

  
meridium

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Data Management

V3.6.0.0.0





## Meridium APM Data Management V3.6.0.0.0

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# About This Document

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This file is provided so that you can easily print a portion of the **APM Foundation** section of the Meridium APM Help system. This document is not meant to be read electronically using the PDF. If you want to read the documentation electronically, you should use one of the Help systems. This file is set up to facilitate double-sided printing and includes blank pages between sections so that each section will begin on an odd page and will be printed on the *front* of the page.

Because this file represents an excerpt from the Meridium APM Help system, parts of this document may seem incomplete outside the Help system itself. When you read the documentation via the Help system, you will see links which serve as cross-references to other areas of the documentation. These cross-references are not available in this document.

To access the Meridium APM Help system, in the Meridium APM Framework application, click the **Help** menu, and then click **Meridium APM Help**.



# Documentation Conventions

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Throughout the documentation, we use various stylistic conventions that make it easier to interpret information and instructions. The following table provides a list and description of the conventions that are used throughout the Meridium APM documentation.

Convention	Description	Example
<b>Bold</b>	Identifies labels that appear on the screen. Identifies folder paths and file names when the folder path or file name is included in step-by-step instructions.	The <b>Save As</b> dialog box appears. Click <b>Cancel</b> . In the Catalog folder <b>\\Public\Meridium\Modules\Core\Queries</b> , open the query <b>Field History Records</b> .
\\	Identifies the beginning of a folder path.	The query is located in the following Catalog folder: <b>\\Public\Meridium\Modules\Core\Queries</b> .
<b>Courier New</b>	Identifies text that you must type.	Type <b>root</b> .
<>	Indicates that the data inside the angle brackets is variable.	Click <b>Expand/Collapse &lt;Record&gt;'s Children</b> , where <Record> is the ID of the selected record.
[ ]	Indicates that the data inside the square brackets is optional.	Type the following text: <b>&lt;Catalog Path&gt;,[Query Parameters]</b> ...where: <ul style="list-style-type: none"><li>• <b>&lt;Catalog Path&gt;</b> is the Catalog path of the desired query.</li><li>• <b>[Query Prompt Value]</b> is a value that you want to supply for a prompt in the query. If you do not pass in query prompt values, you will be prompted to supply them when you run the query.</li></ul>



# Basics

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## What Is Data Management?

The Meridium APM system provides tools that allow you to store and analyze data. Before you can analyze data, you must enter it into the system. And in order to analyze data effectively, you must be able to access it easily, review it, and keep it up-to-date.

The Meridium APM system provides the following tools to help facilitate data management:

- **Searches:** Allows you to find and access records that already exist in the Meridium APM database.
- **Browser:** Lets you view a hierarchy of records that exist in the Meridium APM database and then open any record in the Record Manager.
- **Record Manager:** Allows you to view and modify records that exist in the Meridium APM database and also allows you to create new records.
- **Bulk Data Form:** Allows you to view, modify, and create multiple records in the same family. This tool is especially useful for mass data review and entry.

These tools exist to support the primary data management tasks that you will perform:

- Creating new records.
- Finding and opening existing records.
- Viewing and modifying data in existing records.
- Deleting records from the database.





# User Instructions

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## Creating Records

### Options for Creating Records

The Meridium APM Foundation Core Analysis tools provide two basic user interfaces for creating new records:

- **Record Manager:** When you create a record in the Record Manager, you can:
  - Create a new record from scratch.
  - Create a new record by copying an existing record.
- **Bulk Data Form:** To create a record in the Bulk Data Form, at least one record in the same family must already exist so that you can access the Bulk Data Form.

You can also create records using various module-specific workflows throughout the Meridium APM product. Instructions for these procedures are included in the module-specific documentation.

### Creating a New Record from Scratch

In the Record Manager, you can create a new record from scratch or you can create a new record based on an existing record. The following instructions provide details on creating a new record from scratch. Note that you cannot create a record belonging to a family for which no datasheets have been set up via the Configuration Manager.

To create a new record in the Record Manager:


1. In the Meridium APM Framework, in the Record Manager, on the Common Tasks menu, click the New link.

The **Select Family** dialog box appears.



2. In the list of families, select the family to which the new record will belong, and click **OK**.

-or-

Click the  button to browse a hierarchical view of families, select the desired family, and click **OK**.

The list will display only families for which you have been granted Insert permissions and whose **Family is Managed by Product Module** check box is *cleared* in the Configuration Manager.

The Record Manager displays the datasheet for the family you selected, and the record hierarchy displays a new branch for the new record.

3. In the **Datasheet** list, choose the datasheet that you want to use to create the new record.

**Note:** The **Datasheet** list will display multiple options only if more than one datasheet has been configured for the family that you selected.

4. Complete the fields on the datasheet as desired.
5. If you want to save the record and continue viewing it in the Record Manager, on the **Common Tasks** menu, click the **Save** link.

-or-

If you want to save the record and immediately create another new record *in the same family*, on the **Common Tasks** menu, click the **Save and New** link.

The record is saved to the database.

## Creating a New Record by Copying an Existing Record

If you want to create a new record that is similar to an existing record, you can copy the existing record and use it as a template for creating the new record. When you create a record in this way, the values in any non-ID field will be copied from the original record to the new record. Values in ID fields will not be copied to the new record. The ID fields in the new record may, however, be populated with new values, depending on the rules that are defined for them.

**Note:** ID fields are designated as such via the Configuration Manager. While ID fields cannot necessarily be distinguished from non-ID fields in the Meridium APM Framework application, you can assume that any values not copied from the original record to the new are stored in ID fields.

Note that creating a new record by copying an existing record will create the new record in the same family as the existing record. If you prefer to create a brand new, original record, or if you want to create a record in a different family, you can create a new record from scratch.

To create a new record by copying an existing record:

1. In the Meridium APM Framework, find the desired record, and open it in the Record Manager.
2. In the Record Manager, on the **Common Tasks** menu, click the **Copy** link.

A new datasheet appears, displaying the contents of the copied record.

3. Modify the record as desired.
4. If you want to save the record and continue viewing it in the Record Manager, on the **Common Tasks** menu, click the **Save** link.

-or-

If you want to save the record and immediately create another new record *in the same family*, on the **Common Tasks** menu, click the **Save and New** link.

**Note:** This will create a new record from scratch rather than another copy.

The new record is saved to the database.

## Creating a New Record in the Bulk Data Form

Depending on how you access the Bulk Data Form, in order to create a new record from within the Bulk Data Form, at least one record must have already been created for the associated family. For example, to access the Bulk Data Form via search results, you must select at least one record to open in the Bulk Data Form. If you use the Inspection Management workflow, however, you can access the Bulk Data Form regardless of whether any records for the associated family have been created.

**Note:** When you create a new record in the Bulk Data Form, Default and Disable rules are not executed when the new row is first added. Instead, these rules will fire only after you have entered data into some field.

To create a new record in the Bulk Data Form:

1. In the Meridium APM Framework, in the Bulk Data Form, click the blank cell in the last row, and select an option from the drop-down list or type the desired value in the cell.

**Note:** To add a new row in the Bulk Data Form, click a cell outside of the row in which you are currently working.

2. Continue providing information in each cell of the new row, as appropriate.
3. Click the **Save** button.

All the new records are saved to the database.

## Creating a New Record and Populating Fields Automatically

If desired, you can construct a URL that will create a new record and populate fields in that record with specific values. To do so, you will need to use the Record Manager URL:

```
meridium://Registry/RecordManager
```

You will also need to include the EntityKey parameter and set the value to 0 to indicate that you want to create a new record. In addition, you would need to include the FamilyID parameter to indicate the family to which the record should belong. For instance, suppose that you want to create a new record in the Inspection Recommendation family, where the Family ID is MI\_RECINSP. In this case, the URL would look like this:

```
meridium://Registry/RecordManager?EntityKey=0&FamilyID=MI_RECINSP
```

Finally, to indicate that you want to populate a field with a default value, you will need to include the Field ID of the field that you want to populate and the value that you want to use to populate the field. For instance, suppose that you want to populate the MI\_REC\_BASIS field with the value *Audit preparation*. To do so, the final URL would look like this:

```
meridium://Registry/RecordManager?EntityKey=0&FamilyID=MI_RECINSP&MI_REC_BASIS=Audit preparation
```

**Hint:** By placing this type of URL on the **Associated Pages** menu in the Record Manager, you can map value from the current record to a new record. You would accomplish this in the same way that you pass values from records into any URL on the **Associated Pages** menu, replacing the parameter value with the field ID of the field whose value that you want to map to the new record.

## Finding and Opening Existing Records

### Options for Finding Records

You can find and access records using two main options:

- Performing a search
- Using the Browser

## Performing Searches

Searches lets you find records in the database that meet specific criteria. After you find the desired records, you can open them in the Record Manager or the Bulk Data Form. You can perform a search from any page in the Meridium APM Framework application at any time during your session.

You can perform the following types of searches:

- A Keyword Search.

**Note:** Keyword Searches are available only if an administrative user has not hidden the functionality.

- A Simple Search.
- An Advanced Search.

After you have performed a search, you can browse the search results and open any record that was retrieved using the defined search criteria. Additionally, you can save any search to the Catalog so that it can be used again later.

## Browser

The Browser lets you view a hierarchical list of nodes representing:


- Entity families that exist in the database.
- Records that belong to each entity family.
- Records that are linked to one another.

After you have located the desired record in the Browser, you can open it in the Record Manager.

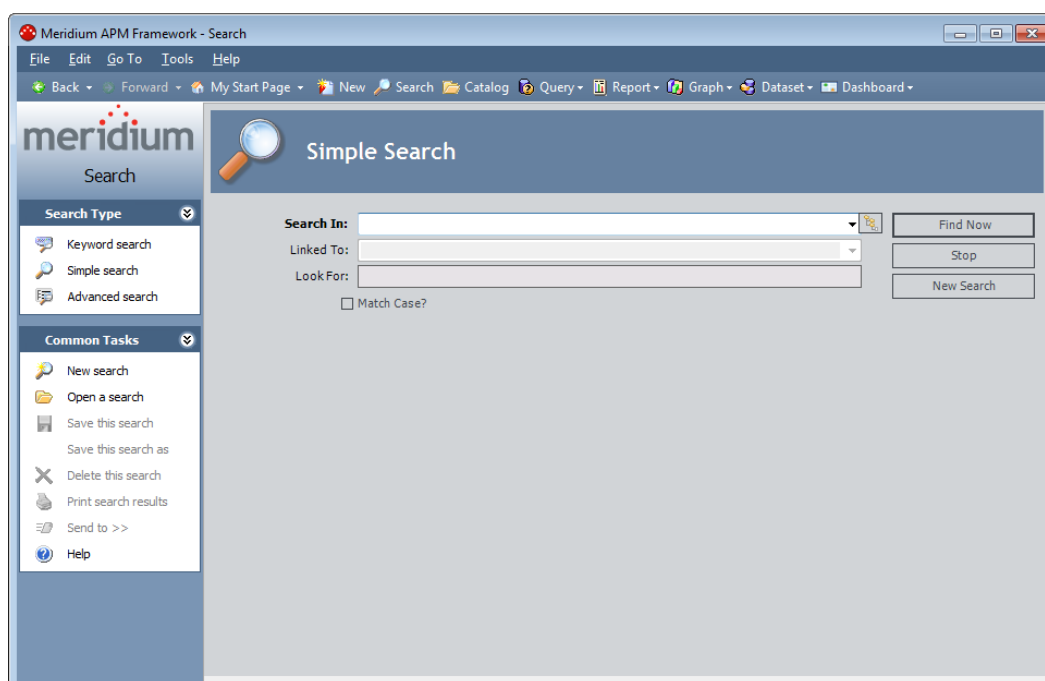
## Performing Searches

### Accessing the Search Page

To access the Search page:

- In the Meridium APM Framework, on the Meridium APM Framework toolbar, click the Search button. 

The Search page appears.



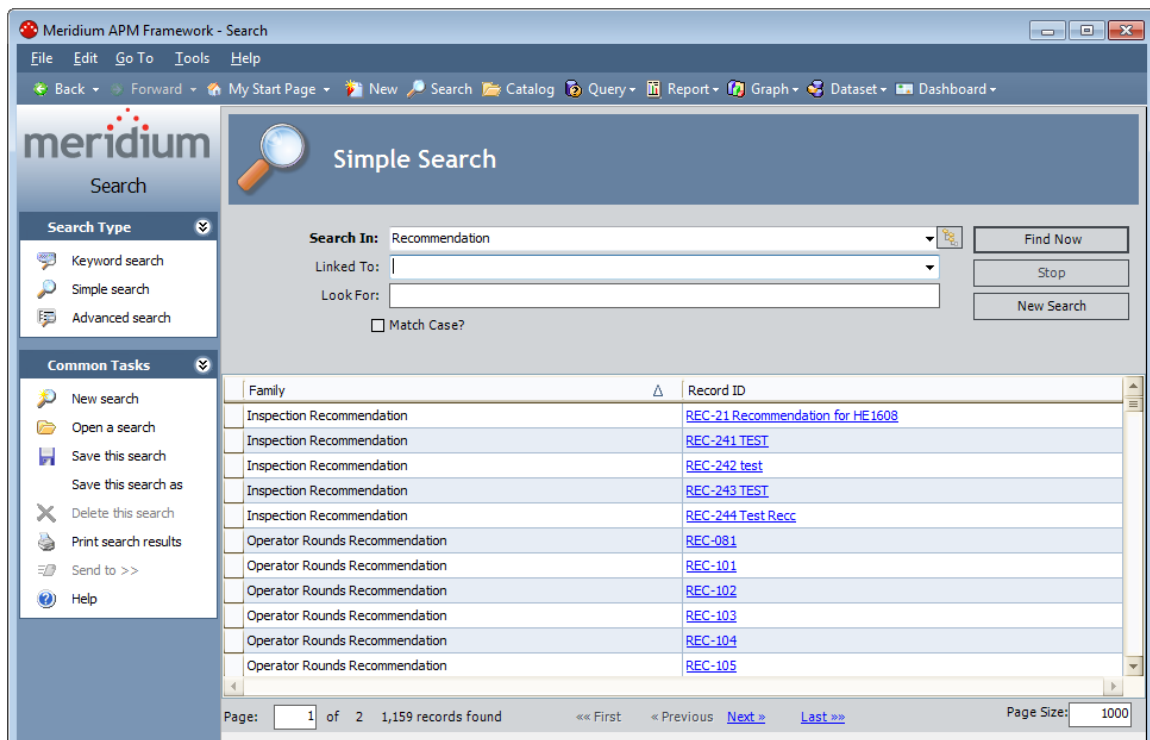
When you first access the **Search** page, the **Simple Search** workspace is displayed by default. After you have accessed the **Search** page once, when you return to it, the search type that appears (Simple, Keyword, or Advanced) corresponds to the type of search you last performed. Note that you can select a different search type by clicking the link for the desired type on the **Search Type** menu.

**Note:** The features of the **Search** page also appear on stand-alone windows in various places throughout the Meridium APM Framework application (e.g., the **Find Now** window). In most cases, the features available on these windows are the same as those available on the **Search** page.

## Aspects of the Search Page

### Overview of the Search Page

The Search page contains options that let you define search criteria, view search results, and perform tasks related to searches.



The Search page is divided into three sections.


1. **Search criteria section:** Lets you define the terms of your search. Depending on the search type you are using, the options that are available in this section will change.
2. **Search results section:** After you have performed a search, displays the records in the database that match the criteria you defined in the search criteria section.
3. **Task Menus section:** Displays two menus, **Search Type** and **Common Tasks**, that provide options that you can use to perform various tasks related to searches.



## Search Criteria Section

The options that are available in the search criteria section of the Search page will change, depending on the search type you are using. The following table lists and describes all of the items that are available in the search criteria section and indicates the search types for which they are available.

Item	Description	Available for Keyword Search?	Available for Simple Search?	Available for Advanced Search?
<b>Find Now</b> button	Initiates the search using the criteria that you have defined.	Yes	Yes	Yes
<b>Stop</b> button	After displaying a message indicating that the search has been cancelled, displays an empty search results section.	Yes	Yes	Yes
<b>New Search</b> button	Clears all values currently displayed in the search criteria section so that you can begin a new search.	Yes	Yes	Yes
<b>Look For</b> text box	Accepts any alphanumeric value, including special characters. The value that you type will be used to limit the results to records containing that word within the Record ID. If you specify a keyword, your results will contain records that match your family criteria and contain the keyword that you specified.	Yes	Yes	No *In an Advanced Search, to limit results to records containing specific text within their record IDs, use the <b>Define Conditions</b> section and the <b>Search Conditions</b> section.

Item	Description	Available for Keyword Search?	Available for Simple Search?	Available for Advanced Search?
Search In list	Contains a list of families that exist in the database. The search results will contain only families that belong to the family you select in the Search In list. The list will display only families to which you have been granted at least View privileges.	No	Yes	Yes
Hierarchy button 	Displays a displays a hierarchical view of the families in the database.	No	Yes	Yes

Item	Description	Available for Keyword Search?	Available for Simple Search?	Available for Advanced Search?
<b>Linked To list</b>	<p>Contains a list of families that are related to the family you selected in the <b>Search In</b> list. If you select a family in the <b>Linked To</b> list, the search results will contain only records that belong to the family you selected in the <b>Search In</b> list that are linked to another record that belongs to the family you select in the <b>Linked To</b> list.</p> <p>The <b>Linked To</b> list contains only families to which you have been granted View privileges in the Configuration Manager. In addition, it will display a family only if you have been granted View at least privileges to the relationship family that relates that family to the family in the <b>Search In</b> list.</p> <p>For example, if you select <b>Pump</b> in the <b>Search In</b> list, and the Pump family is related to the Failure family through the Asset Has Failure relationship, the <b>Linked To</b> list will display the Failure family only if you have View privileges to the Failure family and the Asset Has Failure relationship family.</p>	No	Yes	Yes

Item	Description	Available for Keyword Search?	Available for Simple Search?	Available for Advanced Search?
Through List	<p>Specifies the relationship family that relates the families displayed in the <b>Search In</b> list and the <b>Linked To</b> list. The search results will contain only records that are related through the relationship family displayed in the <b>Through</b> list.</p> <p>If only one relationship exists between the two families, it appears in the <b>Through</b> list as a read-only description. If more than one relationship exists between the two families, you can select it in the <b>Through</b> list.</p>	No	No	Yes
Match Case check box	<p>Indicates that you want to return only the records that contain the keyword you specified using the exact case that you specified in the <b>Look For</b> text box.</p> <p>*The <b>Match Case?</b> option works only on Oracle schemas. When you perform a search using a SQL Server database, the search will be case-insensitive even when the <b>Match Case?</b> check box is selected.</p>	Yes	Yes	Yes

Item	Description	Available for Keyword Search?	Available for Simple Search?	Available for Advanced Search?
<b>Include Configured Search Fields</b> check box	Indicates that you want the search results to be filtered based on the values that you select in the prompts that appear below this check box.	No	Yes	No
Configured search query prompts	Let you filter the search results based upon the values in the prompts. These prompts appear only in Simple Searches for which a Simple Search query has been defined.	No	Yes	No
<b>Define Conditions</b> section	Contains various options that allow you to define field conditions that will limit the search results. If you define field conditions, the search results will contain only records whose field values match the criteria you define.	No	No	Yes
<b>Search Conditions</b> section	Displays a list of the field conditions you have added to the search criteria. You can remove conditions from the list if desired.	No	No	Yes

Item	Description	Available for Keyword Search?	Available for Simple Search?	Available for Advanced Search?
Match section	Contains options that let you specify if you want the search results to contain records that match ALL conditions or records that match ANY of the conditions displayed in the Search Conditions section.	No	No	Yes

### Search Results Section

#### Overview of the Search Results Section

After you perform a search, the search results will appear in the search results section. The following image shows an example of the search results section after a Simple Search has been performed to search for all records in the Equipment family.

Family	Record ID
Equipment	<a href="#">A0006-117 ~ 000000000001071114 ~ MIXER - TANK 790 ~ Mixer ~ ROT MIX MIX</a>
Equipment	<a href="#">A0005-118 ~ 000000000001072295 ~ MIXER - SECONDARY WASTE WATER TREATMENT ~ Mixer ~ ROT MIX</a>
Equipment	<a href="#">A0005-117 ~ 000000000001071113 ~ MIXER - TANK 783 ~ Mixer ~ ROT MIX MIX</a>
Equipment	<a href="#">A0005-104 ~ 000000000001060796 ~ CONVEYOR - TO TOP OF F-2 ~ Conveyor ~ MAT MOV CON</a>
Equipment	<a href="#">A0004-117 ~ 000000000001071112 ~ MIXER - TANK 781 ~ Mixer ~ ROT MIX MIX</a>
Equipment	<a href="#">A0004-104 ~ 000000000001060795 ~ CONVEYOR - SCREW CONVEYOR - OFFSITES ~ Conveyor ~ MAT MOV</a>
Equipment	<a href="#">A0004-017 ~ 000000000001008997 ~ MIXER - TANK 873 ~ Mixer ~ ROT MIX MIX</a>
Equipment	<a href="#">A0003-117 ~ 000000000001071111 ~ MIXER - TANK 358 ~ Mixer ~ ROT MIX MIX</a>
Equipment	<a href="#">A0003-104 ~ 000000000001060794 ~ CONVEYOR - BELT CONVEYOR - OFFSITE ~ Conveyor ~ MAT MOV CON</a>
Equipment	<a href="#">A0003-017 ~ 000000000001008996 ~ MIXER - TANK 21 ~ Mixer ~ ROT MIX MIX</a>
Equipment	<a href="#">A0002-117 ~ 000000000001071110 ~ MIXER - TANK 709 ~ Mixer ~ ROT MIX MIX</a>
Equipment	<a href="#">A0002-104 ~ 000000000001060793 ~ CONVEYOR - BELT CONVEYOR - OFFSITE ~ Conveyor ~ MAT MOV CON</a>
Equipment	<a href="#">A0002-017 ~ 000000000001008995 ~ MIXER - TANK 825 ~ Mixer ~ ROT MIX MIX</a>
Equipment	<a href="#">A0001B-074 ~ 000000000001041618 ~ MIXER - ALKY ~ Mixer ~ ROT MIX MIX</a>
Equipment	<a href="#">A0001A-074 ~ 000000000001041617 ~ MIXER - ALKY ~ Mixer ~ ROT MIX MIX</a>
Equipment	<a href="#">A0001-117 ~ 000000000001071109 ~ MIXER - TANK 717 ~ Mixer ~ ROT MIX MIX</a>
Equipment	<a href="#">A0001-104 ~ 000000000001060792 ~ CONVEYOR - BELT CONVEYOR - HRU OFFSITE ~ Conveyor ~ MAT MOV</a>
Equipment	<a href="#">A0001-017 ~ 000000000001008994 ~ MIXER - TANK 824 ~ Mixer ~ ROT MIX MIX</a>
Equipment	<a href="#">1RL0019-093 ~ 000000000001052539 ~ WATER INJECTION 2104E0013B ~ Miscellaneous Instrument ~ INS</a>

**Note:** If your search criteria include a related family or field conditions, additional columns will be displayed in the search results.

Each row of the search results represents one record. All records listed in this image belong to the Equipment family, as indicated by the family name in the left column of the search results. The Record ID of each record is displayed in the right column of the search results. For example, the Record ID of the first record in the results is *A0006-117 ~ 000000000001071114 ~ MIXER - TANK 790 ~ Mixer ~ ROT MIX MIX*. You can open the associated record in either Record Manager or the Bulk Data Form.

Note that the search results will display results for any sub families that are linked to a parent family. For example, if you search in the parent Recommendation family, the search results would display records for all the Recommendation families, including Meridium General Recommendation, RBI Recommendation, and so on.

With the exception of the Keyword Search, the search results will display records only from *active* families. In other words, if a family is *inactive*, records in that family will *not* be returned in search results.

At the bottom of the search results section, the following information and options are displayed:

- **Page X of X:** Indicates the total number of pages in your search results and identifies the page that is currently displayed. You can type a different number in the **Page** text box and then press Enter to navigate directly to another page. This text box is enabled only if the text **X records found** is displayed (i.e., if the **Display record count** link appears, you cannot type a value in the **Page X of X** text box).

**Note:** If you are viewing search results on a stand-alone window, you will need to press the Tab key instead of the Enter key to navigate to another page in the search results.

- **X records found:** Indicates the total number of records found using the specified search criteria. If the number of records found is *greater than* the number in the **Page Size** text box, the **Display record count** link will appear instead of the actual number of records found. You can click the **Display record count** link to view the total number of returned records.
- **First:** Displays the first page of the search results. This link is enabled when there is more than one page of search results and when you are currently viewing any page other than the first page.

- **Previous:** Displays the previous page of the search results. This link is enabled when there is more than one page of search results and when you are currently viewing any page other than the first page.
- **Next:** Displays the next page of the search results. This link is enabled when there is more than one page of search results and when you are currently viewing any page other than the last page.
- **Last:** Displays the last page of the search results. This link is enabled when there is more than one page of search results and when you are currently viewing any page other than the last page.
- **Page Size:** Indicates the number of records displayed per page. The page size is set to *1000* by default, but you can type a different number and press the Tab key to change the number of records that are displayed on each page.

### When Search Results Include Records From Two Related Families

Using a Simple Search or an Advanced Search, if you select two related families in the search criteria section, then two **Family** columns and two **Record ID** columns will be included in the search results. This means that each row of the search results will represent TWO different records.

The **Record ID** column contains links to records belonging to the family that you selected in the **Search In** list. The **Linked Record ID** column contains links to records belonging to the family that you selected in the **Linked To** list. You can also determine the family of each record in the results by looking in the column to the *left* of each hyperlinked Record ID. Consider the following image.

Family	Record ID	Linked Family	Linked Record ID
▶ Air Cooled Heat Exchanger	<a href="#">HX-2029A VAC HVY GAS OIL PUMP</a>	Reference Document	<a href="#">Glossary</a>

In this image, you can see that the **Record ID** column contains a link to a record in the Air Cooled Heat Exchanger family. The **Linked Record ID** column contains a link to a record in the Reference Document family.

### When Search Results Include Field Conditions

If you specify field conditions using an Advanced Search, an additional column will be displayed in the search results for *each* field condition. For example, if you search for records in the Air Cooled Heat Exchanger that are linked to a record in the Reference Document family where the value in the Asset ID field



of the Air Cooled Heat Exchanger record is **HX-2029A**, the search results will look like those in the following image.

Family	Record ID	[Asset ID]	Linked Family
▶ Air Cooled Heat Exchanger	<a href="#">HX-2029A VAC HVY GAS OIL PUMP</a>	HX-2029A	Reference Document

You can see that an additional **Asset ID** column is displayed in the results, showing the field condition that you defined for the Asset ID field. An additional column will be displayed in the results for every field condition that you include in your search criteria.

**Note:** If you specify a field condition using either the **Is null** or **Is not null** operator, an additional column will not appear in the search results.

## Using the Shortcut Menu in the Search Results

If you right-click a Record ID in the search results section, a shortcut menu will appear. The shortcut menu contains the following options:

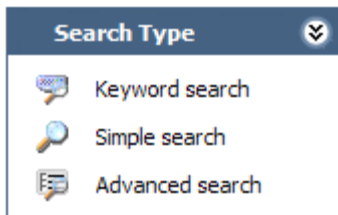
- **Open in Record Manager:** Opens the selected record(s) in the Record Manager.
- **Open in Bulk Data Form:** Opens the selected record(s) in the Bulk Data Form. This link appears only if you selected a single record or multiple records within the same family.

The shortcut menu will also contain all links for the **Associated Pages** menu that have been configured via the URL Manager for the family of the selected record(s).

## Task Menus

### Search Type Menu

The **Search Type** menu gives you access to the different types of searches. When you click a link in the **Search Type** menu, the **Search** page workspace changes to display options that are related to that search type.



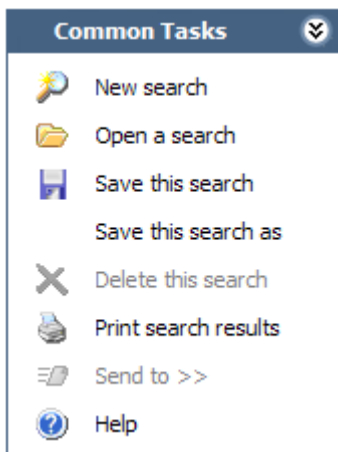
The Search Type menu contains the following links:

- **Keyword search:** Displays the **Keyword Search** workspace, where you can perform a Keyword Search.

**Note:** The **Keyword search** link is available only if an administrative user has not hidden the functionality.

- **Simple search:** Displays the **Simple Search** workspace, where you can perform a Simple Search.
- **Advanced search:** Displays the **Advanced Search** workspace, where you can perform an Advanced Search.

### Common Tasks Menu



The Common Tasks menu on the Search page contains the following links:

- **New search:** Clears the current search criteria and results so that you can begin a new search.
- **Open a search:** Displays the **Open a saved search** dialog box, where you can open a search that exists in the Catalog.

- **Save this search:** Displays the **Save this search** dialog box, where you can save the current search. If you are viewing a search that was previously saved and has been modified, clicking this link will save your changes to the existing search. This link is enabled only if results are displayed in the search results section.
- **Save this search as:** Displays the **Save this search** dialog box, where you can save an existing search with a different name or to a different location. This link is enabled only when you are viewing a saved search.
- **Delete this search:** Displays a confirmation message, asking if you really want to delete the search. This link is enabled only when you are viewing a saved search.
- **Print search results:** Displays the search results in the **Preview** window, from which you can print the search results.
- **Send to:** Displays a submenu with options that let you provide a link to the current page on your desktop (create shortcut), in an email message, or on a Home Page. This link is enabled only when you are viewing a saved search.
- **Help:** Displays the context-sensitive Help topic for the **Search** page.

## Searching for Records

### Search Types

You can perform the following types of searches:

- **Keyword Search:** Lets you specify a keyword and then find all the records in the Meridium APM database that contain that keyword within their record IDs.
- **Simple Search:** Lets you search for records within a selected entity family. You can optionally refine your search by specifying a related family or by specifying a keyword to find within the record IDs of all records.
- **Advanced Search:** Lets you search for records within a selected family. You can optionally refine your search by specifying a related family or by defining field conditions.

## Keyword Searches

### Performing a Keyword Search

**Note:** Keyword Searches are available only if an administrative user has not hidden the functionality.

Using a Keyword Search, you can specify a keyword and search for it within the Record ID of any record in the Meridium APM database. The search results will contain records that contain the keyword you specified, as long as that word appears at the *beginning* of any separate word in the Record ID.

For example, if you search for the keyword *pump*, the search results will contain records where the Record ID is *pump*, *centrifugal pump*, *pump-101*, and so on. It will not, however, return records where the Record ID is *101-pump* since *pump* is the last word instead of the first word of the phrase *101-pump*.

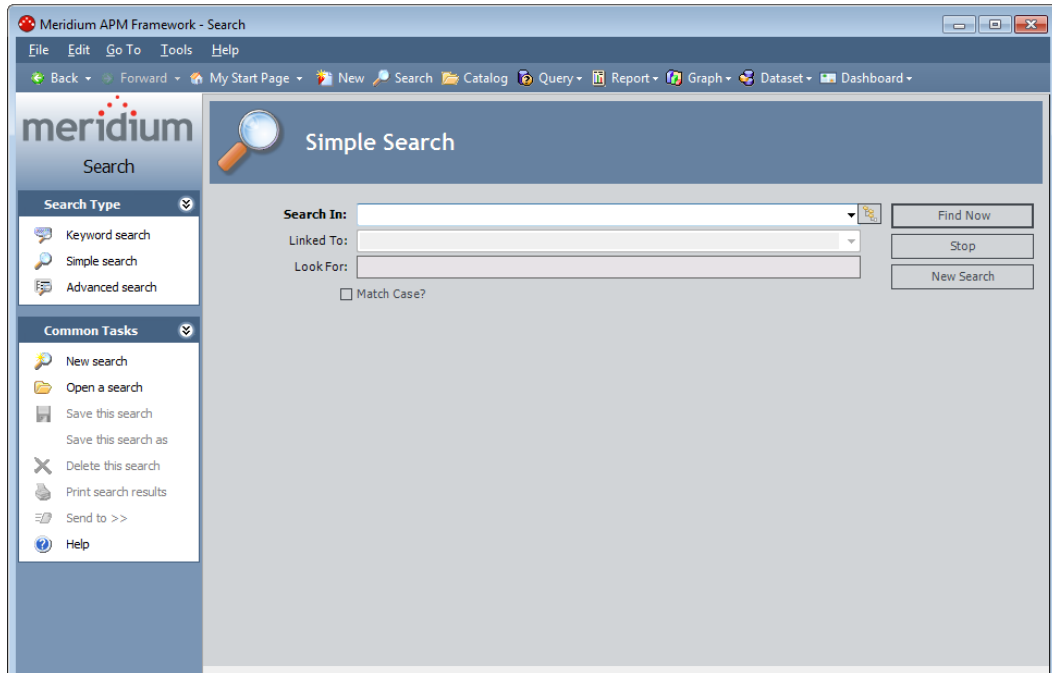
To perform a Keyword Search, the keyword that you specify must include at least two characters. Otherwise, the **Find Now** button will remain disabled.

**Note:** Keyword Search results will include records in *Active* families only. Records belonging to *Inactive* families that contain the specified keywords will not be included in the results. You can find records in *Inactive* families using a query.

To perform a Keyword Search:

1. In the Meridium APM Framework, on the Meridium APM Framework toolbar, click the **Search** button.

The **Search** page appears.



2. If the **Keyword Search** workspace appears on the **Search** page, proceed to step 3 of these instructions. If the **Keyword Search** workspace does not appear, on the **Search Type** menu, click the **Keyword search** link.

The **Keyword Search** workspace appears.



3. In the **Look For** text box, type the keyword that you want to find in a Record ID. The keyword must contain at least two characters. It can contain any alphanumeric value and any special character.

**Note:** The search will be case-insensitive.

5. Click the **Find Now** button.

The results appear in the search results section of the **Search** page. From the results, you can open a record in either the Record Manager or the Bulk Data Form. You can also save the search to the Catalog for future use.

**Note:** If no records match your criteria, a message appears indicating that no records were found. In addition, if the specified keyword could cause a performance problem because it is trying to return too many records, a message appears, indicating that you should narrow your search by specifying a more specific keyword (or group of words).

## Hiding the Keyword Search Functionality

### About Hiding the Keyword Search Functionality

In some cases, Keyword Searches can run slowly, making it difficult for users of the same database to accomplish their tasks efficiently. In other cases, depending upon the search criteria, Keyword Searches will fail to complete.

If you experience performance issues when running Keyword Searches, an administrative user can hide the Keyword Search functionality for all users of the same database.

After the Keyword Search functionality is hidden, searches will work in the following way:

- On the **Search** page, the **Keyword Search** link will be unavailable on the **Search Type** menu.
- If you attempt to open a previously saved Keyword Search (e.g., from the Catalog or by using a URL), the **Simple Search** workspace will appear instead, and the **Look For** text box will be populated automatically with the Keyword Search criteria.

### Hiding the Keyword Search Functionality

#### To hide the Keyword Search functionality:

- In the Configuration Manager, on the **Tools** menu, point to **Global Preferences**, and then click **Hide Keyword Search**.

The Keyword Search functionality is hidden.

## Simple Searches

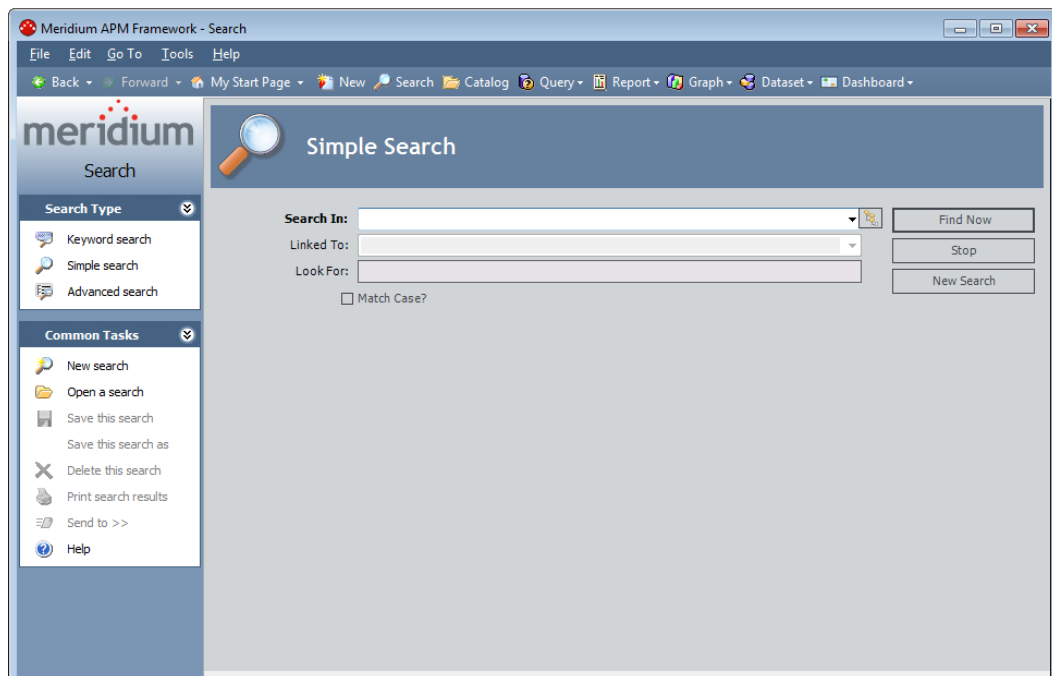
### Performing a Simple Search

A Simple Search lets you search for records that belong to a particular family. When you perform a Simple Search, all the records that exist in the database and belong to the selected family are returned. You can optionally refine your search results by selecting a related family or by specifying a keyword to find within the record IDs of all records.

#### To perform a Simple Search:

1. In the Meridium APM Framework, on the Meridium APM Framework toolbar, click the **Search** button.

The Search page appears.



2. If the **Simple Search** workspace appears on the **Search** page, proceed to step 3 of these instructions. If the **Simple Search** workspace does not appear, on the **Search Type** menu, click the **Simple search** link.

The **Simple Search** workspace appears.

3. In the **Search In** list, select the desired family. Your search results will include only the records that belong to this family. The list will display only families to which you have been granted View permissions in the Configuration Manager. This field is required.

After you select a family in the **Search In** list:

1.
  - If the family is related to one or more families, the **Linked To** list will become enabled. If the selected family is not related to any other families, the **Linked To** list will remain disabled, and you can proceed to step 5.
  - The **Look For** text box becomes enabled.
  - If you selected a family for which a simple search query has been defined via the Configuration Manager, additional search criteria appear in the search criteria section, as shown in the following image.

The screenshot shows a search interface with the following elements:

- Search In:** A dropdown menu with "Equipment" selected.
- Linked To:** A disabled dropdown menu.
- Look For:** An enabled text input field.
- Match Case?
- Include Search Fields (with an expand/collapse icon)
- Category:** A dropdown menu with "ALL" selected.
- Class:** A dropdown menu with "ALL" selected.
- Type:** A dropdown menu with "ALL" selected.
- Buttons: "Find Now", "Stop", and "New Search".

4. In the **Linked To** list, if desired, select a family that is related to the family you selected in the **Search In** list. If you select a family in the **Linked To** list, the search will return only the records that belong to the family in the **Search In** list that are also linked to a record belonging to a family in the **Linked To** list.

The **Linked To** list contains only the families that are related to the family selected in the **Search In** list. It also contains only the families to which you have been granted View permissions in the Configuration Manager. In addition, the list will display a family only if you have been granted View permissions to the relationship family that relates that family to the family in the **Search In** list.



For example, if you selected **Pump** in the **Search In** list, and the Pump family is related to the Failure family through the Asset Has Failure relationship, the **Linked To** list will display **Failure** only if you have View permissions to the Failure family and the Asset Has Failure relationship family.

5. In the **Look For** field, type a keyword to limit your results to records containing that word within the Record ID. If you specify a keyword, your results will contain records that match your family criteria and contain the keyword that you specified. A keyword can contain any number of characters, any alphanumeric value, and any special character. A keyword is optional.
6. If you want the search to be case-sensitive, select the **Match Case?** check box. Selecting the check box indicates that you want to return only the records that contain the keyword you specified using the exact case that you specified in the **Look For** text box.

-or-

If you do not want the search to be case-sensitive, do not select the **Match Case?** check box.

**Note:** The **Match Case?** option works only on Oracle schemas. When you perform a search using a SQL Server database, the search will be case-insensitive even when the **Match Case?** check box is selected.

7. If additional search criteria appear below the **Match Case?** check box:
    - If you want to refine the search results further to include only records with specific values in those fields, select the desired values in the available prompts.
- or-
- If you do not want to refine the search results further to include only records with specific values in those fields, clear the **Include Search Fields** check box.

**Note:** If the underlying query prompts have been configured to contain the value *All* by default, if you do not want to refine the search results further, you can accept the default prompt values *without* clearing the **Include Search Fields** check box.

8. Click the **Find Now** button.

The results appear in the search results section of the **Search** page. If you included a **Linked To** family in your search criteria, the search results will display two hyperlinked record IDs in each row. From the results, you can open a record in either the Record Manager or the Bulk Data Form. You can also save the search to the Catalog for future use.

**Note:** If no records match your criteria, a message appears indicating that no records were found.

### Example of a Simple Search that Includes Query Prompts

If a Simple Search query has been defined for a family via the Configuration Manager, when you perform a Simple Search on that family, any prompts that are defined in the underlying query will appear in the search criteria section. You will be able to select or type a value in those prompts to further limit the search results.

For example, consider the baseline Equipment family, for which a Simple Search query has been defined in the baseline database. The query includes prompts on the following fields in Equipment records:

- Taxonomy Category
- Taxonomy Class
- Taxonomy Type

As a result of the query configuration, when you perform a Simple Search on the Equipment family, the prompts that are shaded in orange in the following image appear in the search criteria section (the shading has been added to the image for clarity and is not available in the product).

When searching for Equipment records, you can select a value in the **Category**, **Class**, and **Type** prompts to further limit the search results to include only Equipment records with those values in the Taxonomy Category, Taxonomy Class, and Taxonomy Type fields.

## Simple Search Queries

### Baseline Simple Search Queries

In the baseline database, a Simple Search query is defined for the following families:

- Equipment
- Functional Location

The Simple Search query for the Equipment family is *Equipment Taxonomy Query*, which is stored in the Catalog folder \\Public\Meridium\Modules\Core\Queries. In the baseline database, this query is associated with the Equipment family via the Configuration Manager.

The Simple Search query for the Functional Location family is *Functional Location Taxonomy Query*, which is stored in the Catalog folder \\Public\Meridium\Modules\Core\Queries. In the baseline database, this query is not associated with the Functional Location family via the Configuration Manager. It is meant to be used by customers who do not link their Functional Location records to Equipment records.

Both queries contain prompts that allow you to filter the search results to include only records that contain a specific value in the following fields:

- Taxonomy Category
- Taxonomy Class
- Taxonomy Type

### Guidelines for Creating Simple Search Queries

If you want to create your own Simple Search query, it must meet the following minimum criteria:

- It must include the Entity Key field of the family for which the query is defined.
- It must contain the fields containing values by which you want Simple Search users to be able to limit the search results. These fields must meet the following minimum criteria:
  - They must be *excluded* from the query select statement.
  - They must contain prompts so that Simple Search users can select the desired values. The prompts must:
    - Have prompt IDs if you wan users to be able to save their Simple Searches with certain values in the prompts.
    - Have default values defined for them. If a user accesses the **Simple Search** workspace page, selects a family for which a Simple Search query has been defined, and initiates a search before the search criteria area is fully displayed, the default prompt values will be used in place of the values shown by default in the prompt lists.

### Associating Families with Simple Search Queries

#### About Associating Families with Simple Search Queries

If you associate a family with a Simple Search query via the Configuration Manager, when a Meridium APM Framework user performs a Simple Search on

that family, any prompts that are defined in the underlying query will appear in the search criteria section. That user will be able to select or type a value in those prompts to further limit the search results.

For example, consider the baseline Equipment family, for which a Simple Search query has been defined in the baseline database. The query includes prompts on the following fields in Equipment records:

- Taxonomy Category
- Taxonomy Class
- Taxonomy Type

As a result of the query configuration, when a user performs a Simple Search on the Equipment family, the prompts that are shaded in orange in the following image appear in the search criteria section (the shading has been added to the image for clarity and is not available in the product).

The screenshot shows a 'Simple Search' interface. At the top left is a magnifying glass icon. The title 'Simple Search' is in the top right of the header. Below the header, there is a search form. The 'Search In:' dropdown menu is set to 'Equipment'. To the right of this dropdown are three buttons: 'Find Now', 'Stop', and 'New Search'. Below 'Search In:' are two more dropdown menus: 'Linked To:' and 'Look For:'. There is a checkbox labeled 'Match Case?' which is currently unchecked. Below this is a section titled 'Include Search Fields' with a checked checkbox and a close button. This section contains three prompts, each with a dropdown menu: 'Category: ALL', 'Class: ALL', and 'Type: ALL'. These three prompts are highlighted with an orange background.

When searching for Equipment records, the user can select a value in the **Category**, **Class**, and **Type** prompts to further limit the search results to include only Equipment records with those values in the Taxonomy Category, Taxonomy Class, and Taxonomy Type fields.

In order to associate a family with a Simple Search query via the Configuration Manager, the following conditions must be met:

- The query must already exist in the Catalog in the Meridium APM Framework application.

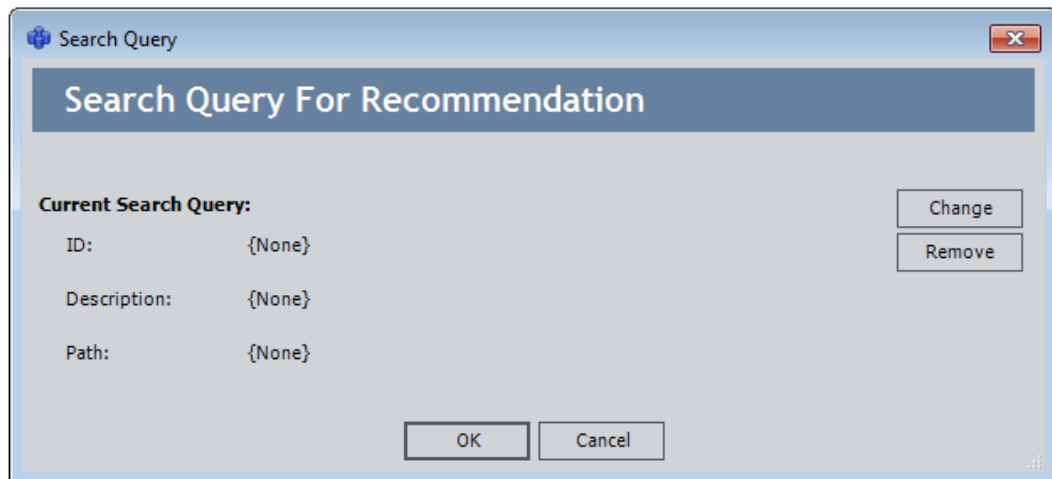
- The query select statement must *include* only the Entity Key. The query can *contain* other fields, but they must be *excluded* from the select statement.

