station in XML format, data is much the same as DepartureVision with train stop list information)
- getStationScheduleXML (provides a list of the 27 hours of train schedule data for any one station or all stations if no station is entered. Limited access to 10 times per day but only needed once per day after midnight - 12:30 would be better - to show the schedule for the 27 hour period from 12 midnight until 3am the next day. The GTFS data does not always match the daily schedules in our train control system. NJT_Only is a filter, pass value 1 for NJT trains only; pass value 0 for All trains)
- getVehicleDataXML (provides the real-time position data for each active train. Provides the latest position, next station and seconds late for any train that has moved in the last 5 minutes.)
- getGTFS_RTfeed (Gets a real-time GTFS File. Note – this is provided by a third party from our above APIs. It therefore may not be functioning all the time. There may also be delays in the content. This interface requires that you use the corresponding GTFS Schedule file from the Developer's Site at www.njtransit.com/developers)
- getStationMSGXML (Gets the all station message, but when pass station code, returns station message. Note – this is provided by a third party from our above APIs.)
- getTrainScheduleJSON19Rec (list train schedule for a given station in JSON format, data is much the same as DepartureVision, but without train stop list information)
- getTrainScheduleXML19Rec (list current real-time train schedule for the next 19 trains at one station for a given station in XML format, data is much the same as DepartureVision, but without train stop list information)
- getTrainStopListJSON (list train stop list in JSON format by train ID)

- getTrainStopListXML (list train stop list in XML format by train ID)

The current version of the API will not restrict users to a static IP address and will allow any request, within the daily limit, with the appropriate key to access the data.

The web services need to be added into the application as a web reference and then you can include the desired parameters.

Please pass username and password parameters first, then call the methods, please see detail below:

username and password parameters:
UserCredentials.userName, UserCredentials.password

Sample Code for Data Retrieval

C# code example of data retrieval (service1 is your web reference name):

```
service1.UserCredentials user = new service1.UserCredentials();
        user.userName = "your username here";
        user.password = “your password here";

        service1.ServiceExternal service = new service1.ServiceExternal();
        service.UserCredentialsValue  = user;

        try
        {
            XmlNode doc1  = service.getTrainScheduleXML("NP");
        }
        catch
        {
        }
        finally
        {
        }
```

PHP example of data retrieval

```
$homepage =
file_get_contents('http://traindata.njtransit.com:8092/njttraindata.asmx/getTrainScheduleJSON?username=
USERNAME&password=PASSWORD&station=NP');

echo $homepage;
```

Schema for Real-time Web Service

GetTrainScheduleXML and GetTrainScheduleJSON Sample

The sample below is for getTrainScheduleXML. getTrainScheduleJSON returns the same XML in JSON format. Schedule data matches Departure Vision. There is a limit on total schedule records, it starts with current time and gives 19 records for the selected station.

Case 1) When Full Screen Message is active, schedule data will be blocked:

```
<STATION>
<FULLSCREENMSG>This is a test of full screen<BR></FULLSCREENMSG>
 </STATION>
```

Case 2) Full screen message is not on

```
<STATION>
<STATION_2CHAR>NP</STATION_2CHAR>
<STATIONNAME>Newark Penn</STATIONNAME>
<BANNERMSG>This is a test message</BANNERMSG>
<ITEMS>
<ITEM>
<ITEM_INDEX>4</ITEM_INDEX>
<SCHED_DEP_DATE>29-Jun-2016 11:01:00 AM</SCHED_DEP_DATE>
<DESTINATION>St Albans</DESTINATION>
<TRACK>2</TRACK>
<LINE>VERMONTER -R</LINE>
<TRAIN_ID>A56</TRAIN_ID>
<CONNECTING_TRAIN_ID/>
<STATUS>in 12 Min</STATUS>
<SEC_LATE>137</SEC_LATE>
<LAST_MODIFIED>29-Jun-2016 10:51:14 AM</LAST_MODIFIED>
<BACKCOLOR>yellow</BACKCOLOR>
<FORECOLOR>black</FORECOLOR>
<SHADOWCOLOR>yellow</SHADOWCOLOR>
<GPSLATITUDE>40.6068</GPSLATITUDE>
<GPSLONGITUDE>-74.2761</GPSLONGITUDE>
<GPSTIME>29-Jun-2016 10:51:13 AM</GPSTIME>
<STATION_POSITION>1</STATION_POSITION>
<LINEABBREVIATION>AMTK</LINEABBREVIATION>
<INLINEMSG/>
<STOPS>
<STOP>
<NAME>New Carrollton</NAME>
```

