Meridium APM Asset Strategy Implementation

3.6.1.3.0

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About This Document

This file is provided so that you can easily print this section of the Meridium APM Help system.

You should, however, use the Help system instead of a printed document. This is because the Help system provides hyperlinks that will assist you in easily locating the related instructions that you need. Such links are not available in a print document format.

The Meridium APM Help system can be accessed within Meridium APM itself or via the Meridium APM Documentation Website (https://www.meridium.com/documentation/WebHelp/WebHelpMaster.htm).

> **Note**: If you do not have access to the Meridium APM Documentation Website, contact Meridium Global Support Services.

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Overview of Asset Strategy Implementation

The Meridium APM *Asset Strategy Implementation* (ASI) module lets you build *Implementation Packages*, which are containers of records that dictate the work that you want to perform and the Asset Strategies that contain the original work requests (Action Revision records). Using ASI, you can determine where you want to track the physical work that needs to be performed: your Meridium APM system or an external SAP system. Then, by implementing these Implementation Packages, you can create those physical work items (Meridium APM records or SAP items).

For example, if you want to track work items in Meridium APM, you can create Measurement Location records or Meridium APM Task records. If, however, you want to track work against items in your SAP system, you can also use ASI to create items such as Maintenance Plans, Maintenance Items, and Task Lists.

Note that if you choose to track your work using SAP items, you must activate the ASI for SAP license, which allows for integration between Meridium APM and an external SAP System.

Keep in mind that although ASI is highly configurable, the focus of this documentation is to explain how to perform tasks using the baseline ASI implementation.

ASI System Requirements

The following licenses are required to take full advantage of ASI functionality:

- *ASM and ASI*
- *ASI for SAP*

In addition, your system must contain the basic Meridium APM system architecture and the following additional components:

- **The Asset Strategy Management (ASM) module.** ASI allows you to build *Implementation Packages*, which are containers of records that dictate the work that you want to perform *and* the Asset Strategies that contain the original work requests (Action Revision records). Asset Strategies are created in ASM. This documentation assumes that you have deployed and configured the ASM module.

- **An SAP System.** This component is required only if you want to create items such as Maintenance Plans, Maintenance Items, and Task Lists from ASI. To take full advantage of the ASI module, we recommend that you integrate ASI with SAP, so this documentation provides details on performing the steps required to integrate ASI with SAP.

  > **Note:** For all ASI workflows, the Meridium APM system does not support integration with SAP through SAP PI.

After you have installed and configured the basic system architecture, you will need to perform some configuration tasks specifically for the ASI module.

ASI Data Model

Like all Meridium APM modules, Meridium APM Asset Strategy Implementation consists of entity families, relationship families, and business rules. The **Packaging <Package ID>** page in ASI provides you with a custom view of ASI records that exist in the database. This page also helps facilitate the creation of new records.

When attempting to understand and make use of the Meridium APM ASI functionality, it can be helpful to visualize the ASI data model. Because you should already be familiar with the concept of records and viewing records in the Meridium APM Record Manager, as you attempt to get your bearings in ASI, it may be useful to remember that ASI is simply a customized view of individual records that work together to make up an Implementation Package.

All ASI implementation packages begin with an *Implementation Package record*. Each Implementation Package record will be linked to:

- Zero or one SAP System records through the Has SAP System relationship.
- At least one Asset Strategy record through the Implements Strategy relationship.
- Zero or more Asset Strategy records through the Implements Secondary Strategy relationship.
- One or more Action records through the Implements Actions relationship.
- One or more other records through the Has Work Management Item relationship. These records store the details of work items that you want to implement, either in Meridium APM or in an external SAP management system.

The following diagram illustrates how families are related to one another within the ASI data model. The boxes represent entity families, and the arrows represent relationship families. You can determine the predecessor and successor in each relationship by the direction of the arrow head. The box to which the arrow is pointing is the successor in the relationship.
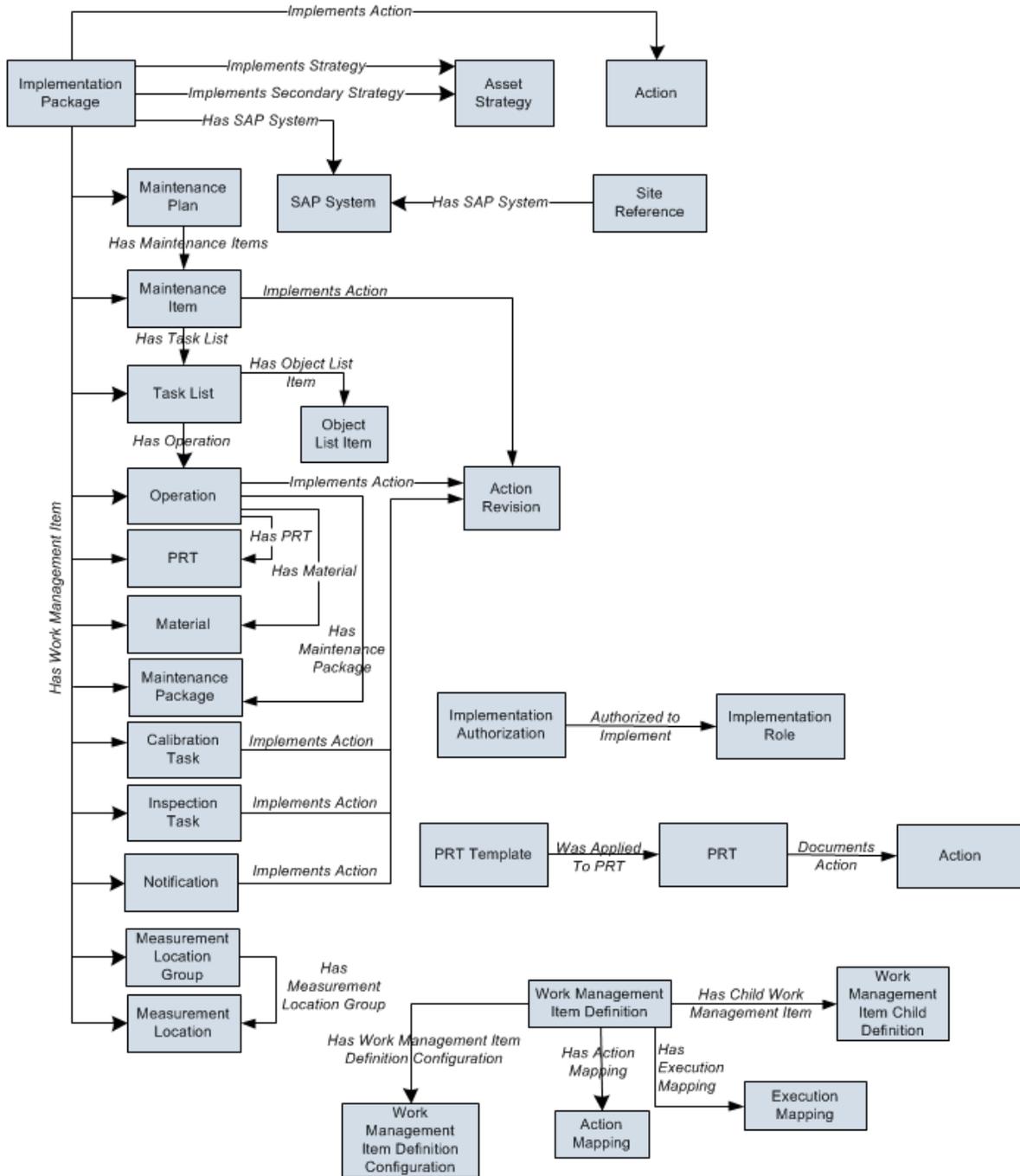
Note that the following relationships are used only if you transfer Action records from one Implementation Package to another Implementation Package:

- **Implements Secondary Strategy:** Links the Asset Strategy record to which the transferred Action record is linked to the *secondary* Implementation Package record.

- **Implements Action:** Links the transferred Action record to the *secondary* Implementation Package record.

What is an Implementation Package?

An *Implementation Package* is a collection of records that define the work that you want to perform and the Asset Strategies that contain the original work requests (i.e., Action records). An Implementation Package consists of the following records:

- One Implementation Package record that defines basic information about the purpose and content of the Implementation Package.
- One or more Asset Strategy records that contain the original work requests (i.e., Actions).
- One or more Actions representing the original work requests.

> **Note:** Although you are technically seeing the Action *Revision* records in ASI, for simplicity sake, unless the distinction is essential to the discussion, the ASI documentation refers to these items simply as *Actions*.

- Multiple records that represent work that you want to perform. These records are linked either directly or indirectly to the root Implementation Package record and can belong to [different families](#), such as the Calibration Task family or the Maintenance Item family. Because they can belong to different families and we cannot predict the families that you might use, throughout the Meridium APM documentation, we refer to them generically as *work item records*.

  Some work item records will represent work that you want to track using Meridium APM (e.g., Inspection Task records), and other work item records will represent work that you want to track using SAP (e.g., Maintenance Item records).

About Primary and Secondary Implementation Packages

When you add an Asset Strategy to an Implementation Package, all Actions that belong to that Asset Strategy become available for implementation in that Implementation Package. In some cases, however, depending upon your business processes and personal workflows, you might not want to implement all of those Actions in the same Implementation Package. Instead, you might want to transfer one or more Actions from that Implementation Package to another Implementation Package.

Throughout the ASI product and this documentation, the following terminology is used to describe Implementation Packages:

- **Primary Implementation Package:** The Implementation Package to which the Asset Strategy and its Actions are originally added.
- **Secondary Implementation Package:** Any Implementation Package to which an Action is transferred.

Except for transferring Actions back to their original primary Implementation Package, which is available only for *secondary* Implementation Packages, all features and functionality of primary Implementation Packages are also available for secondary Implementation Packages. This means that the ability to transfer Actions to other secondary Implementation Packages is available for *both* primary and secondary Implementation Packages.

Note that an Implementation Package can be both a primary Implementation Package *and* a secondary Implementation Package. For instance, consider the following image, where Package 1, outlined in red, is:

- A *primary* Implementation Package for the *Vibration Analysis* Actions from Asset Strategy 1, Asset Strategy 2, and Asset Strategy 3.
- A *secondary* Implementation Package for the *Vibration Analysis* Action from Asset Strategy 4.
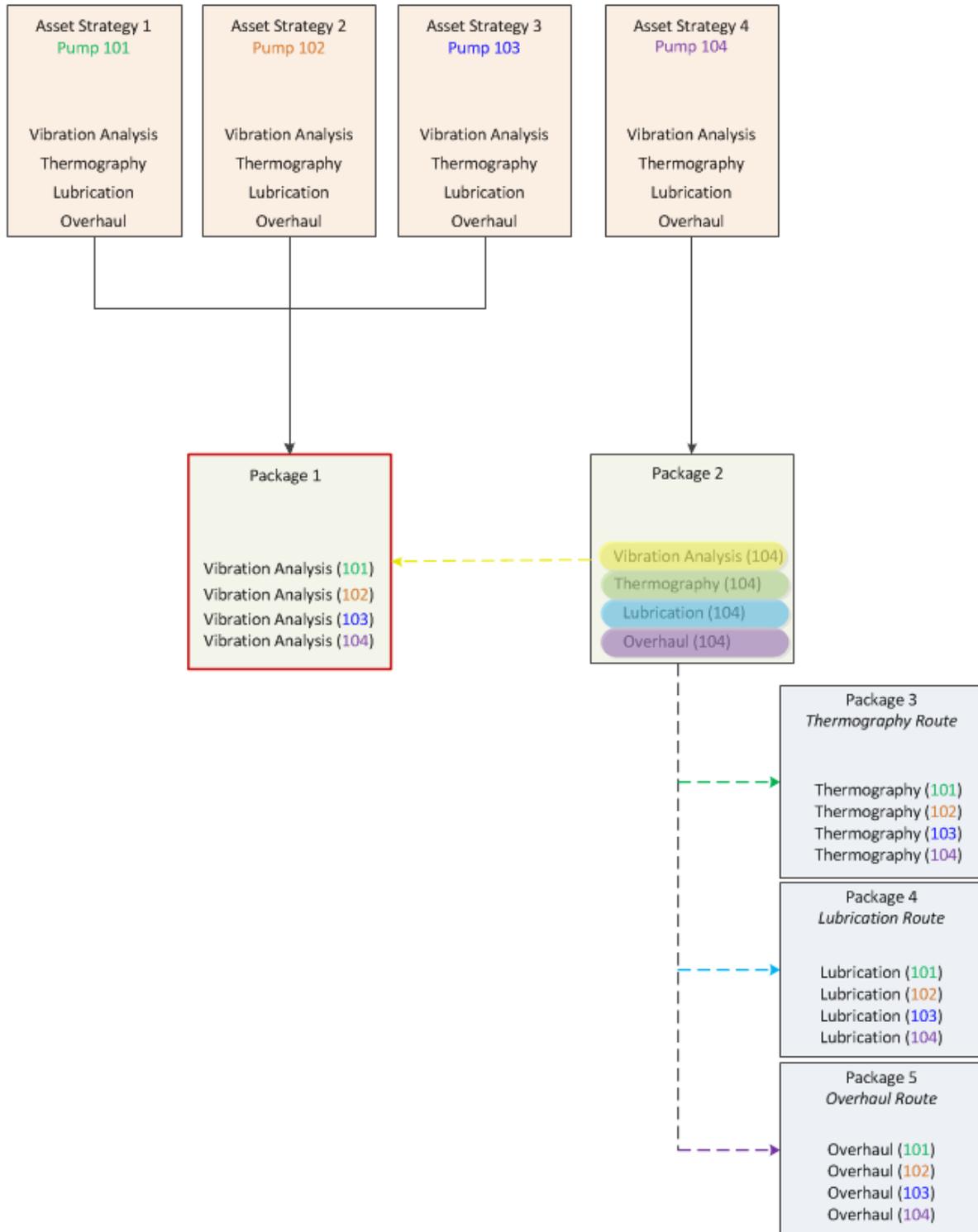
Throughout this documentation, wherever functionality is available for *both* types of Implementation Packages and the distinction is irrelevant to the explanation, we simply use the term *Implementation Package*.

Example: Primary and Secondary Implementation Packages

Suppose that an Asset Strategy Template contains the following Actions that apply to all pumps:

- Vibration Analysis
- Thermography
- Lubrication
- Overhaul

As illustrated in the following image, you could apply this template to three specific pumps (Pump 101, Pump 102, and Pump 103), which would create three distinct Asset Strategies that all inherit Actions from the template.

Asset Strategy Template
Pumps

Vibration Analysis
Thermography
Lubrication
Overhaul

Asset Strategy 1
Pump 101

Vibration Analysis
Thermography
Lubrication
Overhaul

Asset Strategy 2
Pump 102

Vibration Analysis
Thermography
Lubrication
Overhaul

Asset Strategy 3
Pump 103

Vibration Analysis
Thermography
Lubrication
Overhaul
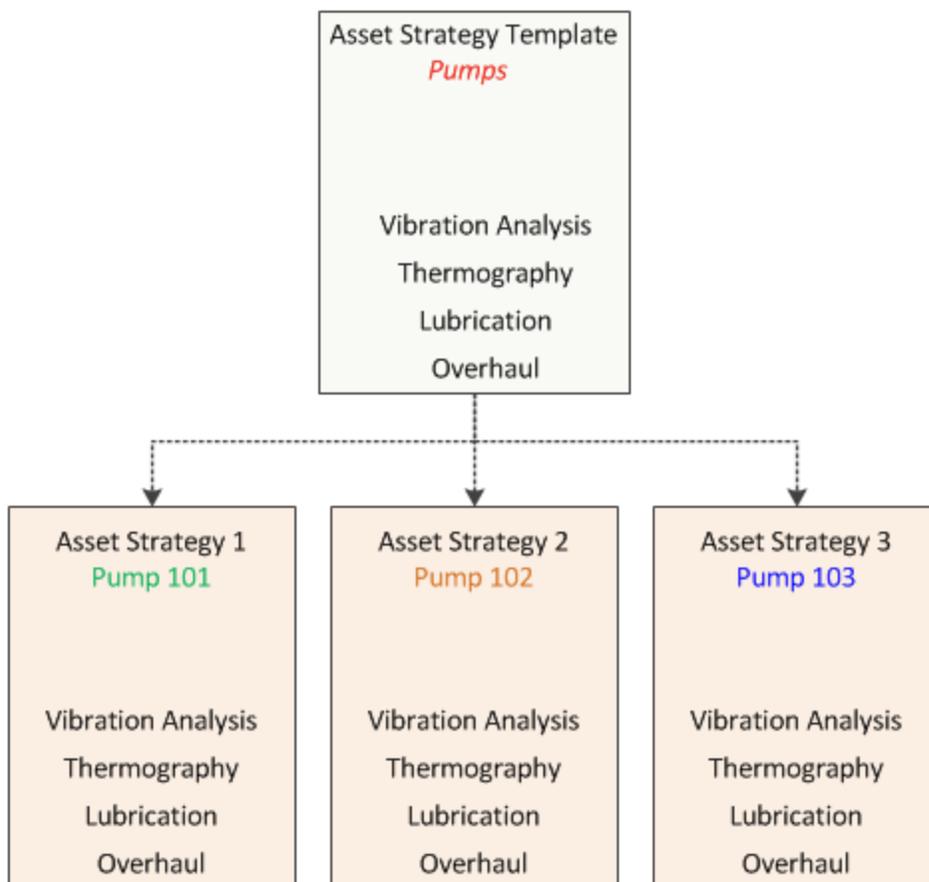
After these Asset Strategies exist, you could create a *single* Implementation Package from them. As illustrated in the following image, all Actions would become available in that Implementation Package, labeled *Primary Package 1*. In the image, all Actions of the same name are grouped together and shaded a common color. For example, you can

see three *Vibration Analysis* Actions shaded in yellow, where each one is for a different pump (101, 102, or 103).

Asset Strategy 1	Asset Strategy 2	Asset Strategy 3
Pump 101	Pump 102	Pump 103
Vibration Analysis	Vibration Analysis	Vibration Analysis
Thermography	Thermography	Thermography
Lubrication	Lubrication	Lubrication
Overhaul	Overhaul	Overhaul

Primary Package 1

Vibration Analysis (101)
Vibration Analysis (102)
Vibration Analysis (103)
Thermography (101)
Thermography (102)
Thermography (103)
Lubrication (101)
Lubrication (102)
Lubrication (103)
Overhaul (101)
Overhaul (102)
Overhaul (103)

After the Actions exist in the Implementation Package, you could build a single SAP Maintenance Plan from them. For the purpose of this example, however, we assume that your company requires different users to complete different routes, where each route involves performing only *one* type of action (only vibration analyses, only thermography analyses, and so on).

Based upon this assumption, you would *not* want to create a single Maintenance Plan from all of these Actions. Instead, you would want to transfer the common Actions to other Implementation Packages, where each of those Implementation Packages represents an individual route that should be performed by one person.

In the following image, you can see that each group of common Actions is transferred to a secondary Implementation Package, labeled according to the type of action. For example, all *Vibration Analysis* Actions have been transferred to the *Vibration Route* Implementation Package.
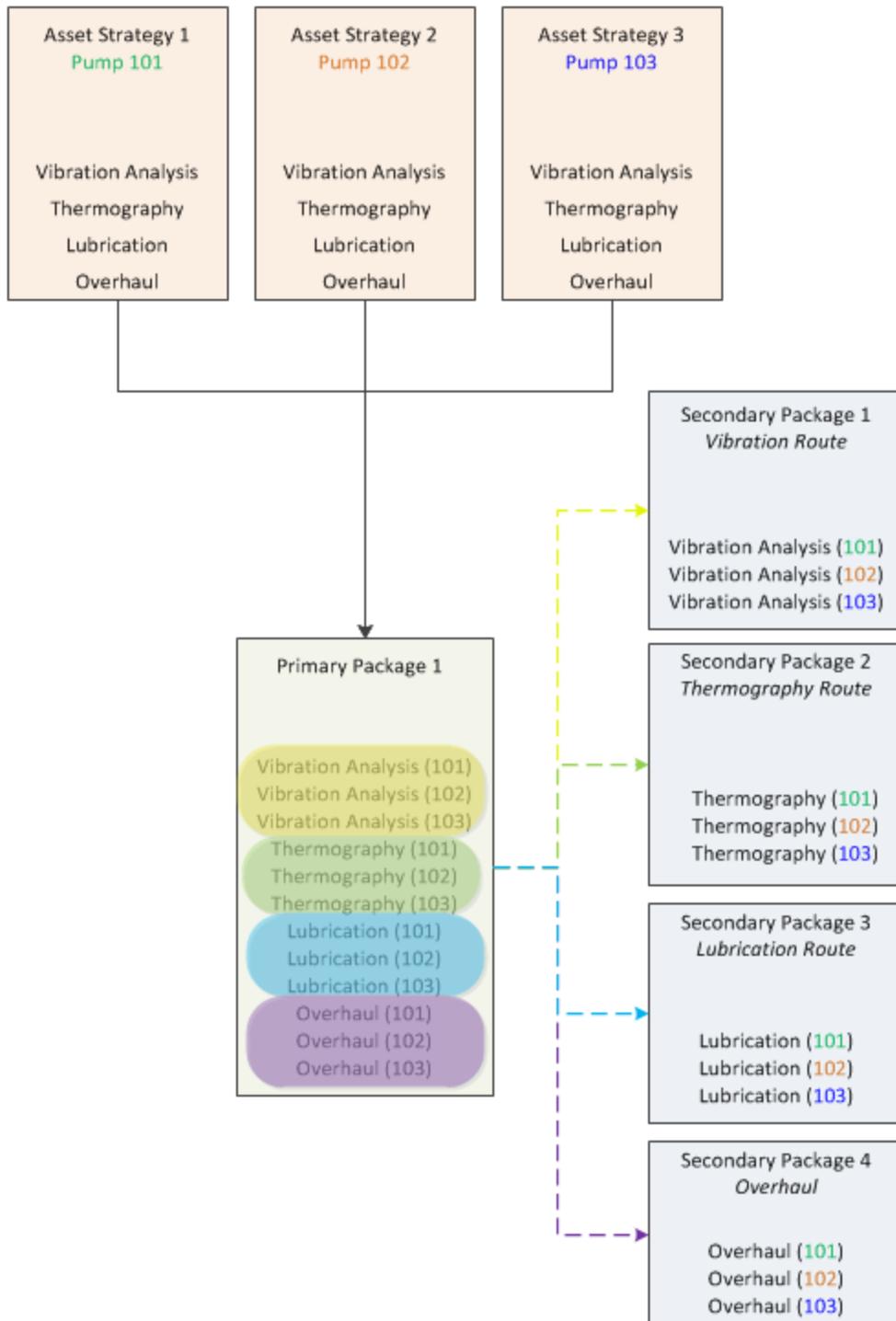
Suppose that later, you apply the original Asset Strategy Template to another pump (Pump 104), creating Asset Strategy 4, and you add that Asset Strategy to another primary Implementation Package, *Primary Package 2*.
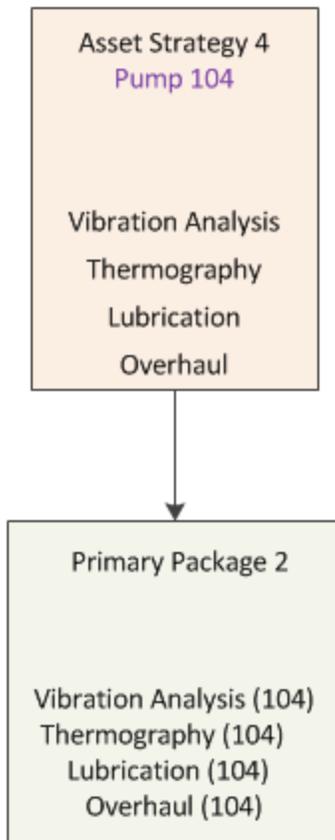
Suppose that Pump 104 exists in a different building than Pump 101, 102, and 103. Regardless of the building in which pumps exists, overhauls are performed on all pumps by the same person. Other actions, however, are divided among operators according to the building in which those pumps exist. In other words, the operators performing actions on Pump 101, 102, and 103 are not going to perform those actions on Pump 104.

In this case, you decide to transfer:

- The *Overhaul* Action to the *existing* secondary Implementation Package *Overhaul Package*.
- The *Vibration Analysis*, *Thermography*, and *Lubrication* Actions to *new* secondary Implementation Packages.

The final image depicts all of the Actions in their appropriate Implementation Packages.
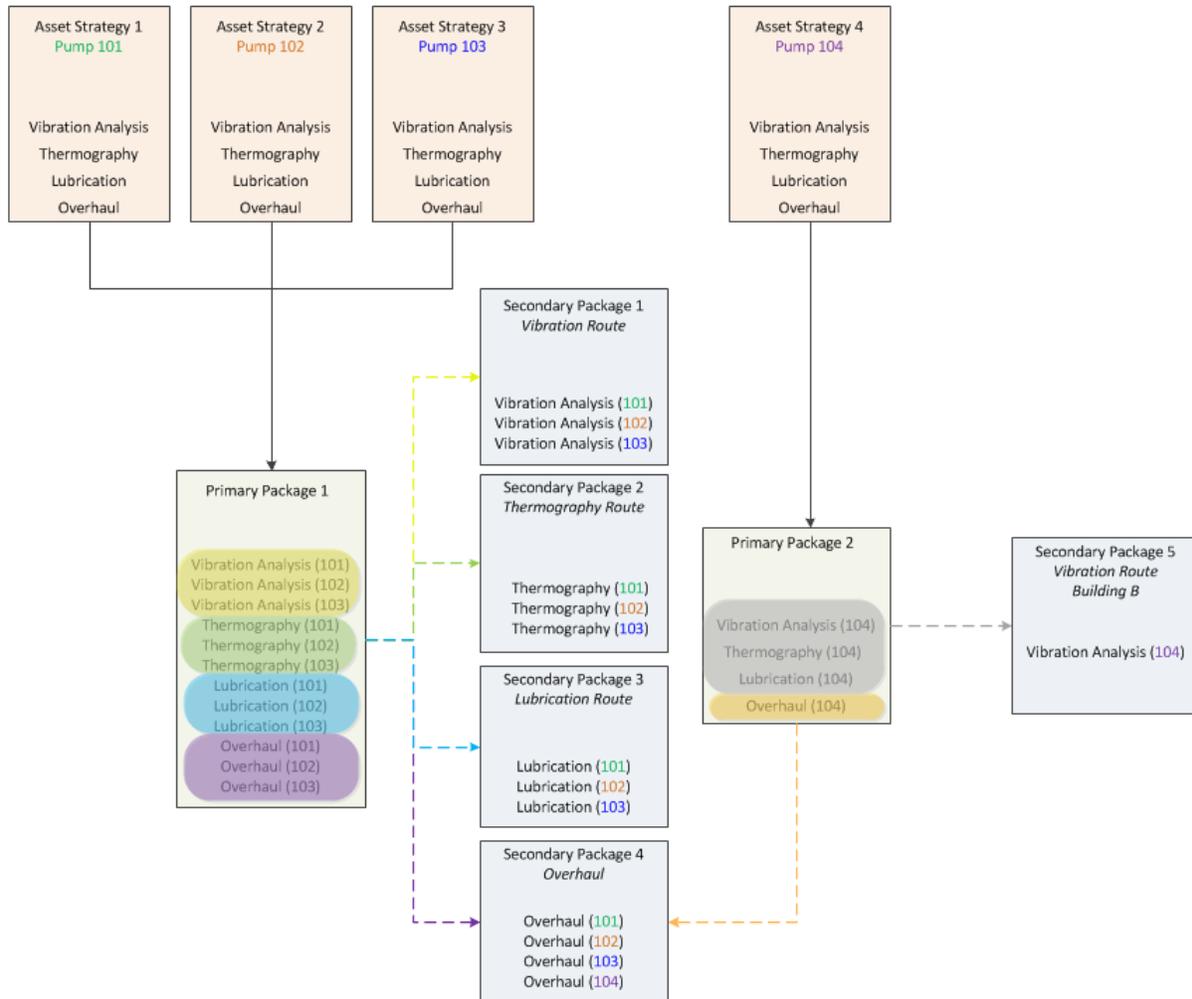
Note: For the Actions in Primary Package 2, the image illustrates the transfer of only the *Vibration Analysis* Action to a separate secondary Implementation Package. The other Actions shaded in gray would also be transferred to other secondary Implementation Packages.

About Work Item Records

Work item records represent the work that should be completed when the Implementation Package is implemented. Throughout the documentation, we refer to them as *work item records* because they can belong to any family. Before you can create work item records in a particular family, the corresponding Work Management Item Definition records and Work Management Item Child Definition records must exist. Each Work Management Item Definition record contains a family ID, which identifies a family to which work item records can belong.

Meridium APM delivers a [baseline set of Work Management Item Definition and Work Management Item Child Definition records](#) to allow you to create work item records in certain baseline families. For example, Meridium APM delivers a Work Management Item Definition record whose family ID is Maintenance Item, which allows you to add Maintenance Item records to an Implementation Package. You can also create your own Work Management Item Definition records so that you can create work item records in other families.

After you add a work item record to an Implementation Package, the work item record is linked either directly or indirectly to the root Implementation Package record. Work item records can also be linked to one another and arranged hierarchically in the tree on the **Packaging <Package ID>** page according to these relationships. Beyond defining the family of the work item records that you want to create, you will, therefore, need to define where in this hierarchy they can exist. To do so, you will need to:

- Configure the appropriate relationship definitions via the Configuration Manager.

  -and-

- Create the appropriate Work Management Item Definition and Work Management Item Child Definition records via the Meridium APM Framework.

On the **Packaging <Package ID>** page, the options that appear in the tree and on the **Packaging Tasks** menu are dynamic, meaning that they change based upon the current selection in the tree. The options that are available are based upon the way in which you have configured the hierarchy.

Throughout this documentation, we describe the hierarchy that appears on the **Packaging <Package ID>** page using the terms *predecessor record* and *successor record*. In this context:

- A *predecessor record* is any work item record to which another work item record can be linked.
- A *successor record* is any work item record that is linked to a predecessor work item record.

How Does Meridium APM Determine the Predecessor Records to Which I Can Link a New Successor Record?

Each Work Management Item Definition record contains a Parent Family ID field, which contains a value that identifies the predecessor family whose existing work item records can be linked to a new successor work item record identified by the value in the Family ID field. For example, in the baseline Maintenance Item Work Management Item Definition record, the Parent Family ID is *Maintenance Plan*. This means that from a predecessor Maintenance Plan record, you can create a new Maintenance Item record to link to it.

How Does Meridium APM Determine the Successor Records That I Can Link to a Predecessor Record?

Each Work Management Item Definition record can be linked to one or more Work Management Item Child Definition records, which contain a Child Family ID field. The Child Family ID field contains a value that identifies the family in which new successor records can be created and linked to an existing predecessor record identified by the family ID in the Work Management Item Definition record to which it is linked.

For example, the baseline Maintenance Item Work Management Item Definition record is linked to a Work Management Item Child Definition record whose Child Family ID is *Task List*. This means that from a predecessor Maintenance Item record, you can create a successor Task List record. The Task List record will be linked to the Maintenance Item record and the Implementation Package record.

How Are Work Item Records Arranged in the Tree?

Any work item record that can be added to an Implementation Package can be added directly under the root Implementation Package node. This one-dimensional organization, however, is not always desired or representative of how the work item records are linked to one another. In addition, if the work item records represent work that will be performed in SAP, this one-dimensional level of organization does not reflect how the items are arranged in the SAP hierarchy.

For example, in the baseline Meridium APM database, you could create Maintenance Item, Maintenance Plan, and Task List records on the root level of the tree on the **Packaging <Package ID>** page, as shown in the following image.
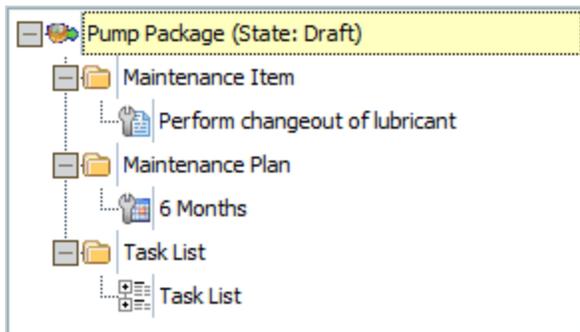
These records will be linked to the root Implementation Package record because they are positioned directly under the Implementation Package node. The links can be created because all three families are related to the Implementation Package family through the Has Work Management Item relationship.

Rather than arranging the records in this way, however, you will probably want to arrange them hierarchically, as shown in the following image, to mimic the hierarchy structure that is used by SAP and to allow the records to be appropriately linked to one another.
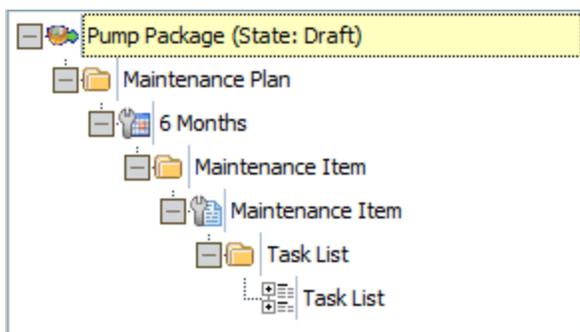
Structuring the records in this way demonstrates how the records are linked to one another. In other words:

- The Implementation Package record is linked to the Maintenance Plan record through the Has Work Management Item relationship.

- The Maintenance Plan record is linked to the Maintenance Item record through the Has Maintenance Item relationship.
- The Maintenance Item record is linked to the Task List record through the Has Task List relationship.

It is possible to arrange the records in a tree structure like this because the appropriate relationship definitions, Work Management Item Definition records, and Work Management Item Child Definition records exist.

A Complete Example

On the **Packaging <Package ID>** page, the options that you see in the tree and on the **Packaging Tasks** menu are determined based on the following items:

- The relationship definitions that have been configured in the Configuration Manager.
- The Work Management Item Definition records and Work Management Item Child Definition records that have been configured in the Meridium APM Framework.

