



# Data Loaders



GE VERNOVA

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# Chapter 1

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## Overview

### Topics:

- [About the APM Connect Data Loaders](#)
- [Access the Data Loaders Page](#)
- [Data Loaders Workflow](#)

## About the APM Connect Data Loaders

The APM Connect Data Loaders allow you to import records from external sources into APM. A new improved version for data ingestion with improved user experience, dynamic classifications or types, improved performance, data or process error visibility at the record level, and better state management is introduced.

### APM Rules and the Data Loaders

When loading data into APM, it is important to understand how APM treats data, and the subsequent impact on data loads.

APM creates records based on the rules for that family. Therefore, the data that is loaded into APM via the Data Loaders are also subject to the same rules. This could result in blank Equipment records with no data if the rules for the family do not require data. Similarly, there is no restriction on key fields having to contain a value other than what is required by the rules.

For example, the baseline Equipment family does not have any fields that are marked as required in the rules, so when using the data loaders, equipment records are created even with only one field populated in the worksheet. If you only populated Maintenance Plant on the APM Connect data loader spreadsheet, then an equipment records would be created with only maintenance plant and no other identifying information. It is also important to understand that since data is also being loaded into GEDA that the GEDA Classifications or Types are required.

## Access the Data Loaders Page

### Procedure

In the **Applications** menu, navigate to the **TOOLS** section, and then select **Data Loaders**.

**Note:** Currently, in the **TOOLS** section, **Data Loaders** appears as **Data Loaders V2**. This will be updated to **Data Loaders** in a future release.

The **Data Bundles Status** page appears, displaying information about the data import jobs. Each data import job is considered as a Bundle and the status of all the data import jobs in the last 48 hours appears on the page.

### Note:

- You can use the drop-down option to change the time range filter from 48 hours to another time range. Alternatively, you can use the **Custom Date Range** option to specify a custom range.
- The default frequency of refreshing the page is 10mins. You can use the drop-down option to change the frequency of refreshing the page (Off, 30 sec, 1 min, 5 min and 10 min). Also, you can manually refresh the page using the Refresh option.
- The default Data Bundles origin is selected as **All Origins**. You can change the origin of the Data Bundle from the drop-down option.

## Data Loaders Workflow

This workflow provides the basic, high-level steps for using this module. The steps and links in this workflow do not necessarily reference every possible procedure.

### Procedure

1. Identify the data you want to transfer from external sources to APM.
2. Download the Data Loader Workbooks, and then populate the data loader workbooks. Alternatively, you can use a zip file of .csv files that conform to the data loader workbook format.

**Note:** If you do not have a Data Loader Template ready to be loaded, you can download the **Default Template** or select **Generate Template** and enter the required details to create the required template and then select **Download Template**.

3. In APM, select the appropriate file, and then run a data import job.
4. Review the Data Bundle Execution Details page for warnings, messages, or errors.
5. If there are transfer errors, resolve the errors.

# Chapter 2

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## Workflow

### Topics:

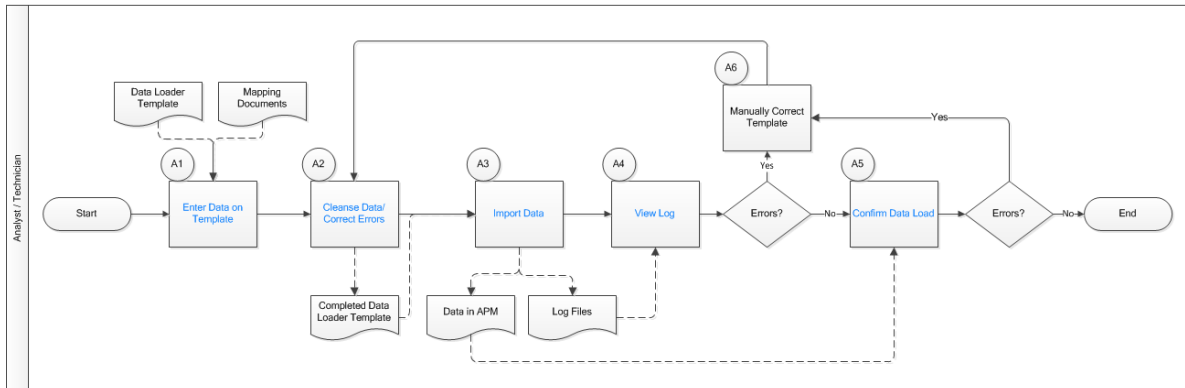
- [General Data Import Workflow](#)
- [Enter Data on Template](#)
- [Cleanse Data / Correct Errors](#)
- [Import Data](#)
- [View Log](#)
- [Confirm Data Load](#)
- [Manually Correct Template](#)



