Record Manager

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Chapter

1

Overview

Topics:

Overview of the Record Manager Module

The Record Manager is a tool through which you can create, view, modify, and delete records. The Record Manager includes the record hierarchy, which you can use to navigate through records in the database, select a record to view, and view the datasheets associated with that record.

The Record Manager also displays a datasheet, which displays the content of the record in a formatted view. You can use the datasheet to view, modify, and add information to the record.

Access Record Manager

Procedure

1. On the top navigation bar, select 🔍.

   The Search menu appears.

2. Enter a Family or Record ID, and then, on the Search menu, select 🔍.

   The search results are displayed.
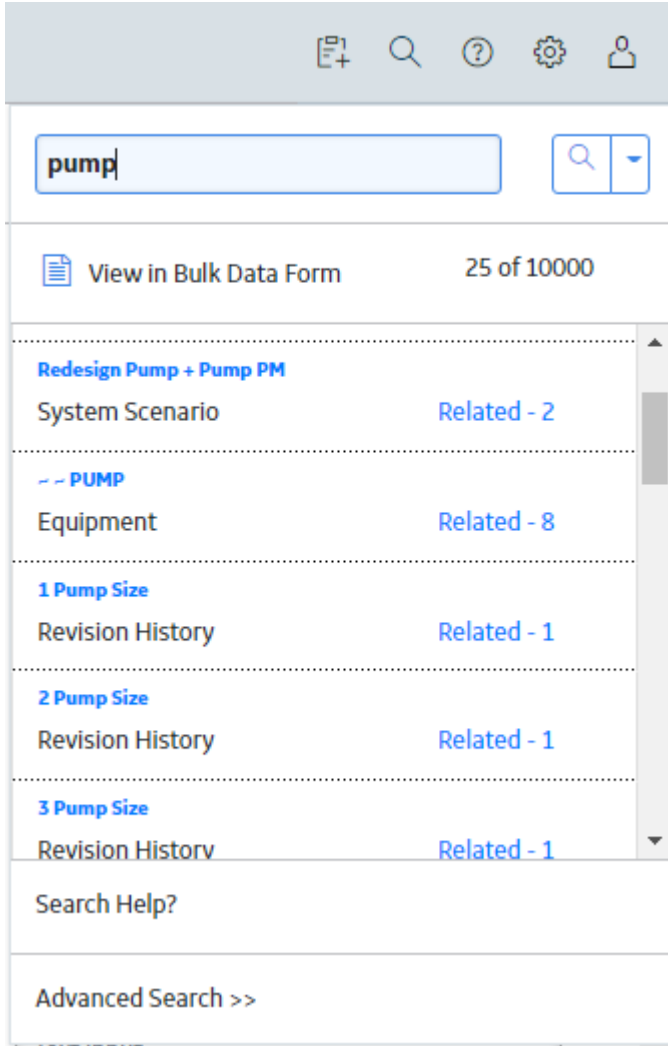
3. Select the record that you want to access.

The **Record Manager** page appears, displaying the workspace for the selected record.

Chapter

2

Records

Topics:

About Master Detail Datasheets

A Master Detail datasheet is a custom form that lets you display a record and all the records that are linked to it through a given relationship definition. Master Detail datasheets can be configured for any entity family using any relationship definition that relates it to another entity family.

For example, in the baseline APM database, the Calibration Template family is related to the Calibration Template Detail family through the Has Template Details relationship. APM includes a Master Detail datasheet that allows you to open a Calibration Template record while simultaneously viewing, creating, and modifying linked Calibration Template Detail records.

Note: In the Master Detail Datasheet, the **Master** and **Details** sections appear in separate sections.

About Associated Pages

Associated Pages are links that are configured for a specific family, and which provide quick access to internal or external locations, such as a page in the APM application, a webpage, or an external file. Associated Pages are meant to provide additional information or functionality related to the record that is currently being viewed. You can configure Associated Pages for any entity family so that when users view a record belonging to that family, links will appear on its **Associated Pages** menu to provide users with access to those items.

To create Associated Pages, you must be familiar with constructing URLs for APM features. When you create Associated Pages, you will find that it is particularly useful to be familiar with URLs that use an Entity Key parameter, which will allow you to pass in to the URL the Entity Key of the record that you are currently viewing.

About Reference Tables

By configuring various aspects of the APM system, you can make values in one record dependent on the values in another record. For example, if you know that certain pump properties, such as weight, size, and pump type, are the same for all pumps with a specific model number, you can create a record that contains fields and values specific to the pump weight, pump size, pump type, and pump model number. You can then write a rule dictating that when any pump record lists the specified model number, the related record containing the populated values will be used to look up various pump information and populate the corresponding fields automatically. You can create multiple records that belong to a single family and reference those records whenever necessary. When you create multiple reference records in the same family, those records are referred to collectively as a reference table.

Reference table records are best viewed using one of the following options:

- Query results
- Bulk Data Form

Each row in the Bulk Data Form or query results represents one record that belongs to the selected reference table family. Each column in the Bulk Data Form or query results represents a field in the reference table records, each of which may correspond to fields in other records.

Reference tables are simply a group of records that, coupled with the appropriate code or rules, tell fields in other records how to behave. Depending on your implementation, you could create as many reference tables as desired and write the appropriate rules to determine the functionality of the reference tables. Note that some APM modules rely on reference tables to populate baseline fields. In some cases, the

reference tables are configured by APM, and in other cases, you will need to configure the reference tables manually.

Note: A datasheet and the T-Min Calculator can be populated with values from the corresponding reference table only if it also contains all the other reference table values that APM rule logic expects it to contain, exactly as they appear in the reference table record.

Because reference table records are accessible in the APM system, anyone with the proper security privileges for the associated family will be able to modify and save changes to those records, thereby changing the values in the reference table. Note that if a reference table is modified, any analysis that was calculated using the previous values becomes outdated and must be recalculated to reflect the changes to the reference table.

If you want to be able to quickly access an individual reference table record to modify it, consider creating a query on the reference table family and fields, and add a hyperlink to the query that will allow you to open and modify the record in the Record Manager or Bulk Data Form.

About Revision History

Via the Configuration Manager, for a given field, you can specify whether or not you want to keep track of the revision history for that field. When this option is enabled for a field, APM records a log of changes that are made to the value in that field.

You can access the log by using either of the following options:

- The **Datasheet Field History** dialog box, which is accessible from the datasheet.
- The Field History Records query, which is provided in the baseline APM database in the following Catalog folder: `\\Public\Meridium\Modules\Core\Queries`.