The following information explains which relationship definitions, Work Management Item Definition records, and Work Management Item Child Definition records work together to allow you to create the following structure on the **Packaging <Package ID>** page.
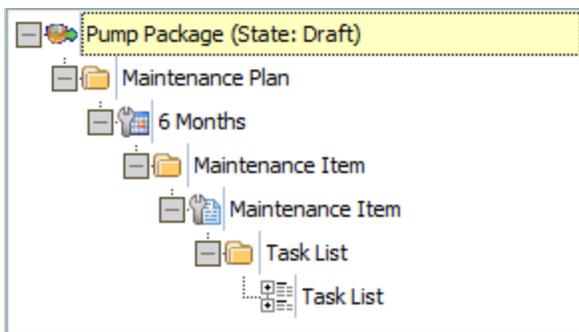
Maintenance Plan Record

The Maintenance Plan record can be created and added to the Implementation Package because a Work Management Item Definition record contains the value *Maintenance Plan* in the Family ID field, as shown in the following image.

The Maintenance Plan record can be added to the root level of the tree because the Maintenance Plan family is related to the Implementation Package family through the Has Work Management Item relationship.
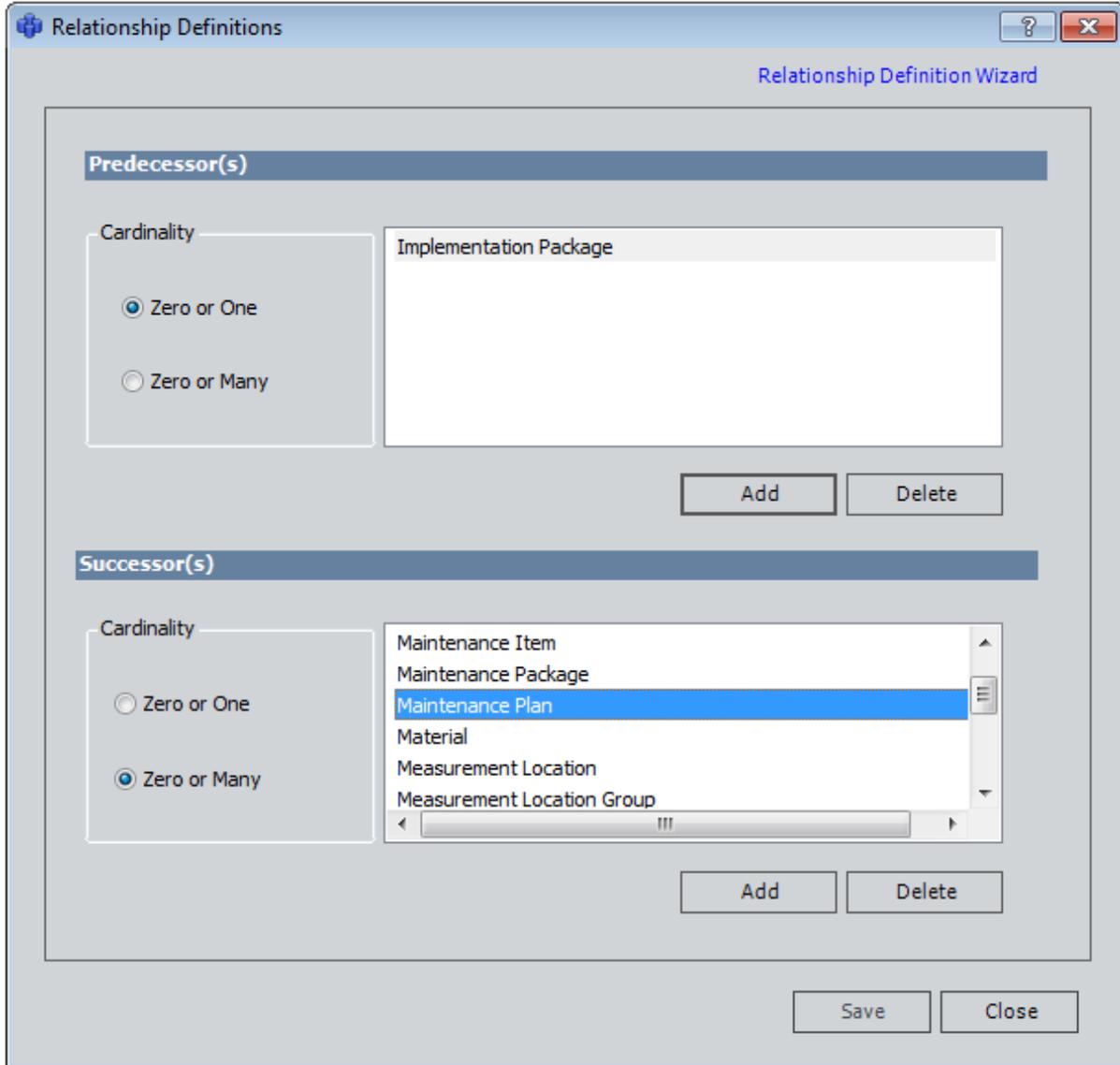
Maintenance Item Record

The Maintenance Item record can be created and added to the Implementation Package because a Work Management Item Definition record contains the value *Maintenance Item* in the Family ID field, as shown in the following image.
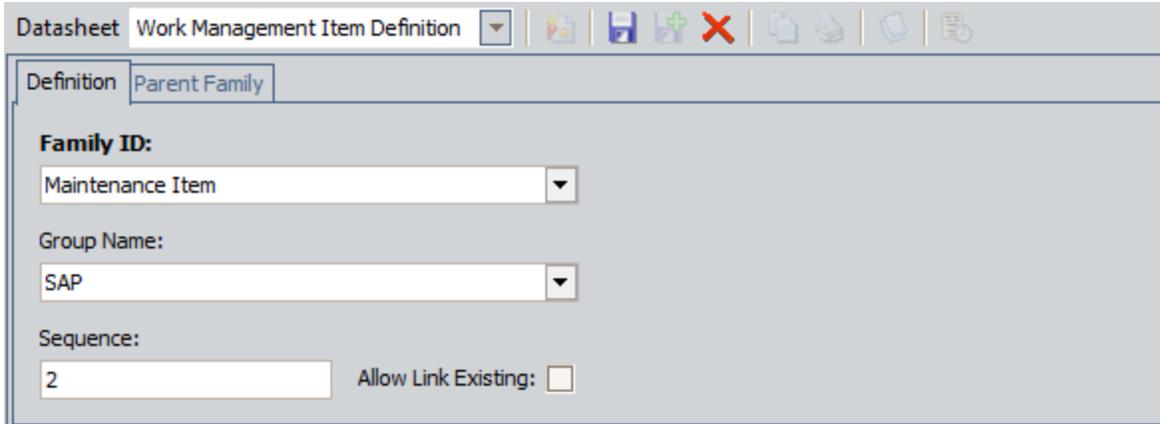
The Maintenance Item record can be created as a successor of the Maintenance Plan record because the Maintenance Item Work Management Item Definition record contains the value *Maintenance Plan* in the Parent family ID field.
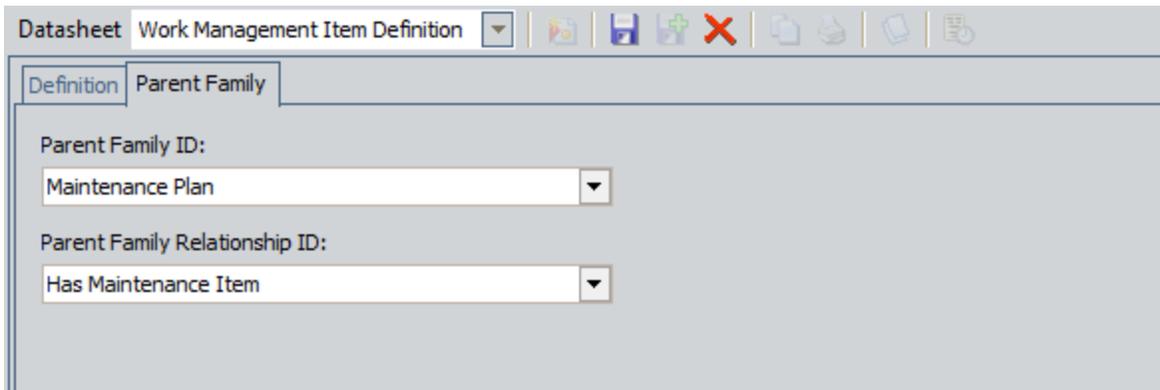
In addition, the Maintenance Item record can be linked to the Maintenance Plan record because the Maintenance Plan family is related to the Maintenance Item family through the Has Maintenance Item relationship.
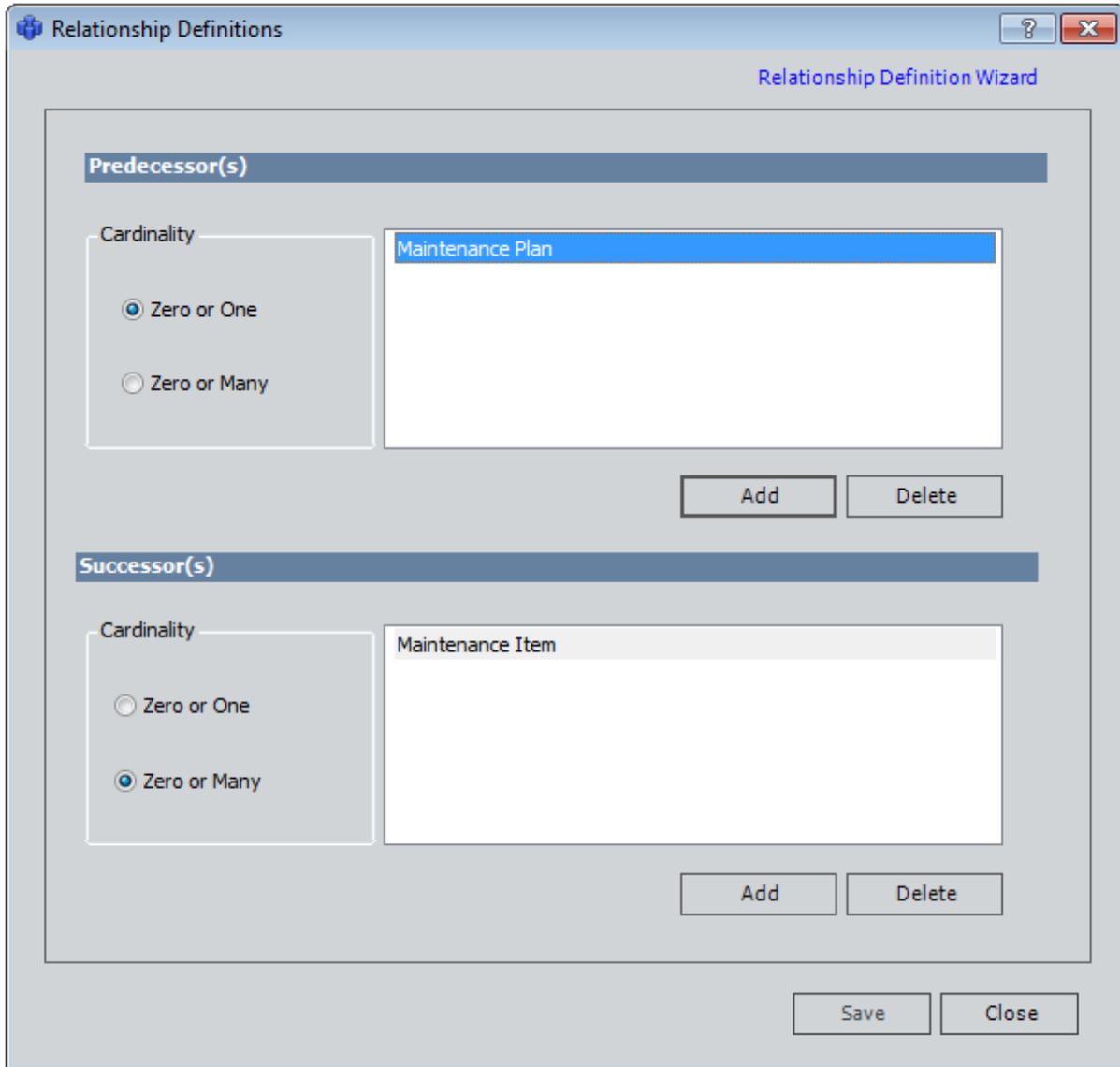
The result is that the **Create a new Maintenance Item...** option is available when you right-click a Maintenance Plan node, as shown in the following image.
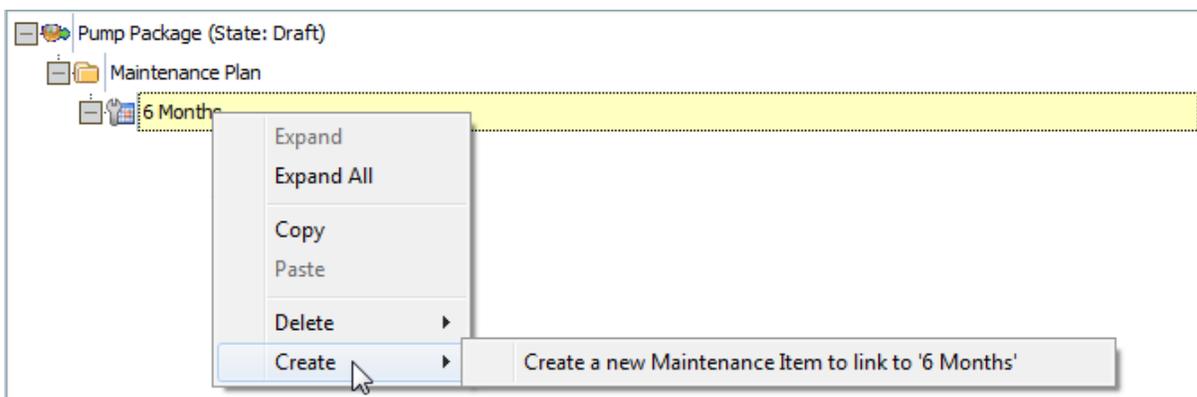
Task List Record

The Task List record can be created and added to the Implementation Package because a Work Management Item Definition record contains the value *Task List* in the Family ID field, as shown in the following image.
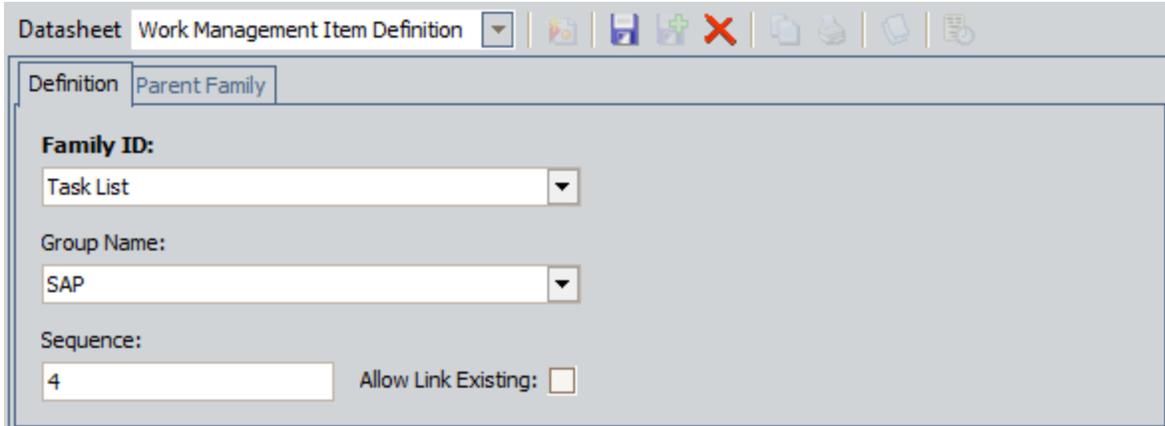
The Task List record can be created from the predecessor Maintenance Item record because of three things:

- The Task List Work Management Item Definition record contains the value *Maintenance Item* in the Parent Family ID field.
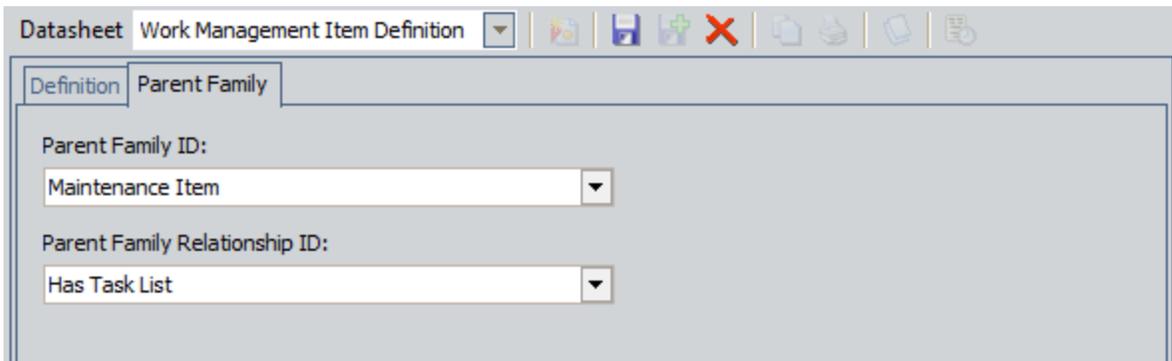
-AND-

- The Maintenance Item Work Management Item Definition record is linked to a Work Management Item Child Definition record that contains the value *Task List* in the Child Family ID field.

-AND-

- The Maintenance Item family is related to the Task List family through the Has Task List relationship.
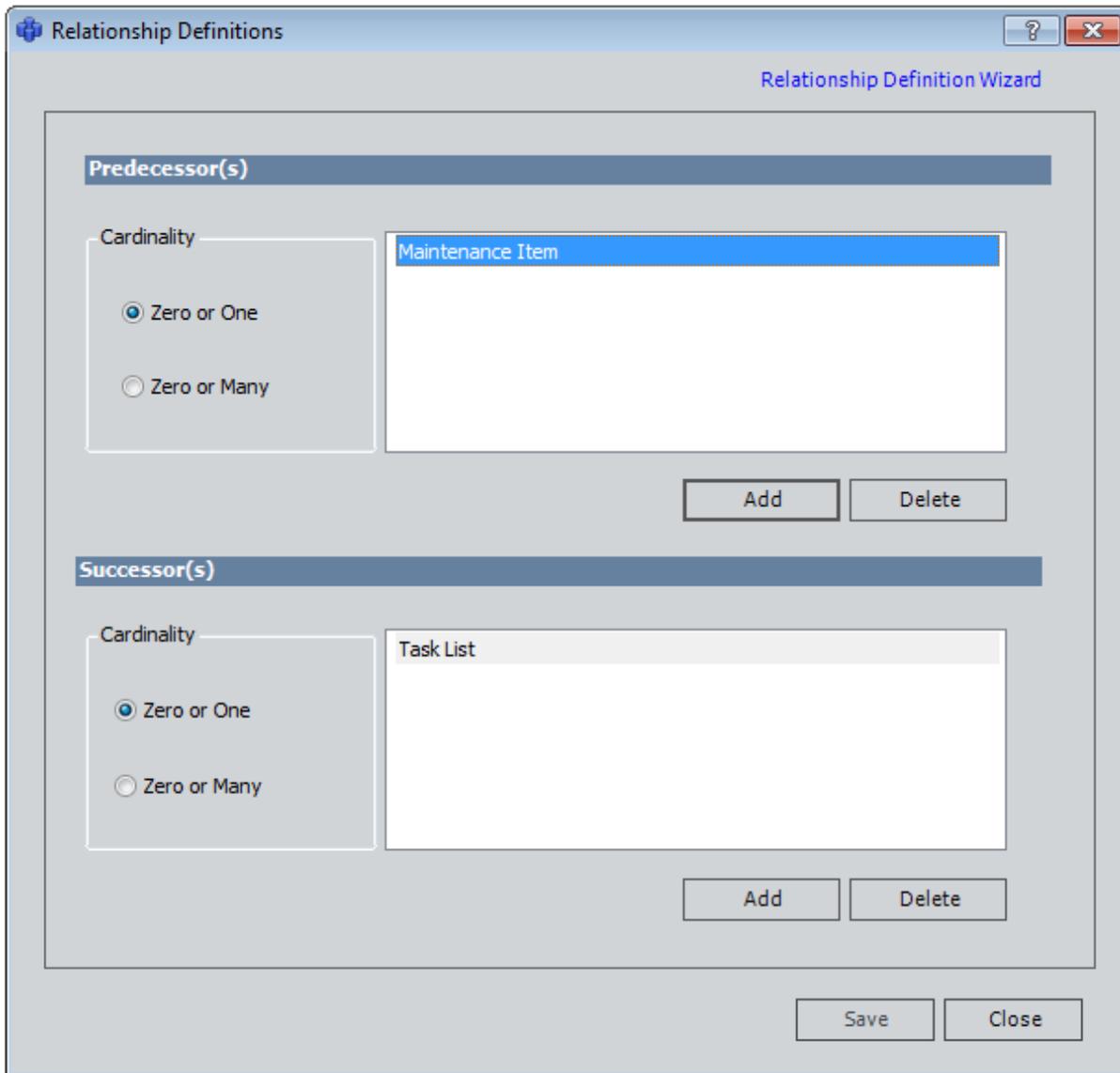
The result is that the following option is available when you right-click a Maintenance Item node, as shown in the following image.
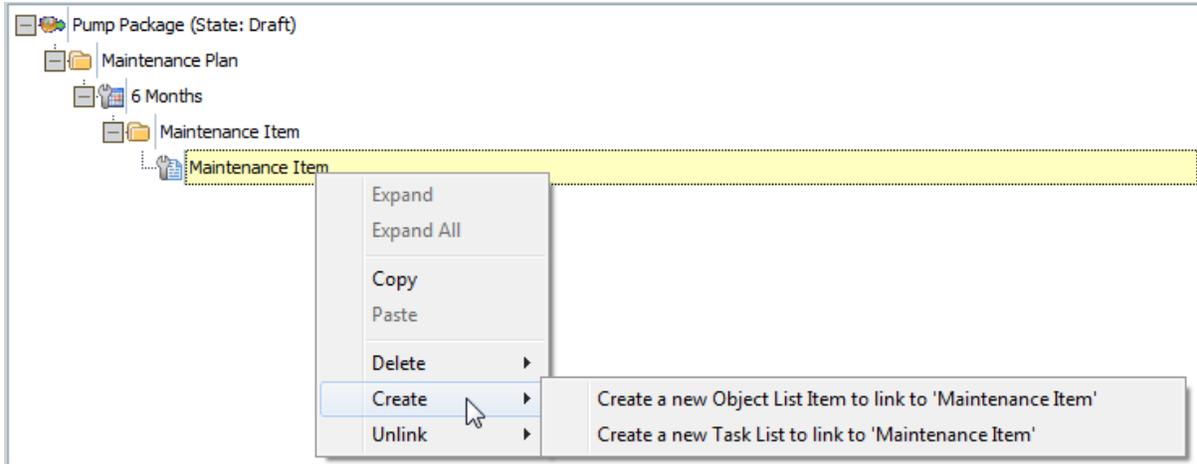
Keep in mind that these Work Management Item Definition and Work Management Item Child Definition records are provided in the baseline Meridium APM database, meaning that by default, you can create Maintenance Plan, Maintenance Item, and Task List records in the preceding hierarchy.

If however, you create new families whose records you want to add to an Implementation Package, you will need to know how to configure the appropriate relationship definitions in the Configuration Manager, create Work Management Item Definition records, and create Work Management Item Child Definition records.

About Implementation Roles

An *Implementation Role* identifies a type of work that is performed by people within your organization. In ASI, you can create Implementation Role records to categorize these work types. For instance, you might create the following Implementation Role records: *Electrical* and *Mechanical*. Using this example, you can assume that some users in the organization perform electrical work (e.g., repair transformers) while other users perform mechanical work (e.g., repair pumps). As part of creating an Implementation Role record, you will need to assign it to Security Users or Security Groups to indicate the users who perform that type of work.

After you create Implementation Role records, when an ASM user creates an Action, he or she can use the Implementation Role field to indicate the type of work that the Action represents. For example, if a user creates the Action *Install light fixtures*, he would want to select the Implementation Role *Electrical*.

If an Action has a designated Implementation Role, only Security Users who are assigned to that Implementation Role will be able to create work item records from that Action in ASI. In addition, when the Action is used to create a work item record, the work item record will be organized in the tree according to the Implementation Role to which it belongs. Security Users who are assigned the Implementation Role that is associated with the Action can filter the tree to display only work item records representing work that they are responsible for performing.

To illustrate this workflow, consider the following example:

The following Implementation Role records exist.

Role Name	Assigned To
Electrical	John Smith
Mechanical	Mary Jones

In addition, the following Actions exist.

Action Name	Associated With
Install light fixtures	Electrical
Replace filter	Mechanical

If both Actions are used to create Inspection Task records in ASI, the tree will look like the one shown in the following image.
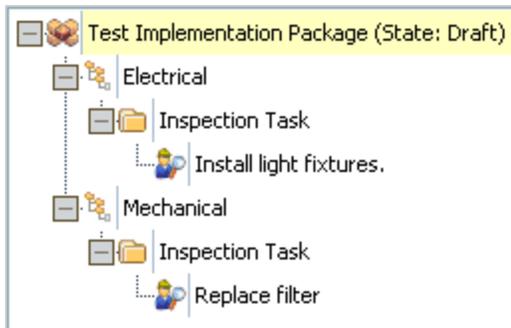
John Smith could log in and filter the tree to display only the Electrical Inspection Task: Install light fixtures. Likewise, Mary Jones could log in and filter the tree to display only the Mechanical Inspection Task: Replace filter.

About the PRT Functionality

In SAP, an *Operation* defines specific maintenance work that needs to be performed. To each Operation, you can assign a production resource/tool (PRT) to define items that help the operator perform the work. In SAP, there are four main types of PRTs:

- Material
- Equipment
- Document
- PRT Master

Using ASI, you can use the **PRT Builder** to create a PRT record in Meridium APM that will be used to create a *document PRT* (i.e., an SAP PRT of the type *Document*) in SAP when the Implementation Package is implemented. In SAP, a document PRT allows you to reference an external file, such as a Word document, that contains information needed to perform maintenance work. When an operator is ready to perform the work, he can use the information in the file to guide his work. For example, suppose an Operation indicates that you need to perform maintenance on your vehicle. While the Operation defines the expected work duration and the type of activity (e.g., change oil filter), a document PRT might reference a Word document including images and detailed instructions (i.e., an explanation of *how* to change the oil filter).

> **Note:** You can also create PRT records outside of the **PRT Builder** and associate them with *existing* PRTs in SAP. When you do so, you can choose any type of PRT to associate with the PRT record.

Because you will probably create many PRT records as you build Implementation Packages, ASI allows you to create *PRT Template records*, where each one references a file that stores the basic structure of the files that you can reference from PRT records. When you create a PRT record in ASI, you must select which PRT template file you want to use to build the file that will be referenced from that PRT record. Values will be passed in to the PRT template file from the records to which the PRT record is linked to generate a PRT file with specific values.

The following terms are used throughout this documentation when referring to PRT functionality.

Term	Definition	Example	Notes
PRT Template record	A Meridium APM entity that is stored in the PRT Template family and references a PRT template file.	The baseline record with the ID *SimplePRT Template* that is stored in the PRT Template family.	You can create PRT Template records on the **Implementation Administration** page.

Term	Definition	Example	Notes
PRT template file	A file that is referenced from a PRT Template record and can be used as the basis for creating new PRT files, which are referenced from PRT records.	A file that contains information about vehicle maintenance procedures, including the type of vehicle to which the procedures apply, the interval at which the maintenance should be performed, and a place for the operator to sign and date each maintenance action, such as changing the oil filter, rotating the tires, or checking fluid levels.	When you create a PRT template file, data is actually inserted into the binary field *Template*, which is defined in the PRT Template family. The file does not exist as an external file but is stored in the Meridium APM database and referenced by the value in this binary field.
PRT record	A Meridium APM entity that is part of an Implementation Package.	A record with the ID *Oil Filter Change* that is stored in the PRT family.	Each PRT record is linked to an Operation record. Each Operation record is linked to a Task List record and one or more Action Revision records.

Term	Definition	Example	Notes
PRT file	A file that is referenced from a PRT record and based on a PRT template file.	A file that contains images and step-by-step instructions for changing an oil filter.	When a file is associated with a PRT record, data is actually inserted into the binary field *Document Binary*, which is defined in the PRT family. The file does not exist as an external file but is stored instead in the Meridium APM database and referenced by the value in this binary field.

In other words, *PRT Template records* contain references to *PRT template files*. The following image illustrates this association.
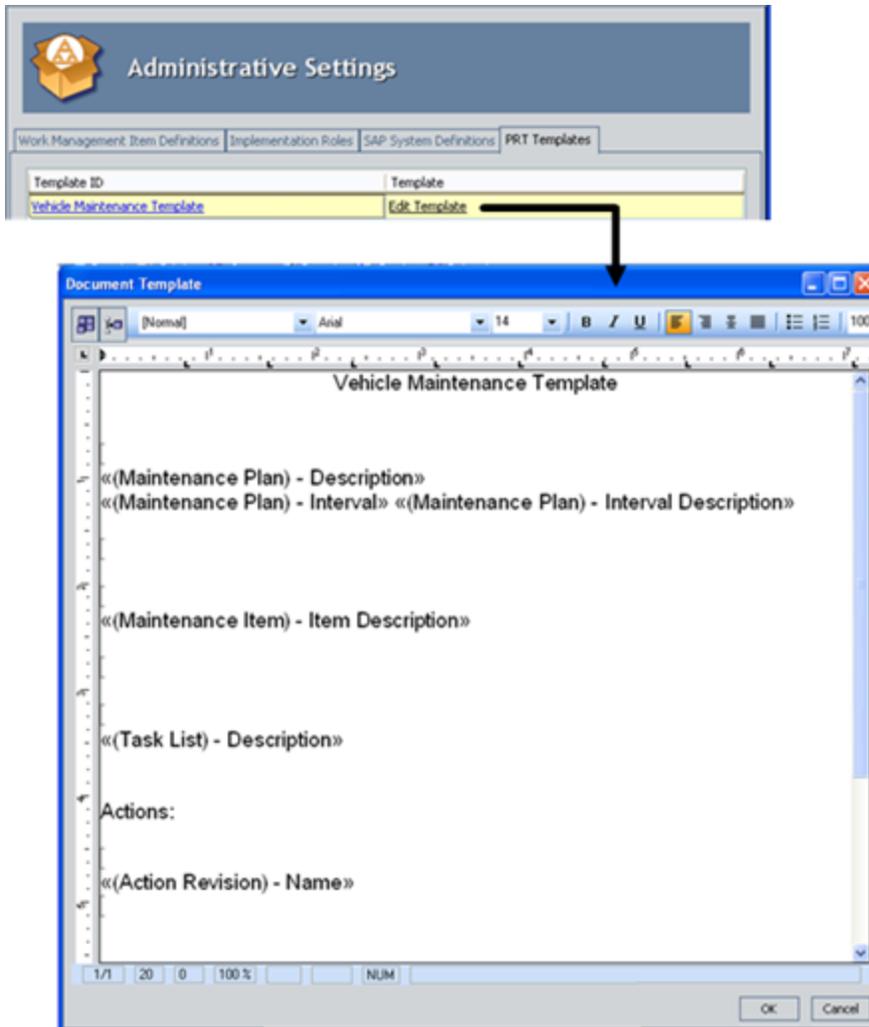
PRT template file

PRT records contain references to *PRT files*, which are files that were created using a PRT template file. The following image illustrates this association.

PRT Record

Document Data | Basic Data

Item Number: 1

Document: Changing Oil Filters

Document Type: DMO

Document Part: 000

Document Version:

Vehicle Maintenance.doc - Microsoft Word

File Edit View Insert Format Tools Table Window Help Adobe PDF Acrobat Comments

Type a question for help

Normal Times New Roman 12 B I U

100% Read

Maintenance Plan: Vehicle Maintenance Plan
12 Month Cycle

Maintenance Item: Truck

Task List: Truck Maintenance Tasks

Actions:

-Change oil filter

Steps to Changing an Oil Filter

1. Required Tools
2. Preparation Steps
3. Step-by-Step Guide
4. Summary

Images provided below:

Draw AutoShapes

Page 1   Sec 1   1/1   At 2.9"   Ln 11   Col 1   REC TRK EXT OVR English (U.S

PRT file

Implementation Package State Configuration

This topic describes attributes of the State Configuration that is defined for the Implementation Package family in the baseline Meridium APM database.

States and Operations

The following State Configuration is defined for the Implementation Package family. Note that in this image, a box represents a state, and an arrow represents an operation. The state to which an arrow points represents a successor state.
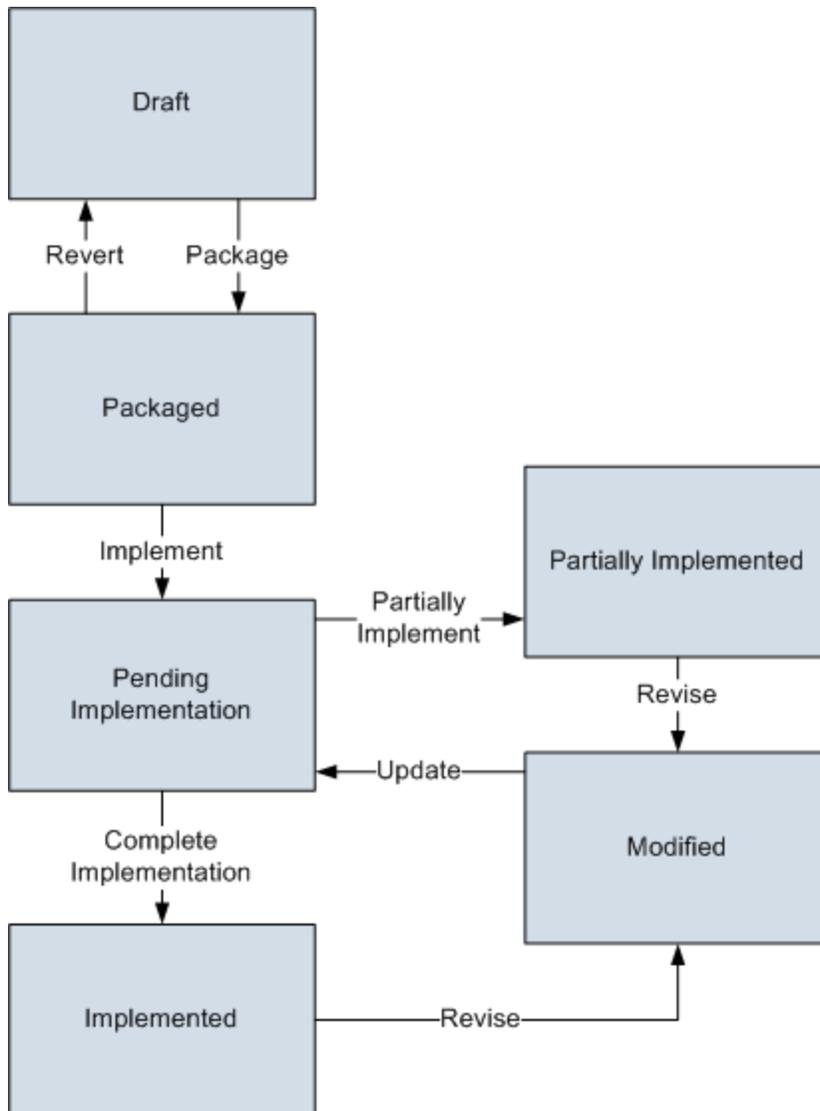
Initial State

The Draft state is the initial state of all new Implementation Package records.