## General Data Import Workflow

The APM Connect Data Loaders provide users with the ability to import data from external sources into the various APM modules. All data loaders share common capabilities and architecture. Each one uses an Excel worksheet as the source of data to be loaded into APM, and each contains the intelligence to load the specific data model for which it was intended.

**Tip:** Select a shape with blue text for details about the step in the workflow. For more information, refer to the topic Interpreting the Workflow Diagrams.



## Enter Data on Template

Persona: Analyst / Technician

Identify the type of data to load, navigate to **Tools > Data Loaders**, download the spreadsheet template, and make it available for editing. In this version of APM Connect Data Loaders, you may only load data using a Unified Asset Ingestion data loader template into APM.

Use the correct template and mapping document to layout the data import, and then populate the spreadsheet with records that you want to load based on the rules detailed in the mapping document.

## Cleanse Data / Correct Errors

Persona: Analyst / Technician

After populating the spreadsheet, use Excel tools to detect and correct (or remove) incomplete, corrupt, or inaccurate records from the worksheet.

## Import Data

Persona: Analyst / Technician

Using the **Select file or Drop file here** option, import the data into APM.

## View Log

Persona: Analyst / Technician

Review the logs that are available through the **Data Bundles Status** page.

## Confirm Data Load

Persona: Analyst / Technician

By searching record manager or creating a query of families loaded, validate that data is loaded successfully. Ideally, run the test validation query as indicated in the mapping document.

## Manually Correct Template

Persona: Analyst / Technician

After running the data load, if the status shows errors, review the bundle details to identify the root cause, and then make any needed changes to the spreadsheet and retry.

# Chapter 3

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## Data Loaders

### Topics:

- [Download the Data Loader Workbooks](#)
- [Run a Data Import Job](#)
- [Process Activity Stages](#)
- [Access the Data Bundle Execution Details of an Import Job](#)
- [Details of the Data Bundle Execution](#)
- [Export the Rejected Data Details of an Import Job](#)
- [Sort Data in a Column in Data Bundle Status](#)
- [Show Data in a Column in Data Bundle Status](#)
- [Hide Data in a Column in Data Bundle Status](#)

# Download the Data Loader Workbooks

## Procedure

1. [Access the Data Loaders page.](#)  
The **Data Bundles Status** page appears.
2. Select **Data Loaders.**  
The **Data Loaders** window appears.
3. In the **DOWNLOAD TEMPLATE** section, select one of the following options:
  - **Default Template:** Select to download the available template. For most of the Data Loaders this is only available option.
  - **Generate Template:** This option appears only for the **Equipment and Functional Location Loader** for selection to create a customized template. Select to download one of the following type of templates,
    - **Construct Hierarchy:** You can construct a hierarchy by creating a relationship between the Enterprise/Site/Segment/Asset by appropriate selections.
    - **Update/Add Asset only:** You can update the existing template data by selecting the required Asset type.

and then enter information in the [available](#) fields.
4. Select **Download Template.**  
The **Download Templates** window appears, displaying a list of the data loader categories.

Data Loader Category	Workbooks in the Category
APM Connect	<ul style="list-style-type: none"> <li>• APM Family</li> <li>• Equipment and Functional Location</li> <li>• Taxonomy</li> <li>• Work History</li> </ul>
APM Failure Elimination	<ul style="list-style-type: none"> <li>• Production Loss Analysis (PLA) 1-Admin</li> <li>• Production Loss Analysis (PLA) 2-Event</li> <li>• Production Loss Analysis (PLA) 3-Plan</li> <li>• Root Cause Analysis (RCA)</li> <li>• System Reliability</li> </ul>
APM Foundation	<ul style="list-style-type: none"> <li>• Asset Criticality Analysis (ACA Checklist)</li> <li>• Asset Criticality Analysis (ACA)</li> <li>• Custom Asset Hierarchy</li> <li>• Geographic Information System (GIS)</li> <li>• Policy Instance Data Loader</li> <li>• Risk Matrix</li> <li>• Role</li> </ul>

