MBTA

MBTA-REALTIME DEVELOPER DOCUMENTATION (V 1.0.1)

JUNE 06, 2013

IBI GROUP

DOCUMENT CONTROL

Client:	MBTA
Project Name:	MBTA-realtime
Report Title:	MBTA-realtime Developer Documentation (v 1.0.1)
IBI Reference:	28238

VERSION CONTROL

Version #	Date	Change Author	Description of Change
0.9	2013/05/07	Ritesh Warade	Working Draft (pre launch)
0.9.1	2013/05/22	Ritesh Warade	Working Draft (pre launch) • Added registration for developer accounts and API keys in Section 4.2 • Added note about open development api key in Section 4.2 • Added query format in Section 4.4 • Changed 'date_time' to 'server_dt' in Server Time query (Section 4.4.1) • Changed 'sch_arrival_datetime' to 'sch_arr_dt' and 'sch_departure_datetime' to 'sch_dep_dt' in Schedule queries (Sections 4.4.6, 4.4.7, and 4.4.8) • Added note on severity in Alerts query (Section 4.4.9)
1.0	2013/06/04	Ritesh Warade	First Release • Implemented display of usage details (number of requests for the current day) (Section 4.2.4) • Started enforcing usage limits (Section 4.3) • Changed route list and stop list by route queries to return routes in MBTA's preferred display order (Sections 4.4.2 and 4.4.3) • Changed stop list by user location query to return up to 15 stops in a one-mile radius ordered by distance (Section 4.4.5) • Implemented error message when usage limits are exceeded (Section 4.5.6)
1.0.1	2013/06/06	Ritesh Warade	• Changed Legacy RSS feed to optionally filter alerts by line (Section 3.2.1)

Table of Contents

1. OVERVIEW

MBTA-realtime provides data about MBTA services, including realtime data such as vehicle locations, arrival predictions, and service alerts as well as less frequently-updated data such as routes, stop locations, and schedules. Data are provided via a number of different methods including GTFS-realtime feeds, RSS feeds, and web services, and are intended for developers to use to create applications to deliver such information to the public.

1.1 Use of the Data

Access to the data provided by the GTFS-realtime feeds, RSS feeds, and web services is governed by the language in the MassDOT Developers License Agreement (http://www.eot.state.ma.us/developers/).

2. GTFS-REALTIME

GTFS-realtime is a new standard developed by Google for delivering realtime data. The data are in the Protocol Buffer format and need to be combined with General Transit Feed Specification (GTFS) schedule data to be meaningful. (MBTA's GTFS files are available in a ZIP file at (http://www.mbta.com/uploadedfiles/MBTA_GTFS.zip)

MBTA provides the following GTFS-realtime feeds:

- Service Alerts – this feed includes all service alerts and is available at http://developer.mbta.com/lib/GTRTFS/Alerts/Alerts.pb.
- Trip Updates – this feed includes trip progress and arrival predictions, currently only for MBTA bus routes, and is available at http://developer.mbta.com/lib/gtrtfs/Passages.pb.
- Vehicle Positions – this feed includes vehicle positions, currently only for MBTA bus routes, and is available at http://developer.mbta.com/lib/gtrtfs/Vehicles.pb.

2.1 Documentation

The GTFS-realtime specification is detailed at https://developers.google.com/transit/gtfs-realtime/. The Protocol Buffer format is detailed at http://code.google.com/p/protobuf/.

2.2 Use of the Feed

Access to the MBTA GTFS-realtime feeds is governed by the language in the MassDOT Developers License Agreement (http://www.eot.state.ma.us/developers/) in addition to the following conditions:

- The MBTA reserves the right to suspend the data feed, modify the feed, or modify elements of the feed at any time at the MBTA's sole and absolute discretion.
- The MBTA does not guarantee any technical support of any kind to users.
- No user may execute polling commands more often than every 10 seconds. A user that polls more often than that or otherwise overtaxes the MBTA's system may be suspended or terminated from the data feed.

2.3 Example of the Service Alerts Feed

The following is an ASCII representation of an example Alert feed:

```
header {
  gtfs_realtime_version: "1.0"
  timestamp: 1367888430
}
entity {
  id: "780"
  alert {
    active_period {
      start: 1368261000
      end: 1368426600
    }
    informed_entity {
      agency_id: "1"
      route_id: "CR-Fitchburg"
      route_type: 2
      stop_id: "Porter Square"
    }
    cause: CONSTRUCTION
    effect: NO_SERVICE
```

```
    header_text {
      translation {
        text: "Porter Square Station closed from Sat May 11, 2013 through Sun May 12,
2013 due to construction"
        language: "en"
      }
    }
    description_text {
      translation {
        text: "Affected services:\r\nFitchburg/South Acton Line"
        language: "en"
      }
    }
  }
}
entity {
  id: "783"
  alert {
    active_period {
      start: 1368046800
      end: 1368108000
    }
    informed_entity {
      agency_id: "1"
      stop_id: "Ruggles"
    }
    cause: MAINTENANCE
    effect: OTHER_EFFECT
    header_text {
      translation {
        text: "Elevator 849 RUGGLES - Commuter Rail Platform to Lobby out of service
from Wed May 08, 2013 at 05:00 PM to Thu May 09, 2013 at 10:00 AM due to electrical
work"
        language: "en"
      }
    }
    description_text {
      translation {
        text: "Please contact station personnel or conductor for assistance. For
inbound commuter rail riders, please disembark at Back Bay and return to Ruggles via
the Orange Line. \r\n\r\nFor outbound customers, please take the Orange Line to Back
Bay and board the commuter rail at Back Bay. Please contact station personnel for
assistance."
        language: "en"
      }
    }
  }
}
```

3. RSS

MBTA provides service alerts in RSS feed format.

Currently, there are two versions of the RSS feed – the Legacy and Standard feeds. (Note: they both contain the same information, but in different formats). The Legacy RSS feed is intended to closely mimic the feed currently available at http://talerts.com/rssfeed2/alertsrss.aspx. It is expected that this feed will remain in service for six months to one year while developers transition to other data sources. The Standard RSS feed is intended to provide an easy way to add an alerts feed to anything with RSS reader capability, with little or no programming acumen. It is expected that this feed will function indefinitely.

Both feeds conform to version 2.0.11 of the RSS 2.0 specification, as available at http://www.rssboard.org/rss-specification.

Developers are requested to make use of the Standard RSS feed, instead of the Legacy RSS feed, wherever possible.

3.1 Use of the Feed

Access to the MBTA RSS feeds is governed by the language in the MassDOT Developers License Agreement (http://www.eot.state.ma.us/developers/) in addition to the following conditions:

- The MBTA reserves the right to suspend the data feed, modify the feed, or modify elements of the feed at any time at the MBTA's sole and absolute discretion.
- The MBTA does not guarantee any technical support of any kind to users.
- No user may execute polling commands more often than every 1 minute. A user that polls more often than that or otherwise overtaxes the MBTA's system may be suspended or terminated from the data feed.

3.2 Feed Format

3.2.1 LEGACY RSS FEED

URL

```
http://realtime.mbta.com/alertsrss/rssfeed2
http://realtime.mbta.com/alertsrss/rssfeed2?<route_name>
```

Parameters

Name	Description
route_name (optional)	Name of route for which alerts should be returned If included then only alerts with the route_name in the “line” attribute of the “metadata” element will be returned If not included then all alerts will be returned Data type: String Example: “Red Line”

Response Fields

Name	Description
rss	Root element of the response document

version	Attribute of the root element The version number of the RSS specification that the feed conforms to Data type: String Value: “2.0”
channel	Child element of the root element Contains information about the channel
title	Child element of the “channel” element The name of the channel Data type: String Value: “T-Alerts”
link	Child element of the “channel” element The link for the channel Data type: String representation of a link Value: “http://www.mbta.com/rider_tools/transit_updates/”
description	Child element of the “channel” element The description for the channel Data type: String Value: “Recent MBTA T-Alerts”
language	Child element of the “channel” element The language the channel is written in Data type: String Value: : “en-us”
generator	Child element of the “channel” element The program used to generate the channel Data type: String Value: “MBTA-realtime http://realtime.mbta.com”
webmaster	Child element of the “channel” element The email address for person responsible for technical issues relating to channel Data type: String representation of an email address Value: “developer@mbta.com”
ttl	Child element of the “channel” element Number of minutes that indicates how long the channel can be cached before refreshing from the source Data type: Integer Value: “10”
item	Child element of the “channel” element Contains information about a single alert

For items representing alerts that do not affect an elevator/escalator:

title	Child element of the “item” element The names of the routes affected by the alert, separated by a comma and space (“, “) Data type: String Example: “Red Line”

link	Child element of the “item” element The link for the alert Data type: String representation of a link Value: “http://www.mbta.com/rider_tools/transit_updates/”
description	Child element of the “item” element The description of the alert Data type: String Example: “Shuttle buses replacing Red Line service from Sat Jun 01, 2013 to Sun Jun 30, 2013 every Saturday and Sunday from 09:00 PM to end of service due to tie replacement Affected stops: Alewife Station Davis Station Porter Square Station Harvard Square Station 05/03/2013 01:28 PM”
metadata	Child element of the “item” element The metadata for the alert
messageid	Attribute of the “metadata” element The unique identifier for the alert Data type: Integer Example: “781”
mode	Attribute of the “metadata” element List of names of the modes affected by the alert, separated by a comma and space (“, “) Data type: String Example: “Subway”
line	Attribute of the “metadata” element List of names of the routes affected by the alert, separated by a comma and space (“, “) Data type: String Example: “Red Line”
name	Attribute of the “metadata” element Value: (empty string)
direction	Attribute of the “metadata” element The direction(s) affected by the alert Data type: String Example: “Westbound”, “Both Directions”
timing	Attribute of the “metadata” element Value: “All”
delayTime	Attribute of the “metadata” element The severity level of the alert Data type: String (“Severe”, “Moderate”, or “Minor”) Example: “Severe”
delayCategory	Attribute of the “metadata” element The cause of the alert Data type: String Example: “construction”

pubdate	Child element of the “item” element The time the alert was last updated in RFC 822 format Data type: String representation of a datetime Example: “Fri, 03 May 2013 17:28:05 GMT”
guid	Child element of the “item” element The unique identifier for the alert Data type: String Example: “talerts781”
isPermaLink	Attribute of the “guid” element Indicates whether the guid can be assumed to a url Data type: String Value: “false”

For items representing alerts that affect an elevator/escalator:

title	Child element of the “item” element The names of the elevator/escalator affect by the alert Data type: String Example: “RUGGLES - Commuter Rail Platform to Lobby”
link	Child element of the “item” element The link for the alert Data type: String representation of a link Value: “http://www.mbta.com/rider_tools/transit_updates/”
description	Child element of the “item” element The description of the alert Data type: String Example: “Elevator 849 RUGGLES - Commuter Rail Platform to Lobby out of service from Wed May 08, 2013 at 05:00 PM to Thu May 09, 2013 at 10:00 AM due to electrical work Please contact station personnel or conductor for assistance. For inbound commuter rail riders, please disembark at Back Bay and return to Ruggles via the Orange Line. For outbound customers, please take the Orange Line to Back Bay and board the commuter rail at Back Bay. Please contact station personnel for assistance. 05/03/2013 01:30 PM”
metadata	Child element of the “item” element The metadata for the alert
messageid	Attribute of the “metadata” element The unique identifier for the alert Data type: Integer Example: “783”
mode	Attribute of the “metadata” element The type of the elevator/escalator Data type: String (“elevator” or “escalator”) Example: “Elevator”
line	Attribute of the “metadata” element (empty string)

name	Attribute of the “metadata” element The names of the elevator/escalator affect by the alert Data type: String Example: “RUGGLES - Commuter Rail Platform to Lobby”
direction	Attribute of the “metadata” element (empty string)
timing	Attribute of the “metadata” element Value: “All”
delayTime	Attribute of the “metadata” element Value: “0”
delayCategory	Attribute of the “metadata” element Value: “0”
pubdate	Child element of the “item” element The time the alert was last updated in RFC 822 format Data type: String representation of a datetime Example: “Fri, 03 May 2013 17:28:05 GMT”
guid	Child element of the “item” element The unique identifier for the alert Data type: String Example: “talerts783”
isPermaLink	Attribute of the “guid” element Indicates whether the guid can be assumed to a url Data type: String Value: “false”

Notes

- The list of acceptable route_name parameter values can be found using the Route List web services query (Section 4.4.2)

Example:

Request:

http://realtime.mbta.com/alertsrss/rssfeed2

Response:

```
<rss version="2.0">
       <channel>
              <title>T-Alerts</title>
              <link>http://www.mbta.com/rider_tools/transit_updates/</link>
              <description>Recent MBTA T-Alerts</description>
              <language>en-us</language>
              <generator>MBTA-realtime http://realtime.mbta.com</generator>
              <webMaster>developer@mbta.com</webMaster>
              <ttl>10</ttl>
              <item>
                     <title>Fitchburg/South Acton Line</title>
                     <link>http://www.mbta.com/rider_tools/transit_updates/</link>
                     <description>
Porter Square Station closed from Sat May 11, 2013 through Sun May 12, 2013 due to
construction Affected services: Fitchburg/South Acton Line 05/03/2013 01:27 PM
                     </description>
```

```
                    <metadata messageid="780" mode="Commuter Rail"
line="Fitchburg/South Acton Line" name="" direction="Both Directions" timing="All"
delayTime="Severe" delayCategory="construction"/>
                    <pubDate>Fri, 03 May 2013 17:27:02 GMT</pubDate>
                    <guid isPermaLink="false">talerts780</guid>
             </item>
             <item>
                    <title>Red Line</title>
                    <link>http://www.mbta.com/rider_tools/transit_updates/</link>
                    <description>
Shuttle buses replacing Red Line service from Sat Jun 01, 2013 to Sun Jun 30, 2013
every Saturday and Sunday from 09:00 PM to end of service due to tie replacement
Affected stops: Alewife Station Davis Station Porter Square Station Harvard Square
Station 05/03/2013 01:28 PM
                    </description>
                    <metadata messageid="781" mode="Subway" line="Red Line" name=""
direction="Both Directions" timing="All" delayTime="Severe" delayCategory="tie
replacement"/>
                    <pubDate>Fri, 03 May 2013 17:28:05 GMT</pubDate>
                    <guid isPermaLink="false">talerts781</guid>
             </item>
             <item>
                    <title>RUGGLES - Commuter Rail Platform to Lobby</title>
                    <link>http://www.mbta.com/rider_tools/transit_updates/</link>
                    <description>
Elevator 849 RUGGLES - Commuter Rail Platform to Lobby out of service from Wed May 08,
2013 at 05:00 PM to Thu May 09, 2013 at 10:00 AM due to electrical work Please contact
station personnel or conductor for assistance. For inbound commuter rail riders,
please disembark at Back Bay and return to Ruggles via the Orange Line. For outbound
customers, please take the Orange Line to Back Bay and board the commuter rail at Back
Bay. Please contact station personnel for assistance. 05/03/2013 01:30 PM
                    </description>
                    <metadata messageid="783" mode="Elevator" line="" name="RUGGLES -
Commuter Rail Platform to Lobby" direction="" timing="All" delayTime="0"
delayCategory="0"/>
                    <pubDate>Fri, 03 May 2013 17:30:01 GMT</pubDate>
                    <guid isPermaLink="false">talerts783</guid>
             </item>
             .
             .
             .
      </channel>
</rss>
```

Request with Optional Parameter:

```
http://realtime.mbta.com/alertsrss/rssfeed2?Orange%20Line
```

Response:

```
<rss  version="2.0">
       <channel>
             <title>T-Alerts</title>
             <link>http://www.mbta.com/rider_tools/transit_updates/</link>
             <description>Recent MBTA T-Alerts</description>
             <language>en-us</language>
             <generator>MBTA-realtime http://realtime.mbta.com</generator>
             <webMaster>developer@mbta.com</webMaster>
             <ttl>10</ttl>
             <item>
                    <title>Orange Line</title>
                    <link>http://www.mbta.com/rider_tools/transit_updates/</link>
```

```
                    <description>The Orange Line may experience some minor delays in
service due to the Oak Grove Platform Rehabilitation Project.  Oak Grove Platform
Rehabilitation May 2013 - September 2013
Please plan your travel arrangements accordingly. 06/02/2013 08:04 PM</description>
                    <metadata messageid="1222" mode="Subway" line="Orange Line"
name="" direction="Both Directions" timing="All" delayTime="Minor" delayCategory="" />
                    <pubDate>Mon, 03 Jun 2013 00:04:00 GMT</pubDate>
                    <guid isPermaLink="false">talerts1222</guid>
             </item>
             <item>
                    <title>Orange Line</title>
                    <link>http://www.mbta.com/rider_tools/transit_updates/</link>
                    <description>Ruggles - Forest Hills: shuttle buses replacing
Orange Line service from Sat, Jun 15, 2013, through Sun, Jun 16, 2013 due to scheduled
maintenance. Affected stops:
Roxbury Crossing Station
Jackson Square Station
Stony Brook Station
Green St. Station
Forest Hills Station

The alternate bus service will make stops at all stations between Ruggles and Forest
Hills Stations. Regular Orange Line train service will resume at the start of service
on Monday, June 17, 2013. 06/05/2013 01:29 PM</description>
                    <metadata messageid="1526" mode="Subway" line="Orange Line"
name="" direction="Both Directions" timing="All" delayTime="Severe"
delayCategory="maintenance" />
                    <pubDate>Wed, 05 Jun 2013 17:29:01 GMT</pubDate>
                    <guid isPermaLink="false">talerts1526</guid>
             </item>
             .
             .
             .
      </channel>
</rss>
```

3.2.2 STANDARD RSS FEED

URL

http://realtime.mbta.com/alertsrss/rssfeed4

Response Fields

Name	Description
rss	Root element of the response document
version	Attribute of the root element The version number of the RSS specification that the feed conforms to Data type: String Value: “2.0”
channel	Child element of the root element Contains information about the channel
title	Child element of the “channel” element The name of the channel Data type: String Value: “T-Alerts”

link	Child element of the “channel” element The link for the channel Data type: String representation of a link Value: “http://www.mbta.com/rider_tools/transit_updates/”
description	Child element of the “channel” element The description for the channel Data type: String Value: “MBTA Service Alerts”
language	Child element of the “channel” element The language the channel is written in Data type: String Value: : “en-us”
pubDate	Child element of the “channel” element The time the feed wad last updated in RFC 822 format Data type: String representation of a datetime Example: “Sun, 05 May 2013 03:26:17 GMT”
generator	Child element of the “channel” element The program used to generate the channel Data type: String Value: “MBTA-realtime http://realtime.mbta.com”
webmaster	Child element of the “channel” element The email address for person responsible for technical issues relating to channel Data type: String representation of an email address Value: “developer@mbta.com”
ttl	Child element of the “channel” element Number of minutes that indicates how long the channel can be cached before refreshing from the source Data type: Integer Value: “10”
item	Child element of the “channel” element Contains information about a single alert

For items representing alerts that are still active:

title	Child element of the “item” element A brief summary of the situation (GTFS-realtime-compatible) Data type: String Example: “Shuttle buses replacing Red Line service from Sat Jun 01, 2013 to Sun Jun 30, 2013 every Saturday and Sunday from 09:00 PM to end of service due to tie replacement”
link	Optional Child element of the “item” element The link for the alert Data type: String representation of a link Value: “http://mbta.com/about_the_mbta/t_projects/”

description	Child element of the “item” element Additional details for the alert (GTFS-realtime-compatible) Data type: String (note: tags are added for line breaks) Example: “Affected stops: Alewife Station Davis Station Porter Square Station Harvard Square Station”
category	Child element of the “item” element The names of the modes or the elevator/escalator type affected Data type: String Example: “Subway”, “Elevator”
guid	Child element of the “item” element The unique identifier for the alert Data type: String Example: “T-Alert ID 781”
isPermaLink	Attribute of the “guid” element Indicates whether the guid can be assumed to a url Data type: String Value: “false”
pubdate	Child element of the “item” element The time the alert was last updated in RFC 822 format Data type: String representation of a datetime Example: “Fri, 03 May 2013 17:28:05 GMT”

For items representing alerts that are closed (present in the feed for only 15 minutes after closing):

title	Child element of the “item” element A brief summary of the situation (GTFS-realtime-compatible) Data type: String Example: “All clear (Shuttle buses replacing Red Line service from Sat Jun 01, 2013 to Sun Jun 30, 2013 every Saturday and Sunday from 09:00 PM to end of service due to tie replacement)”
category	Child element of the “item” element The names of the modes or the elevator/escalator type affected Data type: String Example: “Subway”, “Elevator”
guid	Child element of the “item” element The unique identifier for the alert Data type: String Example: “T-Alert ID 781”
isPermaLink	Attribute of the “guid” element Indicates whether the guid can be assumed to a url Data type: String Value: “false”
pubdate	Child element of the “item” element The time the alert was last updated in RFC 822 format Data type: String representation of a datetime Example: “Fri, 03 May 2013 17:28:05 GMT”

Example:

Request:

http://realtime.mbta.com/alertsrss/rssfeed4

Response:

```
<rss version="2.0">
       <channel>
              <title>T-Alerts</title>
              <link>http://www.mbta.com/rider_tools/transit_updates/</link>
              <description>MBTA Service Alerts</description>
              <pubDate>Mon, 06 May 2013 21:46:14 GMT</pubDate>
              <language>en-us</language>
              <generator>MBTA-realtime http://realtime.mbta.com</generator>
              <webMaster>developer@mbta.com</webMaster>
              <ttl>10</ttl>
              <item>
                     <title>
Porter Square Station closed from Sat May 11, 2013 through Sun May 12, 2013 due to
construction
                     </title>
                     <description>Affected services:<br/>Fitchburg/South Acton
Line</description>
                     <category>Commuter Rail</category>
                     <guid isPermaLink="false">T-Alert ID 780</guid>
                     <pubDate>Fri, 03 May 2013 17:27:02 GMT</pubDate>
              </item>
              <item>
                     <title>
Shuttle buses replacing Red Line service from Sat Jun 01, 2013 to Sun Jun 30, 2013
every Saturday and Sunday from 09:00 PM to end of service due to tie replacement
                     </title>
                     <description>
Affected stops:<br/>Alewife Station<br/>Davis Station<br/>Porter Square
Station<br/>Harvard Square Station
                     </description>
                     <category>Subway</category>
                     <guid isPermaLink="false">T-Alert ID 781</guid>
                     <pubDate>Fri, 03 May 2013 17:28:05 GMT</pubDate>
              </item>
              <item>
                     <title>
Elevator 849 RUGGLES - Commuter Rail Platform to Lobby out of service from Wed May 08,
2013 at 05:00 PM to Thu May 09, 2013 at 10:00 AM due to electrical work
                     </title>
                     <description>
Please contact station personnel or conductor for assistance. For inbound commuter
rail riders, please disembark at Back Bay and return to Ruggles via the Orange Line.
<br/><br/>For outbound customers, please take the Orange Line to Back Bay and board
the commuter rail at Back Bay. Please contact station personnel for assistance.
                     </description>
                     <category>Elevator</category>
                     <guid isPermaLink="false">T-Alert ID 783</guid>
                     <pubDate>Fri, 03 May 2013 17:30:01 GMT</pubDate>
              </item>
              .
              .
              .
       </channel>
</rss>
```

4. WEB SERVICES

MBTA-realtime provides RESTful web services to provide data about MBTA services. Data are provided in XML and JSON formats.

A basic introduction to RESTful web services can be found at these sites:

- http://www.infoq.com/articles/rest-introduction
- http://en.wikipedia.org/wiki/REST

Basic summaries of the XML and JSON formats can be found at these sites:

- http://www.w3schools.com/xml/xml_whatis.asp
- http://www.w3schools.com/json/default.asp

4.1 Use of the Web Services

Access to the MBTA-realtime web services is governed by the language in the MassDOT Developers License Agreement (http://www.eot.state.ma.us/developers/) in addition to the following conditions:

- The MBTA reserves the right to suspend the web services, modify the web services, or modify elements of the web services at any time at the MBTA's sole and absolute discretion.
- The MBTA does not guarantee any technical support of any kind to users.
- No user may request data using the queries more often than their allowed limits (see Section 4.3). A user that requests data more often than that or otherwise overtaxes the MBTA's system may be suspended or terminated from the web services.

4.2 Developer Accounts and API keys

To access the web services, developers are required to register for accounts and API keys using the MBTA-realtime Developer Portal (http://realtime.mbta.com/Portal/). The use of the Developer Portal is described in the following subsections.

4.2.1 REGISTER FOR AN ACCOUNT

To register an account, visit the Developer Portal (http://realtime.mbta.com/Portal/) and click the "Register" link on the upper right-hand corner. Enter a username, password, email address, and phone number, and then click the "Register" button.

The Developer Portal will send back an email acknowledging the request for registration, along with a confirmation token, and a confirmation URL. Click the URL or visit http://realtime.mbta.com/Portal/Account/Confirmation and enter the token to complete the registration process. The account will be confirmed in the system.

4.2.2 LOG IN

To login to a registered developer account, visit the Developer Portal (http://realtime.mbta.com/Portal/) and click the "Log in" link on the upper right-hand corner. Enter the username and password, and then click the "Log in" button. The "Manage API Keys" page will open.