About Record Hierarchy

The record hierarchy is a visual representation of the records in the database and how they relate to one another. The following image displays an example of the record hierarchy as it appears in the **Record Explorer** pane.
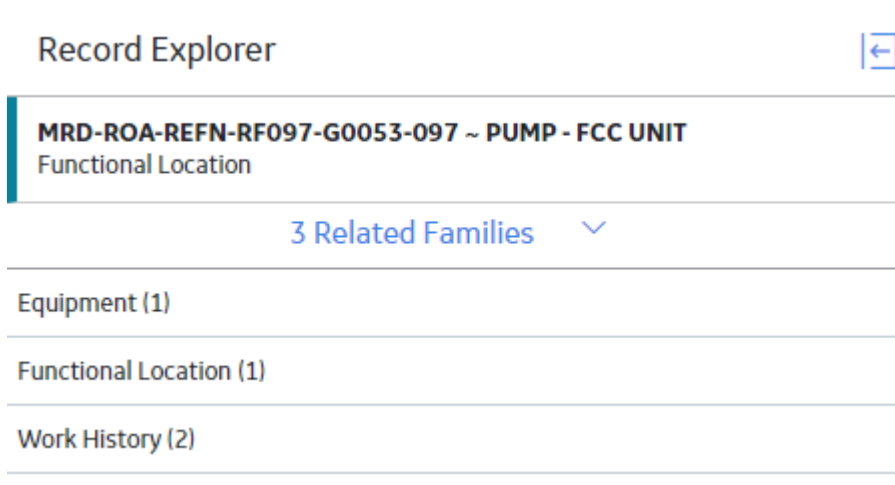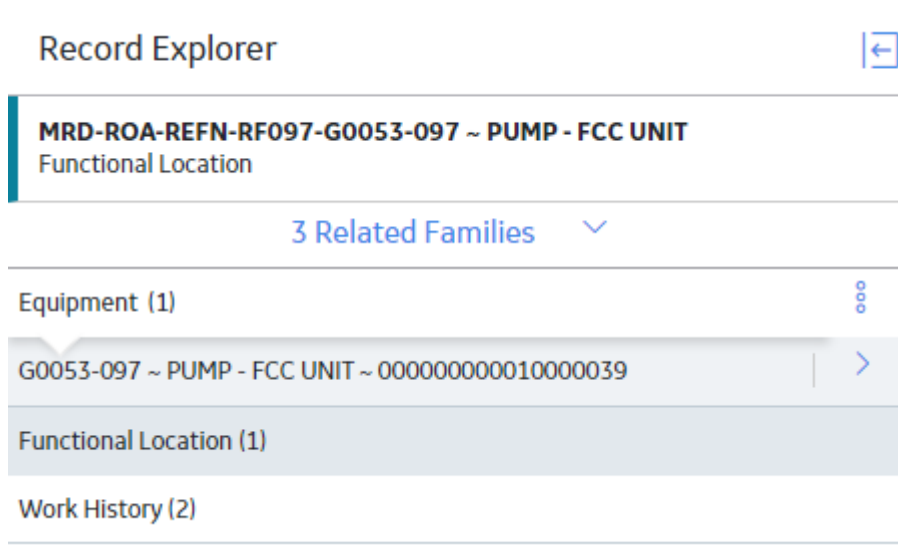
Details

The record hierarchy displays the records in the database and how they relate to one another. When you open a record in the Record Manager, it appears as the root record at the top of the record hierarchy in the **Record Explorer** pane. Below the root record, the record hierarchy displays the families that are related to the family of the root record.
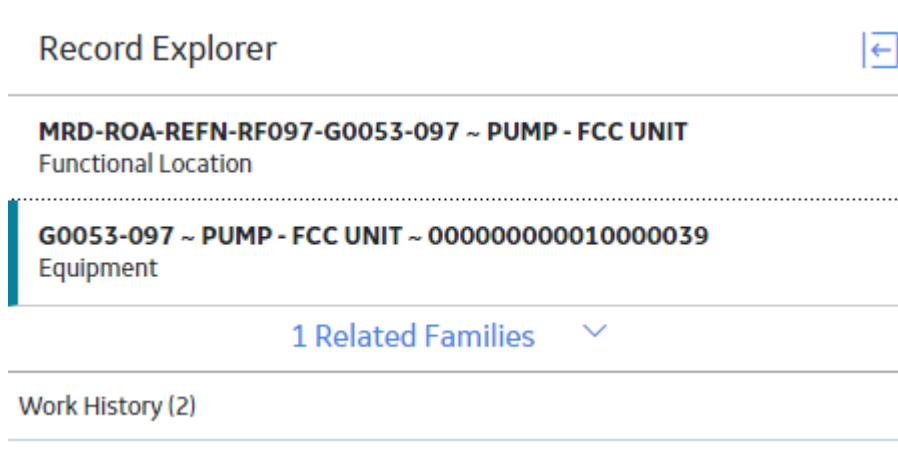
Family-level and record-level tabs in the record hierarchy are distinguished in the following ways:

- Family-level tabs in the record hierarchy contain the ⦂ button, and the related records within the given family appear below that family tab in the record hierarchy.

- When they are selected, record-level tabs in the record hierarchy open the given record's datasheet, and the families related to that record appear below that record tab in the record hierarchy.

When you select a record in the record hierarchy, you can filter the related families in two ways:

- Related Families: The record hierarchy displays only the families that contain records that are linked to the root record.
- All Possible Families: The record hierarchy displays all families that are related to the family of the root record, regardless of whether those families contain records that are linked to the root record.

About Viewing and Modifying Records

The APM system provides two primary features through which you can view and modify records: the Record Manager and the Bulk Data Form.

Note: These are the same tools that you use to create and delete records.

Records store information that you can view, modify, and manipulate throughout the APM system. Many modules provide custom interfaces that allow you to interact with records in ways that are unique to those modules. In some cases, records are meant to be created and modified only from within the modules to which they belong, but all records can be viewed in the Record Manager and Bulk Data Form.

Note: Depending upon the records you are using, the restrictions that have been placed upon them by the module to which they belong, and the permissions that have been granted to you, some of the features described in this documentation may be unavailable.

About Datasheets

While Record Manager is the tool through which you can manipulate records, datasheets are the vehicles for organizing and storing the data in those records. Datasheets will differ depending on the type of records they support, and they can be created by an administrative user in Configuration Manager using the Datasheet Builder. This topic gives a basic overview of datasheets. The following image demonstrates an example of an Equipment datasheet on the **Record Manager** page.

