MTA GTFS Alerts Feed Documentation

Last updated: December 2021

This document defines the MTA's implementation of its GTFS-realtime alerts feed.

This document also contains extensions added specifically for the MTA and its content management system called Mercury. (MercuryFeedHeader, MercuryAlert and MercuryEntitySelector). To use these extensions, you need the mercury-gtfs-realtime.proto file. Mercury had originally been called "Live Media Manager" so users may see legacy references to "LMM" in some fields.

Refer to the GTFS-realtime specification at https://developers.google.com/transit/gtfs-realtime/ for more details on message field type, cardinality, etc. This document outlines only the Mercury specific usage and extensions.

This is the specification for version 1.0.

message FeedMessage

The feed contains one kind of entity: Alerts

Field Name	Usage
header	As defined in the GTFS-rt spec
entity	an array of alert messages

Examples:

```
"header": {
        "gtfsRealtimeVersion": "2.0",
        "incrementality": "FULL_DATASET",
        "timestamp": "1635792210",
        ".mercuryFeedHeader": {
                "mercuryVersion": "1.0"
        }
}

"entity": [
        {
                "id": "lmm:alert:104907",
                "alert": {
                        // alert info here
                }
        },
        {
                "id": "lmm:planned_work:1815",
                "alert": {
                        // alert info here
                }
        },
]
```

message FeedHeader

The feed is a full dataset and uses GTFS-realtime version 2.0

Field Name	Usage
gtfs_realtime_version	2.0
incrementality	FULL_DATASET
timestamp	As defined in the GTFS-rt spec

Extensions

Field Name	Type	Required	Cardinality	Description
mercury_feed_header	MercuryFeedHeader	Optional	One	Mercury-specific feed header information

message MercuryFeedHeader

This message is an extension to the FeedHeader containing the version of the Mercury extensions.

Field Name	Type	Required	Cardinality	Description
mercury_version	string	Required	One	Version of the Mercury extensions specification.

message FeedEntity

As currently configured, the Feed Entity will be an alert. When an alert has multiple impacts, each impact will be displayed as a separate entity in the feed.

Field Name	Usage
id	Format is lmm:<id> (e.g. lmm:planned_work:1 or lmm:alert_2)*
is_deleted	Not currently used
trip_update	Not currently used
vehicle	Not currently used
alert	See Alert message

* Note that lmm:planned_work indicates a planned service interruption, in the case of maintenance, repairs, upgrades, etc. and lmm:alert indicates an unplanned disruption of service.

message Alert

An alert or planned work message indicating some sort of incident

Field Name	Usage
active_period	Array of times when the alert should be shown to the user, can be single or multiple ranges. If the alert does not have an end date set, the time range will only contain a start date. Times are formatted in Unix time.
informed_entity	See EntitySelector.
cause	Not currently used
effect	Not currently used
url	Not currently used
header_text	A headline to describe the high-level impacts of a disruption. Headlines are capped at 160 characters.

Each headline is published with two translations:

"en" headlines contain brackets around objects the MTA represents with symbology such as a route bullet or ADA icon. (e.g. "Delays on the [F] [G] trains.")

"en-html" headlines contain both brackets for symbology and HTML to allow for basic formatting paragraphs, links, and other text styling.

description_text	Provides full details of a disruption's impacts. Details do not have a character limit.
	Description_text is published with two translations:
	"en" description_text contains plain text with brackets around objects the MTA represents with symbology such as a route bullet or ADA icon. (e.g. "Delays on the [F] [G] trains.")
	"en-html" description_text contains both brackets for symbology and HTML to allow for basic formatting paragraphs, links, and other text styling.