4.2.3 REGISTER FOR AN API KEY

To register for an API key, visit the "Manage API Keys" page, enter the name and description of the application which will use the API key, and then click the "Register" button.

The Developer Portal will send an email once the API Key has been granted. Note: this may take up to a day.

Note: An open development API key has been provided to all developers for use in development (which can be found at http://realtime.mbta.com/Portal/Home/Download). It may change or be discontinued at any time. Do not go into production using the open development key!

4.2.4 MONITOR API KEYS

To monitor API keys, visit the "Manage API Keys" page. The page will show all API keys that have been granted or are pending for the developer account. To see more information for an API key, click the API key. The "API Key Details" page will open to show the account and application linked to the API key, as well as usage details.

4.3 Usage Limits

Initial usage limits are set as up to 10,000 requests per day per API key. This limit can be increased upon request. To request an increase please email developer@mbta.com and include the account username, application name, and API Key.

4.4 Web Services API

To access data using the web services, a query in the form of a URL text string needs to be used, containing the API key, web service name, and any required and/or optional input parameters. To get data in XML or JSON format the request header needs to be set to accept "application/xml" or "application/json" respectively.

The format for the web services request queries is:

```
http://realtime.mbta.com/developer/api/<version of the API>/<web service
query>?api_key=<developer's api key>&<parameter>=<required and/or optional parameters>
```

The web services queries offered by MBTA-realtime are:

4.4.1 SERVER TIME

This query will return the current server time.

URL

```
http://realtime.mbta.com/developer/api/v1/servertime?api_key=<developer's api key>
```

Parameters

Name	Description
api_key	Unique API key assigned to each developer

Response Fields

Name	Description
server_time	Root element of the response document

server_dt	Attribute of the root element Server time, in epoch time Data type: String representation of an Integer Example: “1361996667”

Example:

Request:

http://realtime.mbta.com/developer/api/v1/servertime?api_key=9zoExM5kqUiHeBxFicWOMA

Note: This example request, as well as all other example requests in the following sections, uses the open development API key as of May 2013. This may change at any time.

XML Response:

```
<server_time xmlns:xsd="http://www.w3.org/2001/XMLSchema"
xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" server_dt="1361996838"/>
```

JSON Response:

```
{
       "server_dt": "1361996838"
}
```

4.4.2 ROUTE LIST

This query will return a complete list of routes for which data can be requested through the web services.

URL

```
http://realtime.mbta.com/developer/api/v1/routes?api_key=<developer’s api key>
```

Parameters

Name	Description
api_key	Unique API key assigned to each developer

Response Fields

Name	Description
route_list	Root element of the response document
mode	Child element of the root element Contains information for a mode
route_type	Attribute of the “mode” element The GTFS-compatible identifier for the type of service (mode) Data type: String representation of an Integer (0-7) Example: “1”
mode_name	Attribute of the “mode” element The human-readable name for the type of service (mode) Data type: String Example: “Subway”
route	Child element of the “mode” element Contains information for a route

route_id	Attribute of the “route” element The unique GTFS-compatible identifier for the route Data type: String Example: “931_”
route_name	Attribute of the “route” element The human-readable name for the route Data type: String Example: “Red Line”

Notes

- Routes are returned in MBTA’s preferred display order: alphabetical by route_id except for bus routes where lettered routes (Silver Line and CT routes) are displayed before numbered routes, and numbered routes are displayed in ascending numerical order (i.e. 1, 2, 3 instead of 1, 10, 100).

Example:

Request:

http://realtime.mbta.com/developer/api/v1/routes?api_key=9zoExM5kqUiHeBxFicWOMA

XML Response:

```
<route_list xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
	<mode route_type="0" mode_name="Subway">
		<route route_id="810_" route_name="Green Line"/>
		<route route_id="812_" route_name="Green Line"/>
		.
		.
		.
	</mode>
	<mode route_type="1" mode_name="Subway">
		<route route_id="903_" route_name="Orange Line"/>
		<route route_id="913_" route_name="Orange Line"/>
		.
		.
		.
	</mode>
	.
	.
	.
</route_list>
```

JSON Response:

```
{
	"mode": [{
		"route_type": "0",
		"mode_name": "Subway",
		"route": [{
			"route_id": "810_",
			"route_name": "Green Line"
		},
		{
			"route_id": "812_",
			"route_name": "Green Line"
		},
		.
```

```
                .
                .
                ]
        },
        {
                "route_type": "1",
                "mode_name": "Subway",
                "route": [{
                        "route_id": "903_",
                        "route_name": "Orange Line"
                },
                {
                        "route_id": "913_",
                        "route_name": "Orange Line"
                },
                .
                .
                .
                ]
        },
        .
        .
        .
        ]
}
```


4.4.3 ROUTE LIST BY STOP

This query will return a list of routes that serve a particular stop.

URL

```
http://realtime.mbta.com/developer/api/v1/routesbystop?api_key=<developer's api key>&stop=<GTFS-compatible stop_id>
```

Parameters

Name	Description
api_key	Unique API key assigned to each developer
stop	GTFS-compatible stop_id value for which routes should be returned Data type: String Example: "70065"

Response Fields

Name	Description
route_list	Root element of the response document
stop_id	Attribute of the root element The GTFS-compatible unique identifier for the stop for which routes are returned Data type: String Example: "70065"
stop_name	Attribute of the root element The GTFS-compatible name for the stop for which routes are returned Data type: String Example: "Porter Sq - Inbound"

mode	Child element of the root element Contains information for a mode that serves this stop
route_type	Attribute of the “mode” element The GTFS-compatible identifier for the type of service (mode) Data type: String representation of an Integer (0-7) Example: “1”
mode_name	Attribute of the “mode” element The human-readable name for the type of service (mode) Data type: String Example: “Subway”
route	Child element of the “mode” element Contains information for a route that serves this stop
route_id	Attribute of the “route” element The unique GTFS-compatible identifier for the route Data type: String Example: “931_”
route_name	Attribute of the “route” element The human-readable name for the route Data type: String Example: “Red Line”

Notes

- If the GTFS-compatible stop_id value in the stop parameter in the request is for a parent station then all routes that serve that parent station are returned.
- Routes are returned in MBTA’s preferred display order: alphabetical by route_id except for bus routes where lettered routes (Silver Line and CT routes) are displayed before numbered routes, and numbered routes are displayed in ascending numerical order (i.e. 1, 2, 3 instead of 1, 10, 100).

Example

Request:

http://realtime.mbta.com/developer/api/v1/routesbystop?api_key=9zoExM5kqUiHeBxFicWOMA&stop=70065

XML Response:

```
<route_list xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" stop_id="70065" stop_name="Porter Sq -
Inbound">
	<mode route_type="1" mode_name="Subway">
		<route route_id="931_" route_name="Red Line"/>
		<route route_id="933_" route_name="Red Line"/>
	</mode>
</route_list>
```

JSON Response:

```
{
	"stop_id": "70065",
	"stop_name": "Porter Sq - Inbound",
	"mode": [{
		"route_type": "1",
```

```
            "mode_name": "Subway",
            "route": [{
                  "route_id": "931_",
                  "route_name": "Red Line"
            },
            {
                  "route_id": "933_",
                  "route_name": "Red Line"
            }]
      }]
}
```


4.4.4 STOP LIST BY ROUTE

This query will return a list of stops for a particular route.

URL

```
http://realtime.mbta.com/developer/api/v1/stopsbyroute?api_key=<developer's api key>&route=<GTFS-compatible route_id>
```

Parameters

Name	Description
api_key	Unique API key assigned to each developer
route	GTFS-compatible route_id value for which stops should be returned Data type: String Example: "931_"

Response Fields

Name	Description
stop_list	Root element of the response document
route_id	Attribute of the root element The unique GTFS-compatible identifier for the route for which stops are returned Data type: String Example: "931_"
route_name	Attribute of the root element The human-readable name for the route for which stops are returned Data type: String Example: "Red Line"
direction	Child element of the root element Contains information for a direction of the route
direction_id	Attribute of the "direction" element The GTFS-compatible identifier for the direction Data type: String representation of a Bit (0 or 1) Example: "0"

direction_name	Attribute of the “direction” element The human-readable name for the direction Data type: String Example: “Southbound”
stop	Child element of the “direction” element Contains all information for a stop on the direction of the route
stop_order	Attribute of the “stop” element Identifies where the stop comes in the order of stops for this route and direction (note: not guaranteed to be unique) Data type: String representation of an Integer (starting with 1) Example: “1”
stop_id	Attribute of the “stop” element The GTFS-compatible unique identifier for the stop Data type: String Example: “70063”
stop_name	Attribute of the “stop” element The GTFS-compatible name for the stop (not unique) Data type: String Example: “Davis Sq - Inbound”
parent_station	Attribute of the “stop” element The GTFS-compatible unique identifier for the station associated with the stop. (note: can be empty if stop does not have an associated station) Data type: String Example: “place-davis”
parent_station_name	Attribute of the “stop” element The human-readable name for the larger station associated with the stop. (note: can be empty if stop does not have an associated station) Data type: String Example: “Davis Station”
stop_lat	Attribute of the “stop” element The GTFS-compatible latitude of the station. Data type: String representation of a Float Example: “42.3967399597168”
stop_lon	Attribute of the “stop” element The GTFS-compatible longitude of the station. Data type: String representation of a Float Example: “-71.1218185424805”

Notes

- The ‘stop_order’ attribute is not guaranteed to be unique for a route and direction.
- The ‘parent_station’ and ‘parent_station_name’ attributes can be empty if stop does not have an associated parent station.

Example:

Request:

http://realtime.mbta.com/developer/api/v1/stopsbyroute?api_key=9zoExM5kqUiHeBxFicWOMA&route=931_

XML Response:

```
<stop_list xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" route_id="931_" route_name="Red Line">
	<direction direction_id="0" direction_name="Southbound">
		<stop stop_order="1" stop_id="70061" stop_name="Alewife Station Red Line"
parent_station="place-alfcl" parent_station_name="Alewife Station"
stop_lat="42.3954277038574" stop_lon="-71.1424865722656"/>
		<stop stop_order="2" stop_id="70063" stop_name="Davis Sq - Inbound"
parent_station="place-davis" parent_station_name="Davis Station"
stop_lat="42.3967399597168" stop_lon="-71.1218185424805"/>
		.
		.
		.
	</direction>
	<direction direction_id="1" direction_name="Northbound">
		<stop stop_order="1" stop_id="70094" stop_name="Ashmont Station Red Line
Inbound" parent_station="place-asmnl" parent_station_name="Ashmont Station"
stop_lat="42.2846527099609" stop_lon="-71.0644912719727"/>
		<stop stop_order="2" stop_id="70092" stop_name="Shawmut Station -
Inbound" parent_station="place-smmnl" parent_station_name="Shawmut Station"
stop_lat="42.2931251525879" stop_lon="-71.0657348632813"/>
		.
		.
		.
	</direction>
</stop_list>
```

JSON Response:

```
{
	"direction": [{
		"direction_id": "0",
		"direction_name": "Southbound",
		"stop": [{
			"stop_order": "1",
			"stop_id": "70061",
			"stop_name": "Alewife Station Red Line",
			"parent_station": "place-alfcl",
			"parent_station_name": "Alewife Station",
			"stop_lat": "42.3954277038574",
			"stop_lon": "-71.1424865722656"
		},
		{
			"stop_order": "2",
			"stop_id": "70063",
			"stop_name": "Davis Sq - Inbound",
			"parent_station": "place-davis",
			"parent_station_name": "Davis Station",
			"stop_lat": "42.3967399597168",
			"stop_lon": "-71.1218185424805"
		},
		.
		.
		.
		]
	},
```

```
	{
		"direction_id": "1",
		"direction_name": "Northbound",
		"stop": [{
			"stop_order": "1",
			"stop_id": "70094",
			"stop_name": "Ashmont Station Red Line Inbound",
			"parent_station": "place-asmnl",
			"parent_station_name": "Ashmont Station",
			"stop_lat": "42.2846527099609",
			"stop_lon": "-71.0644912719727"
		},
		{
			"stop_order": "2",
			"stop_id": "70092",
			"stop_name": "Shawmut Station - Inbound",
			"parent_station": "place-smmnl",
			"parent_station_name": "Shawmut Station",
			"stop_lat": "42.2931251525879",
			"stop_lon": "-71.0657348632813"
		},
		.
		.
		.
		]
	}]
}
```


4.4.5 STOP LIST BY USER LOCATION

This query will return a list of the five nearest stops from a particular location.