### Associating a Family with a Simple Search Query

To associate a family with a Simple Search query:

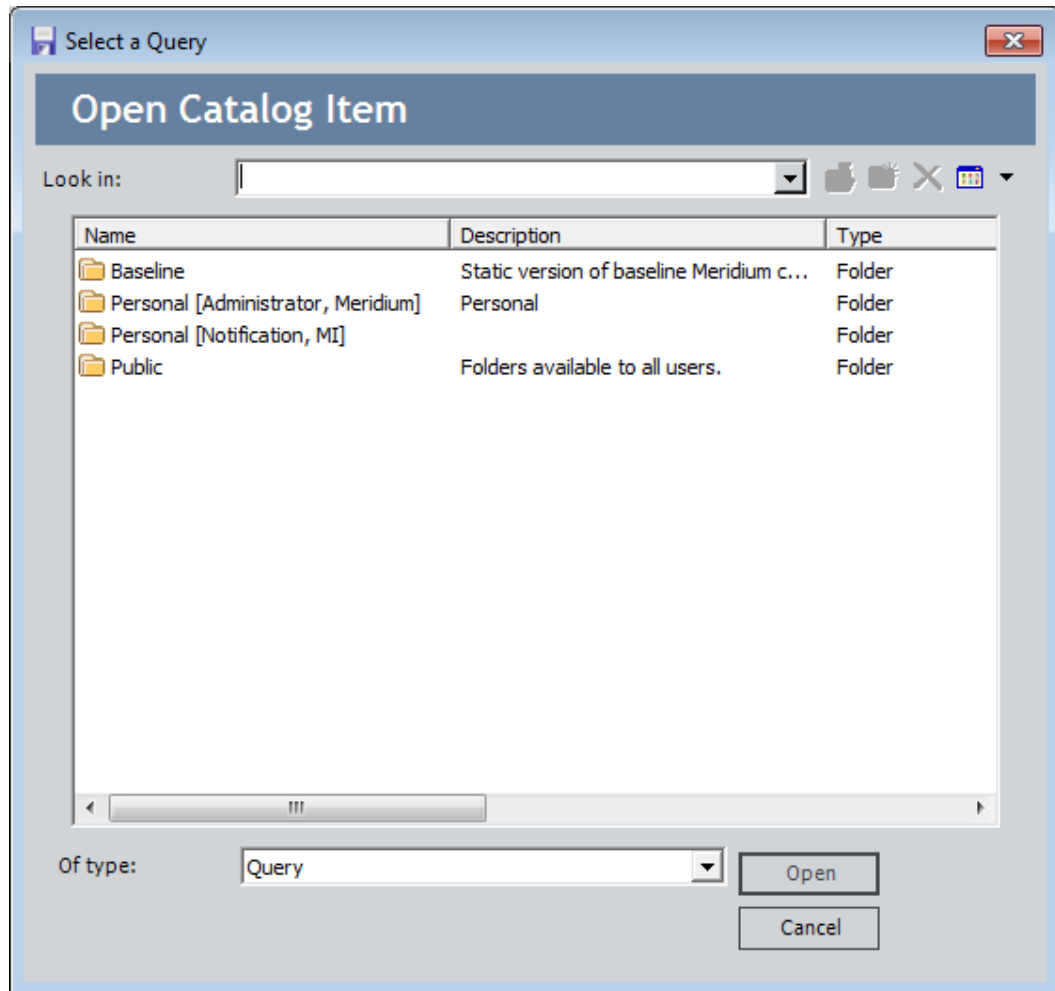
1. In the Configuration Manager, on the **Entity Family** tab, select the family with which you want to associate the Simple Search query.
2. In the Tasks section, click the **Associate Search Query** link.

The Search Query dialog box appears.



3. Click the **Change** button.

The Select a Query dialog box appears.



4. Navigate to the Catalog folder in which the query is stored, select the query, and click the **Open** button.

The **Search Query** dialog box appears again, and the ID, Description, and Path fields are populated.

**Note:** The ID is the name of the query in the Catalog. The Description may or may not be populated, depending on whether a description was saved with the query.

5. Click **OK**.

The **Search Query** dialog box closes.

6. At the bottom of the **Physical Storage** section, click the **Save** link.

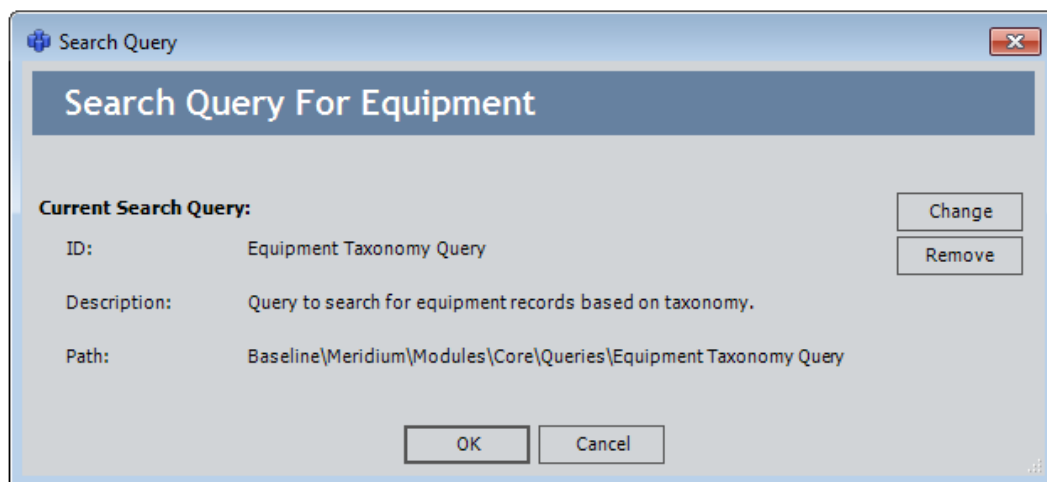
A message appears, indicating that the family was updated successfully.

### Removing the Association Between a Simple Search Query and a Family

To remove the association between a Simple Search query and a family:

1. In the Configuration Manager, on the **Entity Family** tab, select the family you want to disassociate with the Simple Search query.
2. In the Tasks section, click the **Associate Search Query** link.

The Search Query window appears.



3. Click the **Remove** button.

The **ID**, **Description**, and **Path** values change to **{None}**.

4. Click **OK**.

The Search Query window closes.

5. At the bottom of the **Physical Storage** section, click the **Save** link.

A message appears, indicating that the family was updated successfully.



## Advanced Searches

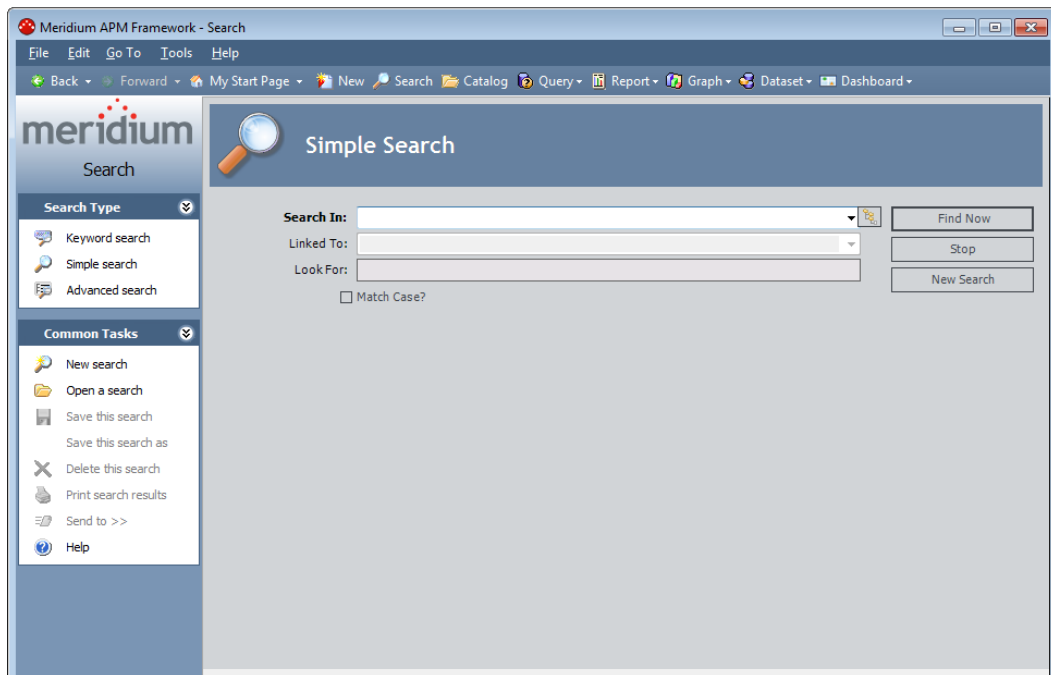
### Performing an Advanced Search

Using an Advanced Search, you can search for records within a selected family and optionally refine your search results by specifying a related family and one or more field conditions. If you specify field conditions, the search results will contain only records whose field values meet the field criteria you define. For example, you might want to search for records where the Asset Installation Date is between January 1, 2005 and December 31, 2005. Or, you might want to search for records where the status is *Active*.

To perform an Advanced search:

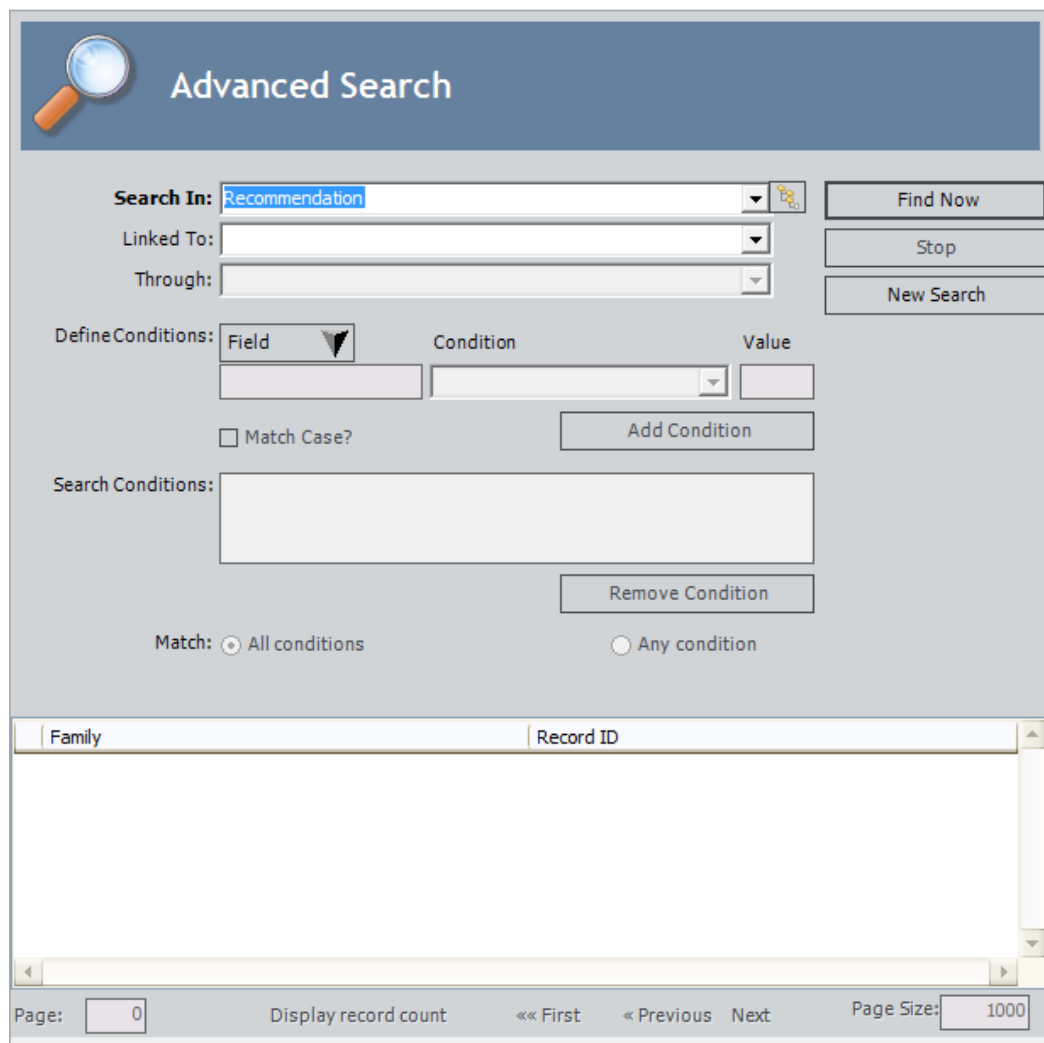
1. In the Meridium APM Framework, on the Meridium APM Framework toolbar, click the Search button

The Search page appears.



2. If the **Advanced Search** workspace appears on the Search page, proceed to step 3 of these instructions. If the **Advanced Search** workspace does not appear, on the **Search Type** menu, click the **Advanced search** link.

The **Advanced Search** workspace appears.



3. In the **Search In** list, select the family of the records you want to search for. This field is required.

After you select a family in the **Search In** list:

- If the family that you selected is related to one or more families, the **Linked To** list will become enabled.

-or-

- If the family that you selected is not related to any other families, the **Linked To** list will remain disabled, and you can proceed to step 6.

4. In the **Linked To** list, if desired, select a family that is related to the family you selected in the **Search In** list. If you select a family in the **Linked To** list, the search will return *only* the records that belong to the family in the **Search In** list that are also linked to a record belonging to a family in the **Linked To** list. You will also be able to define field conditions on the family you select in the **Linked To** list. This list contains only the families that are related to the family selected in the **Search In** list.

If only one relationship exists between the selected families, the **Through** list will be populated automatically with that relationship, and you can proceed to step 6. If more than one relationship exists between the selected families, the **Through** list will become enabled.

Note that the **Linked To** list will display only families to which you have been granted View permissions in the Configuration Manager. In addition, the list will display a family only if you have been granted View permissions to the relationship family that relates that family to the family selected in the **Search In** list.

For example, if you selected **Pump** in the **Search In** list, and the Pump family is related to the Failure family through the Asset Has Failure relationship, the **Linked To** list will display **Failure** only if you have View permissions to the Failure family and the Asset Has Failure relationship family.

5. In the **Through** list, select the relationship between the families that appear in the **Search In** list and the **Linked To** list. The search results will contain only records that are linked using the specified relationship.
6. If desired, define field conditions.
7. Click the **Find Now** button.

The results appear in the search results section of the **Search** page. If you selected a family in the **Linked To** list, the search results will display two hyperlinked record IDs in each row. If you included one or more field conditions in your search, additional columns will appear to represent each condition that you specified. From the results, you can open a record in either the Record Manager or the Bulk Data Form. You can also save the search to the Catalog for future use.

**Note:** If no records match your criteria, a message appears indicating that no records were found.

## Defining Field Conditions

When you are conducting an Advanced Search, you can define field conditions that will limit your results. A field condition is criteria that you specify on a field to limit the search results to only records where the field value matches that criteria. For example, if the Status field in your Equipment records contains either the value *Active* or *Inactive*, you could define a field condition in your search criteria to indicate that you want to see only the records where the status is *Active*.

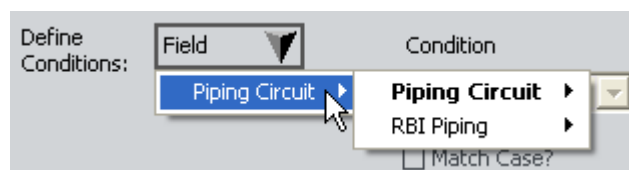
To define field conditions for an Advanced Search:

1. In the Meridium APM Framework, using an Advanced Search, specify the desired search criteria in the **Search In**, **Linked To**, and **Through** text boxes.
2. In the **Define Conditions** section of the Advanced Search workspace, click the **Field** button.

A submenu appears, displaying the names of the selected families. If you selected a family in only the **Search In** list, only one family name will appear. If you selected a family in both the **Search In** list and the **Linked To** list, two family names will appear.

3. Point to the family that contains the field whose values you want to use for limiting the search results.

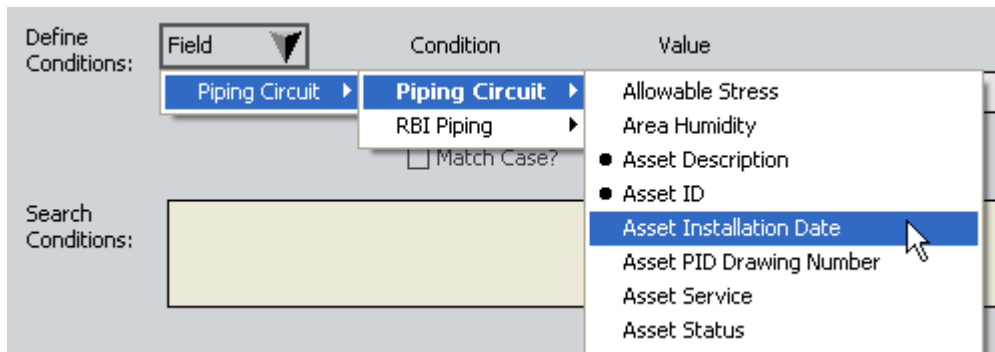
A submenu appears, displaying the names of the datasheets that exist for the selected family.



4. Point to the datasheet that contains the field for which you want to specify a condition.

A submenu appears, displaying the name of every field that exists on the selected datasheet, with the exception of custom forms and datasheets that do not contain any fields. For custom forms and datasheets without fields, the submenu displays *all* the fields that exist for the family. The

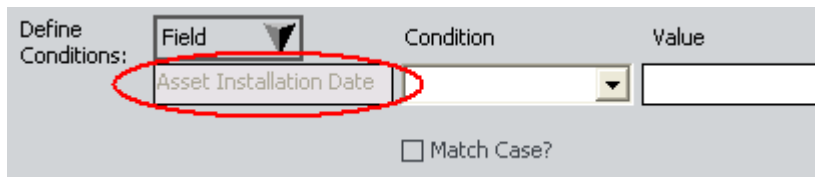
following image shows an example of what the submenu looks like when you point to a standard datasheet.



**Note:** Bullets identify the fields that exist in the ID Template for the selected family.

5. Select the field for which you want to specify a condition.

The selected field appears in the disabled display area under the Field button.



6. In the **Condition** list, select the operator to define the condition that you want to apply to the value in the **Value** text box. The list of operators will change depending on the type of field you select (i.e., numeric, character, date, logical).
7. If you selected anything other than **Is null**, **Is not null**, **Is true**, or **Is false** in the **Condition** list, in the **Value** text box, type the field value to which the specified condition should be applied.
8. If you want the search to be case-sensitive, select the **Match Case?** check box. Selecting the check box indicates that you want to return only the records that contain the keyword you specified using the exact case that you specified in the **Look For** text box.

-or-

If you do not want the search to be case-sensitive, do not select the **Match Case?** check box.

**Note:** The **Match Case?** option works only on Oracle schemas. When you perform a search using a SQL Server data source, the search will be case-insensitive even when the **Match Case?** check box is selected.

9. Click the **Add Condition** button.

The completed field condition appears in the **Search Conditions** section.

10. Add additional field conditions until you have defined all the field conditions that will cause the search to return the results that you want to see.

11. In the **Match** section, select one of the following options:

- **All Conditions (And operator):** If you select this option, the search results will include only the records that match *all* of the search conditions that are listed in the **Search Conditions** section.

-or-

- **Any Conditions (Or operator):** If you select this option, the search results will include records that match any *one* of the search conditions that is listed in the **Search Conditions** section.

12. Click the **Find Now** button.

The search results appear and contain a separate column for each field on which a condition was defined. For example, if you define multiple conditions on the Asset ID field and only one condition on the Asset Manufacturer field, the search results will contain an **Asset ID** column and an **Asset Manufacturer** column.

## Field Condition Operators

### Operators for Numeric and Character Fields

If you define a field condition on a numeric field or a character field, the following operators will appear in the **Condition** list of the **Define Conditions** section of an Advanced Search:

- **Starts with:** Returns records where the value in the selected field starts with the characters in the **Value** text box. For example, you could define the condition *starts with Centrifugal* to return records where a field value is Centrifugal Pump.
- **Ends with:** Returns records where the value in the selected field ends with the characters in the **Value** text box. For example, you could define the condition *ends with Pump* to return records where a field value is Centrifugal Pump.
- **Equals:** Returns records where the value in the selected field matches the characters specified in the **Value** text box *exactly*. For example, you could define the condition *equals Centrifugal Pump* to return records where a field value is Centrifugal Pump.
- **Contains:** Returns records where the characters in the **Value** text box exists anywhere in the selected field. For example, you could define the condition *contains Cent* to return records where a field value is Centrifugal Pump.
- **Does not contain:** Returns records where the characters in the **Value** text box does not exist anywhere in the selected field. For example, you could define the condition *does not contain pump* to return records where the text pump does not exist anywhere in a field.
- **Is null:** Returns records where the selected field does not contain any value.
- **Is not null:** Returns records where the selected field contains any value.

### Operators for Date Fields

If you define a field condition on a date field, the following operators will appear in the **Condition** list of the **Define Conditions** section of an Advanced Search:

- **Yesterday:** Returns records where the selected date field contains yesterday's date. For example, if the current date is 12/15/2007, you could define the condition *yesterday* to return records where a field value is 12/14/2007.

- **Today:** Returns records where the selected date field contains today's date. For example, if the current date is 12/15/2007, you could define the condition *today* to return records where a field value is 12/15/2007.
- **Tomorrow:** Returns records where the selected date field contains tomorrow's date. For example, if the current date is 12/15/2007, you could define the condition *tomorrow* to return records where a field value is 12/16/2007.
- **In the last 7 days:** Returns records where the selected date field contains a date seven or fewer days before the current date. For example, if the current date is 9/6/2007, you could define the condition *in the last 7 days* to return records where a field value is on or after 8/30/2007 and on or before 9/6/2007.
- **In the next 7 days:** Returns records where the selected date field contains date that is seven or fewer days after the current date. For example, if the current date is 9/6/2007, you could define the condition *in the next 7 days* to return records where a field value is on or after 9/6/2007 and on or before 9/13/2007.
- **Last week:** Returns records where the selected date field contains dates in the previous week. For example, if the current date is Thursday, September 6, 2007, you could define the condition *last week* to return records where a field value is on or after 8/26/2007 and on or before 9/1/2007.
- **This week:** Returns records where the selected date field contains dates in the current week. For example, if the current date is Thursday, September 6, 2007, you could define the condition *this week* to return records where a field value is on or after 9/2/2007 and on or before 9/8/2007.
- **Next week:** Returns records where the selected date field contains dates in the following week. For example, if the current date is Thursday, September 6, 2007, you could define the condition *next week* to return records where a field value is on or after 9/9/2007 and on or before 9/15/2007.
- **This month:** Returns records where the selected date field contains dates in the current month. For example, if the current date is Thursday, September 6, 2007, you could define the condition *this month* to return records where a field value is any day in September, 2007.



- **Next month:** Returns records where the selected date field contains dates in the following month. For example, if the current date is Thursday, September 9, 2007, you could define the condition *next month* to return records where a field value is any day in October, 2007.
- **On:** Returns records where the selected date field contains the date that appears in the **Value** text box. For example, you could define the condition *on 12/14/2007* to return records where a field value is exactly 12/14/2007.
- **On or before:** Returns records where the selected date field contains the date that appears in the **Value** text box and any date *before* it. For example, you could define the condition *on or before 12/14/2007* to return records where a field value is on or before 12/14/2007.
- **On or after:** Returns records where the selected date field contains the date that appears in the **Value** text box and any date *after* it. For example, you could define the condition *on or after 12/14/2007* to return records where a field value is on or after 12/14/2007.
- **Between:** Returns records where the selected date field contains a date between the date range that appears in the **Value** text box. For example, you could define the condition *between 12/14/2007, 12/19/2007* to return records where a field value is on or after 12/14/2007 and on or before 12/19/2007.
- **Is null:** Returns records where the selected date field does not contain a value.
- **Is not null:** Returns records where the selected date field contains any value.

### Operators for Logical Fields

If you define a field condition on a logical field, the following operators will appear in the **Condition** list of the **Define Conditions** section of an Advanced search:

- **Is true:** Returns records where the selected field is set to true. For example, you could define the condition *is true* to return records where a check box in a field is selected.

- **Is false:** Returns records where the selected field is set to false. For example, you could define the condition is true to return records where a check box in a field is clear.

## Modifying Field Conditions

To modify a field condition that you already added to a search:

1. In the Meridium APM Framework, in an Advanced Search, in the **Search Conditions** section, select the condition that you want to modify.
2. Click the **Remove Condition** button.

The condition is removed from the **Search Conditions** section, and the values from that condition are populated in the appropriate fields in the **Define Conditions** section.

3. Make the desired changes by modifying the condition or the value.
4. Click the **Add Condition** button.

The updated condition is added to the search criteria.

## Deleting Field Conditions

You can delete existing field conditions from an Advanced Search at any time.

To delete field conditions from an Advanced Search:

1. In the Meridium APM Framework, in an Advanced Search, in the **Search Conditions** section, select the condition that you want to delete.
2. Click the **Remove Condition** button.

The condition is removed from the **Search Conditions** section, and the values from that condition are populated in the appropriate fields in the **Define Conditions** section.

**Note:** The condition that you remove remains populated in the **Define Conditions** section until you remove another field condition. In other words, the **Define Conditions** section always contains values from the condition that was *last* removed.

The **Unadded Condition** dialog box appears, asking if you want to run the search without adding the condition to the **Define Conditions** section.

3. Click the **Yes** button.

The new results appear in the search results section, and the values in the **Define Conditions** section are cleared.

## Saved Searches

### Saving a Search

Searches can be saved to the Catalog so that you can run them again in the future to view updated results. You can save searches using the **Save this search** link and the **Save this search as** link, which are located on the **Common Tasks** menu on the **Search** page.

You will need to use the **Save this search** link if:

- You are saving a search for the first time.
- You are saving changes that you made to an existing search and you do not want to change the name of the search or save it to a different location.

You will need to use the **Save this search as** link if:

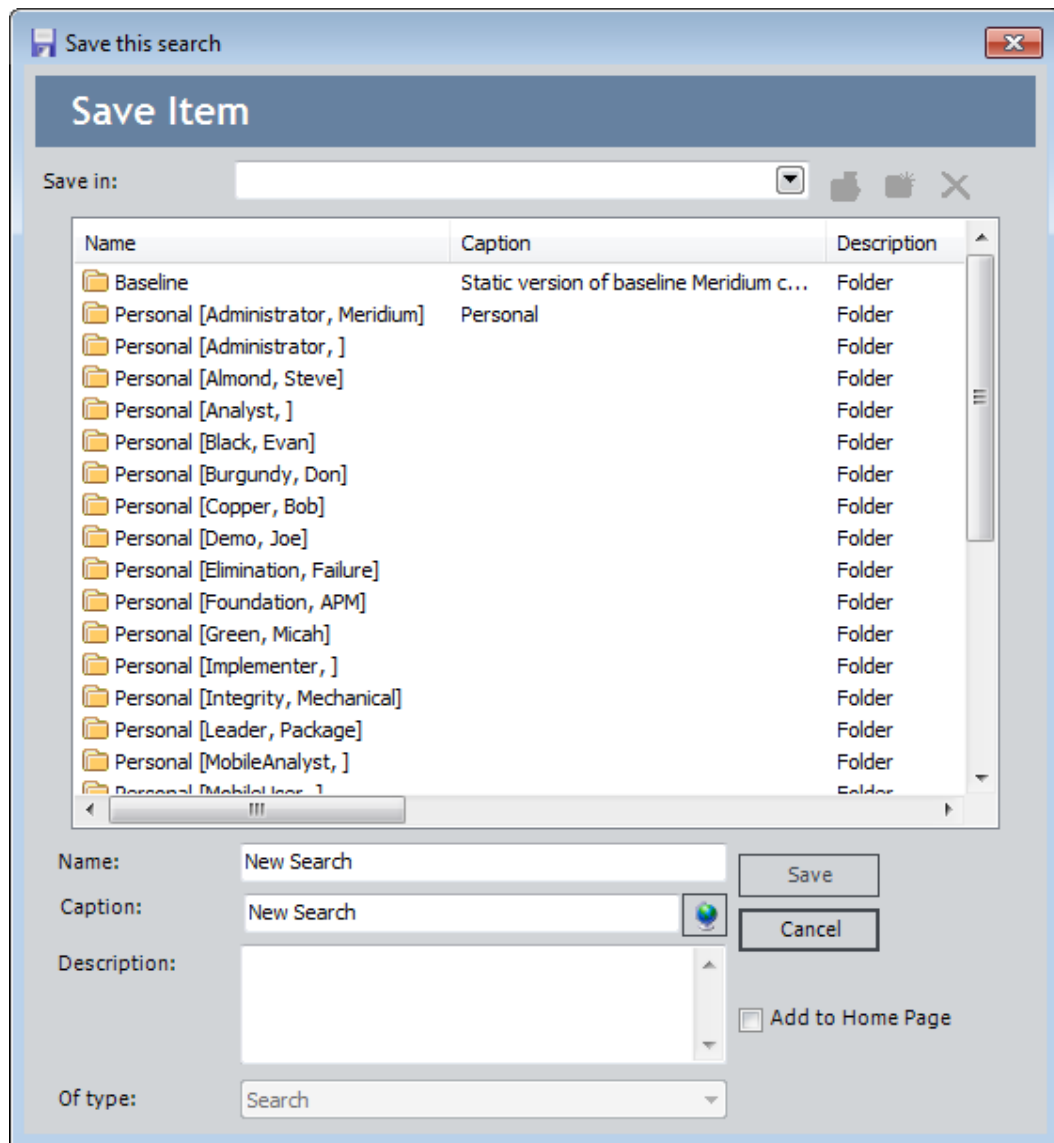
- You have modified a previously saved search and you want to save it with a different name or to a different location.

You can use the following instructions for either option. As an example, we will explain how to save a search for the first time using the **Save this search** link.

To save the current search:

1. In the Meridium APM Framework, on the **Search** page, on the **Common Tasks** menu, click the **Save this search** link.


The **Save this search** dialog box appears.



**Note:** If you were viewing a search that already existed in the Catalog, when you clicked the **Save this search** link, the **Save this search** dialog box would not have appeared. The changes would have been saved automatically to the existing search.

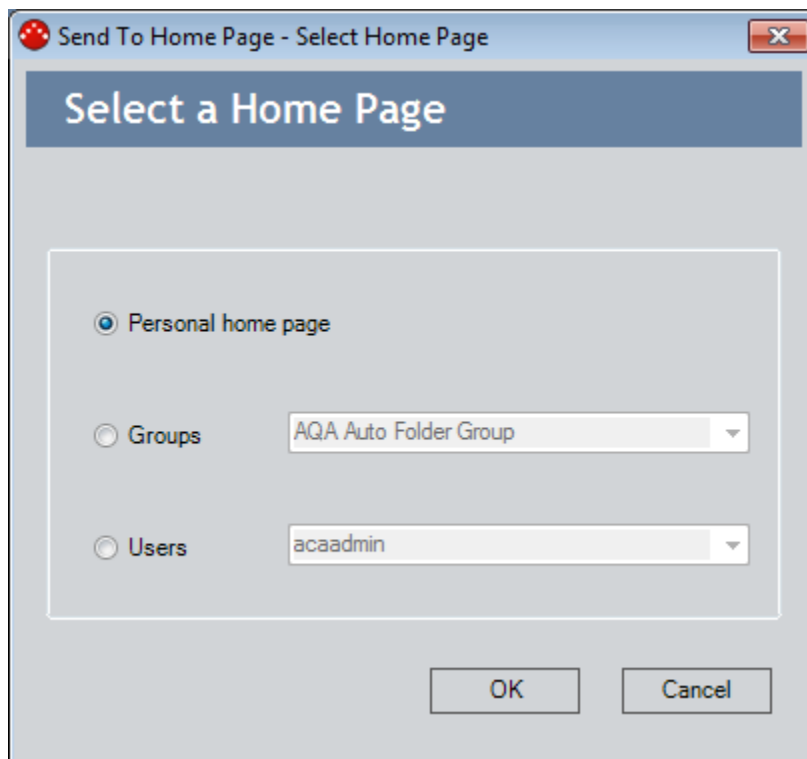
2. Navigate to the Catalog folder in which you want to save the search.
3. In the **Name** text box, type a name for the search. The name is required and must be unique to the Catalog folder in which you are saving the search.

The **Caption** text box is populated automatically with the value that you typed in the **Name** text box.

4. If desired, click the  button to manage translations for that string.
5. If desired, type a description of the search in the **Description** text box. This is not required to save the search.
6. If desired, select the **Add to Home Page** check box if you want to add a link to the search to a Home Page. This is not required to save the search.
7. Click the **Save** button.

If you:

- Selected the **Add to Home Page** check box, the search is saved to the Catalog, and the **Send to Home Page - Select Home Page** dialog box is displayed.



Depending upon your membership in the MI Power User Role Security Group and whether or not you are a Super User, you can use the **Send to Home Page - Select Home Page** dialog box provide a link to the dashboard to your Personal Home Page, a

Group Home Page, or the Personal Home Page for a particular Security User.

- Did not select the **Add to Home Page** check box, or you have completed the process of adding the search to a Home Page, the **Save Graph** dialog box closes, and the search is saved to the Catalog.

## Opening a Saved Search

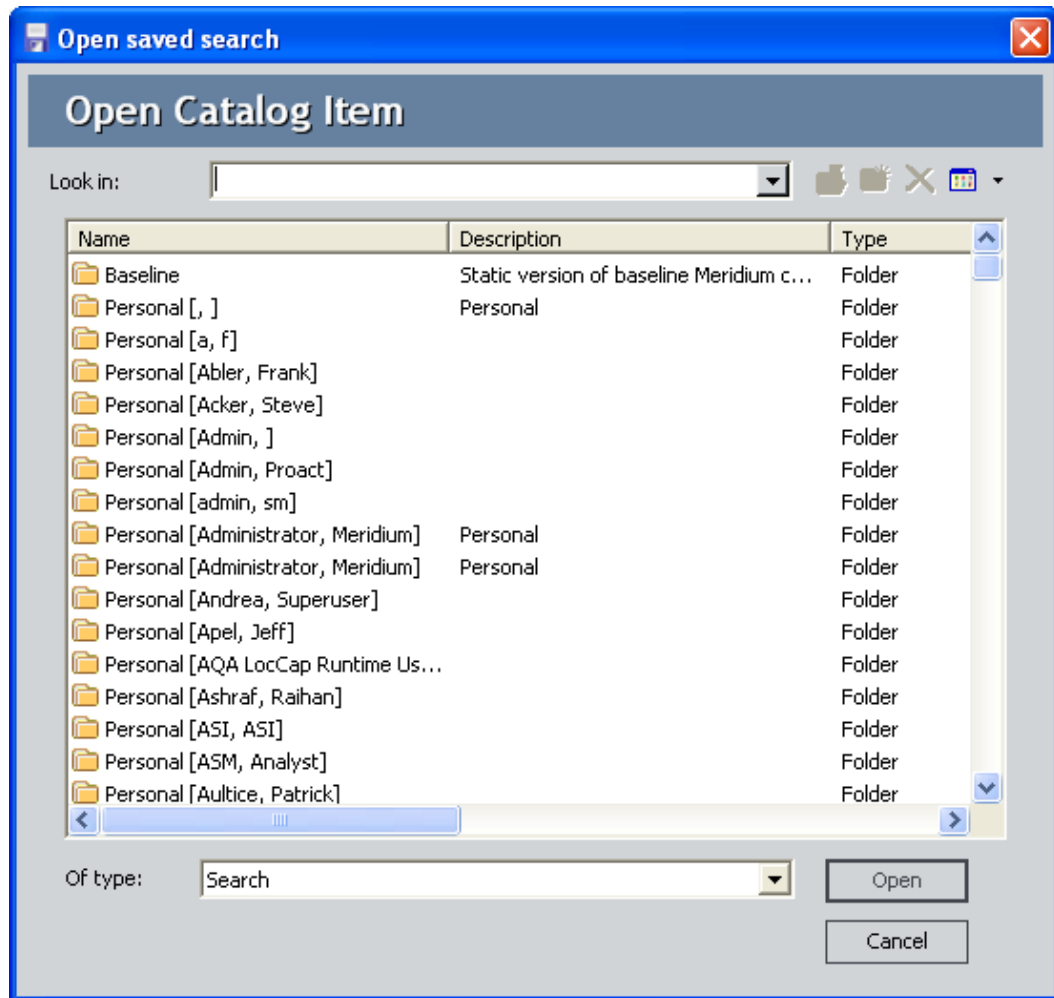
After you have saved a search to the Catalog, you can run the search and view the results.

**Note:** These instructions provide details on opening a saved search. Note that you can also open a saved search via the Catalog.

To open and run a saved search:

1. In the Meridium APM Framework, on the **Search** page, on the **Common Tasks** menu, click the **Open a search** link.

The **Open saved search** dialog box appears.



2. Navigate to the search that you want to open, select it, and click the **Open** button.

The saved search criteria appears. The search is not run automatically when you open it, so initially, no results will appear in the search results section.

3. Click the **Find Now** button.

The results appear in the search results section.

### Deleting a Saved Search

**Note:** These instructions provide details on deleting a saved search. Note that you can also delete a saved search via the Catalog.

To delete the currently saved search:

1. In the Meridium APM Framework, on the Search page, on the Common Tasks menu, click the **Delete this search** link.

A confirmation message appears, asking if you are sure that you want to delete the search.

2. Click the **Yes** button.

The search is deleted from the database.

## Opening Records from Your Search Results

### About Opening Records from Your Search Results

From your search results, you can:

- Open a single record in the Record Manager.
- Open multiple records in the Record Manager.
- Open one or more records in the Bulk Data Form.

### Opening a Single Record in the Record Manager

To open a single record in the Record Manager from your search results list:

- In the Meridium APM Framework, in your search results, click the Record ID link.

-or-

- In the Meridium APM Framework, in your search results, right-click the hyperlinked Record ID, and then click **Open in Record Manager**.

The record appears in the Record Manager.



## Opening More than One Record in the Record Manager

To open multiple records in the Record Manager from the search results section:

1. In the Meridium APM Framework, in the search results, press the Ctrl key (to select multiple, non-consecutive records), or press the Shift key (to select consecutive records), and click the rows containing the records that you want to open.
2. Right-click any of the record IDs in any of the selected rows, and then click **Open in Record Manager**.

The Record Manager appears, displaying each selected record in the record hierarchy. The datasheet of the first record in the record hierarchy is displayed by default.

**Note:** To view another record, click the desired record in the record hierarchy.

## Opening One or More Records in the Bulk Data Form

After you have performed a search and located the desired records, you can open one or more records in the Bulk Data Form.

**Note:** The Bulk Data Form can display multiple records only when they belong to the same family. If you select multiple records that belong to different families, the **Open in Bulk Data Form** option will not appear on the shortcut menu.

To open records in the Bulk Data Form from the search results section:

1. In the Meridium APM Framework, in the search results, press the Ctrl key (to select multiple, non-consecutive records), or press the Shift key (to select consecutive records), and click the rows containing the records that you want to open.
2. Right-click any of the record IDs in any of the selected rows, and then click **Open in Bulk Data Form**.

The records appear in the Bulk Data Form.

Datasheet Air Cooled Heat Exchanger					
Air Cooled Heat Exchanger					
	Asset ID	Asset Description	Asset Type	Asset Manufa...	Asset Model N...
	100101	Chiller Plant Cooling Tower Cell #1	Cooling Tower	MARLEY MAR	NC Class
	100102	Chiller Plant Cooling Tower Cell #2	Cooling Tower	MARLEY MAR	NC Class
▶	Exchanger-1A-Tubside	REGENERATOR GAS COOLER	Air Cooled Heat Exchanger		
	Exchanger-46-Tubside		Air Cooled Heat Exchanger		
	Exchanger-5A-Tubside		Air Cooled Heat Exchanger		

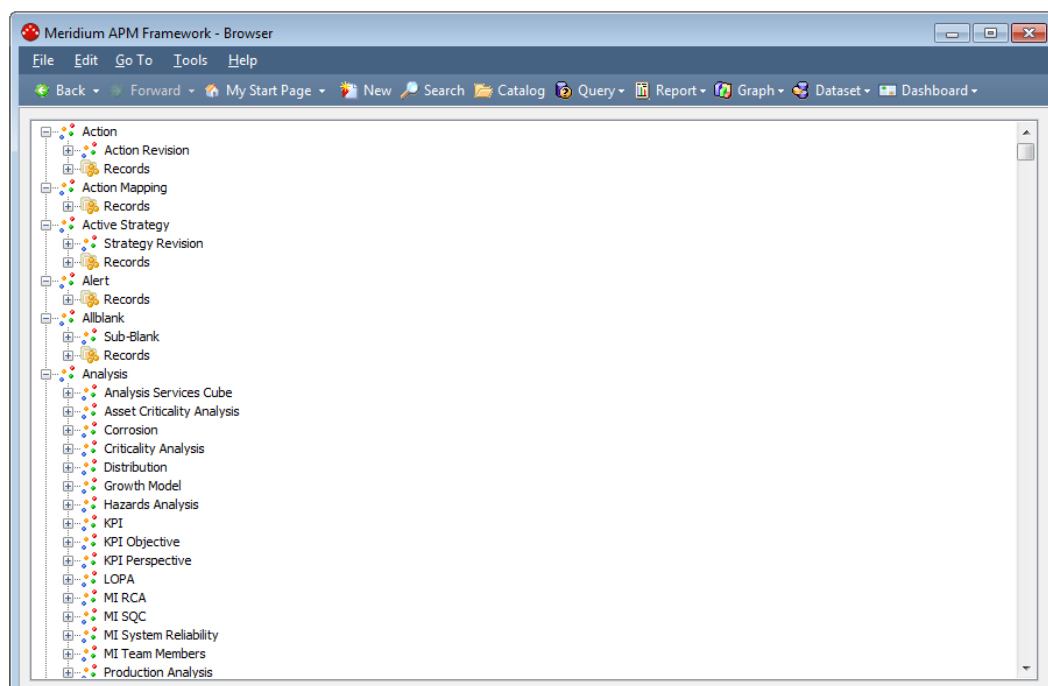
## Using the Browser

### Accessing the Browser

To open the Browser:

- In the Meridium APM Framework, on the main menu, click Tools, and then click Browser.

The Browser appears.




## Aspects of the Browser




The Browser lets you view a hierarchical list of nodes representing:



- Entity families that exist in the database.
- Records that belong to each entity family.
- Records that are linked to one another.

Each node is represented by a different icon.

At the root level, the Browser contains an alphabetic list of nodes representing the active entity families that exist in the Meridium APM database. Each entity family node is represented by the  icon.

Below each root entity family node are the following nodes:

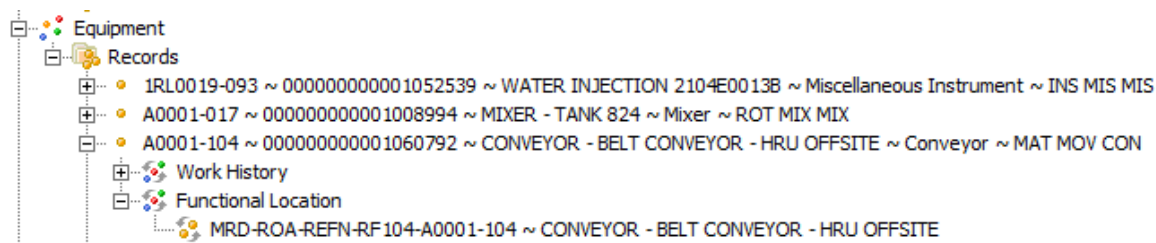
- Other entity family nodes representing the subfamilies of those families. The subfamily nodes are also represented by the  icon.
- The *Records* node, which is represented by the  icon. You can expand the *Records* node to view a list of nodes representing the individual records that exist in that entity family. The individual record nodes are labeled according to the Entity ID that exists in each record. Each individual record node is represented by the  icon.

The Browser also identifies which records are linked to one another. If a predecessor record is linked to a successor record, you can expand the individual record node for that predecessor record to see a list of nodes representing the *families* containing successor records to which that record is linked. These related family nodes are represented by the  icon. You can expand any related family node to reveal nodes representing the records that exist in that family that are linked to the predecessor record. Each record node that appears below a related family node is represented by the  icon.

Note that a family will appear in the Browser only if it is active and you have View permissions to it. Also, you will see a *related family node* only if you have View permissions to the relationship family whose definition includes that entity family as a successor to the predecessor entity family. For example, if the Shell and Tube Heat Exchanger family is related to the Failure family through the Asset Has Failure relationship family, you will see the *Failure*

family beneath the *Shell and Tube Heat Exchanger* family only if you have View permissions to the Asset Has Failure relationship family.

For a complete example of the Browser hierarchy structure, consider the following image.



In this example, you can see the *Equipment* family node at the root level. This node has been expanded to reveal the *Records* node, which has also been expanded. Below the *Records* node, you can see three individual Equipment record nodes with the Entity IDs shown in the following image.

```
1RL0019-093 ~ 0000000000001052539 ~ WATER INJECTION 2104E0013B ~ Miscellaneous Instrument ~ INS MIS MIS
A0001-017 ~ 0000000000001008994 ~ MIXER - TANK 824 ~ Mixer ~ ROT MIX MIX
A0001-104 ~ 0000000000001060792 ~ CONVEYOR - BELT CONVEYOR - HRU OFFSITE ~ Conveyor ~ MAT MOV CON
```

Below the last Equipment record node, you can see the following family nodes:

- Work History
- Functional Location

The *Functional Location* family node has been expanded to show a record node representing the Functional Location record that is linked to the Equipment record represented by the last Equipment record node.

Using the Browser, you can open any specific record.

## Navigating the Browser Hierarchy

The Browser tree structure displays a hierarchical representation of the Meridium APM database structure. The hierarchy displays the families and records that exist in your database. The hierarchy displays only active families to which you have been granted View permissions in the Configuration Manager. The top-level families of the hierarchy are expanded by default. By

expanding the tree, you can view the sub-families that belong to a family and the records belonging to each sub-family.

**Note:** System families and families flagged as Inactive in the Configuration Manager do not appear in the Browser.

To expand any branch of the tree:

- In the Meridium APM Framework, in the Browser, click the plus sign (+) to the left of the branch's name.

The branch expands to show sub-branches.