Data Loader Category	Workbooks in the Category
APM Health	<ul style="list-style-type: none"> <li>• Rounds Allowable Values</li> <li>• Rounds Pro - Picklist Dataloader</li> <li>• Rounds Pro - Route Master Dataloader</li> <li>• Rounds Pro - Step Conditions</li> <li>• Rounds Pro - Step Dataloader</li> <li>• Rounds Pro - Step Reading</li> <li>• Rounds Pro - Step Template</li> <li>• Rounds Readings</li> <li>• Rounds Routes</li> <li>• Rounds Templates and Template Groups</li> </ul>
APM Mechanical Integrity	<ul style="list-style-type: none"> <li>• Inspection Management (IM) Assets</li> <li>• Inspection Management (IM) Functional Location</li> <li>• Link TMLs To Inspection Task</li> <li>• RBI Components To TML Groups Relationship</li> <li>• Risk Based Inspection (RBI) 580</li> <li>• Risk Based Inspection (RBI) 581</li> <li>• Risk Based Inspection (RBI) Corrosion Loop</li> <li>• Thickness Measurement - Assets</li> <li>• Thickness Monitoring (TM) Equipment</li> <li>• Thickness Monitoring (TM) Functional Location</li> <li>• Thickness Monitoring (TM) Piping Equipment</li> <li>• Thickness Monitoring (TM) Piping Functional Location</li> </ul>
APM Power Generation	<ul style="list-style-type: none"> <li>• Generation Availability Analysis (GAA) Events</li> <li>• Generation Availability Analysis (GAA) GADS Amplification Codes</li> <li>• Generation Availability Analysis (GAA) GADS Cause Code</li> </ul>
APM Safety	<ul style="list-style-type: none"> <li>• Calibration Management</li> <li>• Calibration Management - Functional Test</li> <li>• Hazard Analysis</li> </ul>
APM Strategy	<ul style="list-style-type: none"> <li>• Asset Strategy Implementation (ASI)</li> <li>• Asset Strategy Management (ASM)</li> <li>• Asset Strategy Management (ASM) Templates</li> <li>• Failure Modes and Effects Analysis (FMEA)</li> <li style="padding-left: 20px;">Failure Modes and Effects Analysis (FMEA) Analysis Templates</li> <li style="padding-left: 20px;">Failure Modes and Effects Analysis (FMEA) Asset Templates</li> <li>• RCM Analysis Template</li> <li>• Reliability Centered Maintenance (RCM)</li> <li>• Spares Analysis</li> <li>• System Reliability Data Loader</li> </ul>
APM Wind Generation	<ul style="list-style-type: none"> <li>• GAA Wind Asset Hierarchy</li> <li>• GAA Wind Events</li> <li>• GAA Wind Sub Group Capacity</li> </ul>

## Results

The data loader template is downloaded. The downloaded template, can be populated with data to load into APM.

# Run a Data Import Job

## Before You Begin

This topic assumes that you have migrated your data to the required format for the modules into which you want to import data. The format should match the Excel workbook templates.

## Procedure

1. [Access the Data Loaders page.](#)  
The **Data Bundles Status** page appears.
2. Select **Data Loaders.**  
The **Data Loaders** window appears.
3. In the **DATA LOADER TYPE** section select the appropriate loader.
4. In the **UPLOAD DATA** section, select **Select file**, and then navigate to and select the file that you want to import. Alternatively, you can also select the file that you want to import and drag and drop the file in the **UPLOAD DATA** section.
5. In the **Description** box, enter a short description of the job.
6. Select **Upload.**  
The job is run, and the status of the job appears in the **Data Bundles Status** page.

## Results

The selected file is uploaded into APM.

# Process Activity Stages

The **Process Activity** column in the **Data Bundles Status** page displays the process state management of the various Data Loader jobs that are running or have run in the APM system.

There are three different high-level Process activity stages:

- **Prepare:** Preparing stage involves Registering, Collecting, Transforming and Transmitting states
- **Process:** Process stage involves Normalizing, Compiling and Slicing states
- **Ingest:** Ingest stage involves Ingesting, Synchronizing and Notifying states

The following table contains the list of available stages and status mapping with description:

Process Stage	Status	Description
Prepare - Transmitting	In Progress / Failure	The data upload job status is in either <b>In Progress</b> or <b>Failure</b> and the process activity is in <b>Transmitting</b> state of Prepare stage.
Process - Normalize	In Progress / Failure	The data upload job status is in either <b>In Progress</b> or <b>Failure</b> and the process activity is in <b>Normalizing</b> state of Process stage.