The Datasheet ID field has a drop-down menu from which you can select the saved datasheet configuration of your choice.
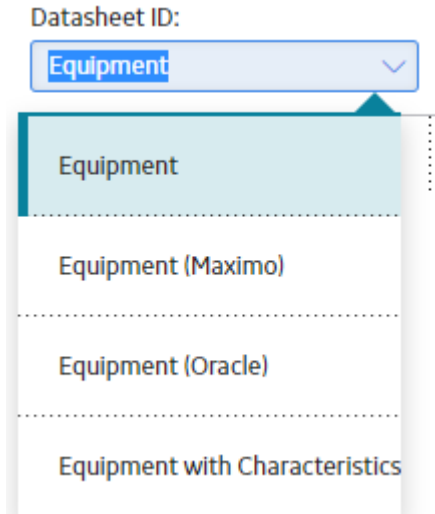
The datasheet tabs allow you to have separate types of datasheets within one saved datasheet configuration.
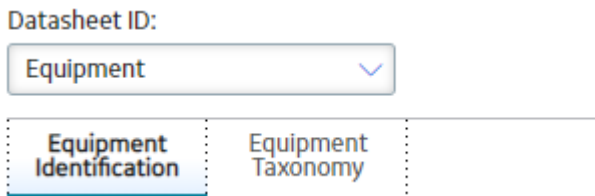
When you access a record, you can enable editing for its datasheet by selecting ⋮, which also enables you to access a number of other actions.
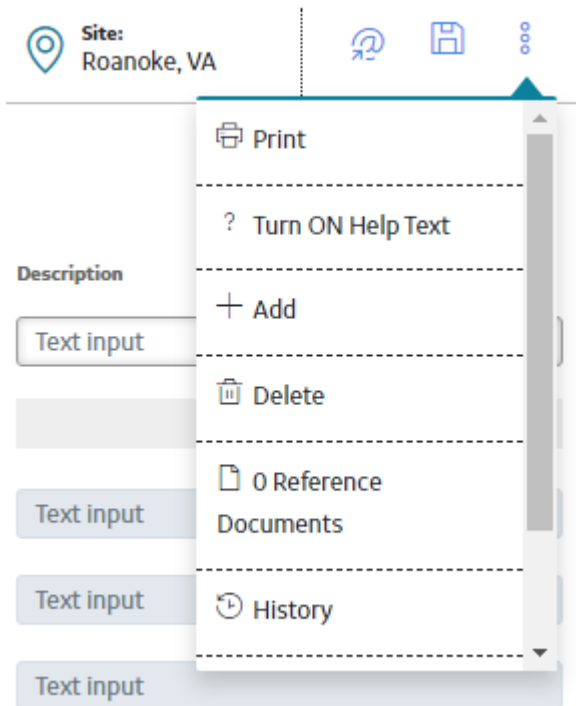
Parameter Syntax for Associated Pages

In the URL Manager, you can create Associated Pages, which are URLs that are associated with a specific entity family. Associated Pages will be available in the APM system when a user is viewing a record that belongs to a family for which Associated Pages have been defined. In general, the syntax for URLs that serve as Associated Pages is the same as the syntax for URLs that you construct in the APM system. One exception to Associated Pages is the URL syntax for specifying a variable parameter value. In the APM system, variable parameter values in query URLs are surrounded by $ (dollar signs). For URLs that serve as Associated Pages, variable parameter values are surrounded by [ ] (square brackets).

Consider an example where the Tank family has a Manufacturer_ID field that stores the name of the company that manufactured the Tank. Now, suppose a query exists that returns a list of tank failures and contains a prompt, with the prompt ID Manufacturer, which accepts the name of a given manufacturer. The purpose of the prompt is to limit the query results to those failures associated with the specified manufacturer. Using this example, you could create a link on the Associated Pages menu that executes this query and passes in to the Manufacturer prompt the Manufacturer ID from the Tank record that is displayed in the Record Manager.

The URL for the link might look something like this: `#query?path=Public\Meridium\Queries\Failures by Manufacturer&Manufacturer=[Manufacturer_ID]`

This URL contains one variable parameter value: Manufacturer_ID. When a user executes the Associated Page, the value from the Manufacturer_ID field in the current Tank record will be passed to the Manufacturer prompt in the Failures by Manufacturer query. As a result, the query will return a list of failures associated with the manufacturer of the Tank record that you are viewing at any given time.

Create a Record

About This Task

To create a new record, complete one of the following sequences of steps.

Procedure

- Create a New Record Using the ⊞ Button

  1. On the top navigation bar, select ⊞.
     A menu appears.
  2. In the menu, in the search bar, enter the family to which you would like the record to belong, and then select that family in the list of search results.
     A blank datasheet appears.
  3. In the data fields, enter your information to build the new record.

     Note: If needed, select the site to which you want to assign the record, or designate the record as a Global record. See the Site Filtering section of the documentation for more information.

  4. Select 💾.
     A new record is created.
- Create a New Record Using the Record Explorer

  1. Access an existing record.
  2. In the **Record Explorer** pane, below the record, change the filtering option to **All Possible Families**.

3. Select the family for which you want to create a new record.

4. Select ⋮ , and then select **Add New Record**.
   If there is more than one possible relationship between the existing record and the family selected for the new record, the **Select Link Family** window appears. Otherwise, a blank datasheet appears. In that case, skip to entering your information.

5. Select the radio button for the relationship that you want to use to link the records, and then select **Select Link Family**.
   A blank datasheet appears.

6. In the data fields, enter your information to build the new record.

   Note: If needed, select the site to which you want to assign the record, or designate the record as a Global record.

   Tip: For more information, refer to the Site Filtering section of the documentation.

7. Select 🖫.

   A new record is created.

- Create a New Record by Copying an Existing Record

  1. Access the record that you want to copy.

  2. On the upper-right corner of the datasheet, select ⋮ , and then select **Copy**.

     The content of the record is copied.

  3. On the upper-right corner of the datasheet, select ⋮ , and then select **Add**.

     A new record is created and appears in the Record Explorer.

  4. On the upper-right corner of the datasheet, select ⋮ , and then select **Paste**.

     The content of the copied record appears in the new record.

  5. Select 🖫.

     The new, copied record is saved.

- Create a New Record in the Bulk Data Form

  1. Access the Bulk Data Form.

  2. Select ＋.
     A new row appears at the top of the first page of results in the Bulk Data Form.

  3. As needed, enter values in the new row of the Bulk Data Form.

  4. Select 🖫.
     The new record is saved.

Access a Record from the Record Explorer

About This Task

In the **Record Explorer** pane, using the Record Hierarchy, you can access via their relationships to other records.

Procedure

1. Access Record Manager, selecting the record whose related records you want to view.

   If the record you accessed has related families, they will be visible in the **Record Explorer** pane.

2. Select a related family to expand it.
3. Select the record that you want to access.

   The datasheet for the selected record appears.

Collapse and Expand the Record Explorer Pane

About This Task

When you access a record, the **Record Explorer** pane appears to the left of the datasheet. You can collapse and expand the pane as needed.

Procedure

1. Access Record Manager.

2. On the left side of the page, in the **Record Explorer** pane, select ⬅ to collapse the pane.

3. To expand the **Record Explorer** pane, select ➡ .

   The **Record Explorer** pane is expanded.

Change the Filtering Option

Procedure

1. Access Record Manager.

2. In the **Record Explorer** pane, next to **Related Families**, select ▶ .

   A drop-down menu appears.
3. Select the desired filter option:
   - **Related Families** - The Record Explorer displays only the families that contain records that are linked to the root record.
   - **All Possible Families** - The Record Explorer displays all families that are related to the family of the root record, regardless of whether those families contain records that are linked to the root record.

   The record hierarchy in Record Explorer is updated to reflect the selected filtering option.

Access the Datasheet Field History Window

Procedure

1. Access the record in Record Manager, selecting the record that contains the field history that you want to view.

2. Select ⸭

   The **Datasheet Field History** window appears, displaying the revision history for all fields for which revision history exists.

Access Associated Pages for a Record

Procedure

1. Access Record Manager.

2. Select ⟳ .

   The Associated Pages hierarchy appears.

Results

The Associated Pages hierarchy contains links to associated pages. In the hierarchy, when a ▶ appears beside a node, the node can be expanded to reveal child nodes, much like the record hierarchy in the

Record Explorer. If a record contains no associated pages, the ⟳ button is not displayed.