Datasheet Configuration

By default, states and operations will appear on the datasheet when you are viewing an Implementation Package record in the Record Manager.

Reserved States and Operations

The following table lists the baseline states and operations and indicates which of these states and operations are reserved. You cannot remove or modify reserved states or operation. You can, however, add your own states and operations to the State Configuration.

States	States
State	Is Reserved?
Draft	No
Implemented	Yes
Modified	Yes
Packaged	Yes
Partially Implemented	No
Pending Implementation	Yes
Operations	
Operation	Is Reserved?
Complete Implementation	Yes
Implement	Yes
Package	No
Partially Implement	Yes
Revert	No
Revise	Yes
Update	Yes

States	
State	Is Reserved?
Draft	No

States	
Implemented	Yes
Modified	Yes
Packaged	Yes
Partially Implemented	No
Pending Implementation	Yes

Operations	
Operation	**Is Reserved?**
Complete Implementation	Yes
Implement	Yes
Package	No
Partially Implement	Yes
Revert	No
Revise	Yes
Update	Yes

State Configuration Roles

By default, the MI ASI User State Configuration Role is assigned to all states in the Implementation Package State Configuration. If desired, you can assign other State Configuration Roles to any state. In addition, for each state, the **Require a specific user to be assigned to a state** check box is *selected*.

About Assigning Users to States in ASI

By default, all the Implementation Package record states require a Security User to be assigned to the successor state before the record can be transitioned to the successor state. In ASI, however, if you try to transition the Implementation Package to a state that does not have an assigned user, the Meridium APM system will assign the current Security User to the successor state automatically, with the exception of the *Packaged* and *Modified* states. You must assign a Security User manually to the *Packaged* and *Modified* states.

In addition, if the Security User who is currently logged in is not assigned to the current state of the Implementation Package record, links on the **State Configuration Tasks** menu will be disabled if the corresponding action would cause the state of the Implementation Package record to change.

Accessing the Asset Strategy Implementation Start Page

To access the Asset Strategy Implementation Start Page:

- On the Meridium APM Framework main menu, click **Go To**, point to **Asset Strategy**, and then click **Asset Strategy Implementation**.

  The Asset Strategy Implementation Start Page appears.
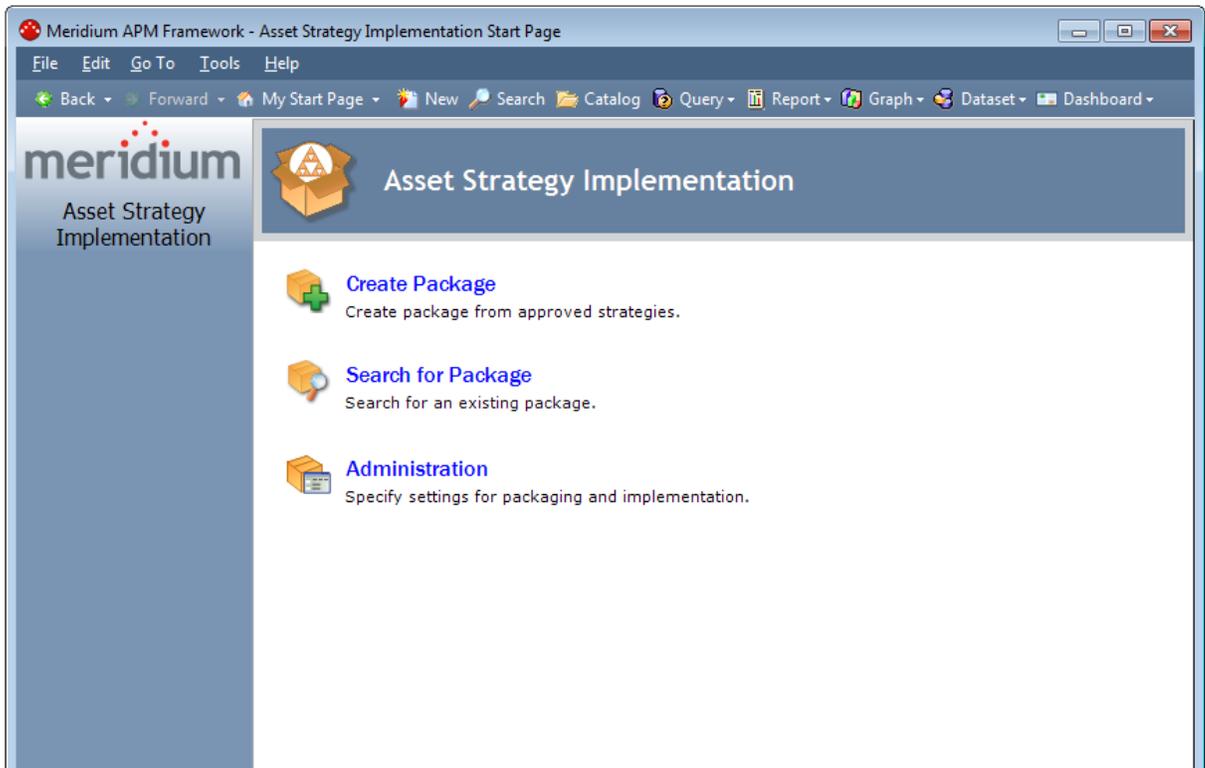
Aspects of the Asset Strategy Implementation Start Page

The **Asset Strategy Implementation Start Page** serves as the starting point for the tasks that you can perform in Meridium APM Asset Strategy Implementation. You can access each task via a link on the start page. Note that the links on this page do not suggest a recommended workflow but rather allow you to access certain features that you will need to use as part of building and implementing Implementation Packages.

The following links are available:

- **Create Package:** Displays the **Implementation Package Creation** page, where you can [create an Implementation Package record](#).
- **Search for Package:** Displays the **Implementation Package List** page, where you can [open an Implementation Package record](#).
- **Administration:** Displays the [**Implementation Administration** page](#), where you can perform various ASI administrative tasks.

First-Time Deployment Workflow

Deploying and configuring ASI for the first time includes completing multiple steps, which are outlined in the table in this topic. The steps in this section of the documentation provide all the information that you need to deploy and configure the ASI module on top of the basic Meridium APM system architecture.

Steps are marked as *Required* in the **Required/Optional** column if you must perform the steps to take advantage of ASI functionality. This documentation assumes that in addition to implementing the basic ASI functionality that you also want to implement integration with SAP. Steps necessary for SAP integration are also designated as *Required* in the following table.

The person responsible for completing each task may vary within your organization. We recommend that the steps be performed in relatively the same order in which they are listed in the table.

Step	Task	Required/Optional	Notes
1	Install the ASI for SAP ABAP add-on on your SAP System.	Required	None
2	Review the ASI data model to determine which relationship definitions you will need to modify to include your custom equipment and location families. Modify any relationship definitions as needed via the Configuration Manager application.	Optional	This task is necessary only if you store equipment and location information in families other than the baseline Equipment and Functional Location families.
3	Assign Security Users to one or more of the ASI Security Groups via the Configuration Manager application.	Required	Users will need permissions to the ASI families in order to use ASI.
4	Configure SAP for external numbering in your SAP System.	Required	None
5	Configure SAP permissions.	Required	None

Step	Task	Required/Optional	Notes
6	Define sites to associate with Implementation Packages via the Meridium APM Framework application.	Optional	This is required only if you want to import data from SAP into ASM.
7	Configure secured Maintenance Plants in your SAP System.	Optional	None
8	Configure Work Management Item Definition records via the Meridium APM Framework application.	Optional	This task is necessary only if you want to use Work Management Item Definition records beyond those provided with the baseline database.
9	Define Implementation Roles via the Meridium APM Framework application.	Optional	None
10	Define the SAP connection that will be used when SAP items are created from records that represent work items. You can do so via the Meridium APM Framework application.	Required	None
11	Build PRT Templates via the Meridium APM Framework application.	Optional	This task is necessary only if you want to use the PRT functionality.
12	Define the packaging query via the Meridium APM Framework application.	Optional	This task is necessary only if you want to use a query other than the baseline query.

Upgrade or Update Asset Strategy Implementation to 3.6.1.3.0

The following tables list the steps that are required to update or upgrade ASI to 3.6.1.3.0. This step assumes that you have completed the steps for upgrading the basic Meridium APM system architecture.

Update from any version V3.6.1.0.0 through V3.6.1.2.0

This module will be updated to 3.6.1.3.0 automatically when you update the components in the basic Meridium APM system architecture. No additional steps are required.

Upgrade from any version V3.6.0.0.0 through V3.6.0.12.6

Step	Task	Required/Optional
1	Upgrade the ASI for SAP ABAP add-on in your SAP System.	Required

Upgrade from any version V3.5.1.0.0 through V3.5.1.12.0

Step	Task	Required/Optional
1	Upgrade the ASI for SAP ABAP add-on in your SAP System.	Required

Upgrade from any version V3.5.0 SP1 LP through V3.5.0.1.9.0

Step	Task	Required/Optional
1	Upgrade the ASI for SAP ABAP add-on in your SAP System.	Required

Upgrade from any version V3.5.0 through V3.5.0.0.7.1

Step	Task	Required/Optional
1	Upgrade the ASI for SAP ABAP add-on in your SAP System.	Required

Upgrade from any version V3.4.5 through V3.4.5.0.1.4

Step	Task	Required/Optional
1	[Upgrade the ASI for SAP ABAP add-on](#) in your SAP System.	Required

What is the ASI for SAP ABAP Add-on?

Meridium APM *ASI for SAP* extends the basic functionality of Asset Strategy Implementation (ASI) by offering integration with SAP. Deploying ASI for SAP requires two steps:

- Activating the ASI for SAP license in the Meridium APM database. This documentation assumes that you activated the license when you completed the steps for creating or upgrading your Meridium APM database.
- Deploying the ASI for SAP ABAP add-on, which is package that must be deployed on your SAP system to allow for integration between your Meridium APM system and your SAP system.

The files necessary to deploy ASI for SAP are provided on the ASI for SAP ABAP Add-on DVD, which is not included in the standard Meridium APM distribution but can be obtained from Meridium, Inc. upon request.

The ASI for SAP ABAP Add-on DVD contains installation files, upgrade files, and exchange files. In this documentation, we provide details on using the installation and upgrade files. You will need to use the exchange files if you upgrade an SAP system on which the ASI for SAP ABAP Add-on package has been installed. In that case, the SAP upgrade procedure will prompt you for the exchange files for ASI for SAP. You can find the files in the **Exchange Upgrade Files** folder on the ASI for SAP ABAP Add-on DVD. Within the **Exchange Upgrade Files** folder, you will see subfolders representing the version of SAP *to which* you are upgrading. When prompted for an ASI for SAP exchange file, use the files in these subfolders. This documentation does not provide specific instructions for using these files during an SAP upgrade.

For information about what is included in the ASI ABAP Add-on, see the file *SAP_ASI_<version>_ObjectList.pdf*, which is located on the ASI for SAP ABAP Add-on installation DVD in the root folder.

What is Included in the ASI ABAP Add-On?

For information about what is included in the ASI ABAP Add-on, see the file SAP_ASI_<version>_ObjectList.pdf, which is located on the ASI for SAP ABAP Add-on installation DVD in the root folder.

Installing the ASI ABAP Add-On on the SAP System

> **Note:** You do not need to perform the following procedure if you are upgrading from a previous version of Meridium APM and you installed ASI for SAP in that version. To complete the following instructions successfully, you *must* use SAP client *000*.

To install the ASI ABAP add-on package on the SAP system:

1. On a machine from which you can access the SAP Server, insert the **ASI for SAP ABAP Add-on** installation DVD.

2. Navigate to the folder **Installation Files**.

3. Navigate to the subfolder **ECC6**, and copy the .PAT file.

4. On the SAP Server, paste the copied file into the folder **usr\sap\trans\eps\in**.

5. Log in to the SAP system as a user with:

   - **SCTSIMPSGL** and **S_CTS_ADMIN** authorizations.

   -or-

   - **SAP_ALL** authorization.

6. Run the **SAINT** transaction.

   The **Add-On Installation Tool** screen appears.

7. On the **Installation Package** menu, point to **Load Packages**, and then click **From application server**.
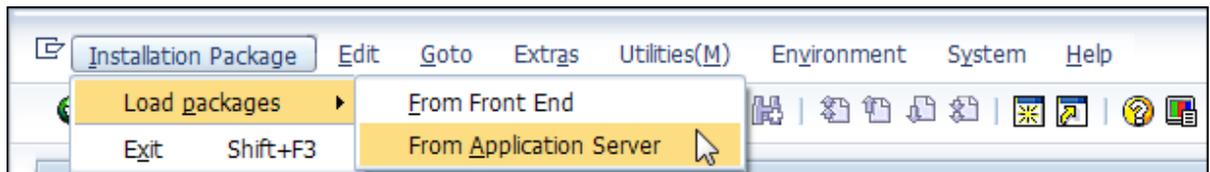
   A message appears, asking if you want to upload OCS packages from the ECS inbox.

8. Click the **Yes** button.

   The **SAINT: Uploading Packages from the File System** screen appears.
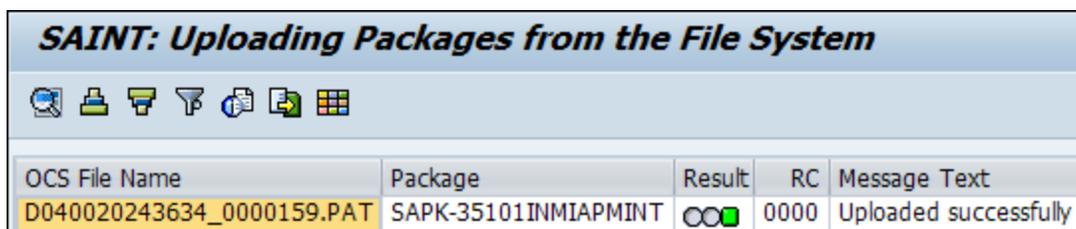
9. Select the .PAT file that you copied in step 3 of these instructions. The message column should read **Uploaded successfully**.

10. Click the button.

    The **Add-On Installation Tool** screen appears again.

11. Click the **Start** button.

    A new grid appears. *MIAPM* appears in the list of add-on packages that can be installed.

12. Select the row containing the text **MIAPM** in the first column, and click the **Continue** button.

    The **Support Package selection** tab appears.

13. Click the **Continue** button.

14. Click the **Continue** button again.

    > **Note:** During the installation, the **Add Modification Adjustment Transports to the Queue** dialog box might appear. If it does, click the **No** button.

    An indicator appears at the bottom of the screen to indicate the installation progress.

15. When the progress indicator disappears, a message appears, indicating that the add-on package will be installed.

16. Click the button.

    The status is updated to indicate that the add-on package will now be imported, and the installation process continues.

    When the installation process is complete, the status is updated to indicate that the add-on package was imported successfully.

17. Click the **Finish** button.

    The **MIAPM** add-on package appears in the list of installed add-on packages on the **Add-On Installation Tool** screen.

After you have installed the ASI ABAP add-on package, you will need to perform various configuration steps to ensure the proper functioning of ASI for SAP.

Upgrading the ASI ABAP Add-On on the SAP System

> **Note:** You should perform the following procedure only if you are upgrading from a previous version of Meridium APM and you installed ASI for SAP in that version.

To upgrade the ASI ABAP Add-on on the SAP System:

1. On a machine from which you can access the SAP Server, insert the **ASI for SAP ABAP Add-on** installation DVD.

2. Navigate to the folder **Upgrade Files**.

3. Navigate to the subfolder **ECC6**, and copy the .PAT file.

4. On the SAP Server, paste the copied file into the folder **usr\sap\trans\eps\in**.

5. Log in to the SAP system as a user with **S_CTS_IMPSGL** and **S_CTS_ADMIN** authorization.

6. Run the **SAINT** transaction.

   The **Add-On Installation Tool** screen appears.

7. On the **Installation Package** menu, point to **Load packages**, and then click **From Application Server**.

   A message appears, asking if you want to upload OCS packages from the ECS inbox.

8. Click the **Yes** button.

   The **SAINT: Uploading Packages from the File System** screen appears.

9. Select the .PAT file that you copied during step 3 of these instructions. The message column should read **Uploaded successfully**.

10. Click the button.

    The **Add-On Installation Tool** screen appears again.

11. Click the **Start** button.

    A new grid appears. *MIAPMINT* appears in the list of add-on packages that can be installed.

12. Select the row containing the value **MIAPMINT** in the first column, and click the **Continue** button.

    The **Support Package selection** tab appears.

13. Click the **Continue** button.

14. Click the **Continue** button again.

> **Note:** During the installation, the **Add Modification Adjustment Transports to the Queue** dialog box might appear. If it does, click the **No** button.

An indicator appears at the bottom of the screen to indicate the installation progress.

15. When the progress indicator disappears, a message appears, indicating that the add-on package will be installed.

16. Click the button.

The status is updated to indicate that the add-on package will now be imported, and the installation process continues.

When the installation process is complete, the status is updated to indicate that the add-on package was imported successfully.

17. Click the **Finish** button.

ASI Security Groups

The baseline Meridium APM database contains two Security Groups specifically for Asset Strategy Implementation:

- MI ASI Administrator
- MI ASI User

The following table lists the baseline family-level privileges that exist for these Security Groups.

Family	MI ASI Administrator	MI ASI user
Entity Families		
Action	None	View, Update
Action Mapping	View, Update, Insert, Delete	View
Active Strategy	None	View
Asset Strategy	None	View
Calibration Task	None	View, Update, Insert, Delete
Consequence	None	View
Equipment	View, Update, Insert, Delete	View, Update, Insert
Execution Mapping	View, Update, Insert, Delete	View
Functional Location	View, Update, Insert, Delete	View, Update, Insert
Health Indicator	None	View
Health Indicator Mapping	None	View
Hierarchy Item Child Definition	None	View
Hierarchy Item Definition	None	View
Implementation Authorization	View, Update, Insert, Delete	View
Implementation Package	None	View, Update, Insert, Delete

Family	MI ASI Administrator	MI ASI user
Implementation Role	View, Update, Insert, Delete	View
Inspection Task	None	View, Update, Insert, Delete
KPI	None	View
KPI Measurement	None	View
Maintenance Item	None	View, Update, Insert, Delete
Maintenance Package	None	View, Update, Insert, Delete
Maintenance Plan	None	View, Update, Insert, Delete
Material	None	View, Update, Insert, Delete
Measurement Location	None	View, Update, Insert, Delete
Measurement Location Group	None	View, Update, Insert, Delete
Measurement Location Template	View, Update, Insert, Delete	View, Update, Insert
Notification	None	View, Update, Insert, Delete
Object List Item	None	View, Update, Insert, Delete
Operation	None	View, Update, Insert, Delete
Operator Rounds Allowable Values	None	View
Probability	None	View
Proposed Strategy	None	View
Protection Level	None	View
PRT	None	View, Update, Insert, Delete

Family	MI ASI Administrator	MI ASI user
PRT Template	View, Update, Insert, Delete	View
RCM FMEA Asset	None	View
RCM FMEA Recommendation	None	View
Risk	None	View
Risk Assessment	None	View
Risk Category	None	View
Risk Matrix	None	View
Risk Rank	None	View
Risk Threshold	None	View
SAP System	View, Update, Insert, Delete	View
Site Reference	View	View
System Strategy	None	View
Task List	None	View, Update, Insert, Delete
Task Types	None	View
Thickness Monitoring Task	None	View, Update, Insert, Delete
Unit Strategy	None	View
Work Management Item Child Definition	View, Update, Insert, Delete	View
Work Management Item Definition	View, Update, Insert, Delete	View
Work Management Item Definition Configuration	View, Update, Insert, Delete	View
Relationship Families		
Authorized to Implement	View, Update, Insert, Delete	View

Family	MI ASI Administrator	MI ASI user
Documents Action	View, Update, Insert, Delete	View, Update, Insert, Delete
Has Actions	None	View
Has Action Mapping	View, Update, Insert, Delete	View
Has Action Revisions	None	View
Has Active Strategy	None	View
Has Asset Strategy	None	View
Has Associated Recommendation	None	View
Has Checkpoint	None	View, Insert
Has Child Hierarchy Item	None	View
Has Child Work Management Item	View, Update, Insert, Delete	View
Has Driving Recommendation	None	View
Has Execution Mapping	View, Update, Insert, Delete	View
Has Health Indicators	View, Update, Insert, Delete	View, Update, Insert, Delete
Has KPI Measurement	None	View
Has Maintenance Item	None	View, Update, Insert, Delete
Has Maintenance Package	None	View, Update, Insert, Delete
Has Material	None	View, Update, Insert, Delete
Has Measurement Location Group	None	View, Update, Insert, Delete
Has Mitigation Revisions	None	View
Has Object List Item	None	View, Update, Insert, Delete

Family	MI ASI Administrator	MI ASI user
Has Operation	None	View, Update, Insert, Delete
Has Proposed Strategy	None	View
Has PRT	None	View, Update, Insert, Delete
Has Reference Values	None	View
Has Risk	None	View
Has Risk Category	None	View
Has Risk Revisions	None	View
Has SAP System	None	View, Update, Insert, Delete
Has Strategy	None	View
Has Strategy Revision	None	View
Has System Strategy	None	View
Has Tasks	None	View, Update, Insert, Delete
Has Task List	None	View, Update, Insert, Delete
Has Task Revision	None	View, Update, Insert, Delete
Has Work Management Item	None	View, Update, Insert, Delete
Has Work Management Item Definition Configuration	View, Update, Insert, Delete	View
Health Indicator Has Mapping	None	View, Update, Insert
Health Indicator Has Source	None	View, Update, Insert, Delete
Implements Action	None	View, Update, Insert, Delete

Family	MI ASI Administrator	MI ASI user
Implements Strategy	None	View, Update, Insert, Delete
Implements Secondary Strategy	None	View, Update, Insert, Delete
Is Mitigated	None	View
Master Template Has Asset Strategy	None	View
Mitigates Risk	None	View
Was Applied to Asset Strategy	View, Update, Insert, Delete	View, Update, Insert, Delete
Was Applied to PRT	View, Update, Insert, Delete	View, Update, Insert, Delete

Configuring SAP for External Numbering

When you implement an Implementation Package in ASI, Meridium APM generates unique numbers for SAP Maintenance Plans, Maintenance Items, and General Maintenance Task Lists. In order for Meridium APM to assign these external numbers, your SAP system must be configured to allow External Numbering.

Consult the documentation for your SAP system to define the following External Number Ranges.

Object Type	From Number	To Number
Maintenance Plan	M00000000001	M99999999999
Maintenance Item	M000000000000001	M999999999999999
General Maintenance Task List	M0000001	M9999999

Configuring SAP Permissions

If you will be sending data to SAP using ASI Implementation Packages, you must have the following security permissions:

- Access to execute RFCs as described in SAP note 460089.
- Access to execute the functions contained in the /MIAPM/ASM function group.
- Authorizations defined in the SAP_PM_DATATRANSFER role.

For details on configuring SAP security, see the documentation for your SAP system.

About Secured Maintenance Plants

Using your SAP system, you can configure ASI to let you see and work with data (e.g., Task Lists) that is specific only to certain Maintenance Plants in that SAP system. Throughout the ASI documentation, these Maintenance Plants are referred to as *secured Maintenance Plants*.

To specify that a Maintenance Plant is secured, using your SAP system, you will need to add the Maintenance Plant to the /MIAPM/PLANT_CFG table. After you add the desired Maintenance Plants to the table, they will appear in the grid on the **Secured Maintenance Plants** tab on the **Implementation Administration** page. Then, when you create an Implementation Package record that is linked to an SAP System record that references that SAP system, actions that you can perform and SAP values that you can work with within that Implementation Package will be limited to actions and values that apply only to those Maintenance Plants.

> **Note:** If the /MIAPM/PLANT_CFG table is empty, *no* Maintenance Plants will be secured, meaning that ASI users can see and manage data for ALL Maintenance Plants in that SAP system.

For example, suppose that the following Maintenance Plants exist in SAP System A:

- 3000
- 0001
- 4000
- 1000

If you wanted users to be able to create and manage data for only Maintenance Plant *3000*, in SAP System A, you could add Maintenance Plant 3000 to the table in SAP. As a result, the grid on the **Secured Maintenance Plants** tab would look like the following image.
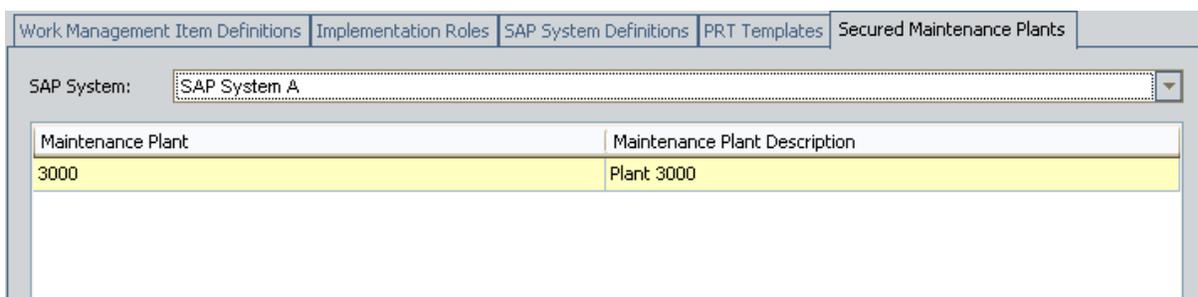
Then, you could create an Implementation Package record that is linked to the SAP System record that references SAP System A.
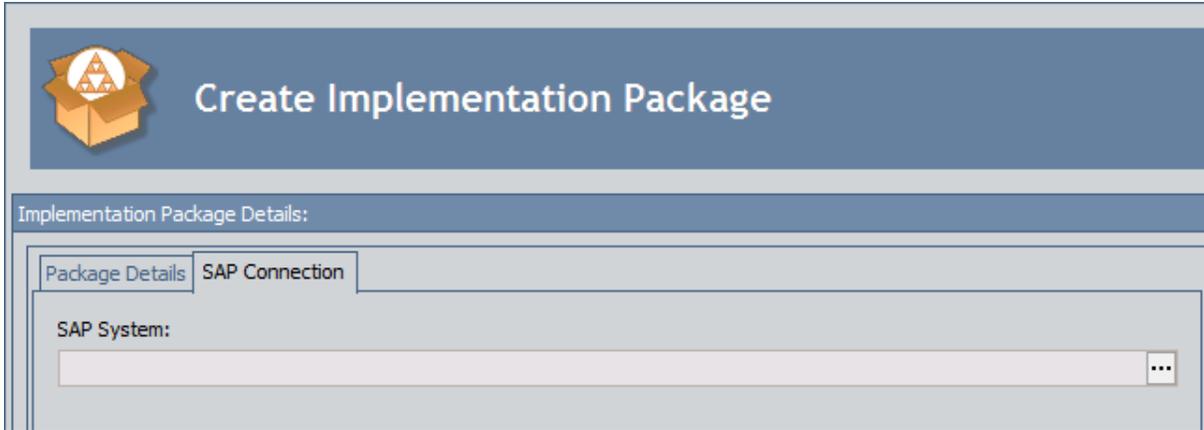
As a result, actions that you can perform in this Implementation Package would be limited to actions that apply only to Maintenance Plant 3000. For example, if you tried to search for a Maintenance Plant from the Plant field in a Task List record, the search results would contain only Maintenance Plant 3000, as shown in the following image.
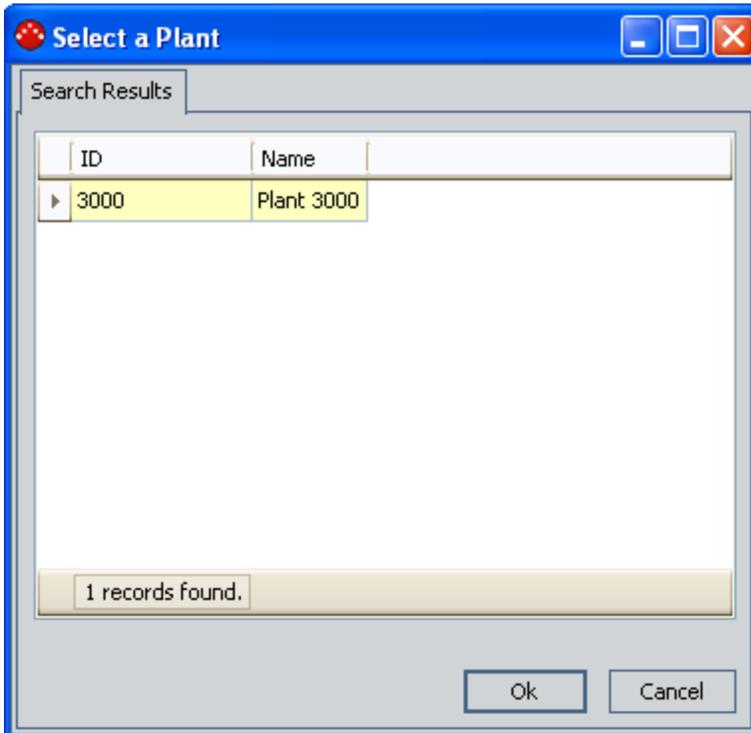
Adding a Maintenance Plant to the /MIAPM/PLANT_ CFG Table

To add a Maintenance Plant to the /MIAPM/PLANT_CFG table:

1. On the SAP system, run the following transaction: **se16**

   The **Data Browser: Initial Screen** appears.

2. In the **Table Name** text box, type: `/MIAPM/PLANT_CFG`

3. Click the ⬜ button.

   The **Table /MIAPM/PLANT_CFG Insert** screen appears.

4. In the **SWERK** text box, type the Maintenance Plant that you want to secure.

5. Click the 💾 button.

   The entry is saved, and the specified Maintenance Plant is secured.

> **Note:** If desired, you can remove a Maintenance Plant from the /MIAPM/PLANT_CFG table, which will cause that Maintenance Plant to no longer be secured. For details on removing entries from tables, see the SAP Help.

Accessing the Implementation Administration Page

> **Note:** You can access the **Implementation Administration** page only if you are a member of the MI ASI Administrator Security Group.

To access the Implementation Administration page:

- On the **Asset Strategy Implementation Start Page**, click the **Administration** link.