<TIME>29-Jun-2016 08:18:00 AM</TIME>
<PICKUP>Pick Up Only</PICKUP>
<DEPARTED>YES</DEPARTED>
<STOP_STATUS>OnTime</STOP_STATUS>
</STOP>
<STOP>
<NAME>BWI Airport</NAME>
<TIME>29-Jun-2016 08:35:00 AM</TIME>
<PICKUP>Pick Up Only</PICKUP>
<DEPARTED>YES</DEPARTED>
<STOP_STATUS>OnTime</STOP_STATUS>
</STOP>
<STOP>
<NAME>Baltimore</NAME>
<TIME>29-Jun-2016 08:52:00 AM</TIME>
<PICKUP>Pick Up Only</PICKUP>
<DEPARTED>YES</DEPARTED>
<STOP_STATUS>OnTime</STOP_STATUS>
</STOP>
<STOP>
<NAME>Wilmington</NAME>
<TIME>29-Jun-2016 09:36:00 AM</TIME>
<PICKUP>Pick Up Only</PICKUP>
<DEPARTED>YES</DEPARTED>
<STOP_STATUS>OnTime</STOP_STATUS>
</STOP>
<STOP>
<NAME>Philadelphia</NAME>
<TIME>29-Jun-2016 09:59:00 AM</TIME>
<DEPARTED>YES</DEPARTED>
<STOP_STATUS>OnTime</STOP_STATUS>
</STOP>
<STOP>
<NAME>Trenton</NAME>
<TIME>29-Jun-2016 10:30:19 AM</TIME>
<DEPARTED>YES</DEPARTED>
<STOP_STATUS>OnTime</STOP_STATUS>
</STOP>
<STOP>
<NAME>Newark Penn</NAME>
<TIME>29-Jun-2016 11:05:17 AM</TIME>
<DEPARTED>NO</DEPARTED>
<STOP_STATUS>OnTime</STOP_STATUS>
</STOP>
<STOP>
<NAME>New York</NAME>
<TIME>29-Jun-2016 11:35:17 AM</TIME>
<DEPARTED>NO</DEPARTED>
<STOP_STATUS>OnTime</STOP_STATUS>
</STOP>
<STOP>
<NAME>Stamford</NAME>
<TIME/></STOP>

```
<STOP>
<NAME>Bridgeport</NAME>
<TIME/>
</STOP>
<STOP>
<NAME>New Haven</NAME>
<TIME/>
</STOP>
<STOP>
<NAME>Wallingford</NAME>
<TIME/>
</STOP>
<STOP>
<NAME>Meriden</NAME>
<TIME/>
</STOP>
<STOP>
<NAME>Brattleboro</NAME>
<TIME/>
</STOP>
<STOP>
<NAME>Claremont</NAME>
<TIME/>
</STOP>
<STOP>
<NAME>Windsor</NAME>
<TIME/>
</STOP>
<STOP>
<NAME>Randolph</NAME>
<TIME/>
</STOP>
<STOP>
<NAME>Montpelier</NAME>
<TIME/>
</STOP>
<STOP>
<NAME>Waterbury</NAME>
<TIME/>
</STOP>
<STOP>
<NAME>Essex Junction</NAME>
<TIME/>
</STOP>
<STOP>
<NAME>St Albans</NAME>
<TIME/>
</STOP>
</STOPS>
</ITEM>
</ITEMS>
</STATION>
```

GetTrainScheduleXML and GetTrainScheduleJSON Tag Description:

Entity NAME	Type	Is Mandatory	Description
STATION			**General station information for the selected station**
STATION_2CHAR	VARCHAR2	YES	2 Character Station Code - See Appendix V
STATIONNAME	VARCHAR2	YES	Station full name
FULLSCREENMSG	VARCHAR2	NO	Full Screen Message - Schedule is blocked
BANNERMSG	VARCHAR2	NO	Banner message for the selected station
ITEM			**Includes information for each individual train**
ITEM_INDEX		YES	Row number
SCHED_DEP_DATE	TIMESTAMP	YES	Scheduled Departure date/time at selected location
DESTINATION	VARCHAR2	YES	Destination Name
TRACK	VARCHAR2	YES	Track Number/Letter. See Appendix II for Track Translations
LINE	VARCHAR2	YES	Train Line
TRAIN_ID	VARCHAR2	YES	Train number
STATUS	VARCHAR2	NO	Current train status
SEC_LATE	VARCHAR2	NO	Train Delay in Seconds
BACKCOLOR	VARCHAR2	YES	Background color for the line
FORECOLOR	VARCHAR2	YES	Foreground color for the line
SHADOWCOLOR	VARCHAR2	YES	Shadow color for the line
GPSLATITUDE	VARCHAR2	NO	Train GPS Latitude - in progress
GPSLONGITUDE	VARCHAR2	NO	Train GPS Longitude - in progress
GPSTIME	TIMESTAMP	NO	Time the GPS Lat/long was captured - in progress
STATION_POSITION	VARCHAR2	YES	Type of station stop - See Appendix III
LINEABBREVIATION	VARCHAR2	YES	Train Line Abbreviation
INLINEMSG	VARCHAR2	NO	In-line Message for the train at the selected station
PICKUP	VARCHAR2	NO	Pick Up Only - This train will ONLY pick up customers at this stop, it will NOT discharge any passengers
DROPOF	VARCHAR2	NO	Discharge Only - This train will ONLY discharge customers at this stop, it will NOT pick up any passengers
STOPS			**Lists ALL stops for the train**
NAME	VARCHAR2	YES	Stop Full Name
TIME	TIMESTAMP	NO	Estimated Time of Arrival (ETA) at the stop
DEPARTED	VARCHAR2	NO	Indicates if train has departed the stop
STOP_STATUS	VARCHAR2	NO	(new field) Indicates train status on a stop.

GetStationScheduleXML Sample

```
- <STATION>
  <STATION_2CHAR>NP</STATION_2CHAR>
  <STATIONNAME>Newark Penn Station</STATIONNAME>
- <ITEMS>
    - <ITEM>
      <ITEM_INDEX>0</ITEM_INDEX>
      <SCHED_DEP_DATE>05-Oct-2015 12:01:00 AM</SCHED_DEP_DATE>
      <DESTINATION>NY Penn</DESTINATION>
      <SCHED_TRACK>1</SCHED_TRACK>
      <TRAIN_ID>7876</TRAIN_ID>
      <PERM_LINE>Northeast Corridor Line</PERM_LINE>
      <STATION_POSITION>1</STATION_POSITION>
      <DIRECTION>Eastbound</DIRECTION>
      <DWELL_TIME>90</DWELL_TIME>
      <PERM_CONNECTING_TRAIN_ID />
      <PERM_PICKUP />
      <PERM_DROPOFF />
      <STOP_CODE>S</STOP_CODE>
      </ITEM>
    - <ITEM>
      <ITEM_INDEX>1</ITEM_INDEX>
      <SCHED_DEP_DATE>05-Oct-2015 12:10:30 AM</SCHED_DEP_DATE>
      <DESTINATION>New York</DESTINATION>
      <SCHED_TRACK>2</SCHED_TRACK>
      <TRAIN_ID>A198</TRAIN_ID>
      <PERM_LINE>REGIONAL</PERM_LINE>
      <STATION_POSITION>1</STATION_POSITION>
      <DIRECTION>Eastbound</DIRECTION>
      <DWELL_TIME>90</DWELL_TIME>
      <PERM_CONNECTING_TRAIN_ID />
      <PERM_PICKUP>False</PERM_PICKUP>
      <PERM_DROPOFF>True</PERM_DROPOFF>
      <STOP_CODE>D</STOP_CODE>
</ITEM>
```