Process Stage	Status	Description
Process – Compiling	In Progress / Failure	The data upload job status is in either <b>In Progress</b> or <b>Failure</b> and the process activity is in <b>Compiling</b> state of Process stage.
Process – Slicing	In Progress / Failure	The data upload job status is in either <b>In Progress</b> or <b>Failure</b> and the process activity is in <b>Compiling</b> state of Slicing stage.
Ingest – Ingesting	In Progress / In Progress with Rejects / Failure	The data upload job status is in either <b>In Progress</b> or <b>In Progress with Rejects</b> or <b>Failure</b> and the process activity is in <b>Ingesting</b> state of Ingest stage.
Ingest – Synchronizing	In Progress / In Progress with Rejects / Failure / Complete with Rejects / Complete	The data upload job status is in either <b>In Progress</b> or <b>In Progress with Rejects</b> or <b>Failure</b> and the process activity is in <b>Synchronizing</b> state of Ingest stage.
Done	Complete with Rejects / Complete	The data upload job status is in either <b>Complete</b> or <b>Complete with Rejects</b> and all process activities are <b>Done</b> state.

**Note:** By default, the execution history records are configured to be retained for 15 days. You can configure the settings to retain the execution history records for executions in the Ingestor configuration.

## Access the Data Bundle Execution Details of an Import Job

### Before You Begin

This topic assumes that you have successfully ingested the Data Bundle Execution.

### Procedure

1. [Access the Data Loaders page.](#)  
The **Data Bundles Status** page appears.
2. In the **Data Bundles Status** page, select the job for which you want to access the details.  
The Data bundle execution details page appears, displaying the detailed information of the job.

### Results

The Data Bundle Execution details of the job is displayed with the status and progress of the imported data. You can export the data of the rejected rows during the import job to view the details of the errors occurred, if any.

## Details of the Data Bundle Execution


When you select a job in the **Data Bundles Status** page, the data import details page appears displaying the detailed import status and the progress of the selected data import job.

The Data Bundle Execution Details page displays the following sections:

Worksheet Field	Description
Overall Job Status	The section displays the overall details of the job such as Asset name, Status, File name, Start Time, End Time, Bundle ID, and Progress Bar that displays the Process Stage.
Summary of the Records Processed	The section displays the summary of the processed records (# of Insert, Delete, Update, Reject and Total Records) in a donut chart. It also displays the System Errors in the job processing, if any.
System Errors	The section displays the System errors occurred during processing of the job.
Rejected Rows	The section displays all the records that are rejected while processing the job. The details include Sheet Name, Row #, Primary Record Id, Slice ID, Error Code, Message, Timestamp, Data. Select a record to view the full data of the record. You can download the Rejected record data into an .xlsx file using the <b>Export Current Page</b> option available in the <b>Rejected Rows</b> section.
Event Timeline	The section displays the process activity event timelines. The details include Timestamp, Process state of Step, Status, Message (displays system errors, if any).
Refresh	You can use the Refresh option for setting the frequency of refreshing the page (Off, 30 sec, 1 min, 5 min and 10 min). Also, you can manually refresh the page.

## Export the Rejected Data Details of an Import Job

### Procedure

1. [Access the Data Bundle Execution Details of an Import Job.](#)
2. In the **Rejected Rows** section, select  and then select **Export Current Page** to download the details of the rejected data during the import job.

### Results

The details of the rejected data in the Data Bundle Execution job is exported.

## Sort Data in a Column in Data Bundle Status

### Procedure

1. [Access the Data Loaders page.](#)  
The **Data Bundles Status** page appears.
2. Select a column header, such as **BUNDLE TYPE**.  
The data in the column is sorted in a specific order (ascending or descending).
3. Select the column header again to reverse the sort order.  
The data in the columns is sorted in the reverse order.


### Results

You can sort the data in the columns in the **Data Bundles Status** page in an ascending or descending order.