  The **Implementation Administration page** appears.
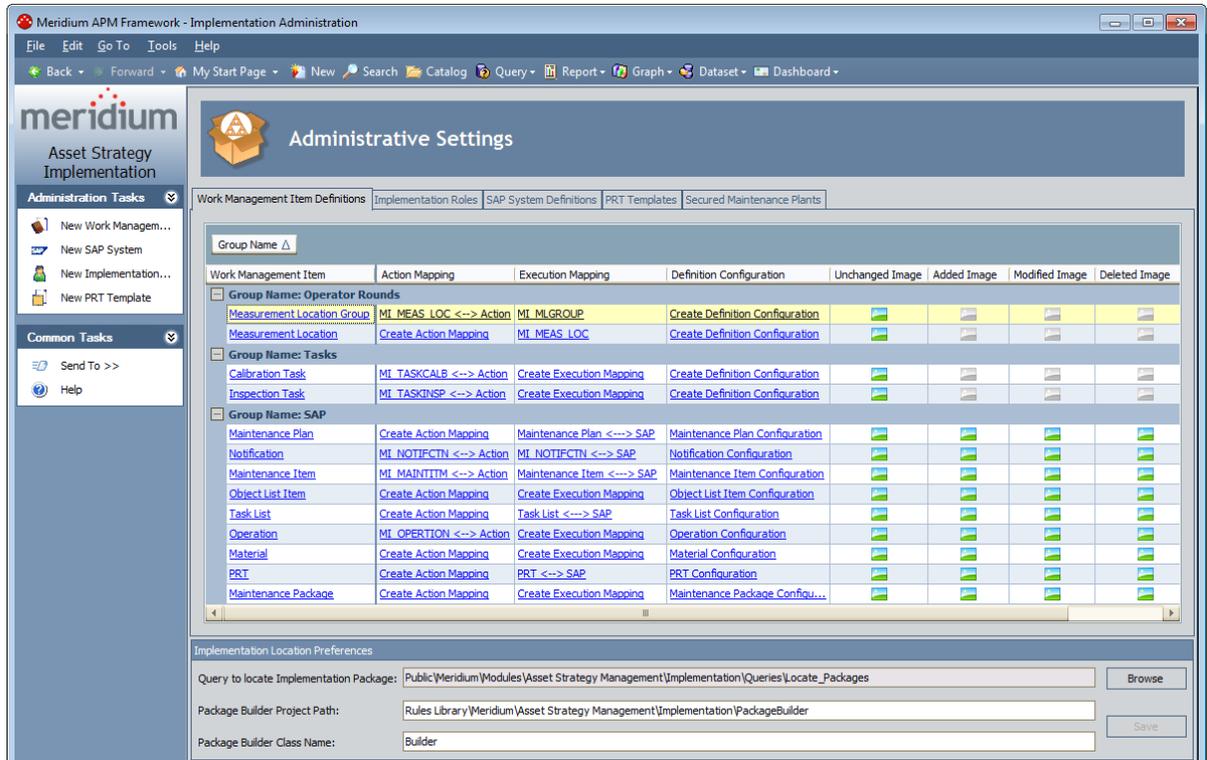
Overview of the Implementation Administration Page

The **Implementation Administratio**n page is divided into the following areas:

- **Administrative Settings workspace:** The area that allows you to manage administrative tasks. This area is divided into the following items:

  - Work Management Item Definitionstab
  - Implementation Roles tab
  - SAP System Definitions tab
  - PRT Templates tab
  - Secured Maintenance Plants tab
  - Implementation Location Preferences section
  - Paste Options section
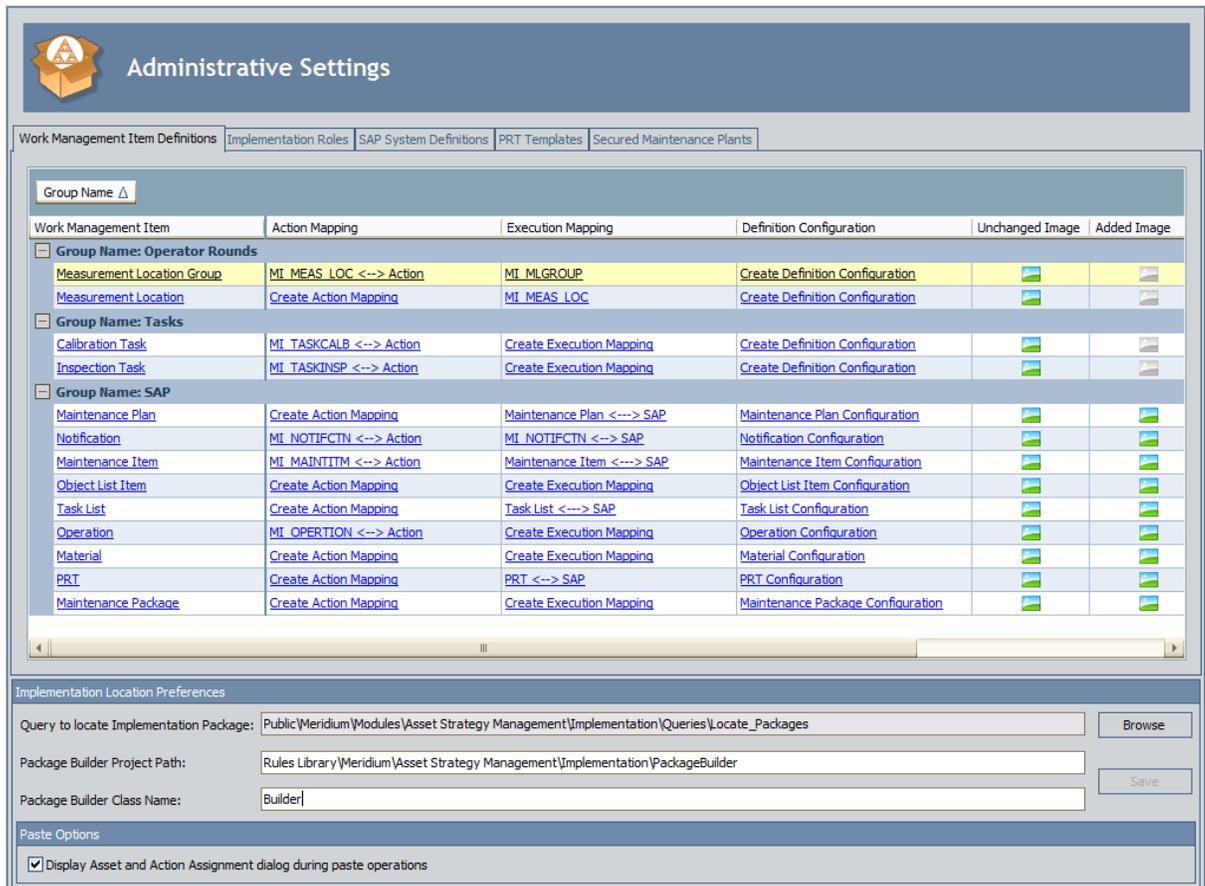
- **Task menus:** Menus that provide specific functionality. The following task menus are available:

- **Administration Tasks** menu
- **Common Tasks** menu

Work Management Item Definitions Tab

The **Work Management Item Definitions** tab on the **Implementation Administration** page contains a grid that displays a list of the Work Management Item Definition records that exist in the database. Each row in the grid represents one Work Management Item Definition record.

Keep in mind from the [illustration of the ASI data model](#) that each Work Management Item Definition record can be linked to one record in each of the following families:

- Action Mapping
- Execution Mapping
- Work Management Item Definition Configuration

The grid in the **Work Management Item Definitions** section contains the following columns:

- **Work Management Item:** Contains the hyperlinked family ID of the Work Management Item Definition record. When you use the scroll bar to view subsequent columns in the grid, the **Work Management Item** column remains frozen in the first position so that you can see the Work Management Item Definition record represented by that row.

- **Action Mapping:** Contains the hyperlinked name of the Action Mapping record to which the Work Management Item Definition record is linked. If no Action Mapping records are linked to the Work Management Item Definition record, the hyperlink text will be **Create Action Mapping**, which you can click to create a new Action Mapping record that is linked to the Work Management Item Definition record.

An *Action Mapping* record identifies the mapping that will be invoked when you create a Meridium APM record, such as an Inspection Task record or a Maintenance Item record, from an Action.

- **Execution Mapping:** Contains the hyperlinked name of the Execution Mapping record to which the Work Management Item Definition record is linked. If no Execution Mapping records are linked to the Work Management Item Definition record, the hyperlink text will be **Create Execution Mapping**, which you can click to create a new Execution Mapping record that is linked to the Work Management Item Definition record.

  An *Execution Mapping* record identifies the rule that will be invoked when you implement the Implementation Package. This rule is responsible for creating physical items in the SAP database.

- **Definition Configuration:** Contains the hyperlinked name of the Work Management Item Definition Configuration record to which the Work Management Item Definition record is linked. If no Work Management Item Definition Configuration records are linked to the Work Management Item Definition record, the hyperlinked text will be **Create Definition Configuration**, which you can click to create a new Work Management Item Definition Configuration record that is linked to the Work Management Item Definition record.

  A *Work Management Item Definition Configuration* record identifies the rule that will be invoked when you right-click a work item node in the tree. The Work Management Item Definition Configuration records in the baseline Meridium APM database identify rules that cause additional options to be available on the shortcut menu in the tree. The following table describes the functionality that is associated with the Work Management Item Definition Configuration records that are linked to Work Management Item Definition records in the baseline Meridium APM database.

Work Management Item Definition Record	Work Management Item Definition Configuration Record	Associated Functionality
Maintenance Plan	Maintenance Plan Configuration	Allows you to: - Copy and paste Maintenance Plan nodes in the tree. -AND- - View the Maintenance Plan Tasks menu.

Work Management Item Definition Record	Work Management Item Definition Configuration Record	Associated Functionality
Notification	Notification Configuration	Allows you to: • Copy and paste Notification nodes in the tree. • View the Notification Tasks menu.
Maintenance Item	Maintenance Item Configuration	Allows you to... • Copy and paste Task List nodes in the tree. -AND- • View the Maintenance Item Tasks menu.
Object List Item	Object List Item Configuration	Allows you to copy and paste Object List Item records in the tree to create new ones.
Task List	Task List Configuration	Allows you to... • Copy and paste Task List nodes in the tree. -AND- • View the Task List Tasks menu.
Operation	Operation Configuration	Allows you to: • Copy and paste Operation nodes in the tree. • View the Operation Tasks menu.
Material	Material Configuration	Allows you to copy and paste Material nodes in the tree.

Work Management Item Definition Record	Work Management Item Definition Configuration Record	Associated Functionality
PRT	PRT Configuration	Allows you to copy and paste PRT nodes in the tree.
Maintenance Package	Maintenance Package Configuration	Allows you to copy and paste Maintenance Package nodes in the tree.

- **Unchanged Image:** Contains an icon that you can click to see the image that is used when a record belonging to the family identified in the **Work Management Item** column contains the value *Unchanged* in the Status field. The image will appear in the tree when the associated work item record is unchanged. If desired, you can assign a new image to a Work Management Item Definition record to represent the *Unchanged* status.

- **Added Image:** Contains an icon that you can click to see the image that is used when a record belonging to the family identified in the **Work Management Item** column contains the value *Added* in the Status field. This icon is used to indicate that the record is not yet implemented in SAP, with the exception of the following families for which updates in SAP are not supported. The image will appear in the tree after the associated work item is added to the tree.

    - Measurement Location Group
    - Measurement Location
    - Calibration Task
    - Inspection Task

  If desired, you can assign a new image to a Work management Item Definition record to represent the *Added* status.

- **Modified Image:** Contains an icon that you can click to see the image that is used when a record belonging to the family identified in the **Work Management Item** column contains the value *Modified* in the Status field. This icon is used to indicate that the record has been modified and the changes are not yet implemented in SAP, with the exception of the following families for which updates in SAP are not supported. The image will appear in the tree after the associated work item is modified.

    - Measurement Location Group
    - Measurement Location
    - Calibration Task
    - Inspection Task

If desired, you can assign a new image to a Work management Item Definition record to represent the *Modified* status.

- **Deleted Image:** Contains an icon that you can click to see the image that is used when a record belonging to the family identified in the **Work Management Item** column contains the value *Deleted* in the Status field. This icon is used to indicate that the record has been deleted in Meridium APM but this change has not yet been implemented in SAP, with the exception of the following families for which updates in SAP are not supported. The image will appear in the tree after the associated work item is marked for deletion.

  - Measurement Location Group
  - Measurement Location
  - Calibration Task
  - Inspection Task

If desired, you can assign a new image to a Work management Item Definition record to represent the *Deleted* status.

Implementation Roles Tab

The **Implementation Roles** tab on the **Implementation Administration** page contains a grid that displays a list of Implementation Role records that exist in the database. Meridium APM does not provide any Implementation Role records, so in the baseline database, this grid will be empty.
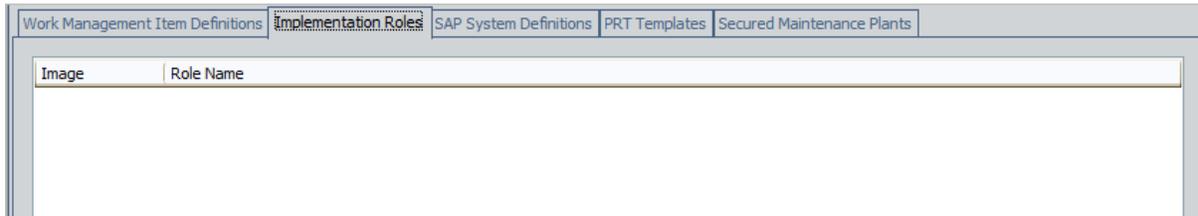
The grid on the **Implementation Roles** tab contains the following columns:

- **Image:** Contains an icon that you can click to see the image that is defined for the Implementation Role record. The image will appear in the tree after a Security User that is assigned to the Implementation Role adds a work item to the tree on the **Packaging <Package ID>** page. If desired, you can assign a new image to an Implementation Role record.

- **Role Name:** Contains the hyperlinked Role Name of the Implementation Role record. You can click the hyperlink to the view the Implementation Role datasheet, which displays the Role Name and the Implementation Authorization records to which the Implementation Role record is linked.

SAP System Definitions Tab

The **SAP System Definitions** tab on the **Implementation Administration** page contains a grid that displays a list of SAP System records that exist in the database. Meridium APM does not provide any SAP System records, so in the baseline database, this grid will be empty.

The grid on the **SAP System Definitions** tab contains the following columns:

- **SAP System:** The hyperlinked name of the SAP System record.

- **Connection Type:** The type of connection that will be used to connect to the SAP system. The default value is RFC.

- **Password:** A hyperlink that allows you set or modify the password to the SAP system. If a password has not yet been specified, the hyperlink text is **Set Password**, which you can click to display the **Enter SAP System Password** dialog box, where you can type the desired password. After you have defined the password, the hyperlink text is **Change Password**, which you can click to display the **Enter SAP System Password** dialog box, where you can type a new password.

- **Test Connection:** A hyperlink that allows you to test the SAP connection. After you click the hyperlink, if the connection information is valid, a confirmation message will appear.

The following image illustrates the **SAP System Definitions** tab containing one row.

PRT Templates Tab

The **PRT Templates** tab on the **Implementation Administration** page contains a grid that displays a list of PRT Template records that exist in the database. Meridium APM provides the PRT Template record *Simple PRT Template*, so in the baseline database, this grid will contain one row.

| Work Management Item Definitions | Implementation Roles | SAP System Definitions | PRT Templates | Secured Maintenance Plants |
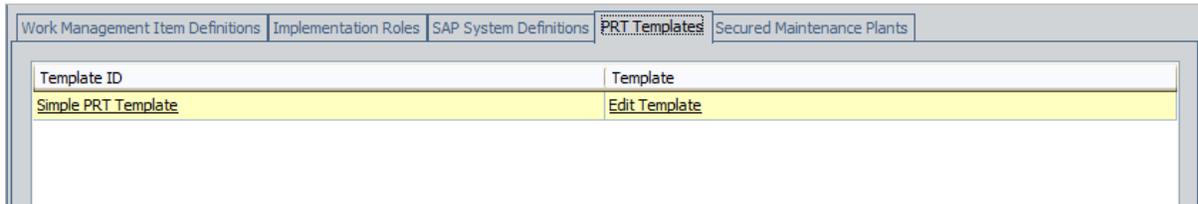
Template ID	Template
Simple PRT Template	Edit Template

The grid on the **PRT Templates** tab contains the following columns:

- **Template ID:** The hyperlinked ID of the PRT Template record. You can click any hyperlink to access the datasheet for that PRT Template record.

- **Template:** A hyperlink that allows you modify the document template. After you create a new PRT Template record, the hyperlink text is **Edit Template**, which you can click to display the **Document Template** window, where you can modify the document template.

Secured Maintenance Plants Tab

The **Secured Maintenance Plants** tab on the **Implementation Administration** page contains the following items:

- **SAP System list:** Contains the value in the Name field in all SAP System records that exist in the database. The baseline Meridium APM database does not contain any SAP System records, so in the baseline database, this list will be empty. If you have created at least one SAP System record that is set as the default SAP System, that record will be selected in the list by default. If no SAP System records are set as the default, nothing will be selected in the list by default, and you will need to click the ▼ button to select a value.

- **Grid:** Displays a list of secured Maintenance Plants belonging to the SAP system that is identified by the value in the **SAP System** list.
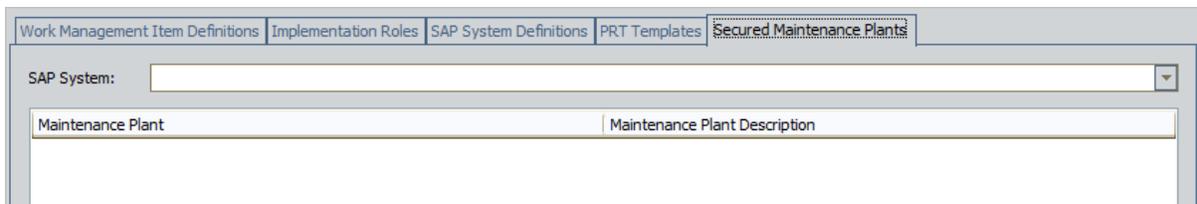
Unlike the other tabs on the **Implementation Administration** page, you cannot add rows to the grid on the **Secured Maintenance Plans** tab through the ASI interface. Instead, the grid displays a list of secured Maintenance Plants that have been added to the /MIAPM/PLANT_CFG table via the SAP system.

The following image illustrates the **Secured Maintenance Plants** tab containing multiple rows.
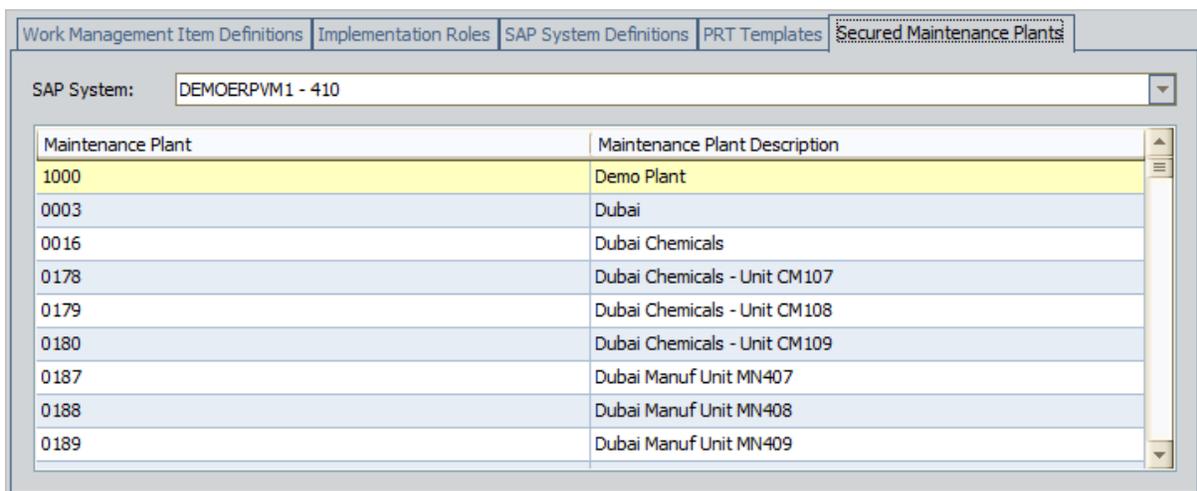
> **Note:** The **Secured Maintenance Plants** tab appears only if the ASI for SAP license has been activated.

Implementation Location Preferences Section

The **Implementation Location Preferences** section on the **Implementation Administration** page displays a series of text boxes that allow you to manage various administrative settings.

Implementation Location Preferences		
Query to locate Implementation Package:	Public\Meridium\Modules\Asset Strategy Management\Implementation\Queries\Locate_Packages	Browse
Package Builder Project Path:	Rules Library\Meridium\Asset Strategy Management\Implementation\PackageBuilder	Save
Package Builder Class Name:	Builder	

The **Implementation Location Preferences** section contains the following text boxes:

- **Query to locate package for Packaging:** Contains the Catalog path to the query that you want to use to return results on the **Implementation Package List** page that you can access via the **Packaging** link on the **Asset Strategy Implementation Start Page**. This text box is populated with the following value in the baseline database: Public\Meridium\Modules\Asset Strategy Management\Implementation\Queries\Locate_Packages.

  To configure Meridium APM to use a different query, you can click the **Browse** button to the right of the text box and browse to the location of the desired query.

- **Package Builder Project Path:** Contains the path to the Rules Library project that you want to use for determining how the **Implementation Packaging Builder** should function. This text box is populated with the following value in the baseline database: Rules Library\Meridium\Asset Strategy Management\Implementation\PackageBuilder.

- **Package Builder Class Name:** Contains the name of the class, which exists within the Rules Library project that is referenced in the **Package Builder Project Path** text box, that you want to use for determining how the **Implementation Packaging Builder** should function. This text is populated with the value **Builder** in the baseline database.

After you make a change to any of the values, you can click the **Save** button to save the changes.

Paste Options Section

The **Paste Options** section on the **Implementation Administration** page contains the **Display Asset and Action Assignment dialog during paste operations** check box, which you can clear to hide the **Asset and Action Assignment** window from users who copy and paste nodes to create new records on the **Packaging <Package ID>** page.

In the baseline database, the check box is selected.

Paste Options
☑ Display Asset and Action Assignment dialog during paste operations

Administration Tasks Menu
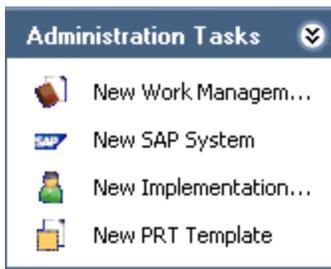
The **Administration Tasks** menu on the **Implementation Administration** page contains the following links:

- **New Work Management Item:** Displays the **<empty> (new Work Management Item Definition)** window, where you can create a new Work Management Item Definition record.

- **New SAP System:** Displays the **<empty> (new SAP System)** window, where you can create a new SAP System record.

- **New Implementation Role:** Displays the **<empty> (new Implementation Role)** window, where you can create a new Implementation Role record.

- **New PRT Template:** Displays the **<empty> (new PRT Template)** window, where you can create a new PRT Template record.

Common Tasks Menu
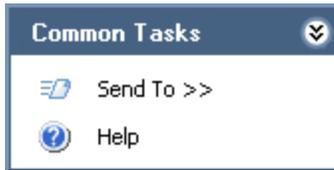
The **Common Tasks** menu on the **Implementation Administration** page contains the following links:

- **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.

- **Help:** Displays the context-sensitive Help topic for the **Implementation Administration** page.

Associating an Implementation Package with a Specific Site

Some companies that use the SAP software have multiple sites, or locations, around the world. Each site might use its own SAP system.

If desired, you can define these sites and associate each SAP system with the site that uses it. After you create an Implementation Package and reference an SAP system using the SAP System field, the Meridium APM system will allow you to add Asset Strategies to that Implementation Package only if *all* the underlying equipment or locations belong to the site that uses that SAP system.

For example, suppose you have the following sites and SAP systems.

Site	SAP System
A	100
B	200

You can see that Site A uses SAP System 100 and Site B uses SAP System 200. You could, therefore, create an Implementation Package record that references SAP System 100 (in the SAP System field), which indirectly references Site A.

In ASM, you might have the following sites, equipment, and Asset Strategies.

Site	Equipment	Asset Strategy
A	Pump 1	Pump Strategy
B	Tank 1	Tank Strategy

You can see that Site A contains the equipment *Pump 1* and Site B contains the equipment *Tank 1*. In this case, you could add Pump Strategy to the Implementation Package because its equipment belongs to the same site (site A) that uses SAP System 100.

You could not, however, add Tank Strategy to the Implementation Package because its equipment belongs to a different site (site B) than the site that uses SAP System 100 (site A).

Hiding the Asset and Action Assignment Window

The **Asset and Action Assignment window** appears when you copy and paste nodes in the tree on the **Packaging <Package ID>** page (if the records represented by the copied nodes meet certain conditions).

To hide the Asset and Action Assignment window:

- On the **Implementation Administration** page, in the **Paste Options** section, clear the **Display Asset and Action Assignment dialog during paste operations** check box. When you are finished, the setting should look like the one shown in the following image.

Paste Options
☐ Display Asset and Action Assignment dialog during paste operations

Baseline Work Management Item Definition Records

The baseline Meridium APM database contains the following Work Management Item Definition records, which means that by default, you can add records that belong to these families to an Implementation Package:

- Calibration Task
- Inspection Task
- Maintenance Item
- Maintenance Package
- Maintenance Plan
- Material
- Measurement Location
- Measurement Location Group
- Notification
- Object List Item
- Operation
- PRT
- Task List
- Thickness Monitoring Task

All baseline Work Management Item Definition records have assigned images, but you can assign a different image to any existing Work Management Item Definition record. If you create a new Work Management Item Definition record, in the tree on the **Packaging <Package ID>** page, nodes representing records that belong to the corresponding family will have the default image 📁.

> Œ **Hint:** If you create a new Work Management Item Definition record, you should change the default image to something more applicable.

Creating a Work Management Item Definition Record

To create a Work Management Item Definition record:

1. On the **Implementation Administration** page, on the **Administration Tasks** menu, click the **New Work Management Item** link.

   The **<empty> (new Work Management Item Definition)** window appears.

2. In the **Family ID** list, select the family representing the type of work item record that you want to add to an Implementation Package. The list displays all families that are related to the Implementation Package family through the Has Work Management Item relationship. This field is required.

   For example, if you want to add Preventative Maintenance Task records to an Implementation Package, select *Preventative Maintenance Task* in the **Family ID** list. This will allow you to add Preventative Maintenance Task records to an Implementation Package using the shortcut menu when you right-click the Implementation Package node in the explorer on the **Packaging <Package ID>** page.

   For example, if you want to add Preventative Maintenance Task records to an Implementation Package, select *Preventative Maintenance Task* in the **Family ID** list. This will allow you to add Preventative Maintenance Task records to an Implementation Package using the shortcut menu when you right-click the Implementation Package node in the explorer on the **Packaging <Package ID>** page.

3. In the **Group Name** list, select the **Packaging Tasks** shortcut menu to which you want to add a link that allows you to create work item records in this family. The list displays the description of all System Codes in the MI_WKMGMTDF_GROUP System Code Table.

   For example, suppose you selected *Preventative Maintenance Task* in the **Family ID** list. If you select *Tasks* in the **Group Name** list, when you click the **Tasks** link on the **Packaging Tasks** menu, the shortcut menu will contain the **Preventative Maintenance Task** link.

   For example, suppose you selected *Preventative Maintenance Task* in the **Family ID** list. If you select *Tasks* in the **Group Name** list, when you click the **Tasks** link on the **Packaging Tasks** menu, the shortcut menu will contain the **Preventative Maintenance Task** link.

4. If you want to be able to link *existing* work item records in this family to records in its predecessor family, accept the default selection in the **Allow Link Existing** check box. This will allow you to add existing work item records in the family that you selected in the **Family ID** list to records in its predecessor family using the shortcut menu in the tree on the **Packaging <Package ID>** page.

   For example, if you selected *Preventative Maintenance Task* in the **Family ID** list, its successor family is the Implementation Package family, and the **Allow Link Existing** check box is selected, when you right-click the Implementation Package

node in the explorer, the **Find an existing Preventative Maintenance Task to link to <Root Implementation Package Name> Implementation Package** option will appear.

For example, if you selected *Preventative Maintenance Task* in the **Family ID** list, its successor family is the Implementation Package family, and the **Allow Link Existing** check box is selected, the **Find an existing Preventative Maintenance Task to link to <Root Implementation Package Name> Implementation Package** option will appear.

-OR-

If you do not want to link *existing* work item records in this family to records in its successor family, clear the **Allow Link Existing** check box.

5. If work item records in this family can be linked to a predecessor record in a family *other than* the Implementation Package family, click the **Parent Family** tab.

-OR-

If work item records in this family will be created and linked only to the Implementation Package record, save the record.

6. If you clicked the **Parent Family** tab in step 5, in the **Parent Family ID** list, select the family whose records will be predecessors to work item records that belong to the family that you selected in the **Family ID** list. The list displays all families that are related to the Implementation Package family through the Has Work Management Item relationship.

For example, if you selected *Preventative Maintenance Task* in the **Family ID** list and you want to link Preventative Maintenance Task records to predecessor Task Grouping records, select *Task Grouping* in the **Parent Family ID** list. This will cause the **Create a new Preventative Maintenance Task to link to 'Task Grouping'** option to be available on the shortcut menu when you right-click a Task Grouping record in the explorer.

Click here for an example.

For example, if you selected *Preventative Maintenance Task* in the **Family ID** list and you want to link Preventative Maintenance Task records to predecessor Task Grouping records, select *Task Grouping* in the **Parent Family ID** list. This will cause the Create a new Preventative Maintenance Task to link to 'Task Grouping' option to be available on the shortcut menu when you right-click a Task Grouping record in the explorer.

> **Note:** Any family that exists in the Parent Family ID field should also exist in the Family ID field in a separate Work Management Item Definition record. In addition, that Work Management Item Definition record should be linked to a Work Management Item Child Definition record whose Child Family ID field contains the appropriate successor family. Using the preceding example, the value *Task*

> *Grouping* would need to exist in the Family ID field in a separate Work Management Item Definition record. That Work Management Item Definition record would also need to be linked to a Work Management Item Child Definition record whose Child Family ID field contains the value *Preventative Maintenance Task*.

7. If you selected a Parent Family ID in step 6, in the **Parent Family Relationship ID** list, select the relationship family that relates the family that you selected in the **Family ID** list to the family that you selected in the **Parent Family ID** list.

   For example, suppose you selected *Preventative Maintenance Task* in the **Family ID** list and *Task Grouping* in the **Parent Family ID** list. If the Task Grouping family is related to the Preventative Maintenance Task family through the Has Tasks relationship, select *Has Tasks* in the **Parent Family Relationship ID** list.

   For example, suppose you selected *Preventative Maintenance Task* in the **Family ID** list and *Task Grouping* in the **Parent Family ID** list. If the Task Grouping family is related to the Preventative Maintenance Task family through the Has Tasks relationship, select *Has Tasks* in the **Parent Family Relationship ID** list.

8. Save the record.

After you have saved the Work Management Item Definition record, you will need to complete the following steps:

- If the family that you selected in the **Family ID** list is related to a successor family whose records you want to add to an Implementation Package, create the appropriate Work Management Item Child Definition record.

- If you selected a family in the **Parent Family ID** list, make sure that the database contains a separate Work Management Item Definition record that contains that family in the Family ID field.

- Assign an image to the Work Management Item Definition record.

Creating a Work Management Item Child Definition Record

To create a Work Management Item Child Definition record:

1. Access the **Implementation Administration** page.

2. On the **Work Management Item Definitions** tab, in the row containing the predecessor family to which you want to link new successor records, click the hyperlink in the **Work Management Item** cell.

   For example, if you want to be able to link new Preventative Maintenance Task records to Task Grouping records, click the *Task Grouping* link.

   The **<Family> (Work Management Item Definition)** window appears, displaying a master/detail datasheet, where the Work Management Item Definition record is the master record, and the Work Management Item Child Definition record is the detail record.

   For example, if you clicked the *Task Grouping* hyperlink, the **Task Grouping (Work Management Item Definition)** window appears.

3. In the **Work Management Item Child Definition** section below the master record, in the **Child Family ID** list, select the successor family whose records you want to link to records belonging to the family that appears in the **Family ID** cell. The list displays all families that are related to the Implementation Package family through the Has Work Management Item relationship.

   For example, if you want to link new Preventative Maintenance Task record to Task Grouping records, in the **Child Family ID** list, select *Preventative Maintenance Task*.

4. In the **Child Family Relationship ID** list, select the relationship family that relates the family that appears in the **Family ID** cell to the family that you selected in the **Child Family ID** list.

5. Save the master Work Management Item Definition record.

After you have saved the Work Management Item Definition record, you will need to:

- Make sure that the database contains a separate Work Management Item Definition record whose family ID field contains the family that you selected in the **Child Family ID** list in the Work Management Item Child Definition record that you just created.

- Make sure that the Parent family ID field in the separate Work Management Item Definition record contains the appropriate predecessor family (i.e., the family that exists in the family ID field in the Work Management Item Definition record that is linked to the Work Management Item Child Definition record that you just created).

Assigning an Image to a Work Management Item Definition Record

To assign an image to a Work Management Item Definition record:

1. Access the [**Implementation Administration** page](#).

2. On the **Work Management Item Definitions** tab, locate the column containing the type of image that you want to change. For example, if you want to change the image that appears when a Notification record is modified, locate the **Modified Image** column.

3. Click anywhere inside the cell of the row containing the Work Management Item Definition record to which you want to assign a new image.

   The image appears in a drop-down window.

4. Right-click the image, and click **Load**.

   The **Open** dialog box appears.

5. Navigate to the location of the desired image, select the image, and click the **Open** button.

   The selected image appears in the drop-down window.

6. Click **OK**.

   The new image is saved and will now be displayed in the tree where applicable.

Creating an Implementation Role Record

To create an Implementation Role record:

1. On the **Implementation Administration** page, on the **Administration Tasks** menu, click the **New Implementation Role** link.

   The **<empty> (new Implementation Role)** window appears.

2. In the **Role Name** text box, type a name for the Implementation Role. Keep in mind that the name you type will be displayed throughout the interface to identify the Implementation Role, so be sure to specify a name that will make sense to your users.

3. Click **OK**.

   The Implementation Role record is saved.

Assigning Implementation Roles to Individual Security Users

To assign an Implementation Role to individual Security Users:

1. On the **Implementation Administration** page, on the **Implementation Roles** tab, click the hyperlinked Role Name of the Implementation Role record that you want to use to assign an Implementation Role to individual Security Users.

   The **<Role Name> (Implementation Role)** window appears, where **<Role Name>** is the Role Name of the selected Implementation Role record.

2. In the grid in the **Implementation Authorization** section, in the **Authorization Type** list in the first row, select **Security User**.

3. In the same row, in the **Authorized User(s)** list, select the Security User to which you want to assign the Implementation Role.

4. Click **OK**.

   The Implementation Role is assigned to the selected Security User.

Assigning Implementation Roles to All Users in a Security Group

To assign an Implementation Role to all Security Users that belong to a Security Group:

1. On the <u>Implementation Administration</u> page, on the **Implementation Roles** tab, click the hyperlinked Role Name of the Implementation Role record that you want to use to assign an Implementation Role to all Security Users that belong to a given Security Group.

   The **<Role Name> (Implementation Role)** window appears, where **<Role Name>** is the Role Name of the selected Implementation Role record.

2. In the grid in the **Implementation Authorization** section, in the **Authorization Type** list in the first row, select **Security Group**.

3. In the same row, in the **Authorized User(s)** list, select the Security Group to which you want to assign the Implementation Role.

4. Click **OK**.

   The Implementation Role is assigned to all Security Users that belong to the selected Security Group.

Assigning an Image to an Implementation Role Record

After you assign an image to an Implementation Role record, that image will appear in the tree on the **Packaging <Package ID>** page when a Security User that is assigned to the Implementation Role adds a work item to the tree.

To assign an image to an Implementation Role record:

1. Access the [Implementation Administration page](#).

2. On the **Implementation Roles** tab, in the **Image** cell of the row containing the Implementation Role record to which you want to assign a new image, click the ⏷ button.

   A drop-down window appears.

3. Right-click anywhere inside the drop-down window, and click **Load**.

   The **Open** dialog box appears.

4. Navigate to the location of the desired image, select the image, and click the **Open** button.

   The selected image appears in the drop-down window.

5. Click **OK**.

   The new image is saved and will now be displayed in the tree to group work items that were created by Security Users with the same Implementation Role.

Creating a New SAP System Record

To create a new SAP System record:

1. On the **Implementation Administration** page, on the **Administration Tasks** menu, click the **New SAP System** link.

   The **<empty> (new SAP System)** window appears, displaying the SAP System data-sheet for a new SAP System record.

2. In the **Name** text box, type a name for the SAP System record.

   We recommend that you use the format *<SYSID>-<CLIENT>*, where <SYSID> is the System ID of the SAP system and <CLIENT> is the Client number. By doing so, the value in the **Name** field will match the value that will be populated automatically in the **System ID** field when you [test the connection to the SAP system](#).

   > **Note:** You do not need to select the **Default SAP System?** check box. When you create SAP work items from Action Revision records, Meridium APM uses the SAP system that is defined in the SAP System record that is linked to the Implementation Package record.

3. In the **User ID** text box, type a valid User ID that you can use to log in to the SAP system.

4. In the **Password** text box, click the ⋯ button.

   The **Enter SAP System Password** dialog box appears.

