
S&P Global

Market Intelligence

Snowflake Delivery Methods



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Snowflake Delivery Methods

Snowflake views are created using three different delivery methods: Stream/History, Latest, and Timeseries.

Snowflake delivery methods vary based on your subscription, and the views in your account might not include every delivery method. You will need to consider which views serve your use case best:

- Stream/History views provide all data changes for every primary key that was published. Stream/History views help you accurately track data changes that occurred in the past.
- Latest views provide a "snapshot" of the last version of every primary key that was published. Latest views provide data values as of the current day (even if that value was provided days, weeks or months ago).
- Timeseries views help you identify trends based on changes over time. Timeseries can contain any range of data that varies over time including historical or forecast data.

Dataset views

Stream/History

Stream/History delivery provides all data changes which are applied in the latest and time-series views for each dataset view.

Example: S&P Global Market Intelligence sends a price correction. Stream/History delivers records for both the old price and the new price.

View Naming convention: These views either contain a `_HISTORY` suffix or no suffix. Please build your queries around the `_HISTORY` view when available.

Availability: Depends on your subscription

Key fields:

- **ID:** Identifier created by S&P Global Market Intelligence to identify a unique entity instance, for example, a single company, a single instrument, or a single curve. The ID field does not have any semantics other than that it is the identifier in instances and references.
- **Timeseries fields:** Depending on the dataset, timeseries fields *may or may not be included* in the dataset views. Timeseries fields are represented by date or datetime fields. A few examples include "asOf", "dataDate", and "date." If multiple rows are stored for the same ID on a single date or date time, the time series field is extended with additional fields. If there is no time component to the data (i.e., a timeseries is not maintained), timeseries fields will not appear in the dataset views.
- **Details for change tracking:** `CURSOR`, `MESSAGE`, `MODE`, `DELETEDATETIME`, `DELETEDFROM` and `DELETEDTO` fields are available *only* in the Stream delivery views.
 - **CURSOR:** An incremental `CURSOR` is assigned to all data changes applied in a schema and defines the order of the changes. If multiple cursor values exist for the same ID or ID and timeseries fields, the highest cursor value can be used to identify the most recent change.
 - **MESSAGE:** Message types provide details regarding data changes in Snowflake:
 - `UPDATE` messages have all relevant fields populated.
 - `DELETE` messages have an ID field that contains the ID that is deleted from the latest or timeseries views. `DELETE` messages may also define a `DELETEDFROM` and `DELETEDTO` time range in which rows are deleted from the latest or timeseries views, otherwise `DELETE` indicates that all rows with that ID are deleted from the latest and timeseries views. For time range deletes, the

DELETEDATETIMEFIELD represents the time dimension and will be equal to the name of the field that is tagged as the timeseries key.

- DELETE_BY_KEY messages have an ID and other fields identifying a row that is deleted from the latest or timeseries views.
- BATCHRUN_START and BATCHRUN_COMPLETE are returned in the BATCHRUN view when the data is loaded in discrete batches. These message types mark the start and end of each batch run. However, both start and end events are only published when the entire batch run has completed loading into Snowflake.
- **MODE:** Represents a publication mode. The default is NORMAL. BACKFILL is used when loading historical updates. BATCHRUNS can be loaded in additional modes: RESTATEMENT and ADJUSTMENT to indicate a BATCHRUN is being reloaded.

Latest

Latest delivery provides the last value for an ID based on the timeseries field within each dataset view. When no timeseries is maintained for a dataset view, latest delivery will provide the most recent update per ID. When forecast data is delivered, this will be a date or date time in the future.

Example: The data in latest reflects yesterday's close price for a stock. Once today's close price is available for the stock, the data will be updated to today's close price.

View Naming convention: Views are suffixed with "_LATEST" (for example CURVE_LATEST)

Availability: Depends on your subscription

Timeseries

Timeseries can contain any range of data that varies over time including historical or forecast data for each ID. Timeseries delivery provides the last value for each unique combination of ID and the timeseries field(s) within each dataset view.

Example: S&P Global Market Intelligence sends a price correction. Timeseries delivers records only for the new price for that particular day.

Key fields:

- **ID:** Identifier created by S&P Global Market Intelligence to identify a unique entity instance, for example, a single company, a single instrument, or a single curve. The ID field does not have any semantics other than that it is the identifier in instances and references.
- **Timeseries fields:** Depending on the dataset, timeseries fields *may or may not be included* in the dataset views. Timeseries fields are represented by date or datetime fields. A few examples include "asOf", "dataDate", and "date." If multiple rows are stored for the same ID on a single date or date time, the time series field is extended with additional fields. If there is no time component to the data (i.e. a timeseries is not maintained), timeseries fields will not appear in the Timeseries dataset views.

View Naming convention: Suffixed with "_TIMESERIES" (for example CURVE_TIMESERIES)

Availability: Depends on the subscription and the timeseries field(s)

BATCH and BATCHRUN views

The BATCH and BATCHRUN views provide date and timestamp information related to the delivery of the underlying source data. Both views can provide insight as to when the data was last updated.

Batches consist of records that span a period of time. Batches represent the frequency of data updates *over time*. Each Batch is identified by its *ID* field.

A BatchRun provides the dates of record updates. A BatchRun is an instance of a Batch and represents a specific version of the Batch that occurred *on a specific date and time*.

For daily Batches, this means a new BatchRun is created each day. The *BATCH* field in the BATCHRUN view references the Batch being run, and the *ID* field uniquely identifies the BatchRun instance.

Tip: To identify batches as they are published, S&P Global Market Intelligence recommends looking for the latest BatchRuns that appear in the BATCHRUN view. The newest *ID* represents the latest records available.

Delivery Options for BATCH and BATCHRUN Views

Stream/History

- These views either contain a *_HISTORY* suffix or no suffix. Please build your queries around the *_HISTORY* view when available.

Latest

- Views are suffixed with "*_LATEST*"

Timeseries

- BATCH and BATCHRUN views are not included

To link to the **BATCH** and **BATCHRUN** views:

- The *BATCH* field links to the *ID* field in the **BATCH** view.
- The *BATCHRUN* field links to the *ID* field in the **BATCHRUN** view.

Revision History

The changes made to this document include the following:

Version	Date	Changes
1.2	02/03/2025	<ul style="list-style-type: none">Stream views are appended and end in _HISTORY for new datasets.
1.1	10/24/2024	<ul style="list-style-type: none">Added language describing how to link to the BATCH and BATCHRUN views
1.0	10/14/2024	<ul style="list-style-type: none">Initial version