**Note:** When you first expand a level of the hierarchy, Meridium APM reads the data directly from the database and caches it until you refresh that branch of the Browser.

You can continue clicking plus signs until all branches of the tree have been fully expanded. You will know when a branch has been fully expanded when a minus sign appears.

To collapse a branch of the tree:

- In the Meridium APM Framework, in the Browser, click the minus sign.

## Refreshing the Browser

After you expand the Browser tree, the system caches the information and does not refresh it automatically. This means that the Browser will not show additions, modifications, or deletions that have been made since you first accessed the Browser. You may want to refresh the Browser periodically to ensure that you are viewing the most current data.

To refresh the Browser:

1. In the Meridium APM Framework, in the Browser, select the branch that you want to refresh.
2. Right-click the branch, and choose **Refresh**.

The Browser refreshes to show the most current information. All branches below the refreshed branch are collapsed automatically. You will need to re-expand them manually.

## Opening Records from the Browser

To open a record from the Browser:

- In the Meridium APM Framework, in the Browser, double-click the record name.

-or-

In the Browser, right-click the record name, and click **Open**.

The Record Manager appears, displaying the record.

# Viewing and Modifying Records

## About Viewing and Modifying Records

The Meridium APM system provides two primary features that are designed to let you view and modify records: the Record Manager and the Bulk Data Form.

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

Records store information that you can view, modify, and manipulate throughout the Meridium APM system. Many modules provide custom interfaces that allow you to interact with records in a 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 Manger 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.

# Record Manager

## Introduction to the Record Manager

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.

## Accessing the Record Manager

The Record Manager lets you view records in the Meridium APM database. There are many ways to access the Record Manager, depending on your workflow and the type of record you want to access. Typically, you will use one of a few common means of accessing records to access the Record Manager. Specifically, you can:

- Open a single record in the Record Manager from search results.
- Open multiple records from search results.
- Open a record from the Browser.
- Access a record via a URL.

## Aspects of the Record Manager

### Aspects of the Record Manager

The Record Manager consists of three main components:

- **Task menu pane:** Contains two task menus: **Common Tasks** and **Associated Pages**.

- **Record hierarchy:** Displays the records in the database and how they are related to one another. The record hierarchy can be displayed in either the **Record Explorer** pane or a pane labeled according to the configured explorer that is driving the contents of the pane.
- **Record Manager workspace:** Displays the contents of the selected record and the datasheets associated with that record. Additionally, the **Record Manager** workspace contains options that you can use to modify the selected record, display a different datasheet for the record, and move the record hierarchy to a different location on the page.

The screenshot shows the Meridium APM Framework interface. On the left is the 'Task Menu Pane' with various actions. The 'Record Explorer' shows a tree of records. The 'Record Hierarchy' pane (orange box) shows details for 'REC-21 Recommendation for HE1608 (Inspection Recommendation)'. The 'Record Manager Workspace' (orange box) displays a table of data for this record.

Field	Value(s)
Recommendation ID	REC-21
Recommendation Headline	Recommendation for HE1608
Recommendation Description	Recommendation from API510-E inspection
Inspection Profile Item	EXTERNALS
Recommendation Basis	general corrosion
Asset ID	HE-1608 CRUDE-HVY. ATMOS. GAS OIL
Technical Number	
Functional Location ID	016-E-E3104A CRUDE-HVY. ATMOS. GAS OIL
Required Equipment Status	Off-Line (OFF-LINE)
Business Impact	Unit Slowdown (UNIT SLOWDOWN)
Target Completion Date	10/1/2005 12:00:00 AM
Mandatory Date	01-Apr-2006
Recommendation Priority	Low (LOW)
Status	Created
Author Name	testInspector, testInspector   testInspector
Reviewer Name	testInspSuper, testInspSuper   testInspSuper
Final Approver Name	Herndon, Super Secured   ajh
Assigned To Name	Herndon, Super Secured   ajh
Create Work Request?	
Work Request Reference	
Work Request Equipment	
Work Request Functional Location	
Implemented Date	25-Feb-2009

## Record Manager Workspace

### Aspects of the Record Manager Workspace


The *Record Manager workspace* appears by default to the right of the task menu pane and the record hierarchy. The **Record Manager** workspace contains the following items:

- A shortcut menu, containing options that you can use to hide the record hierarchy or move it to a different location on the page and to view links on the **Associated Pages** menu.



- The datasheet area, which displays the contents of the selected record and contains options that you can use to modify the record or view a datasheet other than the one that is currently displayed. The datasheet area appears in various places throughout the Meridium APM Framework application and is not unique to the Record Manager.

## Using the Shortcut Menu at the Top of the Record Manager Workspace

The shortcut menu at the top of the **Record Manager** workspace contains options that you can use to move the **Record Explorer** pane to a different location on the page, hide the **Record Explorer** pane, and view links on the **Associated Pages** menu. You can access this menu by clicking the  button that appears to the left of the **Record Manager** text above the datasheet.

The following options are available on this shortcut menu:

- **Record Explorer:** Displays a submenu with two options:
  - **Dock Position:** Displays a submenu with options that let you reposition the **Record Explorer** pane to a different location on the page. You can choose **Left**, **Right**, or **Bottom**.
  - **Hide:** Hides the **Record Explorer** pane. When the **Record Explorer** pane is hidden, you can re-display it using the **Show Explorer** option that appears on the submenu when the **Record Explorer** pane is hidden.

**Note:** The name of the **Record Explorer** option may be different if you are viewing the record hierarchy using a configured explorer.

- **Associated Pages:** Displays a submenu that contains the links that appear on the **Associated Pages** menu. You can click the links to execute them.
- **Show Explorer:** Displays the **Record Explorer** pane. This link appears only when the **Record Explorer** pane is hidden.

**Note:** The name of the **Show Explorer** option may be different if you are viewing the record hierarchy using a configured explorer.

## Using Datasheets

### Aspects of the Datasheet Area

The *datasheet area* displays the datasheet that is associated with the family to which the selected record belongs and provides options that you can use to modify the selected record or to view a different datasheet for the record.

The datasheet area can appear in the Bulk Data Form, the Record Manager, or some other module-specific screen. In the Record Manager, the datasheet area appears to the right of the page in the **Record Manager** workspace, and in the Bulk Data Form, the datasheet appears to the right of the task menu pane. In addition, certain Meridium APM modules, such as Thickness Monitoring, provide access to datasheets via customized pages that do not exactly match the Record Manager or the Bulk Data Form. In general, most basic tasks that can be performed on datasheets in the Record Manager or Bulk Data Form, such as resizing rows and changing the units of measure via the UOM Converter Tool, can also be performed in these customized views of the datasheet area.

Different types of records will have different datasheets, depending on how your system has been configured. Each datasheet will contain fields that are specific to a type of record. For example, for an Equipment record, you might store a description of the piece of equipment and the year it was constructed. For a Work History record, you would likely store different information, such as the activity type and creation date.

Additionally, fields defined for a datasheet may be grouped into various sections, which can appear as different tabs on the datasheet. For example, the following datasheet contains two sections: *Identification* and *History*.

WH-40015244-80001052 ~ Repair ~ G0361-008 ~ 000000000001005602 ~ MRD-ROA-REFN-RF008-G0361-008 ~ (Work History)

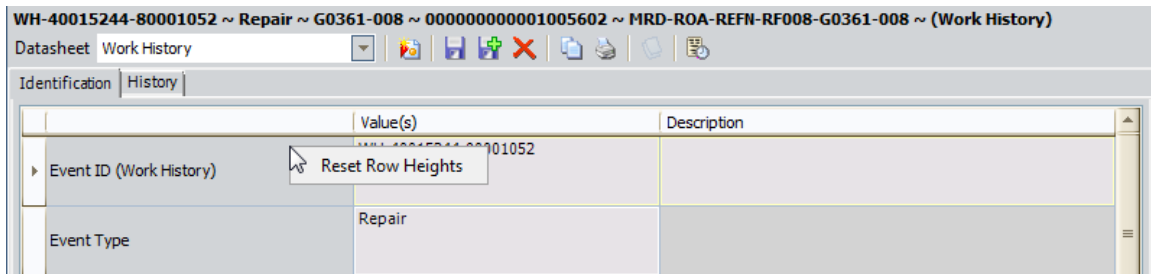
Datasheet Work History

Identification History








	Value(s)	Description
▶ Event ID (Work History)	WH-40015244-80001052	
Event Type	Repair	
Request ID	40015244	
Request Type	M1	Maintenance Request
Request Priority	1	Very Low
Request System Status	NOCO	



**Note:** In the Bulk Data Form, the separation of tabs does not appear. Instead, all fields are included on the same tab.


In most cases, when you open a record and view its associated datasheet in the datasheet area, you can adjust the height of the rows. To do so, place your cursor on a line separating two rows, and drag the line until the rows reach the desired height. If you are using the Record Manager, you can reset the row height to the default height by right-clicking the first cell under the datasheet tab name and selecting **Reset Row Heights**. The **Reset Row Heights** option is not available in the Bulk Data Form.






At the top of the datasheet area, a toolbar appears and gives you access to functions that are associated with the selected record. The toolbar contains the following icons:

-  Displays the **Select Family** dialog box, where you can choose a family for which to create a new record.
-  Saves the current record, including any modifications that you have made.
-  Saves the current record and displays a blank datasheet that you can use to create a new record. The new record will automatically be created using the family of the current record.
-  Deletes the current record after asking for confirmation.
-  Displays a new datasheet, into which all the information except the Record ID from the current record has been copied. You can use the datasheet to create a new record based on the current record.
-  Displays the **Preview** window, from which you can print the information associated with the current record.
-  Displays the **Reference Documents** window, where you can view, edit, and create reference documents for the current record.

**Note:** When you are viewing the datasheet area in the Record Manager, if the current record is already linked to a Reference Document record, the  icon will be replaced with the  icon.

 Displays historical data associated with the record.

 Displays the **State Assignments** dialog box, where you can assign Security Users to states. This icon only appears if State Configuration has been defined for the family via the Configuration Manager.

**Note:** All of these icons appear in the Record Manager. Only the  and  buttons, however, are available in the Bulk Data Form.

The **Datasheet** list appears to the left of the toolbar and contains the list of datasheets that have been configured for the family to which the selected record belongs. If desired, you can view a datasheet other than the one that is currently displayed by selecting the desired datasheet from the list.





In addition, if State Configuration has been defined for the family of the selected record, the current record state will be displayed along with an **Operations** link, which you can click to display a list of the available operations for the current record. From this list, you can select an operation, which will cause the record's state to change.

Note that in most of our instructions, we refer to **Common Tasks** links in step-by-step instructions. Keep in mind, however, that you can use the icons on the datasheet toolbar to perform some of the same tasks.


### Interacting with Fields on Datasheets

Datasheets display fields that are defined for the associated family and configured to be included on the datasheet. Each field on a datasheet has specific properties that determine how you will enter data into them, if you are allowed to enter data at all. You will need to be familiar with these properties when you create and modify records. You can use the following guidelines to identify the properties of fields in a datasheet:

- **Character fields:** Fields that appear as text boxes and accept a string of alphanumeric characters. All character fields have a limit. You will know you have reached the limit when you can no longer type in the field.

- **Text fields:** Fields that appear as text boxes and accept an unlimited amount of text. Text fields contain a  button to the right of the cell. You can click the  button or press the F4 key to open the text editor, where you can work with the text in a dialog box.
- **Numeric fields:** Fields that appear as text boxes and accept only numbers. If you type letters in a numeric field, an error message will appear when you move to a different field. Numeric fields have a limit. You will know you have reached the limit when you can no longer type in the field. If a unit of measure is assigned to the field, it will appear in parentheses along with the number.
- **Date fields:** Fields that accept dates and times. Date fields contain a  button, which you can click to display the Calendar feature, from which you can choose a date and time.
- **Drop-down list fields:** Fields that require you to select a single value from a list of more than one value. List fields contain a  button, which you can click to view the list of available values.
- **Logical fields:** Fields that contain a check box. A selected check box means *Yes, True, or On*. A cleared check box means *No, False, or Off*.
- **Disabled fields:** Fields that cannot be modified manually and are most often populated automatically based on values entered into other fields or actions taken within the system. Fields may also be disabled (and not populated) if they do not apply to the current record. Disabled fields are shaded gray or some other color, as determined by an administrative user. Any character, text, numeric, date, list, or logical field can be disabled.
- **Required fields:** Fields that must contain a value before the record can be saved. Required fields are colored red or some other color, as determined by an administrative user. Any character, text, numeric, date, list, or logical field can be required.
- **Multi-Value fields:** Fields that store more than one value. Numeric, character, and date fields can be multi-value fields, which may be formatted as a text box or contain a drop-down list (i.e., as in a drop-down list field). Multi-value fields may have colored backgrounds, as determined by an administrative user. If a multi-value field contains a drop-down list, a check box will appear to the left of each value in the list. You can select the check box for each desired value. When these

values appear in the multi-value field, they are separated by commas. The number of values allowed in a multi-value field is determined by an administrative user.

- **Custom Data Editor fields:** Fields that provide access to a custom data editor. These types of fields contain a  button to the right of the cell. When you click this button, a custom data editor will appear. The content and behavior of the editor varies from one field to another and is described in detail in the appropriate module documentation. For example, the Production Event Code field on the Production Event datasheet in PLA provides access to a custom data editor that is described in detail in the PLA documentation.

You can copy and paste a value from one field to another field by right-clicking inside the cell and then using the options on the shortcut menu (or standard keyboard shortcuts). When you are copying and pasting values from one field to another, you should keep in mind the following guidelines:

- You can copy the entire value from any field *except* a logical field (i.e., a check box), regardless of whether it is enabled or disabled.
- You can copy *portions* of a value only from a text, character, or custom data editor field that is enabled.
- You can paste a value into only text, character, or custom data editor fields that are enabled.

Each field may have a rule defined for it that controls how the field behaves and how the data in that field is displayed. For example, a rule may be defined for a numeric field that automatically causes the value in the field to be formatted as currency. Another field might have a rule that causes various validation checks to be performed or that limits the values that you can type in the field. Yet another rule may cause values entered in one field to determine values that appear in another field, either within a single record or across records, as is the case with reference tables. A text field might have a rule that determines how many lines of text will appear in that field. Rules are configurable and will vary from one Meridium APM implementation to the next.

If you create a record for a family that has field-level rules defined, you may not see the result of these rules until after you save the record and then open it again.

When you are viewing a record for a family that has field-level rules defined, the values that you see on a datasheet are the formatted values, which may or may not be the same value that is stored in the database. For example, suppose the field *Amount* has a rule configured, such that a dollar sign will be displayed by default next to the value that you type in that field. When you type a value in the Amount field, that value is saved to the database, but when you view the record, a dollar sign will appear next to the value that you entered in the record.

**Note:** Throughout the documentation, wherever we describe specific field behaviors, we are referring to the baseline behaviors. You may see different behaviors within your system if the rules have been customized.


## Navigating Fields in Datasheets

Depending upon the type of datasheet you are viewing, the way in which you can navigate between fields using a keyboard is slightly different.

- **Non-custom-layout datasheets:** To navigate between fields in any datasheet that is not a custom-layout datasheet, you can use the Tab key, the Enter key, or the up or down arrow.
- **Custom-layout datasheets:** To navigate between fields in a custom-layout datasheet, you can use the Tab key.

## Calendar

### About the Calendar Feature

The Calendar feature appears throughout the Meridium APM Framework application and provides the ability to select a date and time. In most cases, the Calendar feature appears in date fields on datasheets. The Calendar feature is *not* available, however, in ALL fields that store date and time values. You will know that the Calendar feature is available if the  button appears when you place your cursor in a date cell. When you click the button, the Calendar will appear, as shown in the following image.



The Calendar feature contains the following items:

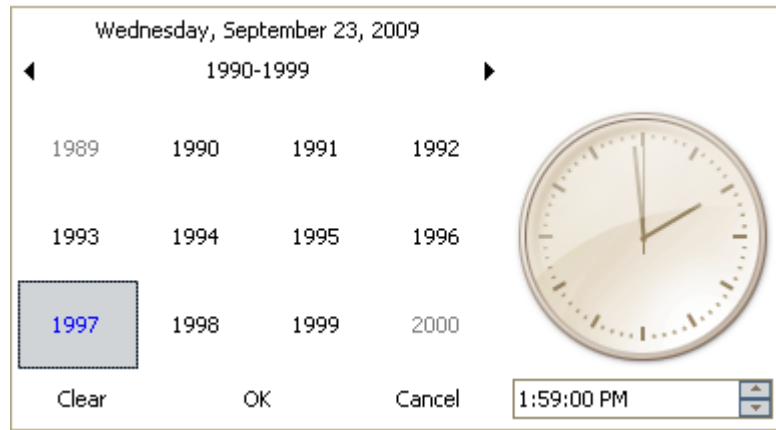
- **Current day, month, and year:** A link that allows you to select the current date.
- **Current month and year:** A link that allows you to select the desired month and year. After you access the Calendar feature, clicking this link will display a monthly grid in place of the daily calendar, displaying all twelve months, as shown in the following image.



Above the monthly grid, the year appears. You can click a month in the grid to display the daily calendar for that month. Or, you can click the left and right arrows next to the year to view the monthly grid for a different year.

After you are viewing the monthly grid, when you click the year link, a yearly grid appears in place of the twelve month grid, displaying years in a ten-year time span, as shown in the following image.





Above the yearly grid, the ten-year time span appears. You can click a year in the grid to display the twelve-month grid for that year. Or, you can click the left and right arrows next to the ten years in a different ten-year time.

- **Calendar:** Lets you select the desired date.
- **Clear button:** Lets you clear the selected date and time from the Calendar feature. Note the following about the **Clear** button:
  - In a custom layout datasheet, the **Clear** button removes the date and time from the field from which you accessed the Calendar feature.
  - In a standard datasheet, the **Clear** button does not remove the date and time from the field. Instead, the following date and time is displayed in the field from which you accessed the Calendar feature: 1/1/0001 12:00 AM.
- **OK button:** Closes the Calendar feature and displays the selected date and time in the field from which you accessed the Calendar feature.
- **Cancel button:** Closes the Calendar feature and discards your selection.
- **Clock:** Shows the time that you select in the time text box as it appears on a clock.
- **Time text box:** Lets you select the desired time and specify A.M. or P.M. The default value in this text box is 12:00:00 AM. You can modify this value by clicking the up and down arrows that appear in the text box.

## Selecting a Date and Time Using the Calendar Feature

You can use the Calendar feature to select the desired date and time and display those values in the field from which you accessed the Calendar feature. Alternatively, you can type the desired date and time in a date field.

**Note:** If you type a date in a date field, when you type the first value in the field, the remaining values for the date are completed automatically using the current date. You can continue typing over these values to replace them with your own. For example, if today's date is 7/21/2009 and you begin typing 5 in the date field, the date will appear as 5/21/2009 until you modify the remaining values.

To select a date and time using the Calendar feature:

1. In the Meridium APM Framework, using the options on the Calendar feature, select the desired year, month, and day.
2. To the right of the calendar, in the time text box, use the arrows to choose the desired time.

The clock displays the time that you selected as it appears on a clock.



3. Click **OK**.

The Calendar closes, and the date and time that you selected appear in the field.

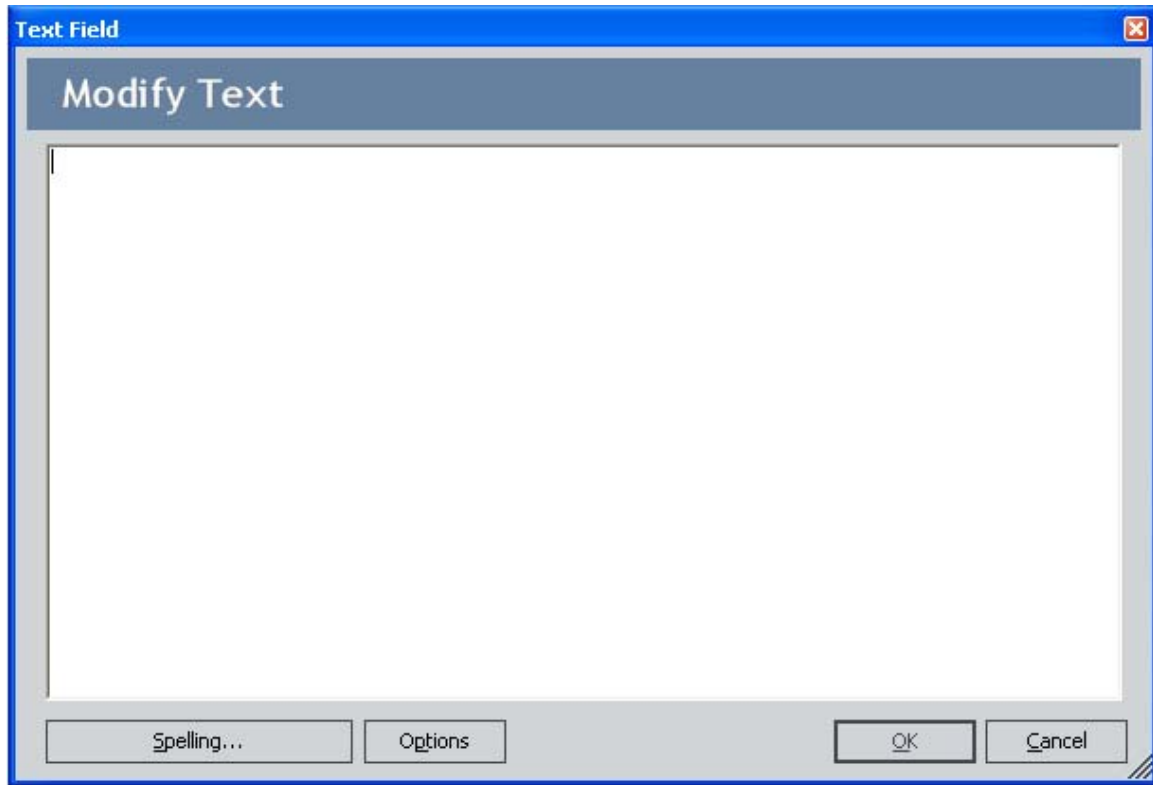
## Text Editor

### About the Text Editor


The text editor is available in various text fields throughout the Meridium APM Framework application. You can use the text editor to enter text into a desired field and then use the Spell Check feature to locate and correct misspelled words within the text. The text editor is especially useful for entering large amounts of text, such as descriptions, into text fields.

The text editor is not available in all fields. You will know that the text editor is available for a given field if a  button appears in the field. When you click the  button, the text editor appears, as shown in the following image. The


name of the field from which the text editor is accessed will appear in the title bar of the text editor window.



### Using the Text Editor

The text editor is useful for entering larger amounts of text and allows you to search the text for misspelled words. The following instructions provide details on using the text editor. These instructions assume that you have located the desired text field that contains a  button, indicating that the text editor is available.

#### To use the text editor:

1. In the Meridium APM Framework, in the field where you want to add or modify text, click the  button.

The text editor window appears.

**Hint:** You can also press the F4 key on your keyboard to access the text editor.

2. Type the desired text in the text box.

**Note:** If you want to search the text for misspelled words, you can click the **Spelling** button to access the Spell Check feature.

3. Click OK.

The text editor closes and the text that you typed appears in the field from which you accessed the text editor.

## UOM Converter Tool

### About the UOM Converter Tool

The **UOM Converter Tool** allows you to perform the following tasks:

- View a current numeric datasheet value in a different unit of measure (UOM).
- Collect numeric data in one UOM and enter it into a datasheet using a different UOM.

The **UOM Converter Tool** allows you perform these conversions directly in the datasheet for any numeric field that meets the following criteria:

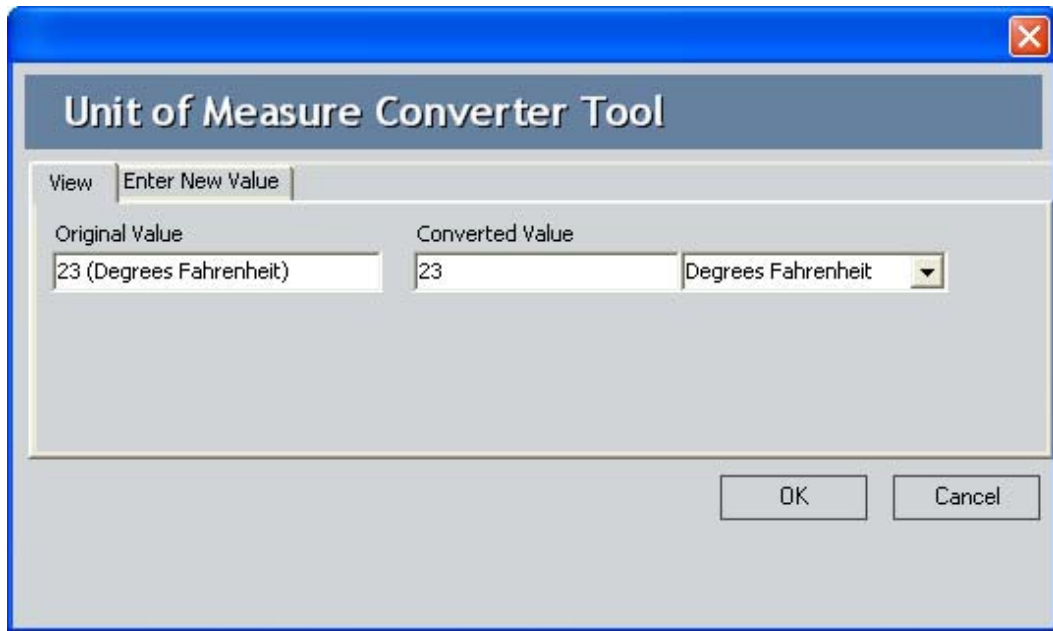
- A base UOM has been selected for the field via the Configuration Manager.
- A conversion has been set up for the UOM via the Configuration Manager. For example, you can convert values that appear in pounds only if a UOM(s) to which pounds can be converted has been determined by the UOM conversion table in the Configuration Manager.

### Viewing a Stored Value in a Different UOM

To view the currently stored value in a different UOM:

1. In the Meridium APM Framework, select the desired field.
2. Right-click the field, and then click **Change Units of Measure**.

The Units of Measure Converter Tool appears.



3. On the **View** tab, in the list on the far right, choose the desired UOM.

**Note:** The list contains the UOMs for which conversions have been defined for the *current* UOM in the Configuration Manager. For example, if the current UOM is pounds, the list will contain all the UOMs to which pounds can be converted, as determined by the UOM conversion table in the Configuration Manager.

The **Original Value** field displays the current value in the datasheet field. The **Converted Value** field displays what the value would be if you were to apply the selected conversion.

4. Click **OK** to close the **Unit of Measure Converter Tool**.

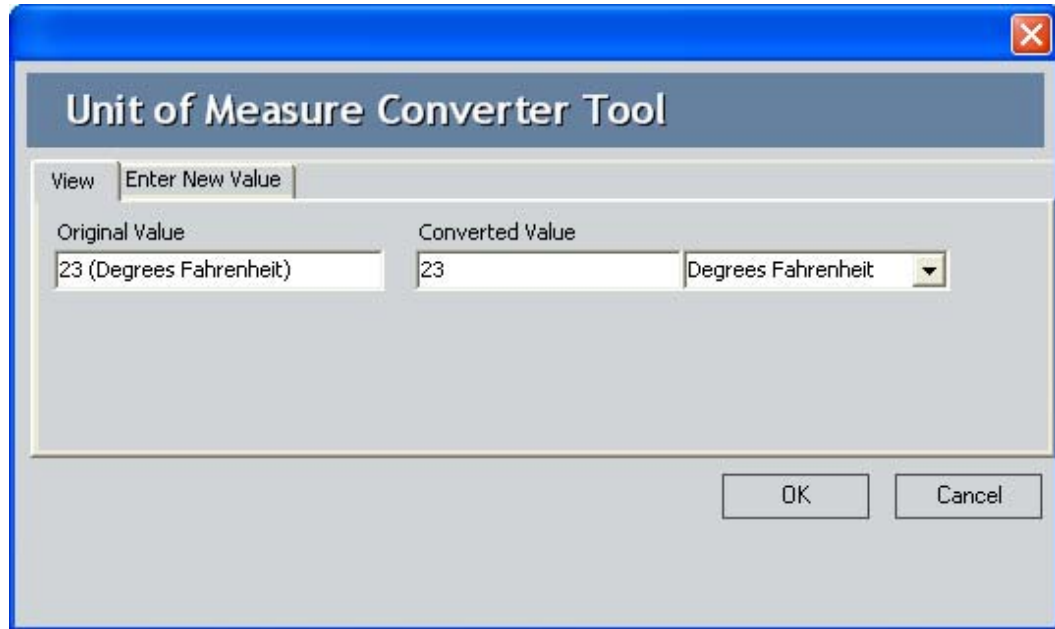
### Converting a Supplied UOM to a Datsheet UOM

In some cases, you might need to convert one UOM to another UOM in order to complete a datasheet field. For instance, if you take pressure readings from instruments that provide the readings in Kilopascals but the datasheet stores the pressure in Inches of Water, you will need to convert the reading to Inches of Water before you can enter it into the system.

To convert a supplied UOM to the UOM used in the datasheet:

1. In the Meridium APM Framework, select the desired field.
2. Right-click the field, and then click **Change Units of Measure**.

The **Units of Measure Converter Tool** appears.



3. Click the **Enter New Value** tab.
4. In the **User Entered Value** text box, type the value that you want to enter into the datasheet field.
5. In the list to the right of the **User Entered Value** text box, choose the UOM of the **User Entered Value**.

The **New Value** field is updated to display the value you entered in the UOM that is used in the datasheet field. This is the value that you will want to enter into the datasheet.

6. Click **OK** to close the **Unit of Measure Converter Tool**.

The converted value appears in the field.

7. On the **Common Tasks** menu, click the **Save** link.

## Master/Detail Datasheets

### Opening Records in a Master/Detail Datasheet

Via the Configuration Manager, you can configure a master/detail datasheet to display on a single page a *master* record (i.e., a root record to which other records are linked) and the associated *detail* records (i.e., the records that are linked to the master). To open records in a master/detail datasheet, a master/detail datasheet must be configured for the *master* family.

To open records in a master/detail datasheet:

1. In the Meridium APM Framework, perform a search on a master family (i.e., a family for which a master/detail datasheet has been configured).
2. Select a record, and click the Open button.

The record is displayed in the Record Manager in the master/detail datasheet.

The screenshot displays the Meridium APM Framework Record Manager interface. The window title is "Meridium APM Framework - Record Manager - FT1001 ~ CAL0000000021 (Calibration, Analog)". The interface includes a menu bar (File, Edit, Go To, Tools, Help), a toolbar with navigation and action icons, and a Record Explorer pane on the left showing a tree view of records. The main area is titled "Record Manager" and contains a "Record Manager" section with a "Datasheet" dropdown set to "Calibration, Analog MDF". Below this, there are tabs for "Identification/Details", "Calibration Ranges", "Calibration Summary", and "Test Equipment". The "Identification/Details" tab is active, showing a table of record details:

Field	Value(s)
Event ID	CAL0000000021
Location ID	MER-FAC-PLT-UNIT-FT1001
Location Short Description	Location Description for FT1001
Equipment ID	0000010007
Equipment Short Description	PLANT DIFFERENTIAL PRESSURE
Equipment Type	DP Transmitter
Instrument Manufacturer	ROSEMOUNT

Below the details, there is a "Calibration Results, Analog" section with a table of calibration data:

Seq No.	% Scale	Up/Dn	Input Measure AF	Pri Output AF	Error AF (%)
01	0 (PCT)	Up (UP)	0	4.02	0.125
02	25 (PCT)	Up (UP)	25	8.1	0.625
03	50 (PCT)	Up (UP)	50	12.4	2.5
04	75 (PCT)	Up (UP)	75	16.8	5
05	100 (PCT)	Up (UP)	100	21	6.25

### Working with Master/Detail Datasheets

A master/detail datasheet provides a view of a master record and all the detail records that are associated with it.

The screenshot shows the 'Calibration, Analog MDF' datasheet. The top section, 'Identification/Details', shows the master record with the following information:

Field	Value(s)
Event ID	CAL000000023
Location ID	PT-1001
Location Short Description	This is a test for calibration comments to see if there is any word wrapping in the report. Hopefully this long string will cause the report to wrap.
Equipment ID	PT-1001
Equipment Short Description	This is a test for calibration comments to see if there is any word wrapping in the report. Hopefully this long string will cause the report to wrap.
Equipment Type	

The bottom section, 'Calibration Results, Analog', displays a grid of detail records:

Event ID	Seq No.	% Scale	Up/Dn	Input Measure AF	Pri Output AF	Error AF	Input Measure AL	Pri Output AL
CAL000000002	01	0 (PCT)	Up (UP)	0	-1E-06	-41.6667	0	1E-06
CAL000000002	02	50 (PCT)	Up (UP)	5	5	10.4167	5	5
CAL000000002	03	100 (PCT)	Up (UP)	10	10.0003	62.505	10	10.0002
CAL000000002	04	50 (PCT)	Down (DN)	5	5	10.4167	5	5
CAL000000002	05	0 (PCT)	Down (DN)	0	2E-06	-41.6666	0	5E-06

Master/detail datasheets are divided into two sections:


- The master record appears at the top of the datasheet. The master record may appear in a standard datasheet or a custom datasheet, depending upon how the datasheet has been configured.
- The details records appear below the master record in a grid, where row in the grid contains a detail record. Each detail record in the grid is linked to the master record.

The two sections of the datasheet are split by a divider, which by default, is positioned so that exactly half of the workspace is reserved for the master record and half is reserved for the detail grid. Depending upon the content of the datasheets, this default 50/50 split may or may not be appropriate. You can adjust the size of the datasheet sections by dragging the divider up or down, as needed. If you move the divider, its position will be saved and used the next time you access the same datasheet.



Because the master/detail datasheet is a custom form that is displayed within the Record Manager, while you are working with a master/detail datasheet, all



aspects of the Record Manager will be available to you. Master/detail datasheets also provide unique features that are not available in standard datasheets. Specifically, you can perform the following tasks using a master/detail datasheet:

- To create a new detail record, click inside the first blank grid row. The row selector will display an image of a pencil, indicating that you can type information into the grid row.
- To edit an existing detail record, click the row containing the record, and modify the values in the fields as desired.
- To link the master record to another existing detail record, click the  button at the top of the detail grid, and then search for the desired record using a search. Select the record(s) that you want to link to the master record, and click the **Link** button.

**Note:** After you select a detail record to link to the master record, that detail record becomes unavailable in the search results if you select to link another detail record to the master record. For example, if you link Detail Record 1 to Master Record A and then choose to link another detail record to Master Record A, Detail Record 1 will not appear in the search results.

- To unlink a detail record from the master record, select the record that you want to unlink, and click the  button. On the confirmation message that appears, click the **Yes** button to confirm the deletion.
- To save all the detail records, click the  button at the top of the master/detail datasheet.

**Note:** When you save the detail records, if any records cannot be saved, the **Error Report** window appears, which displays a list of records that could not be saved along with a description of why the failure occurred.

- To delete an existing detail record, select the row containing the record you want to delete, and click the **Delete** button above the detail grid or press the **Delete** key on your keyboard. The record is deleted, as is the link between it and the master record.
- To print the master record as an individual record, click the **Print** button on the Record Manager toolbar. An administrative user can create

a custom report to allow you to print both the master and detail records on the same report.

### Using the Shortcut Menu in Custom-Layout Datasheets

In general, the features that are available in standard datasheets (e.g., the Calendar) are also available in custom-layout datasheets. In addition to these features, custom-layout datasheets also offer a shortcut menu that allows you to:

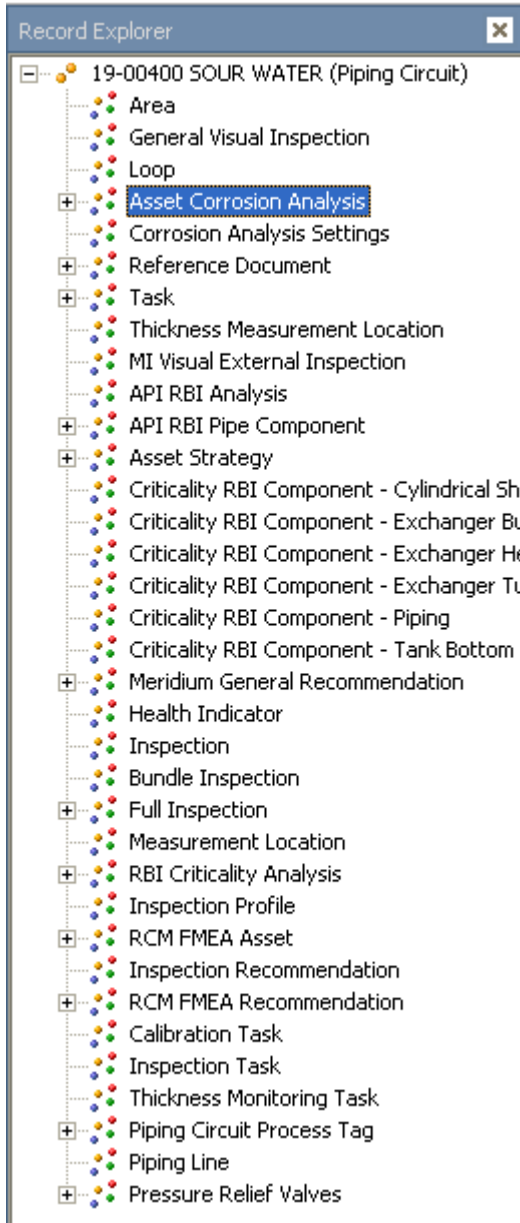
- Cut, copy, and paste values.
- Delete values.
- Select all the text in a cell.
- Undo the last action that you performed on a value (e.g., if you deleted a value, you can undo the deletion to retrieve the value).

## Record Hierarchy

### Overview of the Record Hierarchy

The record hierarchy provides a visual representation of the records in the database and how they relate to one another. The record hierarchy can be displayed in the standard **Record Explorer** pane or a pane that is configured to display a customized view of the record hierarchy using a configured explorer. If you are viewing a pane whose contents have been pre-defined based on a configured explorer, the pane will be labeled according to the name of the configured explorer (as it appears in the Catalog).

The following image displays an example of the record hierarchy as it appears in the **Record Explorer** pane.



In the following topics, we describe the record hierarchy and the features that are provided in the standard **Record Explorer** pane. Note that these features may be slightly different if you are viewing a record in a pane whose contents are determined based on a configured explorer.

## Aspects of the Record Hierarchy

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 and any records that are linked to the root record. The record hierarchy uses icons to help you distinguish between families and records:

 (Family Icon): Designates a family that is related to the root record's family.

 (Record Icon): Designates a record that is linked to the root record.

A plus sign (+) to the left of a family icon indicates that one or more records belonging to that family are linked to the root record. The absence of a plus sign means that no linked records exist for that family. You can expand the family to view additional related families and linked records by clicking the plus sign or by double-clicking the family name. A minus sign (-) indicates that a family is fully expanded.

When you reach the record level, you can double-click any record name to view the record contents in the **Record Manager** workspace.

By default, the record hierarchy is filtered to display only the families that contain a record that is linked to the root record. For example, if the root record belongs to the Centrifugal Pump family, and the Centrifugal Pump family is related to the Failure family, the Failure family would appear in the record hierarchy by default *only* if one or more Failure records were linked to the root Centrifugal Pump record.

The text at the bottom of the **Record Explorer** pane indicates the current filtering option that is applied to the record hierarchy. The record hierarchy can be filtered to display:

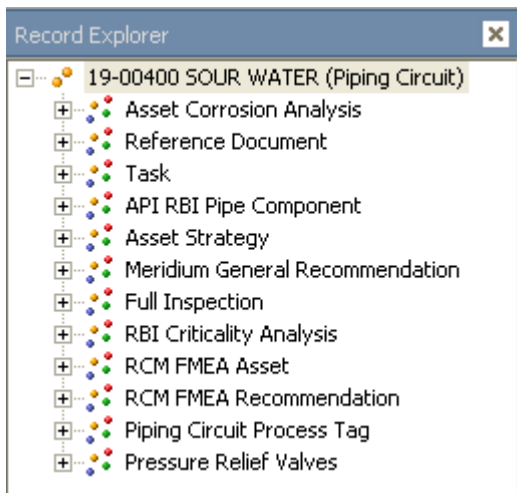
- *Only* families that contain records that are linked to the root record. If the record hierarchy is showing these families, the text below the **Record Explorer** pane is **Related Families Displayed**.

-or-

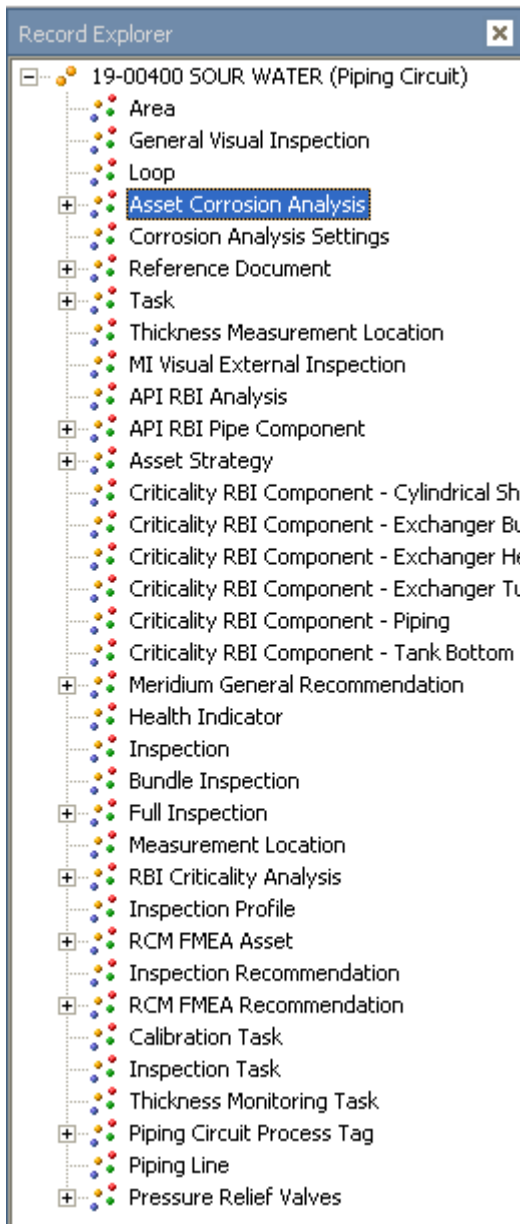
- ALL families that are related to the family of the root record, regardless of whether those families contain records that are linked to the root record. If the record hierarchy is showing these families, the text below the **Record Explorer** pane is **All Families Displayed**.

If desired, you can change the filtering option.

The following figure shows only the families that contain one or more records that are linked to root Unit record.



The next figure, on the other hand, shows all the families that are related to the Unit family.



Each branch in the tree will display up to 1,000 related records at a time. If a family or record is linked to more than 1,000 records, a **More** node will appear at the bottom of the list. You can expand the node to view additional records.

### Shortcut Menu in the Record Hierarchy

When you right-click a node in the record hierarchy, a shortcut menu appears. The menu will look similar to the following menu, but the specific options that appear will vary depending on which family or record you select.

Expand FAIL-2135 08-OCT-00 01-JUN-98's Children Make FAIL-2135 08-OCT-00 01-JUN-98 the root record
Unlink 'FAIL-2135 08-OCT-00 01-JUN-98' from 'PMP-1001 Bottoms Pumps' Move link from 'PMP-1001 Bottoms Pumps' to another 'Centrifugal Pump' View link fields
Send FAIL-2135 08-OCT-00 01-JUN-98 to Open FAIL-2135 08-OCT-00 01-JUN-98 in a new window
Refresh

The menu options that appear will also vary depending on the pane that is used to display the record hierarchy (i.e., Record Explorer pane or a configured explorer).

Depending on the node you select and the current conditions that exist, the menu may display any of the following options:

- **Expand/Collapse <Record>'s Children:** Expands or collapses the selected node to display its children. This menu reads **Expand** when you select an un-expanded node; it reads **Collapse** when you select an expanded node. This menu item is enabled only when you select a node that has one or more children.
- **Create a new <Family record> to link to <root record>:** Displays the **Insert New** dialog box, where you can create a new record and link it to the root record. This menu item appears only when you select a family node of a family whose **Family is Managed by Product Module** check box is *cleared* in the Configuration Manager. If the root record can be linked to only one record in the selected family, this link is enabled only if the root record has not yet been linked to a record in the selected family.
- **Find an existing <selected family record> to link to <root record>:** Displays the **Find an existing <Family record> to link to the <root record>** window, where you can search for an existing record to link to the root record.
- **Create new <selected family record> related to record <root record>:** Opens the Bulk Data Form, where you can create multiple records to link to the root record. This link is enabled only if the root record can be linked to more than one record in the selected family.
- **Manage all <selected family> records related to the <root record>:** Opens the Bulk Data Form, which displays all the records in the currently

selected family that are linked to the root record. If the root record and the selected family are related through more than one relationship, the **Select Link Family** dialog box will appear, where you can select the desired link family. This menu item is enabled only if the following conditions have been met:

- You have permissions to create, edit, and delete records using the Bulk Data Form.
- The root record can be linked to more than one record in the selected family.
- You select a family node of a family whose **Family is Managed by Product Module** check box is *cleared* in the Configuration Manager.

**Note:** If no records have been linked to the root record through the selected family, the **Manage** option instead reads **Create new <selected family> records related to <root record>**, which will open a blank Bulk Data Form so that you create multiple records to link to the root record.

- **Make <Record> the root record:** Adjusts the display of the hierarchy to make the currently selected record the root record. This menu item appears only when you select a record node.
  - **Unlink <Record> from <root record>:** Unlinks the currently selected record from the root record. This menu item appears only when you select a record node. Also, this menu item is enabled only if:
    - You have Delete permissions to the relationship family that relates the family of the selected record to the family of the root record.
- and-
- The **Family is Managed by Product Module** check box (in the Configuration Manager) is *cleared* for the family of the root record.
  - **Move link from <Current Record> to another <Record in the same family>:** Displays the **Find an existing <Family record> to link to the <root record>** window, which you can use to find another record of the



same family as the root record and move the currently selected record link to that record. This menu item is enabled only if:

- You have Delete and Insert permissions to the relationship family that relates the family of the selected record to the family of the root record.
- and-
- The **Family is Managed by Product Module** check box (in the Configuration Manager) is *cleared* for the family of the selected record.
- **View link fields:** Lets you view the link fields associated with the current record.
  - **Send <Record> to:** Displays a submenu with three options that you can use to send a link to the current record to one of three destinations.
  - **Open <Record> in a new window:** Opens the current record in a new instance of the Meridium APM Framework application.
  - **Refresh:** Loads the most current records in the family you selected when you accessed the shortcut menu. For example, if you right-clicked the Piping Circuit family and then clicked **Refresh**, the most current records in the Piping Circuit family would be loaded into the tree. If you right-click the root record and click **Refresh**, the most current records in all sub-families of the root record's family will be loaded into the tree. Note, however, that selecting **Refresh** from the root record node automatically collapses all family nodes. You can then click the plus sign next to a family node to expand it.