5. In the **Enter Password** text box, type the password that is associated with the specified user ID.

6. In the **Confirm Password** text box, retype the password that you typed in the **Enter Password** text box.

7. Click **OK**.

   The password is saved. If needed, you can [change the password later](#).

8. In the **Connection String** text box:

   a. Replace the text **SAP_SERVER_IP** with the IP address of the SAP Server.

   b. Replace the text **SAP_System_Number** with the SAP System number.

   c. Replace the text **SAP_CLIENT_NUMBER** with the SAP Client number.

   d. Delete all angle brackets.

9. In the **ITS URL** text box:

   a. Replace the text **its_or_integrated_its_server_url** with the ITS Server information. To locate the ITS Server information:

      i. In SAP, run the following transaction: **SE80**

> **Note:** If you do not have access to this transaction, contact your SAP BASIS team for assistance.

     ii. On the toolbar, click **Utilities**, and then click **Settings**.

    iii. On the upper-right corner of the screen, click ▶ several times until the **Internet Transaction Server** tab appears.

    iv. Click the **Internet Transaction Server** tab.

The ITS Server information that you must type in the **ITS URL** text box in Meridium APM is <Log><Path>, where <Log> is the text in the **Log** section and <Path> is the text in the **Path** section.
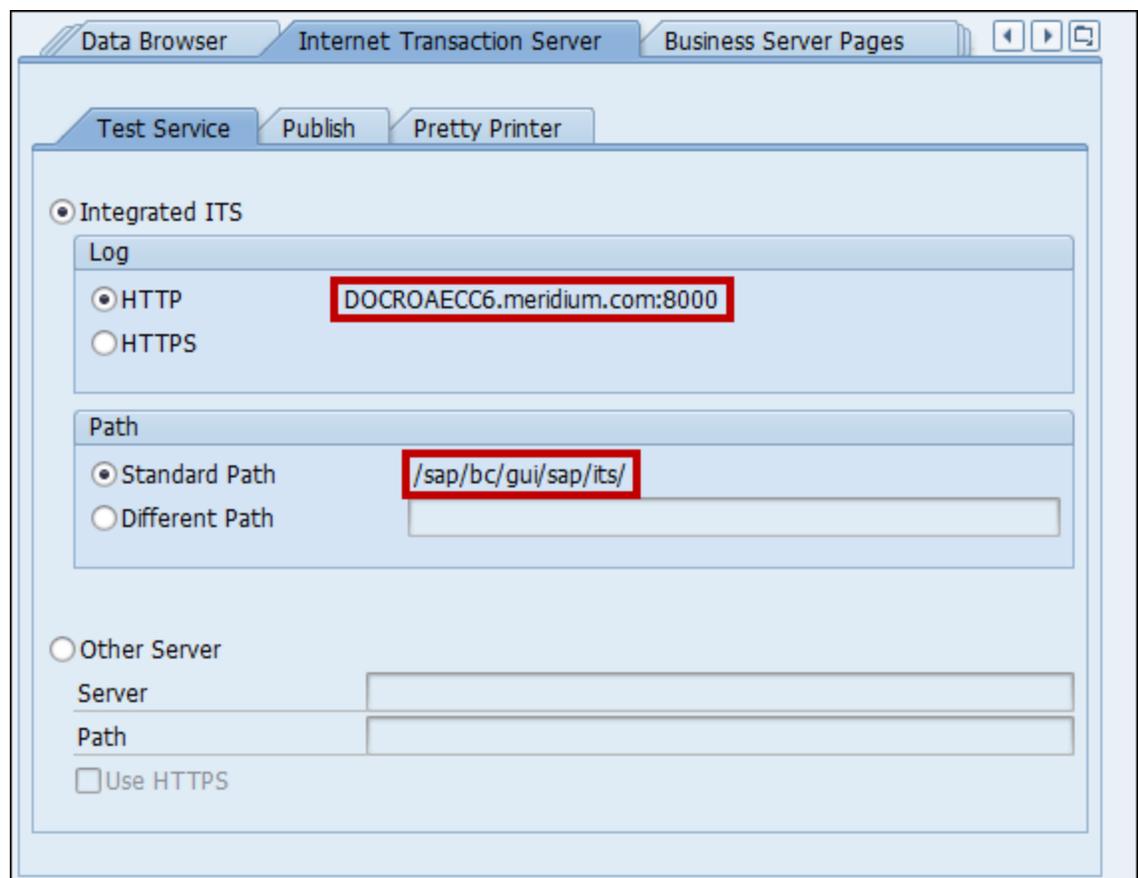
    b. Delete the angle brackets.

    c. At the end of the URL, type: `webgui/!`

For example, the ITS URL that corresponds with the values in the image above is *http:// DOCROAECC6.meridium.com:8000/sap/bc/gui/sap/its/webgui/!*

10. Click **OK**.

The SAP System record is saved. When you create an Implementation Package record, you can specify that you want to use this SAP System record by selecting it using the **SAP Connection** tab.

Changing the Password that You Specified

To change the password that you specified to an SAP system:

1. On the **SAP System Definitions** tab, in the row representing the SAP system whose password you want to specify, click the **Change Password** link.

   The **Enter SAP System Password** dialog box appears.

2. In the **Enter Password** text box, type the password that is associated with the user ID that is defined in the SAP System record.

3. In the **Confirm Password** text box, type the password that you typed in the **Enter Password** text box.

4. Click **OK**.

   The password is saved.

Testing the Connection to an SAP System

After you have created an SAP System record, you can test the connection information that you provided in the Connection String field.

To test the connection to an SAP system:

- On the **SAP System Definitions** tab, in the row representing the SAP system whose connection you want to test, click the **Test Connection** link.

  The connection information that you provided is tested, and a message appears indicating whether or not the test was successful. In addition, in the SAP System record, the System ID field is populated automatically with the name of the SAP system, using the format *<SYSID>-<CLIENT>*, where <SYSID> is the System ID of the SAP system and <CLIENT> is the Client number.

The PRT Workflow

The following table lists the steps that are involved in the PRT workflow.

Step	Action	Notes
1	Create a PRT Template record.	The PRT Template record references a PRT template file automatically, but the content of the PRT template file is empty by default.
2	Build the content of the PRT template file.	You can build the content of a template file by clicking the **Edit Template** link in the row containing the desired PRT Template record on the **Implementation Administration** page.
3	Build an Implementation Package that includes a Task List record.	You can do so on the **Packaging <Package ID>** page using the **Packaging Tasks** menu, the shortcut menu in the tree, or the **Implementation Package Builder**.
4	From the Task List record, build a PRT record.	Values from the Task List record will be passed in to the PRT file wherever there is a merge field referencing a field from the Task List family. Likewise, values from the Maintenance Item record and Maintenance Plan record to which the Task List record is linked (directly or indirectly) will be passed in to the PRT file wherever there is a merge field referencing a field from that family.
5	Select the Operation record to which the PRT record should be linked.	Values from the Operation record will be passed in to the PRT file wherever there is a merge field referencing a field from the Operation family.

Step	Action	Notes
6	Select the PRT template file on which to base the PRT file, which will be referenced automatically from the PRT record.	You can associate a file with a PRT record using the **PRT Builder**, and you can later view the PRT document by navigating through the **PRT Builder** and selecting to regenerate the PRT document. The PRT file will contain values from the records to which the PRT record is linked. For example, if the Action Revision record *Change Oil Filter* is linked to an Operation record, a PRT record that is created from that Operation record will reference a PRT file that contains values from that Action Revision record.
7	Select the Action Revision records whose values should be inserted into the PRT file.	Values from the Action Revision records will be passed in to the PRT file wherever there is a merge field referencing a field from the Action Revision family.
8	Package the Implementation Package.	Based on the State Configuration that is defined for the Implementation Package family, this step is required before you can implement the Implementation Package.
9	Implement the Implementation Package.	The PRT record is transferred to the SAP system as a PRT, and the PRT file is transferred to the SAP system as a Microsoft Word document that is referenced from the PRT.

Creating a PRT Template Record

To create a new PRT Template record:

1. On the **Implementation Administration** page, on the **Administration Tasks** menu, click the **New PRT Template** link.

   The **<empty> (new PRT Template)** window appears, displaying the PRT Template datasheet for a new PRT Template record.

2. In the **ID** text box, type an identifying name for the PRT Template record.

3. Click **OK**.

   The PRT Template record is saved.

Building a PRT Template File

After you create a PRT Template record, you can build a PRT template file that will be referenced from the PRT Template record. You can use the following instructions to build the PRT template file for the first time or modify one after it has already been built.

To create a PRT template file:

1. Access the **Implementation Administration** page.

2. Click the **PRT Templates** tab.

3. In the row containing the PRT Template record that you want to associated with a new PRT template file, click the **Edit Template** link.

   The **Document Template** window appears.

4. Use the **Document Template** window to create the PRT template file.

5. When you are finished creating the PRT template file, click **OK.**

Aspects of the Document Template Window

The **Document Template** window appears when you choose to build a PRT template file. The following image shows the **Document Template** window that appears when you choose to modify the PRT template file that is referenced from the baseline record *Simple PRT Template*.

The **Document Template** window contains the following items:

- **Toolbar:** Contains items that let you format the content of the file and insert merge blocks and merge fields. The **Add Merge Block** and **Add Merge Field** buttons are explained in this documentation. The remaining options function the same way that they function in Microsoft Word and are not explained in this documentation. For details on using these options, see the Microsoft Word documentation.

- **Horizontal ruler:** A ruler that measures the width of the page. The horizontal ruler functions the same way that it functions in Microsoft Word and is not explained in this documentation. For details on using the horizontal ruler, see the Microsoft Word documentation.

- **Vertical ruler:** A ruler that measures the length of the page. The vertical ruler functions the same way that it functions in Microsoft Word and is not explained in this documentation. For details on using the vertical ruler, see the Microsoft Word

documentation.

- **Page:** The [workspace where you can insert text, merge blocks, merge fields, tables, images, and other content](). The page contains standard copy, cut, and paste functions and other functions that are supported within the body of a Microsoft Word document.

- **OK button:** Saves any changes that you have made to the file.

- **Cancel button:** Discards any changes that you have made to the file and returns you to the **Implementation Administration** page.

About the Content of the PRT Template File

A PRT template file contains content that will be used as the basis for creating a PRT file. When you create a new PRT Template record, it will be associated with a PRT template file automatically. The file will not, however, contain any content. The organization and structure of the content is up to you. Because PRT template files are used to build PRT files that are transferred to your SAP system, you will need to build the content according to any company standards and guidelines for these files. For example, you might want to add your company logo, copyright information, and so on.

While the Meridium APM system does not enforce any guidelines regarding the content of the file, at a minimum, a PRT template file should contain at least one merge field and one merge block. Most likely, the PRT template files that you build will contain *many* merge fields and merge blocks. Beyond merge fields and merge blocks, PRT template files can include any other content (text, images, or tables) that you want to include in the Microsoft Word documents that will be generated from them.

What is a Merge Field?

A *merge field* is a reference from a PRT template file to any field within any of the following families:

- Maintenance Plan
- Maintenance Item
- Task List
- Operation
- Action Revision

You will want to insert merge fields into PRT template files to create placeholders for the actual data that will be inserted into the PRT files that are built from them. In the end, a PRT file will contain a specific field value whereas the PRT template file contains only a reference to the field whose value should be inserted.

More specifically, PRT files are referenced from PRT records, which are linked to other records in the ASI data model. When you build a PRT file, the Meridium APM system locates the records to which the PRT record is linked. It then replaces each merge field in the source PRT template file with the actual value that is stored in that field in the associated record.

When you add a merge field to a PRT template file, the following text appears in the file:

<<(<Family Caption>) - <Field Caption>>>

...where:

- **<Family Caption>** is the caption of the family that contains the field.
- **<Field Caption>** is the caption of the selected field.

For example, the PRT template file that is referenced from the baseline PRT Template record contains the merge field *Description* from the Action Revision family. The following line of text appears in the file where this merge field exists:

<<(Action Revision) - Description>>

This merge field is outlined in red in the following image.

Suppose you create a PRT record that is linked (indirectly) to an Action Revision record with the following value in the Description field:

Perform full spectrum vibration monitoring. Establish baseline and action levels. Trend results.

If you build the PRT file from the baseline PRT template file, the PRT file will look like the following image.

Note that where the PRT template file contains the text *<<(Action Revision) - Description>>*, the PRT file contains the actual value that is stored in the Description field in the Action Revision record.

What is a Merge Block?

A *merge block* is a group of merge fields that reference fields in the same family. Each merge field in a PRT template file *must* exist within a merge block.

When a PRT file is built from a PRT template file, values do not replace merge blocks like they replace merge fields. The merge blocks are required in order for the Meridium APM system to generate the PRT file accurately without error. Beyond supporting the Meridium APM code, merge blocks do not serve any functional purpose.

When you add a merge block to a file, the merge block is represented by opening and closing ⌇ symbols. For example, consider the following image, where the red arrows point to the two merge block symbols before and after the Maintenance Item merge fields.
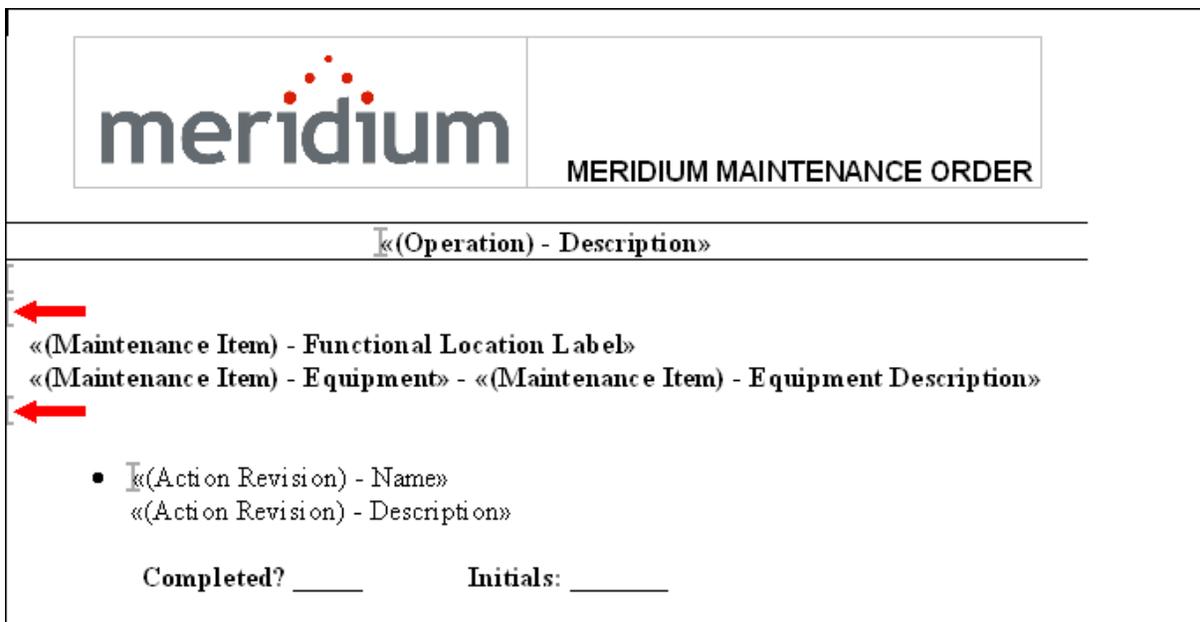
These merge fields exist within a single merge block, and that merge block is defined by the opening and closing merge block symbols.

For guidelines on adding merge blocks, see the Tips for Adding Merge Fields and Merge Blocks in this documentation.

Adding a Merge Field

> **Note:** Before adding merge fields to a PRT template file, see the [Tips for Adding Merge Fields and Merge Blocks](#) in this documentation.

To add a merge field to a PRT template file:

1. Place your cursor in the workspace in the **Document Template** window.

2. On the toolbar, click the **Add Merge Field** button.

   The **Insert Field** dialog box appears.

3. In the **Name** list, select the field to which you want to add a reference. Each value in the list appears using the format **(<Family Caption> - <Field Caption>)**, where **<Family Caption>** is the caption of the family to which the field belongs, and **<Field Caption>** is the caption of the field. For example, the *Category* field in the *Maintenance Plan* family is listed as *(Maintenance Plan) - Category*.

4. Click **OK**.

   The merge field is added to the file.

Adding a Merge Block

> **Note:** Before adding merge blocks to a PRT template file, see the Tips for Adding Merge Fields and Merge Blocks in this documentation.

To add a merge block to a PRT template file:

1. In the **Document Template** window, place the cursor before the first merge field that you want to add to the merge block (including the empty space *before* the merge field), and drag the cursor to select all the merge fields that you want to add to the merge block (including the empty space *after* the merge field).

2. On the toolbar, click the **Add Merge Block** button.

   The **Insert Block** dialog box appears.

3. In the **Name** list, select the family of the selected merge fields. For example, if you selected merge fields from the Operation family, you would select *Operation*.

4. Click **OK**.

   The merge block is added to the file.

Tips for Adding Merge Fields and Merge Blocks

Note the following guidelines about adding content to a PRT template file:

- Each merge field must exist within a merge block.
- Before you add a merge block, you must add all the merge fields that will belong to that merge block.
- Each merge block can contain merge fields from only one family.
- To add a merge block, the file must contain at least one empty space before the first merge field and one empty space after the last merge field, where neither empty space is part of the merge field itself. To determine if an empty space is part of a merge field, you can type any character in the space. If the character is highlighted in grey, the space is still considered part of the merge field.

  To prevent problems, before adding merge fields that will belong to the same merge block, press the Enter key several times in the file to create the rows on which these merge fields will reside. The number of times you should press the Enter key should exceed the number of merge fields that you plan to add by at least two. This will ensure that one empty space exists before the first merge field and one exists after the last merge field.

  For example, if you want to add three merge fields from the Action Revision family:

  1. Before adding the first one, place the cursor on an empty line, and press the Enter key five times.
  2. Place the cursor on the *second* line that you added, and add the first merge field.
  3. Add the second and third merge fields on the second and third lines that you added.
  4. After you have added the third merge field, place the cursor on the next row and type any character. If the character is not highlighted in grey, you can delete the character and include that empty space when you add the merge block.

- Merge fields and merge blocks cannot be removed or modified after they are added.

Specifying the Packaging Query

The packaging query is used on the **Implementation Package List** page that appears when you click the **Package** link on the **Asset Strategy Implementation Start Page**. By default, this page returns the results of the following query: \\Public\Meridi-um\Modules\Asset Strategy Management\Implementation\Queries\Locate_Packages.

If desired, you can specify that you want to see the results of a different query when you click the **Package** link on the start page.

The following instructions assume that:

- The query that you want to specify has been saved to the Meridium APM Catalog.
- You have View permissions to the Catalog in which the desired query is located.

To specify the packaging query:

1. Access the **Implementation Administration** page.

2. In the **Implementation Location Preferences** section, to the right of the **Query to locate package for Packaging** text box, click the **Browse** button.

   The **Save As** dialog box appears.

3. Navigate to the folder containing the query that you want to use as the packaging query, select the query, and click the **Open** button.

   The **Query to locate package for Packaging** text box is populated with the path to the query that you selected.

4. Click the **Save** button.

   The selected query will now be used.

ASI Workflow

Depending on the type of records that you want to create from an Action, the workflow that you follow in ASI will vary. The following workflow describes the basis tasks that you can perform within ASI and provides a general order in which you should perform them. This workflow assumes that all installation, upgrade, and configuration tasks have already been completed.

In general, you will need to perform the following tasks in ASI:

1. Create an Implementation Package record.
2. Add Asset Strategies to the Implementation Package.
3. Add work item records to the Implementation Package.
4. Package the Implementation Package.
5. Implement the Implementation Package.

About Starting an Implementation Package

An *Implementation Package record* stores details about an Implementation Package and connection information to the SAP system in which the Implementation Package will be implemented. The Implementation Package record is the root record of the Implementation Package. All other records that make up the Implementation Package will be linked to the Implementation Package record.

You can create an Implementation Package record via the following pages:

- **Asset Strategy Implementation Start Page**
- **Implementation Package List**

Using either of these methods, you will define the Implementation Package record on the **Implementation Package Creation** page.

Accessing the Implementation Package Creation Page

To access the Implementation Package Creation page:

- On the **Asset Strategy Implementation Start Page**, click the **Create Package** link.

  -or-

- On the **Implementation Package List** page, on the **Common Tasks** menu, click the **Create Package** link.

  The **Implementation Package Creation** page appears, displaying a new blank Implementation Package record in the **Implementation Package Details** section.
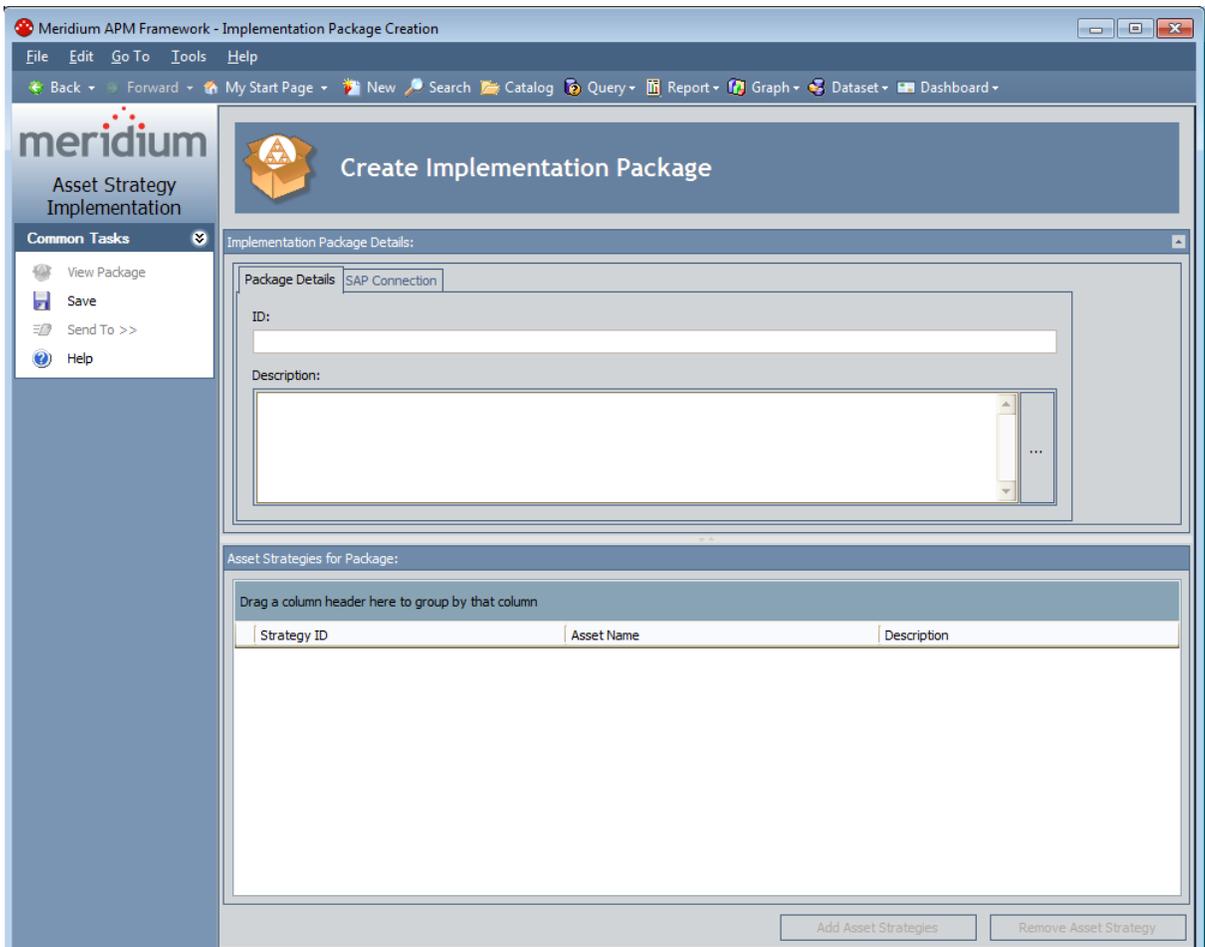
Aspects of the Implementation Package Creation Page

The **Implementation Package Creation** page appears after you:

- Click the **Create Package** link on the **Asset Strategy Implementation Start Page**.
- Click the **Create Package** link on the **Common Tasks** menu on the **Implementation Package List** page.
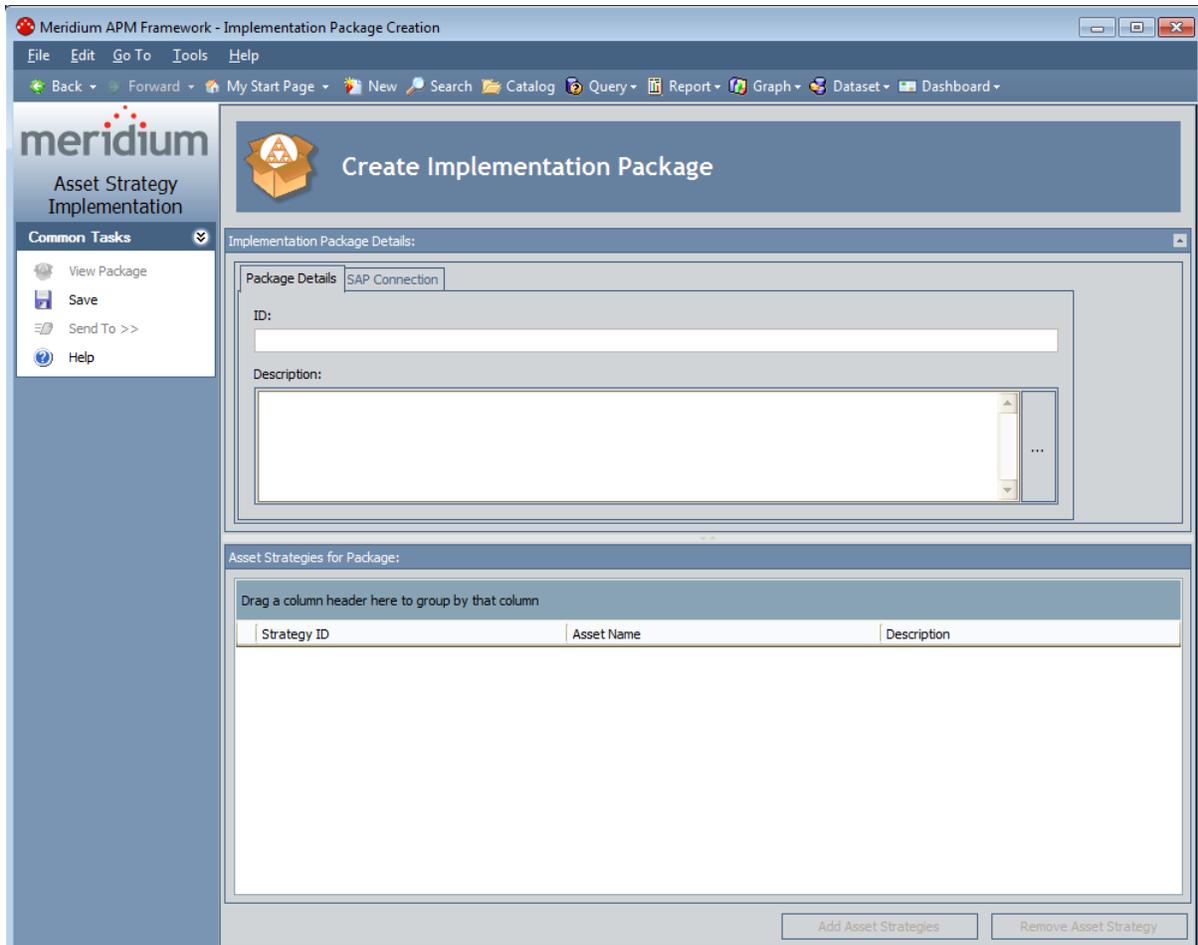
The **Implementation Package Creation** page contains the following items:

- **Implementation Package Details section:** Displays the datasheet for the Implementation Package record. In the baseline database, the datasheet contains two tabs: **Package Details** and **SAP Connection**.
- **Asset Strategies for Package section:** Contains a grid that displays the Asset Strategy records that are linked to the Implementation Package record. Each row in the grid represents one Asset Strategy record. The buttons in this section are disabled until you save the Implementation Package record, in which case the page is

relabeled *Implementation Package Update*.

- **Task menus pane:** Contains the **Common Tasks** menu.

After you save the Implementation Package record, the page will be refreshed and renamed the **Implementation Package Update** page.

Common Tasks Menu
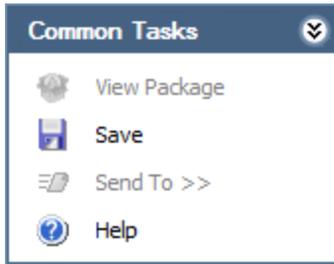
The **Common Tasks** menu on the **Implementation Package Creation** page contains the following links:

- **View Package:** This link is always disabled on this page.
- **Save:** Saves the Implementation Package record.
- **Send To:** This link is always disabled on this page.
- **Help:** Displays the context-sensitive Help topic for the **Implementation Package Creation** page.

Creating Implementation Package Records from the Asset Strategy Implementation Start Page

To create an Implementation Package record from the Asset Strategy Implementation Start Page:

1. Access the [Implementation Package Creation page](#).

2. In the **ID** text box, type an ID for the Implementation Package record.

3. In the **Description** text box, type a description for the Implementation Package.

4. If you want to create SAP work items [when the Implementation Package is implemented](#), click the **SAP Connection** tab.

   > **Note:** If you do not want to create SAP work items when the Implementation Package is implemented, continue to step 8.

   The **SAP Connection** tab appears.
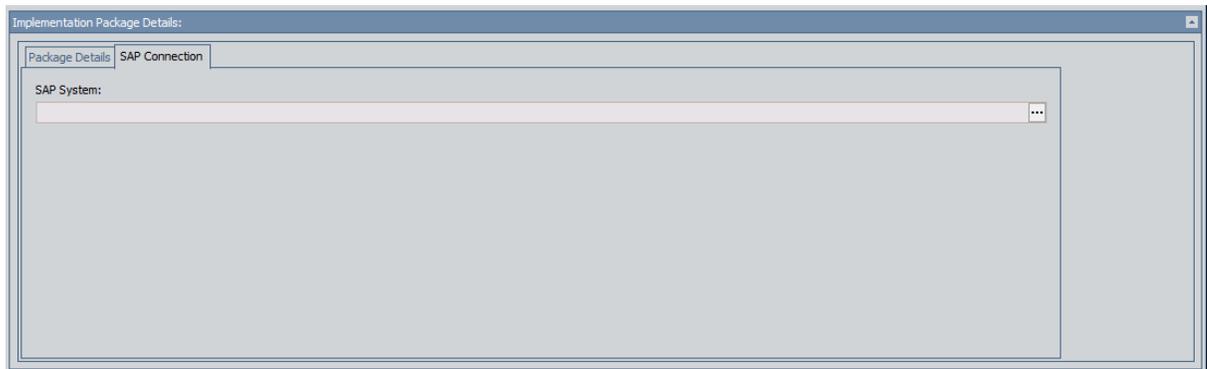
5. In the **SAP System** text box, click the ⋯ button.

   The **Find Items** window appears. The **Search In** list contains the value **SAP System**. You cannot select another value.

6. Perform a search for the SAP System record representing the SAP system in which you want to create SAP work items when the Implementation Package is implemented.

   The results appear in the search results section of the window.

7. Select the row containing the SAP System record to which you want to link the Implementation Package record, and click the **Open** button.

   The **Implementation Package Creation** page returns to focus, and the **SAP System** text box is populated with the Record ID of the selected record.

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

The Implementation Package record is saved and linked to the selected SAP System record. In addition, the page is refreshed and renamed the **Implementation Package Update** page. At this point, you can add Asset Strategies to the Implementation Package.

Accessing the Implementation Package List Page

The **Implementation Package List** page provides tools that you can use to search for an existing Implementation Package record and then open that record from the search results.

To access the Implementation Package List page:

1. Access the **Asset Strategy Implementation Start Page**.

2. Click the **Search for Package** link.

   The **Implementation Package List** page appears.

Aspects of the Implementation Package List Page

The **Implementation Package List** page contains the results of the query that is specified in the **Query to locate Implementation Package** text box on the **Implementation Administration** page. This documentation assumes that you are using the baseline Locate_ Packages query, which contains the following prompts that appear as lists at the top of the **Implementation Package List** page:

- **State:** Contains a list of record states that have been configured for the Implementation Package family. You can choose from the following baseline states:
  - **All:** Displays all the existing Implementation Package records that are in any state.
  - **Draft:** Displays the Implementation Package records that are in the *Draft* state.
  - **Implemented:** Displays the Implementation Package records that are in the *Implemented* state.
  - **Modified:** Displays the Implementation Package records that are in the *Modified* state.
  - **Packaged:** Displays the Implementation Package records that are in the *Packaged* state.
  - **Partially Implemented:** Displays the Implementation Package records that are in the *Partially Implemented* state.
- **Implementation Role:** Contains the value *All* and the list of Implementation Roles representing the Implementation Role records that exist in the database.

This query is run automatically using the default prompt value in both prompts: *All*. If you select different criteria, you can click the **Run Query** button to run the query and display the results in the grid at the bottom of the page. The query results will include hyperlinked Record IDs, which you can use to open the Implementation Package records on the **Packaging <Package ID>** page, where **<Package ID>** is the ID of the selected Implementation Package record.

Below the query results are options that you can use to navigate the results.

The **Implementation Package List** page contains one task menu, [Common Tasks](#).

> **Note:** If you access the **Implementation Package List** page from an **ASM - System Strategy Overview** page or an **ASM - Unit Strategy Overview** page, the query that is run will differ from the one described here and return results based on the System Strategy or Unit Strategy you are viewing.

Common Tasks Menu
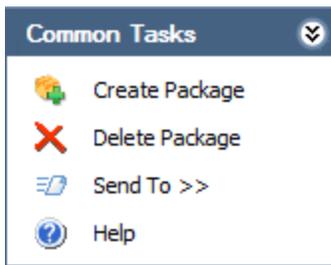
The **Common Tasks** menu on the **Implementation Package List** page contains the following links:

- **Create Package:** Displays a new blank Implementation Package record on the**Implementation Package Creation** page.
- **Delete Package:** Displays a confirmation message, and then deletes the selected records. Under some circumstances, the Implementation Package record cannot be deleted.
- **Sent 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.**
- **Help:** Displays the context-sensitive help topic for the **Implementation Package List** page.