URL

```
http://realtime.mbta.com/developer/api/v1/stopsbylocation?api_key=<developer's api key>&lat=<latitude>&lon=<longitude>
```

Parameters

Name	Description
api_key	Unique API key assigned to each developer
lat	The latitude for location near which stops should be returned Data type: Float Example: "42.352913"
lon	The longitude for location near which stops should be returned Data type: Float Example: "-71.064648"

Response Fields

Name	Description
stop_list	Root element of the response document
lat	Attribute of the root element The latitude for location near which stops are returned Data type: String representation of a Float Example: "42.352913"

lon	Attribute of the root element The longitude for location near which stops are returned Data type: String representation of a Float Example: “-71.064648”
stop	Child element of the “root” element Contains all information for a stop near the location
stop_id	Attribute of the “stop” element The GTFS-compatible unique identifier for the stop Data type: String Example: “70158”
stop_name	Attribute of the “stop” element The GTFS-compatible name for the stop (not unique) Data type: String Example: “Boylston Station - Inbound”
parent_station	Attribute of the “stop” element The GTFS-compatible unique identifier for the station associated with the stop (note: can be empty if stop does not have an associated station) Data type: String Example: “place-boyls”
parent_station_name	Attribute of the “stop” element The human-readable name for the larger station associated with the stop (note: can be empty if stop does not have an associated station) Data type: String Example: “Boylston Station”
stop_lat	Attribute of the “stop” element The GTFS-compatible latitude of the station Data type: String representation of a Float Example: “42.3530197143555”
stop_lon	Attribute of the “stop” element The GTFS-compatible longitude of the station Data type: String representation of a Float Example: “-71.0645904541016”
distance	Attribute of the “stop” element The distance of the stop from the location in miles Data type: String representation of a Float Example: “0.00800655130296946”

Notes

- The ‘parent_station’ and ‘parent_station_name’ attributes can be empty if stop does not have an associated parent station.
- Up to 15 stops in a one-mile radius of the location are returned ordered in ascending order of distance from the location.

Example:

Request:

http://realtime.mbta.com/developer/api/v1/stopsbylocation?api_key=9zoExM5kqUiHeBxFicWOMA&lat=42.352913&lon=-71.064648

XML Response:

```
<stop_list xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" lat="42.352913" lon="-71.064648">
       <stop stop_id="70158" stop_name="Boylston Station - Inbound"
parent_station="place-boyls" parent_station_name="Boylston Station"
stop_lat="42.3530197143555" stop_lon="-71.0645904541016"
distance="0.00800655130296946"/>
       <stop stop_id="70159" stop_name="Boylston Station - Outbound"
parent_station="place-boyls" parent_station_name="Boylston Station"
stop_lat="42.3530197143555" stop_lon="-71.0645904541016"
distance="0.00800655130296946"/>
       <stop stop_id="8279" stop_name="Tremont St opp Avery St" parent_station=""
parent_station_name="" stop_lat="42.3532485961914" stop_lon="-71.0643539428711"
distance="0.0277116596698761"/>
       .
       .
       .
</stop_list>
```

JSON Response:

```
{
       "stop": [{
              "stop_id": "70158",
              "stop_name": "Boylston Station - Inbound",
              "parent_station": "place-boyls",
              "parent_station_name": "Boylston Station",
              "stop_lat": "42.3530197143555",
              "stop_lon": "-71.0645904541016",
              "distance": "0.00800655130296946"
       },
       {
              "stop_id": "70159",
              "stop_name": "Boylston Station - Outbound",
              "parent_station": "place-boyls",
              "parent_station_name": "Boylston Station",
              "stop_lat": "42.3530197143555",
              "stop_lon": "-71.0645904541016",
              "distance": "0.00800655130296946"
       },
       {
              "stop_id": "8279",
              "stop_name": "Tremont St opp Avery St",
              "parent_station": "",
              "parent_station_name": "",
              "stop_lat": "42.3532485961914",
              "stop_lon": "-71.0643539428711",
              "distance": "0.0277116596698761"
       },
       .
       .
       .
       ]
}
```

4.4.6 SCHEDULED ARRIVALS AND DEPARTURES BY STOP

This query will return up to the next three scheduled arrivals and departures in the next hour for a direction and route for a particular stop.

URL

```
http://realtime.mbta.com/developer/api/v1/schedulebystop?api_key=<developer's api key>&stop=<GTFS-compatible stop_id>&route=<GTFS-compatible route_id>&direction=<GTFS-compatible direction_id>&datetime=<epoch time>
```

Parameters

Name	Description
api_key	Unique API key assigned to each developer
stop	GTFS-compatible stop_id value for which schedule should be returned Data type: String Example: "Back Bay"
route (optional)	GTFS-compatible route_id value on the stop for which schedule should be returned If not included then schedule for all routes serving the stop will be returned Data type: String Example: "CR-Providence"
direction (optional)	GTFS-compatible direction_id value on route of the stop for which schedule should be returned If included then route must also be included If not included then schedule for all directions of the route serving the stop will be returned Data type: Bit (0 or 1) Example: "0"
datetime (optional)	Epoch time after which schedule should be returned If included then must be within the next seven (7) days If not included then schedule starting from the current datetime will be returned Data type: Integer Example: "1361989200"

Response Fields

Name	Description
schedule	Root element of the response document
stop_id	Attribute of the root element The GTFS-compatible unique identifier for the stop for which the schedule is returned Data type: String Example: "Back Bay"
stop_name	Attribute of the root element The GTFS-compatible name for the stop for which routes are returned Data type: String Example: "Back Bay"

mode	Child element of the root element Contains information for a mode that serves this stop
route_type	Attribute of the “mode” element The GTFS-compatible identifier for the type of service (mode) Data type: String representation of an Integer (0-7) Example: “2”
mode_name	Attribute of the “mode” element The human-readable name for the type of service (mode) Data type: String Example: “Commuter Rail”
route	Child element of the “mode” element Contains information for a route that serves this stop
route_id	Attribute of the “route” element The unique GTFS-compatible identifier for the route Data type: String Example: “CR-Providence”
route_name	Attribute of the “route” element The human-readable name for the route Data type: String Example: “Providence/Stoughton Line”
direction	Child element of the ‘route’ element Contains information for a direction of the route
direction_id	Attribute of the “direction” element The GTFS-compatible identifier for the direction Data type: String representation of a Bit (0 or 1) Example: “0”
direction_name	Attribute of the “direction” element The human-readable name for the direction Data type: String Example: “Outbound”
trip	Child element of the ‘direction’ element Contains information for a trip on a direction of the route
trip_id	Attribute of the “trip” element The unique GTFS-compatible identifier for the trip Data type: String Example: “CR-Providence-CR-Weekday-815”
trip_name	Attribute of the “trip” element The human-readable for the trip Data type: String Example: “815 (4:35 pm from South Station)”
sch_arr_dt	Attribute of the “trip” element Scheduled arrival time at the stop for the trip, in epoch time Data type: String representation of an Integer Example: “1361989260”

sch_dep_dt	Attribute of the “trip” element Scheduled departure time at the stop for the trip, in epoch time Data type: String representation of an Integer Example: “1361989260”

Example

Request:

http://realtime.mbta.com/developer/api/v1/schedulebystop?api_key=9zoExM5kqUiHeBxFicWOMA&stop=Back%20Bay&route=CR-Providence&direction=0

XML Response:

```
<schedule xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" stop_id="Back Bay" stop_name="Back Bay">
	<mode route_type="2" mode_name="Commuter Rail">
		<route route_id="CR-Providence" route_name="Providence/Stoughton Line">
			<direction direction_id="0" direction_name="Outbound">
				<trip trip_id="CR-Providence-CR-Weekday-815" trip_name="815
(4:35 pm from South Station)" sch_arr_dt="1367872800" sch_dep_dt="1367872800"/>
				<trip trip_id="CR-Providence-CR-Weekday-917" trip_name="917
(4:05 pm from South Station)" sch_arr_dt="1367871000" sch_dep_dt="1367871000"/>
				<trip trip_id="CR-Providence-CR-Weekday-919" trip_name="919
(4:50 pm from South Station)" sch_arr_dt="1367873700" sch_dep_dt="1367873700"/>
			</direction>
		</route>
	</mode>
</schedule>
```

JSON Response:

```
{
	"stop_id": "Back Bay",
	"stop_name": "Back Bay",
	"mode": [{
		"route_type": "2",
		"mode_name": "Commuter Rail",
		"route": [{
			"route_id": "CR-Providence",
			"route_name": "Providence/Stoughton Line",
			"direction": [{
				"direction_id": "0",
				"direction_name": "Outbound",
				"trip": [{
					"trip_id": "CR-Providence-CR-Weekday-815",
					"trip_name": "815 (4:35 pm from South Station)",
					"sch_arr_dt": "1367872800",
					"sch_dep_dt": "1367872800"
				},
				{
					"trip_id": "CR-Providence-CR-Weekday-817",
					"trip_name": "817 (5:00 pm from South Station)",
					"sch_arr_dt": "1367874300",
					"sch_dep_dt": "1367874300"
				},
				{
					"trip_id": "CR-Providence-CR-Weekday-919",
					"trip_name": "919 (4:50 pm from South Station)",
					"sch_arr_dt": "1367873700",
					"sch_dep_dt": "1367873700"
				}]
```

```
                    }]
                }]
        }]
}
```

4.4.7 SCHEDULED ARRIVALS AND DEPARTURES BY ROUTE

This query will return the scheduled arrivals and departures for the next three trips (including trips already underway) in a direction for a particular route.

URL

```
http://realtime.mbta.com/developer/api/v1/schedulebyroute?api_key=<developer's api key>&route=<GTFS-compatible route_id>&direction=<GTFS-compatible direction_id>&datetime=<epoch time>
```

Parameters

Name	Description
api_key	Unique API key assigned to each developer
route	GTFS-compatible route_id value for which schedule should be returned Data type: String Example: "CR-Providence"
direction (optional)	GTFS-compatible direction_id value on route for which schedule should be returned If not included then schedule for all directions of the route will be returned Data type: Bit (0 or 1) Example: "0"
datetime (optional)	Epoch time after which schedule should be returned If included then must be within the next seven (7) days If not included then schedule starting from the current datetime will be returned Data type: Integer Example: "1361989200"

Response Fields

Name	Description
schedule	Root element of the response document
route_id	Attribute of the root element The unique GTFS-compatible identifier for the route for which schedule is returned Data type: String Example: "CR-Providence"
route_name	Attribute of the root element The human-readable name for the route for which stops are returned Data type: String Example: "Providence/Stoughton Line"
direction	Child element of the root element Contains information for a direction of the route

direction_id	Attribute of the “direction” element The GTFS-compatible identifier for the direction Data type: String representation of a Bit (0 or 1) Example: “0”
direction_name	Attribute of the “direction” element The human-readable name for the direction Data type: String Example: “Outbound”
trip	Child element of the ‘direction’ element Contains information for a trip on a direction of the route
trip_id	Attribute of the “trip” element The unique GTFS-compatible identifier for the trip Data type: String Example: “CR-Providence-CR-Weekday-815”
trip_name	Attribute of the “trip” element The human-readable for the trip Data type: String Example: “815 (4:35 pm from South Station)”
stop	Child element of the ‘trip’ element Contains information for a stop on the trip
stop_sequence	Attribute of the “stop” element Identifies where the stop comes in the sequence of stops for this trip Data type: String representation of an Integer (starting with 1) Example: “2”
stop_id	Attribute of the “stop” element The GTFS-compatible unique identifier for the stop Data type: String Example: “Back Bay”
stop_name	Attribute of the “stop” element The GTFS-compatible name for the stop Data type: String Example: “Back Bay”
sch_arr_dt	Attribute of the “stop” element Scheduled arrival time at the stop for the trip, in epoch time Data type: String representation of an Integer Example: “1361986080”
sch_dep_dt	Attribute of the “stop” element Scheduled departure time at the stop for the trip, in epoch time Data type: String representation of an Integer Example: “1361986080”

Example

Request:

http://realtime.mbta.com/developer/api/v1/schedulebyroute?api_key=9zoExM5kqUiHeBxFicWOMA&route=CR-Providence&direction=0

XML Response:

```
<schedule xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" route_id="CR-Providence"
route_name="Providence/Stoughton Line">
       <direction direction_id="0" direction_name="Outbound">
              <trip trip_id="CR-Providence-CR-Weekday-811" trip_name="811 (3:30 pm from
South Station)">
                     <stop stop_sequence="1" stop_id="South Station" stop_name="South
Station" sch_arr_dt="1367868600" sch_dep_dt="1367868600"/>
                     <stop stop_sequence="2" stop_id="Back Bay" stop_name="Back Bay"
sch_arr_dt="1367868900" sch_dep_dt="1367868900"/>
                     .
                     .
                     .
              </trip>
              <trip trip_id="CR-Providence-CR-Weekday-813" trip_name="813 (4:00 pm from
South Station)">
                     <stop stop_sequence="1" stop_id="South Station" stop_name="South
Station" sch_arr_dt="1367870400" sch_dep_dt="1367870400"/>
                     <stop stop_sequence="2" stop_id="Back Bay" stop_name="Back Bay"
sch_arr_dt="1367870700" sch_dep_dt="1367870700"/>
                     .
                     .
                     .
              </trip>
              .
              .
              .
       </direction>
</schedule>
```