-
-
-
-

```
</STATION>
```

GetStationScheduleXML Tag Description

Entity NAME	Type		Description
STATION			
STATION_2CHAR	VARCHAR2	NO	2 Character Station Code - See Appendix V
STATIONNAME	VARCHAR2	NO	Station full name
ITEMS			
ITEM_INDEX		YES	Row number
SCHED_DEP_DATE	TIMESTAMP	YES	Scheduled Departure date/time at selected location
DESTINATION	VARCHAR2	YES	Destination Name
SCHED_TRACK	VARCHAR2	YES	Scheduled Track - See Appendix II for Track Translations
TRAIN_ID	VARCHAR2	YES	Train number
PERM_LINE	VARCHAR2	NO	Train Line Long name
STATION_POSITION	VARCHAR2	YES	Type of station stop - See Appendix III
DIRECTION	VARCHAR2	YES	Eastbound or Westbound
DWELL_TIME	VARCHAR2	YES	Used to get arrival time. This is the amount of time, in seconds, the train is to spend at the station, conditions allowing
PERM_CONNECTING_TRAIN_ID		NO	Used for NJCL, will show Longbranch connection to Bayhead
PERM_PICKUP	VARCHAR2	NO	If True - This train will ONLY pick up customers at this stop, it will NOT discharge any passengers
PERM_DROPOFF	VARCHAR2	NO	If True - This train will ONLY discharge customers at this stop, it will NOT pick up any passengers
STOP_CODE	VARCHAR2	NO	Stop Code for train - See Appendix IV

GetVehicleDataXML Sample

```
- <Trains>
- <Train>
  <ID>6238</ID>
  <TRAIN_LINE>Montclair-Boonton Line</TRAIN_LINE>
  <DIRECTION>Eastbound</DIRECTION>
  </Train>
- <Train>
  <ID>3846</ID>
  <TRAIN_LINE>Northeast Corridor Line</TRAIN_LINE>
  <DIRECTION>Eastbound</DIRECTION>
  <ICS_TRACK_CKT>EI-1W1TK</ICS_TRACK_CKT>
  <LONGITUDE>40.5019</LONGITUDE>
  <LATITUDE>-74.4397</LATITUDE>
  <SEC_LATE >320</SEC_LATE>
  <NEXT_STOP>Metro Park</NEXT_STOP>
  </Train>
- <Train>
  <ID>1001</ID>
  <TRAIN_LINE>Montclair-Boonton Line</TRAIN_LINE>
  <DIRECTION>Westbound</DIRECTION>
   <SEC_LATE >122</SEC_LATE>
  <NEXT_STOP>Watessing</NEXT_STOP>
</Train>
- <Train>
  <ID>4624</ID>
  <TRAIN_LINE>Atlantic City Line</TRAIN_LINE>
  <DIRECTION>Westbound</DIRECTION>
  <SEC_LATE >0</SEC_LATE>
  <NEXT_STOP>Pennsauken Transit Center</NEXT_STOP>
</Train>
- <Train>
  <ID>6631</ID>
  <TRAIN_LINE>Morris & Essex Line</TRAIN_LINE>
  <DIRECTION>Westbound</DIRECTION>
  <ICS_TRACK_CKT>AA-AAJO9ATK</ICS_TRACK_CKT>
  <LONGITUDE>40.7506</LONGITUDE>
  <LATITUDE>-73.9939</LATITUDE>
  <SEC_LATE >22</SEC_LATE>
  <NEXT_STOP>Summit</NEXT_STOP>
</Train>
- </Trains>
```

GetVehicleDataXML Tag Description

Entity NAME	Type		Description
TRAINS			**List of trains**
ID	VARCHAR2	YES	Train number
TRAIN_LINE	VARCHAR2	YES	Train Line
DIRECTION	VARCHAR2	YES	Eastbound or Westbound
ICS_TRACK_CKT	VARCHAR2	YES	Last identified track circuit ID for train
LONGITUDE	VARCHAR2	NO	Last identified longitude
LATITUDE	VARCHAR2	NO	Last identified latitude
SEC_LATE	VARCHAR2	NO	Train Delay in Seconds
NEXT_STOP	VARCHAR2	NO	Next stop for train

GTFS-RT feed – Provided by TRANSCOM

GTFS-RT feed is built upon GTFS schedule data received from NJ Transit. In order to use GTFS-RT feed, user is required to go to the NJ Transit Developer section (https://www.**njtransit**.com/**developer**) and signup and secure an account and download GTFS schedule data. The user must comply with terms and conditions stipulated on the NJ Transit website for use of data.