Opening an Existing Implementation Package

To open an existing Implementation Package:

1. Access the **Implementation Package List** page.

2. Locate the row containing the Implementation Package that you want to open.

   > Œ**Hint:** You can use the **State** and **Implementation Role** lists above the grid to filter the Implementation Packages that are returned in the results.

3. In the grid, click the hyperlinked ID of the Implementation Package.

   The Implementation Package appears on the **Packaging <Package ID>** page, where **<Package ID>** is the ID of the selected Implementation Package.
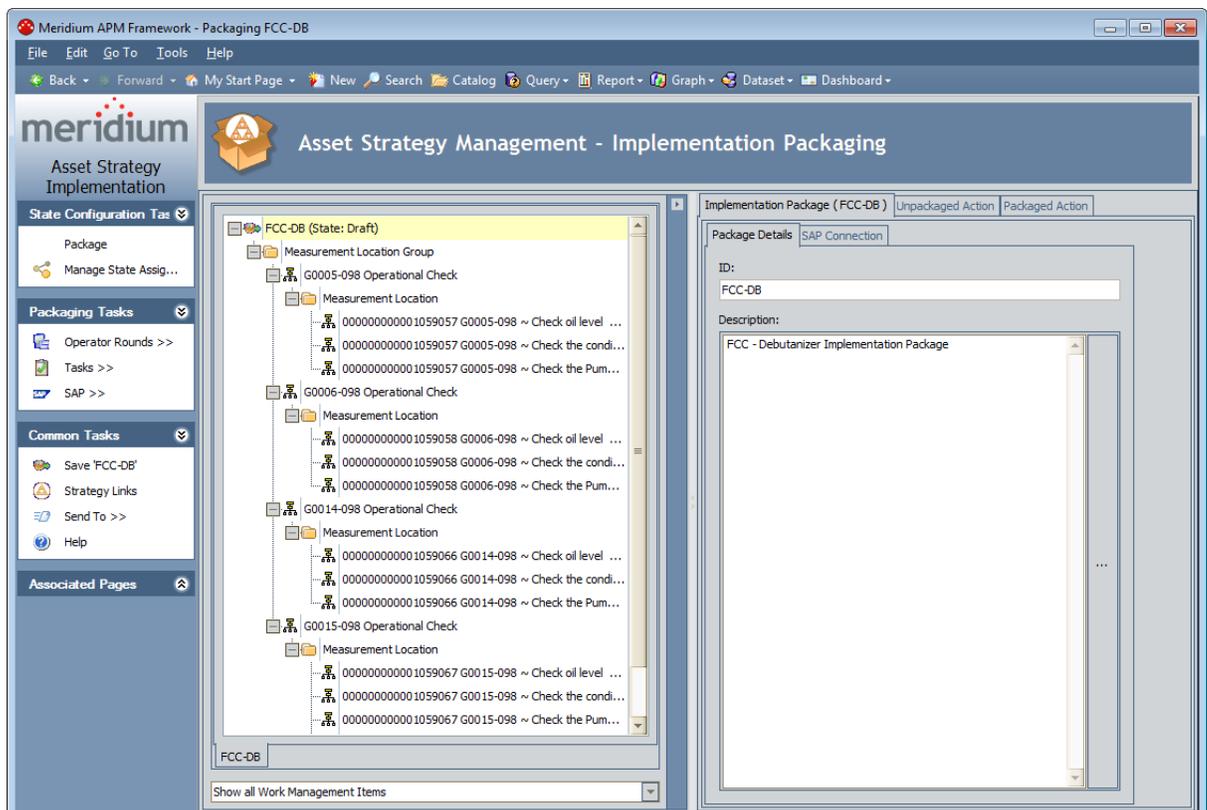
Aspects of the Packaging Page

The **Packaging <Package ID>** page, where **<Package ID>** is the ID of the Implementation Package record, is divided into the following areas:

- **Task Menus pane:** Displays the following task menus:
    - State Configuration Tasks
    - Packaging Tasks
    - Maintenance Plan Tasks

        > **Note:** This menu appears only when a Maintenance Plan node is selected in the tree.

    - Task List Tasks

        > **Note:** This menu appears only when a Task List node is selected in the tree.

    - Maintenance Item Tasks

        > **Note:** This menu appears only when a Maintenance Item node is selected in the tree.

    - Operation Tasks

        > **Note:** This menu appears only when an Operation node is selected in the tree.

    - Notification Tasks

        > **Note:** This menu appears only when a Notification node is selected in the tree.

    - Asset Strategy Tasks
    - Action Tasks
    - Common Tasks
    - Associated Pages
- The left pane, which contains a tree containing nodes representing records.
- The datasheet for the record that is currently selected in the tree.
- The Unpackaged Actions tab.
- The Packaged Actions tab.
- The Externally Packaged Actions tab.

> **Note:** Throughout the rest of this documentation, we refer to this page as the *Packaging* page.

State Configuration Tasks Menu

The **State Configuration Tasks** menu on the **Packaging** page displays links that allow you to change the state of the Implementation Package record. The links that are available depend upon the State Configuration that is defined for the Implementation Package family and the current state of the selected Implementation Package records.

In addition, if the Security User who is currently logged in is not assigned to the current state of the Implementation Package record, links on the **State Configuration Tasks** menu will be disabled if the corresponding action would cause the state of the Implementation Package record to change.

Packaging Tasks Menu
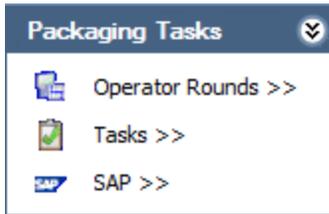
The **Packaging Tasks** menu on the **Packaging** page contains the following links:

- **Operator Rounds:** Displays a submenu from which you can choose to create a Measurement Location Group record or a Measurement Location record. After you create the record, it will be represented by a new node in the tree.

- **Tasks:** Displays a submenu from which you can choose to create a Calibration Task record, Inspection Task record, or Thickness Monitoring Task record. After you create the record, it will be represented by a new node in the tree.

- **SAP:** Displays a submenu from which you can choose to create any of the following records:

  After you create the record, it will be represented by a new node in the tree.

    - Maintenance Plan
    - Maintenance Item
    - Object List Item
    - Task List
    - Operation
    - Material
    - PRT
    - Maintenance Package

Maintenance Plan Tasks Menu

The **Maintenance Plan Tasks** menu appears on the **Packaging** page only when a Maintenance Plan node is selected in the tree.

This menu contains one link, **Append Standard Text**, which displays the **Select Standard Text** window, where you can search in SAP for the standard text value that you want to append to the value in the Long Text field in the Maintenance Plan record.

Task List Tasks Menu
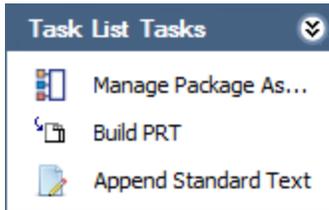
The **Tasks List Tasks** menu appears on the **Packaging** page only when a Task List node is selected in the tree. The **Task List Tasks** menu contains the following links:

- **Manage Package Assignments:** Displays the [Assign Maintenance Packages for Task List window](#), where you can view and manage the Maintenance Package records that are linked to the Operation records that are linked to the selected Task List record. This link is enabled only if the following conditions are met:
    - In the tree, you have selected a Task List node representing a Task List record whose Maintenance Strategy field contains a value.

      -AND-
    - An SAP system is associated with the Implementation Package.
- **Build PRT:** Displays the [PRT Builder](#), which you can use to [create PRT records](#). This link is enabled only if the Implementation Package is in a state other than *Implemented*.
- **Append Standard Text:** Displays the **Select Standard Text** window, where you can search in SAP for the standard text value that you want to append to the value in the Long Text field in the Task List record.

Maintenance Item Tasks Menu
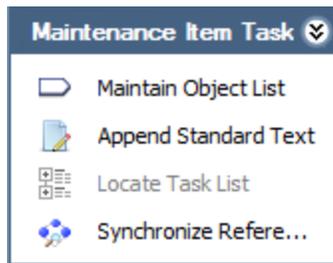
The **Maintenance Item Task** menu appears on the **Packaging** page only when a Maintenance Item node is selected in the tree. This menu contains the following links:

- **Maintain Object List:** You can <u>use this link to manage the Object List records</u> that are linked to the Maintenance Item record represented by the selected node.

- **Append Standard Text:** Displays the **Select Standard Text** window, where you can search in SAP for the standard text value that you want to append to the value in the Long Text field in the Maintenance Item record.

- **Locate Task List:** Displays the **Locate Task List** window, where you can search for the SAP Task List that you want to use to <u>create a new Task List record</u>.

  Note: The Locate Task List link is enabled only if the Maintenance Item record represented by the selected node is not already linked to a Task List record. Also, the Implementation Package record must be in a state that allows it to be modified (e.g., Draft).

- **Synchronize Reference Object:** <u>Copies the value</u> in the Equipment or Functional Location field in the Maintenance Item record to the Equipment or Functional Location field in the Task List record to which it is linked.

  Note: This link is enabled only if the Maintenance Item record is linked to a Task List record that does not represent a Reference Task List.

Operation Tasks Menu

The **Operation Tasks** menu appears on the **Packaging** page only when an Operation node is selected in the tree.

This menu contains one link, **Append Standard Text**, which displays the **Select Standard Text** window, where you can search in SAP for the standard text value that you want to append to the value in the Long Text field in the Operation record.

Notification Tasks Menu
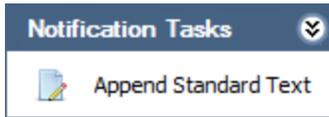
The **Notification Tasks** menu appears on the **Packaging** page only when a Notification node is selected in the tree.

This menu contains one link, **Append Standard Text**, which displays the **Select Standard Text** window, where you can search in SAP for the standard text value that you want to append to the value in the Description field in the Notification record.

Asset Strategy Tasks Menu

The **Asset Strategy Tasks** menu on the **Packaging** page contains the following link:

- **Navigate:** Displays the **Select Package for Navigation** window, which displays the results of the Catalog query Locate Packages for Navigation. By default, the query is configured to display all Implementation Packages (except for the current Implementation Package) that contain one or more of the Asset Strategies that belong to the current Implementation Package. You can use the query results to select the Implementation Package to which you want to navigate.

  This link is enabled only if the current Implementation Package contains at least one Asset Strategy that belongs to at least one other Implementation Package.

Action Tasks Menu
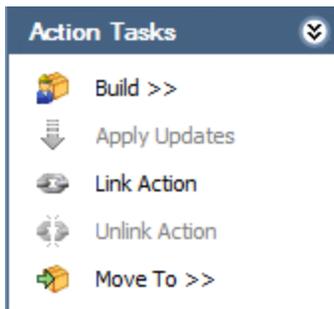
The **Action Tasks** menu on the **Packaging** page contains the following links:

- **Build:** Displays a submenu with options that let you create work item records from the selected Actions. This link is enabled only if you have selected an Action on the **Unpackaged Actions** tab.

- **Apply Updates:** Updates the work item record represented by the selected node with the updated values in the associated Action. This button is enabled only if you have selected a node that is associated with an Action to which a change has been made (causing a new Action Revision record to be created).

- **Link Action:** Associates the selected Action with the work item represented by the selected node. This link is enabled only if you have selected an Action on the **Unpackaged Actions** tab and a work item node in the tree.

- **Unlink Action:** Removes the association between the selected Action and the work item represented by the selected node. This link is enabled only if you have selected an Action on the **Packaged Actions** tab and the associated work item node in the tree.

- **Move To:** Displays a submenu with the following options:
    - **Primary Package:** Transfers the selected Action back to its original primary Implementation Package. This option is enabled only if you are viewing a secondary Implementation Package.
    - **New Secondary Package:** Displays the **New Secondary Package (Implementation Package)** window, where you can define the ID and description of the new Implementation Package to which you want to transfer the selected Action.
    - **Existing Secondary Package:** Displays the Existing Secondary Package window, where you can select the existing Implementation Package to which you want to transfer the selected Action.

    The **Move To** link is enabled only if you have selected an Action on the **Unpackaged Actions** tab.

> **Note:** All functionality that is available from the **Action Tasks** menu is also available from the shortcut menu in the grids on the **Unpackaged Actions** and **Packaged**

Actions tabs, as appropriate. For example, to associate an Action with an existing work item record, you can select the Action on the Unpackaged Actions tab and click the Link Action link on the Actions Tasks menu, *or* you can select the Action in the grid, right-click the grid, and then click Link Action on the shortcut menu. The instructions in this documentation explain how to use the Actions Tasks menu. If you prefer to use the shortcut menu, however, the labels on the shortcut menu are the same as those on the Action Tasks menu.

Common Tasks Menu
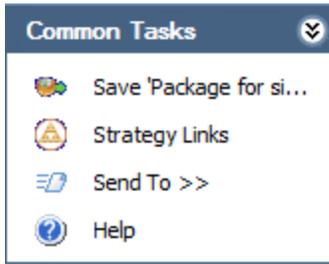
The **Common Tasks** menu on the **Packaging** page contains the following links:

- **Save <Package ID>:** Saves any changes that you have made to the currently displayed datasheet. This link is enabled only if the Implementation Package record is in the Draft or Modified state.

- **Strategy Links:** Displays the **Implementation Package Update** page, where you can [add Asset Strategies to the Implementation Package](#) or [remove Asset Strategies from the Implementation Package](#).

- **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.

- **Help:** Displays the context-sensitive Help topic for the **Packaging** page.

About the Tree

The tree on the **Packaging** page displays various nodes, where each node in the tree represents a Meridium APM record. The root node of the tree always represents the Implementation Package record. Each node that represents an SAP item (e.g., Maintenance Item) has an icon that indicates the status of the corresponding SAP item.

You can select a node in the tree to see the datasheet for that record to the right of the tree. In addition, as you select nodes in the tree, the rows in the grid on the **Packaged Actions** tab change. The grid on the **Packaged Actions** tab displays only those Actions that were used to create a work item record.

If an Action was used to create a work item record, to remove the association (i.e., unlink the Action Revision record from the work item record), you can select the node that represents that record and click the **Unlink Action** link on the **Action Tasks** menu. For example, if an Action was used to create an Inspection Task record, you can select the Inspection Task node in the tree, then select the row containing the associated Action on the **Packaged Action** tab, and then click the **Unlink Action** link.

To re-associate an Action with a record that represents a work item, you can select the node that represents that record and then click the **Link Action** link on the **Action Tasks** menu.

When you select any node other than the Implementation Package node, a new tab appears at the bottom of the tree, displaying the ID of the selected node as it appears in the tree. When you click this tab, that node appears at the root level in its own tree with nodes that represent the records that are linked to the record represented by the root-level node. Within this documentation, we refer to this feature as the *zoomed tree view*.

You can also use the shortcut menu in the tree to work with the records in the tree.

Below the tree, you will see a list that allows you to filter the nodes in the tree according to the Implementation Role with which they are associated. The list contains the following options:

- **Show all Work Management Items:** Displays all nodes in the tree.
- **Filter Package by Implementation Roles:** Displays only the nodes that are associated with the Implementation Role that is assigned to the Security User who is currently logged in.

> **Note:** If a Super User is logged in, ALL nodes will be displayed even if the Super User selects **Filter Package by Implementation Roles**.

Zoomed Tree Tab

When you are viewing the tree on the **Packaging** page, you can select any node in the tree to work with that record and its linked records within its own tree. When you select any node other than the Implementation Package record (i.e., the root node when you open the **Packaging** page), a new tab will appear at the bottom of the tree, displaying the ID of the currently selected node, as shown in the following image. A red outline has been added to the following image to highlight this tab.
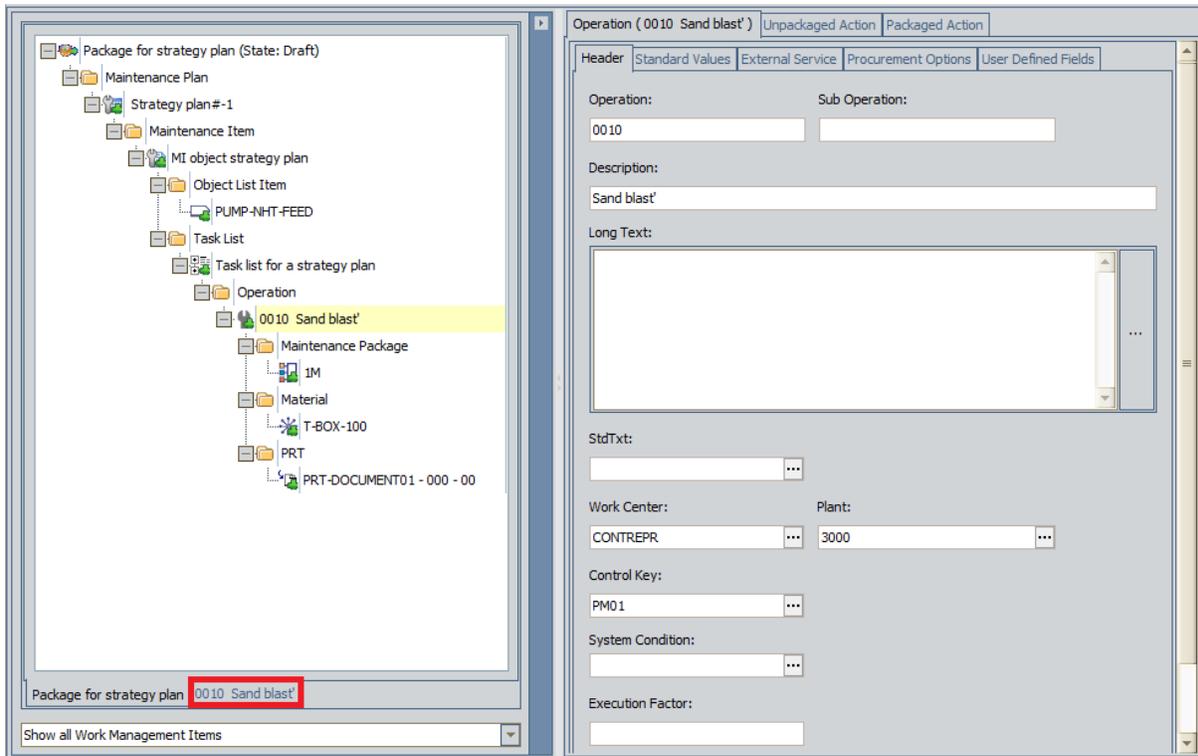
When you select this tab, the Meridium APM system will *zoom* to that location in the tree, displaying the selected node at the root level in its own tree. Only the selected node and its associated nodes will appear in the tree in the zoomed tree view, as shown in the following image.
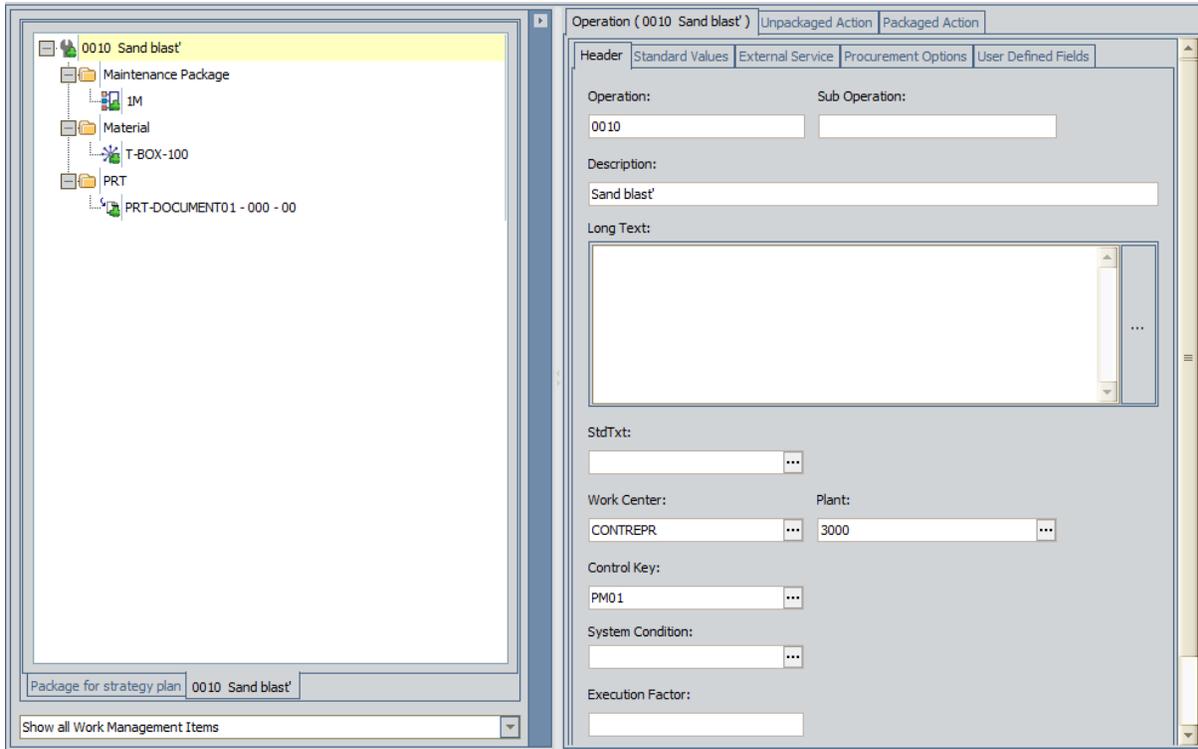
This view offers the same functions as the tree that appears by default when you open the **Packaging** page, where the Implementation Package node is displayed at the root level.

Images Displayed for SAP Items

On the **Packaging** page, the tree contains nodes representing items that you want to implement. All nodes representing *SAP* items contain an image representing the status of the Meridium APM record relative to its SAP counterpart.

If the Meridium APM record has never been sent to SAP (i.e., an SAP counterpart does not exist for that record), the tree will display an image with a green plus sign in the lower right corner. For example, if a Maintenance Item record has never been used to create an SAP Maintenance Item, the tree will display the image.

If, however, a Meridium APM record has been modified or deleted since it was last sent to SAP, the image will contain either a blue gear or a red X, where:

- A blue gear indicates that the record has been modified. For example, if a Maintenance Item record has been modified since it was sent to SAP to create a new Maintenance Item, you would see the image.

- A red X indicates that the record has been flagged for deletion. For example, if the Maintenance Item record has been flagged for deletion since it was last sent to SAP (but the Maintenance Item has not yet been deleted in SAP), you would see the image.

Finally, if the Meridium APM record has remained unchanged since it was last sent to SAP, the tree will display the standard image without any overlaying icons. For example, if a Maintenance Item record has not changed since it was last sent to SAP, you would see the image.

The following table lists the baseline images that are associated with the statuses of Meridium APM records relative to their SAP counterparts.

Meridium APM Record	New	Modified	Deleted	Unchanged
Maintenance Plan				
Maintenance Item				
Notification				
Object List Item				
Operation				
Material				
PRT				
Maintenance Package				

Unpackaged Actions Tab

The **Unpackaged Actions** tab displays a list of Actions that:

- Belong to the underlying Asset Strategies and that are not yet associated with a work item record. After you select one of these Actions on the **Unpackaged Actions** tab, you can:

  - [Create a new work item record from it](#).

    -or-

  - [Associate it with an existing work item record](#).

- Are already associated a work item record, but the Action has been modified in ASM, creating an Action Revision record. After you select one of these Actions on the **Unpackaged Actions** tab, you can [update the work item record with which it is associated](#) to reflect the latest changes in ASM. You will know that an Action has been modified since being associated with a work item if the Revision Operation column contains the 🔧 icon.

> **Note:** An Action Revision record is created only when you *activate* the Asset Strategy containing the modified Action. Modifying an Action without activating the Asset Strategy does *not* result in an Action Revision record, meaning that the updates will not be reflected on the **Unpackaged Actions** tab.

The following image shows an example of the **Unpackaged Actions** tab.

Revision Operation	Name	Interval	Interval Units	Mandatory	Nonrecurring	Implementation Role	Work Management Item ID
Asset Strategy: ASI AIR COOLER							
📄	23-0010-HX100-ACN08	1	Days	☐	☐		
📄	23-0010-HX100-ACN12	1	Days	☐	☐		
📄	23-0010-HX100-ACN07	1	Days	☐	☐		
📄	23-0010-HX100-ACN06	60	Days	☐	☐		
📄	23-0010-HX100-ACN11	1	Days	☐	☐		
📄	23-0010-HX100-ACN05	54	Days	☐	☐		
📄	23-0010-HX100-ACN01	1	Days	☐	☐		
📄	23-0010-HX100-ACN04	18	Days	☐	☐		
📄	23-0010-HX100-ACN03	1	Days	☐	☐		
📄	23-0010-HX100-ACN10	18	Months	☐	☐		
📄	23-0010-HX100-ACN02	2	Days	☐	☐		
Asset Strategy: ASI Power Supply							
📄	23-0010-PS-1000-ACN01	1	Months	☐	☐		
📄	23-0010-PS-1000-ACN03	1	Years	☐	☐		
📄	23-0010-PS-1000-ACN05	54	Months	☐	☐		
📄	23-0010-PS-1000-ACN02	2	Months	☐	☐		
📄	23-0010-PS-1000-ACN04	18	Months	☐	☐		
📄	23-0010-PS-1000-ACN06	60	Months	☐	☐		

The **Unpackaged Actions** tab contains a grid, grouped by Asset Strategy, where each row in the grid represents an Action that belongs to an underlying Asset Strategy. Specifically, the grid displays Action *Revision* records, and the following columns are displayed:

- **Revision Operation:** An icon indicating the status of the Action Revision record. These icons are identical to the icons that are displayed in ASM for Actions and Risks.

- **Name:** The value (formatted as a hyperlink) in the Name field in the Action Revision record. You can click any hyperlink in this column to display the datasheet for the Action Revision record.

- **Interval:** The value in the Interval field in the Action Revision record.

- **Interval Units:** The value in the Interval Units field in the Action Revision record.

- **Mandatory:** A check box reflecting the value in the Mandatory field in the Action Revision record. If the value in the field is set to *True*, the check box is selected. If the value in the field is set to *False*, the check box is cleared.

- **Nonrecurring:** A check box reflecting the value in the Nonrecurring field in the Action Revision record. If the value in the field is set to *True*, the check box is selected. If the value in the field is set to *False*, the check box is cleared.

- **Implementation Role:** The value in the Implementation Role field in the Action Revision record.

- **Work Management Item ID:** The Record ID (formatted as a hyperlink) of the work item record that is associated with the Action Revision record. This column contains a value only if a new Action Revision record has been created since the associated work item record was last updated. You can click any hyperlink in this column to navigate in the tree directly to the node that is associated with the Action Revision record.

Packaged Actions Tab

The **Packaged Actions** tab on the **Packaging** page displays a list of Actions that belong to the underlying Asset Strategies and that are already associated with a work item record. If you select a node in the tree and its *successor* nodes are associated with an Action, that Action will appear on the **Packaged Actions** tab when you select either the predecessor or the successor node in the tree.

For example, suppose an Action is used to create an Operation record. If the Operation record is linked to a Task List record, the Action will appear on the **Packaged Actions** tab when you select either the Task List node or the Operation node in the tree.

The following image shows an example of the **Packaged Actions** tab.

The **Packaged Actions** tab contains a grid, grouped by Asset Strategy, where each row in the grid represents an Action that is associated with a work item record. Specifically, the grid displays Action *Revision* records, and the following columns are displayed:

- **Revision Operation:** An icon indicating the status of the Action Revision record. These icons are identical to the icons that are displayed in ASM for Actions and Risks.
- **Name:** The value (formatted as a hyperlink) in the Name field in the Action Revision record. You can click any hyperlink in this column to display the datasheet for the Action Revision record.
- **Interval:** The value in the Interval field in the Action Revision record.
- **Interval Units:** The value in the Interval Units field in the Action Revision record.
- **Mandatory:** A check box reflecting the value in the Mandatory field in the Action Revision record. If the value in the field is set to *True*, the check box is selected. If the value in the field is set to *False*, the check box is cleared.
- **Nonrecurring:** A check box reflecting the value in the Nonrecurring field in the Action Revision record. If the value in the field is set to *True*, the check box is selected. If the value in the field is set to *False*, the check box is cleared.
- **Implementation Role:** The value in the Implementation Role field in the Action Revision record.
- **Work Management Item ID:** The Record ID (formatted as a hyperlink) of the work item record that is associated with the Action Revision record. This column contains a value only if a new Action Revision record has been created since the associated work item record was last updated. You can click any hyperlink in this column to navigate in the tree directly to the node that is associated with the Action Revision record.

Externally Packaged Actions Tab

The **Externally Packaged Actions** tab on the **Packaging** page displays a list of Actions that have been transferred from the current *primary* Implementation Package to another Implementation Package. The following image shows an example of the **Externally Packaged Actions** tab.

The **Externally Packaged Actions** tab contains a grid, grouped by Asset Strategy, where each row in the grid represents an Action that has been transferred from the current primary Implementation Package to another Implementation Package. Specifically, the grid displays Action *Revision* records, and the following columns are displayed:

- **Revision Operation:** An icon indicating the status of the Action Revision record. These icons are identical to the icons that are displayed in ASM for Actions and Risks.

- **Name:** The value (formatted as a hyperlink) in the Name field in the Action Revision record. You can click any hyperlink in this column to display the datasheet for the Action Revision record.

- **Interval:** The value in the Interval field in the Action Revision record.

- **Interval Units:** The value in the Interval Units field in the Action Revision record.

- **Mandatory:** A check box reflecting the value in the Mandatory field in the Action Revision record. If the value in the field is set to *True*, the check box is selected. If the value in the field is set to *False*, the check box is cleared.

- **Nonrecurring:** A check box reflecting the value in the Nonrecurring field in the Action Revision record. If the value in the field is set to *True*, the check box is selected. If the value in the field is set to *False*, the check box is cleared.

- **Implementation Package:** The value (formatted as a hyperlink) in the Name field in the Implementation Package to which the Action was transferred. You can click any hyperlink in this column to navigate to that Implementation Package.

About Adding Asset Strategies to Implementation Packages

After you create an Implementation Package record, you can add one or more Asset Strategies to the Implementation Package for the purpose of creating work item records from the Actions that belong to those Asset Strategies. If an Implementation Package is associated with a specific site, you can add Asset Strategies to it only if their underlying equipment or locations are associated with that site or are not associated with *any* site.

You can add an Asset Strategy to an Implementation Package via the Implementation Package Update page.

Accessing the Implementation Package Update Page

You can use the **Implementation Package Update** page to add Asset Strategies to an Implementation Package. You can access the **Implementation Package Update** page via the following methods:

- [Saving a new Implementation Package record](#).
- Clicking the **Strategy Links** link on the **Common Tasks** menu on the **Packaging** page.

The following instructions provide details on accessing the **Implementation Package Update** page using the **Strategy Links** link on the **Common Tasks** menu on the **Packaging** page.

To access the Implementation Package Update page via the Strategy Links link on the Common Tasks menu on the Packaging page:

1. [Open the Implementation Package](#) to which you want to add additional Asset Strategies.

    The **Packaging** page appears.

2. On the **Common Tasks** menu, click the **Strategy Links** link.

    The **Implementation Package Update** page appears.
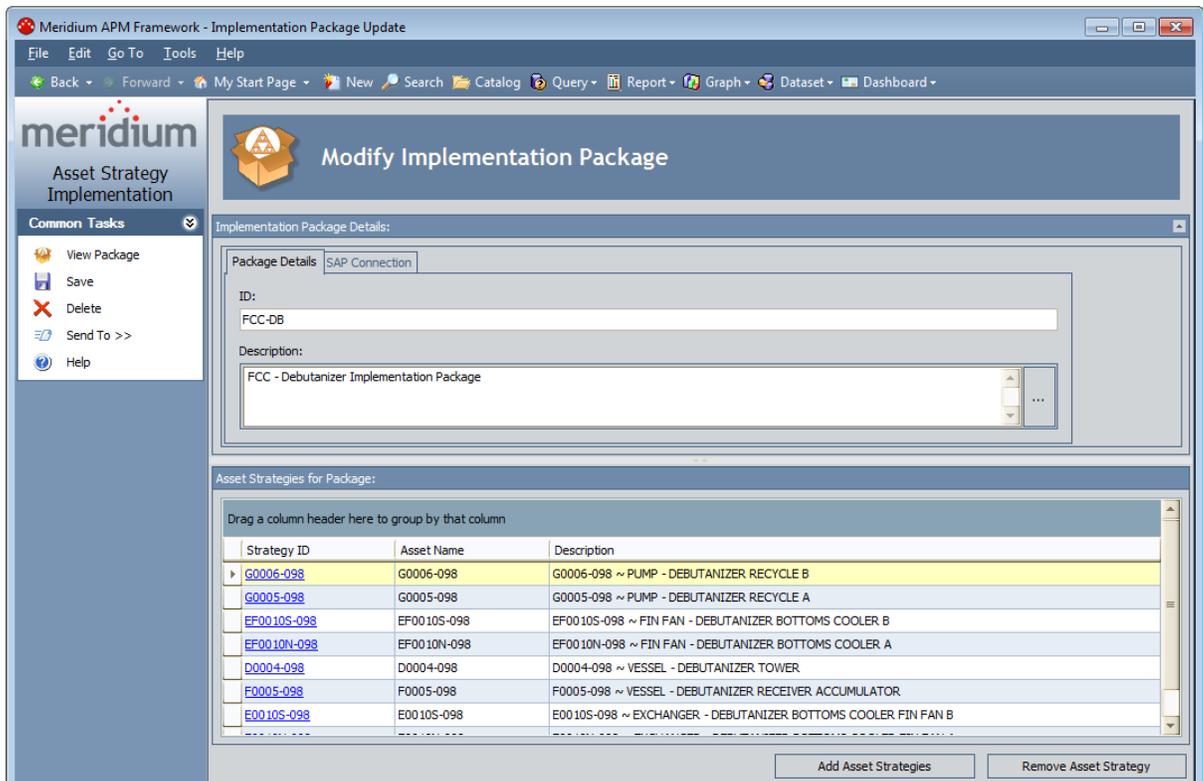
Aspects of the Implementation Package Update Page

The **Implementation Package Update** page provides options that you can use to add Asset Strategies to the Implementation Package. The **Implementation Package Update** page contains the following sections:

- **Implementation Package Details:** Contains the datasheet for the Implementation Package record representing the current Implementation Package.