JSON Response:

```
{
       "route_id": "CR-Providence",
       "route_name": "Providence/Stoughton Line",
       "direction": [{
              "direction_id": "0",
              "direction_name": "Outbound",
              "trip": [{
                     "trip_id": "CR-Providence-CR-Weekday-811",
                     "trip_name": "811 (3:30 pm from South Station)",
                     "stop": [{
                            "stop_sequence": "1",
                            "stop_id": "South Station",
                            "stop_name": "South Station",
                            "sch_arr_dt": 1367868600,
                            "sch_dep_dt": 1367868600
                     },
                     {
                            "stop_sequence": "2",
                            "stop_id": "Back Bay",
                            "stop_name": "Back Bay",
                            "sch_arr_dt": 1367868900,
                            "sch_dep_dt": 1367868900
                     },
                     .
                     .
                     .
                     ]
              },
              {
                     "trip_id": "CR-Providence-CR-Weekday-813",
```

```
                    "trip_name": "813 (4:00 pm from South Station)",
                    "stop": [{
                           "stop_sequence": "1",
                           "stop_id": "South Station",
                           "stop_name": "South Station",
                           "sch_arr_dt": 1367870400,
                           "sch_dep_dt": 1367870400
                    },
                    {
                           "stop_sequence": "2",
                           "stop_id": "Back Bay",
                           "stop_name": "Back Bay",
                           "sch_arr_dt": 1367870700,
                           "sch_dep_dt": 1367870700
                    },
                    .
                    .
                    .
                    ]
             },
             .
             .
             .
             ]
      }]
}
```


4.4.8 SCHEDULED ARRIVALS AND DEPARTURES BY TRIP

This query will return the scheduled arrivals and departures for a particular trip.

URL

```
http://realtime.mbta.com/developer/api/v1/schedulebytrip?api_key=<developer's api key>&trip=<GTFS-compatible trip_id>
```

Parameters

Name	Description
api_key	Unique API key assigned to each developer
trip	GTFS-compatible trip_id value for which schedule should be returned Data type: String Example: "CR-Providence-CR-Weekday-807"
datetime (optional)	Epoch time after which schedule should be returned If included then must be within the next seven (7) days If not included then schedule starting from the current datetime will be returned Data type: Integer Example: "1361989200"

Response Fields

Name	Description
schedule	Root element of the response document

route_id	Attribute of the root element The unique GTFS-compatible identifier for the route for which schedule is returned Data type: String Example: “CR-Providence”
route_name	Attribute of the root element The human-readable name for the route for which stops are returned Data type: String Example: “Providence/Stoughton Line”
trip_id	Attribute of the root element The unique GTFS-compatible identifier for the trip Data type: String Example: “CR-Providence-CR-Weekday-815”
trip_name	Attribute of the root element The human-readable for the trip Data type: String Example: “815 (4:35 pm from South Station)”
direction_id	Attribute of the root element The GTFS-compatible identifier for the direction Data type: String representation of a Bit (0 or 1) Example: “0”
direction_name	Attribute of the root element The human-readable name for the direction Data type: String Example: “Outbound”
stop	Child element of the ‘trip’ element Contains information for a stop on the trip
stop_sequence	Attribute of the “stop” element Identifies where the stop comes in the sequence of stops for this trip Data type: String representation of an Integer (starting with 1) Example: “2”
stop_id	Attribute of the “stop” element The GTFS-compatible unique identifier for the stop Data type: String Example: “Back Bay”
stop_name	Attribute of the “stop” element The GTFS-compatible name for the stop Data type: String Example: “Back Bay”
sch_arr_dt	Attribute of the “stop” element Scheduled arrival time at the stop for the trip, in epoch time Data type: String representation of an Integer Example: “1361986080”
sch_dep_dt	Attribute of the “stop” element Scheduled departure time at the stop for the trip, in epoch time Data type: String representation of an Integer Example: “1361986080”

Example

Request:

http://realtime.mbta.com/developer/api/v1/schedulebytrip?api_key=9zoExM5kqUiHeBxFicWOMA&trip=CR-Providence-CR-Weekday-807

XML Response:

```
<schedule xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" route_id="CR-Providence"
route_name="Providence/Stoughton Line" trip_id="CR-Providence-CR-Weekday-807"
trip_name="807 (11:20 am from South Station)" direction_id="0"
direction_name="Outbound">
       <stop stop_sequence="1" stop_id="South Station" stop_name="South Station"
sch_arr_dt="1367940000" sch_dep_dt="1367940000"/>
       <stop stop_sequence="2" stop_id="Back Bay" stop_name="Back Bay"
sch_arr_dt="1367940300" sch_dep_dt="1367940300"/>
       .
       .
       .
</schedule>
```

JSON Response:

```
{
       "route_id": "CR-Providence",
       "route_name": "Providence/Stoughton Line",
       "trip_id": "CR-Providence-CR-Weekday-807",
       "trip_name": "807 (11:20 am from South Station)",
       "direction_id": "0",
       "direction_name": "Outbound",
       "stop": [{
              "stop_sequence": "1",
              "stop_id": "South Station",
              "stop_name": "South Station",
              "sch_arr_dt": 1367940000,
              "sch_dep_dt": 1367940000
       },
       {
              "stop_sequence": "2",
              "stop_id": "Back Bay",
              "stop_name": "Back Bay",
              "sch_arr_dt": 1367940300,
              "sch_dep_dt": 1367940300
       },
       .
       .
       .
       ]
}
```

4.4.9 ALERTS

This query will return details for all alerts.

URL

```
http://realtime.mbta.com/developer/api/v1/alerts?api_key=<developer's api key>
```

Parameters

Name	Description

api_key	Unique API key assigned to each developer

Response Fields

Name	Description	Can be absent	Can be empty
alerts	Root element of the feed	No	No
alert	Child element of the root element Contains information about a single alert	No	No
alert_id	Attribute of the “alert” element The unique identifier for the alert Data type: Integer Example: “2585”	No	No
effect_name	Child element of the “alert” element The human-readable name for the effect Data type: String Example: “Shuttle bus”	No	No
effect	Child element of the “alert” element The GTFS-realtime-compatible code for the effect Data type: String Example: “MODIFIED_SERVICE”	No	No
cause_name	Child element of the “alert” element The human-readable name for the cause Data type: String Example: “maintenance”	No	Yes
cause	Child element of the “alert” element The GTFS-realtime-compatible code for the cause Data type: String Example: “MAINTENANCE”	No	No
header_text	Child element of the “alert” element A brief summary of the situation (GTFS-realtime-compatible) Data type: String Length: 230 characters Example: “Shuttle buses replacing Red Line service from Sat Apr 27, 2013 to Sun May 26, 2013 every Saturday and Sunday from 09:00 PM to end of service due to maintenance”	No	No
url	Child element of the “alert” element A URL for extra detail (optional, GTFS-realtime-compatible) Data type: String Length: 255 characters Example: “http://mbta.com/about_the_mbta/t_projects/”	No	Yes

Name	Description	Can be absent	Can be empty
description_text	Child element of the “alert” element Additional details (GTFS-realtime-compatible) Data type: String Length: 3000 characters Example: “Affected stops: Alewife Station Davis Station Porter Square Station Harvard Square Station”	No	Yes
severity	Child element of the “alert” element Severity level of the alert Data type: String (“Severe”, “Moderate”, or “Minor”) Example: “Severe”	No	No
created_dt	Child element of the “alert” element Date and time the alert was created, in epoch time Data type: String representation of an Integer Example: “1361395938”	No	No
last_modified_dt	Child element of the “alert” element Date and time the alert was last modified, in epoch time Data type: String representation of an Integer Example: “1361395938”	No	No
effect_periods	Child element of the “alert” element Contains information about all time periods for which the alert will be in effect	No	No
effect_period	Child element of the “effect_periods” element Contains information about a single time period	No	No
effect_start	Attribute of the “effect-period” element Date and time of the start of the effect period, in epoch time Data type: String representation of an Integer Example: “1367110800”	No	No
effect_end	Attribute of the “effect-period” element Date and time of the end of the effect period, in epoch time. Can be empty if effect end is not known. Data type: String representation of an Integer Example: “1367130600”	No	Yes
affected_services	Child element of the “alert” element Contains information about the services or elevators affected by this alert	No	No

Name	Description	Can be absent	Can be empty
services	Child element of the “affected_services” element Contains information about the services affected by this alert	No	Yes, if it is an elevator/escalator alert
service	Child element of the “services” element Contains information about a service affected by this alert	Yes	No
route_type	Attribute of the “service” element GTFS-compatible code for route type (i.e. mode) Data type: Integer (0-7) Example: “1”	Yes	No
mode_name	Attribute of the “service” element Human-readable name for the mode Data type: String Example: “Subway”	Yes	No
route_id	Attribute of the “service” element The unique GTFS-compatible identifier for the route Data type: String Example: “931_”	Yes	No
route_name	Attribute of the “service” element The human-readable name for the route Data type: String Example: “Red Line”	Yes	No
direction_id	Attribute of the “service” element The GTFS-compatible identifier for the direction Data type: String representation of a Bit (0 or 1) Example: “0”	Yes	No
direction_name	Attribute of the “service” element Human-readable direction name Data type: String Example: “Westbound”	Yes	No
trip_id	Attribute of the “service” element The GTFS-compatible unique identifier for the trip Data type: String Example: “CR-Newburyport-CR-Weekday-129”	Yes	No
trip_name	Attribute of the “service” element Human-readable trip name Data type: String Example: “129 (5:00 pm from North Station)”	Yes	No

Name	Description	Can be absent	Can be empty
stop_id	Attribute of the “service” element The GTFS-compatible unique identifier for the stop Data type: String Example: “70061”	Yes	No
stop_name	Attribute of the “service” element The GTFS-compatible name for the stop (not unique) Data type: String Example: “Alewife Station Red Line”	Yes	No
elevators	Child element of the “affected_services” element Contains information about elevators/escalators affected by this alert	No	Yes, if it is a non-elevator/escalator alert
elevator	Child element of the “elevators” element Contains information about an elevator/escalator affected by this alert	Yes	No
elev_id	Attribute of the “elevator” element Unique identifier for the elevator/escalator Data type: String Example: “926”	Yes	No
elev_name	Attribute of the “elevator” element Human-readable name for the elevator/escalator Data type: String Example: “SOUTH STATION – Lobby to Street”	Yes	No
elev_type	Attribute of the “elevator” element Type of the elevator/escalator Data type: String (“Elevator”, “Escalator”, or “Lift”) Example: “Elevator”	Yes	No
stop	Child element of the “elevator” element Contains information about a stop related to this elevator	Yes	No
stop_id	Attribute of the “stop” element The GTFS-compatible unique identifier for the stop Data type: String Example: “70080”	Yes	No
stop_name	Attribute of the “stop” element The GTFS-compatible name for the stop (not unique) Data type: String Example: “South Station – Inbound”	Yes	No

Name	Description	Can be absent	Can be empty
parent_station	Attribute of the “stop” element The GTFS-compatible unique identifier for the larger station associated with the stop, if one exists. Can be empty if parent station does not exist. Data type: String Example: “place_sstat”	Yes	Yes
parent_station_name	Attribute of the “stop” element The human-readable name for the larger station associated with the stop, if one exists. Can be empty if parent station does not exist. Data type: String Example: “South Station”	Yes	Yes

Notes

Severity:

- “Severity” was created with the intent that it could drive presentation of alerts in a variety of ways – ordering, coloring, icons – and not with the intent that the words “severity,” “mild,” “moderate,” or “severe” would necessarily be shown directly to customers.

Effect Periods:

- More than one ‘effect_period’ element can be present.
- ‘effect_end’ can be empty if the end time for an alert is not known.