## Show Data in a Column in Data Bundle Status

### Procedure

1. [Access the Data Loaders page.](#)  
The **Data Bundles Status** page appears.
2. Select , and then select the check box next to the column name that you want to view.  
The selected column appears.

## Hide Data in a Column in Data Bundle Status

### Procedure

1. [Access the Data Loaders page.](#)  
The **Data Bundles Status** page appears.
2. Select , and then clear the check box next to the column name that you want to hide.  
The selected column is hidden.

# Chapter 4

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## Reference

### Topics:

- [Worksheets and Fields](#)
- [Family Field Descriptions](#)

# Worksheets and Fields

## About the Data Loader Worksheets and Fields

Field formats for the data loader workbooks carry specific value and cell requirements. This topic contains guidelines for data/time format, units of measure (UOM), and cell color coding.

**Important:** When using an Excel data loader workbook, to delete rows from the workbook, you must right-click the row number and then select **Delete**.

Worksheet Field	Description
Cell Color Coding	<p>In order to differentiate between required and recommended field values in the Excel workbook, cells adhere to the following color coding scheme:</p> <ul style="list-style-type: none"> <li>• <b>Red:</b> a required field.</li> <li>• <b>Blue:</b> a recommended field.</li> </ul> <p><b>Note:</b> The Column ID and Associated Field ID will both be colored the same.</p>
Cells that Require Logical Values	<p>When a cell corresponds to a field in APM that requires a Logical value, you should enter True or False.</p>
Character Limits in Character Fields	<p>In APM, family fields that have the Character data type (Character fields) restrict values to a maximum length. In the Excel workbooks, when entering data in a cell that represents a Character field, the values must not exceed the character limit of the corresponding field.</p>
only in GEDA fields	<p>These fields are only ingested into the GEDA and can be viewed in the Asset Instance module.</p>
Date and Time Format	<p>Dates should be entered as text in the following format: YYYY-MM-DD hh:mm:ss, where:</p> <ul style="list-style-type: none"> <li>• <b>YYYY</b> is the four-digit year.</li> <li>• <b>MM</b> is the two-digit month.</li> <li>• <b>DD</b> is the two-digit day.</li> <li>• <b>hh</b> is hours in 24-hour notation.</li> <li>• <b>mm</b> is minutes.</li> <li>• <b>ss</b> is seconds.</li> </ul> <p><b>Note:</b> It is recommended to enter the dates as text in the date fields stored in the data loader workbooks.</p> <p>For example, a complete entry would be the following: 2015-05-01 17:53:00. This corresponds to 5:53 PM on May 1, 2015.</p> <p><b>Note:</b> Hours must be entered in 24-hour notation (e.g., 17:53:00, not 5:53:00). AM and PM should never be included. Unless otherwise noted in the applicable Mappings Document, times entered should be based on the time zone of the user who will be performing the data load."</p>
Language	<p>Data loader Excel workbooks are available with field captions in all baseline languages supported by APM.</p>

Worksheet Field	Description
Reference Sheets	You can insert additional worksheets into your data loader workbook that will not be loaded into APM by encasing the worksheet name in parentheses. For example, if you wanted to add a sheet to record notes on the data loaded into the workbook, you could add a worksheet named (Notes). Because the name of the worksheet is in parentheses, the worksheet will not be loaded into APM.
Units of Measure	In the workbooks, values that correspond to a Unit of Measure (UOM) should be entered based on the current UOM Conversion Set setting for the user performing the data load.  For example, if the UOM Conversion Set for the user is Metric, metric values should be entered in the Excel workbook.  In cells that correspond to a field that uses a UOM, you should not enter the actual UOM. For example, you should enter 10, not 10 Inches.

## About the Configuration Worksheet

The **Configuration** Worksheet is a common worksheet, which can be implemented by each of the data loaders. It allows you to control aspects of how your data is loaded such as batching and which other worksheets should be processed.

**Note:** The **Configuration** Worksheet cannot be used by the Failure Modes and Effects Analysis (FMEA) Data Loader, the Reliability Centered Maintenance (RCM) Data Loader, Thickness Monitoring (TM) Equipment Data Loader, or the Thickness Monitoring (TM) Functional Location Data Loader.

The Configuration worksheet is needed to describe the type of data that you will be loading and how that data should be handled during the data load.

Worksheet	Description
<b>Configuration</b>	The Configuration worksheet is needed to describe the type of data that you will be loading and how that data should be handled during the data load.