- **Asset Strategies for Package:** Contains a grid that displays the Asset Strategy records that are linked to the Implementation Package record. Each row in the grid represents one Asset Strategy record. For each Asset Strategy record that appears in the grid, the following information is displayed:

  - **Strategy ID:** The value stored in the Asset ID field in the Asset Strategy record. This value appears as a hyperlink, which you can click to view the Asset Strategy in ASM.

  - **Asset Name:** The value stored in the Asset Name field in the Asset Strategy record.

  - **Description:** The value stored in the Description field in the Asset Strategy record.

  Below the grid, the following buttons appear:

  - **Add Asset Strategies:** Displays the **Select Asset Strategies to Add to Package** window, from which you can select the Asset Strategies that you want to add to the Implementation Package. The **Select Asset Strategies to Add to Package** window displays results of the *Locate Strategies to Package* query by default. This query is stored in the Meridium APM Catalog folder \\Public\Meridium\Modules\Asset Strategy Management\Implementation\Queries.

  - **Remove Asset Strategy:** Deletes the link between the selected Asset Strategy record and the Implementation Package record. This button is enabled only when Asset Strategies appear in the **Asset Strategies for Package** grid.

The **Implementation Package Update** page contains one task menu, [Common Tasks](#).

Common Tasks Menu
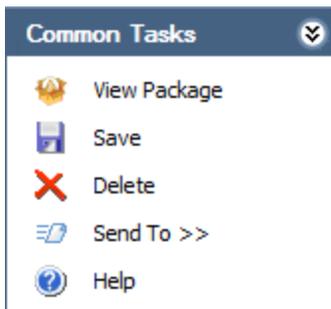
The **Common Tasks** menu on the **Implementation Package Update** page contains the following links:

- **View Package:** Displays the **Packaging** page for the current Implementation Package.
- **Save:** Saves the Implementation Package.
- **Delete:** Displays a confirmation message and then deletes the Implementation Package record. Under some circumstances, the Implementation Package record cannot be deleted.
- **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.
- **Help:** Displays the context-sensitive Help topic for the **Implementation Package Update** page.

Adding Asset Strategies to an Implementation Package

When you add Asset Strategies to an Implementation Package, you are linking the Asset Strategy records to the Implementation Package record. Keep in mind that if the Implementation Package is associated with a specific site, you can add Asset Strategies to it only if their underlying equipment or locations are associated with that site or are not associated with *any* site.

In addition, when you try to add an Asset Strategy to the Implementation Package record, the Meridium APM system checks the SAP system that is associated with the Asset Strategy to see if it matches the SAP system that is associated with the Implementation Package. Only Asset Strategies whose associated SAP system matches the SAP system that is associated with the Implementation Package will be added to the Implementation Package.

To add Asset Strategies to an Implementation Package:

1. Access the Implementation Package Update page.

2. At the bottom of the page, click the **Add Asset Strategies** button.

   The **Select Asset Strategies to Add to Package** dialog box appears, displaying a list of all Active Asset Strategies that do not currently belong to an Implementation Package.

   ## Select Asset Strategies

Strategy ID	Description	Asset Name	Asset Family
G0045-031	PUMP - VACUUM BOTTOMS	00000000000 1016872	Centrifugal Pump
GC01	GC01 Asset Strategy		
MF01	MF01 Asset Strategy		
PH01	PH01 Asset Strategy		
RX01	RX01 Asset Strategy		
SC01	SC01 Asset Strategy		
G0006A-071	PUMP - DEBUTANIZER FEED	G0006A-071	Centrifugal Pump
G0324-094	PUMP - SOUR WATER	G0324-094	Centrifugal Pump
G0014-098	G0014-098 ~ PUMP -	G0014-098	Centrifugal Pump
G0015-098	G0015-098 ~ PUMP -	G0015-098	Centrifugal Pump

   Page: 1 of 1   10 records found   «« First   « Previous   Next »   Last »»   Page Size: 1000

   Add to Package   Cancel

3. In the grid, select the rows containing the Asset Strategies that you want to add to the Implementation Package, and click the **Add to Package** button.

   The selected Asset Strategies appear in the grid in the **Asset Strategies for Package** section.

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

   The Implementation Package record is linked to the selected Asset Strategy records.

Removing Asset Strategies from an Implementation Package

You can remove an Asset Strategy from an Implementation Package only if none of the Actions that belong to that Asset Strategy are currently associated with a work item record. If you try to do so, a message will appear, indicating that the Asset Strategy could not be removed from the Implementation Package.

To remove an Asset Strategy from an Implementation Package:

1. Open the Implementation Package from which you want to remove from an Asset Strategy.

    The **Packaging** page appears.

2. On the **Common Tasks** menu, click the **Strategy Links** link.

    The **Implementation Package Update** page appears, displaying the Implementation Package datasheet and a list of Asset Strategies that currently belong to the Implementation Package.

3. In the grid in the **Asset Strategies for Package** section, select the row containing the Asset Strategy that you want to remove from the Implementation Package.

4. At the bottom of the page, click the **Remove Asset Strategy** button.

    The Asset Strategies are removed from the grid, and the Asset Strategy records are unlinked from the Implementation Package record.

About Adding Work Item Records to Implementation Packages

On the **Packaging** page, you can create work item records and add them to an Implementation Package, where the new records are represented by nodes in the tree. When creating records, you can use any of the methods in the following table.

Regardless of how you create new records, they will be linked to the Implementation Package record through the Has Work Management Item relationship.

Method	Notes
Using the Packaging Tasks menu.	You will need to populate manually all fields that are not calculated and that are not populated automatically by a Meridium APM rule.
Using the shortcut menu in the tree.	You will need to populate manually all fields that are not calculated and that are not populated automatically by a Meridium APM rule.
Mapping values from an existing Action.	This option is available for the following types of records: • Records that represent Meridium APM work items (e.g., Measurement Location records). • Records that represent SAP work items (e.g., Maintenance Items). If you use this method, certain values in the Action will be used to populate fields in the new record. This method can save you a significant amount of time. When using Actions as the basis for creating new records, you have two options: • Use the **Build** link and select the individual type of records that you want to create. • Use the **Build** link and select the **Implementation Package** option, which will allow you to use the **Implementation Packaging Builder** to create the records. If you are creating records that represent SAP work items, the **Implementation Packaging Builder** will also create the records in the appropriate SAP hierarchy using the Rules Library project and class that is specified on the **Implementation Administration** page.

Method	Notes
[Copying an existing record](#).	This option is available for records in the following families: • Notification • Object List Item • Operation • Material • PRT • Maintenance Package

Creating Records Using the Packaging Tasks Menu

To create a record from scratch using the Packaging Tasks menu:

1. Open the Implementation Package to which you want to add a new record that represents a work item.

   The **Packaging** page appears.

2. On the **Packaging Tasks** menu, click the desired link.

   A submenu appears.

3. On the submenu, click the link associated with the type of record that you want to create.

   A new window appears, displaying the datasheet for the family of the selected record type. For example, if you clicked *Inspection Task* in step 2, the **<empty> (new Inspection Task)** window appears, displaying the Inspection Task datasheet.

4. Complete the fields as desired, and click **OK**.

   The record is created, and the tree is updated to display a new node representing this record. The node is grouped in the tree under a folder labeled according to the type of record that you created. For example, if you created an Inspection Tasks record, a node is added to the tree under the **Inspection Task** folder.

   In addition, the new node is highlighted in the tree, and the datasheet area to the right of the tree displays the datasheet of the new record.

> Œ Hint: The image that appears in the tree for the new node is configured on the Implementation Administration page.

Creating a Record Using the Shortcut Menu in the Tree

To create a record from scratch using the shortcut menu in the tree:

1. Open the Implementation Package to which you want to add a new work item record.

   The **Packaging** page appears.

2. In the tree, right-click the node *under* which you want to create a new node. Note that the new record will be linked to the record represented by the node that you right-click.

   A shortcut menu appears.

3. On the shortcut menu, click the desired option.

   A new window appears, displaying the datasheet for the family of the selected record type.

4. Complete the fields as desired, and click **OK**.

   The record is created, and the tree is updated to display a new node representing this record. The node is grouped in the tree under a folder labeled according to the type of record that you created. For example, if you created an Inspection Tasks record, a node is added to the tree under the **Inspection Task** folder.

   In addition, the new node is highlighted in the tree, and the datasheet area to the right of the tree displays the datasheet of the new record.

   > Œ **Hint:** The image that appears in the tree for the new node is configured on the **Implementation Administration** page.

Adding Existing Records to an Implementation Package

If your database already contains a record that you want to add to an Implementation Package, you can do so via the **Packaging** page. By default, you can add the following types of existing records to an Implementation Package:

- Measurement Location Group
- Measurement Location
- Calibration Task
- Inspection Task

> **Note:** You can add records in these families to an Implementation Package because the corresponding Work Management Item Definition record contains a selected **Allow link existing** check box. If this check box is cleared in a Work Management Item Definition record, you will not be able to add existing records in that family to an Implementation Package.

To add an existing record to an Implementation Package:

1. [Open the Implementation Package](#) to which you want to add an existing record.

   The **Packaging** page appears.

2. In the tree, right-click the Implementation Package node.

   A shortcut menu appears.

3. On the shortcut menu, click **Link Existing**.

   A submenu appears.

4. On the submenu, click **Find an existing <Family Caption> to link to <Package ID>**, where **<Family Caption>** is the family to which the desired record belongs and **<Package ID>** is the ID of the selected Implementation Package record.

   For example, to add an existing Inspection Task record to Implementation Package A, you would click **Find an existing Inspection Task to link to Implementation Package A**.

   The **Select <Family Caption> to Add to Package** dialog box appears, where **<Family Caption>** is the family of the desired record.

5. In the grid that appears, select the rows containing the records that you want to add to the Implementation Package, and click **OK**.

   The tree is updated to display nodes representing the selected records. In addition, the selected records are linked to Implementation Package record.

About Copying and Pasting Nodes in the Tree

Using the shortcut menu in the tree, you can create new records in certain families by copying the node representing an existing record and pasting it to the desired location in the tree. You can choose to copy only the selected node or the selected node and all of its successor nodes. When you paste a copied node, a new node appears in the tree, and a new record is created in the corresponding family and populated automatically with the values in the corresponding fields in the source record (with some exceptions).

To copy a node, in the tree, you will need to select the node and then click the **Copy** option on the shortcut menu. You can paste a copied node only to a node that represents a family that is related to the family representing the copied node. You will know if it is valid to paste a node in a given location if the **Paste** option is enabled on the shortcut menu.

When you paste one or more nodes, the **Asset and Action Assignment** window appears (if certain conditions have been met). You can use this window to select the following items:

- The SAP Equipment or Functional Locations that you want to assign to the new nodes.
- The Actions that you want to assign to the new nodes.

After you copy a node, you can paste a copy of it more than once, without copying the source node again. Each time you paste a copied node, a new node appears representing a new record that is a copy of the source record.

Fields Mapped from Copied Nodes

The following table provides details on each node you can [copy](#) and the fields in the source record that are mapped to the target record.

Node	Mapped Fields	Notes
Maintenance Item	All fields are mapped, with the following exceptions: • Date Imported • Maintenance Item (i.e., ID field)	When you try to paste a Maintenance Item node to a Maintenance Plan node, the Meridium APM system will check to see if the value stored in the Maintenance Strategy field in the target Maintenance Plan record matches the value stored in the Maintenance Strategy field in the source Maintenance Item record: • If the values match, the copied Maintenance Item node will be pasted to that Maintenance Plan node. • If the values do not match, the copied Maintenance Item node will not be pasted to that Maintenance Plan node. If you paste a Maintenance Item node and implement the Implementation Package in SAP, a new Maintenance Item will be created in SAP for the new node.
Maintenance Package	All fields are mapped.	

Node	Mapped Fields	Notes
Maintenance Plan	All fields are mapped, with the following exceptions: • Date Imported • ID	If you paste a Maintenance Plan node and implement the Implementation Package in SAP, a new Maintenance Plan will be created in SAP for the new node. If you paste a child node to a parent Maintenance Plan node, the Maintenance Strategy value from parent Maintenance Plan record will be copied to the Maintenance Strategy field in the child record.
Material	All fields are mapped.	
Notification	All fields are mapped, with the following exceptions: • Notification Number • Import Status • Date Imported	
Object List Item	All fields are mapped.	
Operation	All fields are mapped.	
PRT	All fields are mapped, except for the Document Binary field.	If you paste a PRT node and implement the Implementation Package in SAP, a new PRT will be created in SAP for the new node.

Node	Mapped Fields	Notes
Task List	All fields are mapped, with the following exceptions: • Date Imported • Group • Group Counter	When you try to paste a Task List node to a Maintenance Item node, the Meridium APM system will check to see if the value stored in the Maintenance Strategy field in the Maintenance Item record matches the value stored in the Maintenance Strategy field in the Task List record: • If the values match, the Task List node will be pasted to that Maintenance Item node. • If the values do not match, the Task List node will not be pasted to that Maintenance Item node. If you paste a Task List node and implement the Implementation Package in SAP, a new Task List will be created in SAP for the new node.

Copying Nodes

You can copy nodes [only in certain families](). You will know if you can copy a node if the **Copy** option is enabled on the shortcut menu.

To copy a node in the tree:

1. [Open the desired Implementation Package]().

   The **Packaging** page appears.
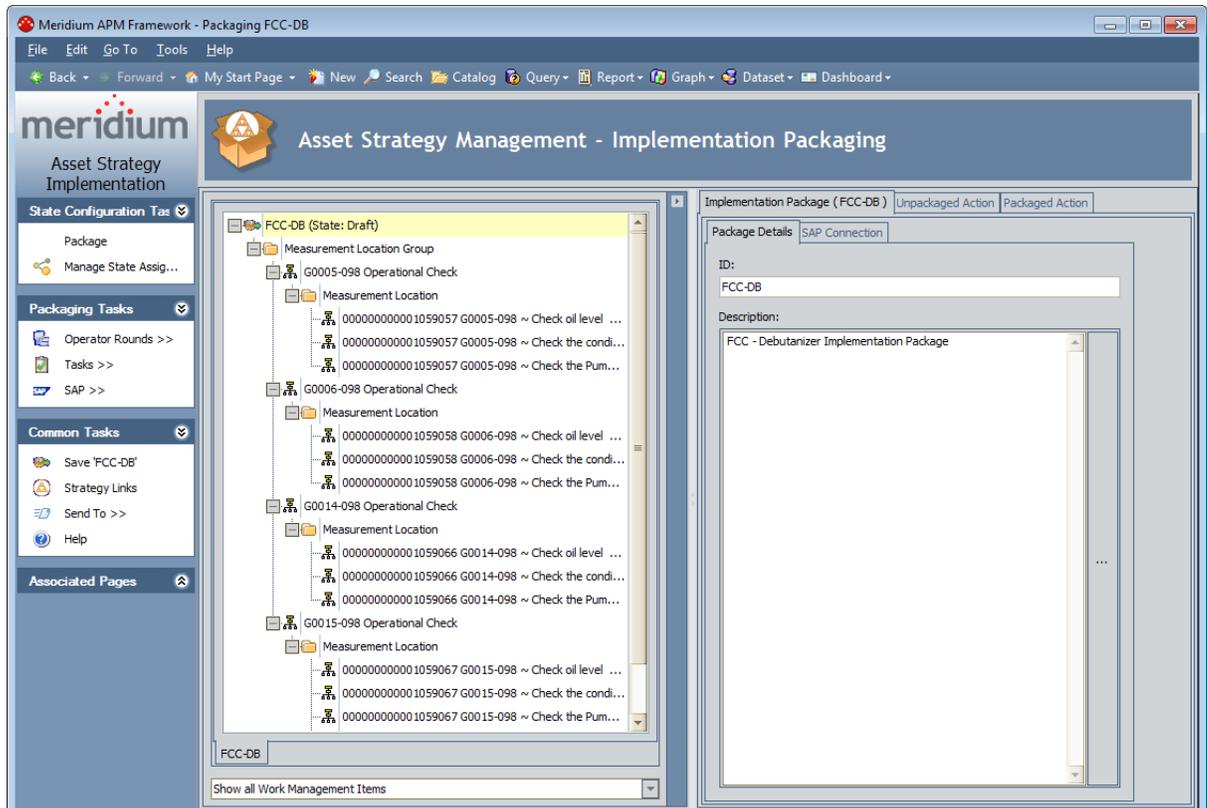
2. In the tree, right-click the node that you want to use as a source node to create a new node.

   The shortcut menu appears.

3. On the shortcut menu, click **Copy.**

   If you copied a node with child nodes, a message appears, asking if you want to also copy the successor nodes.

4. If you want to copy the successor nodes, click the **Yes** button.

   -or-

   If you do not want to copy the successor nodes, click the **No** button.

The selected node is copied. If you clicked the **Yes** button on the message, its successor nodes are also copied.

Pasting Nodes

The following instructions assume that you are viewing an Implementation Package and that you have already copied the nodes that you want to paste.

To paste a copied node in the tree:

1. Right-click the node *below which* you want to paste the copied nodes.

   The shortcut menu appears.

2. On the shortcut menu, click **Paste**.

   If the required conditions have been met, the Asset and Action Assignment window appears.

Work Management Item	Equipment	Equipment Label	Functional Location	Location Label	Assigned Actions
Single cycle #-1					
Maintenance Item					
6 Month Oil analysis PdM Route	PUMP-NHT-FEED				
Object List Item					
PUMP-NHT-FEED	PUMP-NHT-FEED				
Task List					
6 Month Oil analysis PdM Route	PUMP-NHT-FEED				
Operation					
0010 perform oil sampling per r...					
Material					
T-BOX-100					
PRT					
PRT-DOCUMENT01 - 000...					
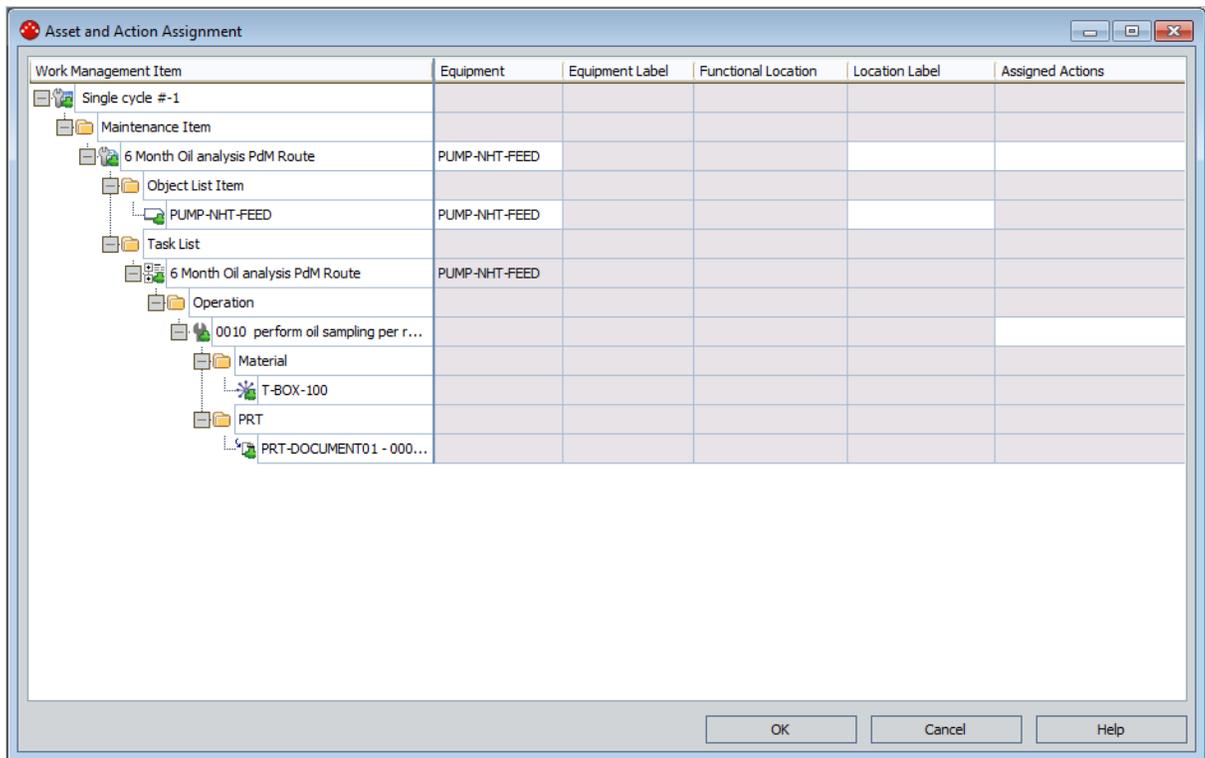
   -or-

   If the required conditions have not been met, a new node(s) appears in the selected location.

3. If you want to change the SAP Equipment and Functional Location assignment for the new nodes, assign different SAP Equipment items and Functional Locations to the new nodes.

4. Assign Actions to the new nodes.

5. Click **OK**.

The **Asset and Action Assignment** window closes, the **Packaging** page returns to focus, and the tree is updated to contain new nodes that are copies of the source nodes.

Conditions Required to Display the Asset and Action Assignment Window

When you paste one or more copied nodes, the **Asset and Action Assignment** window will be displayed if the following conditions have been met:

- The **Display Asset and Action Assignment dialog during paste operations** check box is selected on the **Implementation Administration** page.

  -and-

- *At least one* of the following conditions has been met:
    - At least one of the copied nodes contains a field that allows you to select an SAP Equipment or Functional Location.
    - The **Unpackaged Actions** tab contains at least one Action.

For example, consider the scenarios in the following table.

In this scenario...	The window is...	Because...
The **Display Asset and Action Assignment dialog during paste operations** check box is *cleared*.	Not displayed	The Meridium APM system looks first at the check box. If it is cleared, no further evaluation of the copied nodes occurs.
The **Display Asset and Action Assignment dialog during paste operations** check box is *selected*. -and- You copy a Maintenance Item node.	Displayed	The Maintenance Item record contains fields that allow you to select an SAP Equipment or Functional Location.

In this scenario...	The window is...	Because...
The **Display Asset and Action Assignment dialog during paste operations** check box is *selected*. -and- You copy an Operation node. -and- The **Unpackaged Actions** tab contains two Actions.	Displayed	Although the Operation record does not contain fields that allow you to select an SAP Equipment or Functional Location, the **Unpackaged Actions** tab contains at least one Action.
The **Display Asset and Action Assignment dialog during paste operations** check box is *selected*. -and- You copy an Operation node. -and- The **Unpackaged Actions** tab contains no records.	Not displayed	The Operation record does not contain fields that allow you to select an SAP Equipment or Functional Location, and the **Unpackaged Actions** tab does not contain at least one Action.

Aspects of the Asset and Action Assignment Window

If the required conditions have been met, the **Asset and Action Assignment** window appears when you paste one or more copied nodes.
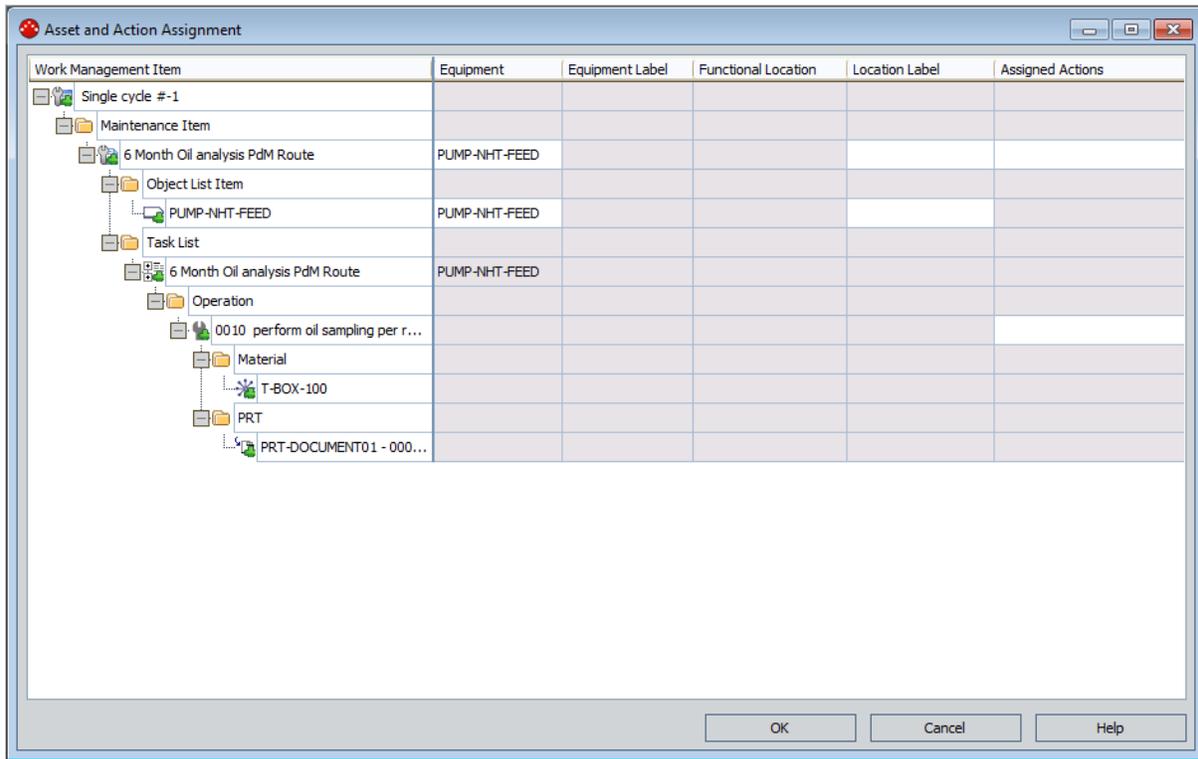
The **Asset and Action Assignment** window contains the following items:

- **Tree:** Contains a hierarchical list of the nodes that will be created when you complete the paste operation.

- **Grid:** Contains rows representing the SAP Equipment, SAP Functional Locations, and Actions that you can assign to the records that will be created when you complete the paste operation. Each row in the grid corresponds to the node that exists at that level in the tree on the left. For example, in the following image, the row for the Maintenance Item *6 Month Oil analysis PdM Route* is highlighted in red.

In each row, the following cells are available:

- **Equipment:** Lets you assign an SAP Equipment item to the node in that row. When you complete the paste operation, this value will be stored in the appropriate equipment field (e.g., the Equipment Number field in Object List

Item records) in the record represented by that node.

- **Equipment Label:** Displays the label of the selected SAP Equipment item. When you complete the paste operation, this value will be stored in the Equipment Description field in the record represented by that node.

- **Functional Location:** Lets you assign an SAP Functional Location to the node in that row. When you complete the paste operation, this value will be stored in the appropriate functional location field (e.g., the Functional Location ID field in Object List Item records) in the record represented by that node.

- **Functional Location Label:** Displays the label of the selected SAP Functional Location. When you complete the paste operation, this value will be stored in the Functional Location Label field in the record represented by that node.

- **Assigned Actions:** Lets you assign Actions to the node in that row. When you complete the paste operation, the corresponding Action Revision records will be linked to the work item record represented by that node. The Actions are displayed in the following format:

<Strategy ID> - <Action Revision Name>

...where:

  - **<Strategy ID>** is the value in the Strategy ID field in the Asset Strategy containing the Action.

  - **<Action Revision Name>** is the value in the Name field in the corresponding Action Revision record.

For example, in the following image, the first Action in the list is *PMP-4543 - Operational Check*, where *PMP-4543* is the value in the Strategy ID field in the Asset Strategy record, and *Operational Check* is the value in the Name field in the corresponding Action Revision record.
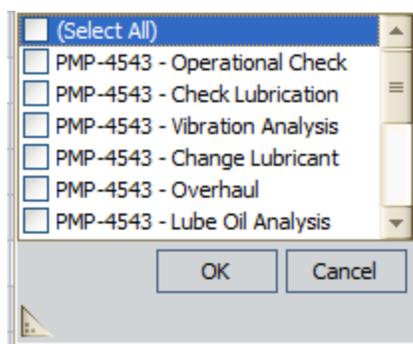
In any enabled cell, you can select the appropriate value. Except for the **Assigned Actions** cell, which does not represent a field, the other cells behave the same way that they do on the datasheets based upon rules that are defined for those fields. For example, the **Equipment Label** cell is disabled and populated automatically

after you select a value in the **Equipment** cell in that row. In addition, you can click the ⋯ button in any cell representing a field to select an item from SAP.

> **Note:** Standard grid functionality is intentionally unavailable.

- **OK button:** Completes the paste operation, which applies your selections.

- **Cancel button:** Discards your changes and closes the window, cancelling the paste operation.

- **Help button:** Displays the context-sensitive Help topic for the **Asset and Action Assignment** window.

Typical Workflow Using the Asset and Action Assignment Window

If you apply Asset Strategy Templates to different Asset Strategies for similar equipment and add all of those Asset Strategies to the same Implementation Package, you can create nodes from Actions from one of those Asset Strategies and then copy those nodes to create new nodes, where the new nodes are assigned to the Equipment and Actions from the other Asset Strategies, as appropriate. During the paste operation, if your administrative setting is configured to display the **Asset and Action Assignment** window, you can quickly and easily assign the appropriate SAP Equipment and Actions to the new nodes.

Consider the following workflow:

1. You create an Asset Strategy Template for one type of equipment, such as electric pump motors. The template contains five Actions:

    -   Thermography

    -   Vibration Analysis

    -   Seal Replacement

    -   Efficiency Testing

    -   Lubrication Analysis

	Name	Interval	Interval Units
▶	Perform Thermography Analysis	12	Months
	Perform Vibration Analysis	1	Months
	Replace Seal	24	Months
	Perform Efficiency Testing	1	Months
	Perform Lubrication Oil Analysis	6	Months

2. You apply the template as a master to an Asset Strategy for a specific electric pump motor. The Asset Strategy, therefore, inherits the Actions from the template. We will refer to this Asset Strategy as *N051*.

    Asset Strategy Actions

    Site Map: Asset Strategy Management-> No Unit Assigned-> No System Assigned-> ~ Motor for electric pump,250kw ~ M-3000-N051   **Controlled By Master Template** Operations>>

    Proposed Strategy

	Flag	Name	Description	Action Type	Interval	Interval Units	Cost	Nonrecurring	Number of Recomme...
▶		Perform Efficiency Tes...			1	Months	20.00	☐	0
		Perform Lubrication Oil...			6	Months	1,500.00	☐	0
		Replace Seal			24	Months	5,000.00	☐	0
		Perform Vibration Anal...			1	Months	25.00	☐	0
		Perform Thermograph...			12	Months	2,000.00	☐	0

3. You build an Implementation Package for the Asset Strategy and use the Actions to create various work item records representing SAP work items. You also implement the Implementation Package.

Revision ...	Name	Interval	Interval...	Work Management Item ID
Asset Strategy: ~ Motor for electric pump,250kw ~ M-3000-N051				
	Replace Seal	24	Months	0050 Replace Seal
	Perform Vibration Analysis	1	Months	0030 Perform Vibration Analysis
	Perform Efficiency Testing	1	Months	0010 Perform Efficiency Testing
	Perform Thermography Analysis	12	Months	0040 Perform Thermography Analysis
	Perform Lubrication Oil Analysis	6	Months	0020 Perform Lubrication Oil Analysis

4. You apply the same Asset Strategy Template to a different Asset Strategy for a different electric pump motor. The Asset Strategy, therefore, inherits the Actions from the template. We will refer to this Asset Strategy as *N052*.

Asset Strategy Actions

Site Map: Asset Strategy Management-> No Unit Assigned-> No System Assigned-> ~ Motor for electric pump,250kw ~ M-3000-N052

Controlled By Master Template
Operations>>

Proposed Strategy

Flag	Name	Description	Action Type	Interval	Interval Units	Cost	Nonrecurring	Number of Recomme...
	Perform Lubrication Oil...			6	Months	1,500.00	☐	0
	Perform Efficiency Tes...			1	Months	20.00	☐	0
	Perform Thermograph...			12	Months	2,000.00	☐	0
	Perform Vibration Anal...			1	Months	25.00	☐	0
	Replace Seal			24	Months	5,000.00	☐	0

5. You add Asset Strategy *N052* to the existing Implementation Package. The Actions from this Asset Strategy appear on the **Unpackaged Actions** tab.

Revision Operation	Name	Interval	Interval Units	Work Management Item ID
Asset Strategy: ~ Motor for electric pump,250kw ~ M-3000-N052				
	Perform Lubrication Oil Analysis	6	Months	
	Perform Vibration Analysis	1	Months	
	Replace Seal	24	Months	
	Perform Efficiency Testing	1	Months	
	Perform Thermography Analysis	12	Months	
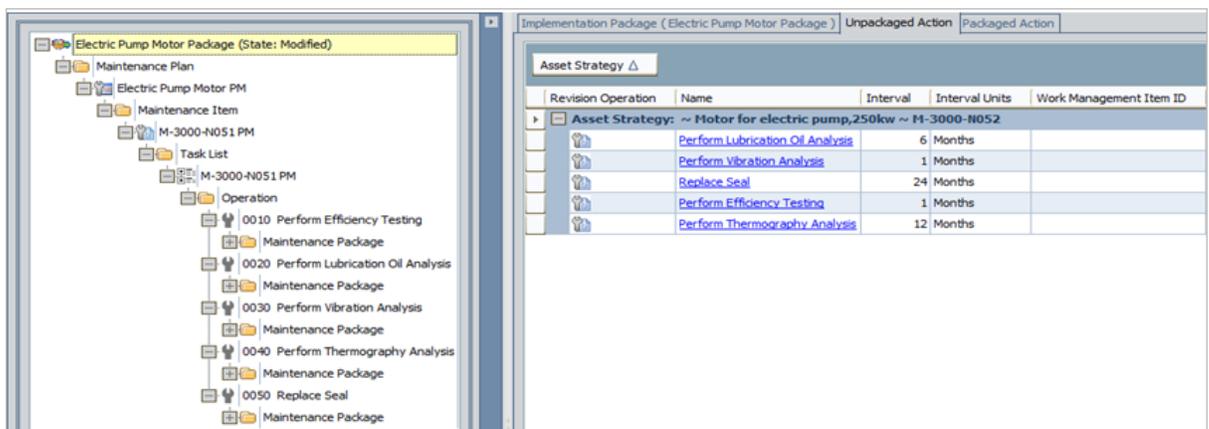
6. You want to add these new Actions to the *existing* Maintenance Plan (created using the Actions from Asset Strategy *N051*), where the new Actions are represented by *different* Maintenance Items, Task Lists, and Operations. To do so, you copy the existing Maintenance Item and all of its children.
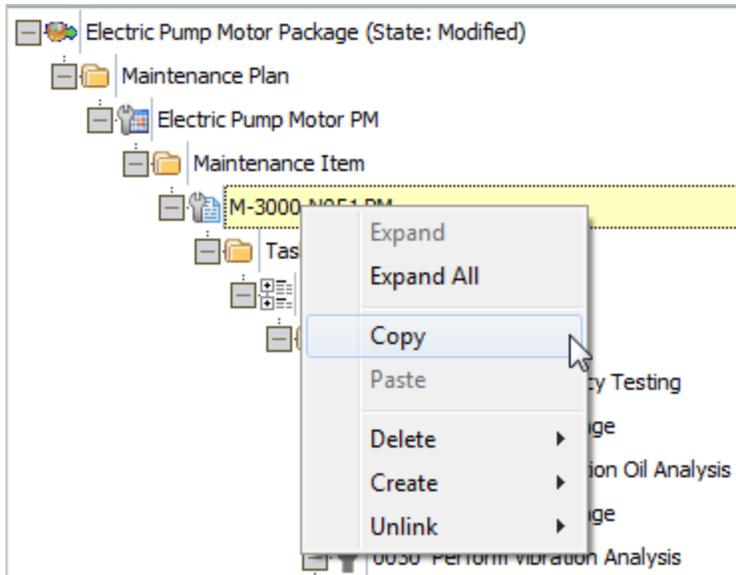
7. You paste the Maintenance Item and its children to the existing Maintenance Package. When you do so, the **Asset and Action Assignment** window appears.