Affected Services:

- The affected services for an alert can include either services or elevators/escalators but NOT both. If the ‘services’ element is empty (i.e. ‘service’ elements are not present) then the ‘elevators’ element will not be empty (i.e. ‘elevator’ elements will be present) and vice versa.
- More than one ‘service’ element can be present.
- Each ‘service’ element includes combinations of modes (route_type/mode_name), routes (route_id/route_name), directions (direction_id/direction_name), trips (trip_id/trip_name), and stops (stop_id/stop_name). The following configurations are possible:

Mode (route_type/ mode_name)	Route (route_id/ route_name)	Direction (direction_id/ direction_name)	Trip (trip_id/ trip_name)	Stop (stop_id/ stop_name)	Affects
Yes					An entire mode
Yes	Yes				An entire route
Yes	Yes	Yes			A direction of a route
Yes	Yes	Yes	Yes		A trip on a direction of a route
Yes	Yes	Yes	Yes	Yes	A stop on a trip on a direction of a route

Yes	Yes		Yes	Yes	A stop on a trip on a route
Yes	Yes			Yes	A stop on a route

- Currently, the system does not allow creation of an alert that applies to multiple elevators/escalators. Therefore, only one 'elevator' element can be present. This may change in the future.
- For alerts that apply to elevators/escalators, 'parent_station' and 'parent_station_name' attributes on the 'stop' element can be empty if parent station does not exist.

Example

Request:

http://realtime.mbta.com/developer/api/v1/alerts?api_key=9zoExM5kqUiHeBxFicWOMA

XML Response:

```
<alerts xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
	<alert alert_id="780">
		<effect_name>Station Closure</effect_name>
		<effect>NO_SERVICE</effect>
		<cause_name>construction</cause_name>
		<cause>CONSTRUCTION</cause>
		<header_text>
Porter Square Station closed from Sat May 11, 2013 through Sun May 12, 2013 due to
construction
		</header_text>
		<url/>
		<description_text>Affected services: Fitchburg/South Acton
Line</description_text>
		<severity>Severe</severity>
		<created_dt>1367605622</created_dt>
		<last_modified_dt>1367605622</last_modified_dt>
		<effect_periods>
			<effect_period effect_start="1368261000" effect_end="1368426600"/>
		</effect_periods>
		<affected_services>
			<services>
				<service route_type="2" mode_name="Commuter Rail"
route_id="CR-Fitchburg" route_name="Fitchburg/South Acton Line" stop_id="Porter
Square" stop_name="Porter Square"/>
			</services>
			<elevators/>
		</affected_services>
	</alert>
	<alert alert_id="781">
		<effect_name>Shuttle Bus</effect_name>
		<effect>DETOUR</effect>
		<cause_name>tie replacement</cause_name>
		<cause>MAINTENANCE</cause>
		<header_text>
Shuttle buses replacing Red Line service from Sat Jun 01, 2013 to Sun Jun 30, 2013
every Saturday and Sunday from 09:00 PM to end of service due to tie replacement
		</header_text>
		<url/>
		<description_text>
Affected stops: Alewife Station Davis Station Porter Square Station Harvard Square
Station
```

```
            </description_text>
            <severity>Severe</severity>
            <created_dt>1367605685</created_dt>
            <last_modified_dt>1367605685</last_modified_dt>
            <effect_periods>
                  <effect_period effect_start="1370134800" effect_end="1370154600"/>
                  <effect_period effect_start="1370221200" effect_end="1370241000"/>
                  <effect_period effect_start="1370739600" effect_end="1370759400"/>
                  <effect_period effect_start="1370826000" effect_end="1370845800"/>
                  <effect_period effect_start="1371344400" effect_end="1371364200"/>
                  <effect_period effect_start="1371430800" effect_end="1371450600"/>
                  <effect_period effect_start="1371949200" effect_end="1371969000"/>
                  <effect_period effect_start="1372035600" effect_end="1372055400"/>
                  <effect_period effect_start="1372554000" effect_end="1372573800"/>
                  <effect_period effect_start="1372640400" effect_end="1372660200"/>
            </effect_periods>
            <affected_services>
                  <services>
                        <service route_type="1" mode_name="Subway" route_id="931_"
route_name="Red Line" stop_id="70061" stop_name="Alewife Station Red Line"/>
                        <service route_type="1" mode_name="Subway" route_id="931_"
route_name="Red Line" stop_id="70063" stop_name="Davis Sq - Inbound"/>
                        <service route_type="1" mode_name="Subway" route_id="931_"
route_name="Red Line" stop_id="70064" stop_name="Davis Square - Outbound"/>
                        <service route_type="1" mode_name="Subway" route_id="931_"
route_name="Red Line" stop_id="70065" stop_name="Porter Sq - Inbound"/>
                        <service route_type="1" mode_name="Subway" route_id="931_"
route_name="Red Line" stop_id="70066" stop_name="Porter Sq - Outbound"/>
                        <service route_type="1" mode_name="Subway" route_id="931_"
route_name="Red Line" stop_id="70067" stop_name="Harvard Station - Inbound"/>
                        <service route_type="1" mode_name="Subway" route_id="931_"
route_name="Red Line" stop_id="70068" stop_name="Harvard Station - Outbound"/>
                        <service route_type="1" mode_name="Subway" route_id="933_"
route_name="Red Line" stop_id="70061" stop_name="Alewife Station Red Line"/>
                        <service route_type="1" mode_name="Subway" route_id="933_"
route_name="Red Line" stop_id="70063" stop_name="Davis Sq - Inbound"/>
                        <service route_type="1" mode_name="Subway" route_id="933_"
route_name="Red Line" stop_id="70064" stop_name="Davis Square - Outbound"/>
                        <service route_type="1" mode_name="Subway" route_id="933_"
route_name="Red Line" stop_id="70065" stop_name="Porter Sq - Inbound"/>
                        <service route_type="1" mode_name="Subway" route_id="933_"
route_name="Red Line" stop_id="70066" stop_name="Porter Sq - Outbound"/>
                        <service route_type="1" mode_name="Subway" route_id="933_"
route_name="Red Line" stop_id="70067" stop_name="Harvard Station - Inbound"/>
                        <service route_type="1" mode_name="Subway" route_id="933_"
route_name="Red Line" stop_id="70068" stop_name="Harvard Station - Outbound"/>
                  </services>
                  <elevators/>
            </affected_services>
      </alert>
      <alert alert_id="783">
            <effect_name>Accessibility</effect_name>
            <effect>OTHER_EFFECT</effect>
            <cause_name>electrical work</cause_name>
            <cause>MAINTENANCE</cause>
            <header_text>
Elevator 849 RUGGLES - Commuter Rail Platform to Lobby out of service from Wed May 08,
2013 at 05:00 PM to Thu May 09, 2013 at 10:00 AM due to electrical work
            </header_text>
            <url/>
            <description_text>
Please contact station personnel or conductor for assistance. For inbound commuter
rail riders, please disembark at Back Bay and return to Ruggles via the Orange Line.
```

```
For outbound customers, please take the Orange Line to Back Bay and board the commuter
rail at Back Bay. Please contact station personnel for assistance.
            </description_text>
            <severity>Severe</severity>
            <created_dt>1367605801</created_dt>
            <last_modified_dt>1367605801</last_modified_dt>
            <effect_periods>
                  <effect_period effect_start="1368046800" effect_end="1368108000"/>
            </effect_periods>
            <affected_services>
                  <services/>
                  <elevators>
                        <elevator elev_id="849" elev_name="RUGGLES - Commuter Rail
Platform to Lobby" elev_type="Elevator">
                              <stop stop_id="Ruggles" stop_name="Ruggles"
parent_station="place-rugg" parent_station_name="Ruggles Station"/>
                        </elevator>
                  </elevators>
            </affected_services>
      </alert>
</alerts>
```

JSON Response:

```
{
      "alerts": [{
            "alert_id": 780,
            "effect_name": "Station Closure",
            "effect": "NO_SERVICE",
            "cause_name": "construction",
            "cause": "CONSTRUCTION",
            "header_text": "Porter Square Station closed from Sat May 11, 2013
through Sun May 12, 2013 due to construction",
            "url": "",
            "description_text": "Affected services:\r\nFitchburg/South Acton Line",
            "severity": "Severe",
            "created_dt": "1367605622",
            "last_modified_dt": "1367605622",
            "effect_periods": [{
                  "effect_start": "1368261000",
                  "effect_end": "1368426600"
            }],
            "affected_services": {
                  "services": [{
                        "route_type": "2",
                        "mode_name": "Commuter Rail",
                        "route_id": "CR-Fitchburg",
                        "route_name": "Fitchburg/South Acton Line",
                        "stop_id": "Porter Square",
                        "stop_name": "Porter Square"
                  }],
                  "elevators": []
            }
      },
      {
            "alert_id": 781,
            "effect_name": "Shuttle Bus",
            "effect": "DETOUR",
            "cause_name": "tie replacement",
            "cause": "MAINTENANCE",
            "header_text": "Shuttle buses replacing Red Line service from Sat Jun 01,
2013 to Sun Jun 30, 2013 every Saturday and Sunday from 09:00 PM to end of service due
to tie replacement",
```

```
            "url": "",
            "description_text": "Affected stops:\r\nAlewife Station\r\nDavis
Station\r\nPorter Square Station\r\nHarvard Square Station",
            "severity": "Severe",
            "created_dt": "1367605685",
            "last_modified_dt": "1367605685",
            "effect_periods": [{
                  "effect_start": "1370134800",
                  "effect_end": "1370154600"
            },
            {
                  "effect_start": "1370221200",
                  "effect_end": "1370241000"
            },
            {
                  "effect_start": "1370739600",
                  "effect_end": "1370759400"
            },
            {
                  "effect_start": "1370826000",
                  "effect_end": "1370845800"
            },
            {
                  "effect_start": "1371344400",
                  "effect_end": "1371364200"
            },
            {
                  "effect_start": "1371430800",
                  "effect_end": "1371450600"
            },
            {
                  "effect_start": "1371949200",
                  "effect_end": "1371969000"
            },
            {
                  "effect_start": "1372035600",
                  "effect_end": "1372055400"
            },
            {
                  "effect_start": "1372554000",
                  "effect_end": "1372573800"
            },
            {
                  "effect_start": "1372640400",
                  "effect_end": "1372660200"
            }],
            "affected_services": {
                  "services": [{
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "931_",
                        "route_name": "Red Line",
                        "stop_id": "70061",
                        "stop_name": "Alewife Station Red Line"
                  },
                  {
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "931_",
                        "route_name": "Red Line",
                        "stop_id": "70063",
                        "stop_name": "Davis Sq - Inbound"
                  },
```

```
                {
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "931_",
                        "route_name": "Red Line",
                        "stop_id": "70064",
                        "stop_name": "Davis Square - Outbound"
                },
                {
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "931_",
                        "route_name": "Red Line",
                        "stop_id": "70065",
                        "stop_name": "Porter Sq - Inbound"
                },
                {
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "931_",
                        "route_name": "Red Line",
                        "stop_id": "70066",
                        "stop_name": "Porter Sq - Outbound"
                },
                {
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "931_",
                        "route_name": "Red Line",
                        "stop_id": "70067",
                        "stop_name": "Harvard Station - Inbound"
                },
                {
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "931_",
                        "route_name": "Red Line",
                        "stop_id": "70068",
                        "stop_name": "Harvard Station - Outbound"
                },
                {
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "933_",
                        "route_name": "Red Line",
                        "stop_id": "70061",
                        "stop_name": "Alewife Station Red Line"
                },
                {
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "933_",
                        "route_name": "Red Line",
                        "stop_id": "70063",
                        "stop_name": "Davis Sq - Inbound"
                },
                {
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "933_",
                        "route_name": "Red Line",
                        "stop_id": "70064",
                        "stop_name": "Davis Square - Outbound"
```

```
                        },
                        {
                               "route_type": "1",
                               "mode_name": "Subway",
                               "route_id": "933_",
                               "route_name": "Red Line",
                               "stop_id": "70065",
                               "stop_name": "Porter Sq - Inbound"
                        },
                        {
                               "route_type": "1",
                               "mode_name": "Subway",
                               "route_id": "933_",
                               "route_name": "Red Line",
                               "stop_id": "70066",
                               "stop_name": "Porter Sq - Outbound"
                        },
                        {
                               "route_type": "1",
                               "mode_name": "Subway",
                               "route_id": "933_",
                               "route_name": "Red Line",
                               "stop_id": "70067",
                               "stop_name": "Harvard Station - Inbound"
                        },
                        {
                               "route_type": "1",
                               "mode_name": "Subway",
                               "route_id": "933_",
                               "route_name": "Red Line",
                               "stop_id": "70068",
                               "stop_name": "Harvard Station - Outbound"
                        }],
                        "elevators": []
                }
        },
        {
                "alert_id": 783,
                "effect_name": "Accessibility",
                "effect": "OTHER_EFFECT",
                "cause_name": "electrical work",
                "cause": "MAINTENANCE",
                "header_text": "Elevator 849 RUGGLES - Commuter Rail Platform to Lobby
out of service from Wed May 08, 2013 at 05:00 PM to Thu May 09, 2013 at 10:00 AM due
to electrical work",
                "url": "",
                "description_text": "Please contact station personnel or conductor for
assistance. For inbound commuter rail riders, please disembark at Back Bay and return
to Ruggles via the Orange Line. \r\n\r\nFor outbound customers, please take the Orange
Line to Back Bay and board the commuter rail at Back Bay. Please contact station
personnel for assistance.",
                "severity": "Severe",
                "created_dt": "1367605801",
                "last_modified_dt": "1367605801",
                "effect_periods": [{
                        "effect_start": "1368046800",
                        "effect_end": "1368108000"
                }],
                "affected_services": {
                        "services": [],
                        "elevators": [{
                               "elev_id": "849",
                               "elev_name": "RUGGLES - Commuter Rail Platform to Lobby",
```

```
                        "elev_type": "Elevator",
                        "stops": [{
                               "stop_id": "Ruggles",
                               "stop_name": "Ruggles",
                               "parent_station": "place-rugg",
                               "parent_station_name": "Ruggles Station"
                        }]
                }]
        }
        }]
}
```

4.4.10 ALERT BY ID

This query will return details for a particular alert.