## Changing the Filtering Option

To change the filtering option:

1. In the Meridium APM Framework, in the Record Manager, at the bottom of the **Record Explorer** pane, click the text indicating the current filter that is applied. You will see one of the following:
  - **All Families Displayed**
  - **Related Families Displayed**

A submenu appears.

2. On the submenu, click the desired filter option. You can choose one of the following:
  - **Show 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.
  - **Show Only Families that are currently related:** The record hierarchy displays *only* the families that contain records that are linked to the root record.

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

## Changing the Location of the Record Hierarchy

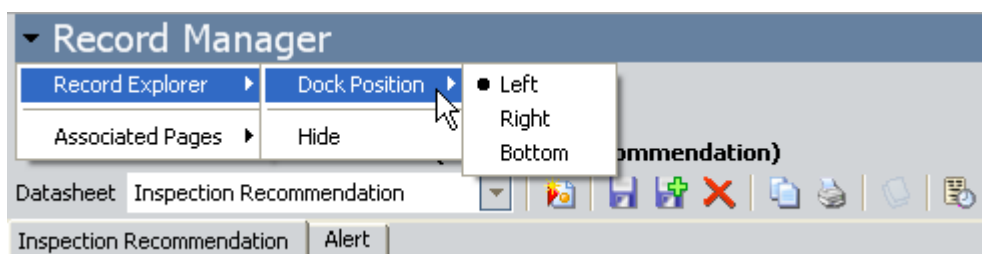
By default, the record hierarchy appears to the left of the datasheet area using either the standard **Record Explorer** pane or a configured explorer. You can, however, move the record hierarchy to a different location or hide it completely.

The following instructions provide details on moving the **Record Explorer** pane. Note that the name of the pane may differ if the record hierarchy is displayed using a configured explorer.

**Note:** The position of the record hierarchy is not saved after you navigate away from the page.

To change the location of the Record Hierarchy:

1. In the Meridium APM Framework, in the Record Manager, on the submenu in the datasheet area, point to **Record Explorer**, and then point to **Dock Position**.




2. On the **Dock Position** submenu, choose one of the following options:
  - **Left:** To dock the Record Hierarchy on the left side of the screen. This is the default location.
  - **Right:** To dock the Record Hierarchy on the right side of the screen.
  - **Bottom:** To dock the Record Hierarchy at the bottom of the screen.

The Record Hierarchy moves to the selected location.

## Hiding and Displaying the Record Hierarchy

The following instructions provide details on hiding the record hierarchy. You can use these instructions if the record hierarchy is displayed using the **Record Explorer** pane or a configured explorer. The following options may be named differently if you are viewing the record hierarchy using a configured explorer.

### To hide the Record Explorer pane completely:


- In the Meridium APM Framework, in the Record manager, click the  button to the left of the header in the **Record Manager** workspace, and on the submenu, point to **Record Explorer** pane, and then click **Hide**.

-or-

- Click the X in the upper right corner of the **Record Explorer** pane.

The **Record Explorer** pane disappears.

### To display the Record Explorer pane:

- In the Meridium APM Framework, in the Record Manager, click the  button to the left of the header in the **Record Manager** workspace, and on the submenu, click **Show Record Explorer**.

The **Record Explorer** pane appears.

## Making a Linked Record the Root Record

You can change the view of the record hierarchy by making a linked record the root record, which is the record that appears at the top of the record hierarchy.

To make a linked record the root record:

1. In the Meridium APM Framework, in the Record Manager, in the **Record Explorer** pane, find the linked record that you want to make the root record.
2. Right-click the record, and click **Make <linked record> the root record**.

The linked record appears at the top of the record hierarchy in place of the previous root record.

## Configured Explorers

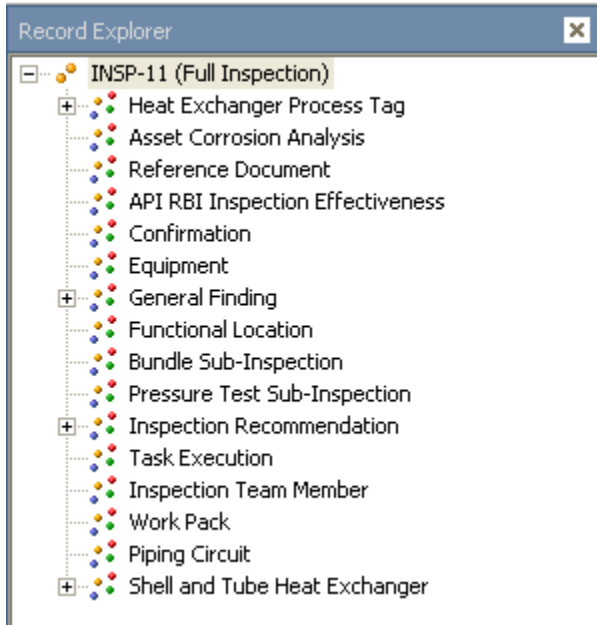
### Overview of Configured Explorers

When records are opened in the Record Manager, a record hierarchy appears, displaying the selected record at the root level and other families and records below it. The record hierarchy can be displayed in the **Record Explorer** pane or in a pane whose contents are driven by a *configured explorer*.

A configured explorer is a Catalog item that can be used to provide a customized view of the record hierarchy when a record is opened in the Record Manager. Configured explorers control:

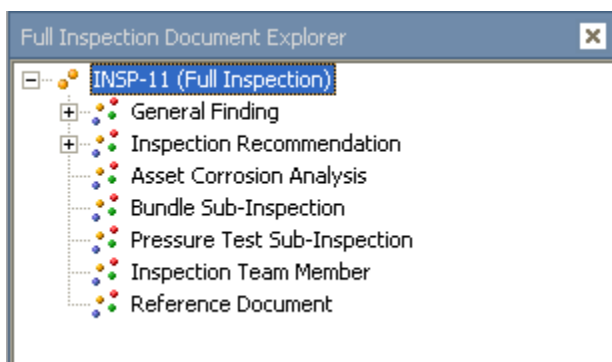
- Which families appear in the record hierarchy.
- Which options are available on the shortcut menu when you right-click an item in the hierarchy.

For example, if you view a General Inspection record in the standard **Record Explorer** pane, the record hierarchy will display every family that is related to the General Inspection family, as shown in the following image.



A configured explorer, on the other hand, lets you specify exactly which related families you want to see in the record hierarchy, the order in which you want to see them, and the options that you want to make available on the shortcut menu when you right-click an item. The baseline configured explorer that is provided for the General Inspection family specifies that four families should be displayed in the following order: General Finding, Inspection Recommendation, Pressure Test Sub-Inspection, and Reference Document.

In the following image, you can see a General Inspection record displayed in a record hierarchy whose contents are driven by this configured explorer. Notice that the pane is titled **General Inspection Document Explorer**, which is the name of the configured explorer as it was saved to the Catalog.



You can create configured explorers in the following ways:

- You can create a configured explorer for a *single* family, which lets you display a record in a record hierarchy whose contents are driven by that configured explorer only if the record belongs to that family.
- You can create one configured explorer for *multiple* families, which lets you display a record in a record hierarchy whose contents are driven by that configured explorer if the record belongs to any of those families.

The preceding example shows the baseline configured explorer defined for the General Inspection family. This configured explorer will be used for viewing records belonging specifically to the General Inspection family. An alternative would be to create ONE configured explorer that will be used to display any Inspection Event record.

After you create a configured explorer, it can be associated with a family via the Configuration Manager. If a configured explorer is associated with a family, any record that you open in that family will be displayed automatically in a record hierarchy that is driven by that configured explorer. Note that if a configured explorer is associated with a family via the Configuration Manager, you can create a URL to display records in that family using a record hierarchy that is driven by an *alternate* configured explorer, if desired.

### About Mapping Fields in Configured Explorers

Configured explorers allow you to transfer values in a root record in the record hierarchy to fields in another record in the record hierarchy. In other words, when you use the shortcut menu in the record hierarchy to create a new record to link to the root record, values that exist in the root record can be used to populate fields in the new record.

If, on the other hand, you use the **Record Explorer** pane to create a record to link to the root record of the record hierarchy, the new record remains a stand-alone record with no awareness of other *data* in the database. This means that no values in the new record will be reflective of other data in the database.

For example, if you open a General Inspection record such that the record hierarchy is controlled by the General Inspection Document explorer, when you create a new General Finding record to link to a root General Inspection record, a field in the General Finding record can be populated with a value based on the mapping that was specified when the General Inspection Document Explorer was last modified.

Note that if you modify the mapping in a configured explorer, only records that you create after modifying the mappings will use these updated mappings.

### An Example of Mapping Fields Using Configured Explorers

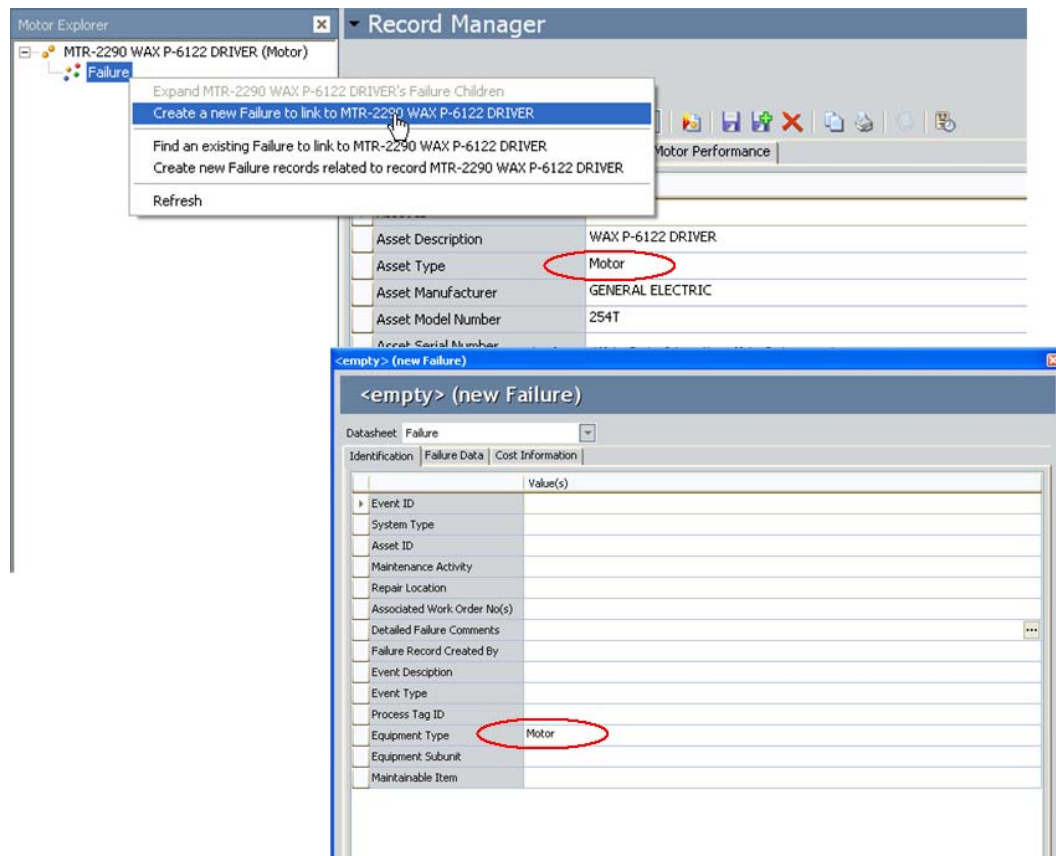
The following example provides details for mapping fields using a configured explorer. This example assumes that you are familiar with creating a configured explorer using the **Definable Explorer Wizard**.

Assume that you want to copy a value from the Asset Type field in a Motor record to the Equipment Type field in an Event record. To do so, you will need to create a configured explorer and map the fields.

To map fields in our example using a configured explorer:

1. Access the **Definable Explorer Wizard**, and select the following options:
  - The *Motor* family as the root family.
  - The *Asset Has Failure* relationship family as the relationship family.
  - The *Failure* family as the related family.
2. On the **Specify Field Mappings** screen, select the **Specify field mappings** check box.
3. While on the **Specify Field Mappings** screen, click the **Create new mapping** link, and then complete the fields as shown in the following image.
4. Save the configured explorer to the desired location in the Catalog.
5. Open a Motor record using the configured explorer.
6. Right-click the root Motor record, and choose to create a Failure record.

When the new Failure record appears, note that the value in the Asset Type field in the Motor record appears by default in the Equipment Type field in the Failure record, as the following image shows.



## Creating a Configured Explorer

The **Definable Explorer Wizard** lets you create or edit a configured explorer, which provides a customized view of the record hierarchy for one or more Meridium APM families. The following instructions will guide you through the process of using the **Definable Explorer Wizard** to create a configured explorer.

The following instructions provide details on accessing the **Definable Explorer Wizard** via the **Tools** menu. Accessing the wizard in this way will take you through the entire process of creating a new configured explorer. Note that other modules (e.g., **Inspection Management**) provide access to the wizard in other ways. Where you begin in the wizard will depend upon how you access the wizard.

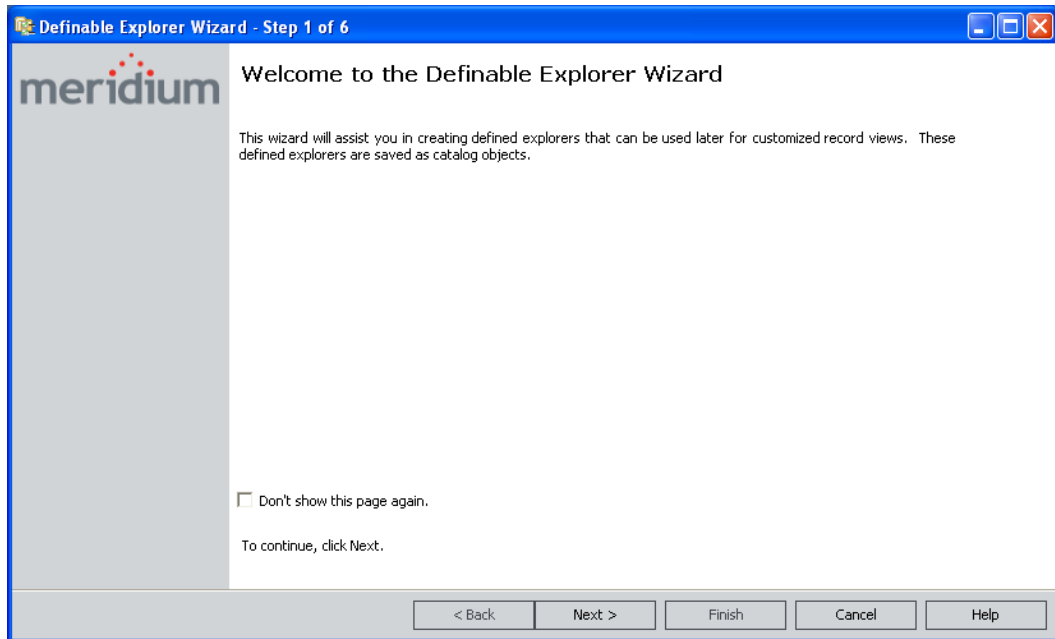
**Note:** After you create a configured explorer, you can construct URLs to display the record hierarchy in a pane whose contents are based on the configured explorer instead of the standard **Record Explorer** pane.



To create a configured explorer:

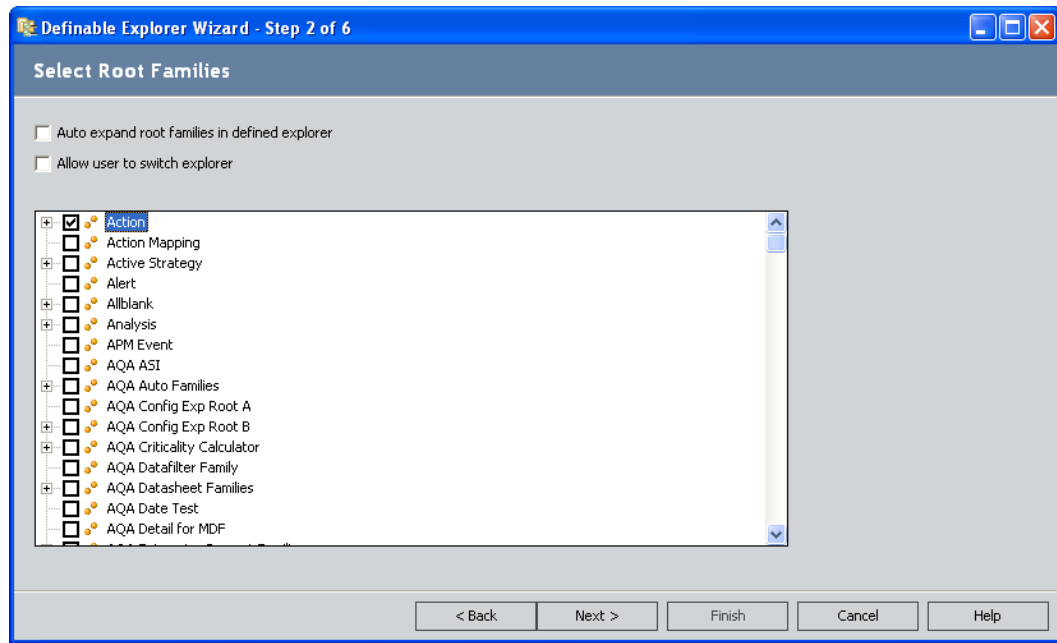
1. In the Meridium APM Framework, on the main menu, click **Tools**, point to **Explorer**, and then click **Build New**.

The **Definable Explorer Wizard** appears, displaying the **Welcome** screen.



2. Click the **Next** button.

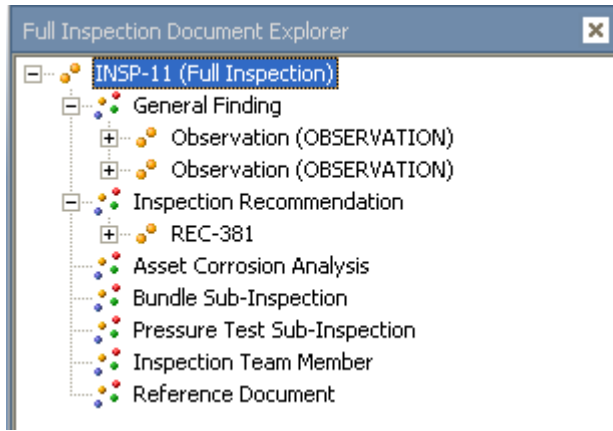
The **Select Root Families** screen appears.



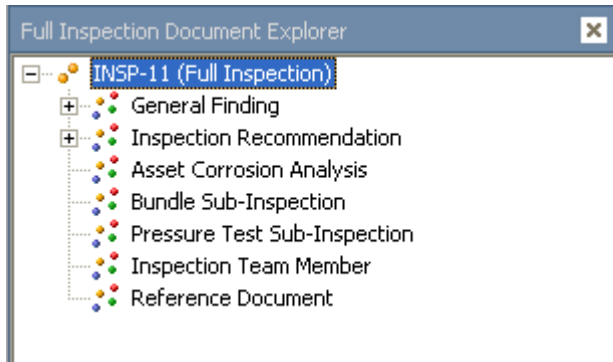
**Note:** This screen displays only active families.

3. Expand the hierarchy until you find the family or families for which you want to create the configured explorer. The families are displayed in alphabetical order. When you have found the desired family, select the corresponding check box. Note the following:
  - If you select only one family, you will be able to use this configured explorer to display records in *that family only* as the root family of the record hierarchy. If you select multiple families, you will be able to use this configured explorer to display a record in any of the selected families as the root family of the record hierarchy.
  - If you select a family, you will be able to use this configured explorer to display records in any subfamily as the root family of the record hierarchy.
  - If you select a subfamily, the name of that family and any parent family is colored in blue.
4. When this configured explorer is used to display records in the record hierarchy, if you want to expand the families to show the records in those families, select the **Auto expand root families in defined explorer** check box.

For example, an expanded record hierarchy would look similar to the following image:

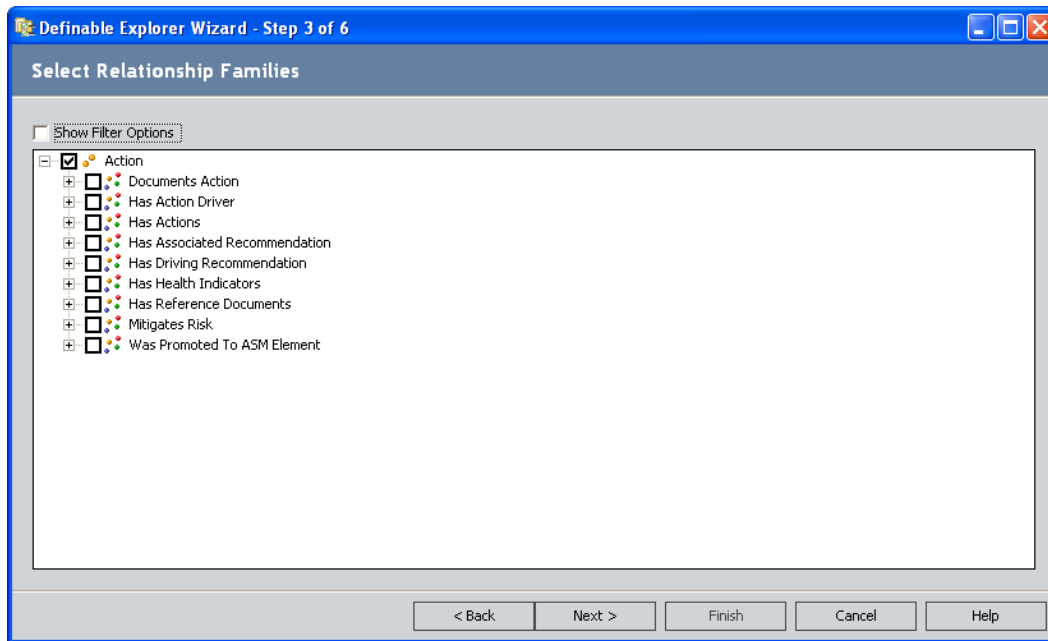


A record hierarchy that is not expanded would look similar to the following image:



5. When this configured explorer is used to display records in the record hierarchy, if you want to allow users to switch between the record hierarchy that is built using this configured explorer and the record hierarchy that is displayed in the standard **Record Explorer** pane, select the **Allow user to switch explorer** check box.
6. Click the **Next** button.

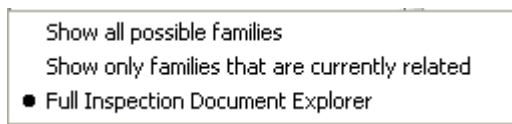
The **Select Relationship Families** screen appears, displaying a list of the relationships in which the selected family participates.



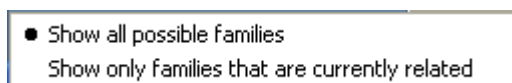
The families are displayed in alphabetical order. If desired, you can use this screen to limit the number of relationships that will appear in the record hierarchy when this configured explorer is used to display records. This screen also contains an option to show the filter options below the record hierarchy, which lets users display all families related to the root family (even if no records exist in that family) or only families that are related that also contain records.

7. Select the **Show Filter Options** check box if you want users to be able to switch between displaying all families related to the root family or only those families that are related that also have existing records.

For an example, if you selected the **Allow user to switch explorer** check box on the previous screen and the **Show Filter Options** check box on this screen, users will see something like this:



If you did not select the **Allow user to switch explorer** check box on the previous screen and you DID select the **Show Filter Options** check box on this screen, users will see something like this:

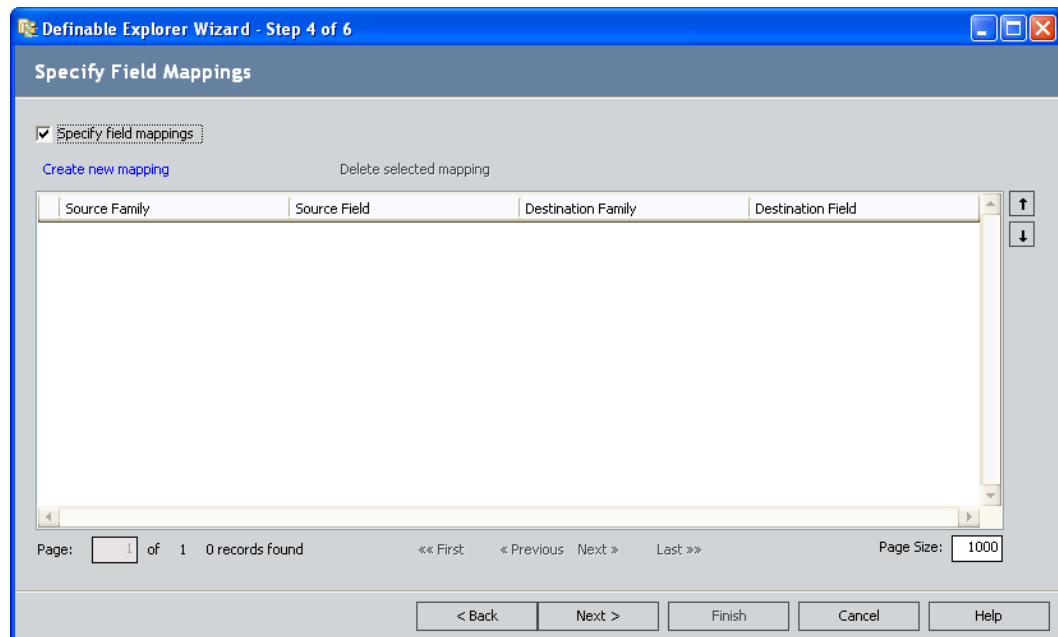


8. On the **Select Relationship Families** screen, select the check boxes that correspond to the relationship families that you want to appear in the record hierarchy when this configured explorer is used to display records. You can display relationships in which the subfamilies of the root family participate.

For example, suppose the root family is *Piping*, the subfamily is *Thickness Measurement Location*, and the subfamilies are *TML Corrosion Analysis* and *Corrosion Analysis Settings*. If you want to show records in all four families in the record hierarchy, you must select the relationships in which those families participate. In this example, the relationships are:

- *Has Datapoints*, where Piping is the predecessor and Thickness Measurement Location is the successor.
  - *Has Corrosion Analysis*, where Thickness Measurement Location is the predecessor and TML Corrosion Analysis is the successor.
  - *Has Corrosion Analysis Settings*, where Thickness Measurement Location is the predecessor and Corrosion Analysis Settings is the successor.
9. Click the **Next** button.

The **Specify Field Mappings** screen appears.



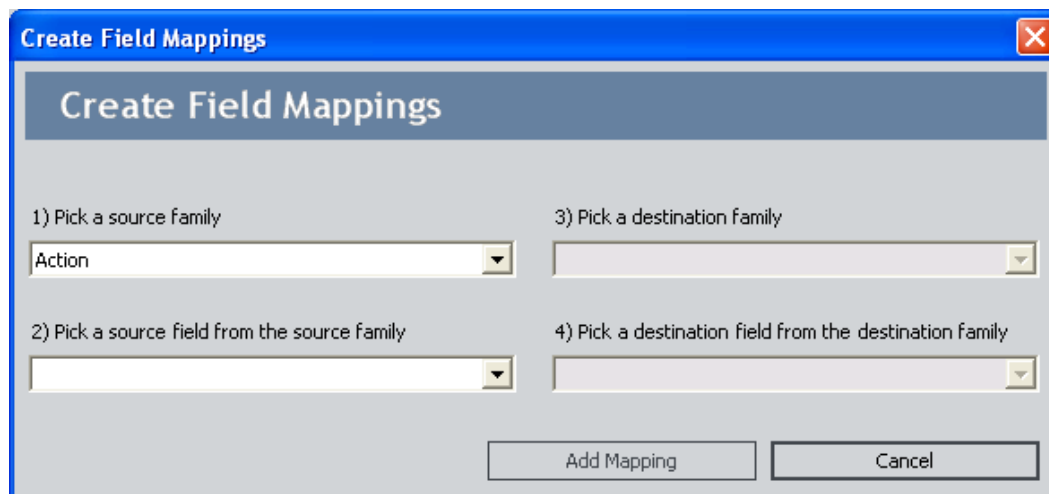
10. If you do not want to specify field mappings, skip to step 18 of these instructions.

-or-

If you want to define field mappings, select the **Specify Field Mappings** check box. When you do so, a grid appears at the bottom of the screen.

11. Click the **Create new mapping** link.

The **Create Field Mappings** dialog box appears, where you can map a field in one family to a field in another family.



12. In the **Pick a source family** list, select the source family for the mapping. The families that appear in this list, are the families that you selected on the **Select Root Families** screen.

13. In the **Pick a source field from the source family** list, select the desired source field.

14. In the **Pick a destination family** list, select the desired destination family.

15. In the **Pick a destination field from the destination family** list, select the destination field.

16. Click the **Add mapping** button.

The **Specify Field Mappings** screen appears again. Your new mapping appears in the list.

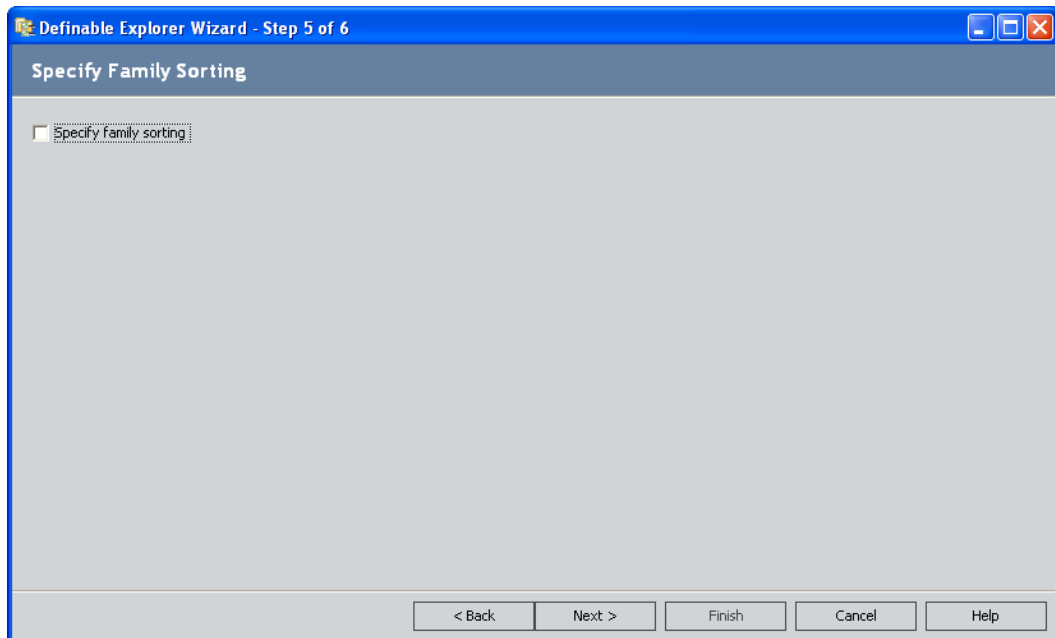
17. On the **Specify Field Mappings** screen, continue configuring the list of mappings. Click the **Create new mapping** link to create another mapping. If you need to delete a mapping, select it in the list, and then click the **Delete selected mapping** link.

The order the fields are displayed represents the order in which the fields will be mapped. You can change the order using the arrow buttons.

**Note:** If a field in a family has been mapped to a field in a subfamily, when you create a new record in the subfamily, it will automatically inherit the value for that field in the family record. If, however, you later *change* the field value in the family record, the field value in the subfamily record will not be updated automatically. You must manually change the value in the subfamily record. If you want to maintain synchronization of family to subfamily values automatically, you must implement custom rules on a case-by-case basis.

18. On the **Specify Field Mappings** screen, click the **Next** button.

The **Specify Family Sorting** screen appears.



19. If you do not want to specify family sorting, skip to step 22 of these instructions. Note that if you do not specify family sorting, the families will appear in the record hierarchy in alphabetical order.

-or-

If you want to define family sorting, select the **Specify Family Sorting** check box. When you do so, a tree appears, displaying the root family and any families that you selected on the **Select Relationship Families** screen.

20. To apply a sorting order to the families that will appear in the record hierarchy when this configured explorer is used to display records, in the tree, sort the families by clicking a family and using the up or down arrow to move it up or down in the list. The families will appear in the record hierarchy in the order that you specify.
21. To apply a sorting order to the *records* that will appear in the record hierarchy in your configured explorer:

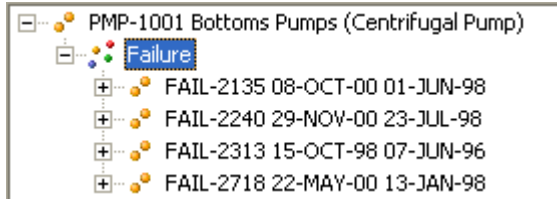
- a. In the tree, select a family.

The following options appear at the bottom of the window:

- **Sort records in ascending order:** Causes the records in the selected family to appear in ascending order.
  - **Sort records in descending order:** Causes the records in the selected family to appear in descending order.
  - **Sort records by record ID:** Causes the records in the selected family to be sorted by Record ID.
  - **Sort records by field:** Causes the records in the selected family to be sorted by field. When this option is selected, a drop down list appears, displaying the fields for the selected family.
- b. Select the desired sorting options. Note that the sorting options that you select in each group of options will be applied to the records.

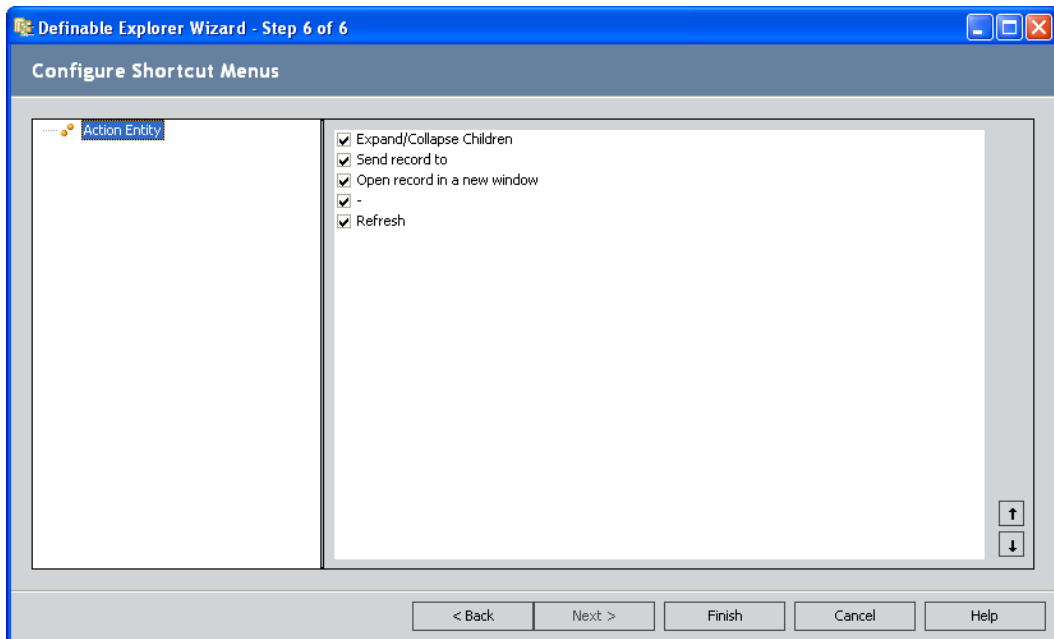




For example, if you select the Failure family and choose the Sort records in ascending order option and the Sort records by record ID option, Failure records would appear in ascending order according to their record IDs, as shown in the following image:



22. On the Specify Family Sorting screen, click the Next button.

The Configure Shortcut Menu screen appears, displaying the sorting specified on the previous Specify Family Sorting screen.



You can configure the shortcut menu that appears when you right-click each family node and record node in the record hierarchy. Family and record nodes appear on the left side of the window, and the menu options appear on the right side of the window. Family nodes are designated by the  symbol, and record nodes are designated by the  symbol.

When you select a family or record node on the left, the menu options on the right change based upon the options that are logical for that

node. For example, if you select a family node, the option **Send record to** does not apply, so it does not appear on the right.

In addition to the options that appear on the shortcut menu in the standard **Record Explorer** pane, the list on the right will also include any links defined on the **Associated Pages** menu and submenus that are defined in the URL Manager for the family selected on the left. For example, if you select **Thickness Measurement Entity** on the left, the options on the right are the links defined on the **Associated Pages** menu and submenus defined for the Thickness Measurement family.

23. Select the node for which you want to configure the shortcut menu, and use the right side of the window to configure the shortcut menu for that node. On the right side of the window, you can:

- Clear the check box for each menu option that you do not want to include.
- Use the up and down arrows to move the options up or down in the shortcut menu.

Note that the dash (-) option represents a menu separator. For example, if you menu is configured like this:

- Expand/Collapse Children
- Create a new record to link to root
- 
- Find an existing record to link to root
- Manage all records related to root
- 
- Refresh

The shortcut menu will look like this:

```
Expand 19-00400 SOUR WATER's Inspection Recommendation Children
Create a new Inspection Recommendation to link to 19-00400 SOUR WATER
-----
Find an existing Inspection Recommendation to link to 19-00400 SOUR WATER
Manage all Inspection Recommendation records related to record 19-00400 SOUR WATER
-----
Refresh
```

If, however, the menu is configured like this:

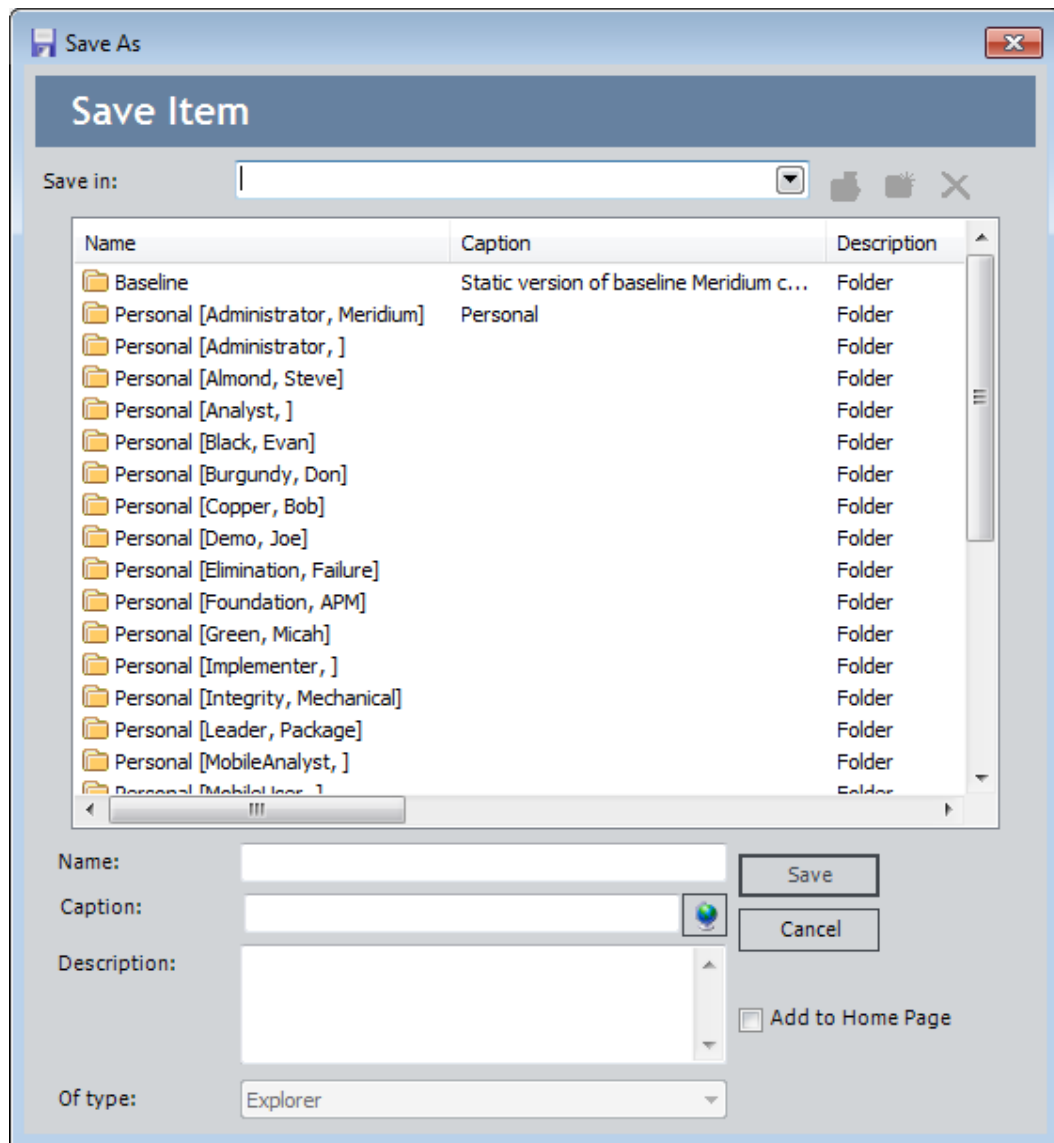
- Expand/Collapse Children
- Create a new record to link to root
- 
- Find an existing record to link to root
- Manage all records related to root
- 
- Refresh

The shortcut menu will look like this:

```
Expand 19-00400 SOUR WATER's Reference Document Children
Create a new Reference Document to link to 19-00400 SOUR WATER
Find an existing Reference Document to link to 19-00400 SOUR WATER
Manage all Reference Document records related to record 19-00400 SOUR WATER
Refresh
```


24. Continue configuring the shortcut menu for each node as desired, and click the **Finish** button when you are finished.

The **Save As** dialog box appears.



25. In the Name text box, type a name for the configured explorer. The name is required and must be unique to the Catalog folder in which you are saving the configured explorer.

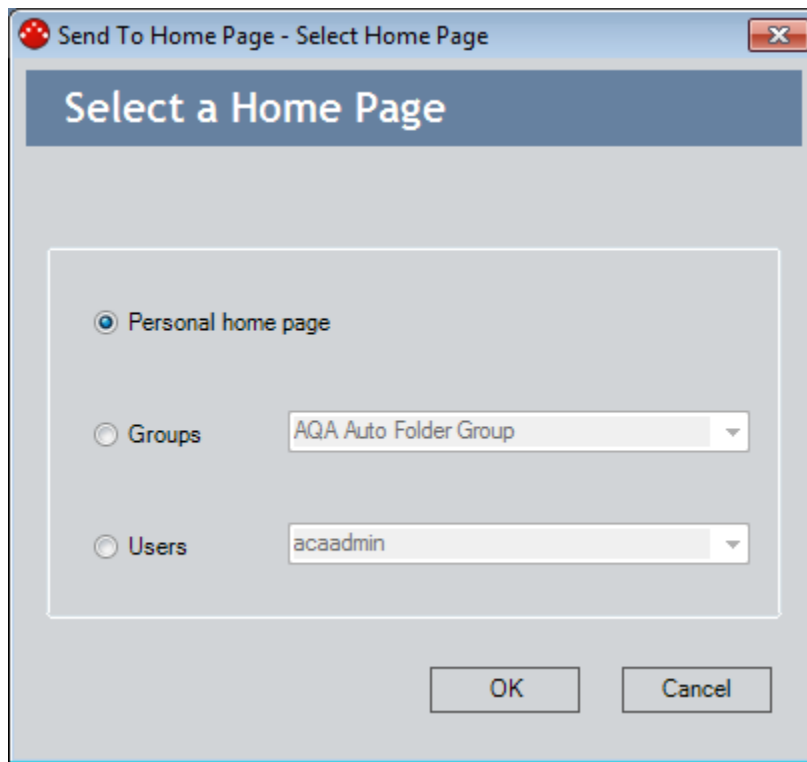
The Caption text box is populated automatically with the value that you typed in the Name text box.

26. If desired, click the  button to manage translations for that string.
27. If desired, type a description of the configured explorer in the Description text box. This is not required to save the configured explorer.

28. If desired, select the **Add to Home Page** check box if you want to add a link to the configured explorer to a Home Page. This is not required to save the configured explorer.
29. Click the **Save** button.

If you:

- Selected the **Add to Home Page** check box, the configured explorer is saved to the Catalog, and the **Send to Home Page - Select Home Page** dialog box is displayed.



Depending upon your membership in the MI Power User Role Security Group and whether or not you are a Super User, you can use the **Send to Home Page - Select Home Page** dialog box provide a link to the dashboard to your Personal Home Page, a Group Home Page, or the Personal Home Page for a particular Security User.

- Did not select the **Add to Home Page** check box, or you have completed the process of adding the configured explorer to a Home Page, the **Save As** dialog box closes, and the configured explorer is saved to the Catalog.

## About Opening a Record in a Configured Explorer

After a configured explorer exists, you can use a URL to open a record in the Record Manager and display it in a record hierarchy that is built using that configured explorer. For example, you might:

- Construct an Associated Page so that when you open a record in the Record Manager, the link on the **Associated Pages** menu will let you display the root record in a record hierarchy whose contents are driven by a configured explorer.
- Add a link to query results to open a given record in the Record Manager, where the contents of the record hierarchy are driven by a configured explorer.
- Create a link on a Home Page that opens a commonly used record in the Record Manager, where the contents of the record hierarchy are driven by a configured explorer.

Note that if a configured explorer has been associated with a family via the Configuration Manager application, any time you open a record in that family without using a user-defined URL, the record hierarchy contents will be driven by the configured explorer. The label for the **Record Explorer** pane will be replaced with the caption defined for the configured explorer Catalog item. For example, if Pump Explorer is associated with the Pump family, when you open a Pump record in the Record Manager, you will see the **Pump Explorer** pane, whose contents are driven by the Pump Explorer.

If, however, a family has been associated with a configured explorer via the Configuration Manager and you create a new configured explorer for that family, you can use a URL to display records in a record hierarchy whose contents are driven by the new configured explorer instead of the configured explorer that is associated with the family. For example, if Pump Explorer is associated with the Pump family and you create Pump Explorer for Inspectors, you can use a URL to display the Pump record in a record hierarchy whose contents are driven by the Pump Explorer for Inspectors instead of the Pump Explorer.

## Opening a Record in a Configured Explorer

A configured explorer is a customized view of the record hierarchy that lets you control the content of the hierarchy when you are viewing records that belong to a particular family. After you have created a configured explorer and saved

it to the Catalog, you can create a hyperlink that will open records in that family in the configured explorer.