NOTE: The GTFS data may not match the data in NJ Transit Train Control system data.

Encoded File

Method Name	public Response getFileActualFileFormat()
End point for Data File (Encoded)	http://standards.xcmdata.org/TransitDE/rest/GTFSController/njtrailgtfsrt
Description	Used to get Vehicle, stop monitoring and alert message in Encoded format: Actual Proto file is in binary format. The decoded version of actual message is shown in table below.

Decoded GTFS-RT Response Message

```
header {
  gtfs_realtime_version: "1.1"
  incrementality: FULL_DATASET
  timestamp: 1442311629
}
entity {
  id: "T1000"
  is_deleted: false
  trip_update {
    trip {
      trip_id: "53"
      start_time: "06:18:00"
      start_date: "2015-09-15"
      schedule_relationship: SCHEDULED
      route_id: "2"
      direction_id: 0
    }
    stop_time_update {
      stop_sequence: 3
      arrival {
        delay: 0
        time: 1442297880
        uncertainty: 0
      }
      departure {
        delay: 0
        time: 1442297880
        uncertainty: 0
      }
```

```
  stop_id: "35"
  schedule_relationship: SCHEDULED
 }
 stop_time_update {
  stop_sequence: 4
  arrival {
   delay: 0
   time: 1442298300
   uncertainty: 0
  }
  departure {
   delay: 0
   time: 1442298300
   uncertainty: 0
  }
  stop_id: "34"
  schedule_relationship: SCHEDULED
 }
 stop_time_update {
  stop_sequence: 5
  arrival {
   delay: 0
   time: 1442298660
   uncertainty: 0
  }
  departure {
   delay: 0
   time: 1442298660
   uncertainty: 0
  }
  stop_id: "96"
  schedule_relationship: SCHEDULED
 }
 stop_time_update {
  stop_sequence: 6
  arrival {
   delay: 0
   time: 1442298900
   uncertainty: 0
  }
  departure {
   delay: 0
   time: 1442298900
   uncertainty: 0
  }
  stop_id: "20"
  schedule_relationship: SCHEDULED
 }
```

```
  stop_time_update {
   stop_sequence: 7
   arrival {
    delay: 0
    time: 1442299260
    uncertainty: 0
   }
   departure {
    delay: 0
    time: 1442299260
    uncertainty: 0
   }
   stop_id: "147"
   schedule_relationship: SCHEDULED
  }
  stop_time_update {
   stop_sequence: 8
   arrival {
    delay: 0
    time: 1442299500
    uncertainty: 0
   }
   departure {
    delay: 0
    time: 1442299500
    uncertainty: 0
   }
   stop_id: "69"
   schedule_relationship: SCHEDULED
  }
  stop_time_update {
   stop_sequence: 9
   arrival {
    delay: 0
    time: 1442299740
    uncertainty: 0
   }
   departure {
    delay: 0
    time: 1442299740
    uncertainty: 0
   }
   stop_id: "98"
   schedule_relationship: SCHEDULED
  }
  stop_time_update {
   stop_sequence: 10
   arrival {
```

```
      delay: 0
      time: 1442299920
      uncertainty: 0
    }
    departure {
      delay: 0
      time: 1442299920
      uncertainty: 0
    }
    stop_id: "39635"
    schedule_relationship: SCHEDULED
  }
  stop_time_update {
    stop_sequence: 11
    arrival {
      delay: 0
      time: 1442300160
      uncertainty: 0
    }
    departure {
      delay: 0
      time: 1442300160
      uncertainty: 0
    }
    stop_id: "72"
    schedule_relationship: SCHEDULED
  }
  stop_time_update {
    stop_sequence: 13
    arrival {
      delay: 0
      time: 1442300880
      uncertainty: 0
    }
    departure {
      delay: 0
      time: 1442300880
      uncertainty: 0
    }
    stop_id: "153"
    schedule_relationship: SCHEDULED
  }
  stop_time_update {
    stop_sequence: 14
    arrival {
      delay: 0
      time: 1442301060
      uncertainty: 0
```

```
    }
    departure {
      delay: 0
      time: 1442301060
      uncertainty: 0
    }
    stop_id: "152"
    schedule_relationship: SCHEDULED
  }
  stop_time_update {
    stop_sequence: 15
    arrival {
      delay: 0
      time: 1442301300
      uncertainty: 0
    }
    departure {
      delay: 0
      time: 1442301300
      uncertainty: 0
    }
    stop_id: "14"
    schedule_relationship: SCHEDULED
  }
  stop_time_update {
    stop_sequence: 16
    arrival {
      delay: 0
      time: 1442301840
      uncertainty: 0
    }
    departure {
      delay: 0
      time: 1442301840
      uncertainty: 0
    }
    stop_id: "106"
    schedule_relationship: SCHEDULED
  }
  stop_time_update {
    stop_sequence: 17
    arrival {
      delay: 0
      time: 1442302800
      uncertainty: 0
    }
    departure {
      delay: 0
```

```
      time: 1442302800
      uncertainty: 0
     }
     stop_id: "63"
     schedule_relationship: SCHEDULED
   }
  }
}
entity {
  id: "V1000"
  is_deleted: false
  vehicle {
    trip {
     trip_id: "53"
     start_time: "06:18:00"
     start_date: "2015-09-15"
     schedule_relationship: SCHEDULED
     route_id: "2"
     direction_id: 0
    }
    position {
     latitude: 0.0
     longitude: 0.0
    }
    current_stop_sequence: 1
    current_status: IN_TRANSIT_TO
    timestamp: 1442311629
    stop_id: "67"
  }
}
entity {
  id: "A1"
  is_deleted: false
  alert {
    active_period {
     start: 1457358138000
    }
    informed_entity {
     route_id: "15"
    }
    description_text {
     translation {
      text: "NJ Transit Rail: due to Construction, Construction, both directions Raritan Valley Line at
Dunellen Station (Dunellen)   from 8:45 A.M. until 3:15 P.M. all trains arrive on the inbound track"
      language: "en"
     }
    }
  }
```

```
}
```