Extensions

Name	Type	Required	Cardinality	Description
Transit_realtime.mercury_alert	MercuryAlert	Optional	One	Mercury-specific alert information

Example

```
"alert": {
        "activePeriod": [
                {
                        "start": "1637786700",
                        "end": "1637788500"
                }
        ],
        "informedEntity": [
                {
                        "agencyId": "LI",
                        "routeId": "9",
```

```json
                              ".mercuryEntitySelector": {
                              "sortOrder": "LI:9:10"
                    }
                    }
          ],
          "headerText": {
                    "translation": [
                              {
                              "text": "Extra train for Thanksgiving Eve",
                              "language": "en"
                              },
                              {
                                   "text": "Extra train for Thanksgiving Eve",
                                   "language": "en-html"
                              }
                    ]
          },
          "descriptionText": {
                    "translation": [
                              {
                              "text": // Description info here,
                                   "language": "en"
                              },
                              {
                                   "text": // Description info here,
                              "language": "en-html"
                              }
                    ]
          },
          ".mercuryAlert": {
                    "createdAt": "1635548457",
                    "updatedAt": "1635549994",
                    "alertType": "Extra Service",
                    "displayBeforeActive": "3600",
                    "humanReadableActivePeriod": {
                              "translation": [
                              {
                                   "text": "Wednesday, November 24",
                                   "language": "en"
                              }
                              ]
                    }
          }
}
```

message transit_realtime.mercury_alert

This is an extension to the Alert that contains Mercury-specific information

Field Name	Type	Required	Cardinality	Description
created_at	uint64	Required	One	Time when the message was created in Mercury (not to be confused with active_period start time. Times are formatted in Unix time.
updated_at	uint64	Required	One	Time when the message was last updated in Mercury. Times are formatted in Unix time.
alert_type	string	Required	One	The service status category for the alert (e.g. "Delays"). While there are a standard set of service status categories, the MTA may add/remove/change them so data consumers should treat this as a free text field.
Display_before_active	int	Required		Number of seconds before the active_period start time that the MTA sets a message to appear on our homepage to give customers advance notice of a planned service change. The value for service alerts is 0 and the default value for planned work messages is 3600.
Human_readable_active_period	A TranslatedString with one translation. Language specified as en.	Required for planned work messages		A human-readable summary of the dates and times when a planned service change impacts customers.

Additional_information	A TranslatedString with one translation. Language specified as en.	Deprecated	Deprecated. Previously used in service alerts to display additional information about an alert.
Station_alternative	An array of entities (affectedEntity objects with an agencyId and stopId)		An array of station alternatives for some planned work messages. Each station has an affectedEntity with agencyId and stopId and a notes object consisting of TranslatedStrings
service_plan_number	Array		Internal service plans associated with the planned work message
clone_id	String		If the message was duplicated from a previous message, this is the id of the original message.

message EntitySelector

A selector for an entity targeted in an alert

Name	Usage
agency_id	The GTFS-ID for the agency that correlated to the route_id or stop_id (e.g. MTASBWY). MTA agency IDs are MNR for Metro North Railroad, MTASBWY for subway, MTA NYCT or MTABC for buses, and LI for Long Island Rail Road.
route_id	Either route_id or stop_id will be set for each EntitySelector. Format is the GTFS-ID for the route without the agency prefix (e.g. G)
route_type	Not currently used

trip	Not currently used (coming soon for mentioned railroad trips)
stop_id	Either route_id or stop_id will be set for each EntitySelector. Format is the GTFS-ID for the route without the agency prefix (e.g. 10021)

Extensions

Field Name	Type	Required	Cardinality	Description
mercury_entity_selector	MercuryEntitySelector	Optional	One	Mercury-specific entity selector information

message MercuryEntitySelector

This is an extension to the EntitySelector used for Mercury-specific entity information

Field Name	Type	Required	Cardinality	Description
sort_order	string	Required	One	Priority of the affected entity. Format is GTFS-ID:Priority (e.g. MTASBWY:G:16. Priority and NyctBusPriority enums are used to determine the priority number based on the alert type. Priority is in ascending order.

enum Priority

The relation between the alert type and the priority of the affected entity for NYCT Subway, MNR, and LIRR agencies.

enum NyctBus Priority

The relation between the alert type and the priority of the affected entity for the NYCT Bus agency.