Consider the following example:

```
meridium://Registry/RecordManager?FamilyKey=1234567&EntityKey=1234567&ExplorerPath=Public\Meridium\PumpExplorer
```

A link constructed from this URL will open:

- A record with the Entity Key 1234567.
- Which belongs to the family with the Family Key 1234567.
- In the configured explorer called PumpExplorer, which is stored in the Catalog folder \\Public\Meridium.

Alternatively, you could modify this example to construct a link on the **Associated Pages** menu for the Pump family. By configuring a link, you would be able to open Pump records in the configured explorer from the Search results or from the **Associated Pages** menu in the Record Manager. The URL for the link would be:

```
meridium://Registry/RecordManager?FamilyKey=[FMLY_KEY]&EntityKey=[ENTITY_KEY]&ExplorerPath=Public\Meridium\PumpExplorer
```

If you set up a query that returned all Pump records, you could construct a URL on the Asset ID field that would let you open in the PumpExplorer configured explorer any record in the query results. To open records that belonged to different families, however, such as the Centrifugal Pump family and the Reciprocating Pump family, the configured explorer must be configured for each of those families. The URL behind the Asset ID field would be:

```
meridium://Registry/RecordManager?FamilyKey=$FMLY_KEY&EntityKey=$ENTITY_KEY&ExplorerPath=Public\Meridium\PumpExplorer
```

### Creating Records in a Configured Explorer

Unlike working with records that are displayed using the standard **Record Explorer** pane, when you are viewing a record and the record hierarchy contents are driven by a configured explorer, when you choose to create a new record in the root family, you will not be prompted to select the family in which you want to create the new record. Instead, you will be prompted to

save the current record, if you have modified it, and the new record will be created in the *same* family as the family of the current root record. In this way, you can create multiple records in the root family, one after the other.

You can create new records in families that are not displayed at the root level of the hierarchy if the shortcut menu has been configured to display the **Create a new <record> to link to <record>** option when a given family is selected. If this option is not available on the shortcut menu, you can configure a link on the **Associated Pages** menu to display the new record in a separate window. For information on constructing URLs, see the URLs section of the Help.

### Modifying a Configured Explorer

The **Definable Explorer Wizard** lets you create or modify a configured explorer, which provides a customized view of the record hierarchy for a Meridium APM family. The following instructions guide you through the process of using the **Definable Explorer Wizard** to modify a configured explorer.

The following instructions provide details on accessing the **Definable Explorer Wizard** via the **Tools** menu. Accessing the wizard in this way will take you through the entire process of modifying an existing configured explorer. Note that other modules (e.g., Inspection Management) provide access to the wizard in other ways. Note that your specific workflow (i.e., where you begin in the wizard) will depend on how you access the wizard.

#### To modify a configured explorer:

1. In the Meridium APM Framework, on the main menu, click **Tools**, point to **Explorer**, and then click **Open Existing**.

The **Open an existing Explorer** dialog box appears.

2. Navigate to the configured explorer that you want to modify, select it, and click the **Open** button.

The **Definable Explorer Wizard** appears, displaying the **Welcome** screen.

3. Click the **Next** button.

The **Select Root Families** screen appears.

**Note:** This screen displays *only* active families.



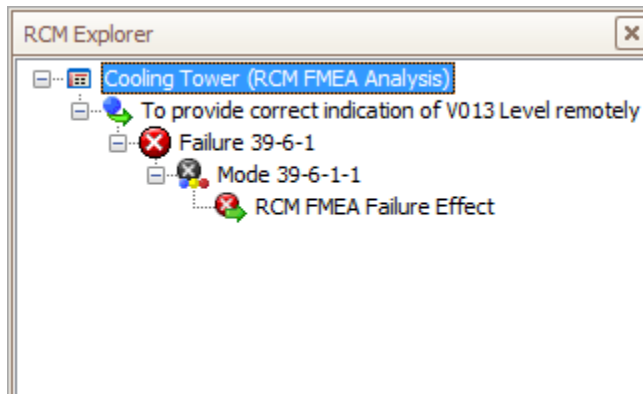
4. Expand the hierarchy until you find the family for which the configured explorer is configured. The families are displayed in alphabetical order. When you have found the desired family, select the corresponding check box. Note the following:
  - If you select only one family, you will be able to use this configured explorer to display records in *that family only*. If as the root family of the record hierarchy. If you select multiple families, you will be able to use this configured explorer to display a record in any of the selected families as the root family of the record hierarchy.
  - If you select a family, you will be able to use this configured explorer to display records in any subfamily as the root family of the record hierarchy.
  - If you select a subfamily, the name of that family and any parent family is colored in blue.
5. When this configured explorer is used to display records in the record hierarchy, if you want to modify the configured explorer for the currently selected family (i.e., if you do not want to modify the root family), accept the existing selection.

-or-

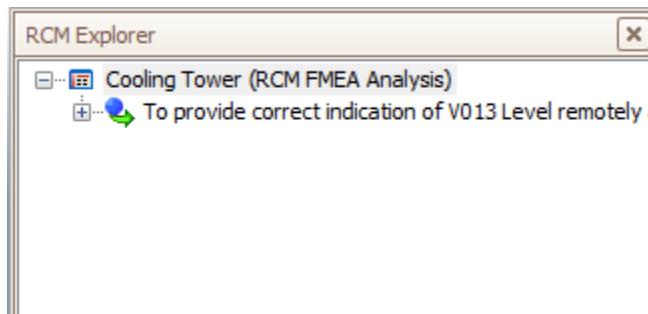
If you want to modify the family for which the configured explorer is configured, clear the selected check box, and select the desired check box.

6. If you want to expand the families that are displayed in the record hierarchy in the configured explorer to show any records in those families, select the *Auto expand root families in defined explorer* check box if it is not already selected.

For example, an expanded Configured Explorer would look similar to the following image:



A Configured Explorer that is not expanded would look similar to the following image:

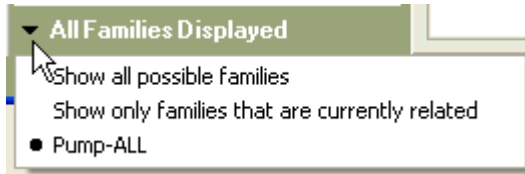


7. If you want to allow users to switch between the record hierarchy that is built using this configured explorer and the record hierarchy that is displayed in the standard **Record Explorer** pane, select the **Allow user to switch explorer** check box.
8. Click the **Next** button.

The **Select Relationship Families** screen appears, displaying a list of the relationships in which the selected family participates. The families are displayed in alphabetical order. If desired, you can use this screen to limit the number of relationships that will appear in the record hierarchy when this configured explorer is used to display records. This screen also contains an option to show the filter options below the record hierarchy, which lets users display all families related to the root family (even if no records exist in that family) or only families that are related that also contain records.

9. Select the **Show Filter Options** check box if you want users to be able to switch between displaying all families related to the root family or only those families that are related that also have existing records.

For an example, if you selected the **Allow user to switch explorer** check box on the previous screen and the **Show Filter Options** check box on this screen, users will see something like this:



If you did not select the **Allow user to switch explorer** check box on the previous screen and you DID select the **Show Filter Options** check box on this screen, users will see something like this:



10. On the **Select Relationship Families** screen, select the check boxes that correspond to the relationship families that you want to appear in the record hierarchy when this configured explorer is used to display records. You can display relationships in which the subfamilies of the root family participate.

For example, if the root family is *Piping*, the subfamily is *Thickness Measurement Location*, and the grandchild families are *TML Corrosion Analysis* and *Corrosion Analysis Settings*. If you want to show records in all four families in the configured explorer, you must select the relationships in which those families participate. In this example, the relationships are:

- *Has Datapoints*, where Piping is the predecessor and Thickness Measurement Location is the successor.
- *Has Corrosion Analysis*, where Thickness Measurement Location is the predecessor and TML Corrosion Analysis is the successor.
- *Has Corrosion Analysis Settings*, where Thickness Measurement Location is the predecessor and Corrosion Analysis Settings is the successor.

11. Click the **Next** button.

The **Specify Field Mappings** screen appears.

12. If you do not want to specify field mappings, skip to Step 20 of these instructions.

-or-

If you want to define field mappings, select the **Specify Field Mappings** check box. When you do so, a list appears at the bottom of the screen.

13. Click the **Create new mapping** link.

The **Create Field Mappings** dialog box appears.

On the **Create Field Mappings** dialog box, you can map a field in one family to a field in another family.

14. In the **Pick a source family** list, select the source family.
15. In the **Pick a source field from the source family** list, select the desired source field.
16. In the **Pick a destination family** list, select the desired destination family.
17. In the **Pick a destination field from the destination family** list, select the destination field.
18. Click the **Add mapping** button.

The **Specify Field Mappings** screen appears again. Your new mapping appears in the list.

19. On the **Specify Field Mappings** screen, continue configuring the list of mappings. Click the **Create new mapping** link to create another mapping. If you need to delete a mapping, select it in the list, and then click the **Delete selected mapping** link.

The order the fields are displayed represents the order in which the fields will be mapped.

For example, if the fields are listed in this order:

Source Family	Source Field	Destination Family	Destination Field
► Piping Circuit	Asset ID	Inspection Recommendation	Asset ID
Piping Circuit	Asset Type	Inspection Recommendation	Asset Type

...the fields on a new Inspection Recommendation record will be populated in this order:

- Asset ID
- Asset Type

You can change the order using the arrow buttons.

**Note:** If a field in a family has been mapped to a field in a subfamily, when you create a new record in the subfamily, it will automatically inherit the value for that field in the family record. If, however, you later *change* the field value in the family record, the field value in the subfamily record will not be updated automatically. You must manually change the value in the subfamily record. If you want to maintain synchronization of family to subfamily values automatically, you must implement custom rules on a case-by-case basis.

20. On the **Specify Field Mappings** screen, click the **Next** button.

The **Specify Family Sorting** screen appears.

21. If you do not want to specify family sorting, skip to step 24 of these instructions. Note that if you do not specify family sorting, the families will appear in the record hierarchy in alphabetical order.

-or-

If you want to define family sorting, select the **Specify Family Sorting** check box. When you do so, a tree appears, displaying the root family and any families that you selected on the **Select Relationship Families** screen.

22. To apply a sorting order to the families that will appear in the record hierarchy when this configured explorer is used to display records, in the tree, sort the families by clicking a family and using the arrow buttons to move it up or down in the list. The families will appear in the record hierarchy in the order that you specify.

23. To apply a sorting order to the *records* that will appear in the record hierarchy in your configured explorer:

a. In the tree, select a family.



The following options appear at the bottom of the window:

- **Sort records in ascending order:** Causes the records in the selected family to appear in ascending order, according to their record IDs.
  - **Sort records in descending order:** Causes the records in the selected family to appear in descending order, according to their record IDs.
  - **Sort records by record ID:** Causes the records in the selected family to be sorted by Record ID.
  - **Sort records by field:** Causes the records in the selected family to be sorted by field. When this option is selected, a drop down list appears, displaying the fields for the selected family.
- b. Select the desired sorting options. Note that the sorting options that you select in each group of options will be applied to the records.

For example, if you select the Failure family and choose the **Sort records in ascending order** option and the **Sort records by record ID** option, Failure records would appear in the record hierarchy in ascending order according to their record IDs.

24. Click the **Next** button.

The **Configure Shortcut Menus** screen appears, displaying the sorting specified on the previous **Specify Family Sorting** screen.

You can configure the shortcut menu that appears when you right-click each family node and record node in the Configured Explorer. Family and record nodes appear on the left side of the window, and the menu options appear on the right side of the window. Family nodes are designated by the  symbol, and record nodes are designated by the  symbol.

When you select a family or record node on the left, the menu options on the right change based upon the options that are logical for that node. For example, if you select a family node, the option **Send record to** does not apply, so it does not appear on the right.

In addition to the options that appear on the shortcut menu in the standard **Record Explorer** pane, the list on the right will also include any links defined on the **Associated Pages** menu and submenus that are defined in the URL Manager for the family selected on the left. For example, if you select **Thickness Measurement Entity** on the left, the options on the right are the links defined on the **Associated Pages** menu and submenus defined for the Thickness Measurement family.

25. Select the node for which you want to configure the shortcut menu, and use the right side of the window to configure the shortcut menu for that node. On the right side of the window, you can:
  - Clear the check box for each menu option that you do not want to include.
  - Use the up and down arrows to move the options up or down in the shortcut menu.

Note that the dash (-) option represents a menu separator.

For example, if the menu is configured like this:

- Expand/Collapse Children
- Create a new record to link to root
- 
- Find an existing record to link to root
- Manage all records related to root
- 
- Refresh

The shortcut menu will look like this:

```

Expand 19-00400 SOUR WATER's Inspection Recommendation Children
Create a new Inspection Recommendation to link to 19-00400 SOUR WATER
-----
Find an existing Inspection Recommendation to link to 19-00400 SOUR WATER
Manage all Inspection Recommendation records related to record 19-00400 SOUR WATER
-----
Refresh
    
```

If, however, the menu is configured like this:

- Expand/Collapse Children
- Create a new record to link to root
- 
- Find an existing record to link to root
- Manage all records related to root
- 
- Refresh

The shortcut menu will look like this:

```
Expand 19-00400 SOUR WATER's Reference Document Children
Create a new Reference Document to link to 19-00400 SOUR WATER
Find an existing Reference Document to link to 19-00400 SOUR WATER
Manage all Reference Document records related to record 19-00400 SOUR WATER
Refresh
```

26. Continue configuring the shortcut menu for each node as desired, and click the **Finish** button when you are finished.

Your changes to the configured explorer are saved.

## Associating Families with Configured Explorers

### About Associating Families With Configured Explorers

If a configured explorer has been created and saved in the Meridium APM Framework application, you can associate that configured explorer with a family via the Configuration Manager. After you do so, any record that you open in that family using the Meridium APM Framework application or the Meridium APM Web Framework will display that record in the record hierarchy using the configured explorer. You can associate a configured explorer with multiple families if desired.

Associating a configured explorer with a family does not automatically associate it with any subfamilies of the family. You must manually associate the configured explorer with the desired families. Note, however, that if a configured explorer has been configured with a family as the root family, you can display records from subfamilies using that configured explorer via a URL.

Note also that if you associate a family with a configured explorer, users can override that selection by creating a new configured explorer and using a URL to display records in the record hierarchy through the configured explorer



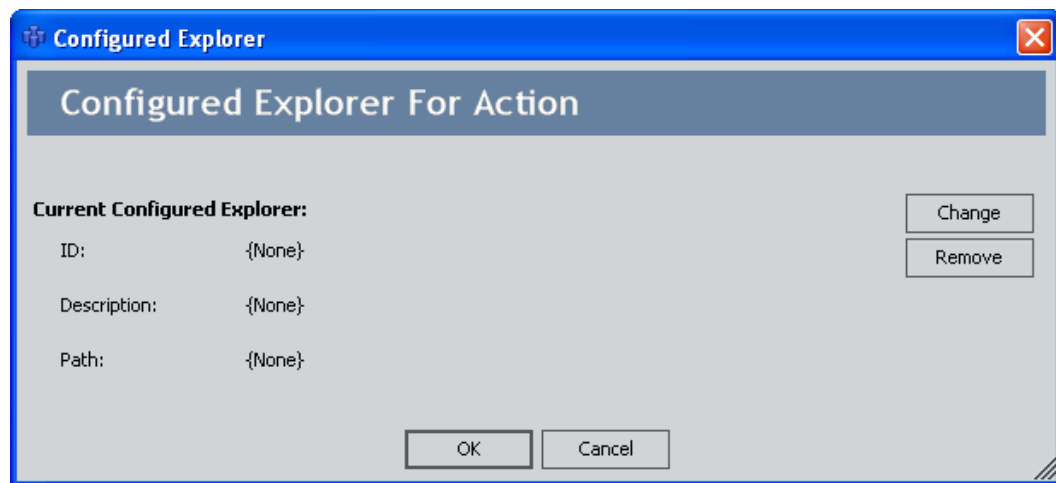
instead of the one you associated with the family via the Configuration Manager.

### Associating a Family With a Configured Explorer

To associate a family with a configured explorer:

1. In the Configuration Manager, on the **Entity Family** tab, select the family with which you want to associate the configured explorer.
2. In the Tasks section, click the **Manage Configured Explorer** link.

The Configured Explorer dialog box appears.



3. Click the **Change** button.

The **Select an Explorer** dialog box appears.

4. Navigate to the Catalog folder in which the configured explorer is stored, select the configured explorer, and click the **Open** button.

The **Configured Explorer** dialog box appears again, and the ID, Description, and Path fields are populated.

**Note:** The ID is the name of the configured explorer in the Catalog. The Description may or may not be populated, depending on whether a description was saved with the configured explorer.

5. Click **OK**.

The **Configured Explorer** dialog box closes.

6. At the bottom of the **Physical Storage** section, click the **Save** link.

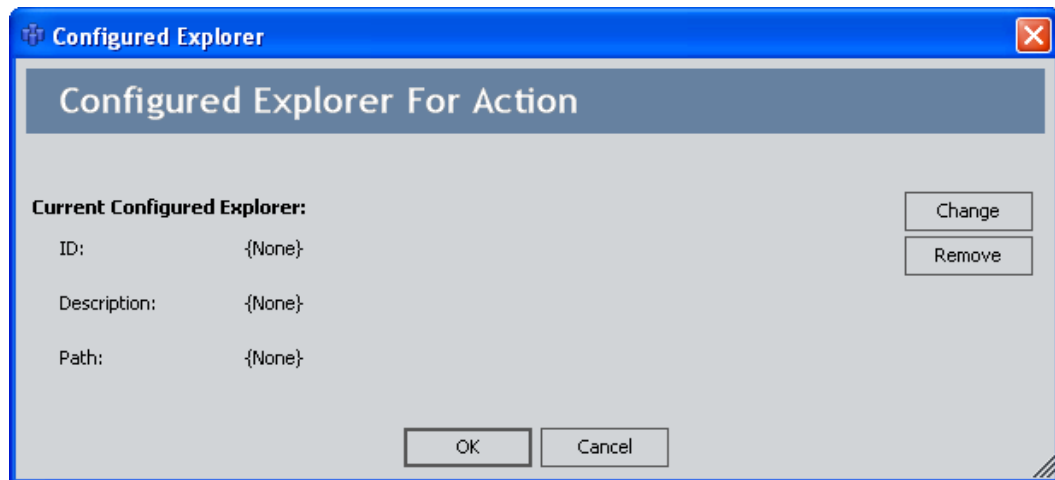
A message appears, indicating that the family was updated successfully.

### Removing the Association Between a Configured Explorer and a Family

To remove the association between a configured explorer and a family:

1. In the Configuration Manager, on the **Entity Family** tab, select the family you want to disassociate with the configured explorer.
2. In the Tasks section, click the **Manage Configured Explorer** link.

The **Configured Explorer** dialog box appears.



3. Click the **Remove** button.

The **ID**, **Description**, and **Path** values change to **{None}**.

4. Click **OK**.

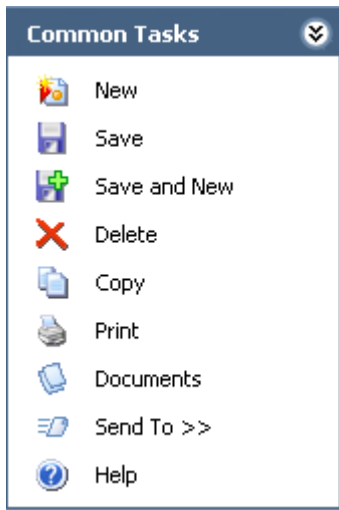
The **Configured Explorer** dialog box closes.

5. At the bottom of the **Physical Storage** section, click the **Save** link.

A message appears, indicating that the family was updated successfully.

## Task Menus

### Common Tasks Menu



The **Common Tasks** menu on the **Record Manager** page contains the following links:

- **New:** Displays the **Select Family** dialog box, where you can choose a family for which to create a new record.
- **Save:** Saves the current record, including any modifications that you have made.
- **Save and New:** Saves the current record and displays a blank datasheet that you can use to create a new record. The new record will automatically be added to the family of the current record.
- **Delete:** Deletes the current record after asking for confirmation.
- **Copy:** Displays a new datasheet, into which all the information except the Record ID from the current record has been copied. You can use the datasheet to create a new record based on the current record.
- **Print:** Displays the **Preview** window, from which you can print the information associated with the current record. .
- **Documents:** Displays the **Reference Documents** window, where you can view, edit, and add reference documents for the current record.

- **Send To:** Displays a submenu with options that let you provide a link to the current page on your desktop (create shortcut), in an email message, or on a Home Page.

**Note:** When you use the **Send To** feature in the Record Manager, the Datasheet ID is included in the URL that is generated. In this way, when you access the record using the link, the Record Manager will default to the datasheet that was displayed at the time the link was sent.

- **Help:** Display the context-sensitive Help topic for the Record Manager.

## Associated Pages Menu

The Record Manager displays the **Associated Pages** menu, which may or may not display links, depending on the type of record you are viewing. Links on the **Associated Pages** menu are defined for families via the Meridium APM URL Manager. Some preconfigured links are delivered with the Meridium APM product. Others may be configured by an administrative user. The links that you see here will likely be intuitive, as they will apply specifically to the type of record you are viewing and the types of tasks you can perform for that record.

## Revision History

### About Revision History

Via the Configuration Manager, you can specify for a given field whether or not you want to keep track of the revision history for that field. When this option is enabled for a field, Meridium 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 **Field Change History** dialog box, which is available from the datasheet.
- The **Field History Records** query, which is provided in the baseline Meridium APM database in the following Catalog folder:  
\\Public\Meridium\Modules\Core.

The following figure shows an example of a record's revision history as it is displayed on the **Field Change History** dialog box.

Field	Changed On	Changed By	New Value	Previous Value
Asset Installation Date	5/18/2010 9:08 AM	Administrator, Meridium	5/19/2010 12:00:00 AM	5/18/2010 12:00:00 AM
Asset Status	5/18/2010 9:08 AM	Administrator, Meridium	Active	Inactive

From this example, you can see that revision history has been enabled on the Asset Installation Date field and the Asset Status field. Note that revision history may be enabled on other fields, but if at least two values have not been saved in those fields, you will not see them in the **Field Change History** dialog box.

You can also see from the example that the first value entered in the Asset installation Date field was 5/18/2010 at 9:08 A.M. This value was changed to 5/19/2010 at 9:08 A.M. on May 18, 2010.

Additionally, you can see that the first value entered in the Asset Status field was *Inactive*. This value was changed to *Active* at 9:08 A.M. on May 18, 2010.


**Note:** The time recorded with the change is the time that the record was saved.

Note also that the **Field Change History** dialog box displays the revision history for all fields for which revision history was once enabled, regardless of whether the revision history is *currently* enabled in the Configuration Manager. This means that if revision history is enabled for the Asset Installation Date field and the Asset Status field on May 18, 2010, you can change the Asset Installation Date and Asset Status values as many times as necessary and see those changes reflected in the **Field Change History** dialog box. If, however, revision history is *disabled* for the Asset Installation Date field on May 20, 2010, you will still see the Asset Installation Date field in the **Field Change History** dialog box, but you will see only the changes that were made up to May 20, 2010. Any changes made after May 20, 2010, will not appear in the **Field Change History** dialog box.

Note that in order for a value to appear in the **Field Change History** dialog box, the record must have been *saved* with the value.

## Accessing the Field Change History Dialog Box

To access the Field Change History dialog box:

1. In the Meridium APM Framework, open in the Record Manager the record whose field history you want to view.
2. On the datasheet toolbar, click the  button.

The **Field Change History** dialog box appears, displaying the revision history for all fields for which revision history exists.

**Note:** If the revision history feature has not been enabled in the Configuration Manager for any fields, a message will appear, indicating that no revision history is available.

3. When you are finished viewing the revision history, click the **Close** button to close the dialog box.

## Linking Records

### About Linking Records

You can create links between records in two ways:

- You can link an existing record to a record that already exists in the database.
- You can link an existing record to a new record that you create for the purpose of linking.

### Linking Two Existing Records

To create a link between two existing records:

1. In the Meridium APM Framework, in the Record Manager, open the record that you want to link to another record.

The record hierarchy displays the families whose records can be linked to the root record.

2. In the **Record Explorer** pane, find the family of the record that you want to link to the root record.
3. Right-click the family name, and click **Find an existing <Family record> to link to the <root record>**.
  - If more than one relationship has been defined in the Configuration Manager relating the selected family to the family of the root record, the **Select Link Family** dialog box appears.
    - a. On the **Select Link Family** dialog box, select the check box for the relationship family you want to use to link the records.
    - b. Click the **Select link family** button.

The **Find an existing <Family record> to link to the <root record>** window appears. Notice that the family you selected appears by default in the **Search In** field.

-or-

- If only one relationship has been set up in the Configuration Manager for the associated families, the **Find an existing <Family record> to link to the <root record>** window appears, displaying the selected family in the **Search In** field.
4. On the **Find an existing <Family record> to link to the <root record>** window, in the **Look For** text box, type a keyword that will find the record that you want to link to the root record.
  5. Click the **Find Now** button.

Your search results appear in a list below the search form.

6. Select the desired record, and click the **Link to Selected Record** button, which appears at the bottom of the page.

The **Find an existing <Family record> to link to the <root record>** window closes, revealing the Record Manager. The record you selected from the search results is linked to the root record.

## Linking an Existing Record to a New Record

To link an existing record to a new record:

1. In the Meridium APM Framework, in the Record Manager, open the record for which you want to create a new link.

The record hierarchy displays the families whose records can be linked to the root record.

2. Find the family in which you want to create the new record.
3. Right-click the family, and click **Create a new [Family record] to link to [root record]**.
  - If more than one relationship has been defined in the Configuration Manager relating the selected family to the family of the root record, the **Select Link Family** dialog box appears.
    - a. On the **Select Link Family** dialog box, select the check box for the relationship family you want to use to link the records.
    - b. Click the **Select link family** button.

A blank datasheet for the selected family appears in a new window.

-or-

- If only one relationship has been set up in the Configuration Manager for the associated families, a blank datasheet for the selected family appears in a new window.
4. Complete the fields on the datasheet as desired.
  5. Click **OK**.

The new record is saved to the database, and the new link is created.



## Moving Links Between Records

At times, you may need to move record links. For example, you might need to move links if:

- The record was originally linked to the wrong record.
- A piece of equipment moves to a different location within the facility.

You can move record links only if the cardinality of the relationship is configured appropriately. For example, if one Work Order record can be linked to only one Pump record, you cannot move the link between Work Order 123 and Pump A by linking Work Order 123 to another Pump record.

To move a record link:

1. In the Meridium APM Framework, in the Record Manager, open the record that has links that you want to move.
2. In the **Record Explorer** pane, find the record whose link you want to move.
3. Right-click the record, and click **Move link from <root record> to <Family record>**.

The **Find an existing <Family record> to link to the <root record>** window appears.

4. Search for the record to which you want to re-link the selected record.
5. In the search results, select the desired record, and click the **Link to Selected Record** button.

**Note:** If the relationship cardinality is not configured to allow multiple records of the family in the **Search In** field to be linked to records in the family you selected in the **Record Explorer** pane, the search will not display any results. This does not necessarily indicate that no records exist in the family that appears in the **Search In** field.

The **Find an existing <Family record> to link to the <root record>** window closes, revealing the Record Manager, where the link has been

removed from the root record. You can do a search to see that the link has been moved to the record that you selected.

## Unlinking Records

If desired, you can unlink two records after opening either of the two records in the Record Manager.

To unlink records:

1. In the Meridium APM Framework, in the Record Manager, open the desired record.
2. In the **Record Explorer** pane, right-click the record to which the root record is linked, and click **Unlink <record> from <root record>**.
  - If only one relationship has been set up in the Configuration Manager for the associated families, a confirmation message appears, asking if you really want to remove the link. In this case, skip to step 6 of these instructions.

-or-

- If more than one relationship has been defined in the Configuration Manager relating the selected entity family to the family of the root record, the **Select Link(s) to Remove** dialog box appears.
4. Select the check box for the relationship family you want to use to unlink the records. To remove all links between the selected record and the root record, select the **Select all items?** check box.
  4. Click the **Remove select link(s)** button.

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

5. Click the **Yes** button.

The link is removed.

## Modifying Records in the Record Manager

To modify a record in the Record Manager:

1. In the Meridium APM Framework, open the record that you want to modify.
2. In the **Datasheet** list, which appears at the top of the datasheet, select the desired datasheet.

**Note:** The **Datasheet** list will display multiple datasheets only if more than one datasheet has been configured for the family to which the record belongs.

3. Modify the fields on the datasheet as desired.
4. On the **Common Tasks** menu, click the **Save** link.

Your changes are saved to the database.

## Viewing the Datasheet for a Relationship Family

If fields have been defined for a relationship family via the Configuration Manager, when you use that relationship family to link two records, you can record information about the link in those fields. For instance, if the Pump family is related to the Failure family through the Asset Has Failures relationship, when you create a link between a Pump record and a Failure record, you can record information about that link using the fields that have been defined for the Asset Has Failures relationship family.

Note that if you move the link and fields have been defined for the associated relationship family, any values in those fields will be removed. If needed, you can access the relationship fields and type the values that apply to the newly created relationship.

To view the properties of a link:

1. In the Meridium APM Framework, in the Record Manager, in the **Record Explorer** pane, right-click the link.

A shortcut menu appears.

2. Select **View link fields** to view the fields that are available for the link.

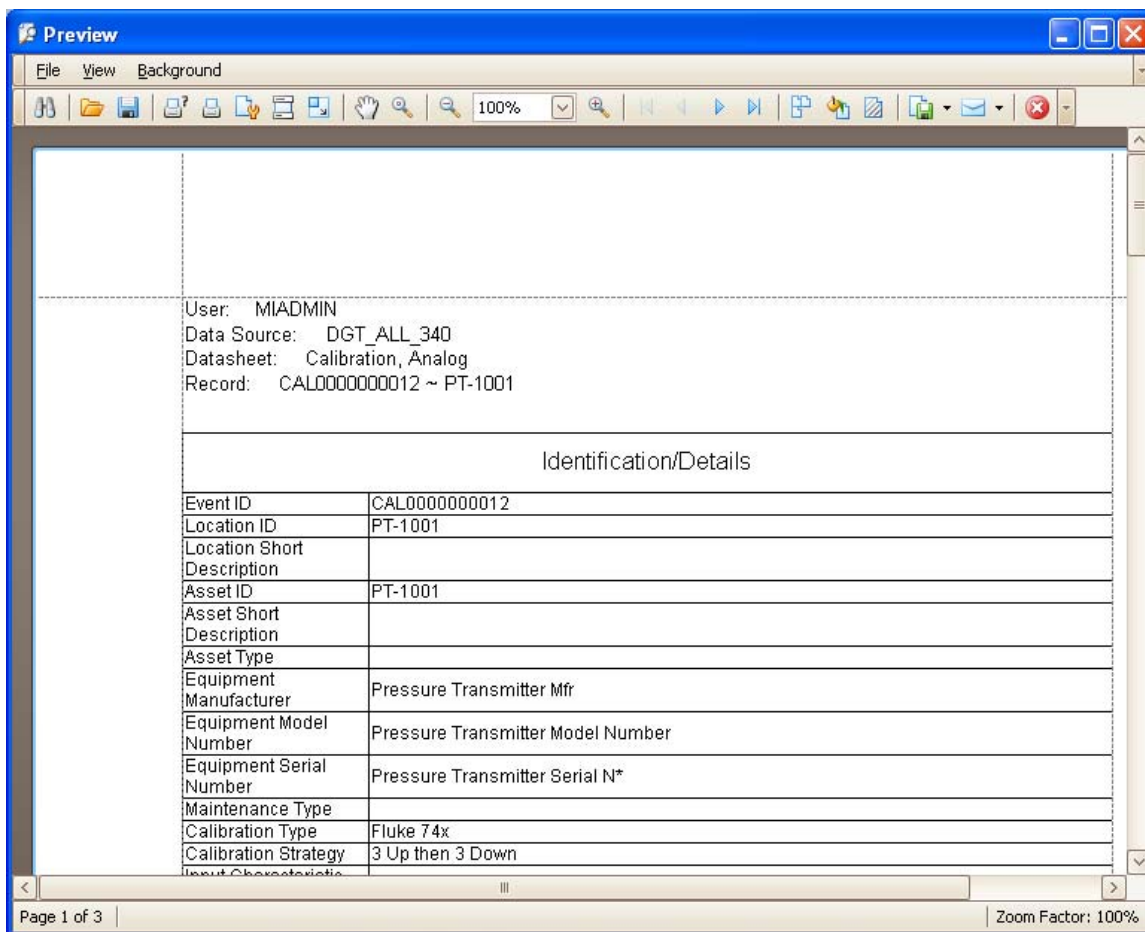
The **Update Link Fields** dialog box appears.

3. If desired, update the information.
4. Click the **Save** button to save your changes.

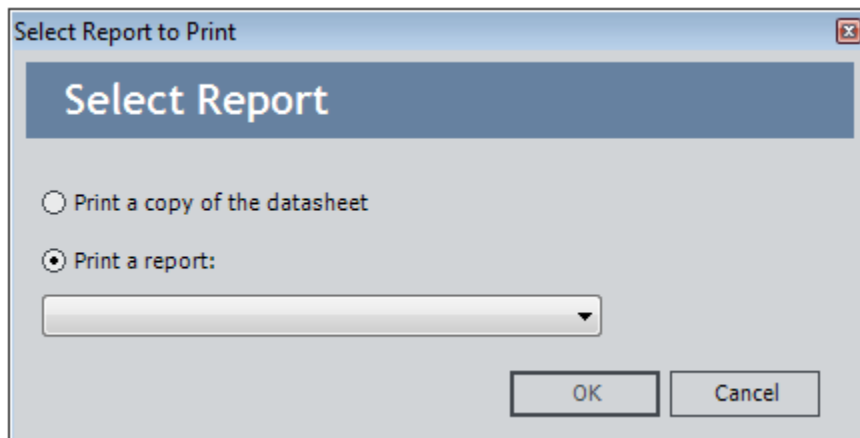
## Printing Records in the Record Manager

### About Printing Records in the Record Manager

In most cases, printing records in the Record Manager will work the same way it works elsewhere in the Meridium APM Framework application, where executing the **Print** command will cause the **Preview** window to appear to show you a preview of how the printed material will look. From the **Preview** window, you will be able to print the datasheet.



In some cases, however, custom reports may be configured that will give you the additional option of printing records in a predefined report format. When reports have been configured for a family, executing the **Print** command (e.g., from the **Common Tasks** menu) will cause the **Select Report to Print** dialog box to appear.



From this dialog box you can:

- Select the **Print a copy of the datasheet** option to print a copy of the datasheet in the standard format. When you select this option and click **OK**, the **Preview** window will appear, where you can proceed with the **Print** operation as usual.

**Hint:** When this dialog box first appears, selecting the **Print a copy of the datasheet** option may not enable the **OK** button. If this happens, select the **Print a Report** option, select a report, and then select the **Print a copy of the datasheet** option, which will then enable the **OK** button.

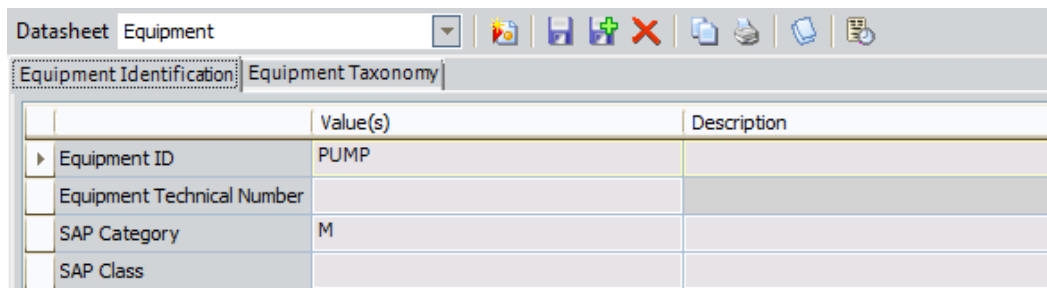
- Accept the default selection, **Print a report**, and then select the desired report from the list. When you select this option and click **OK**, the report will appear in the **Report Viewer**, which serves as the print preview. From the **Report Viewer**, you can print the report, export the report, or perform any other function that is available in the **Report Viewer**.

Custom reports can be created and then associated with entity families via the **Configuration Manager**.

## What is Printed When You Print from the Record Manager?

In most cases, when you print a record from the Record Manager, the printed content will match what you see on the screen, with the following exceptions:

- If a custom report has been associated with the record family, the record content will be printed in the format defined by the report.
- If you are viewing a Master/Detail datasheet, you will be able to print the master datasheet only.
- Custom-layout datasheets will not be re-sized automatically for printing. If the Meridium APM Framework window has been maximized on a large monitor, when you print a custom-layout datasheet, parts of the datasheet may be cut off. If this occurs, simply make the Meridium APM Framework window smaller, and then try to print again.
- If you are viewing a standard datasheet, the printed grid should match the grid that is displayed on the user interface unless the datasheet contains multiple columns, in which case, each column will be printed as a separate row. For example, assume that you want to print the **Equipment Identification** tab of the datasheet shown in the following image.



	Value(s)	Description
▶ Equipment ID	PUMP	
Equipment Technical Number		
SAP Category	M	
SAP Class		

In this case, the printed output would look similar to the following image.

Equipment Identification	
Equipment ID Value (s)	PUMP
Equipment ID Description	
Equipment Technical Number	
SAP Category Value (s)	M
SAP Category Description	
SAP Class Value(s)	
SAP Class Description	

## Bulk Data Form

### About the Bulk Data Form

Regardless of whether you open one record or multiple records, the Record Manager lets you view only one datasheet at a time. So, even if the record hierarchy displays multiple records, you can view the details only of the selected record.

The Bulk Data Form, however, lets you view the details of multiple records belonging 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.

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.

Bulk Data Form								
Datasheet Air Cooled Heat Exchanger								
Air Cooled Heat Exchanger								
	Asset ID	Asset Descrip...	Asset Type	Asset Manufa...	Asset Model N...	Asset Serial N...	Asset Installa...	Asset Status
	100101	Chiller Plant Cooling Tower Cell #1	Cooling Tower	MARLEY MAR	NC Class	NC902131	6/2/1997 1:47:00 PM	Active
	100102	Chiller Plant Cooling Tower Cell #2	Cooling Tower	MARLEY MAR	NC Class	NC902131	6/2/1997 1:47:00 PM	Active
	ACHE 001	MAIN HEAD ACHE Unit	Air Cooled Heat Exchanger	ACME AC&HE	WILE-E KI-YO-T	12345		Active
	ACHE 002	MAIN HEAD ACHE Unit	Air Cooled Heat Exchanger	ACME AC&HE	WILE-E KI-YO-T	12345		Active
	ACHE 003	MAIN HEAD ACHE Unit	Air Cooled Heat Exchanger	ACME AC&HE	WILE-E KI-YO-T	12345		Active
	ACHE 004	MAIN HEAD ACHE Unit	Air Cooled Heat Exchanger	ACME AC&HE	WILE-E KI-YO-T	12345		Active
	AQA AC-HEX 00	QA Test Asset	Air Cooled Heat Exchanger	ACME AC&HE	WILE-E KI-YO-T		5/18/2011 12:00:00 AM	Active

Using the Bulk Data Form, you can create new records, modify existing records, or delete records from the database. You can also freeze columns in the Bulk Data Form so that when you scroll to the right, the frozen columns stay in their current location. As with all grids, you can customize the appearance of the grid (e.g., sort the results), as needed.

## About Accessing the Bulk Data Form

In addition to using some of the most common methods of accessing records, you can also access the Bulk Data Form via the following methods:

- Using the shortcut menu in the record hierarchy and selecting **Manage all <selected family> records related to the <root record>**.

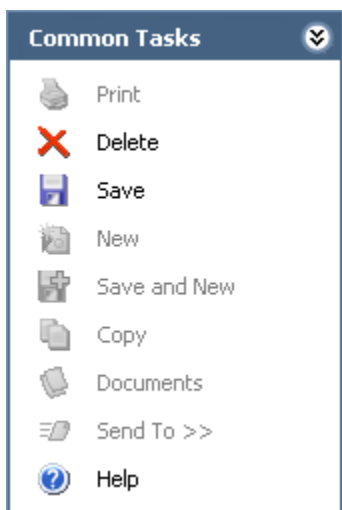
-or-

- Using customized methods within other modules in the Meridium APM Framework application, such as Inspection Management. For example, Inspection Management provides a query that returns a list of specified Inspection Profile records, which are opened in the Bulk Data Form by default.



## Task Menus

The Bulk Data Form contains two task menus: **Common Tasks** and **Associated Pages**.



The **Common Tasks** menu on the Bulk Data Form page contains the following links:

- **Delete:** Deletes the selected record.
- **Save:** Saves the selected record.
- **Help:** Displays the context-sensitive Help topic for the Bulk Data Form.

**Note:** The **Print**, **New**, **Save and New**, **Copy**, **Documents**, and **Send To** options are always disabled.

The **Associated Pages** menu may or may not display links, depending on the records you are viewing. Links on the **Associated Pages** menu are defined for families via the Meridium APM URL Manager. Some preconfigured links are delivered with the Meridium APM product. Others may be configured by an administrative user. The links that you see here will likely be intuitive, as they will apply specifically to the type of record you are viewing and the types of tasks you can perform for that record.

## Modifying Existing Records

You can modify data in the Bulk Data Form just as you can modify it in the Record Manager. All datasheet field functionality is available while working with the Bulk Data Form as well. Note that each row in the Bulk Data Form represents a separate record.

To modify an existing record:

1. In the Meridium APM Framework, in the Bulk Data Form, locate the row containing the record you want to modify.
2. In each cell, modify the existing data, as appropriate.
3. Click the Save button to save your changes.

## Viewing Query Results in the Bulk Data Form

Because the Bulk Data Form lets you view multiple records at once, it is useful if you want to modify data in multiple records without having to switch between records. To view multiple records in the Bulk Data Form, you can create a query and use a URL to view the query results in the Bulk Data Form.

Suppose that all your Inspection Recommendation records are assigned to an employee who plans to leave the company, and you want to assign the records to a different employee. You could create a query on Inspection Recommendation family and add criteria that limits the results to those records where the *Assigned To Name* field contains the name of the employee who is leaving. The query results would look similar to the following image.

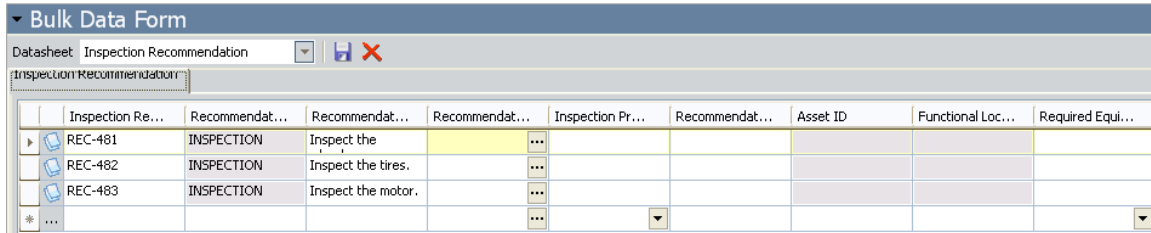
ENTY_KEY	Recommendation ID	Recommendation Hea...	Assigned To Name	Target Completion Date
▶ 64251878237	REC-481	Inspect the wheels.	Smith, John	9/29/2009
64251878238	REC-482	Inspect the tires.	Smith, John	9/29/2009
64251878239	REC-483	Inspect the motor.	Smith, John	9/29/2009

**Note:** The first column in the query *must* be ENTY\_KEY.

You could then use a URL to open the results in the Bulk Data Form, where you can modify the value in the Assigned To Name field of each of the records. If you name the query *Inspection Recommendations Assigned to John Williams* and you store the query in the Public Catalog folder, you would construct the URL as follows:

## meridium://Registry/BulkDataForm?QueryPath=Public\Inspection Recommendations Assigned to John Williams

When you execute the URL, the Bulk Data Form will display the records as shown in the following image.



Inspection Re...	Recommendat...	Recommendat...	Recommendat...	Inspection Pr...	Recommendat...	Asset ID	Functional Loc...	Required Equi...
REC-481	INSPECTION	Inspect the						
REC-482	INSPECTION	Inspect the tires.						
REC-483	INSPECTION	Inspect the motor.						
* ...								

In the Bulk Data Form, you can modify the value in the Assigned To Name field for each of the records.

## Freezing and Unfreezing Columns in 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 as you are scrolling. 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 its current position 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 first need to unfreeze the columns that are currently frozen. Also, if you change the datasheet setting to view a different datasheet for the records, any columns that were frozen 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, your frozen column settings will be reset automatically, meaning that no columns will be froze by default.

The following instructions provide details on freezing and unfreezing columns in the Bulk Data Form.

### To freeze a column or set of columns in the Bulk Data Form:

- In the Bulk Data Form grid, right-click the first column (if you want to freeze only that column) or the last column in the column set that you want to freeze, and click **Freeze Columns**.

A border appears to the right of the frozen columns. In the following image, you can see the border to the right of the **Analysis Type** column.

	Analysis ID	Analysis Short...	Analysis Long ...	Analysis Type	Analysis Start...	Analysis End ...	Analysis Re-E...	Site ID	Unit ID
	2	12K001 Suction	...	FMEA					
	96	Acid Blowdown	Cent Pump 1...	FMEA	6/4/2008	6/20/2008	6/30/2012	Site ID	Unit ID
	100	Acid Blowdown	RCM - Cent 1...	RCM	5/30/2008	6/5/2008	6/30/2020	Nyankpala	Unit3
	96	Acid Blowdown	Cent Pump 1...	FMEA	6/4/2008	6/20/2008	6/30/2012	Site ID	Unit ID
	100	Acid Blowdown	RCM - Cent 1...	RCM	5/30/2008	6/5/2008	6/30/2012	Nyankpala	Unit3
	19	Analysis 19	...						
	61	Analysis 61	...	RCM			6/30/2012		
*	...		...	RCM					

### To unfreeze columns in the Bulk Data Form:

- In the Bulk Data Form grid, right-click *any* column in the grid, and click **Unfreeze**.

The border that appeared to the right of the frozen column or column set disappears, and the column or column set is no longer frozen.




## Working With a Record in a Stand-Alone Window

If a URL has been configured appropriately and you execute that URL, you will see a stand-alone window that lets you work with records on an individual basis.

If the URL is configured to open a new record, the title bar will read **<empty> (new <Family ID>)**, where **<Family ID>** is the ID of the family to which the record belongs. For example, if the URL opens a new Actuator record the title bar will read **<empty> (new Actuator)**.

If the URL is configured to open an existing record, the title bar will read **<Record ID> (<Family ID>)**, where **<Record ID>** is the ID of the record you opened, and **<Family ID>** is the ID of the family to which the record belongs. For example, if the URL opens an existing Actuator record with the ID Actuator 101, the title bar will read **Actuator 101 (Actuator)**.