URL

```
http://realtime.mbta.com/developer/api/v1/alertbyid?api_key=<developer's api key>&id=<alert_id>
```

Parameters

Name	Description
api_key	Unique API key assigned to each developer
id	Unique identifier for the alert Date Type: Integer Example: "781"

Response Fields

Name	Description	Can be absent	Can be empty
alert	Root element of the feed	No	No
alert_id	Attribute of the "root" element The unique identifier for the alert Data type: Integer Example: "2585"	No	No

All other fields are similar to that for Alerts (see Section 4.4.9).

Notes

Similar to Alerts (see Section 4.4.9).

Example

Request (non elevator/escalator):

```
http://realtime.mbta.com/developer/api/v1/alertbyid?api_key=9zoExM5kqUiHeBxFicWOMA&id=781
```

XML Response:

```
<alert xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" alert_id="781">
       <effect_name>Shuttle Bus</effect_name>
```

```
      <effect>DETOUR</effect>
      <cause_name>tie replacement</cause_name>
      <cause>MAINTENANCE</cause>
      <header_text>
Shuttle buses replacing Red Line service from Sat Jun 01, 2013 to Sun Jun 30, 2013
every Saturday and Sunday from 09:00 PM to end of service due to tie replacement
      </header_text>
      <url/>
      <description_text>
Affected stops: Alewife Station Davis Station Porter Square Station Harvard Square
Station
      </description_text>
      <severity>Severe</severity>
      <created_dt>1367605685</created_dt>
      <last_modified_dt>1367605685</last_modified_dt>
      <effect_periods>
            <effect_period effect_start="1370134800" effect_end="1370154600"/>
            <effect_period effect_start="1370221200" effect_end="1370241000"/>
            <effect_period effect_start="1370739600" effect_end="1370759400"/>
            <effect_period effect_start="1370826000" effect_end="1370845800"/>
            <effect_period effect_start="1371344400" effect_end="1371364200"/>
            <effect_period effect_start="1371430800" effect_end="1371450600"/>
            <effect_period effect_start="1371949200" effect_end="1371969000"/>
            <effect_period effect_start="1372035600" effect_end="1372055400"/>
            <effect_period effect_start="1372554000" effect_end="1372573800"/>
            <effect_period effect_start="1372640400" effect_end="1372660200"/>
      </effect_periods>
      <affected_services>
            <services>
                  <service route_type="1" mode_name="Subway" route_id="931_"
route_name="Red Line" stop_id="70061" stop_name="Alewife Station Red Line"/>
                  <service route_type="1" mode_name="Subway" route_id="931_"
route_name="Red Line" stop_id="70063" stop_name="Davis Sq - Inbound"/>
                  <service route_type="1" mode_name="Subway" route_id="931_"
route_name="Red Line" stop_id="70064" stop_name="Davis Square - Outbound"/>
                  <service route_type="1" mode_name="Subway" route_id="931_"
route_name="Red Line" stop_id="70065" stop_name="Porter Sq - Inbound"/>
                  <service route_type="1" mode_name="Subway" route_id="931_"
route_name="Red Line" stop_id="70066" stop_name="Porter Sq - Outbound"/>
                  <service route_type="1" mode_name="Subway" route_id="931_"
route_name="Red Line" stop_id="70067" stop_name="Harvard Station - Inbound"/>
                  <service route_type="1" mode_name="Subway" route_id="931_"
route_name="Red Line" stop_id="70068" stop_name="Harvard Station - Outbound"/>
                  <service route_type="1" mode_name="Subway" route_id="933_"
route_name="Red Line" stop_id="70061" stop_name="Alewife Station Red Line"/>
                  <service route_type="1" mode_name="Subway" route_id="933_"
route_name="Red Line" stop_id="70063" stop_name="Davis Sq - Inbound"/>
                  <service route_type="1" mode_name="Subway" route_id="933_"
route_name="Red Line" stop_id="70064" stop_name="Davis Square - Outbound"/>
                  <service route_type="1" mode_name="Subway" route_id="933_"
route_name="Red Line" stop_id="70065" stop_name="Porter Sq - Inbound"/>
                  <service route_type="1" mode_name="Subway" route_id="933_"
route_name="Red Line" stop_id="70066" stop_name="Porter Sq - Outbound"/>
                  <service route_type="1" mode_name="Subway" route_id="933_"
route_name="Red Line" stop_id="70067" stop_name="Harvard Station - Inbound"/>
                  <service route_type="1" mode_name="Subway" route_id="933_"
route_name="Red Line" stop_id="70068" stop_name="Harvard Station - Outbound"/>
            </services>
            <elevators/>
      </affected_services>
</alert>
```

JSON Response:


```
{
	"alert_id": 781,
	"effect_name": "Shuttle Bus",
	"effect": "DETOUR",
	"cause_name": "tie replacement",
	"cause": "MAINTENANCE",
	"header_text": "Shuttle buses replacing Red Line service from Sat Jun 01, 2013
to Sun Jun 30, 2013 every Saturday and Sunday from 09:00 PM to end of service due to
tie replacement",
	"url": "",
	"description_text": "Affected stops:\r\nAlewife Station\r\nDavis
Station\r\nPorter Square Station\r\nHarvard Square Station",
	"severity": "Severe",
	"created_dt": "1367605685",
	"last_modified_dt": "1367605685",
	"effect_periods": [{
		"effect_start": "1370134800",
		"effect_end": "1370154600"
	},
	{
		"effect_start": "1370221200",
		"effect_end": "1370241000"
	},
	{
		"effect_start": "1370739600",
		"effect_end": "1370759400"
	},
	{
		"effect_start": "1370826000",
		"effect_end": "1370845800"
	},
	{
		"effect_start": "1371344400",
		"effect_end": "1371364200"
	},
	{
		"effect_start": "1371430800",
		"effect_end": "1371450600"
	},
	{
		"effect_start": "1371949200",
		"effect_end": "1371969000"
	},
	{
		"effect_start": "1372035600",
		"effect_end": "1372055400"
	},
	{
		"effect_start": "1372554000",
		"effect_end": "1372573800"
	},
	{
		"effect_start": "1372640400",
		"effect_end": "1372660200"
	}],
	"affected_services": {
		"services": [{
			"route_type": "1",
			"mode_name": "Subway",
			"route_id": "931_",
			"route_name": "Red Line",
```

```
                        "stop_id": "70061",
                        "stop_name": "Alewife Station Red Line"
                },
                {
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "931_",
                        "route_name": "Red Line",
                        "stop_id": "70063",
                        "stop_name": "Davis Sq - Inbound"
                },
                {
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "931_",
                        "route_name": "Red Line",
                        "stop_id": "70064",
                        "stop_name": "Davis Square - Outbound"
                },
                {
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "931_",
                        "route_name": "Red Line",
                        "stop_id": "70065",
                        "stop_name": "Porter Sq - Inbound"
                },
                {
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "931_",
                        "route_name": "Red Line",
                        "stop_id": "70066",
                        "stop_name": "Porter Sq - Outbound"
                },
                {
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "931_",
                        "route_name": "Red Line",
                        "stop_id": "70067",
                        "stop_name": "Harvard Station - Inbound"
                },
                {
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "931_",
                        "route_name": "Red Line",
                        "stop_id": "70068",
                        "stop_name": "Harvard Station - Outbound"
                },
                {
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "933_",
                        "route_name": "Red Line",
                        "stop_id": "70061",
                        "stop_name": "Alewife Station Red Line"
                },
                {
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "933_",
```

```
                        "route_name": "Red Line",
                        "stop_id": "70063",
                        "stop_name": "Davis Sq - Inbound"
                },
                {
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "933_",
                        "route_name": "Red Line",
                        "stop_id": "70064",
                        "stop_name": "Davis Square - Outbound"
                },
                {
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "933_",
                        "route_name": "Red Line",
                        "stop_id": "70065",
                        "stop_name": "Porter Sq - Inbound"
                },
                {
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "933_",
                        "route_name": "Red Line",
                        "stop_id": "70066",
                        "stop_name": "Porter Sq - Outbound"
                },
                {
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "933_",
                        "route_name": "Red Line",
                        "stop_id": "70067",
                        "stop_name": "Harvard Station - Inbound"
                },
                {
                        "route_type": "1",
                        "mode_name": "Subway",
                        "route_id": "933_",
                        "route_name": "Red Line",
                        "stop_id": "70068",
                        "stop_name": "Harvard Station - Outbound"
                }],
                "elevators": []
        }
}
```


Request (elevator/escalator):

http://realtime.mbta.com/developer/api/v1/alertbyid?api_key=9zoExM5kqUiHeBxFicWOMA&id=783

XML Response:


```
<alert xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" alert_id="783">
        <effect_name>Accessibility</effect_name>
        <effect>OTHER_EFFECT</effect>
        <cause_name>electrical work</cause_name>
        <cause>MAINTENANCE</cause>
        <header_text>
Elevator 849 RUGGLES - Commuter Rail Platform to Lobby out of service from Wed May 08,
2013 at 05:00 PM to Thu May 09, 2013 at 10:00 AM due to electrical work
```

```
	</header_text>
	<url/>
	<description_text>
Please contact station personnel or conductor for assistance. For inbound commuter
rail riders, please disembark at Back Bay and return to Ruggles via the Orange Line.
For outbound customers, please take the Orange Line to Back Bay and board the commuter
rail at Back Bay. Please contact station personnel for assistance.
	</description_text>
	<severity>Severe</severity>
	<created_dt>1367605801</created_dt>
	<last_modified_dt>1367605801</last_modified_dt>
	<effect_periods>
		<effect_period effect_start="1368046800" effect_end="1368108000"/>
	</effect_periods>
	<affected_services>
		<services/>
		<elevators>
			<elevator elev_id="849" elev_name="RUGGLES - Commuter Rail
Platform to Lobby" elev_type="Elevator">
				<stop stop_id="Ruggles" stop_name="Ruggles"
parent_station="place-rugg" parent_station_name="Ruggles Station"/>
			</elevator>
		</elevators>
	</affected_services>
</alert>
```

JSON Response:

```
{
	"alert_id": 783,
	"effect_name": "Accessibility",
	"effect": "OTHER_EFFECT",
	"cause_name": "electrical work",
	"cause": "MAINTENANCE",
	"header_text": "Elevator 849 RUGGLES - Commuter Rail Platform to Lobby out of
service from Wed May 08, 2013 at 05:00 PM to Thu May 09, 2013 at 10:00 AM due to
electrical work",
	"url": "",
	"description_text": "Please contact station personnel or conductor for
assistance. For inbound commuter rail riders, please disembark at Back Bay and return
to Ruggles via the Orange Line. \r\n\r\nFor outbound customers, please take the Orange
Line to Back Bay and board the commuter rail at Back Bay. Please contact station
personnel for assistance.",
	"severity": "Severe",
	"created_dt": "1367605801",
	"last_modified_dt": "1367605801",
	"effect_periods": [{
		"effect_start": "1368046800",
		"effect_end": "1368108000"
	}],
	"affected_services": {
		"services": [],
		"elevators": [{
			"elev_id": "849",
			"elev_name": "RUGGLES - Commuter Rail Platform to Lobby",
			"elev_type": "Elevator",
			"stops": [{
				"stop_id": "Ruggles",
				"stop_name": "Ruggles",
				"parent_station": "place-rugg",
				"parent_station_name": "Ruggles Station"
			}]
		}]
```

```
        }
}
```

4.4.11 ALERT HEADERS

This query will return headers for all alerts.