### Configuration Worksheet

**Note:** For the Unified Asset Ingestion Data Loader, the only supported actions are ACTION\_INSERTUPDATE, ACTION\_LOCATE and ACTION\_NONE.

Field Caption	Field ID	Data Type (Length)	Comments
Batch Size	BATCH_SIZE	Character	<p>Modifying this field is required to determine the number of records processed in each batch. Enter the batch size you want, and the Data Loader will process that many records per batch.</p> <p>For example, if you want to use a batch size of 100, enter 100, and the Data Loader will process 100 records per batch.</p> <p><b>Note:</b> The recommended batch size is 100. If the <b>Batch Size</b> column is removed from the source workbook, the data loader will default to a batch size of 100.</p> <p>In addition to processing the data in batches, the log file reports progress by batch.</p>
Data Worksheet ID	DATA_WORKSHEET_ID	Character	<p>This column contains the name of the <b>&lt;data&gt;</b> worksheet where the actual data is located. It needs to have the same name as the <b>&lt;data&gt;</b> worksheet in the data loader workbook.</p>
Load Data From Worksheet	LOAD_DATA_WORKSHEET	Boolean	<p>Identifies if data from the corresponding worksheet identified in the <b>Data Worksheet ID</b> column will be loaded or not.</p> <ul style="list-style-type: none"> <li>• True: The corresponding worksheet will be processed.</li> <li>• False: The corresponding worksheet will not be loaded into the Meridium database.</li> </ul>
Number of Rows to Chunk	OPTION_NUMBER_ROWS_TO_CHUNK	Character	<p>Option to break-up or chunk data.</p>
Primary Family ID	PRIMARY_FAMILY_ID	Character	<p>Depending on the type of data that you are working with, this will contain the Relationship Family ID or the Entity Family ID where the data is being ingested. If the Family ID in the APM metadata contains spaces, you must specify this value in <b>&lt; &gt;</b>.</p>
Primary GEDA Type Name	PRIMARY_GEDA_TYPE_NAME	Character	<p>The value represents the type of the data in the corresponding worksheet.</p> <p>For example, you can define the basic types as</p> <ul style="list-style-type: none"> <li>• <i>generic-enterprise-type</i></li> <li>• <i>generic-site-type</i></li> <li>• <i>generic-segment-type</i></li> <li>• <i>generic-asset-type</i></li> <li>• <i>&lt;complex&gt;-asset-type</i>.</li> </ul> <p>The field will be <b>&lt;none&gt;</b> when the Family type is Relationship.</p>

Field Caption	Field ID	Data Type (Length)	Comments
Primary Family Key Fields	PRIMARY_FAMILY_KEY_FIELDS	Character	<p>This column contains the Field IDs associated with the Primary Family that are used to uniquely identify a record. If more than one field is to be used, each Field ID needs to be separated by a   (pipe) character. If you are loading data into a relationship and no keys fields exist or are used, then use the &lt;none&gt; constant.</p> <p>If the Primary Action are ACTION_INSERTUPDATE, ACTION_LOCATE and ACTION_NONE, then no key fields need to be specified, and you can use the &lt;none&gt; constant.</p> <p>We cannot have Date and Text data type fields because this field is part of the key fields.</p>
Family Type	FAMILY_TYPE	Character	The value is the column should be Entity or Relationship depending on the type of data that is being loaded.
Predecessor Family ID	PRED_FAMILY_ID	Character	When the Family Type is Relationship, this column will contain the value of the Entity Family ID that acts as predecessor of the relationship. It should contain the <none> for the Entity FAMILY_TYPE row.
Predecessor GEDA Type Name	PRED_GEDA_TYPE_NAME	Character	When the Family Type is Relationship, this column will contain the value of the type of the Entity Family ID that is the predecessor in the relationship. Otherwise, it should contain the <none> constant.
Predecessor Family Key Fields	PRED_FAMILY_KEY_FIELDS	Character	<p>This column contains the Field ID or IDs associated with the Predecessor Family that are used to uniquely identify the predecessor record. If more than one field is to be used, each Field ID needs to be separated by a   (pipe) character.</p> <p>If the Predecessor Action is ACTION_INSERTONLY, no key fields need to be specified, so you can use the &lt;none&gt; constant.</p> <p>We cannot have Date and Text data type fields because this field is part of the key fields.</p>
Successor Family ID	SUCC_FAMILY_ID	Character	When the Family Type is Relationship, this column will contain the value of the Entity Family ID that acts as successor of the relationship. It should contain the <none> for the Entity FAMILY_TYPE row.
Successor GEDA Type Name	SUCC_GEDA_TYPE_NAME	Character	When the Family Type is Relationship, this column will contain the value of the type of the Entity Family ID that is the successor in the relationship. Otherwise, it should contain the <none> constant.