Tag Description of GTFS-RT response message:

Entity NAME	Type	Is Mandatory	Description
header	-	Yes	Root Tag
gtfs_realtime_version	String	Yes	Represents version of GTFS-RT
Incrementality	String	No	Represent level of data, for list of options, refer appendix GTFS – 001
timestamp	Integer	No	Represents response date and time in POSIX format
Entity	-	Yes	Root Tag
id	String	Yes	Represents Vehicle/ Train along with ID, example “T1000” represents Train with ID=1000
is_deleted	Boolean	No	Not yet supported, default “false” is used
trip_update	-	No	Root Tag
trip	-	Yes	Root Tag
trip_id	String	No	Represents trip ID
route_id	String	No	Represents route ID as per the schedule
direction_id	Integer	No	Represents inbound or outbound. For possible values of DirectionRef, refer appendix GTFS – 003.
start_time	String	No	Represents scheduled time for particular vehicle and stop
start_date	String	No	Represents scheduled date for particular vehicle and stop
schedule_relationship	String	No	Represents whether the data is scheduled or real time. For possible values of schedule relationship, refer appendix GTFS-002. Please note that currently only scheduled data is supported.
vehicle	-	No	Root tag
id	String	No	Not yet supported
label	String	No	Not yet supported
license_plate	String	No	Not yet supported
stop_time_update	-	Yes	Root tag

stop_sequence	Integer	No	Represents scheduled stop sequence
stop_id	String	No	Represents stop ID
arrival	-	No	Root tag
delay	Integer	No	Represents arrival delay in seconds
time	Integer	No	Represents arrival time in POSIX format
uncertainty	Integer	No	Not Yet support, default “0” is sent
departure	-	No	Root tag
delay	Integer	No	Represents departure delay in seconds
time	Integer	No	Represents departure time in POSIX format
uncertainty	Integer	No	Not Yet support, default “0” is sent
schedule_relationship	String	No	Represents whether the data is scheduled or real time. For possible values of schedule relationship, refer appendix GTFS-002. Please note that currently only scheduled data is supported.
timestamp	Integer	No	Currently not supported
delay	Integer	No	Currently not supported
vehicle	-	No	Root tag
trip	-	No	Root tag
trip_id	String	No	Represents trip ID
route_id	String	No	Represents route ID as per the schedule
direction_id	Integer	No	Represents inbound or outbound. For possible values of DirectionRef, refer appendix GTFS – 003.
start_time	String	No	Represents scheduled time for particular vehicle and stop
start_date	String	No	Represents scheduled date for particular vehicle and stop
schedule_relationship	String	No	Represents whether the data is scheduled or real time. For possible values of schedule relationship, refer appendix GTFS-