Using stand-alone window, you can manage records using the datasheet toolbar, which offers the same options that are available in the Record Manager.

You can work with the displayed record only and click **OK** to close the window, or you can create additional records using the , , and  buttons. You can also delete records from this window. When you are finished working with the desired records, click **OK** to close the window.

## Applying a Sequence Value to Records

### About Applying a Sequence Value to Records

In some cases, you might want to assign a sequence value to records to put them in an order that is meaningful to you and other users who work with them. For example, you might create Inspection Task records to indicate that someone needs to inspect a piece of equipment. If you create multiple Inspection Task records, the Meridium APM system does not by default assign any order to those records. If desired, you might want to define the order in which the inspections should be performed on a particular piece of equipment.

The *Sequencing feature* allows you to assign a sequence value to records that are linked to the same record. Note that the records to which you are applying a sequence value can belong to one or multiple families. As long as they are linked to the same record, you can apply a sequence value to them.

For example, if a Piping Circuit record is linked to Inspection Task records and Thickness Monitoring Task records, you could use the Sequencing feature to apply a sequence value to the Inspection Task records and the Thickness Monitoring Task records that are linked to that Piping Circuit record.

In order to use the Sequencing feature, a field that captures the sequence value must exist. Throughout this documentation, this field is referred to as the *Sequence field*. Keep in mind, though, that it might not be labeled Sequence. This field can have any caption and ID you choose. Field captions and IDs are determined in the Configuration Manager.

Note the following about the Sequence field:

- If you are applying a sequence value to records in the *same* family, the Sequence field must be defined for that family and exist on the datasheet that will be displayed on the **Sequencing** page.

For example, if you are applying a sequence value to Inspection Task records only, the Sequence field must be defined for the Inspection Task family. It must also exist on the datasheet that is used to display the Inspection Task records on the **Sequencing** page.

-or-

- If you are applying a sequence value to records in *multiple* families, the Sequence field must be defined for the family of the displayed records and for the root family of those families. In addition, the Sequence field must exist on the datasheet that will be displayed on the **Sequencing** page.

For example, if you are applying a sequence value to Inspection Task records and Thickness Monitoring Task records, the Sequence field must be defined for the Inspection Task family, Thickness Monitoring Task family, and Task family. In addition, the Sequence field must exist on the datasheet that appears on the **Sequencing** page, which is a datasheet that is defined for the Task family.

**Note:** If multiple datasheets are defined for the family on which the Sequence field exists, the Sequence field must exist on the datasheet that will be used to display records on the **Sequencing** page. This datasheet can be defined in the Sequencing URL via the URL Manager, or it can be determined from Meridium APM logic.

To navigate to the **Sequencing** page, which allows you to assign a sequence value to records, a URL must be configured. That URL can:

- Specify the root record that is linked to the records to which you want to apply a sequence value.

-or-

- Specify a query that returns the records to which you want to apply that sequence value.

## Configuring the Sequencing Feature

To use the Meridium APM Sequencing feature to apply a sequence value to records in the *same* family, you must complete the following steps:

1. Add a field that captures the sequence value to the family of the records that you want to sequence. Throughout this documentation, this field is referred to as the *Sequence field*. Keep in mind, though, that it might not be labeled Sequence. This field can have any caption and ID you choose.

For example, if users are going to apply a sequence value to Inspection Task records, you would need to add the field to the Inspection Task family.

2. Add the Sequence field that you created in step 1 to the datasheet that will display the records on the Sequencing page in the Meridium APM Framework application. Note that the datasheet cannot be a custom form.

3. In the URL Manager, create an Associated Page for the family of the record to which the sequenced records will be linked. For example, if users are going to apply a sequence value to Inspection Task records that are linked to a Motor record, define the link for the Motor family.

To use the Meridium APM Sequencing feature to apply a sequence value to records in *multiple* families when those records are linked to the same record, you must complete the following steps:

1. Add a field that captures the sequence value to the *root* family of the family of the records that you want to sequence. Throughout this documentation, this field is referred to as the *Sequence field*. Keep in mind, though, that it might not be labeled Sequence. This field can have any caption and ID you choose.

For example, if users are going to apply a sequence value to Inspection Task records and Thickness Monitoring Task records that are linked to a Motor record, you would need to add the Sequence field to the Task family (the family of the Inspection Task and Thickness Monitoring Task families).

2. Spread the field that you added in step 1 to all subfamilies.

3. Add the Sequence field that you created in step 1 to the datasheet that will display the records on the Sequencing page in the Meridium APM Framework application. This field must be added a datasheet that is defined for the family to which you added the field in step 1. Note that the datasheet cannot be a custom form.
4. Generate a script to modify the physical tables for the families that you have modified.
5. Generate a script to recreate family views.
6. Compile the family to which you added the Sequence field in step 1.
7. In the URL Manager, create an Associated Page for the family of the record to which the sequenced records will be linked. For example, if users are going to apply a sequence value to Inspection Task records and Thickness Monitoring Task records that are linked to a Motor record, define the link for the Motor family.

## How Does Meridium APM Determine Which Datasheet to Display on the Sequencing Page?

If multiple datasheets are defined for the family of the records that appear on the **Sequencing** page (or the root family of the family to which the records belong), the Meridium APM system determines which datasheet to display using the following logic:

- If a datasheet is specified in the URL that was used to access the page, that datasheet will be displayed.
- If no datasheet was specified in the URL, the datasheet that was last used in the Record Manager to display the records that appear on the **Sequencing** page will be displayed.
- If the datasheet is not specified in the URL and the current Security User has not opened the records that are displayed on the **Sequencing** page in the Record Manager:
  - If the records that are displayed on the **Sequencing** page belong to one family, the default datasheet for that family will be displayed.



- If the records that are displayed on the **Sequencing** page belong to multiple families, the default datasheet for the *root* family of those families will be displayed.
- If the datasheet is not specified in the URL, the current Security User has not opened the records in the Record Manager, and there is no default datasheet defined, the datasheet that appears first in the list of datasheets in the Configuration Manager will be displayed. Note that if this datasheet is a custom form, the **Sequencing** page will not display any datasheet, and an error will appear when you try to access the page.

## Accessing the Sequencing Page

To access the **Sequencing** page, you must execute a URL that has been configured for that purpose. This URL is not provided in the baseline Meridium APM product, so you must configure one manually if you want to be able to apply sequence numbers to records.

## Aspects of the Sequencing Page

The **Sequencing** page displays records in a grid format. Each row in the grid represents one record. The fields that are shaded gray represent the fields that appear on the datasheet that is displayed. Note that if multiple datasheets are defined for the family of the current records (or the root family of the family to which the current records belong), the Meridium APM system determines which datasheet to display using the following logic:

- If a datasheet is specified in the URL that was used to access the page, that datasheet will be displayed.
- If no datasheet was specified in the URL, the datasheet that was last used in the Record Manager to display the current records will be displayed.
- If the datasheet is not specified in the URL and the current Security User has not opened the current records in the Record Manager:
  - If the current records belong to one family, the default datasheet for that family will be displayed.
  - If the current records belong to multiple families, the default datasheet for the *root* family of those families will be displayed.

- If the datasheet is not specified in the URL, the current Security User has not opened the records in the Record Manager, and there is no default datasheet defined, the datasheet that appears first in the list of datasheets in the Configuration Manager will be displayed. Note that if this datasheet is a custom form, the **Sequencing** page will not display any datasheet, and an error will appear when you try to access the page.

The gray shading in each cell does not indicate that the fields are disabled on the datasheet. Instead, it indicates that the field values cannot be modified on the **Sequencing** page.

The **Order** column is a field that is unique to the Sequencing feature and is not included on the datasheet. The **Order** column appears by default as the first column in the grid. You cannot change the order of the columns. The field that was specified in the URL that you used to open the page is displayed to the right of the **Order** column, regardless of its position on the datasheet that is displayed. Throughout this documentation, this field is referred to as the *Sequence field*. Keep in mind, though, that it might not be labeled Sequence. The field caption is determined in the Configuration Manager.

The value that appears in the Sequence column is the currently saved sequence value.

To reorder the records and specify a different sequence value for a record, you can:

- Click the row that you want to move, drag it to the desired location, and then release the mouse button.
- Select the row that you want to move and click the **Move Up** link or the **Move Down** link on the **Tasks** menu.
- Type the desired sequence number in the **Order** column for the record to which you want to apply a new sequence value.

After you specify a new value in the **Order** column and navigate to another row, the row is positioned automatically in the grid according to the specified order number. The **Sequence** column will contain the order number as it is saved in the database. The **Order** column will contain the order number that you specified.

For example, suppose the saved sequence for Measurement Location records looks like the one in the following image.

Order	Sequence	Related Asset Id	Description	Status	Checkpoint Type
1	1	19-01200	General Check for 19-00400	Active	Measurement Location
2	2	19-00400	Pump Stroke Check for 19-00400	Active	Measurement Location
3	3	19-00400	Filter Check for 19-00400	Active	Measurement Location

In this image, you can see from the **Sequence** column that *General Check for 19-01200* has a sequence value of *1*, *Pump Stroke Check for 19-00400* has a sequence value of *2*, and so on.

If you want General Check for 19-00400 to have a sequence value of 3 instead of 1, you can select the row that contains General Check for 19-00400 and drag it to the end of the list. The results would look like those shown in the following image.

Order	Sequence	Related Asset Id	Description	Status	Checkpoint Type
1	2	19-00400	Pump Stroke Check for 19-00400	Active	Measurement Location
2	3	19-00400	Filter Check for 19-00400	Active	Measurement Location
3	1	19-01200	General Check for 19-00400	Active	Measurement Location

You can see that General Check for 19-00400 is now in the third row, and the remaining rows have been shifted up to allow it to be inserted.

The **Order** column displays the desired sequence value (3) and the **Inspection Sequence** column displays the currently saved sequence value (1). You can compare the value in the **Order** column and the **Inspection Sequence** column to see your changes in context of the sequence value that existed when you first opened the page.

**Hint:** If desired, you can group the rows by any column in the grid. Grouping the rows might help you visualize a more logical way to sequence the records than you could determine from viewing the records in the ungrouped grid format.

After you have moved the rows according to the desired order, you can click the **Save Sequence** link on the **Tasks** menu to save the new sequence. The **Order** column and the **Sequence** column will then contain the same values (i.e., the specified sequence values have been saved to the database).

**Hint:** To cancel your changes, you can click the **Back** button and respond **No** to the prompt asking if you want to save your changes.

## The Tasks Menu

The Tasks menu on the **Sequencing** page contains the following links:

- **Move Up:** Moves the currently selected row up one row in the grid.
- **Move Down:** Moves the currently selected row down one row in the grid.
- **Save Sequence:** Saves the current sequence. After saving the sequence, the **Order** column and the **Sequence** column will contain the same values (i.e., the specified sequence values have been saved to the database). Note that the **Save Sequence** link is enabled only after the **Sequencing** page is updated to reflect a sequence arrangement that is not yet saved to the database. This can occur if you:
  - Make a manual change on the **Sequencing** page.
  - Access the **Sequencing** page after a record that was previously linked to the root record has been deleted, assuming that the sequence values of the remaining records have not been updated manually.
  - Access the **Sequencing** page after the root record is linked to a new record, assuming that the sequence value of the new record is not updated manually.
  - Group the grid by any field, causing the rows to be arranged in a different order.
- **Help:** Displays the context-sensitive Help topic for the **Sequencing** page.

## Creating a Query To Facilitate Record Sequencing

If you want to create a query to use as the source of the records on the **Sequencing** page, the query must at least:

- Contain as the query source the family of the records that you want to display on the **Sequencing** page.

- Return only records that are linked to a root record of *one* family. For example, suppose you want to apply a sequence value to Inspection Task records, and your database contains Inspection Task records that are linked to Pump records and Tank records. In this case, you must configure the query such that it returns either Inspection Task records that are linked only to Pump records or Inspection Task records that are linked only to Tank records (not Inspection Task records that are linked to both Pump and Tank records).
- You must include as the *first* column the Entity Key of the family of the records to which you want to apply a sequence value.
- The query must be a Select query.

The URL that is configured to open records returned by the query will specify:

- The query path.
- The sequence field in the family of the records to which you want to apply a sequence.

## URLs

### Parameters for the Sequencing URL

The URL for the Sequencing feature, `meridium://Registry/Sequencing`, accepts the parameters listed in the following table. Note that a link constructed using the URL path and no parameters will not be functional.

Parameter Name	Description	Accepted Value(s)	Notes
EntityKey	Specifies the Entity Key of the record that is linked to the records that you want to sequence.	The Entity Key of the desired record.	If Source=EntityAndRelationship, you must also include the EntityKey parameter in the URL.

Parameter Name	Description	Accepted Value(s)	Notes
QueryPath	Specifies the query whose results you want to sequence.	The Catalog path and file name of the desired query.	If Source=Query, you must also include the QueryPath parameter in the URL.
RelationshipFamilyID	Specifies the relationship family that relates the family of the record identified by the EntityKey parameter to the family of the linked records that you want to sequence.	The relationship family ID of the desired relationship family.	If Source=EntityAndRelationship, you must also include the RelationshipFamilyID parameter in the URL.
SequenceFieldID	Specifies the field that you will use to store the sequence value.	The ID of the desired field.	This parameter is required.

Parameter Name	Description	Accepted Value(s)	Notes
Source	Specifies how Meridium APM should determine the record that you want to sequence.	Query EntityAndRelationship	<ul style="list-style-type: none"> <li>If you specify the value Query, you must also include the QueryPath parameter in the URL. The Sequencing page will display the records returned by the query specified by the QueryPath parameter.</li> <li>If you specify the value EntityAndRelationship, you must also include the EntityKey and RelationshipFamilyID parameters in the URL. The Sequencing page will display records that are linked to the record specified by the EntityKey parameter using the relationship specified by the RelationshipFamilyID parameter.</li> </ul>
TargetFamilyID	Specifies the root family of the subfamilies whose records you want to sequence.	The ID of the desired family.	<p>If you want to apply a sequence values to records in multiple families (which you can do only if those records are all linked to a single record, such as an Asset record), you will need to use the TargetFamilyID parameter to indicate the root family of the families to which those records belong.</p> <p>For example, if you want to sequence Inspection Task records and Thickness Monitoring Task records that are linked to a single Asset record, you would need to use the TargetFamilyID parameter to specify the ID of the Task family.</p>

Parameter Name	Description	Accepted Value(s)	Notes
<p><b>DatasheetID</b></p>	<p>Specifies the datasheet that you want to display on the Sequencing page.</p>	<p>The ID of the desired datasheet.</p>	<p>This parameter is optional. If you do not specify a datasheet in the URL and multiple datasheets are defined for the family of the current records (or the <i>root</i> family of the family to which the current records belong), the Meridium APM system will determine which datasheet to display using the following logic:</p> <ul style="list-style-type: none"> <li>• The datasheet that was last used in the Record Manager will be used to display the records that you want to sequence.</li> <li>• If the current Security User has not used the Record Manager to open the records that they want to sequence: <ul style="list-style-type: none"> <li>▪ If the records on the Sequencing page belong to one family, the default datasheet for that family will be displayed.</li> <li>▪ If the records on the Sequencing belong to multiple families, the default datasheet for the <i>root</i> family of those families will be displayed.</li> </ul> </li> </ul>



## Examples of the Sequencing URL

- `meridium://Registry/Sequencing?Source=Query&QueryPath=Public\Test Query&SequenceFieldID= ARPMP_INSPE_SEQUE_CHR`

Displays on the **Sequencing** page the records returned by the query Test Query. The field ARPMP\_INSPE\_SEQUE\_CHR will be updated with a sequence value as you reorder the records on the **Sequencing** page.

- `meridium://Registry/Sequencing?Source=Entityandrelationship&EntityKey=123456&RelationshipFamilyid=TestRelationship&SequenceFieldID=ARPMP_INSPE_SEQUE_CHR`

Displays on the **Sequencing** page the records that are linked to the record with the Entity Key 123456 through the relationship with the ID TestRelationship. The field ARPMP\_INSPE\_SEQUE\_CHR will be updated with a sequence value as you re-order the records on the **Sequencing** page.

- `meridium://Registry/Sequencing?Source=Entityandrelationship&EntityKey=123456&RelationshipFamilyid=TestRelationship&SequenceFieldID=ARPMP_INSPE_SEQUE_CHR&DatasheetID=Test Datasheet`

Displays on the **Sequencing** page the records that are linked to the record with the Entity Key 123456 through the relationship with the ID TestRelationship. The field ARPMP\_INSPE\_SEQUE\_CHR will be updated with a sequence value as you re-order the records on the **Sequencing** page. The datasheet with the ID Test Datasheet will be used to display records on the **Sequencing** page.

- `meridium://Registry/Sequencing?Source=EntityAndRelationship&EntityKey=123456&RelationshipFamilyID= MI Has Tasks&SequenceFieldId=MI_TASK_SEQUE&TargetFamilyID=MI Task`

Displays on the **Sequencing** page the records that are linked to the record with the Entity Key 123456 through the relationship with the ID Has Tasks. The field MI\_TASK\_SEQUE will be updated with a sequence value as you re-order the records on the **Sequencing** page. The records that are displayed on the **Sequencing** page belong to different families, and the root family of those families has the ID MI Task.

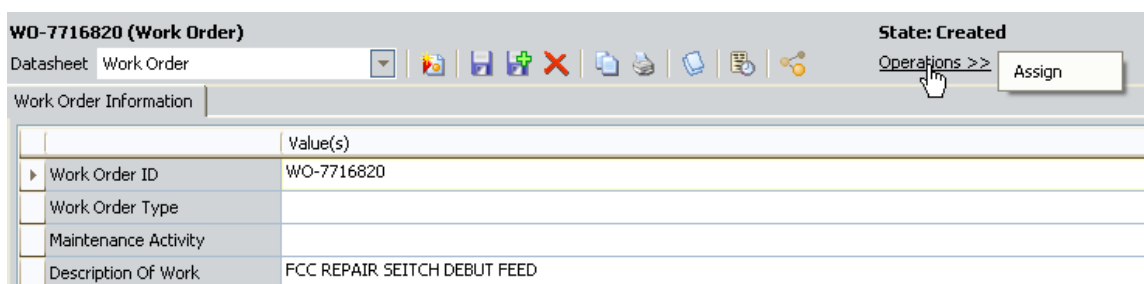
## Managing Record States

### About Managing Record States

If an administrative user has defined State Configuration for a family and configured states and operations to appear on the datasheet (via the Configuration Manager), when you are viewing the datasheet for a record in that family, the state of a record and its associated information is indicated at the top of the datasheet. In addition, an **Operations** link appears, which you can click to display a list of available actions that you can execute to change the record's state.

For example, suppose the workflow for requesting maintenance work involves creating a Work Order record, assigning the record to the appropriate maintenance personnel, and then closing the record after the work is completed. In this case, the State Configuration that is defined for the Work Order family might allow a Work Order record to be in a state of *Created*, *Assigned*, or *Closed*. The possible operations, then, might be *Assign* (to transition the record from the Created state to the Assigned state) and *Close* (to transition the record from the Assigned state to the Closed state).

In this case, if you are viewing a Created Work Order record, after you click the **Operations** link at the top of the datasheet, the *Assign* operation will appear on a submenu, as shown in the following image.



The screenshot shows the Meridium APM interface for a Work Order record. The record title is "WO-7716820 (Work Order)". The state is "State: Created". The "Operations" link is highlighted, and the "Assign" operation is visible in the submenu. The "Work Order Information" table is displayed below the toolbar.

	Value(s)
Work Order ID	WO-7716820
Work Order Type	
Maintenance Activity	
Description Of Work	FCC REPAIR SEITCH DEBUT FEED

Here, the *Assign* operation will change the record state from *Created* to *Assigned*, which will then be reflected on the datasheet.



The screenshot shows the Meridium APM interface for the same Work Order record. The state is now "State: Assigned". The "Operations" link is visible, and the "Assign" operation is no longer visible in the submenu.

Throughout this documentation, the following terms are used:

- **Predecessor state:** The state *from which* a record changes.
- **Successor state:** The state *to which* a record changes.

Note that before you can change the state of a record, several state assignment conditions must be met.

## Conditions Required to Change a Record's State

When State Configuration has been defined for a family and a record is created in that family, the record will be set to a default state. This state is configured as the *initial* state in the Configuration Manager and cannot be changed in the Meridium APM Framework application.

After the record is saved, you can change the record's state if certain conditions have been met, depending upon how the State Configuration is set up.

- If the State Configuration is set up in its *least restrictive* form, anyone can transition a record out of its current state and into any subsequent state (i.e., no conditions must be met).
- or-
- In the State Configuration is set up in its *most restrictive* form, all of the following conditions must be met before you can transition a record out of its current state:
    - You must be assigned to the State Configuration Role that is assigned to the current state.
    - You must be assigned to the current state.
    - The state to which you want to transition the record must be assigned to a Security User that is assigned to the State Configuration Role to which the next state is assigned.

If these conditions are not met, the **Operations** link will be enabled, but the items in the list that appears when you click the link will be disabled.

**Hint:** If the **Operations** link is *disabled*, this means that the operation is set as reserved in the Configuration Manager.

Note that there are several other levels of restriction that can be configured between the least restrictive and the most restrictive. Keep in mind that a user's ability to transition record states depends upon the way in which the State Configuration has been defined.

## Assigning Security Users to States

### About Assigning Security Users to States

Security Users can be assigned to states when you are viewing a record of a family for which State Configuration has been defined. If the State Configuration has been defined accordingly, for a given record, after you assign a Security User to a state, that Security User can transition that record *from* that state to a new state.

Note that if a Security User is assigned to a state for a given record, that Security User will be allowed to transition only *that* record from the assigned state. If other records exist in the same family, that Security User will not be allowed to transition those records from the same state unless the Security User is assigned to that state in ALL of those records.

For example, suppose John Smith is assigned to the Created state in the Work Order record WO-101. John Smith will be able to transition WO-101 from Created to Assigned, but he will not be able to transition WO-102 from Created to Assigned unless he is also assigned to the Created state in WO-102.


You can assign a Security User to a state using the **State Assignments** window.

**Note:** You can assign a Security User to a state only if a State Configuration Role is assigned to that state via the Configuration Manager.

### State Assignments Window

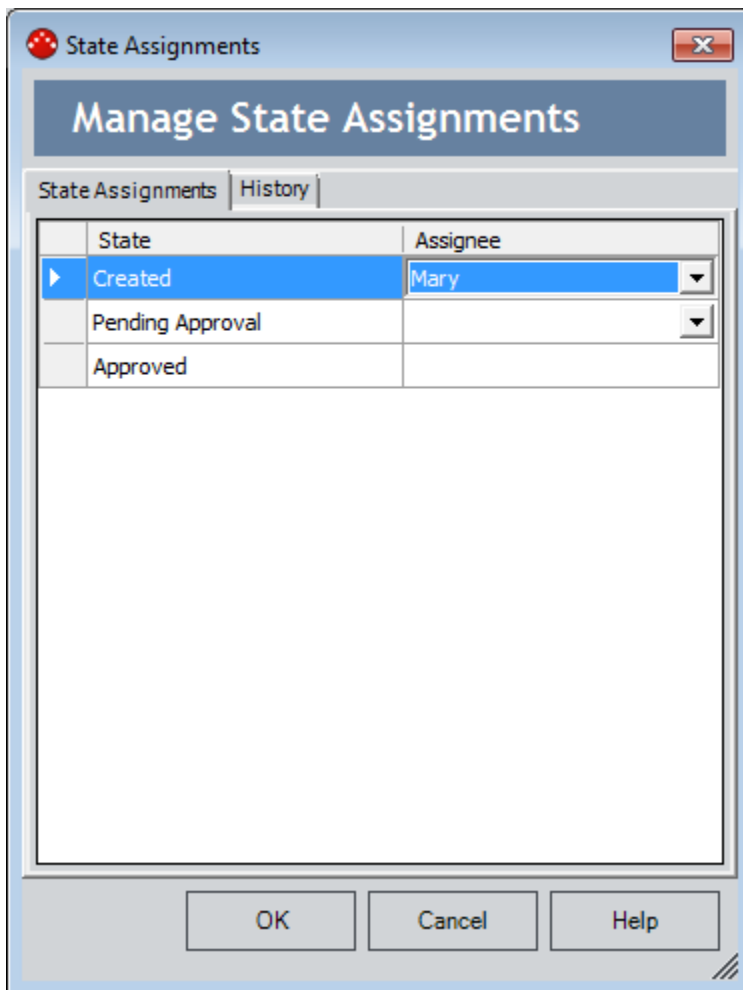
#### About Accessing the State Assignments Window

In the Meridium APM Framework, the **State Assignments** window appears when you:

- Click the  button on the datasheet toolbar. This method allows you to assign a Security User to a state for a *single* record.
- Perform an action in a module or feature that allows you to assign a Security User to a state for *multiple* records (i.e., Recommendation Management). In these cases, the documentation for that module or feature describes how to manage the state assignments for multiple records.

## Aspects of the State Assignments Window

The State Assignments window allows you to assign Security Users to states and see a history of the states to which the current record has ever been set. The following image shows an example of what you will see when you access the State Assignments window.



The State Assignments window contains two tabs:

- **State Assignments:** Contains a grid displaying a row for each state in the State Configuration for the family of the current record(s). The grid contains the following columns:
  - **State:** The state caption.
  - **Assignee:** The user name of the Security User who is currently assigned to that state. In each **Assignee** cell, a list will appear if a State Configuration Role has been assigned to that state via the Configuration Manager. You can select a value from the list to assign that Security User to the state.
- **History:** Contains a grid displaying a row for each state to which the current record has ever been set. The grid contains the following columns:
  - **State:** The state caption.
  - **Last Set By:** The user name of the Security User who last set the record to that state.
  - **Last Set On:** The date and time on which the record was last set to that state. The grid is sorted by default in descending order according to this date, allowing you to see the progression of state assignments, from most recent to least recent. If desired, you can resort the grid by the values in another column.

If you access the **State Assignments** window from a module or feature that allows you to manage state assignments for multiple record (e.g., Recommendation Management), the **History** tab does not appear.

## Assigning a Security User to a State

To assign a Security User to a state:

1. In the Meridium APM Framework, on the **State Assignments** window, on the **State Assignments** tab, select the row containing the state to which you want to assign a Security User.
2. In the selected row, in the **Assignee** cell, select the Security User that you want to assign to the state. Note that no Security Users will be available (and a down arrow will not appear) if no State Configuration Roles are assigned to the state via the Configuration Manager.

3. Click OK.

The Security User is assigned to the state. This Security User will now be able to transition the record from the assigned state to a successor state.

**Hint:** In some cases, depending upon how the State Configuration has been set up in the Configuration Manager, a Security User must also be assigned to the successor state before a Security User can transition a record to that state.

## Removing a Security User as an Assignee

To remove a Security User as the assignee of a state:

1. In the Meridium APM Framework, open the record that contains a state from which you want to remove an assignee.

2. On the toolbar, click the  button.

The **State Assignments** window appears.

3. Select the row containing the state whose assignee you want to remove.
4. In the selected row, in the **Assignee** cell, select a different Security User. Note that you cannot select a null value in this list.
5. Click OK.

The new Security User is assigned to the state. This Security User will now be able to transition the record from the assigned state to a successor state.

## Changing Record States

### Tips About Changing Record States

Note the following information about changing a record's state:

- A record's state is changed as the result of an operation that you execute while viewing the record. The Meridium APM Framework application

does not provide a way to view all possible states and operations for a record. Before you change a record from one state to another, therefore, you might find it helpful to be familiar with all possible states and the operations that result in those states. For information about all states and operations, contact the administrative user who configured the states and operations via the Configuration Manager.

- To create a query that displays information about a record's state, you will need to query the family of the records whose state information you are interested in. Then, you will need to add the following fields to the query:
  - [MI\_SM\_STATE\_ID\_C]: The current state.
  - [MI\_SM\_STATE\_ENTERED\_D]: The date that the record entered the current state.
  - [MI\_SM\_STATE\_OWNER\_ID\_C]: The Security User that is assigned to the current state.

For example, if you create a query on the Recommendation family and include these fields, the results might look something like the following image.

Recommendation ID	Recommendation Description	MI_SM_STATE_ID_C	MI_SM_STATE_ENTERED_D	MI_SM_STATE_OWNER_ID_C
15-1-1-1-2	Visual inspection for signs of leakage under insul...	MI_PENDING	5/27/2008	MIADMIN
15-1-1-1-1	Visual inspection and thickness measurement (s...	MI_PENDING	5/27/2008	MIADMIN

## Changing Record States

To change the state of a record:

1. In the Meridium APM Framework, open the record whose state you want to change.

**Hint:** You can change the state of a record only after the record has been saved.

The current state of the record is displayed on the toolbar.

2. On the toolbar, click the **Operations** link.



A submenu appears, displaying a list of available operations for the current record.

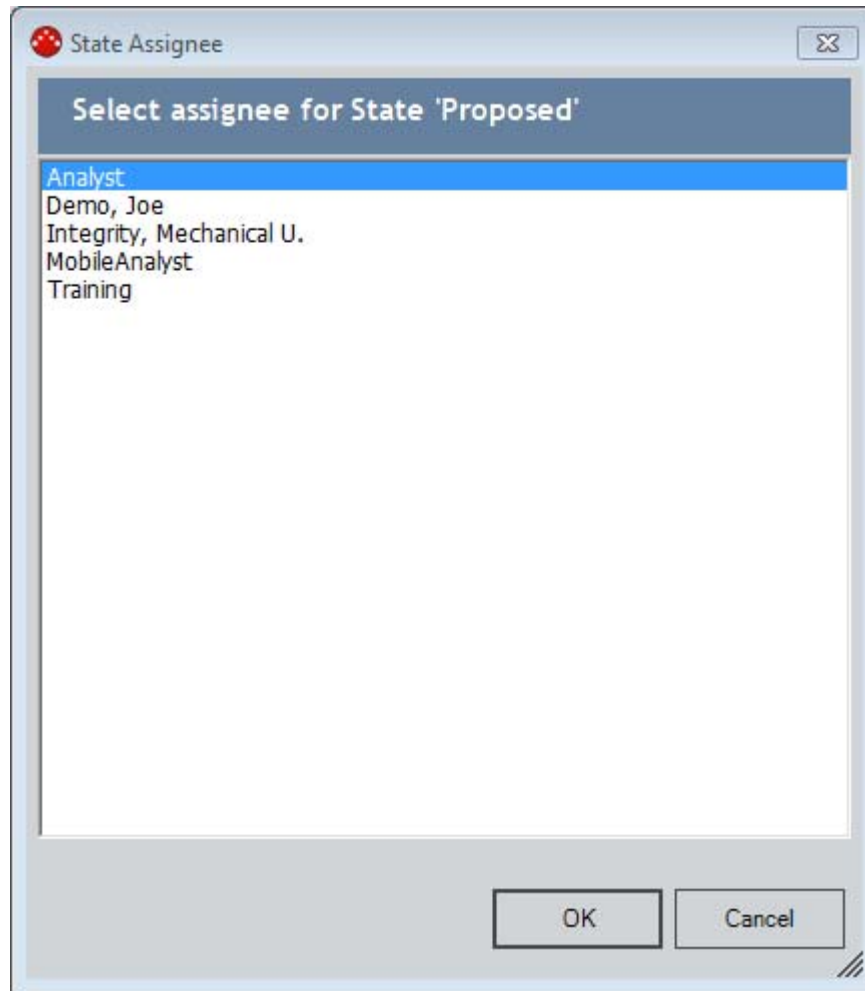
**Hint:** The available operations are determined by the State Configuration that is defined for the family in the Configuration Manager. In addition, if an image has been associated with an operation via the Configuration Manager, that image will appear to the left of the operation.

3. Click the operation that you want to use to change the record's state.

If the State Configuration is defined in a way that does not require a Security User to be assigned to the successor state, or if a Security User is required to be assigned to the successor state and one is already assigned, the record's state changes, and the new state is reflected above the **Operations** link. In this case, you can proceed to step 5 of these instructions.

-or-

If the State Configuration is defined in a way that requires a Security User to be assigned to the successor state but a Security User is not currently assigned to the successor state, the **State Assignee** dialog box appears. In this case, you can proceed to step 4 of these instructions.



4. On the **State Assignee** dialog box, select the Security User that you want to assign to the successor state, and click **OK**.

The record's state changes, and the new state is reflected above the **Operations** link.

5. On the **Common Tasks** menu, click the **Save** link.

The record is saved with the new state.

# Deleting Records

To delete a record from the database:

1. In the Meridium APM Framework, open the record that you want to delete.
2. On the **Common Tasks** menu, click the **Delete** link.

A message window appears, asking you to confirm the deletion.

3. Click the **Yes** button.

The record is deleted from the database.

**Note:** Deleting a record from the database does not automatically delete any corresponding Home Page links or desktop shortcuts. You will need to delete these links manually. If you do not delete these links, they will be non-functional.

## Optional Record Types and Features

### Reference Documents

#### Introduction to Reference Documents

Reference documents allow you to associate files or websites with a record in the Meridium 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 Meridium 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

Has Reference Documents relationship has been defined via the Configuration Manager. The Meridium APM system supports two different types of reference documents:

- **Internal Reference Documents:** Reference document files that are stored in the Meridium APM database.
- **External Reference Documents:** Reference document files and websites that reside outside of the Meridium APM database and are referenced from 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. For example, only you will be able to view an external reference document that is stored in a location that only *you* can access, such as your local drive. Other users would be able to view an external reference document that is stored in a public location, such as a network drive.

Reference document functionality is available in the Record Manager and places throughout the Meridium APM Framework application. Regardless of your location in the Meridium APM Framework application, reference document functionality is available on the **Reference Documents** window, from which you can create, view, modify, and delete reference documents. A similar feature is available in the Meridium APM Web Framework.

## Configuring the Has Reference Documents Relationship

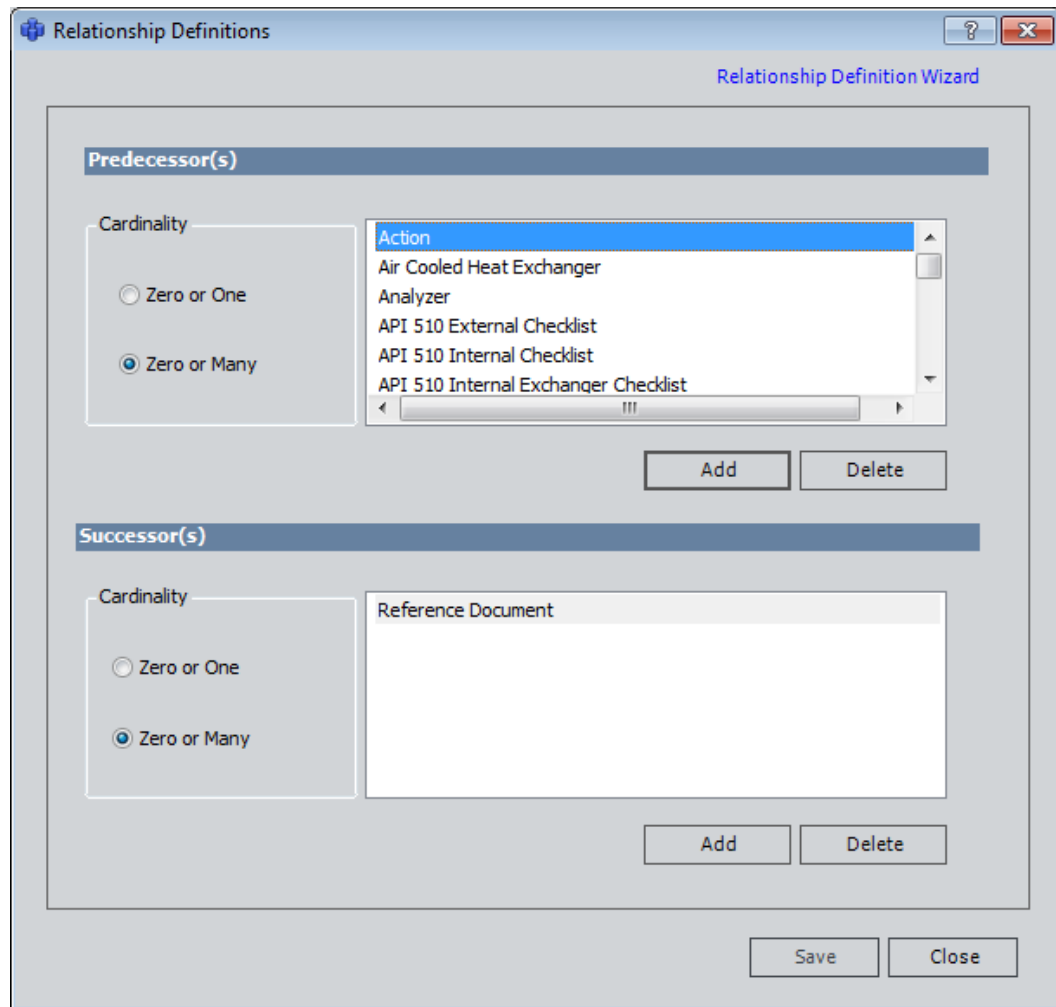
To enable reference document functionality for records in a given family, that family must be related to the Reference Document family through the Has Reference Documents relationship. After you create the appropriate relationship definition, via the Record Manager, users will be able to manage reference documents for any record in any family for which the relationship has been established.

**Note:** Various relationship definitions are provided for the Has Reference Documents relationship family in the baseline database. Reference document functionality will be available automatically for any predecessor family that already participates in one of these baseline relationship definitions. The following instructions, however, can be used to enable reference document functional for custom families and for baseline families for which the relationship definition is not already configured.

To set up the Has Reference Documents relationship definition:

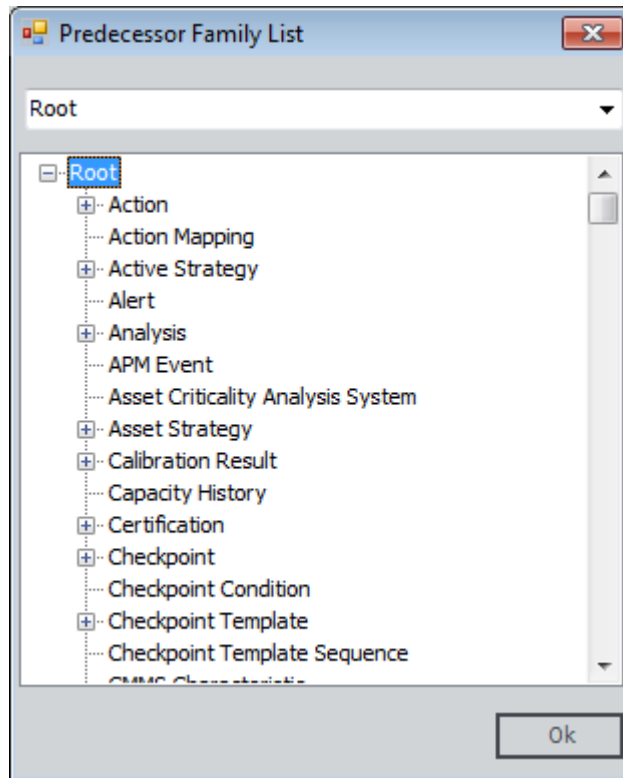
1. In the Configuration Manager, in the Entity Family/Relationship Family pane, click the Relationship Family tab.
2. Select the Has Reference Documents relationship family.
3. In the Tasks section, click the Manage Relationship Definitions link.

The Relationship Definitions window appears.



4. In the Predecessor(s) section, click the Add button.

The Predecessor Family List dialog box appears, displaying a list of all predecessor families.



5. Select a family from the list. This should be the family for which you want to enable reference documents functionality.
6. Click OK.
7. On the **Relationship Definitions** window, in the **Predecessor(s)** section, for the family you added, select **Zero** or **Many**.
8. In the **Successor(s)** section, click the **Add** button.

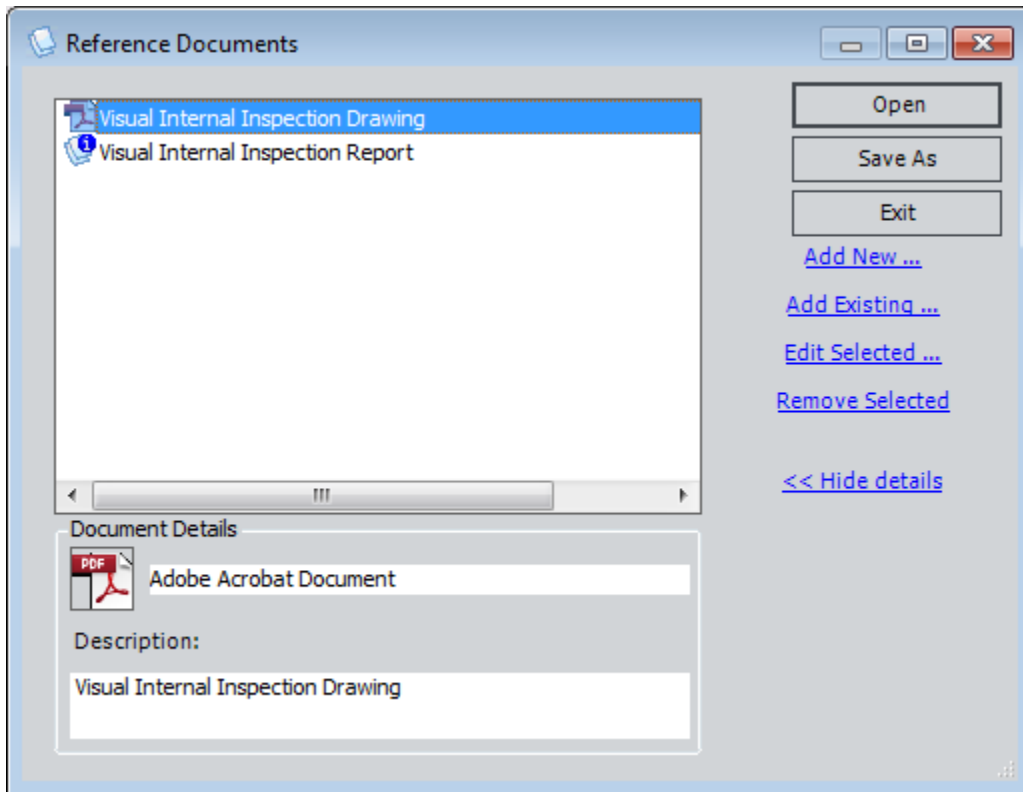
The **Successor Family List** dialog box appears, displaying a list of all successor families.


9. Select the **Reference Document** family, and click OK.
10. On the **Relationship Definitions** window, in the **Successor(s)** section, select **Zero** or **Many**.
11. Click the **Save** button.



The relationship definition is saved.

## About the Reference Documents Window

The Reference Documents window serves as the primary user interface for managing reference documents.



Depending upon your location in the Meridium APM Framework application, you will be able to access the Reference Documents window in different ways. It will *always* be available in the Record Manager at the top of the datasheet area if the Has Reference Documents relationship definition has been defined for the family of the record that you are currently viewing. You can click the Reference Documents button  on the Record Manager toolbar to access the Reference Documents window. Other modules provide module-specific methods if accessing the window (e.g., from the Common Tasks menu on the task menu pane on one or more pages in the module). Regardless of how you access the Reference Documents window, it will always provide the same functionality.

**Note:** When you are viewing the datasheet area in the Record Manager, if the current record is already linked to a Reference Document record, the  icon will be replaced with the  icon.

The **Reference Documents** window provides various options that allow you to:

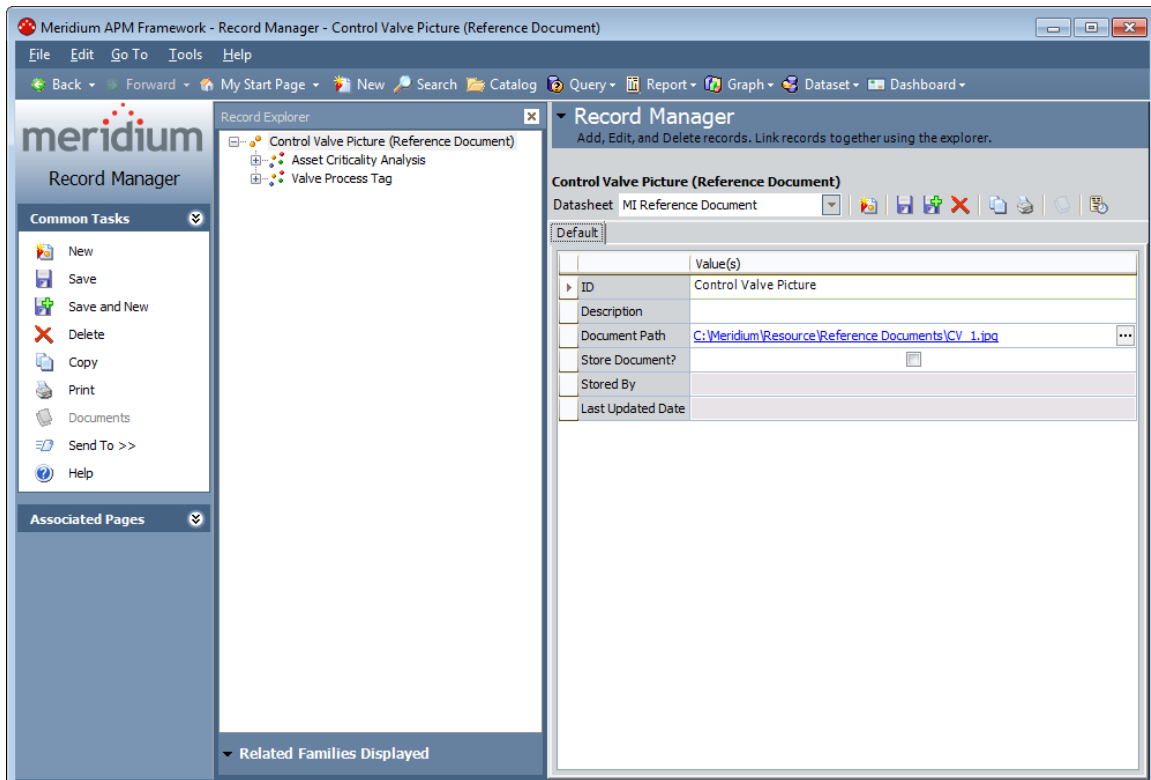
- View the actual reference document file that is currently associated with a record (e.g., if the reference document file is a Word document, you can view the Word document in Microsoft Word).
- Link a new Reference Document record to a record.
- Link an existing Reference Document record to a record.
- Edit a Reference Document record that is linked to a record.
- Remove the link between a Reference Document record and the current record.
- Save a copy of a Reference Document file to another location.

You can display additional details about the reference documents in the list at the top of the window by clicking the **Show Details** link. For external reference documents, the details indicate the file type and description. For internal reference documents, the details indicate *Stored Reference Document* and the description.