URL

```
http://realtime.mbta.com/developer/api/v1/alertheaders?api_key=<developer's api key>
```

Parameters

Name	Description
api_key	Unique API key assigned to each developer

Response Fields

Name	Description	Can be absent	Can be empty
alert_headers	Root element of the feed	No	No
alert	Child element of the root element Contains information about a single alert	No	No
alert_id	Attribute of the "alert" element The unique identifier for the alert Data type: Integer Example: "781"	No	No
header_text	Child element of the "alert" element A brief summary of the situation (GTFS-realtime-compatible) Data type: String Example: "Shuttle buses replacing Red Line service from Sat Jun 01, 2013 to Sun Jun 30, 2013 every Saturday and Sunday from 09:00 PM to end of service due to tie replacement"	No	No

Example

Request:

```
http://realtime.mbta.com/developer/api/v1/alertheaders?api_key=9zoExM5kqUiHeBxFicWOMA
```

XML Response:

```
<alert_headers xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
      <alert alert_id="780" header_text="Porter Square Station closed from Sat May
11, 2013 through Sun May 12, 2013 due to construction"/>
      <alert alert_id="781" header_text="Shuttle buses replacing Red Line service
from Sat Jun 01, 2013 to Sun Jun 30, 2013 every Saturday and Sunday from 09:00 PM to
end of service due to tie replacement"/>
      .
      .
      .
</alert_headers>
```

JSON Response:

```
{
       "alert_headers": [{
              "alert_id": 780,
              "header_text": "Porter Square Station closed from Sat May 11, 2013
through Sun May 12, 2013 due to construction"
       },
       {
              "alert_id": 781,
              "header_text": "Shuttle buses replacing Red Line service from Sat Jun 01,
2013 to Sun Jun 30, 2013 every Saturday and Sunday from 09:00 PM to end of service due
to tie replacement"
       },
       .
       .
       .
       ]
}
```

4.4.12 ALERT HEADERS BY ROUTE

This query will return headers for all alerts affecting a particular route.

URL

```
http://realtime.mbta.com/developer/api/v1/alertheadersbyroute?api_key=<developer's api
key>&route=<GTFS-compatible route_id>
```

Parameters

Name	Description
api_key	Unique API key assigned to each developer
route	GTFS-compatible route_id value for which alert headers should be returned Data type: String Example: "931_"

Response Fields

Name	Description	Can be absent	Can be empty
alerts	Root element of the feed	No	No
alert	Child element of the root element Contains information about a single alert	No	No
alert_id	Attribute of the "alert" element The unique identifier for the alert Data type: Integer Example: "781"	No	No

Name	Description	Can be absent	Can be empty
header_text	Child element of the “alert” element A brief summary of the situation (GTFS-realtime-compatible) Data type: String Example: “Shuttle buses replacing Red Line service from Sat Jun 01, 2013 to Sun Jun 30, 2013 every Saturday and Sunday from 09:00 PM to end of service due to tie replacement”	No	No

Example

Request:

```
http://realtime.mbta.com/developer/api/v1/alertheadersbyroute?api_key=9zoExM5kqUiHeBxFicWOMA&route=931_
```

XML Response:

```
<alert_headers xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema" route_id="931_" route_name="Red Line">
       <alert alert_id="781" header_text="Shuttle buses replacing Red Line service
from Sat Jun 01, 2013 to Sun Jun 30, 2013 every Saturday and Sunday from 09:00 PM to
end of service due to tie replacement"/>
       <alert alert_id="794" header_text="Red Line experiencing moderate delays
between Harvard and Alewife"/>
       .
       .
       .
</alert_headers>
```

JSON Response:

```
{
       "alert_headers": [{
              "alert_id": 781,
              "header_text": "Shuttle buses replacing Red Line service from Sat Jun 01,
2013 to Sun Jun 30, 2013 every Saturday and Sunday from 09:00 PM to end of service due
to tie replacement"
       },
       {
              "alert_id": 794,
              "header_text": "Red Line experiencing moderate delays between Harvard and
Alewife"
       },
       .
       .
       .
       ],
       "route_id": "931_",
       "route_name": "Red Line"
}
```

4.4.13 ALERT HEADERS BY STOP

This query will return headers for all alerts.

URL

```
http://realtime.mbta.com/developer/api/v1/alertheadersbystop?api_key=<developer's api key>&stop=<GTFS-compatible stop_id>
```

Parameters

Name	Description
api_key	Unique API key assigned to each developer
stop	GTFS-compatible stop_id value for which alert headers should be returned Data type: String Example: "place-portr"

Response Fields

Name	Description	Can be absent	Can be empty
alerts	Root element of the feed	No	No
alert	Child element of the root element Contains information about a single alert	No	No
alert_id	Attribute of the "alert" element The unique identifier for the alert Data type: Integer Example: "781"	No	No
header_text	Child element of the "alert" element A brief summary of the situation (GTFS-realtime-compatible) Data type: String Example: "Shuttle buses replacing Red Line service from Sat Jun 01, 2013 to Sun Jun 30, 2013 every Saturday and Sunday from 09:00 PM to end of service due to tie replacement"	No	No

Example

Request:

http://realtime.mbta.com/developer/api/v1/alertheadersbystop?api_key=9zoExM5kqUiHeBxFicWOMA&stop=place-portr

XML Response:

```
<alert_headers xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance" xmlns:xsd="http://www.w3.org/2001/XMLSchema" stop_id="place-portr" stop_name="Porter Square Station">
      <alert alert_id="780" header_text="Porter Square Station closed from Sat May 11, 2013 through Sun May 12, 2013 due to construction"/>
      <alert alert_id="781" header_text="Shuttle buses replacing Red Line service from Sat Jun 01, 2013 to Sun Jun 30, 2013 every Saturday and Sunday from 09:00 PM to end of service due to tie replacement"/>
      .
      .
      .
</alert_headers>
```

JSON Response:

```
{
	"alert_headers": [{
		"alert_id": 780,
		"header_text": "Porter Square Station closed from Sat May 11, 2013
through Sun May 12, 2013 due to construction"
	},
	{
		"alert_id": 781,
		"header_text": "Shuttle buses replacing Red Line service from Sat Jun 01,
2013 to Sun Jun 30, 2013 every Saturday and Sunday from 09:00 PM to end of service due
to tie replacement"
	},
	.
	.
	.
	],
	"stop_id": "place-portr",
	"stop_name": "Porter Square Station"
}
```

4.5 Errors

The following error messages may be returned by the web services:

4.5.1 INVALID QUERY

This error occurs when the query string is incorrectly formatted.

Example

Request

http://realtime.mbta.com/developer/api/v1/routesstop?api_key=9zoExM5kqUiHeBxFicWOMA&stop=place-portr

XML Response:

```
<error xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
	<message>The requested resource is not found</message>
</error>
```

JSON Response:

```
{
	"error": {
		"message": "The requested resource is not found"
	}
}
```

4.5.2 INVALID API KEY

This error occurs when an invalid API key is used.

Example

Request

http://realtime.mbta.com/developer/api/v1/routesbystop?api_key=1234567890&stop=place-portr

XML Response:

```
<error xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
	<message>Invalid API Key</message>
</error>
```

JSON Response:

```
{
	"error": {
		"message": "Invalid API Key"
	}
}
```

4.5.3 MISSING REQUIRED QUERY PARAMETER

This error occurs when a required parameter is not provided.

Example

Request

http://realtime.mbta.com/developer/api/v1/routesbystop?api_key=9zoExM5kqUiHeBxFicWOMA

XML Response:

```
<error xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
	<message>Missing required query parameter: stop</message>
</error>
```

JSON Response:

```
{
	"error": {
		"message": "Missing required query parameter: stop"
	}
}
```

4.5.4 INVALID QUERY PARAMETER

This error occurs when an invalid query parameter is provided.

Example

Request

http://realtime.mbta.com/developer/api/v1/routesbystop?api_key=9zoExM5kqUiHeBxFicWOMA&stop=place-portr&id=1

XML Response:

```
<error xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
	<message>Invalid query parameter: id</message>
</error>
```

JSON Response:

```
{
	"error": {
		"message": "Invalid query parameter: id"
	}
```

```
}
```

4.5.5 DATA NOT AVAILABLE

This error occurs when data is not available, or when an incorrect parameter is used.

Example

Request

```
http://realtime.mbta.com/developer/api/v1/routesbystop?api_key=9zoExM5kqUiHeBxFicWOMA&stop=place-port
```

XML Response:

```
<error xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
	<message>Routes data is not available for stop place-port</message>
</error>
```

JSON Response:

```
{
	"error": {
		"message": "Routes data is not available for stop place-port"
	}
}
```

4.5.6 DATA USAGE LIMIT EXCEEDED

This error occurs when the usage limit for a particular API key has been exceeded.

XML Response:

```
<error xmlns:xsi="http://www.w3.org/2001/XMLSchema-instance"
xmlns:xsd="http://www.w3.org/2001/XMLSchema">
	<message>Invalid API Key</message>
</error>
```

JSON Response:

```
{
	"error": {
		"message": "Invalid API Key"
	}
}
```

Note: The error message is anticipated to be changed to “Data usage limit exceeded” in June 2013.

4.5.7 INSUFFICIENT PRIORITY

This error occurs when the API key does not have sufficient priority (this is possible only when available bandwidth is insufficient to handle all user requests and requests are being prioritized).

Note: not currently implemented, but is anticipated to be done in June 2013.

4.6 Field and Attribute Definitions

The following table contains definitions of the fields and attributes found in the web services. The “In GTFS/GTFS-realtime” column indicates if the field is found in the GTFS or GTFS-realtime specification (see https://developers.google.com/transit/gtfs/reference and https://developers.google.com/transit/gtfs-realtime/reference).

Field or attribute	Definition	Data Type	Example	In GTFS/ GTFS-realtime
alert_id	A unique identifier for each alert	Integer	781	No
cause	GTFS-realtime code for cause	Text	TECHNICAL_PROBLEM	Yes
cause_name	Human-readable name for cause	Text	fire	No
created_dt	Date/time created (in epoch time)	Integer	1346770368	Yes (as “timestamp”)
server_dt	Date/time of the server (in epoch time)	Integer	1346770368	No
description_text	Additional details for the alert	Text	Affected services: 62 76 77	Yes
direction_id	An identifier for the direction of the route or trip	Bit (0 or 1)	0	Yes
direction_name	A human-readable name for the direction	Text	Eastbound	No
distance	The distance in miles of a stop from a given location	Float	.5	No
effect	GTFS-realtime code for effect	Text	NO_SERVICE	Yes
effect_end	Date/time of effect end (in epoch time; empty if no specified end time)	Integer	1346788059	Yes (as “active_period end”
effect_name	Human-readable name for effect	Text	Station closure	No
effect_start	Date/time of effect start (in epoch time)	Integer	1346770260	Yes (as “active_period start”
elev_id	Unique identifier for elevator (typically a 3-digit number)	Text	802	No
elev_name	Human-readable name for elevator	Text	STATE STREET - Oak Grove Platform to Forest Hills and Wonderland Platforms	No
elev_type	Type for elevator (text: “Elevator”, “Escalator”, or “Lift”)	Text	Elevator	No

header_text	A brief summary of the alert	Text	Route 62 and 2 other routes experiencing moderate delays due to traffic	Yes
last_modified_dt	Date/time last modified (in epoch time)	Integer	1346770368	No
mode_name	Human-readable mode name	Text	Subway	No
parent_station	The stop_id of the parent station	Text	place-portr (Porter Square including all Red Line and Commuter Rail platforms as well as bus stops)	Yes
parent_station_name	The stop_name of the parent station	Text	Porter Square Station	Yes (as the stop_name for the stop_id that corresponds to the parent_station)
route_id	Unique identifier for route	Text	931_	Yes
route_name	Human-readable route name (text)	Text	Red Line	No
route_type	GTFS code for route type	Integer	1	Yes
sch_arr_dt	Date/time of scheduled arrival (in epoch time)	Integer	1346770368	Yes (as arrival_time, but in different format)
sch_dep_dt	Date/time of scheduled departure (in epoch time)	Integer	1346770368	Yes (as departure_time, but in different format)
severity	Severity of the alert (“Mild”, “Moderate”, or “Severe”)	Text	Moderate	No
stop_id	Unique identifier for stop	Text	70065 (inbound Red Line platform at Porter Square)	Yes
stop_lat	The latitude of the stop	Float	42.329788	Yes
stop_lon	The longitude of the stop	Float	-71.083885	Yes
stop_name	Human-readable stop name	Text	Porter Square - Inbound	Yes

stop_order	A number indicating where the stop falls on the route (starting at “1” for the first stop). Not unique within routes if variant routes exist.	Integer	3	No
stop_sequence	A number indicating where the stop falls on the trip (starting at “1” for the first stop). Unique for a particular trip.	Integer	3	No
trip_id	Unique identifier for trip	Text	CR-Newburyport-CR-Weekday-133	Yes
trip_name	Human-readable trip name	Text	133 (departing North Station 6:15 pm)	No
url	A URL for extra detail	Text	http://mbta.com/about_the_mbta/t_projects/	Yes