			002. Please note that currently only scheduled data is supported.
vehicle	-	No	Root tag
id	String	No	Represents vehicle ID
label	String	No	Not yet supported
license_plate	String	No	Not yet supported
position	-	No	Root tag
latitude	Real	Yes	Represents current latitude of vehicle
longitude	Real	Yes	Represents current longitude of vehicle
bearing	Real	No	Not yet supported
odometer	Double	No	Not yet supported
speed	Real	No	Not yet supported
current_stop_sequence	Integer	No	Represents current or next stop of the vehicle, if on station or arriving, respectively
stop_id	String	No	Represents stop ID of current or arriving stop
current_status	-	No	Root tag
timestamp	Integer	No	Represents GPS time stamp
congestion_level	String	No	Not yet supported
occupancy_status	String	No	Not yet supported
alert	-	No	Root tag
active_period	-	No	Root tag
start	Long	No	Represents start time of alert
end	Long	No	Represents end time of alert
informed_entity	-	No	Root tag
route_id	String	No	Represents route that is affected by particular alert
stop_id	String	No	Represents stop that is affected by particular alert
description_text	-	No	Root tag
translation	-	No	Root tag
text	String	Yes	Represents alert description
language	String	No	Represents language of alert description

Download GTFS-RT Schema

Method Name	public Response getProtocolSchemaFile()
End point for Schema	http://standards.xcmdata.org/TransitDE/rest/GTFSController/downloadSchema
Description	Used to download vehicle, stop monitoring and alert message schema

Appendix

I. Train ID Prefixes

Some of the TrainIDs have a prefix in front of the number; e.g. “A126”. See table below for descriptions.

Prefix	Description
A	Amtrak Train
S	Septa Train
X	Non-Revenue train – Does not accept passengers

II. Track Translations

When using the track data at a few stations there is a translation between railroad track that is provided in the data and the public track that the public sees at the station. Use the table below for those translations.

TRACK	TRANSLATION	STATION
Single	1	Lebanon
2	1	Metropark
B	2	Montclair State U
Single	1	Montclair State U
0	A	Newark Airport
4	E	Secaucus Lower Lvl
2	F	Secaucus Lower Lvl
3	H	Secaucus Lower Lvl
1	G	Secaucus Lower Lvl
Single	S	Summit

III. Station Positions

Station Position	TRANSLATION
0	Origin Station
1	Valid Stop between Origin and Terminate Station
2	Terminate Station

IV. Station Stop Codes

Stop Code	TRANSLATION
A	Arrival time
S	Normal Stop
S	Normal stop. May leave up to 3 minutes early
LS	Leaves 1 minute before scheduled time
L	Train can leave before scheduled departure. Will hold for connections
H	Will hold for connection unless authorize by dispatcher
D	Stop to discharge passengers only. May leave ahead of schedule
R	Stop to receive passengers only
R*	Stop to receive passengers only. May leave 3 minutes early
E	Employee stop. May leave ahead of schedule

V. Station 2 Character Codes

STATION NAME	STATION 2CHAR
Aberdeen-Matawan	AM
Absecon	AB
Allendale	AZ
Allenhurst	AH
Anderson Street	AS
Annandale	AN
Asbury Park	AP
Atco	AO
Atlantic City Rail Terminal	AC
Avenel	AV
Baltimore Station	BL
Basking Ridge	BI
Bay Head	BH
Bay Street	MC
Belmar	BS
Berkeley Heights	BY
Bernardsville	BV
Bloomfield	BM
Boonton	BN
Bound Brook	BK
Bradley Beach	BB
Brick Church	BU
Bridgewater	BW
Broadway-Fairlawn	BF
BWI Thurgood Marshall Airport	BA
Campbell Hall	CB
Chatham	CM
Cherry Hill	CY
Clifton	IF
Convent Station	CN
Cranford	XC
Delawanna	DL
Denville	DV
Dover	DO
Dunellen	DN
East Orange	EO
Edison	ED
Egg Harbor City	EH
Elberon	EL
Elizabeth	EZ
Emerson	EN
Essex Street	EX
Fanwood	FW
Far Hills	FH