## Viewing Reference Document Records in Record Manager

Information about reference documents is stored in Reference Document records. Reference Document records are stored in the Meridium APM database just like any other record and can be viewed in the Record Manager, as shown in the following image.





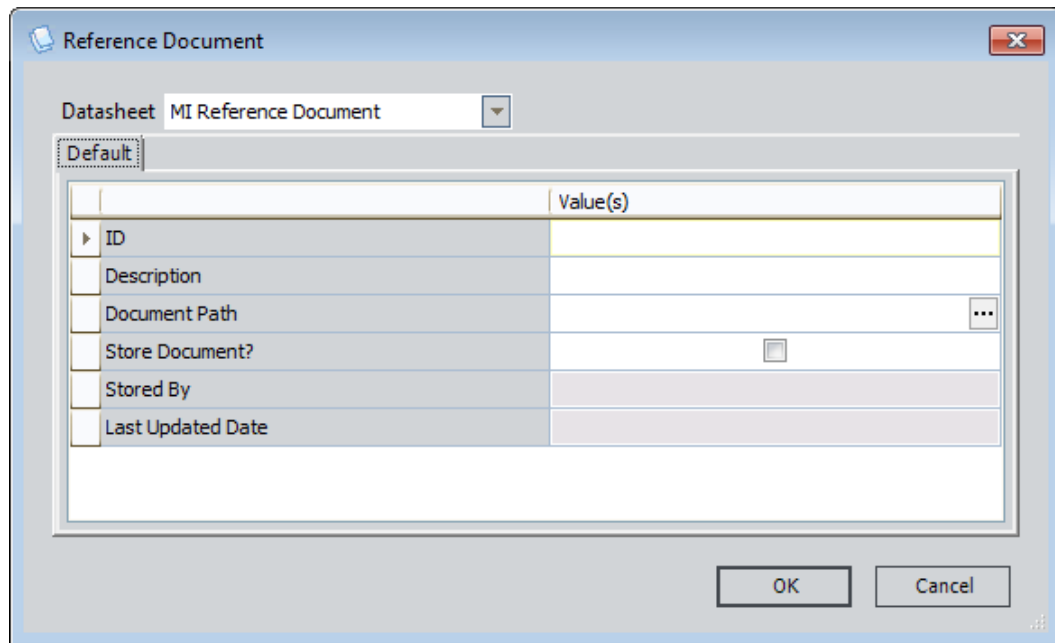
## Linking Reference Document Records to Other Records

### Creating a New Reference Document Record

To create a new Reference Document record and link it to the current record:

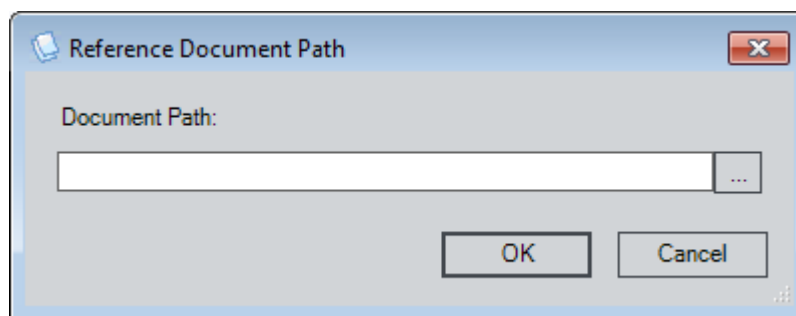
1. In the Meridium APM Framework, on the Reference Documents window, click the **Add New** link.

The **Reference Document** window appears, displaying a new Reference Document record.



2. In the ID text box, type a name for the file.
3. In the Description text box, type a description of the file.
4. In the Document Path text box, click the  button.

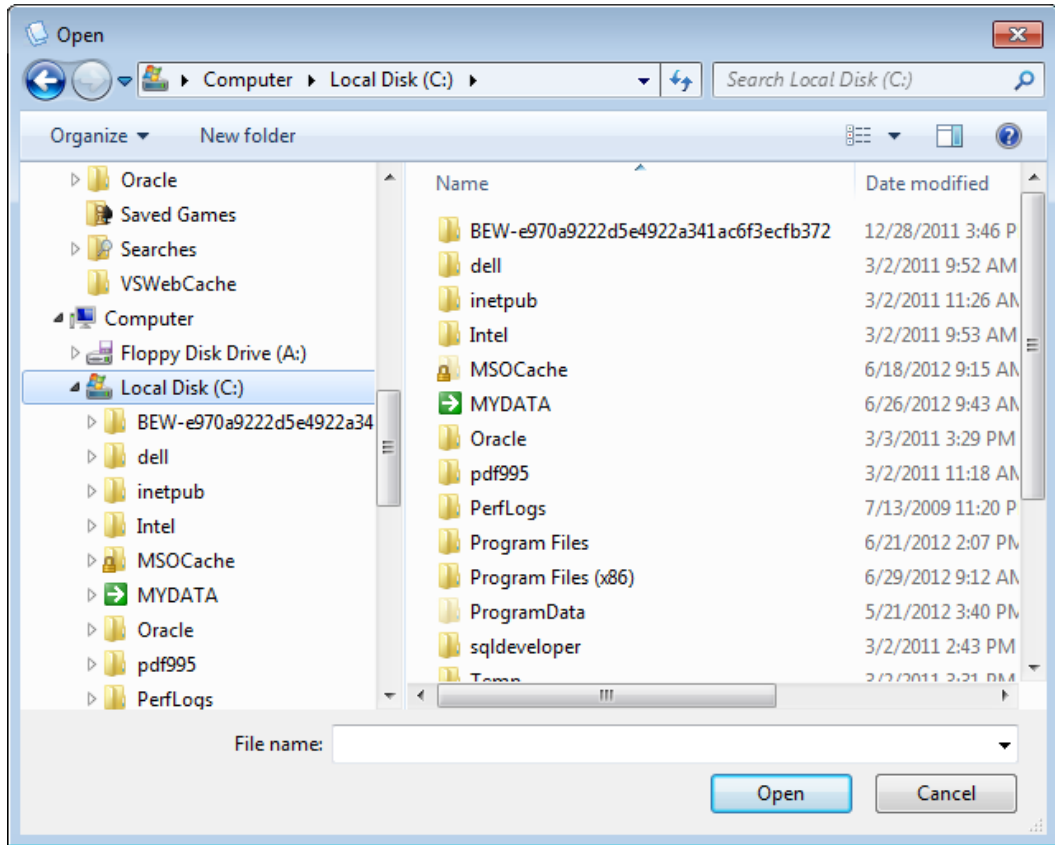
The Reference Document Path dialog box appears.



In the Document Path text box, you can type the path to the reference document, or you can click the  button to browse for the document. These instructions assume that you want to browse for the document.

5. Click the  button.

The Open dialog box appears.



6. Navigate to the location where the desired file resides, select the file, and click the **Open** button.

The **Document Path** text box is populated with the path of the selected file.

- If you are creating an internal reference document, this is the location from which the file will be uploaded to be stored in the Meridium APM database.
- If you are creating an external reference document, this is the location in which the document will be referenced. Only users who have permission to access this location will be able to view this reference document.

7. Click **OK**.

The **Document Path** field is populated with a hyperlink to the document path.

- For internal reference documents, when you save the Reference Document record, the document path will be replaced with just the file name.
  - For external reference documents, when you save the Reference Document record, the document path will remain in this field.
8. If you want to create an internal reference document, select the check box in the **Store Document?** cell. If you do not select this check box, an external reference document will be created.

**Note:** If you are creating an internal reference document, when you save the Reference Document record, the Stored By and Last Updated Date fields will be populated automatically.

9. Click OK.

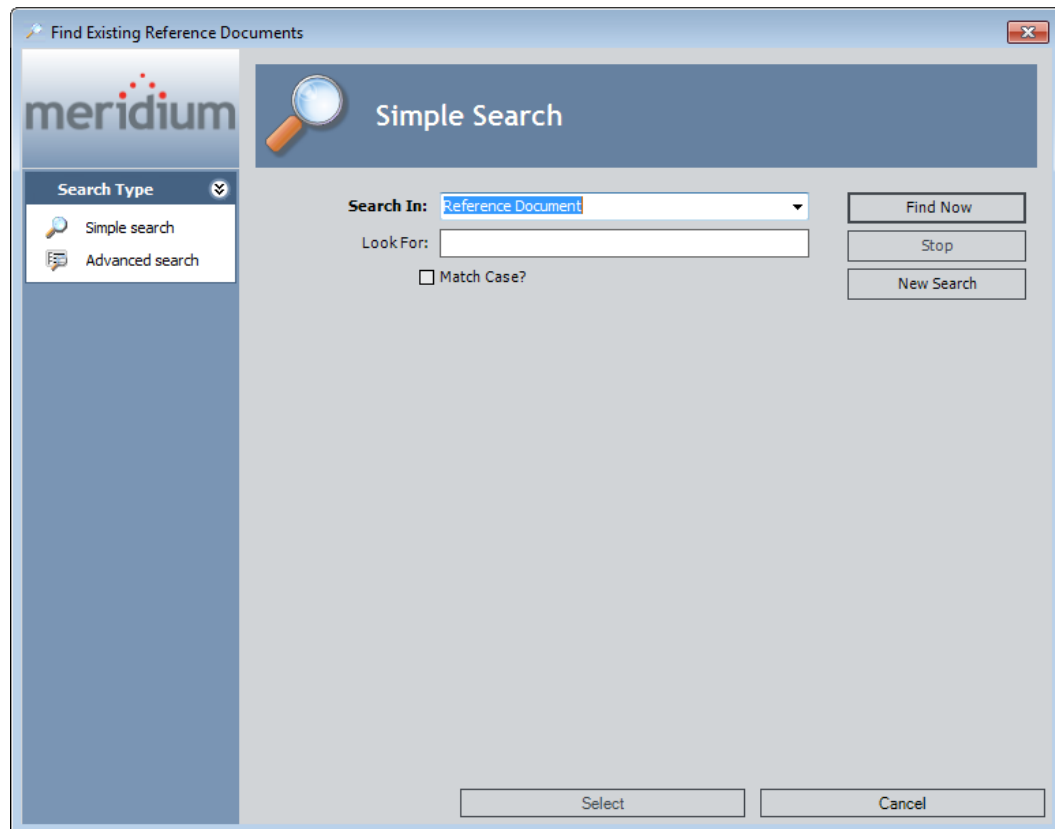
The new Reference Document record is created. If you created an internal reference document, the file that you specified will be uploaded to the database when the record is created. Depending upon the size of the file, the upload process may take several seconds. If so, a progress bar will appear to indicate the progress of the upload process. When the Reference Document record has been created and the file has been uploaded (if needed), the **Reference Document** window closes, revealing the **Reference Documents** window. The name of the new Reference Document record appears in the list of reference documents.

## Linking a Record to an Existing Reference Document Record

To link the current record to an existing Reference Document record:

1. In the Meridium APM Framework, on the Reference Documents window, click the **Add Existing** link.

The **Find Existing Reference Documents** window appears, displaying the Reference Document family in the **Search In** field.



2. Click the **Find Now** button to display a list of existing Reference Document records.
3. Highlight the row containing the desired record, and click the **Select** button.

The name of the Reference Document record appears in the list on the Reference Documents window.

## Viewing the File Associated With a Reference Document

If you want to open the actual file defined in a Reference Document record, you have several options:

- You can open the Reference Document record in Record Manager.
- You can open the Reference Document record in the Bulk Data Form.
- You can access the **Reference Documents** window and open the file from there.


The following instructions explain how to view the reference document from the **Reference Documents** window.

To view the file defined by a **Reference Document** record:

1. In the Meridium APM Framework, on the **Reference Documents** window, highlight the **Reference Document** record whose file you want to open.
2. Click the **Open** button. Note that the **Open** button will be disabled if the reference document file cannot be located by the Meridium APM system.

The file opens in the appropriate application. For example, if the **Reference Document** defines a Microsoft Word file, the document would open in Microsoft Word.

## Modifying Reference Document Records

**Note:** The following instructions provide details on editing the properties of a **Reference Document** record (e.g., path, location, description) via the **Reference Documents** window. Note that you can also open the **Reference Document** record in **Record Manager** or the **Bulk Data Form** and modify it from there. Where you see the  button in the datasheet, you can click it to access the **Reference Document** window, which is explained in the following instructions. To modify the file itself, however, you must access it from its source location.

To modify a **Reference Document** record from the **Reference Documents** window:

1. In the Meridium APM Framework, on the **Reference Documents** window, highlight the **Reference Document** record that you want to edit, and click the **Edit Selected** link.

The **Reference Document** window appears.

2. Modify the path, location, description, and additional properties as desired, and click **OK**.

Your changes are saved.

## Unlinking Reference Document Records from a Record

**Note:** The following instructions provide details on removing the link between a Reference Document record and another record. Note that when unlink a Reference Document record from its root record, neither the Reference Document record nor the file itself are deleted.

To unlink a Reference Document record from another record:

1. In the Meridium APM Framework, on the **Reference Documents** window, highlight the document that you want to unlink, and click the **Remove Selected link**.

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

2. Click the **Yes** button.

The link between the Reference Document record and the associated record is removed.

## Saving a Copy of a Reference Document to a Different Location

If desired, you have the option of saving a reference document file to another location. This can be useful if the database contains an internal reference document that you want to save locally for your own use.

To save a copy of a Reference Document file to a different location:

1. On the **Reference Documents** window, in the list of reference documents, select the reference document that references the file you want to save.
2. Click the **Save As** button. Note that the **Save As** button will be disabled if the reference document file cannot be located by the Meridium APM system.

The **Save As** dialog box appears.

3. Navigate to the location in which you want to save the file.

4. Click the **Open** button.

The file is saved to the specified location.

## Conditional Alerts Records

### How Are Conditional Alerts Records Used?

Conditional Alerts records store information about emails that you want to send to various users. Before you can create a Conditional Alerts record 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.

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 they are assigned. Then, you could create a Conditional Alerts record that determines when an email message will be sent to those inspectors and the type of the data that the email message will contain.

After you create a Conditional Alerts record, you must compile and execute the strategy rule `MI_ProcessConditionalAlerts`, which is provided as part of the baseline Meridium APM content. This strategy rule searches the database for all Conditional Alerts 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 Inspection Management workflow facilitates the creation of Conditional Alerts records, but you can create Conditional Alerts records at any time, based upon the needs dictated by your Meridium APM implementation.

### Workflow for Sending an Email Using a Conditional Alerts Record

If you want to send an email message using a Conditional Alerts record, you should complete the following steps:

1. Create a query whose results you want to include in an email message, and save the query to the Catalog.



2. Create and save a Conditional Alerts record that references the saved query and indicates which users should receive an email message, how often the email message should be sent, and so on.
3. Execute the MI\_ProcessConditionalAlerts strategy rule.

After you execute the strategy rule:

- An email message is sent to the recipients that were specified in the Conditional Alerts record.
- An Alert record is created to store data about the email message that was distributed.

**Note:** Because an Alert record is created, the user who executes the strategy rule must have Insert privileges to the Alert family.

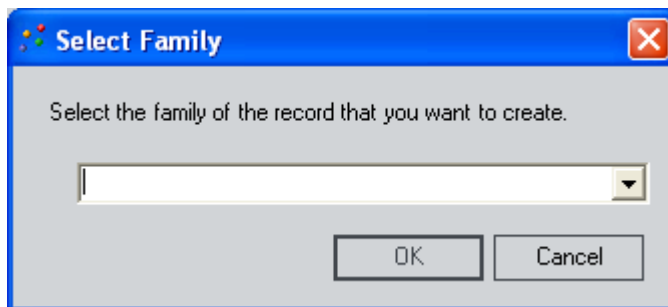
- If you scheduled the strategy rule to be executed automatically (rather than executing the strategy rule manually), a scheduled item is created and can be viewed using the Schedule Manager.

## Creating a Conditional Alerts Record

To create a Conditional Alerts record:

1. In the Meridium APM Framework, on the Meridium APM Framework toolbar, click the New button.

The Select Family dialog box appears.



2. In the list of families, select **Conditional Alerts**, and click **OK**.

The Conditional Alert datasheet appears in the Record Manager.

	Value(s)
Alert ID	[Redacted]
Description	[Redacted]
Alert Owner	[Redacted]
Alert Source	[Redacted]
Query Location	Public\Meridium\Modules\Inspection\Conditional Alert Queries
Query Name	[Redacted]
Interval	[Redacted]
Fixed Distribution List	
Additional Distribution List	
Optional Distribution	
Variable Distribution Source	
Group By	
Send Variable Distribution List	<input type="checkbox"/>
Send Alert Results	<input checked="" type="checkbox"/>
Send Query Link	<input checked="" type="checkbox"/>
Send Web Query Link	<input type="checkbox"/>
Do Not Include	
Alert Parameters	
Send Alert When no Data?	<input type="checkbox"/>
Email Subject Line	Meridium Alert System (Do Not Reply)
Header Line 1	
Header Line 2	
Footer Line 1	
Footer Line 2	
Footer Line 3	
Last Date Processed	
Active?	<input checked="" type="checkbox"/>
Email Origin	Alerts@Meridium.Com
Image Path	

3. Complete the fields as desired, and save the record when you are finished.

**Note:** To send an email message based upon the information in the Conditional Alerts record, you must compile and execute the strategy rule MI\_ProcessConditionalAlerts.

## The Conditional Alert Datasheet

The following table explains how the baseline fields on the Conditional Alert datasheet work.

Field Caption	Description	Notes
Alert ID	Identifies the alert.	The Alert ID appears as the Record ID when you search the Conditional Alerts family. This is a required field.
Description	A description of or the purpose of the alert.	This is a required field.
Alert Owner	The user who created the record.	None
Alert Source	The component used to facilitate the creation of the record.	Use this field to indicate the workflow that prompted the need for the Conditional Alert record. For example, if you are creating the record because of the results of a Reliability analysis, select <b>Reliability Analytics</b> . If there was no specific workflow that prompted the record, select <b>Manual</b> . This is a required field.
Query Location	The path to the Catalog folder that contains the query whose results you want to send in an email message.	The location is set by default to Catalog folder \\Public\Meridium\Modules\Inspection\Conditional Alert Queries. If you are creating the record outside of the Inspection Management workflow, delete the default path and type the appropriate path instead.
Query Name	The name of the query whose results you want to send in an email message.	This field lists all items in the folder specified in the Query Location field. Select the appropriate query from the list.  Note that the query name must contain only alphabetic or numeric characters. If it contains non-alphabetic or non-numeric characters, when you try to execute the MI_ProcessConditionalAlerts strategy, the strategy will fail to execute.
Interval	The interval at which you want to send an email message.	This is a required field.

Field Caption	Description	Notes
<b>Fixed Distribution List</b>	Identifies people to whom you want to send an email message.	<p>This field lists all users whose Human Resource record contains an email address. The users are displayed in the following format:</p> <p>&lt;First Name&gt; &lt;Last Name&gt; (&lt;email address&gt;)</p> <p>For example, if John Smith's email address is jsmith@companyabc.com, he will be listed in the list as:</p> <p><b>John Smith (jsmith@companyabc.com)</b></p> <p>Users are sorted in the list alphabetically by <i>last</i> name (in ascending order). For example, John Smith and Sarah Doe would be listed in this order:</p> <ul style="list-style-type: none"> <li>• Sarah Doe (sdoe@companyabc.com)</li> <li>• John Smith (jsmith@companyabc.com)</li> </ul> <p>Users you select in this field will be listed in the <b>To:</b> field in the email message. You can select up to 30 users.</p>
<b>Additional Distribution List</b>	Identifies people to whom you want to send an email message.	<p>Email addresses that you type in this field will appear in the list of recipients in the email message. You can type up to 30 email addresses. You can send an email message to someone who is not a Meridium APM Security User.</p>
<b>Optional Distribution</b>	Identifies users to whom you want to send an email message.	<p>This field lists all users whose Human Resource record contains an email address. The users are displayed in the following format:</p> <p>&lt;First Name&gt; &lt;Last Name&gt; (&lt;email address&gt;)</p> <p>For example, if John Smith's email address is jsmith@companyabc.com, he will be listed in the list as:</p> <p><b>John Smith (jsmith@companyabc.com)</b></p> <p>Users are sorted in the list alphabetically by <i>last</i> name (in ascending order). For example, John Smith and Sarah Doe would be listed in this order:</p> <ul style="list-style-type: none"> <li>• Sarah Doe (mdoe@companyabc.com)</li> <li>• John Smith (jsmith@companyabc.com)</li> </ul> <p>Users you select in this field will be listed in the <b>Cc:</b> field in the email message. You can select up to 30 users.</p>

Field Caption	Description	Notes
Variable Distribution Source	Identifies the query field that lists email addresses of users to whom you want to send an email message.	This field lists all fields in the query identified in the Query Name field. Select the field that returns email addresses.
Group By	Identifies the field by which the query listed in the Query Name field is grouped.	This field works in combination with other selections you make in the Conditional Alert query and in the Conditional Alert record.
Send Variable Distribution List	Determines whether or not the field selected in the Variable Distribution Source field will be included in the query results sent in the email message.	None
Send Alert Results	Determines whether or not the query results are included in the email message.	This check box is selected by default.
Send Query Link	Determines whether or not the email message will contain a link that opens the query in the Meridium APM Framework application.	This check box is selected by default.
Send Web Query Link	Determines whether or not the email message will contain a link that opens the query in the Meridium APM Web Framework.	The link will provide access to the Meridium APM Web Server that is specified via the Configuration Manager application. If no Meridium APM Web Server is specified via the Configuration Manager application, an error appears if you select this check box and navigate away from the cell.
Do Not Include	Specifies the columns in the query that you do not want to appear in the email message.	When you click in this field, you will see a drop-down area that allows you to type each query column on a separate row. You must type the <i>field alias</i> (not the field ID).  Note that if you select the check box in the <b>Send Variable Distribution List</b> field and you also add to the <b>Do Not Include</b> list the field that you selected in the <b>Variable Distribution Source</b> field, that field <b>WILL</b> appear in the email message.

Field Caption	Description	Notes
Alert Parameters	Specifies the parameters to pass into any prompts included in the Conditional Alert query.	<p>When you click in this field, you will see a drop-down area that allows you to type each query parameter on a separate row. The order in which you type the parameters in the rows <i>must</i> match the order in which the prompts appear in the query. For example, if the query prompts for an Asset Installation Date and Asset Manufacturer, respectively, you must specify the appropriate parameters in that order in the Alert Parameters field.</p> <p>This field is <i>optional</i>. If you do not specify parameters, the email message will display all query results in the body of the email message (if the <b>Send Alert Results</b> check box is selected). If you specify parameters, the query results in the email message will be filtered by those records that correspond to the specified parameters.</p>
Send Alert When no Data?	Determines whether or not an email message is sent if the Conditional Alert query does not return any results.	None
Email Subject Line	The subject line of the email message.	This field is set by default to <i>Meridium APM Alert System (Do Not Reply)</i> . You can modify this value if desired.
Header Line 1	The main heading in the body of the email message.	See the topic <b>Example Email Generated by a Conditional Alert</b> for an example.
Header Line 2	The sub-heading in the body of the email message.	See the topic <b>Example Email Generated by a Conditional Alert</b> for an example.
Footer Line 1	The text that appears below the query results in the email message.	See the topic <b>Example Email Generated by a Conditional Alert</b> for an example.
Footer Line 2	The text that appears in the email below the text you typed in the Footer Line 1 field.	See the topic <b>Example Email Generated by a Conditional Alert</b> for an example.
Footer Line 3	The text that appears in the email below the text you typed in the Footer Line 2 field.	See the topic <b>Example Email Generated by a Conditional Alert</b> for an example.

Field Caption	Description	Notes
Last Date Processed	The date on which the MI_ProcessConditionalAlerts strategy was last executed.	When you create the Conditional Alert record, this field is blank. When the MI_ProcessConditionalAlert strategy is executed, this field is populated with the date and time the strategy is executed. When you open a Conditional Record that has been processed by the MI_ProcessConditionalAlert strategy, you can remove the date in this field if desired.
Active?	Indicates whether or not the Conditional Alert record is active.	This check box is selected by default. If it is cleared, when the MI_ProcessConditionalAlerts strategy is executed, it will not consider this record, and an email will not be sent based on the information in the record.
Email Origin	The text that appears in the From: field in the email message.	This is set by default to <i>Alerts@Meridium APM.Com</i> . You can modify this value if desired. The value you type in this field will appear in the From: field in the email message.
Image Path	The path to an image that you want to imbed in the email message.	The type of image you can imbed in your email will depend on the type of email service you are using. If you are using Microsoft Outlook, standard image file types such as .JPG, .PNG, and .BMP are supported.

## Using the Group By Functionality

The Group By field lets you select a field in the Conditional Alert query by which the query results are grouped. The Group By field works in combination with other selections you make in the Conditional Alert query and in the Conditional Alert record. The intended workflow is as follows:

1. Create the query whose results you want to send in an email message to one or more recipients.
2. Add to the query a field that returns email addresses of users to whom you want to send an email message.
3. In the query design view, select Show Totals, and group the query by the desired field. You should also sort your query results on the Group By field.

4. In the Conditional Alert record, in the **Variable Distribution Source** field, select the query field that you added in step 2 that returns email addresses.
5. In the Conditional Alert record, in the **Group By** field, select the field by which you grouped the query.

When you execute the MI\_ProcessConditionalAlerts strategy, one email message will be sent to each email address returned by the field that you added in step 2 (and the Conditional Alert record in step 4), according to how the query is grouped.

This functionality is best demonstrated through an example. Suppose your database contains twenty Inspection records. Ten of those records are assigned to John Smith, and ten are assigned to Jane Doe. You want to send one email message to John Smith that lists the inspections for which he is responsible, and you also want to send one email message to Jane Doe that lists the inspections for which she is responsible.

To do so, you could create a query that returns the following results, where the query is grouped by the Inspection Report Owner field.



Inspector E-mail Address	Inspection Headline	Inspection Report Owner
▶ janedoe@address.com	Inspect Area A-2	Doe, Jane
janedoe@address.com	Inspect Area A-3	Doe, Jane
janedoe@address.com	Inspect Area A-6	Doe, Jane
janedoe@address.com	Inspect Area A-5	Doe, Jane
janedoe@address.com	Inspect Area A-8	Doe, Jane
janedoe@address.com	Inspect Area A-1	Doe, Jane
janedoe@address.com	Inspect Area A-9	Doe, Jane
janedoe@address.com	Inspect Area A-7	Doe, Jane
janedoe@address.com	Inspect Area A-4	Doe, Jane
janedoe@address.com	Inspect Area A-10	Doe, Jane
johnsmith@address.com	Inspect Area B-1	Smith, John
johnsmith@address.com	Inspect Area B-2	Smith, John
johnsmith@address.com	Inspect Area B-3	Smith, John
johnsmith@address.com	Inspect Area B-4	Smith, John
johnsmith@address.com	Inspect Area B-5	Smith, John
johnsmith@address.com	Inspect Area B-6	Smith, John
johnsmith@address.com	Inspect Area B-7	Smith, John
johnsmith@address.com	Inspect Area B-8	Smith, John
johnsmith@address.com	Inspect Area B-9	Smith, John
janedoe@address.com	Inspect Area A-10	Smith, John

The Conditional Alert record could then be set up as shown in the following image.

Variable Distribution Source	Inspector E-mail Address
Group By	Inspection Report Owner

When the strategy is executed, one email message will be sent to Jane Doe, and one email message will be sent to John Smith. Each email message will contain a list of inspections that are relevant to that user.

**Note:** The Inspector Email Address field is not provided as a baseline Inspection family. If you want to use this field, you would need to add it to the family manually via the Configuration Manager. For details, see the Help system in the Configuration Manager application.

## Example Email Generated by a Conditional Alert

The following image shows a Conditional Alert record. To simplify the example, the Group By functionality is not used.

**Full Inspection Alert (Conditional Alerts)**

Datasheet: Conditional Alert

Condition Alert

	Value(s)
Alert ID	Full Inspection Alert
Description	Full Inspection Alert
Alert Owner	Green, Sara   Student3
Alert Source	Manual
Query Location	Public
Query Name	Inspections
Interval	Daily (DAILY)
Fixed Distribution List	johnsmith@address.com
Additional Distribution List	bwhite@testaddress.com, aduncan@testaddress.com
Optional Distribution	
Variable Distribution Source	
Group By	
Send Variable Distribution List	<input type="checkbox"/>
Send Alert Results	<input checked="" type="checkbox"/>
Send Query Link	<input checked="" type="checkbox"/>
Send Web Query Link	<input type="checkbox"/>
Do Not Include	
Alert Parameters	
Send Alert When no Data?	<input type="checkbox"/>
Email Subject Line	Meridium Alert System (Do Not Reply)
Header Line 1	Full Inspections
Header Line 2	Assigned to Bill and John
Footer Line 1	Note the equipment due to be inspected.
Footer Line 2	This equipment is currently on-line.
Footer Line 3	*There's a state inspection due next month.
Last Date Processed	
Active?	<input checked="" type="checkbox"/>
Email Origin	Alerts@Meridium.Com
Image Path	

The email message that would be generated by this Conditional Alert record would look like the one shown in the following image.

From: Alerts@Meridium.Com Sent: Wed 10/18/2006 4:35 PM  
 To: johnsmith@testaddress.com; bwhite@testaddress.com; Duncan, Amy  
 Cc:  
 Subject: Meridium Alert System (Do Not Reply)

The following query results are as of 10/18/2006 04:34:52 PM

For the most up to date results click on this link: [meridium://Registry/QueryBuilder?querypath=Public\inspections](http://meridium://Registry/QueryBuilder?querypath=Public\inspections)

## Full Inspections

### Assigned to Bill and John

Inspection Headline	Inspectors Name	Asset ID	Inspector E-mail Address
Check Temperature	Black, Bill	HE-1666 #1 DEPROP. O.H. COND.	billblack@testaddress.com
Complete Visual Inspection.	Black, Bill	HE-1666 #1 DEPROP. O.H. COND.	billblack@testaddress.com
Check corrosion.	Smith, John	039-0001 Overhead Line	johnsmith@testaddress.com
Check corrosion.	Smith, John	19-01200 FUEL GAS	johnsmith@testaddress.com

#### NOTES:

Note the equipment due to be inspected.

This equipment is currently on-line.

\* There's a state inspection due next month.

## Troubleshooting

### About Troubleshooting the Conditional Alerts Process

The following list describes some issues that you may encounter while working with the Conditional Alerts process. Click a link to view an explanation of what may be causing the issue.

- While executing the strategy rule, I see an error indicating that a query cannot be found.
- While executing the strategy rule, I see an error indicating that at least one recipient is required but none were found.

### I See an 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.

### I See an 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.

## Reference Table Records

By configuring various aspects of the Meridium 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.

For example, the Representative Fluids Reference Table uses the value in the Representative Fluid field on the datasheet to determine various other values, such as Fluid Type, as indicated in the following image of a portion of the Representative Fluids reference table accessed via query results.

Fluid	FluidType	MolWt	DensityLiq	CpCv	BoilPt	Buoyancy	PPF
15% H2	Flammable	24.1	15	1.4	-200	B	0
H2	Flammable	2	4.4	1.41	-423	B	0
C3	Flammable	43	32.1	1.14	-49	D	5.6
C1	Flammable	16	18.7	1.3	-259	B	5.6
C2	Flammable	29	22.5	1.22	-141	B	5.4
C4	Flammable	57	37	1.1	26	D	5.8
C5	Flammable	71	40	1.07486	92	D	5.8
MTBE	Flammable	130	46.2	1.13	131	D	5
Benzine	Flammable	85	41.8	1.1	151	D	6
C6	Flammable	85	41.8	1.0621	151	D	6
ACR (Acrolein)	Toxic	56	52.5	1.1	126	D	0
AIR	Inert	29	50	1.4	-320	B	0
AN (Acrylonitrile)	Toxic	53	49.9	1.1	174	D	0
Acetic Anhydride	Reactive	102	67.4	1.1	284	D	0.564
BF3	Toxic	67.81	186.58	1.2	-148	D	0
CO	Toxic	28	50.79	1.4	-312	B	0
CO2	Inert	44	68.3	1.3	-110	D	0
Calcium Acetate	Reactive	60	65.6	1.1	245	D	0.564
Calcium Chloride	Reactive	20	70	1.1	212	D	0.564
Caustic (20%)	Reactive	40	80	1.1	220	D	0.564

Using this reference table, if you select *H2* in the Representative Fluid field in a Criticality Analysis record, the Fluid Type field will be populated with *Flammable*, the MolWt field will be populated with *2*, and so on. A rule could also be written, however, that would allow the value in the Fluid Type field in the datasheet to populate the Representative Fluid field based on the Representative Fluids Reference Table.

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 Meridium APM modules rely on reference tables to populate baseline fields. In some cases, the reference tables are configured by Meridium 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 Meridium APM rule logic expects it to contain, exactly as they appear in the reference table record.

Because reference table records are accessible from the Meridium APM Framework application, 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 out-dated 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.

## Associated Pages

### Introduction to Associated Pages

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

To create Associated Pages, you must be familiar with constructing URLs for Meridium 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 you are currently viewing.

### Where Do Associated Pages Appear?

After you have configured Associated Pages for a family, depending on the settings that you specify, they can appear:

- On a shortcut menu in your search results when you search on that family in the Meridium APM Framework.

- On the **Associated Pages** menu when you are viewing a record that belongs to that family in the Record Manager in the Meridium APM Framework and the Meridium APM Web Framework.
- On the **Associated Pages** menu when you are viewing a record that belongs to that family in the Bulk Data Form in the Meridium APM Framework.

Associated Pages also appear on various module-specific pages throughout the Meridium APM Framework application, as appropriate to the page you are viewing. For details on the Associated Pages that are displayed on module-specific pages, refer to the documentation for that module.

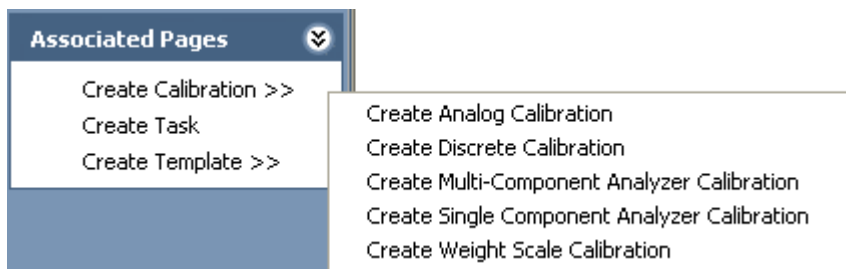
## Options for Organizing Associated Pages

Via the Meridium APM URL Manager, you can configure Associated Pages for the families in your database. You have two options when designing the menu on which they will appear in the Meridium APM Framework application.

- You can put them all directly on the root menu, which is the root **Associated Pages** menu and the shortcut menu that appears when you right-click in the search results. The following image shows all Associated Pages on the root **Associated Pages** menu.



- You can put them on one or more submenus, which *cascade* down from the root menu. For example, in the following figure, the same options that appear on the previous **Associated Pages** menu appear instead on the **Calibration** submenu.





Each submenu that you create can also contain one or more submenus of its own.

If you choose to organize items on submenus, you can create one or more submenus, each with its own set of items. In addition, when you use submenus, you can divide the items on the menus into different groups.

## Viewing the Associated Pages that Exist for a Family

### Accessing the Associated Pages that Exist for a Family

On the **Associate Families with URLs** tab in the Meridium APM URL Manager, you can view the Associated Pages that have already been defined for a selected family.

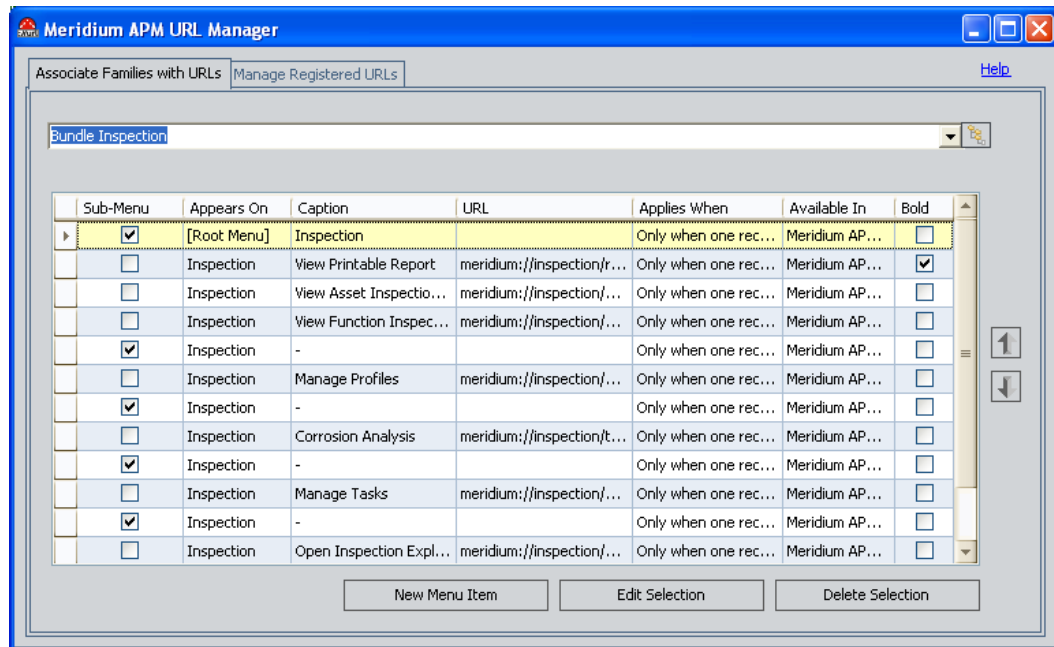
To view a list of Associated Pages that are defined for a family:

- In the URL Manager, in the list at the top of the window, select the desired family.

-or-

Click the  button and select the desired family from the hierarchy.

The grid is populated with the Associated Pages that are already associated with the selected family.



**Note:** The Associated Pages will appear on the menus in the Meridium APM Framework application and in the Meridium APM Web Framework in the exact order that they appear in the list on the **Associate Families with URLs** tab.

## Properties of Associated Pages

The grid on the **Associate Families with URLs** tab displays a list of Associated Pages that have been associated with a selected family and any submenus that are used to group the Associated Pages.

For each item in the list, the following columns of information are displayed:

- **Sub-Menu:** A flag that indicates that the item is a submenu. The submenu can be a submenu of the root menu, which is either the root **Associated Pages** menu or the shortcut menu that appears in the search results, or it could be a submenu of another submenu.

**Hint:** Submenus are used as organizational units that determine where an Associated URL Page will appear.

- **Appears On:** The name of the menu on which the Associated Page will appear.
- **Caption:** The label that will appear for the Associated Page. If desired, you can manage translations for that string.

- **URL:** The URL that will be used to construct the link behind the Associated Page. A value will appear in this field only for Associated Pages, not for submenus.
- **Apply When:** A flag that specifies when the Associated Page will appear. Each Associated Page can appear:
  - **All the time:** The Associated Page will *always* appear, regardless of other conditions that exist.
  - **Only one record is selected:** The Associated Page will appear *only* when one record is selected in the search results. Note that this option applies only when the Associated Page is displayed in the shortcut menu of search results.
  - **When user is a Super User or a member of the MI Power User security group:** The Associated Page will appear only when the user who is logged in to the Meridium APM Framework is a Meridium APM Super User or a member of the MI Power User Security Group.
- **Available In:** A flag that specifies where the Associated Page will be available. Each Associated Page can be available in the:
  - Meridium APM Framework and Meridium APM Web Framework
  - Meridium APM Framework only
  - Meridium APM Web Framework only
  - Never
- **Bold:** A flag that indicates whether the label for the Associated Page will be displayed with bold text.

## Creating a New Associated Page or Submenu

To create a new Associated Page or submenu:

1. In the URL Manager, on the **Associate Families with URLs** tab, in the list at the top, select the family with which you want to associate the Associated Page or submenu.
2. Click the **New Menu Item** button.

The Menu Item Information dialog box appears.

**Menu Item Information**

**Enter menu item information**

**Hyperlink**      **Hyperlink Information**

Appears On: [Root Menu]

Caption: [Text Box]

URL: [Text Box]

Apply When: All the time

Available in: Meridium APM Framework and Meridium APM Web Framework

Make Bold:

---

**Sub-Menu**      **Sub-Menu Information**

Appears On: [Root Menu]

Caption: [Text Box]

Apply When: All the time

Available in: Meridium APM Framework and Meridium APM Web Framework

Make Bold:

Save      Cancel

3. Configure the properties as desired.
4. Click the **Save** button.

The new Associated Page or submenu is saved for the selected family and appears in the grid on the **Associate URLs with Families** tab.

## Modifying an Existing Associated Page or Submenu

You can modify the properties of any Associated Page or submenu that has been configured for a family.

To modify an Associated Page or submenu that has already been configured for a family:

1. In the URL Manager, on the **Associate Families with URLs** tab, in the list at the top, select the family that is associated with the Associated Page or submenu that you want to modify.
2. Select the item that you want to modify.
3. Click the **Edit Selection** button.

The **Menu Item Information** dialog box appears, displaying the information that is currently defined for the selected item.

4. Modify the information as desired.

**Note:** Modifying the **Apply When** selection of a submenu will automatically modify any related submenus.

5. Click the **Save** button.

Your changes are saved to the database.

## Configuring Properties of Associated Pages or Submenus

### About Configuring Properties

You can configure the properties of an Associated Page or a submenu when you add a new Associated Page or submenu for a family or by modifying an existing Associated Page or submenu that already exists for a family. In both cases, you can configure properties on the **Menu Item Information** dialog box.

**Menu Item Information**

**Enter menu item information**

**Hyperlink**      **Hyperlink Information**

Appears On: [Root Menu]

Caption: [Text Field]

URL: [Text Field]

Apply When: All the time

Available in: Meridium APM Framework and Meridium APM Web Framework

Make Bold:

---

**Sub-Menu**      **Sub-Menu Information**

Appears On: [Root Menu]

Caption: [Text Field]

Apply When: All the time

Available in: Meridium APM Framework and Meridium APM Web Framework

Make Bold:

Save      Cancel

### Aspects of the Menu Item Information Dialog Box

The Menu Item Information dialog box is divided into the following sections:

- **Hyperlink:** Lets you configure the properties of an Associated Page.
- **Sub-Menu:** Lets you configure the properties of a submenu that is used to group Associated Pages.

When you access the window by clicking the **New Menu Item** button on the **Associate Families with URLs** tab, the **Hyperlink** option is selected by default, and the fields in the **Sub-Menu** section are disabled.

The following list describes the fields in the **Hyperlink** section:

- **Appears On:** Specifies the menu on which the Associated Page should appear. This could be the root menu, which is the root **Associated Pages** menu and the right-click shortcut menu that appears in the search results, or it could be a submenu that appears on either the root menu or another submenu.
- **Caption:** The text that will appear as the label for the Associated Page.
- **URL:** The URL behind the Associated Page. This field is required for all Associated Pages.
- **Apply When:** The option that indicates when the Associated Page should appear. You can choose:
  - **All the time:** The Associated Page will *always* appear, regardless of other conditions that exist.
  - **Only one record is selected:** The Associated Page will appear *only* when one record is selected in the search results. Note that this option applies only when the link is displayed in the shortcut menu of search results.
  - **When user is a Super User or a member of the MI Power User security group:** The Associated Page will appear only when the user who is logged in to the Meridium APM Framework is a Meridium APM Super User.
- **Available in:** The option that indicates where the Associated Page should appear. You can choose:
  - **Meridium APM Framework and Meridium APM Web Framework:** The Associated Page will appear in both the Meridium APM Framework and the Meridium APM Web Framework.
  - **Meridium APM Framework only:** The Associated Page will appear in the Meridium APM Framework but not in the Meridium APM Web Framework.
  - **Meridium APM Web Framework only:** The Associated Page will appear in the Meridium APM Web Framework but not in the Meridium APM Framework.

- **Never:** The Associated Page will not appear anywhere in either application.
- **Make Bold:** Specifies whether or not you want the Associated Page to appear in bold text.

The following list describes how to use each field in the **Sub-Menu** section:

- **Appears On:** Specifies the menu on which the submenu should appear. This could be either the root menu, which appears when you right-click the cell in the query results, or another submenu.
- **Caption:** The text that will appear as the title for the submenu. This field is required.

**Note:** You can create a separator by typing a hyphen in the **Caption** field. here

- **Apply When:** Specifies when the submenu should appear. You can choose:
  - **All the time:** The submenu will *always* appear, regardless of other conditions that exist.
  - **Only one record is selected:** The submenu will appear *only* when one record is selected in the search results. Note that this option applies only when the item is displayed in the shortcut menu of search results.
  - **When user is a Super User or a member of the MI Power User security group:** The submenu will appear only when the user who is logged in is a Super User or member of the MI Power User Security Group.
- **Available in:** The option that indicates where the submenu should appear. You can choose:
  - **Meridium APM Framework and Meridium APM Web Framework:** The submenu will appear in both the Meridium APM Framework and the Meridium APM Web Framework.




- **Meridium APM Framework only:** The submenu will appear in the Meridium APM Framework but not in the Meridium APM Web Framework.
  - **Meridium APM Web Framework only:** The submenu will appear in the Meridium APM Web Framework but not in the Meridium APM Framework.
  - **Never:** The submenu will not appear anywhere in Meridium APM.
- **Make Bold:** Specifies whether or not you want the submenu header to appear in bold text.

You can toggle between the **Hyperlink** section and **Sub-Menu** section. The fields in the section that is not currently selected will be disabled. When you click the **Save** button, Meridium APM will save the values in the currently selected section.

## Configuring Properties of an Associated Page

The following instructions apply to configuring an Associated Page, whether it appears on the root menu or on a submenu.

### To configure properties of an Associated Page:

1. In the URL Manager, on the **Menu Item Information** dialog box, select the **Hyperlink** option.
2. In the **Appears On** list, select the menu on which the Associated Page should appear. The default value is **[Root Menu]**, but you can select a submenu if any submenus have been created. This list is populated with an alphanumeric list of all the submenus defined for this family.
3. In the **Caption** text box, type the text that will serve as the label for the Associated Page. If desired, click the  button to manage translations for that string. This is a required field.
4. In the **URL** text box, type the URL for the Associated Page. This is a required field.

**Note:** You can specify an internal Meridium APM URL or an external URL. In either case, you must define the scheme within the URL (e.g., **meridium://** or **http://**).

5. In the **Apply When** list, select when you want this Associated Page to appear.

**Note:** When configuring settings for an Associated Page that appears on a submenu, you cannot choose an **Apply When** setting that is *less* restrictive than that of the submenu on which it appears. For example, if the Associated Page appears on the **Inspection** submenu, and the **Inspection** submenu is set to **Only one record is selected**, its Associated Pages cannot be set to **All the time**.

6. In the **Available in** list, select where you want this Associated Page to appear.
7. If you want the Associated Page to appear in bold text, select the **Make Bold** check box.