Field Caption	Field ID	Data Type (Length)	Comments
Successor Family Key Fields	SUCC_FAMILY_KEY_FIELDS	Character	<p>This column contains the Field ID or IDs associated with the Successor Family that are used to uniquely identify the successor record. If more than one field is to be used, each Field ID needs to be separated by a   (pipe) character.</p> <p>If the Successor Action is ACTION_INSERTONLY, no key fields need to be specified, and you can use the &lt;none&gt; constant.</p> <p>We cannot have Date and Text data type fields because this field is part of the key fields.</p>
PrimaryAction	PRIMARY_ACTION	Character	<p>The value in this column will determine the action that will be applied to the Primary Family records. If the Family Type is Entity, the possible values are:</p> <ul style="list-style-type: none"> <li>• ACTION_INSERTUPDATE</li> <li>• ACTION_LOCATE</li> <li>• ACTION_NONE</li> </ul> <p>Deleting a record and purging a record will both delete the current record, the difference being that the purge action will delete the record and all the links or relationships tied to that record. The delete action will simply attempt to delete the record, and if it is related to another record, the delete will fail.</p> <p>If the Family Type is Relationship, the possible values are:</p> <ul style="list-style-type: none"> <li>• ACTION_INSERTONLY</li> <li>• ACTION_INSERTUPDATE</li> <li>• ACTION_UPDATEONLY</li> <li>• ACTION_DELETE</li> </ul>
Predecessor Action	PRED_ACTION	Character	<p>The value in this column will determine the action that will be applied to the Predecessor Family records. The possible values are:</p> <ul style="list-style-type: none"> <li>• ACTION_INSERTONLY</li> <li>• ACTION_INSERTUPDATE</li> <li>• ACTION_UPDATEONLY</li> <li>• ACTION_DELETE</li> <li>• ACTION_PURGE</li> <li>• ACTION_LOCATE</li> </ul> <p>If the family type is Entity, the value needs to be:</p> <ul style="list-style-type: none"> <li>• ACTION_NONE</li> </ul>

Field Caption	Field ID	Data Type (Length)	Comments
Successor Action	SUCC_ACTION	Character	<p>The value in this column will determine the action that will be applied to the Successor Family records. The possible values are:</p> <ul style="list-style-type: none"> <li>• ACTION_INSERTONLY</li> <li>• ACTION_INSERTUPDATE</li> <li>• ACTION_UPDATEONLY</li> <li>• ACTION_DELETE</li> <li>• ACTION_PURGE</li> <li>• ACTION_LOCATE</li> </ul> <p>If the family type is Entity, the value needs to be:</p> <ul style="list-style-type: none"> <li>• ACTION_NONE</li> </ul>
Insert with Null Values?	OPTION_INSERT_ON_NULL	Boolean	When setting the field values on a new record, if a value coming across is NULL, the field values will be set to NULL if this option is set to True.
Update with Null Values?	OPTION_UPDATE_ON_NULL	Boolean	When setting the field values on an existing record, if a value coming across is NULL, the field values will be set to NULL if this option is set to True.
Replace an Existing Link?	OPTION_REPLACE_EXISTING_LINK	Boolean	<p>The Replace Existing Relationship option is used to determine how a relationship is to be maintained by its cardinality definition.</p> <p>For example, the relationship Location Contains Asset is defined in the Configuration Manager. It has a cardinality defined as Zero or One to Zero or One, has a Location LP-2300, and contains the Asset P-2300. If in the data load, you assign the Asset P-5000 to be contained in the Location LP-2300, and you have set the Replace Existing Link property to True, the data loader will link P-5000 to LP-2300 and unlink P-2300 from LP-2300. This assumes that the P-5000 is not currently linked to another location. The same is true for a relationship that is defined as Zero or One to Zero or Many, or Zero or Many to Zero or One.</p>
Allow Change of Family?	OPTION_ALLOW_CHANGE_OF_FAMILY	Boolean	<p>Allows the data loader to move an entity from one family to another.</p> <p>For example, this would allow an entity that is currently assigned to the Centrifugal Pump family to be moved to the Reciprocating Pump family.</p> <p>All relationships will be maintained as long as the family to which the entity is being moved allows the same relationships.</p> <p><b>Note:</b> Because of the extra processing required, by selecting this option, the interface performance will decrease.</p>