Modify a Record in the Record Manager

Procedure

1. Access Record Manager, selecting the record that you want to modify.
2. As needed, modify the available fields on the datasheet.
3. On the upper-right corner of the datasheet, select **Site**.

   Note: If the user creates a new record from an existing record, then the new record will inherit the site reference key of the predecessor record.
4. Select the site to which you want to assign the record.

   Note:

   - If the record is assigned to the default site, then it can be accessed only by users who have been assigned to the same site or by a Super User. You may change the site to any of the sites that the user has permission for or choose to designate the record as a Global Record by selecting Global, so that all APM users can see it.
   - A Super user can assign any site to the record.

   Tip: For more information, refer to the Site Filtering section of the documentation.
5. Select 💾.

   The changes are saved.

Print a Record

Procedure

1. Access Record Manager.

2. Select ⁝ , and then select **Print**.

The datasheet for the record is downloaded and appears in .pdf format, which is ready to print as needed.

Delete a Record

Procedure

1. Access Record Manager, selecting the record that you want to delete.
2. Select ⦙ , and then select **Delete**.

   The **Alert** dialog box appears, asking you to confirm the deletion.
3. Select **Yes**.

   The record is deleted from the APM database.

Chapter

3

Linked Records

Topics:

About Linking Records

Linking records makes data from related items more readily available to you from an open record. You can create links between records in two ways:

- You can link an existing record to a record that already exists in the database provided that the family of the record is not excluded from Search.
- You can link an existing record to a new record that you create for the purpose of linking.

Link an Existing Record to a New Record

Procedure

1. Access Record Manager.
2. In the Record Hierarchy, find the record that you want to link to a new record.
3. Next to the family in which you want to create a new record, select ⁝⁝ .
4. Select **Add New Record**.

   A blank datasheet appears.
5. As needed, enter values in the available fields.
6. Select 💾 .

   The new record is saved and linked to the specified record.

Link Two Existing Records

Procedure

1. Access Record Manager by accessing the record that you want to link to another record.
2. In the Record Explorer, select a related family in the hierarchy and find the record that you want to link to the root record.

   Note: The related family must not be excluded from Search.
3. Beside the family of the record you want to access, select ⁝⁝ , and then select **Link Existing Record**.

   The **Search** window appears, displaying a list of entities of the family.
4. In the drop-down list boxes, select the required options to filter the entities from the list.

   -or-

   In the text box, enter the name of the family or entity that you want to search, and then select 🔍 .
5. Select the record that you want to link, and then select **OK**.

   The records are linked.

Make a Linked Record the Root Record

Procedure

1. Access Record Manager.
2. In the **Record Explorer** pane, select a related family to expand it, and then select the record that you want to make the new root record.

   The datasheet of the record appears in the **Record Manager** workspace.

3. Select ⬀.

   In the **Record Explorer**, the record becomes the new root record.

Unlink Records

Procedure

1. Access Record Manager, selecting the record that you want to unlink.

   The datasheet for the record appears.

2. Select ⋮ , and then select **Unlink this record**.

   A confirmation message appears, asking if you really want to remove the link.

3. Select **Yes**.

   The record link is removed, but the record is still available in the APM database.

Chapter

4

Bulk Data Form

Topics:

About the Bulk Data Form

The Bulk Data Form lets you view the details of multiple records which belong to the same family. This can be useful if you want to compare data for multiple entities without having to switch between records and remember the information in each record.

You can open the Bulk Data Form from the Related Families section in the Record Manager to display all the records in the selected entity family which are linked to the record you initially opened in Record Manager (that is the root record) through a single relationship family.

Using the Bulk Data Form, you can add new records, modify existing records, delete records, and unlink existing records. You can also search, filter, and sort the list of records.

To create, modify, unlink, or delete records in the Bulk Data Form, you must have the necessary privileges to create, update, or delete the relevant entity and relationship families.

The Bulk Data Form is used to display the list of related records in a master/detail datasheet.

Note: If a master/detail datasheet is designated as the default datasheet for a family, at least one non-custom form datasheet must exist for a family before that family can be opened in the Bulk Data Form. If a master/detail datasheet is specified as the default datasheet for a family and you try to open that family in the Bulk Data Form, the Bulk Data Form will display the family using the first non-custom form that appears after the default datasheet in that family's list of datasheets.

You can also open the Bulk Data Form from Global Search, Advanced Search, or using the bulk data form URL, to display any records belonging to the same family. In these cases, you can create new records that are not linked to a root record, modify existing records, or delete records from the database.

You can modify the settings for a Bulk Data Form using the **Table Settings** window and then select the rows per page. The following settings are retained as a user preference for the selected family and datasheet:

- Freeze columns
- Show or hide columns
- Change the order of columns
- Sort columns
- Rows per page

Note: If, however, you change the order of columns using the drag-and-drop method, the changes are not saved as a user preference.

About Freezing and Unfreezing Columns on the Bulk Data Form

When you view records in the Bulk Data Form, more columns may be available than the number of columns that can be displayed on one screen. In this case, you will need to scroll to the right to view all the columns. In some cases, the first column or the first few columns in the grid may contain information that you need to reference while you view information that appears in subsequent columns. In this case, you can freeze the columns that should remain visible as you are scrolling. When you freeze a column, that column and any column that appears to the left of it will remain in their current positions on the screen, even as you scroll through subsequent columns that appear to the right of the frozen column(s).

After a column or set of columns is frozen, if you want to freeze different columns, you will need select the columns to freeze. You can freeze a maximum of four columns on the Bulk Data Form page. Also, if you change the page setting to view a different page for the records, any columns that were frozen will be unfrozen automatically. Additionally, after you navigate away from the Bulk Data Form, the next time that you view records in that family in the Bulk Data Form, the settings for the column are saved as a user preference for the user, and will be frozen the next time the user accesses the form.

Access the Bulk Data Form from Record Manager

Procedure

1. Access Record Manager.
2. In the **Record Explorer** pane, in the **Related Families** section, select a family to expand its contents.
3. Select ⁝ , and then select **Manage All Related Records**.

   If there is more than one possible relationship family between the related records and the first record you opened, the Select Link Family window is displayed.
4. Select the relationship for which you want to display the related records.
5. Select **Select Link Family**.

   All records from the selected link family are related to the record you initially opened appear on the Bulk Data Form.

Freeze and Unfreeze Columns on the Bulk Data Form

Procedure

1. Access the Bulk Data Form page.

2. On the upper-right corner of the page, select ⚙.
   The **Table Settings** window appears.

   Note: If available, the **Site** column is always frozen; therefore, it does not appear in the list in the **Table Settings** window.

3. In the **Freeze Column Left** column, select the check boxes for the columns that you want to freeze in the Bulk Data Form. Similarly, clear the check boxes for the columns that you do not want to freeze.
   The column is frozen, and the scroll bar moves from that column to the next column.

4. Select **Apply**.
   The columns are now frozen or unfrozen, as applicable. The settings are saved as a user preference.

Choose Columns on the Bulk Data Form

Procedure

1. Access the Bulk Data Form.
2. On the upper-right corner, select ⚙.
   The **Table Settings** window appears.
3. Depending on the columns that you want in the **Bulk Data Form** datasheet, select or clear the check boxes in the **Show Column** column.
4. Select **Apply**.
   The columns now appear as selected in the datasheet. The settings are saved as a user preference for the user.