**Note:** If you decide at this point that you want to create a submenu rather than an Associated Page, you should close the **Menu Item Information** dialog box and then start over. If you select the **Sub-menu** option after defining properties for a Associated Page, the Associated Page that is created will contain a combination of the information that you defined for the Associated Page and the submenu.

8. Click the **Save** button.


Your changes are saved to the database.

## Configuring Properties of a Submenu

To configure properties of a submenu:

1. In the URL Manager, on the **Menu Item Information** dialog box, select the **Sub-Menu** option.

**Note:** Designating an item as a submenu means that you are not defining an Associated Page. Rather, you are defining a menu on which Associated Page or other submenus will appear.

2. In the **Appears On** list, select the menu on which the submenu should appear. The default value is **[Root Menu]**, but you can select a submenu if any submenus have been created. This list is populated with an alphanumeric list of all the other submenus defined for this family.
3. In the **Caption** text box, type the name that will be used for the submenu. If desired, click the  button to define manage translations for that string. This is a required field.
4. In the **Apply When** list, select when you want this menu to appear.

**Note:** If you change the **Apply When** settings of a submenu from **All the time** to a more restrictive option, a message appears, indicating that the change will be propagated to ALL of the child items. In addition, if you are configuring settings for a submenu, you cannot choose an **Apply When** setting that is *less* restrictive than that of the menu on which the submenu appears. For example, if the **Inspection** submenu appears on the **Internal URLs** submenu, which is configured to appear **Only one record is selected**, the **Inspection** submenu cannot be configured to appear **All the time**.

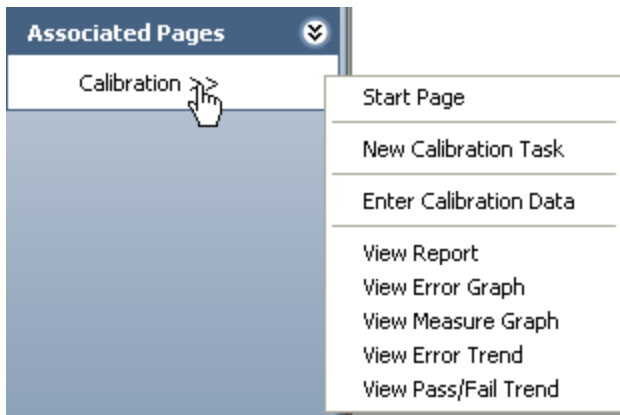
5. In the **Available in** list, select where you want this menu to appear.
6. If you want the submenu header to appear in bold text, select the **Make Bold** check box.
7. Click the **Save** button.

Your changes are saved to the database.

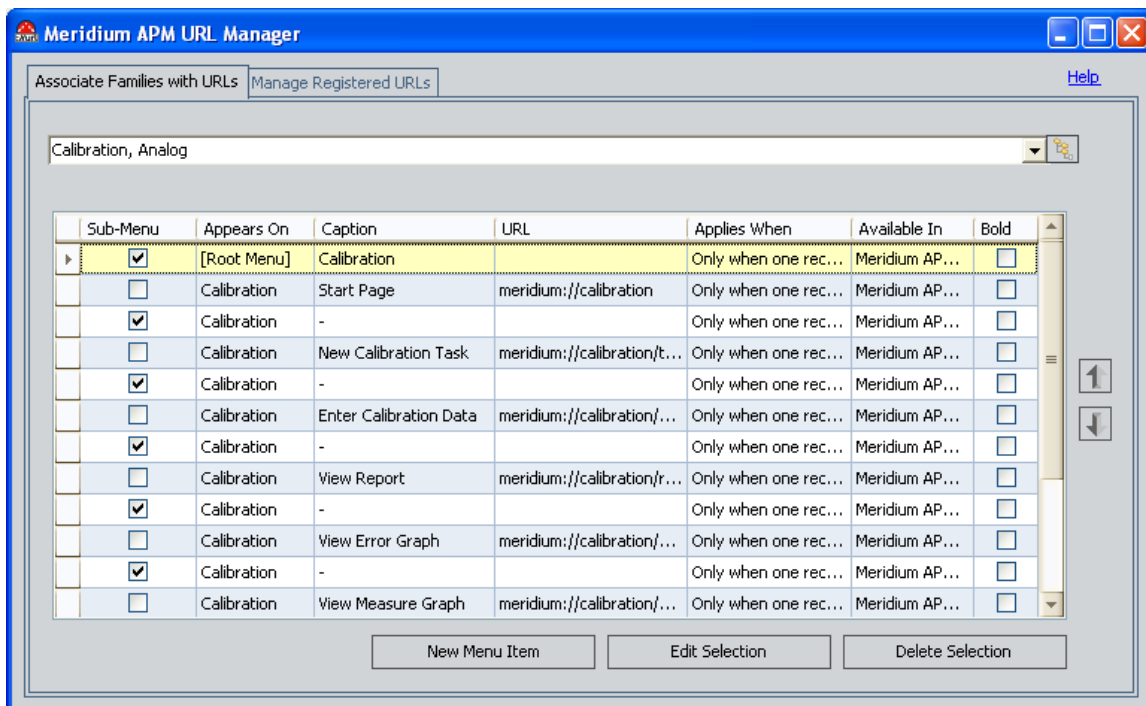
## Creating Division Between Associated Pages

### About Creating Division Between Associated Pages

If you organize Associated Pages on a submenu, you can separate them with a dividing line, as shown with the Associated Pages on the **Calibration** submenu in the following image.



The following image shows how the Associated Pages are configured to produce the division shown in the preceding image.



### Creating a Dividing Line Between Associated Pages

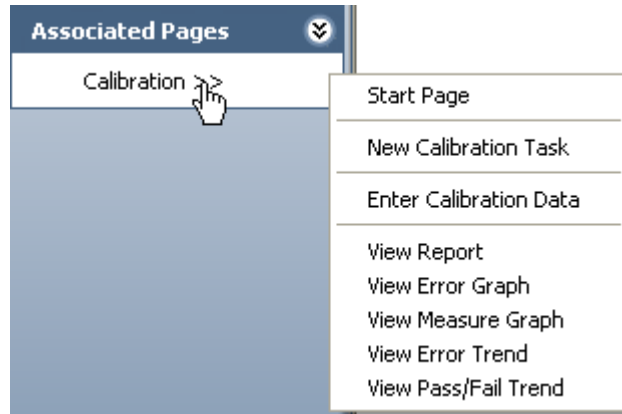
**Note:** Dividing lines are intended to be used only on submenus. You should not create dividing lines on the root menu.

To create a dividing line between Associated Pages:

1. In the URL Manager, on the Associate Families with URLs tab, click the New Menu Item button.

The Menu Item Information dialog box appears.

2. Select the **Sub-Menu** option.
3. In the **Appears On** list, select the submenu on which the divider will appear. For example, if you were creating one of the dividers shown in the following image, you would select **Calibration** in the **Appears On** list.



4. In the **Caption** text box, type a hyphen (-).
5. Choose the desired **Apply When**, **Available in**, and **Make Bold** settings.
6. Click the **Save** button.

The new entry is added to the list on the **Associate Families with URLs** tab.

7. If necessary, use the arrow buttons to the right of the list to position the entry between the two **Associated Pages** that you want to separate.

## Deleting Associated Pages or Submenus

**Note:** Deleting a submenu will also delete any related **Associated Pages**. If you want to delete submenus without deleting the **Associated Pages** that are configured to appear on them, first modify the properties of the **Associated Pages** such that no menu is selected as the menu on which the **Associated Page** appears. Then delete the submenus. In this way, the links will appear directly on the root menu.

### To delete one or more Associated Pages or submenus:

1. In the URL Manager, on the **Associate Families with URLs** tab, select the items that you want to delete.
2. Click the **Delete Selection(s)** button.

A confirmation message appears, asking if you really want to delete the selected items. If the selected item is a submenu, the message will indicate that deleting the item will also delete any Associated Pages that are configured to appear on the submenu.

3. Click the **Yes** button.

The items are deleted from the database.

## Syntax for Variable Parameter Values in 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 Meridium APM Framework application 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 Meridium APM Framework application. One exception to Associated Pages is the URL syntax for specifying a variable parameter value. In the Meridium APM Framework application, 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:

meridium://Registry/QueryBuilder?QueryPath=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.

## Passing Values from Records into URLs on the Associated Pages Menu

Via the URL Manager, you can create Associated Pages for a family. These Associated Pages will appear as links on the **Associated Pages** menu when you are viewing a record that belongs to a family. You can create Associated Pages using any URL that uses the *meridium* or *http* as the scheme. For example, if you want to provide access to the **RCM Start Page** whenever an RCM Analysis record is displayed in the Record Manager, you could create an Associated Page for the MI RCM family using the URL `meridium://RCM`.

In addition to creating static links, as described in the previous example, you can also create dynamic links for a family so that the links provide access to information that is specific to the record you are viewing. You can do this by passing in to the URL information from the record that is currently displayed.

Consider an example where you have created a query that retrieves all the measurements that have been recorded for a specified TML. The query contains a prompt that accepts the Entity Key of a TML. After an entity key has been supplied, the query returns all the records in the Thickness Measurements family that are linked to the specified TML through the Has Measurements relationship. You have used this query to create a graph, which provides a visual representation of the measurements that have been recorded for a given TML. You want to use this graph to create a link on the **Associated Pages** menu so that whenever you are viewing a TML, you will be able to access a graphical representation of its associated measurements. To do so, you would construct a URL that looks something like this:

meridium://Registry/GraphViewer?GraphPath=Public/Meridium  
APM/Graphs/TMLGraph&PO=[ENTY\_KEY]

...where:

- `meridium://Registry/GraphViewer` specifies to open the graph in the Graph Viewer.
- `GraphPath=Public/Meridium APM/Graphs/TMLGraph` is the Catalog path and file name of the graph that you want to open.
- `P0` specifies that you are supplying a value for the first prompt in the query on which the saved graph is based.
- `[ENTY_KEY]` is the variable that will be replaced at runtime by the Entity Key of the actual TML record that you are viewing.

You can modify this example to pass in for *any URL parameter any value from the record that is currently displayed*. For any parameter value, simply use the syntax `[Field]`, where Field is the field ID of the field whose data you want to pass in to the parameter.

**Note:** If the record you are viewing contains a NULL value in a field that is passed to a URL parameter, an error will appear when a user tries to execute the link. Therefore, try to pass to URLs only values from fields that are likely to contain data.



# Reference Information

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## URLs

### Search URLs

#### Parameters for Search URLs

The URL for searches, `meridium://Registry/Finder`, accepts the optional parameters listed in the following table. Note that a link constructed using the URL path and no parameters will open a new search on the **Search** page. The **Search** page will display the search type that the user last used to perform a search.

Parameter Name	Description	Accepted Value(s)	Notes
AutoExecute	Specifies whether or not to execute the saved search automatically.	Y N	Set this parameter to Y if you want to execute the specified search automatically. Executing the search automatically has the same effect as clicking the <b>Find Now</b> button manually. Omitting this parameter has the same effect as setting it to N (i.e., the search will not be executed automatically).

Parameter Name	Description	Accepted Value(s)	Notes
Families	Limits the list of available families to the families specified.	The Family Key(s) or family ID(s) of the families that should be available for selection.	You should use this parameter only when the mode is Simple or Advanced. If Mode=Keyword (where the family selection list is not available) and use the Families parameter, the system will override the specified search type and will display the <b>Simple Search</b> form.  This parameter accepts as its values either numeric Family Keys or alphanumeric family IDs.
Mode	Specifies the search type.	Simple Advanced Keyword	Use this parameter only when constructing a URL to initiate a new search. Whenever you use the Path parameter, the system will open the saved search using the search type with which it was saved, even if you specify a different search type via the Mode parameter.
Path	Specifies the path to a saved search.	The full Catalog path and file name of a saved search.	Use this parameter when you want to use the URL to open a saved search rather than initiating a new search.

## Examples of Search URLs

- `meridium://Registry/Finder`

Opens the **Search** page. The search type that you last used is selected by default.

- `meridium://Registry/Finder?Mode=Advanced`

Opens the **Search** page, displaying the **Advanced Search** workspace.

- <meridium://Registry/Finder?Mode=Simple&Families=2831362,2768293>

Opens the **Search** page, displaying the **Simple Search** workspace. The **Search In** list will contain two families, those whose Family Keys are 2831362 and 2768293.

**Hint:** For the Families parameter, you can use alphanumeric Family IDs in place of numeric Family Keys.

- <meridium://Registry/Finder?Path=Public\Meridium\KeywordSearch>

Opens the **Search** page and displays the saved search named **KeywordSearch**, which resides in the Catalog folder `\\Public\Meridium`.

- <meridium://Registry/Finder?Path=Public\Meridium\KeywordSearch&AutoExecute=Y>

Opens the **Search** page, opens the search **KeywordSearch**, and executes the search automatically so that the search results are displayed in the grid on the **Search** page.

## Using the URL Builder to Create a Link to a Search

### Building a Link to a New Search

Using the **URL Builder**, you can create a link either to a new search or a saved search. These instructions provide details on creating a link to a new search.

These instructions assume that you have already accessed the **URL Builder** and have chosen to create an internal Meridium APM URL.

To complete the steps in the **URL Builder** to create a link to a new search:

1. In the **URL Builder**, on the **Select URL** screen, select **Registry Search**, and click the **Next** button.

The **Choose type of Search** screen appears.

2. Accept the default option, **New search**, and click the **Next** button.

The **Search Mode** screen appears.

3. Select the option that corresponds to the type of link you want to create: **Keyword**, **Simple**, or **Advanced**.

**Note:** If you select the **Simple** or **Advanced** option, an additional screen appears, prompting you to select a family. This family will appear in the **Search In** text box on the **Search** page. You will need to select a family before you can create the URL. The **Keyword** option is available only if an administrative user has not hidden the **Keyword** search functionality.

4. Click the **Finish** button.

The URL is created.

### Building a Link to a Saved Search

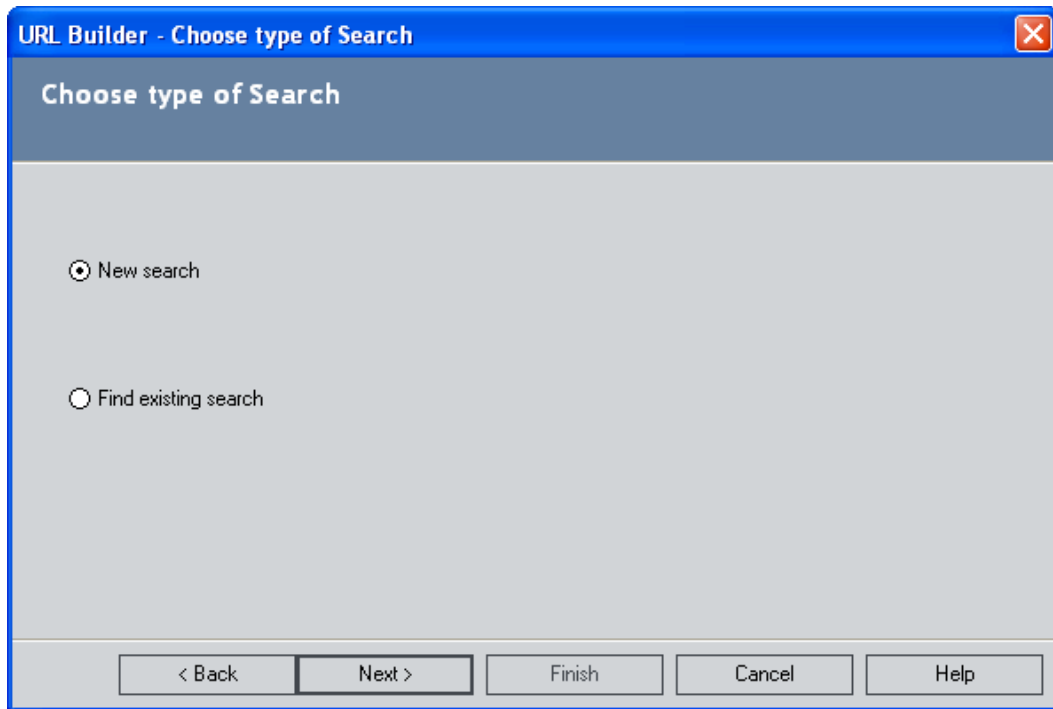
Using the **URL Builder**, you can create a link either to a new search or a saved search. These instructions provide details on creating a link to a saved search.

These instructions assume that you have already accessed the **URL Builder** and have chosen to create an internal Meridium APM URL.

To complete the steps in the **URL Builder** to create a link to a saved search:

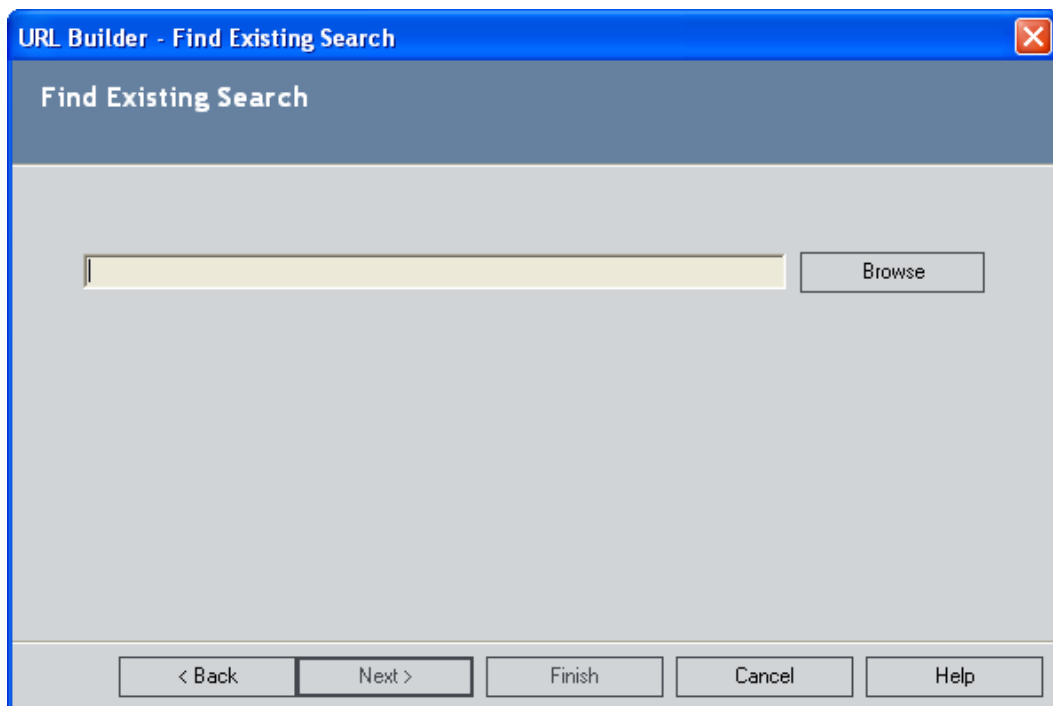
1. In the **URL Builder**, on the **Select URL** screen, select **Registry Search**, and click the **Next** button.

The **Choose Type of Search** screen appears.



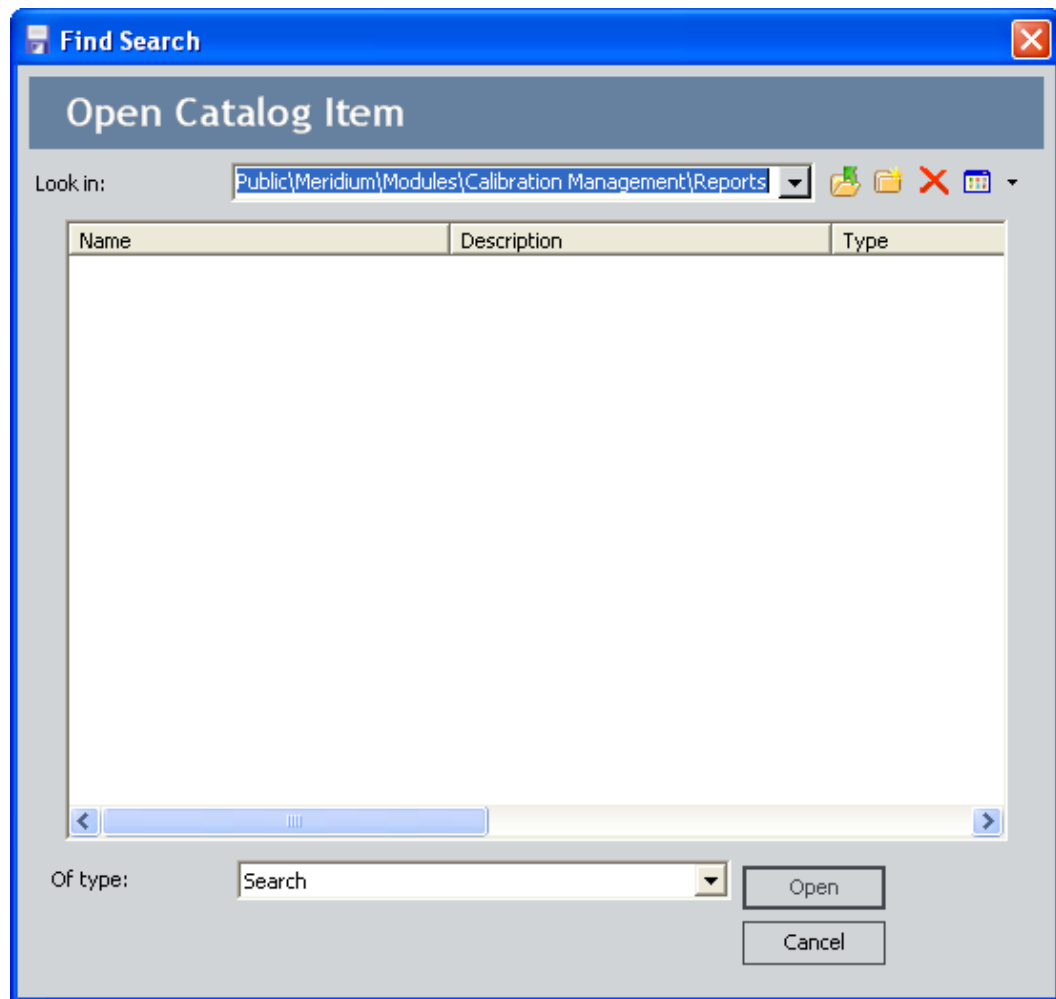
2. Select the Find existing search option, and click the Next button.

The Find Existing Search screen appears.



3. Click the Browse button.

The Find Search dialog box appears.



4. Navigate to the desired search, select it, and click the **Open** button.

The selected search appears in the field on the **Find Existing Search** screen.

5. In the **URL Builder**, on the **Find Existing Search** screen, click the **Finish** button.

The hyperlink is created.

**Note:** If you want the search to execute automatically, you can manually insert the **AutoExecute** parameter after you create the base URL using the URL Builder. (You must also provide the **Path** parameter when using the **AutoExecute** parameter.) Example:  
 meridium://Registry/Finder?mode=Simple&Path=Personal[user]\Queries\General Insp&AutoExecute=Y

## Record Manager URLs

### Record Manager URLs

#### Parameters for the Record Manager URL

The URL for the Record Manager, `meridium://Registry/RecordManager`, accepts the parameters listed in the following table. Note that the URL path alone is not a valid URL. Use the information in the following table to choose parameters that will allow you to construct a usable link.

Parameter Name	Description	Accepted Value(s)	Notes
AutoExpand	Specifies whether or not you want to expand the related families in the record hierarchy to reveal any records in those families.	True	Specifying a value of True will expand the families related to the root record to show all records in those families. This parameter also accepts False as a value. Note, however, that specifying False has the same effect as omitting this parameter from the URL: the record hierarchy will not expand related families. Therefore, you will need to use this parameter <i>only</i> when you want to expand the related families.

Parameter Name	Description	Accepted Value(s)	Notes
<b>DatasheetID</b>	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 Meridium 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.
<b>DialogHeight</b>	Specifies the height at which the dialog box should appear.	Number in pixel units.	You can use this parameter when you use the NewWindow parameter. The DialogHeight parameter works only if the <i>DialogWidth</i> parameter appears before it.
<b>DialogWidth</b>	Specifies the width at which the dialog box should appear.	Number in pixel units.	You can use this parameter when you use the NewWindow parameter. The DialogWidth parameter works only if the <i>DialogHeight</i> parameter appears after it.
<b>EntityKey</b>	Specifies the Entity Key of the record that you want to open in the Record Manager.	0 numeric Entity Key(s)	You can set this parameter to 0 (zero) if you want to create a new record. Whenever you use the FamilyKey parameter, the EntityKey parameter is also required.
<b>ExplorerPath</b>	Specifies the configured explorer in which the record should be opened.	The path and file name of a configured explorer.	The configured explorer that you specify must be valid for the family specified by the FamilyKey parameter.



Parameter Name	Description	Accepted Value(s)	Notes
FamilyID	Specifies the family ID for a new record.	Alphanumeric Family ID(s) <sup>1</sup>	<p>You can use this parameter to force the selection of a certain family (i.e., bypass the <b>Select Family</b> dialog box) when constructing a link to create a new record.</p> <p>The FamilyID parameter provides the same functionality as the FamilyKey parameter. In each URL that contains the EntityKey parameter, you can use either the FamilyKey or FamilyID parameter. You do not need to use both.</p>
FamilyKey	Specifies the Family Key for a new record.	numeric Family Key(s) <sup>1</sup>	<p>You can use this parameter to force the selection of a certain family (i.e., bypass the <b>Select Family</b> dialog box) when constructing a link to create a new record.</p> <p>The FamilyKey parameter provides the same functionality as the FamilyID parameter. In each URL that contains the EntityKey parameter, you can use either the FamilyKey or FamilyID parameter. You do not need to use both.</p>
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.	<p>When you construct a URL to create a new record, 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. <i>You must use the field ID as the parameter name.</i> 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).</p>

Parameter Name	Description	Accepted Value(s)	Notes
Mode	Specifies the mode of the Record Manager.	ShowRecords SelectNewRecordType NewExplorer EditExplorer	<ul style="list-style-type: none"><li>• <b>ShowRecords:</b> Opens the records specified by the FamilyKey and EntityKey parameters. Omitting the Mode parameter and specifying only a FamilyKey and EntityKey parameters has the same effect as using the ShowRecords mode.</li><li>• <b>SelectNewRecordType:</b> Opens the <b>Select Family</b> dialog box for creating a new record.</li><li>• <b>NewExplorer:</b> Launches the <b>Definable Explorer Wizard</b> so that you can create a new configured explorer.</li><li>• <b>EditExplorer:</b> Opens in the <b>Definable Explorer Wizard</b> the configured explorer specified by the ExplorerPath parameter.</li></ul>

Parameter Name	Description	Accepted Value(s)	Notes
NewWindow <sup>2</sup>	Specifies that the record should be opened in a separate window instead of the Record Manager.	True	<p>Specifying a value of True will open the record in a separate window instead of the Record Manager. This parameter also accepts False as a value. Note, however, that specifying False has the same effect as omitting this parameter from the URL: the record will be opened in the standard Record Manager. Therefore, you will need to use this parameter <i>only</i> when you want to open a record in a separate window.</p> <p>If desired, you can specify the width and height of the new window using the DialogWidth and DialogHeight parameters. If you do not specify a width and height, the window will appear using the default size.</p>
ShowRecordExplorer	Specifies whether or not the Record Explorer pane will be displayed by default when the Record Manager is initially opened.	False	<p>Specifying a value of False will hide the <b>Record Explorer</b> pane by default. This parameter also accepts True as a value. Note, however, that specifying a value of True has the same effect as omitting this parameter from the URL: the <b>Record Explorer</b> pane will be displayed. Therefore, you will need to use this parameter <i>only</i> when you want to hide the <b>Record Explorer</b> pane.</p>

1. You can specify multiple FamilyKey/EntityKey pairs to open more than one record. Note that for every FamilyKey value, there must be a corresponding EntityKey value, and vice versa, even if the FamilyKey is the same for all records. For example, FamilyKey=1,2,3&EntityKey=1,2,3 (records 1,2, and 3 belong to different families, 1,2, and 3, respectively) or FamilyKey=1,1,1&EntityKey=1,2,3 (entities 1,2, and 3 belong to the same family, 1).

2. This parameter is identical in functionality to the `OpenEntityInDialog` parameter that was supported in previous releases. The `OpenEntityInDialog` parameter will still work, but for new URLs, we recommend that you use the `NewWindow` parameter.

### Examples of the Record Manager URL

- `meridium://Registry/RecordManager?Mode=SelectNewRecordType`  
  
Opens the **Select Family** dialog box. After you select a family, the Record Manager appears, displaying an empty record for that family.
- `meridium://Registry/RecordManager?Mode=NewExplorer`  
  
Launches the **Definable Explorer Wizard**, where you can create a new configured explorer.
- `meridium://Registry/RecordManager?Mode=EditExplorer&ExplorerPath=Public\Meridium\PumpExplorer`  
  
Launches the **Definable Explorer Wizard**, where you can modify the configured explorer called `PumpExplorer`.
- `meridium://Registry/RecordManager?FamilyID=Pump&EntityKey=0`  
  
Opens the Record Manager, displaying a blank record for the Pump family.
- `meridium://Registry/RecordManager?EntityKey=1234567`  
  
Opens the Record Manager, displaying the record with the Entity Key 1234567.
- `meridium://Registry/RecordManager?FamilyKey=1234567&EntityKey=0`  
  
Opens the Record Manager, displaying a blank record for the family with the Family Key 1234567.
- `meridium://Registry/RecordManager?FamilyKey=1234567&EntityKey=0&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.

- `meridium://Registry/RecordManager?EntityKey=1234567&DatasheetID=Custom_Datasheet`

Opens the Record Manager, displaying the record with the Entity Key 1234567. The datasheet Custom\_Datasheet is selected by default.

- `meridium://Registry/RecordManager?EntityKey=1234567&DatasheetID=Custom_Datasheet&NewWindow=True`

Opens in a separate window the record with the Entity Key 1234567. The datasheet Custom\_Datasheet is selected by default.

**Hint:** For the DatasheetID parameter, be sure to use the Datasheet *ID*, not the Datasheet Caption.

- `meridium://Registry/RecordManager?EntityKey=1234567&DatasheetID=Custom_Datasheet`

`&NewWindow=True&DialogWidth=1024&DialogHeight=768`

Opens the record with the Entity Key 1234567 in a separate window that is 1,024 pixels wide and 768 pixels in height. The datasheet Custom\_Datasheet is selected by default.

- `meridium://Registry/RecordManager?EntityKey=1234567&ExplorerPath=Public\Meridium\PumpExplorer`

Opens the Record Manager, displaying the record with the Entity Key 1234567. Instead of using the standard Record Explorer pane, the configured explorer called PumpExplorer is used.

- `meridium://Registry/RecordManager?EntityKey=1234567&ShowRecordExplorer=False`

Opens the Record Manager, displaying the record with the Entity Key 1234567. The Record Explorer pane is hidden by default.

- `meridium://Registry/RecordManager?EntityKey=1234567&AutoExpand=True`

Opens the Record Manager, displaying the record with the Entity Key 1234567. The families that are related to the family specified by the Family Key 1234567 are expanded to show any records in those families.

## Record Linking URLs

### Linking Existing Records

#### Parameters for the URL for Linking Existing Records

The URL for record linking functionality, `meridium://Registry/LinkTo`, accepts the parameters described in the following table. Note that a link created from the path with no parameters will generate an error. Click [here](#) for examples of how you can combine these parameters to construct a URL.

Parameter Name	Description	Accepted Value(s)	Notes
<b>FromEntityKey</b>	Specifies the record that will serve as the predecessor in the link that you want to create.	The Entity Key of the desired record.	This parameter is required.
<b>FromEntityFamily</b>	Specifies the family of the record that will serve as the predecessor in the link that you want to create.	The Family Key of the desired family.	This parameter is required.
<b>RelFamily</b>	Specifies the relationship family that relates the predecessor record to the successor record.	The Family Key of the desired relationship.	This parameter is required only when multiple relationships exists between the predecessor family and the successor family. If only one relationship exists, it will be used automatically.

Parameter Name	Description	Accepted Value(s)	Notes
ToEntityFamily	Specifies the family of the record that will serve as the successor in the link that you want to create.	The Family Key of the desired family.	This parameter is required.

### Examples of the URL for Linking Existing Records

- meridium://Registry/LinkTo?FromEntityKey=12345&FromEntityFamily=23456&ToEntityFamily=45678

Displays the **Search** page with the family identified by Family Key 45678 automatically selected in the **Search In** field. You can search for a record in that family and then click the **Link to Selected Record** button to link the selected record to the record identified by Entity Key 12345 using the *only* relationship that exists between the two entity families.

- meridium://Registry/LinkTo?FromEntityKey=12345&FromEntityFamily=23456&ToEntityFamily=45678&RelFamily=56789

Displays the **Search** page with the family identified by Family Key 45678 automatically selected in the **Search In** field. You can search for a record in that family and then click the **Link to Selected Record** button to link the selected record to the record identified by Entity Key 12345 using the relationship family identified by the relationship family key 56789.

### Creating a New Record and Linking It to an Existing Record

#### Parameters for the URL for Creating and Linking a New Record to an Existing Record

The URL for creating a new record and linking it to an existing record, **meridium://Registry/CreateAndLink**, accepts the parameters described in the following table. Note that a link created from the path with no parameters will generate an error. Click [here](#) for examples of how you can combine these parameters to construct a URL.

Parameter Name	Description	Accepted Value(s)	Notes
DatasheetID	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 Meridium APM sytem 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.
ExplorerPath	Specifies the configured explorer in which the new record should be opened.	The path and file name of a configured explorer.	The configured explorer that you specify must be valid for the family specified by the ToFamily parameter.



Parameter Name	Description	Accepted Value(s)	Notes
Field Values	Defines values that should be populated automatically in the datasheet.	Values that are appropriate for the specified fields.	You can supply values to the new record that will be populated automatically for that record. The actual parameter names that you use must correspond to fields defined for the family via the Configuration Manager. The parameter values will vary, depending on the specified fields but should be appropriate for those fields (e.g., specify numbers for numeric fields). You must use the field ID as the parameter name.
FromEntityKey	Specifies the existing record to which you want to link a new record.	The Entity Key of the desired record.	This parameter is required.
ToFamily	Specifies the family of the record that you want to create.	The family ID or the Family Key of the family to which the new record will belong.	This parameter is required.

Parameter Name	Description	Accepted Value(s)	Notes
RecordManager	Specifies whether or not the new record will be displayed in the Record Manager after it is saved.	False	Specifying a value of False will return to focus the screen from which you launched the URL. In other words, if you specify False, the new record will not be displayed in the Record Manager. This parameter also accepts True as a value. Note, however, that specifying True has the same effect as omitting this parameter from the URL: the record hierarchy will be displayed. Therefore, you will need to use this parameter <i>only</i> when you do not want to display the new record in the Record Manager.
RelationshipFamily	Specifies the relationship family that relates the existing record to the new record.	The family ID or the Family Key of the desired relationship.	This parameter is required.

Parameter Name	Description	Accepted Value(s)	Notes
ShowRecordExplorer	Specifies whether or not the Record Explorer pane will be displayed by default when the Record Manager is initially opened.	False	Specifying a value of False will hide the Record Explorer pane by default. This parameter also accepts True as a value. Note, however, that specifying a value of True has the same effect as omitting this parameter from the URL: the Record Explorer pane will be displayed. Therefore, you will need to use this parameter <i>only</i> when you want to hide the Record Explorer pane.

### Examples of the URL for Creating and Linking a New Record to an Existing Record

**Note:** The following examples describe the behavior of parameter values that are specific to the URL that creates a new record and links it to an existing record. Many of the parameters accepted by this URL are also accepted by the Record Manager URL. For examples of how to use those parameters, see the Record Manager URL examples.

- meridium://Registry/CreateAndLink?FromEntityKey=123456&ToFamily=MI\_REC&RelationshipFamily=MI Has Recommendations

Displays in a new window a new record in the MI\_REC (Recommendation) family. After the new record is saved, it is linked to the record defined by the Entity Key 123456 and displayed in the Record Manager. The records are linked through the MI Has Recommendations relationship family.

- meridium://Registry/CreateAndLink?FromEntityKey=123456&ToFamily=MI\_REC&RelationshipFamily=MI Has Recommendations&RecordManager=False

After creating the Recommendation record and linking it to the record defined by the Entity Key 123456, Meridium APM displays the screen from which the URL was launched instead of the Record Manager.

## Using the URL Builder to Create Links to Manage Records

### Creating a Link to Create a New Record

You can create a link that opens an existing record in the Record Manager or a link that opens a template that you can use to create a new record. These instructions provide details on creating a link to a new record.

These instructions assume that you have already accessed the **URL Builder** and have chosen to create an internal Meridium APM URL.


To complete the steps in the **URL Builder** to create a link to a new record template:

1. In the **URL Builder**, on the **Select URL** screen, select **Registry Record Manager**, and click the **Next** button.

The **New or Existing Record** screen appears.

2. Accept the default option, **New record template**, and click the **Next** button.

The **Select Family** screen appears.

3. Click the down arrow and select the family to which the new record will belong. Alternatively, you can click the  button to see a hierarchical view of families from which you can select.
4. Click the **Finish** button.

The link is created.

### Creating a Link to Open an Existing Record

You can create a link that opens an existing record in the Record Manager or a link that opens a template that you can use to create a new record. These instructions provide details on linking to an existing record.

These instructions assume that you have already accessed the **URL Builder** and have chosen to create an internal Meridium APM URL.

To complete the steps in the **URL Builder** to create a link to an existing record template:

1. In the **URL Builder**, on the **Select URL** screen, select **Registry Record Manager**, and click the **Next** button.

The **New or Existing Record** screen appears.

2. Select the **Find existing record** option, and click the **Next** button.

The **Add Records** screen appears.

3. Click the **Add Record(s)** button.

The **Find Items** window appears, displaying the **Simple Search** form by default.

4. Perform a search to find the record that you want to use to build the link.
5. In the search results, select the record(s) that you want to use to build the link, and click the **Open** button.

The records are added to the list on the **Add Records** screen. You can remove a record from the list by clicking the **Remove** button.

6. When you are finished adding records, click the **Finish** button.

The link is created.

### Creating a Link to Create a New Record and Linking it to an Existing Record

These instructions assume that you have already accessed the **URL Builder** and have chosen to create an internal Meridium APM URL.

To create a link to create a new record and link it to an existing record:

1. In the **URL Builder**, on the **Select URL** screen, select **Registry Create and Link** from the list, and click the **Next** button.

The **Build Parameters for Registry Create and Link** screen appears.

2. In the **Available Parameters** section, click the plus sign next to the **FromEntityKey** option.

The **FromEntityKey** parameter is added to the list at the bottom of the screen.

3. In the **Value** field for the **FromEntityKey** parameter, click the down arrow, and select **[ENTY\_KEY]**. Note that if you have accessed the **URL Builder** from within a query, the syntax for the value is **\$ENTY\_KEY\$**.

**Hint:** If you are adding this URL to a Home Page, after the URL has been added, you will need to manually remove the text **[ENTY\_KEY]** and replace with the actual Entity Key of the existing record to which you want to link the new record.

4. Click anywhere outside of the **Value** drop-down list to close it.
5. In the **Available Parameters** section, click the plus sign next to the **ToFamily** option.

The **ToFamily** parameter is added to the list at the bottom of the screen.

6. In the **Value** field for the **ToFamily** parameter, click the down arrow, and select the family to which you want the *new* record to belong.

7. Click anywhere outside of the **Value** drop-down list to close it.

8. In the **Available Parameters** section, click the plus sign next to the **RelationshipFamily** option.

The **RelationshipFamily** parameter is added to the list at the bottom of the screen.

9. In the **Value** field for the **RelationshipFamily** parameter, click the down arrow, and select the relationship family that you want to use to create the link between the new record to the existing record.

**Note:** The list displays only relationship families that are used in a relationship definition with the family specified by the **ToFamily** parameter.

10. Click anywhere outside of the **Value** drop-down list to close it.

At this point, all required parameters have been added to the URL. You could continue defining values for the **DatasheetID** and **RecordManager** parameters if desired. These instructions, however, assume that you do not want to add these parameters.

11. Click the **Finish** button.

The URL is created. When you click the link associated with the URL:

- A new window displays a new record in the family specified by the **ToFamily** parameter.
- Upon saving the new record, it is linked to the record specified by the **FromEntityKey** parameter using the relationship specified by the **RelationshipFamily** parameter.

## Bulk Data Form URLs

### Parameters for the Bulk Data Form URL

The URL for the Bulk Data Form, `meridium://Registry/BulkDataForm`, accepts the parameters described in the following table. Note that a link created from the path with no parameters will generate an error. To open the Bulk Data Form, if you are not using the `QueryPath` parameter, you must define at least the `FamilyKey` or `EntityKey` parameter. If you are using the `QueryPath` parameter, you do not need to define the `FamilyKey` or the `EntityKey` parameter.

Note that when you include the `QueryPath` parameter in the `meridium://Registry/Bulk Data Form` URL to view the results of an existing query, if the query contains one or more prompts, you can pass values in for

the prompts via the URL. Note that prompt parameters are not specific to the Bulk Data Form URL and are, therefore, not discussed in this section.

Parameter Name	Description	Accepted Value(s)	Notes
<b>BestFitColumns</b>	Facilitates the automatic adjustment of column-widths, using Best Fit functionality.	True	When you use this parameter, the Best Fit option will be applied automatically to columns in the Bulk Data Form. If you use this parameter with other Bulk Data Form URL parameters, you should add this parameter <i>first</i> .
<b>DatasheetID</b>	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 default datasheet will be used.
<b>EntityKeys</b>	Specifies the Entity Key of the record that you want to open in the Bulk Data Form.	numeric Entity Key(s)	To open more than one record in the Bulk Data Form, you can specify multiple values for this parameter, each separated by a comma. Note that the entities you specify must belong to the same family. You can use this parameter either with or without the FamilyKey parameter.
<b>FamilyKey</b>	Specifies the Family Key of the family for which you want to access the Bulk Data Form.	numeric Family Key	Specifying the FamilyKey alone will open a blank Bulk Data Form, where you can begin creating records that belong to that family.



Parameter Name	Description	Accepted Value(s)	Notes
Field Values	Defines values that should be automatically populated in the datasheet.	Field IDs for the fields that you want to populate with data.	The values defined for the field values parameters will be inserted into the corresponding fields of each new record. The actual parameter names that you use must correspond to fields defined for the family via the Configuration Manager. The parameter values will vary, depending on the specified fields but should be appropriate for those fields (e.g., specify numbers for numeric fields).
PageHelpText	Specifies the help text that you want to appear at the top of the workspace.	Any alphanumeric string that you want to use for help text.	This parameter allows you to customize the appearance of the Bulk Data Form.
PageName	Specifies the text that will appear in the title bar and in place of the default label <b>Bulk Data Form</b> .	Any alphanumeric string that you want to use for the name of the Bulk Data Form.	This parameter allows you to customize the appearance of the Bulk Data Form.
QueryPath	Specifies the query whose results you want to view in the Bulk Data Form.	The Catalog path and file name of the query you want to open.	The Catalog path and file name must include the same capitalization that exists in the Catalog. Additionally, the first column in the query must be <i>ENTY_KEY</i> .
RelatedEntityKey	Specifies a related entity.	The Entity Key of the related entity.	This parameter must be used with the RelationshipKey parameter.

Parameter Name	Description	Accepted Value(s)	Notes
RelationshipKey	Specifies a relationship pertaining to the related entity.	The relationship definition key of the relationship.	This parameter must be used with the RelatedEntityKey parameter to specify which relationship will be used to link new records to the related entity.
SortType	Specifies the order in which to sort records in the Bulk Data Form.	A D	<p>You can specify the following values for this parameter:</p> <ul style="list-style-type: none"> <li>• A - Sorts records in ascending order on the field specified for the SortField parameter.</li> <li>• D - Sorts records in descending order on the field specified for the SortField parameter.</li> </ul> <p>This parameter should be used in conjunction with the SortField parameter but is not required when you specify the SortField parameter. If you omit the SortType parameter, records will be sorted in ascending order on the field specified for the SortField parameter.</p>
SortField	Specifies the field on which to sort records in the Bulk Data Form.	The field ID of the field that you want to use for sorting.	When you use this parameter, you can also include the SortType parameter to indicate the order in which records should be sorted.

## Examples of the Bulk Data Form URL

- <meridium://Registry/BulkDataForm?FamilyKey=2025482>

Opens a blank Bulk Data Form where you can begin creating records that belong to the Family Key 2025482.

- <meridium://Registry/BulkDataForm?FamilyKey=2025482&DatasheetID=Custom Datasheet>

Opens the record identified by the Entity Key 2025482 in the Bulk Data Form using the Custom Datasheet.

- <meridium://Registry/BulkDataForm?FamilyKey=2005386&RelatedEntityKey=2005503&RelationshipKey=2005421>

Opens a blank Bulk Data Form for the family identified by the Family Key 2005386. When you create records and save them, they will be linked to the entity identified by the Entity Key 2005503 through the relationship identified by the Relationship Definition Key 2005421.

- [meridium://Registry/BulkDataForm?FamilyKey=2005268&MIN\\_NBR=1000&MAX\\_NBR=9999](meridium://Registry/BulkDataForm?FamilyKey=2005268&MIN_NBR=1000&MAX_NBR=9999)

Opens a blank Bulk Data Form for the family identified by the Family Key 2005268. The MIN\_NBR field is populated with 1000 and the MAX\_NBR field populated with 9999. Note that each new record you create in the Bulk Data Form will be populated with the specified default values.

- <meridium://Registry/BulkDataForm?FamilyKey=2025482&PageName=Custom Title>

Opens a blank Bulk Data Form for the family identified by the Family Key 2025482. The text **Custom Title** appears in the title bar and at the top of the workspace.

- <meridium://Registry/BulkDataForm?FamilyKey=2025482&PageHelpText=Create new records.>

Opens a blank Bulk Data Form for the family identified by the Family Key 2025482. The text **Create new records** appears at the top of the workspace.

- <meridium://Registry/BulkDataForm?EntityKeys=2025922,2025933,2025944>

Opens the Bulk Data Form displaying three entities, which correspond to the key values 2025922, 2025933, and 2025944.

- <meridium://Registry/BulkDataForm?QueryPath=Public\Meridium\PumpQuery>

Opens the Bulk Data Form and displays the results of the Pump Query.

- [http://<server>/MeridiumWeb/Apm/Registry/Bulkdataform.aspx?EntityKeys=64251874617, 64251874620, 64251874623&FilterField=ASSET\\_ID&SortType=D](http://<server>/MeridiumWeb/Apm/Registry/Bulkdataform.aspx?EntityKeys=64251874617,64251874620,64251874623&FilterField=ASSET_ID&SortType=D)

Displays in the Bulk Data Form the records with the Entity Keys 64251874617, 64251874620, and 64251874623 and sorts them in descending order by Asset ID.