Finderne	FE
Garfield	GD
Garwood	GW
Gillette	GI
Gladstone	GL
Glen Ridge	GG
Glen Rock	RS
Glen Rock Boro Hall	GK
Great Notch	GA
Hackettstown	HQ
Hamilton	HL
Hammonton	HN
Harriman	HR
Hawthorne	HW
Hazlet	HZ
High Bridge	HG
Highland Avenue	HI
Hillsdale	HD
Hoboken	HB
Hohokus	UF
Jersey Avenue	JA
Kingsland	KG
Lake Hopatcong	HP
Lebanon	ON
Lincoln Park	LP
Linden	LI
Lindenwold	LW
Little Falls	FA
Little Silver	LS
Long Branch	LB
Lyndhurst	LN
Lyons	LY
Madison	MA
Mahwah	MZ
Manasquan	SQ
Maplewood	MW
Metro Park	MP
Metuchen	MU
Middleton NJ	MI
Middletown NY	MD
Millburn	MB
Millington	GO
Montclair State U	UV
Monmouth Park	MK
Montclair Heights	HS
Montvale	ZM
Morris Plains	MX
Morristown	MR
Mount Olive	OL

Mount Tabor	TB
Mountain Avenue	MS
Mountain Lakes	ML
Mountain Station	MT
Mountain View	MV
Murray Hill	MH
Nanuet	NN
Netcong	NT
Netherwood	NE
New Brunswick	NB
New Carrollton Station	NC
New Providence	NV
Newark Airport	NA
Newark Broad Street	ND
Newark Penn Station	NP
North Branch	OR
North Elizabeth	NZ
New Bridge Landing	NH
Oradell	OD
Orange	OG
Ottisville	OS
Park Ridge	PV
Passaic	PS
Paterson	RN
Peapack	PC
Pearl River	PQ
New york Penn Station	NY
Pennsauken	PN
Perth Amboy	PE
Philadelphia	PH
Plainfield	PF
Plauderville	PL
Point Pleasant Beach	PP
Port Jervis	PO
Princeton	PR
Princeton Junction	PJ
Radburn-Fairlawn	FZ
Rahway	RH
Ramsey	RY
Ramsey Rt 17	17
Raritan	RA
Red Bank	RB
Ridgewood	RW
River Edge	RG
Roselle Park	RL
Rutherford	RF
Salisbury Mills-Cornwall	CW
Secaucus Upper Lvl	SE
Secaucus Lower Lvl	TS

Short Hills	RT
Sloatsburg	XG
Somerville	SM
South Amboy	CH
South Orange	SO
Spring Lake	LA
Spring Valley	SV
Stirling	SG
Suffern	SF
Summit	ST
Teterboro	TE
Towaco	TO
Trenton	TR
Tuxedo	TC
Union	US
Upper Montclair	UM
Waldwick	WK
Walnut Street	WA
Watchung Avenue	WG
Watsessing Avenue	WT
Washington Station	WS
Wayne-Route 23	23
Westfield	WF
Westwood	WW
Wilmington Station	WI
White House	WH
Wood Ridge	WR
Woodbridge	WB
Woodcliff Lake	WL

VI. GFTS-RT Feed Elements

GTFS – 001 (Element Name – Incrementality)

Value	Description
FULL_DATASET	Provides complete information about vehicle and its stations
DIFFERENTIAL	Not yet supported

GTFS – 002 (Element Name - schedule_relationship)

Value	Description
0	SCHEDULED
1	ADDED
2	UNSCHEDULED
3	CANCEL

GTFS – 003 (Element Name - DirectionRef)

Value	Description
0	Inbound
1	Outbound