Reorder Columns on the Bulk Data Form

Procedure

1. Using the Bulk Data Form grid:

   a) Access the Bulk Data Form.
   b) Place the cursor on the heading of the column that you want to reorder.
   c) Drag the column header to the desired location.

      Tip: A vertical line appears between the columns, where the selected column will be moved when the pointer is in a valid drop location.

      The columns are reordered. The column order settings are not saved as a user preference.

2. Using the **Table Settings** window:

   a) Access the Bulk Data Form.
   b) On the upper-right corner, select ⚙.
      The **Table Settings** window appears.
   c) Place the cursor in the row containing the column that you want to move.
      Arrows appear in the **Re-order** column.
   d) Use the arrows to reorder the columns as needed.
   e) Select **Apply**.
      The columns are reordered in the Bulk Data Form. The column order settings are saved as a user preference.

Modify an Existing Record on the Bulk Data Form

Procedure

1. Access the Bulk Data Form.
2. As needed, enter values directly into the cells for the record that you want to modify.

   Tip: You can use the Tab key after entering a value to move to the next cell. You can use the Tab key +Shift key to move back.

3. Select 💾.

The changes are saved.

Add Reference Documents to a Record on the Bulk Data Form

Procedure

1. Access the Bulk Data Form page.
2. On the **Bulk Data Form** datasheet, in the grid, select the check box next to the record for which you want to add the reference document.

   Note: You can add a reference document to one record at a time.

3. Select ⸭ , and then select **Reference Documents**.

   The **Reference Documents** window appears.

4. Select ＋ .

   The **Add Reference Document** datasheet appears.

5. As needed, enter the values for **ID** and **Description**.

6. In the Document Path field, select ⠿.

   The **Edit Document Path** window appears.

   Note: You can either upload a file from the local network by selecting 📁, and navigating to the path of the file or you can link to an external network file.

7. Select **Save**.

8. In the Edit Reference Document window, select 💾.
9. In the Reference Document window, select **Close**.

   The Reference Document is added to the selected record on the Bulk Data Form.

Copy a Record on the Bulk Data Form

Procedure

1. Access the Bulk Data Form page.
2. On the **Bulk Data Form** datasheet, in the grid, select the check box beside the record which you want to copy.

3. On the upper-right corner of the page, select ⸭ , and then select **Copy**.

4. On the upper right corner of the page, select ⸭ , and then select **Paste**.

   A copy of the record appears at the bottom of the list.

5. Select 💾.

   The copied record is saved and linked to the root record.

Delete Records on the Bulk Data Form

Procedure

1. Access the Bulk Data Form page.
2. On the **Bulk Data Form** page, in the grid, select the check box beside one or more records which you want to delete.
3. On the upper-right corner of the page, select ⁝ , and then select **Delete**.

   The **Alert** dialog box appears, asking you to confirm that you want to delete the record.
4. Select **Yes**.

   The selected records are deleted from the database.

Unlink Records on the Bulk Data Form

Procedure

1. Access the Bulk Data Form.
2. On the **Bulk Data Form** page, in the grid, select the check box beside one or more records which you want to unlink from the record that you initially opened in the Record Manager.
3. On the upper-right corner of the page, select ⁝ , and then select **Unlink**.
   The **Alert** window appears, asking you to confirm that you want to unlink the records.
4. Select **Yes**.
   The selected records are unlinked from the root record.

Print a Bulk Data Form

Procedure

1. Access the Bulk Data Form page.
2. On the upper-left corner of the page, select 🖶.
   The Bulk Data Form is downloaded and appears in .pdf format, and is ready to be printed as needed.

   The printed output includes only a limited number of columns, typically those that are visible without scrolling in the Bulk Data Form.

Export Formatted Printout of a Bulk Data Form

Procedure

1. Access the Bulk Data Form page.
2. Select ⁝ , then select **Print Options**.
   The Print Options dialog is displayed.
3. Enter or select values for the following print options:

- Number of rows per page
- Number of columns per page
- Output file name
- Show row numbers (checked or unchecked)
- Orientation (portrait or landscape).

4. Select **OK**.
   The settings are saved as a user preference for the current bulk data form.
5. Select **Formatted Print**.
   The formatted Bulk Data Form print is downloaded in .pdf format.

Manage the State of Records in the Bulk Data Form

Before You Begin

To manage the state of one or more records in the Bulk Data Form, State Management should be enabled for the family.

Procedure

1. Access the Bulk Data Form for records in a family where State Management is active.
   On the **Bulk Data Form** page heading, **Select Items to Manage State** is displayed.
2. In the Bulk Data Form grid, select the check box beside one or more records for which you want to modify the state.

   Note: All the records that you select must be in the same state.

   The state management control appears, displaying the current state of the record.

3. Select ∨.
   The valid successor states for the records are displayed.
4. Select the state to which you want to transition the selected records.
5. Select **Done**.
   The records are transitioned to the selected state.

Results

For more information, refer to State Management Overview.

Chapter

5

Reference Documents

Topics:

About Reference Documents

Reference documents allow you to associate files or websites with a record in the APM database. For example, while performing an inspection, you might take pictures of the piece of equipment that you are inspecting and save them on your local machine or company network. Then, while recording the inspection details in a General Inspection record in APM, you can link those images, as reference documents, to the General Inspection record, so that when other users open the General Inspection record, they will be able to view the images.

Each time you associate a reference document file with a record, a Reference Document record will be created and linked to that record. You can link Reference Document records to any record belonging to a family for which the Reference Documents relationship has been defined through the Configuration Manager. The APM system supports two different types of reference documents:

- Internal Reference Documents: Reference document files that are stored in the APM database.
- External Reference Documents: Reference document files and websites that reside outside of the APM database and are referenced in a Reference Document record. Internal reference documents can be accessed only by users who have permission to access the location in which they are stored. Other users would be able to view an external reference document that is stored in a public location, such as a network drive.

You can access the Reference document either by performing a search or through the Record Manager.

Note: You can store a reference document upto 30MB with your record.

Access Reference Documents

Procedure

1. Access Record Manager, selecting the record whose reference documents you want to view.
2. Select ⋮ , and then select **Reference Documents**.

   In the drop-down menu, the number listed before the **Reference Documents** menu indicates the number of existing reference documents for that record. On selecting this menu, the list of available reference documents appears for that record.

Reference Documents Workflow

Note: Before manipulating Reference Documents, you must configure the Has Reference Documents relationship. Many of the baseline families in APM already possess the Has Reference Documents relationship, but it will need to be added for any new or custom families.

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

1. Add a Reference Document.
2. Modify a Reference Document.
3. Unlink a Reference Document from a Record.
4. Access a File Associated with a Reference Document.
5. Save a Copy of a Reference Document to a Different Location.

Add a Reference Document

About This Task

You can add a new reference document or link an existing reference document to a record. Complete one of the following sequences of steps.

Procedure

- Create a Reference Document

  1. Access Record Manager.

  2. Select ⁝ , and then select **Reference Documents**.

  3. Select ＋ .

     The **Add Reference Document** window appears.