# Family Field Descriptions

## Data Bundles Status Records

Data Bundles Status records store details about the imported data details for different modules. This topic provides a list and description of the fields that exist for the Data Bundles family. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

Field	Data Type	Description	Behavior and Usage
BUNDLE ID	Alphanumeric	The Job ID of the Integration Log Record.	The Bundle ID is auto-generated with the Data Loader that was selected.
BUNDLE TYPE	Character	The type of the APM Connect Job related to the data record.	This is auto-generated based on the type of the Data loader that was selected.
CREATED DATE	Numeric	The date and time at which the Integration job was started.	None
DESCRIPTION	Character	The text that was entered in the <b>Job Description</b> box by the user when importing the data job.	None
EXPIRY DATE	Numeric	The date and time at which the integration job will expire.	None
FILE NAME	Character	The name of the datasheet file that is uploaded.	The name given for the file while uploading a data workbook.
ORIGIN	Character	This indicates the process that initiated the Data ingestion.	Following are the different Origin types you can select: <ul style="list-style-type: none"> <li>• User</li> <li>• Automated Dataloader</li> <li>• EAM Integration</li> <li>• Simple Ingestion</li> </ul>
PROCESS ACTIVITY	Character	Displays the data processing stage of the import job.	The three different Process activity stages are Prepare, Process, and Ingest. Below are the sub stages for each stage: <ul style="list-style-type: none"> <li>• Prepare – Registering, Collecting, Transforming, and Transmitting</li> <li>• Process – Normalizing, Compiling, and Slicing</li> <li>• Ingest – Ingesting, Synchronizing, and Notifying</li> </ul>

Field	Data Type	Description	Behavior and Usage
STATUS	Character	Displays the status of the importing job.	<p>You can select an import job to view a detailed status log. The appropriate indicators appear against each status based on the progress of the import:</p> <ul style="list-style-type: none"> <li>• Gray: In process</li> <li>• Red: Failure</li> <li>• Yellow: Completed with Rejects</li> <li>• Green: Completed</li> </ul> <p><b>Note:</b> The status log view contains the detailed information about the job such as Process Stage, Processed Records, System Errors, details of the System Errors, Rejected Rows, Event Timeline concerning the data load, and general information about the records that were loaded.</p>
USER	Character	The name of the user who initiated the import job in the APM.	None

## Download Template Records

Download Template records store details about the template classification fields. This topic provides a list and description of the fields that exist for the download template classification. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

Field	Data Type	Description	Behavior and Usage
Construct Hierarchy	Button	You can select this option construct a hierarchy by creating a connection between the Enterprise/Site/Segment/Asset.	You can construct a hierarchy by creating a relationship between the Enterprise/Site/Segment/Asset by appropriate selections.
Relationships	Numeric	This indicates the number of relationships created.	The value is auto-generated based on the selections.
SELECT ASSET CLASSIFICATION	Alphanumeric	This field displays the list of classifications/type of the Assets. Select the required Asset classification from the drop-down list.	You can select one or many Asset classifications/types from the drop-down list.
SELECT ENTERPRISE CLASSIFICATION	Character	This field displays the list of classifications of the Enterprise. Select the required Asset classification from the drop-down list.	You can select one or many Enterprise classifications/types from the drop-down list.
SELECT SEGMENT CLASSIFICATION	Character	This field displays the list of classifications of the Segment. Select the required Asset classification from the drop-down list.	You can select one or many Segment classifications/types from the drop-down list.

Field	Data Type	Description	Behavior and Usage
SELECT SITE CLASSIFICATION	Numeric	This field displays the list of classifications of the Site. Select the required Asset classification from the drop-down list.	You can select one or many Site classifications/types from the drop-down list.
Update/Add Asset only	Button	You can select this option to update the existing template data by selecting the required the Asset type.	None