  4. In the **ID** box, enter a name for the reference document.

  5. In the **Description** box, enter a brief description.

  6. In the **Document Path** box, select ⦿⦿⦿.

     The **Edit Document Path** window appears.

  7. If you want to store the reference document in the APM database:

     a. Select **Upload a Local File**, then select 📂, and then select a file to upload.

     b. Select **Save**.

     The document path is added to the datasheet.

     -or-

     To **Link to an external network file**:

     a. Choose the external network from the drop-down.

     b. Select the Network Path.

     c. Select **Save**.

     Note: Before you link a reference document to an external network file by selecting the browse button, you must configure the server credentials of your network in APM.

     The following file formats are supported:

     - Microsoft PowerPoint (.ppt, pptx, .pptm, .pps, .ppsx, or .ppsm)
     - Microsoft Word (.doc, .docx, or .docm)
     - Text files (.txt, .rtf, or .odt)
     - Adobe Portable Document Format (.pdf)
     - Images (.bmp, .dwg, .jpg, .jpeg, .jpe, .gif, .png, .svg, .tif, .vsd, .vss, .vst .vdx, or .vsx)
     - Email Messages (.msg)
     - JSON (.json)

     The following file protocols are supported:

     - HTTP (Hypertext Transfer Protocol)
     - HTTPS (HTTP over SSL)

  8. Select 💾.

The reference document is saved.

Note: The link to the document appears in the Document Path box.

- Link a Record to a Reference Document

    1. Access Record Manager.

    2. Select ⁝ , and then select **Reference Documents**.

    3. Select 🔗 .

       The **Search** window appears.

    4. If you want to search reference documents of all families, select 🔍 .

       -or-

       If you know the name of the reference document that you want to link, enter the name in the search box, and then press Enter.

    5. Select the check box next to the reference document that you want to link, and then select **OK**.

       The reference document is linked to the record.

Modify a Reference Document

Procedure

1. Access Reference Documents for the record that you want to modify.

2. Select the row for the reference document you want to modify, and then select ✏️ .

   The datasheet for the selected reference document appears.

3. Modify the datasheet fields as desired.

4. Select 💾 .

   The changes you made to the reference document record are saved.

Access the File Associated with a Reference Document

Procedure

1. Access Reference Documents.

2. In the **Document Path** box, select the link.

   If the file type is supported by a web browser, the file opens in a web browser . Otherwise, the file is downloaded on your machine.

   Note: Depending on the operating system of your mobile device, Accessing Reference Documents using the APM mobile application will vary. For example, on a Window or an Android device, when you attempt to access a Reference Document for the first time, a dialog box appears, asking you to select the application in which you want to open the file. This selection will be saved as the default setting. Whereas, on an iOS device, each time you attempt to access a Reference document, the dialog box appears. When you attempt to download a file and the operating system of your mobile device does not recognize the file type, a message appears.

Unlink a Reference Document from a Record

Procedure

1. Access Reference Documents.

2. Select the row for the reference document you want to unlink, and then select ⚲.

   The **Alert** dialog box appears asking you to confirm that you want to unlink the reference document.

3. Select **OK**.

   The reference document is unlinked from that record.

   Note: When you unlink a reference document from a record, the reference document no longer appears in the list for that record, but it still exists in the APM database. You can re-link the reference document or link it to another record by following the procedure to add a reference document by linking.

Save a Copy of a Reference Document to a Different Location

Procedure

1. Access Reference Documents.

2. Select the reference document that you want to open.

   The file is downloaded and ready to be accessed.

3. Open the file, and then save it to your desired location.

Delete a Reference Document

Procedure

1. Access Reference Documents on page 26 for the record that you want to delete.

2. Select ⋮ , and then select **Delete**.

   The **Alert** dialog box appears, asking you to confirm the deletion.

3. Select **Yes**.

   The record is deleted from the APM database.

   Note: Only Super Users are granted the privileges of deleting the global records.

Reference Document Bulk Upload

About This Task

You can upload multiple reference documents to be stored in APM in a single transaction using the Bulk Upload feature. Reference Document Bulk Upload allows you to upload multiple files of the supported types, subject to an overall maximum upload size of 100MB. If you upload a zip file, each file contained

within the zip file can optionally be stored as a separate reference document. Optionally, you can select an entity record in the APM database to which all the uploaded Reference Documents will be linked.

Note: To access Reference Document Bulk Upload, you must be a member of the MI Configuration Role security group or a role that includes this group.

Procedure

1. In the **Applications** menu, navigate to **Admin** > **Operations Manager** > **Reference Document Bulk Upload**.
   The **Reference Document Bulk Upload** page appears.
2. Optionally, to link the uploaded Reference Documents to an entity record in APM:

   a. Select 🔗 next to the **Choose Entity to link Reference Documents** box.
   b. In the **Search** window, search for and select the entity record to which you want to link the Reference Documents.
   c. Select **OK**.
   d. In the **Choose Relationship to link Reference Document and Entity** box, select the relationship to use to link the entity to the Reference Documents.

3. In the **Choose Files** box, select 📂.
   A window appears showing the files on your local drives.
4. Select the files that you want to upload, then select **Open**.

   Tip: Hold down the **Ctrl** key to enable selection of multiple files.

   The number of files selected is displayed.
5. Select **Save**.

   Note: Depending on your connection speed, you may experience a time out when attempting an upload less than the total allowed upload size (100MB). If a time out occurs, select fewer documents, and try again.

Results

A scheduled job is created to store the uploaded documents in APM and link them to the predecessor record, if applicable. You can check progress of the scheduled job in the Job Monitoring Dashboard.

Chapter
6

Conditional Alerts

Topics:

About Conditional Alerts

Conditional Alert records store information about emails that you want to send to various users. Before you can create a Conditional Alert that specifies when to send an email message and to whom, you must create and save a query that returns the data you want to send in the email message.

Note: You can configure the email address from which the Conditional Alert emails are sent in the **From** field in the **Email Settings** page.

For example, suppose there are two inspectors in your company to whom Inspection Task records are assigned. You might want to create a query that returns a list of those Inspection Task records and the user to whom each is assigned. Then, you could create a Conditional Alert record that determines when an email message will be sent to those inspectors and the type of data that the email message will contain.

After you create a Conditional Alert, you must compile and execute the strategy rule MI_ProcessCondtionalAlerts, which is provided as part of the baseline APM content. This strategy rule searches the database for all Conditional Alert records. If it finds any records, it then uses the information in those records (i.e., interval at which to send the email message, date the email message was last sent, and so on) to determine if an email message should be sent at that time.

The creation of Conditional Alert records is part of the Inspection Management workflow. Note that, based upon your needs, you can create Conditional Alert at any time.

Create a Conditional Alert

Procedure

1. On the upper-right corner of any page in APM, select .

   A search menu appears with a list of families below it.
2. In the search bar, enter Conditional Alerts, and then select **Conditional Alerts** from the list of families.

   A blank datasheet for a new Conditional Alert record appears.
3. As needed, enter values in the available fields, and then select .

   Note: Required fields are marked in red.

Send an Email Using a Conditional Alert

Procedure

1. In the upper-right corner of any page in APM, select , and then enter the name of the conditional alert in the search bar.
2. Select the conditional alert record that you want to modify.

   The record opens.
3. Select to enable editing of the fields.

   The datasheet toolbar is displayed.

4. In the **Fixed Distribution List** drop-down menu, select the email recipients that you would like to receive that alert.

   -or-

   In the **Additional Distribution List** box, enter additional email addresses for new recipients.

5. Select 🖫.

   The conditional alert will be sent to the recipients you added.

   Note: The default email subject line is *Email Subject Line*: **Conditional Alert -** *Alert ID*. Here, the Alert ID is the ID and Email Subject Line is the subject line that was set in the Conditional Alert Datasheet.

Use the Group By Functionality in Conditional Alerts

About This Task

If the query in your conditional alert has an Email ID field and multiple conditional alert records have the same email address, you can use the **Group By** field to group the records according to the email address. This avoids sending multiple messages to the same email address.

Procedure

1. Sort your query by the Email ID field column.

   If the records in your query are not sorted by email ID, they will be considered as single records and separate email messages will be sent.

2. Select the **Email ID** field in the **Variable Distribution Source** drop-down list box.

3. Select the **Email ID** field in the **Group By** drop-down list box.

   Note: If the values in the Variable Distribution Source and Group By fields do not match, then APM does not send an email message for the conditional alert records.

Results

The recipient will receive a single email message listing all the conditional alert records associated with that email address.

Note:

- If the recipient has blocked emails from APM, the email message will still be sent to the address mentioned in the query. However, it will go to the recipient's spam folder.
- If the wrong email address is entered or if the email ID field for a record is blank, an exception entry will be listed in the log file.

Configure Alert Interval for Scheduling Strategy Macro

Before You Begin

Procedure

1. In the main navigation bar, select 🔍, and then enter the name of the conditional alert in the search bar.

2. Select the conditional alert record that you want to schedule based on the frequency set in the **Strategy Macros** page.
   The record appears in a new tab.
3. In the **Interval** drop-down list box, select **Strategy Macro Schedule** option.
4. Select the **Active** check box.
5. Select 💾.

The conditional alert record is updated, and the alert appears in the **Active Alerts** drop-down list box of the **Strategy Macros** page.

Next Steps

Troubleshoot Conditional Alerts

The following list describes some issues that you may encounter while working with the Conditional Alerts process. Select the appropriate drop-down section to view an explanation of what may be causing the issue.

Example: Error Indicating that a Query Cannot be Found

When you execute the strategy rule MI_ProcessConditionalAlerts, the rule searches for Conditional Alerts records and tries to send an email message containing the results of queries that are referenced in those Conditional Alerts record. If one or more Conditional Alerts records does not reference a query, an error will appear, indicating that the query is missing.

What could cause this to happen?

One or more Conditional Alerts records contains an empty Query Name field.

What can I do?

Create a query to locate the Conditional Alerts record(s) that contains an empty Query Name field. Open the Conditional Alerts records that are returned by the query, and select the desired query in the Query Name field.

Example: Error Indicating that a Recipient is Required but Not Found

When you execute the strategy rule MI_ProcessConditionalAlerts, the rule searches for Conditional Alerts records and tries to send an email message to the recipients referenced in the records. If one or more Conditional Alerts records does not indicate the email address to which the email message should be sent, an error will appear, indicating that one or more recipients is required but none were found.

What could cause this to happen?

One or more Conditional Alerts records is missing values in all of the following fields:

- Fixed Distribution List
- Additional Distribution List
- Optional Distribution
- Variable Distribution Source

What can I do?

Create a query to locate the Conditional Alerts record(s) where these fields are empty. Open the Conditional Alerts records that are returned by the query, and select at least one email address in at least one of the empty fields.

Chapter

7

Reference Document Server Credentials Configuration

Topics:

Reference Document Server Credentials

Reference documents associated with various types of records in APM can be stored internally, meaning in the APM database, or externally on a shared network drive. This topic below describes how to connect APM to your shared network drive.

Configure Reference Document Credentials in APM

About This Task

When you create a Reference Document for a record, one of your options is to house the file on a shared network drive. Before you can do that, you must configure user credentials to the network share in APM. This topic describes how to configure these credentials.

Note: To configure the Reference Document Server Credentials, you must be a member of the MI Configuration Role security group or a role that includes this group.

Procedure

1. In the **Applications** menu, navigate to **ADMIN** > **Operations Manager** > **Reference Document Server Credentials**.
   The **Reference Document Server Credentials** result grid appears.
2. Select the **Add New Resource** icon.
3. Enter the appropriate values in the **Shared Folder UNC Path**, **Caption**, Sites, Roles, Groups, **Domain**, **User Name**, and **User Password** fields.

   Note: The Shared Folder UNC Path must refer to a location other than the APM server.
4. Select **Save**.

   Note: Select Perform Connection Test button to validate the configuration provided.

   Your shared network drive is now accessible by APM users assigned to the specific Sites, Roles, or Groups and you can link your Reference Document files on the shared network drive.

   Note: If you update the Shared Folder UNC Path field, you must re-enter the User Password.

Chapter

8

Reference

Topics:

- General Reference

General Reference

Reference Documents System Requirements

License Requirements

This feature is available with the core APM application; no specific license is required.

Record Manager URLs

There are two URL routes associated with Record Manager: record-manager, which opens a record in Record Manager in a new tab, and BDF-screen, which opens a collection of records in the Bulk Data Form in a new tab. There is also an action route, datasheet-dialog, which opens a record in a separate window.

Note: An action route is preceded by ! instead of # when specifying the route in APM.

The following table describes the various paths that build on the routes, and the values that you can specify for each element in the path.

Element	Description	Accepted Value(s)	Notes
#record-manager/<FamilyKey or ID>/<EntityKey>: Opens the **Record Manager** page for a specified record using the family key or ID. #record-manager/<FamilyKey or ID>: Opens the **Record Manager** page for a new record using the family key or ID #record-manager/<FamilyKey or ID>/<EntityKey>?datasheetid=<DatasheetID>: Opens the **Record Manager** page for the entity of a given family using the desired datasheet. #record-manager/<FamilyKey or ID>?<FieldID1>=Value1&<FieldID2>=Value2: Opens the **Record Manager** page for a new record and updates the specified field with given value. #record-manager/<FamilyKey or ID>/<Entitykey>?<FieldID1>=<Value1>&<FieldID2>=<Value2>: Opens the **Record Manager** page for the entity of a given family and updates the specified fields with the given values. #record-manager/<Family Key or ID>/<EntityKey>?datasheetid=<DatasheetID>&<FieldID1>=Value1&<FieldID2>=Value2: Opens the **Record Manager** page for the entity of a given family using the desired datasheet and updates the specified fields with the given values. #record-manager/<Family Key or ID>/<EntityKey>/id/<DatasheetID>?<FieldID1>=Value1&<FieldID2>=Value2: Opens the **Record Manager** page for the entity of a given family on the desired datasheet and updates the specified fields with the given values.			
Family Key	Specifies the Family Key of the record that you want to open in the Record Manager.	Any Family Key that corresponds to a family.	NA
Family ID	Specifies the family ID of the record that you want to open in the **Record Manager**.	Alphanumeric Family ID	The Family ID parameter provides the same functionality as the Family Key parameter. In each URL that contains the Entity Key parameter, you can use either the Family Key or Family ID parameter. You do not need to use both.

Element	Description	Accepted Value(s)	Notes
Entity Key	Specifies the Entity Key of the record that you want to open in the Record Manager.	Any Entity Key that corresponds to an existing record in the specified family.	N/A
Datasheet ID	Specifies the datasheet that you want to display in the Record Manager.	The Datasheet ID of the desired datasheet.	The Datasheet ID must correspond to a datasheet that has been defined for the specified family in the Configuration Manager. If you do not specify this parameter, the APM system will use the datasheet that the current user was last using when viewing a record in the specified family or the default datasheet if the user has never opened a record in that family before.
Field ID	Defines fields that you want to populate automatically, as well as the values that you want to use to populate them.	Values that are appropriate for the specified fields.	You can specify values that will be used to populate fields in that record automatically. The actual parameter names should correspond to fields that you want to populate. You must use the Field ID as the parameter name. The parameter values will vary depending on the values that you want to use to populate the fields, but you should make sure to specify values that are appropriate for the field types (e.g., specify numbers for numeric fields). If you select a URL that specifies a new value for a field, you must save the entity after opening the record in order to save the changes.
#record-manager/asset/<EntityKey>: Opens the **Record Manager** page for a record found in the asset hierarchy.			
asset	Specifies that the record you want to open in Record Manager is found in a family used in the asset hierarchy.	asset	N/A
Entity Key	Specifies the Entity Key of the record that you want to open in the Record Manager.	Any Entity Key that corresponds to an existing record in a family that appears in the asset hierarchy.	N/A

Element	Description	Accepted Value(s)	Notes
#bdf-screen/id/<datasheet ID>?familykey=<family key or id>&keys=<entity key 1>,<entity key 2>: Opens the **Bulk Data Form** for the specified entity keys using the desired datasheet. #bdf-screen/id/<datasheet ID>?familykey=<family key or id>: Opens the Bulk Data Form for a new entity of the specified family using the desired datasheet. #bdf-screen?familykey=<family key or id>&keys=<entity key1 >,<entity key 2>: Opens the Bulk Data Form for the specified entity keys. #bdf-screen?familykey=<family key or id>: Opens the Bulk Data Form for a new entity of the specified family.			
Family Key	Specifies the Family Key of the record that you want to open in the Bulk Data Form.	Any Family Key that corresponds to a family.	N/A
Family ID	Specifies the family ID of the record that you want to open in the Bulk Data Form.	Alphanumeric Family ID	The Family ID parameter provides the same functionality as the Family Key parameter. In each URL that contains the Entity Key parameter, you can use either the Family Key or Family ID parameter. You do not need to use both.
Entity Key	Specifies the Entity Key of the record that you want to open in the Bulk Data Form	Any Entity Key that corresponds to an existing record in a family that appears in the asset hierarchy.	N/A
Datasheet ID	Specifies the datasheet that you want to display in the Bulk Data Form	The Datasheet ID of the desired datasheet.	The Datasheet ID must correspond to a datasheet that has been defined for the specified family in the Configuration Manager. If you do not specify this parameter, the APM system will use the datasheet that the current user was last using when viewing a record in the specified family or the default datasheet if the user has never opened a record in that family before.
!datasheet-dialog/{family key or ID}/{Entity Key}?caption=<string>&canEdit=<true or false>:Opens the datasheet for a record in a separate window using the family key or ID. !datasheet-dialog/{family key or ID}?caption=<string>&canEdit=<true or false>: Opens the datasheet for a new record in a separate window using the family key or ID.			
Family Key	Specifies the Family Key of the record that you want to open in the Record Manager.	Any Family Key that corresponds to a family.	N/A

Element	Description	Accepted Value(s)	Notes
Family ID	Specifies the family ID for a new record.	Alphanumeric Family ID	The Family ID parameter provides the same functionality as the Family Key parameter. In each URL that contains the Entity Key parameter, you can use either the Family Key or Family ID parameter. You do not need to use both.
Entity Key	Specifies the Entity Key of the record that you want to open in the Record Manager.	Any Entity Key that corresponds to an existing record in the specified family.	If you specify 0 or omit the entity key, a new record is created.
caption	Sets the title of the window.	Any alphanumeric value	This parameter is optional. If a title is not specified, the window title will appear as "Datasheet".
canEdit	Sets whether the Edit button appears in the window.	Boolean value	This parameter is optional. If this parameter is not specified, the value is assumed to be true; that is, the datasheet can be edited.

Example URLs

Example URL	Destination
#record-manager/ 9876543/1234567	Opens the Record Manager, displaying the record with the Entity Key 1234567 and with the Family Key 9876543.
#record-manager/1234567	Opens the Record Manager, displaying a new record for the family with the Family Key 1234567.
#record-manager/Pump	Opens the Record Manager, displaying a new record for the Pump family.
#record-manager/ 9876543/1234567? datasheetid=Custom_Datasheet	Opens the Record Manager, displaying the record with the Entity Key 1234567 and Family Key 9876543. The datasheet Custom_Datasheet is selected by default.

Example URL	Destination

#record-manager/1234567?
Asset_Manf_CHR=Pacific
	Opens the Record Manager, displaying a blank record for the family with the Family Key 1234567. The field with the ID Asset_Manf_CHR is populated automatically with the value Pacific.

#record-manager/asset/ 1234567	Opens the Record Manager displaying a record with entity key 1234567 and which appears in the asset hierarchy.

#bdf-screen?
familykey=6785746&keys=1234
5678, 98765432
	Opens the Bulk Data Form, displaying the records with Entity Keys 12345678 and 98765432. The Family Key is 6785746.

#bdf-screen/ID/ MI_EQUIP000_MXMO? familykey=MI_EQUIP000&keys= 12345678, 98765432	Opens the Bulk Data Form, displaying the records with Entity Keys 12345678 and 98765432. Family Key is MI_EQUIP000 and Family ID is MI_EQUIP000_MXMO.
!datasheet-dialog/MI_TASKINSP/ 12345678?caption=Inspection Task&canEdit=false	Opens a specified record in a separate window with the title "Inspection Task" and without the Edit button.

Site Filtering in Record Manager

When you open a record in Record Manager, the site to which the record is assigned is displayed in the **Site** field, as shown below.

Site:
Predix Default
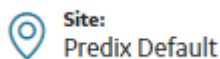
The **Site** field is not displayed when you access a record in a family for which the site filtering is disabled.

When you create or edit a record in the Record Manager, you can modify the value of the **Site** field according to the site filtering constraints for the relevant families and your site assignment.

- When you use the **Add New Record** option to create a new record linked to an existing record, and the family of the new record has site filtering enabled, the site of the new record is set automatically based on the site of the existing record.
- When you open an existing record in Record Manager and use the **Link Existing Record** option, the **Search** window only displays the records that can be linked with the existing record according to the site filtering configuration of the relevant families.

  Note: In most cases, the **Search** window displays only records assigned to the same site as the record initially opened in Record Manager, and records assigned to the Global site.

- If you are a Super User, when you open an existing record in Record Manager, you can use the **Site** fields to change the site of the record.