8. For the new Maintenance Item, you assign the piece of equipment associated with the strategy *N052*.

9. For the new Operations, you assign the appropriate Actions from the strategy *N052*. For example, for the Operation *0010 Perform Efficiency Testing*, you assign the corresponding Action...
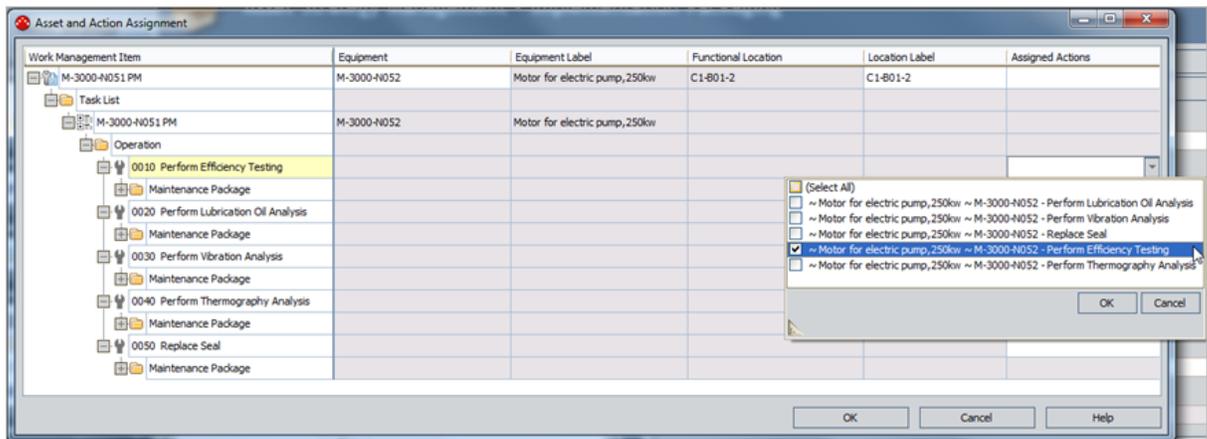
...and for the Operation *0020 Perform Lubrication Oil Analysis*, you assign the corresponding Action.
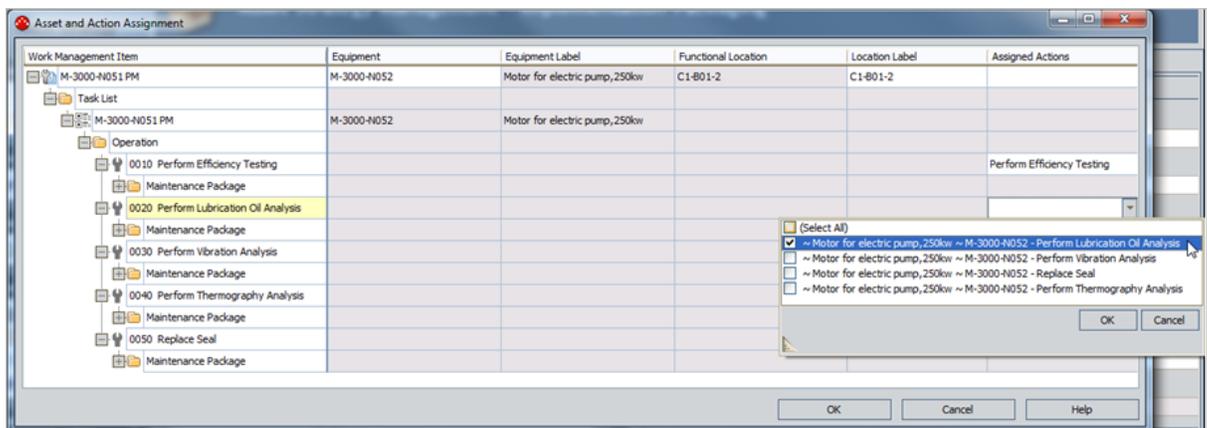
10. You complete the paste operation. The new records that were created during the paste operation are:

-   Linked to the Action Revision records from Asset Strategy *N052*.

-   Populated with the selected Equipment and Functional Location values (e.g., the new Maintenance Item record contains the value *M-3000-N052* in the Equipment field).

Assigning SAP Equipment Items and Functional Locations to Nodes

The following instructions assume that you have already [pasted nodes](#), causing the **Asset and Action Assignment** window to appear.

To assign SAP Equipment items and Functional Locations to nodes using the Asset and Action Assignment window:

1. On the [Asset and Action Assignment window](#), in the row containing the node to which you want to assign an SAP Equipment item or Functional Location, in the appropriate cell (e.g., **Equipment**), click the ··· button.

   The **Select a <Field Caption>** window appears, where **<Field Caption>** is the caption of the field from which you accessed the window. In the image below, you can see that the window label is **Select an Equipment** because it was accessed from the **Equipment** cell.
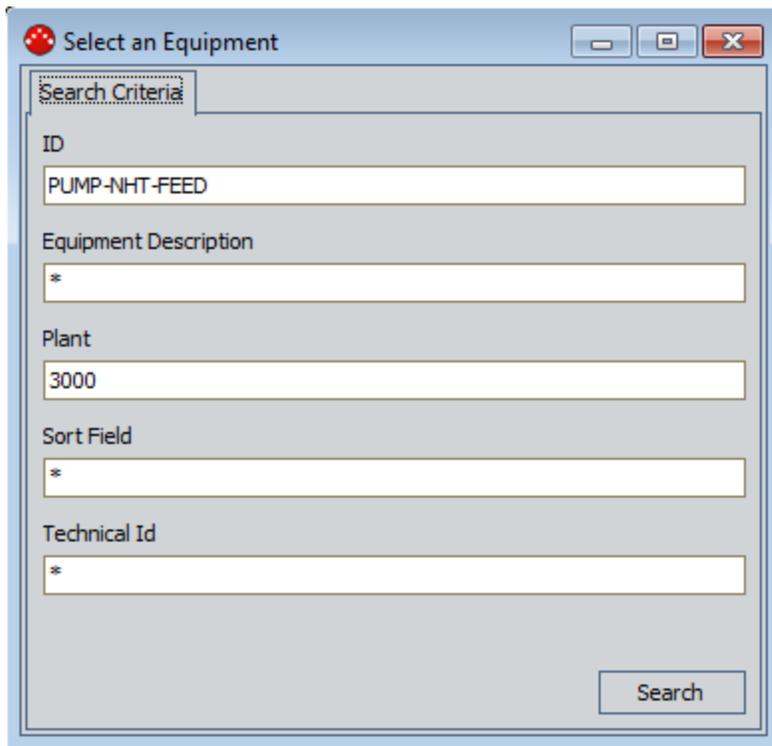
2. Type the desired criteria in the available cells. To return all values, you can select the default selection, which is the asterisk (*) symbol.

3. Click the **Search** button.

   The **Search Results** tab appears, displaying the search results.

4. On the **Search Results** tab, select the row containing the value that you want to use for populating the field and corresponding cell on the **Asset and Action Assignment** window, and click **OK**.

The selected value appears in the appropriated cell in the grid. In the following image, you can see that the selected SAP Equipment is *M-3000-N058*.

Assigning Actions to Nodes

The following instructions assume that:

- You have already [pasted nodes](#), causing the **Asset and Action Assignment** window to appear.

  -and-

- Actions exist on the **Unpackaged Actions** tab on the **Packaging** page.

To assign Actions to nodes using the Asset and Action Assignment window:

- On the [Asset and Action Assignment window](#), in the row containing the node to which you want to assign an Action, in the **Assigned Actions** list, select the check boxes for the Actions that you want to assign to that node.

  For example, in the following image, you can see that the Action *PMP-4543 - Lube Oil Analysis* has been assigned to the node.
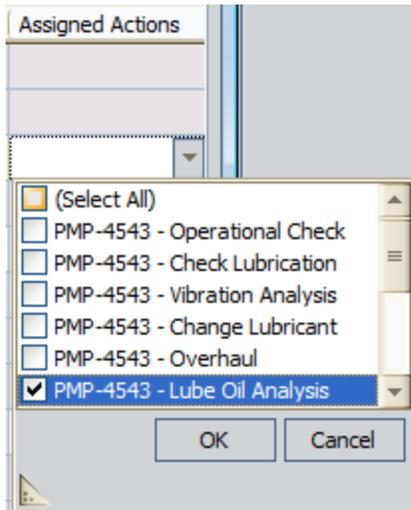
  Note: Actions that have already been assigned to another node will not appear in the list.

About Creating Records from Actions

For any Action that is included in an Asset Strategy that belongs to an Implementation Package, you can use that Action to create a work item record. You can create work item records representing:

- [Meridium APM work items](#) (e.g., Inspection Task records).

  -or-

- [SAP work items](#) (e.g., SAP Notifications).

Creating Records that Represent Meridium APM Work Items

Using values in an Action, you can create the following records to represent Meridium APM work items:

- Measurement Location Group
- Calibration Task
- Inspection Task

To create records that represent Meridium APM work items:

1. Open the Implementation Package to which you want to add a record that represents a Meridium APM work item.

   The **Packaging** page appears.

2. In the tree, if it is not already selected, select the root node, which represents the Implementation Package record.

3. In the grid on the **Unpackaged Action** tab, select the rows containing the Actions that you want to use to create new records that represent Meridium APM work items.

4. On the **Action Tasks** menu, click the **Build** link.

   A submenu appears.

5. On the submenu, click the item that represents the type of record that you want to create from the Actions that are selected in the grid. One record will be created for each Action that is selected in the grid. For example, if four Actions are selected in the grid and you click **Inspection Task** on the submenu, four Inspection Task records will be created, and each of these Inspection Task records will contain data from one of the Actions.

   The records are created, and the tree is updated to display a new node representing each record. The nodes are grouped in the tree under a folder labeled according to the type of records that you created. For example, if you created four Inspection Task records, four nodes are added to the tree under the **Inspection Task** folder.

   In addition, note that the first new node is highlighted in the tree. To see the datasheet of each new record that you created, you can select the appropriate node in the tree and view the datasheet area to the right of the tree.

   > Œ Hint: The image that appears in the tree for the new nodes is configured on the **Implementation Administration** page.

Notes About Creating Measurement Location Group Records

If you create a Measurement Location Group record from an Action, the Meridium APM system checks to see if the Action record is linked to a Health Indicator record. The Meridium APM system accounts for the following scenarios:

- **The Action record is** *not* **linked to a Health Indicator record.** In this case, the Measurement Location Group record is linked to a Measurement Location record, which contains data from the Action. This Measurement Location records is linked to the Equipment or Functional Location record that is linked to the associated Asset Strategy record.

- **The Action record is linked to a Health Indicator record that IS linked to a Measurement Location source record.** In this case, the Measurement Location Group record is linked to the source Measurement Location record. The Measurement Location record contains data from the Health Indicator record, which was copied to the Measurement Location record when it was created from the Health Indicator record. The Measurement Location records is linked to the Equipment or Functional Location record that is linked to the associated Asset Strategy record.

- **The Action record is linked to a Health Indicator record that is not linked to a Measurement Location source record.** In this case, the Measurement Location Group record is linked to a Measurement Location record, which contains data from the Action. This Measurement Location record is linked to the Equipment or Functional Location record that is linked to the associated Asset Strategy record.

Values Mapped to Inspection Task Records

The following table lists the fields that are populated in an Inspection Task record when you create it from an Action. The table describes:

- The Inspection Task fields that reflect values in the Action.
- The Inspection Task fields that are populated with default values that do not reflect values in the Action.

Inspection Task Field	Action Field	Notes
Task ID	Name	None
Task Description	Description	None
Last Date	None	Set by default to the current date.
Desired Interval	Interval	None
Desired Interval UOM	None	Set by default to MON, regardless of the value in the Interval Units field in the Action Revision record.
Next Date	None	Set by default to **n** days after the Last Date, where **n** is the value in the Desired Interval field.
Coverage	None	Set by default to zero (0).
Reoccurring	None	Selected by default.
Modifiable	None	Selected by default.
Rejectable	None	Selected by default.
Min Interval	Interval	None
Min Interval UOM	None	Set by default to MON, regardless of the value in the Interval Units field in the Action Revision record.
Min Date	None	Set by default to **n** days after the Last Date, where **n** is the value in the Desired Interval field.
Max Interval	Interval	None
Max Interval UOM	None	Set by default to MON, regardless of the value in the Interval Units field in the Action Revision record.

Inspection Task Field	Action Field	Notes
Max Date	None	Set by default to **n** days after the Last Date, where **n** is the value in the Desired Interval field.
Source Type	None	Set by default to Manual.
Task State	None	Set by default to Scheduled without change.
Related Entity ID	None	Set by default to the record ID of the Equipment or Functional Location record that is linked to the Asset Strategy record for the Asset Strategy containing the Action.
Reason	Action Basis	The Reason field does not appear on the Inspection Task datasheet that is provided in the baseline Meridium APM database. You can, however, see that this field contains the value from the Action Basis field by building a query on the Inspection Task family and including the Reason field.

Values Mapped to Calibration Task Records

The following table lists the fields that are populated in a Calibration Task record when you create it from an Action. The table describes:

- The Calibration Task fields that reflect values in the Action.
- The Calibration Task fields that are populated with default values that do not reflect values in the Action.

Calibration Task Field	Action Field	Notes
Task ID	Name	None
Task Description	Description	None
Last Date	None	Set by default to the current date.
Desired Interval	Interval	None
Desired Interval UOM	None	Set by default to DAYS, regardless of the value in the Interval Units field in the Action Revision record.
Next Date	None	Set by default to **n** days after the Last Date, where **n** is the value in the Desired Interval field.
Coverage	None	Set by default to zero (0).
Reoccurring	None	Selected by default.
Modifiable	None	Selected by default.
Rejectable	None	Selected by default.
Min Interval	Interval	None
Min Interval UOM	None	Set by default to DAYS, regardless of the value in the Interval Units field in the Action Revision record.
Min Date	None	Set by default to **n** days after the Last Date, where **n** is the value in the Desired Interval field.
Max Interval	Interval	None
Max Interval UOM	None	Set by default to DAYS, regardless of the value in the Interval Units field in the Action Revision record.

Calibration Task Field	Action Field	Notes
Max Date	None	Set by default to **n** days after the Last Date, where **n** is the value in the Desired Interval field.
Source Type	None	Set by default to Calibration.
Task State	None	Set by default to Scheduled without change.
Related Entity ID	None	Set by default to the Record ID of the Equipment or Functional Location record that is linked to the Asset Strategy record for the Asset Strategy containing the Action.
Reason	Action Basis	The Reason field does not appear on the Calibration Task datasheet that is provided in the baseline Meridium APM database. You can, however, see that this field contains the value from the Action Basis field by building a query on the Calibration Task family and including the Reason field.

Values Mapped to Thickness Monitoring Task Records

The following table lists the fields that are populated in a Thickness Monitoring Task record when you create it from an Action Revision record. The table describes:

- The Thickness Monitoring Task fields that reflect values in the Action.
- The Thickness Monitoring Task fields that are populated with default values that do not reflect values in the Action.

Thickness Monitoring Task Field	Action Revision Field	Notes
Task ID	Name	None
Task Description	Description	None
Last Date	None	Set by default to the current date.
Desired Interval	Interval	None
Desired Interval UOM	Interval Units	None
Next Date	None	Set by default to n days after the Last Date, where n is the value in the Desired Interval field.
Coverage	None	Set by default to zero (0).
Reoccurring	None	Selected by default.
Modifiable	None	Selected by default.
Rejectable	None	Selected by default.
Min Interval	Interval	None
Min Interval UOM	Interval Units	None
Min Date	None	Set by default to n days after the Last Date, where n is the value in the Desired Interval field.
Max Interval	Interval	None

Thickness Monitoring Task Field	Action Revision Field	Notes
Max Interval UOM	Interval Units	None
Max Date	None	Set by default to n days after the Last Date, where n is the value in the Desired Interval field.
Source Type	None	Set by default to Manual.
Task State	None	Set by default to Proposed.
Related Entity ID	None	Set by default to the Record ID of the Equipment or Functional Location record that is linked to the Asset Strategy record for the Asset Strategy containing the Action.
Reason	Action Basis	None

Values Mapped to Measurement Location Group Records

When you create a Measurement Location Group record from an Action, the Measurement Location Group ID field is populated with **<Action Revision Name> Group**, where **<Action Revision Name>** is the value in the Name field in the Action Revision record.

For example, if the name in the Action Revision record is *Replace Motor*, the Measurement Location Group ID would be *Replace Motor Group*.

Values Mapped to Measurement Location Records

The following table lists the fields that are populated in a Measurement Location record when you create it from an Action. The table describes:

- The Measurement Location fields that reflect values in the Action.
- The Measurement Location fields that are populated with default values that do not reflect values in the Action.

Measurement Location Field	Action Field	Notes
Asset ID	None	Set by default to the Equipment Technical Number of the Equipment record or the Functional Location ID of the Functional Location record that is linked to the Asset Strategy record for the Asset Strategy containing the Action. If the **Equipment Technical Number** field in the Equipment record or the **Functional Location**field in the Functional Location record is empty, this field will be populated instead with the Record ID of the Equipment or Functional Location record.
Description	Description	None
ML Type	None	Set by default to Numeric.
Status	None	Set by default to Active.
Schedule	Interval and Interval Units	Determined based on the current date and time, the Action Revision Interval, and the Action Revision Interval Units value. For example, suppose the following is true: • Current date and time = 05/05/2008 4:30 PM. • Action Revision Interval = 10 • Action Revision Interval Units = Years In this case, the Schedule would be **Due January 1 of every 10 years effective 5/5/2008 4:30 PM**.
Next Date	None	Determined based on the value in the Schedule field.

Values Mapped to Checkpoint Task Records

When you create a Measurement Location or Measurement Location Group record from an Action, a Checkpoint Task record is created automatically and linked to the created Measurement Location record(s). Checkpoint Task records store the schedule that is associated with the checkpoint.

The following table lists the fields that are populated in a Checkpoint Task record. The table describes:

- The Checkpoint Task fields that reflect values in the Action.
- The Checkpoint Task fields that are populated with default values that do not reflect values in the Action.

Measurement Location Field	Action Field	Notes
Task ID	None	Generated automatically by the Meridium APM system and set by default to **CP-<n>**, where **<n>** is a number representing the number of Checkpoint Task records that have been initiated (even if they were not actually saved).
Schedule	Interval and Interval Units	Determined based on the current date and time, the Interval value, and the Interval Units value. For example, suppose the following is true: - Current date and time = 05/05/2008 4:30 PM. - Action Revision Interval = 10 - Action Revision Interval Units = Years In this case, the Schedule would be *Due January 1 of every 10 years effective 5/5/2008 4:30 PM*. Note that if the Action Revision record does not have a value in the Interval or Interval Unit field, the Schedule field will display the text *There is no more future occurrence*. The checkpoint is configured to occur one time only on the current date and time.
Next Date	None	Calculated using the schedule and the current date and time.

Accessing the Implementation Package Builder

To access the Implementation Package Builder:

1. Open the Implementation Package to which you want to add a new record that represents an SAP work item.

   The **Packaging** page appears.

2. In the tree, if it is not already selected, select the root node, which represents the Implementation Package record.

3. In the grid on the **Unpackaged Action** tab, select the rows containing the Actions that you want to use to create new records representing SAP items.

4. On the **Action Tasks** menu, click the **Build** button.

   A submenu appears.

5. On the submenu, click **Implementation Package**.

   The **Implementation Package Builder** appears, displaying the Welcome screen.
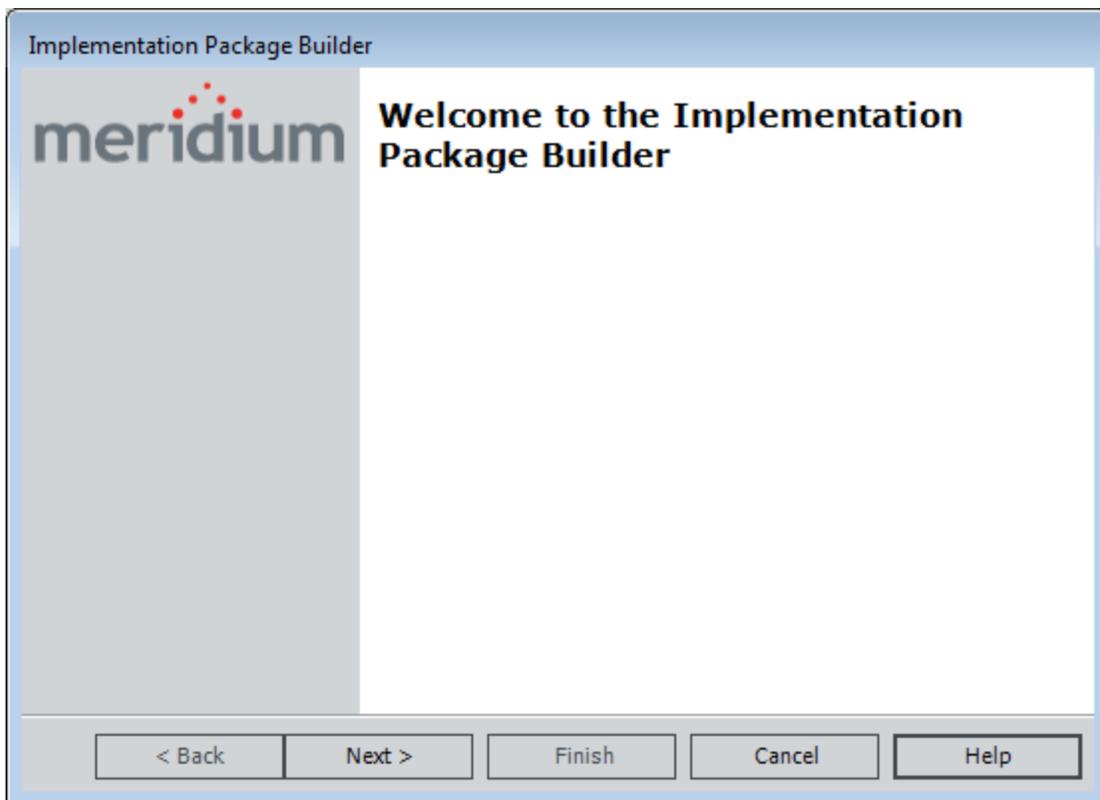
Using the Implementation Package Builder

Using the **Implementation Package Builder**, you can create the following records to represent SAP work items:

- Maintenance Plan
- Maintenance Item
- Object List Item
- Task List
- Operation
- Material
- PRT
- Maintenance Package

> **Note:** You can create records that represent SAP work items only if the ASI for SAP license is active.

To use the Implementation Package Builder to create records that represent SAP work items:

1. Access the **Implementation Package Builder**.

2. On the Welcome screen, click the **Next** button.

   The **Select Work Management System** screen appears.
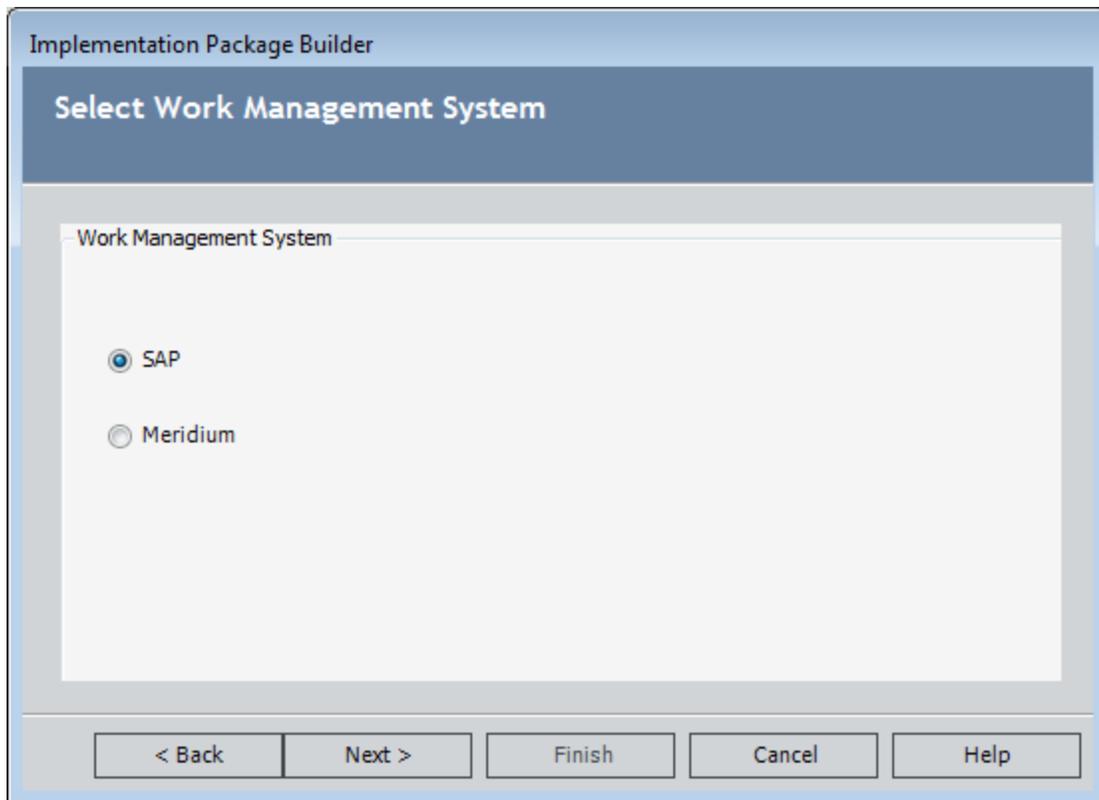
3. Accept the default selection, **SAP**, and click the **Next** button.

    The **Select SAP Template Path** screen appears.
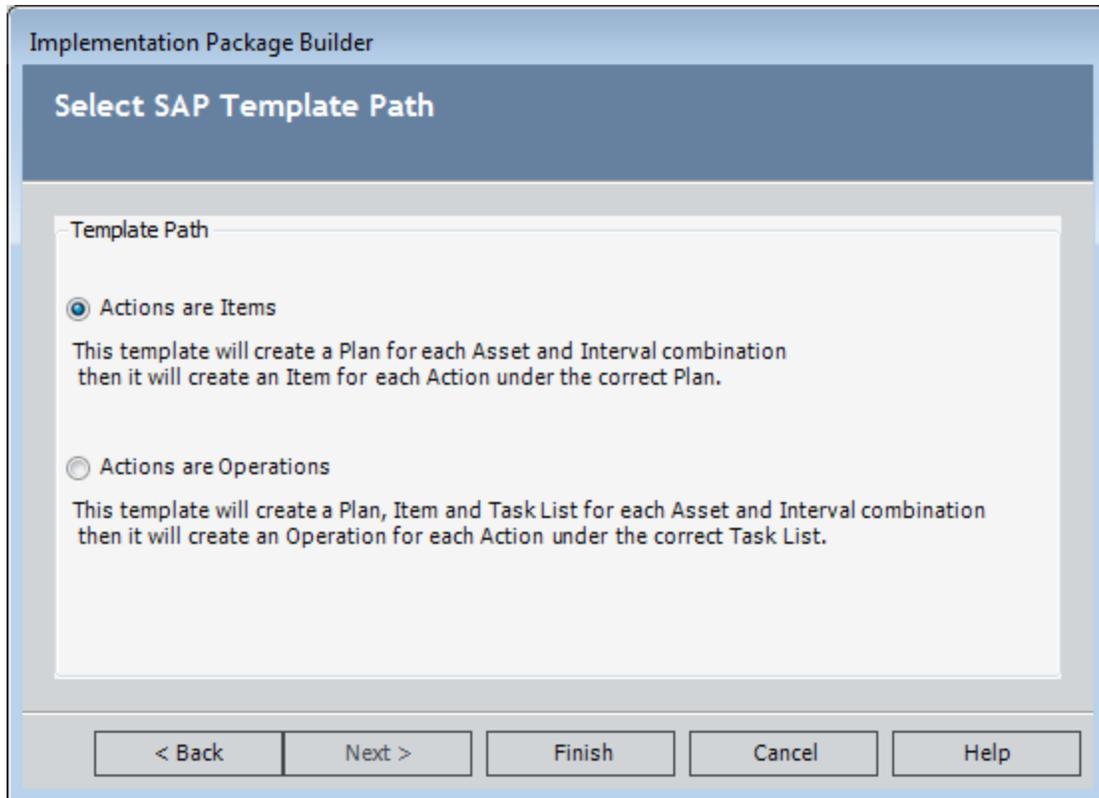
4. Select either of the following options:

- **Actions are Items:** This option will [create a Maintenance Plan record for each unique interval associated with the Actions that belong to the underlying Asset Strategies](#). This option will also create one Maintenance Item record for each Action, and each Maintenance Item will be grouped under the appropriate Maintenance Plan (i.e., each Maintenance Item record will be linked to the appropriate Maintenance Plan record through the Has Maintenance Items relationship).

- **Actions are Operations:** This option will [create a Maintenance Plan record, Maintenance Item record, and Task List record for each unique combination of equipment or location and intervals for the Actions that belong to the underlying Asset Strategies](#). This option will also create an Operation record for each Action, and each Operation will be grouped under the appropriate Task List (i.e., each Operation record will be linked to the appropriate Task List record through the Has Operation relationship).

5. Click the **Finish** button.

The appropriate records are created, and new nodes representing each record appear in the tree.

Example: Selecting Actions are Items

Suppose an Implementation Package includes two Asset Strategies: Dryer Strategy and Stove Strategy.

Suppose that the Actions for the *Dryer Strategy* contain the following values.

Name	Interval
Replace the dryer	8 years
Clean the lint trap	1 week

In addition, assume that the Actions for the *Stove Strategy* contain the following values.

Name	Interval
Replace the stove	8 years
Clean the eyes	1 month

In this case, between the two Asset Strategies, there are three unique intervals: 8 years, 1 week, and 1 month. If you select all of the Actions, choose to build an Implementation Package, and select **Actions are Items**, three Maintenance Plan records will be created to represent each unique interval, as shown in the following image.
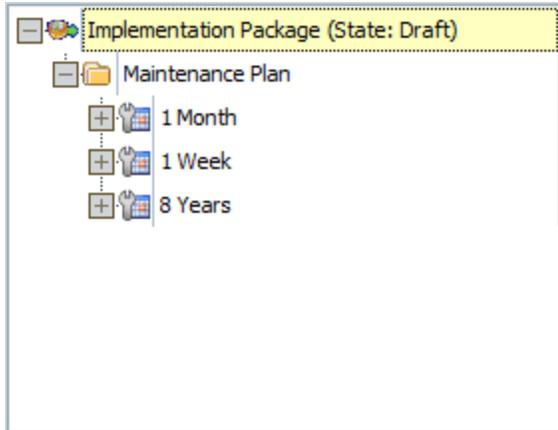
Below each Maintenance Plan node, a Maintenance Item node will appear to represent each Action that contains that interval. Using the Action names and intervals listed above, the Maintenance Item nodes shown in the following image would appear below each Maintenance Plan node.

Example: Selecting Actions are Items
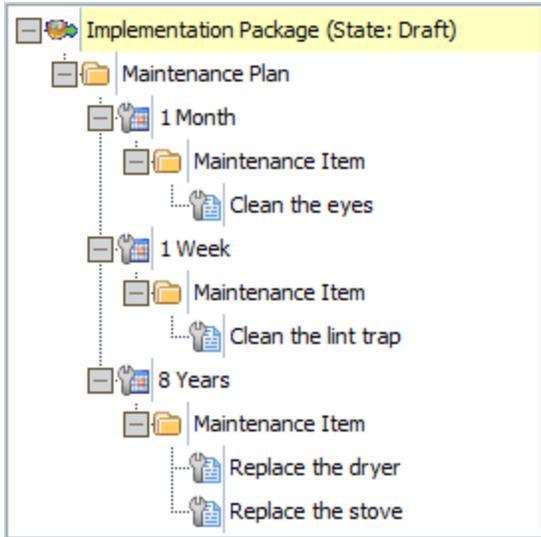
Example: Selecting Actions are Operations

Suppose an Implementation Package includes two Asset Strategies: Dryer Strategy and Stove Strategy.

Suppose that the Actions for the *Dryer Strategy* contain the following values.

Name	Interval
Replace the dryer	8 years
Clean the lint trap	1 week

In addition, assume that the Actions for the *Stove Strategy* contain the following values.

Name	Interval
Replace the stove	8 years
Clean the eyes	1 month

In this case, between the two Asset Strategies, there are three unique intervals: 8 years, 1 week, and 1 month. If you select all of the Actions, choose to build an Implementation Package, and select **Actions are Operations**, three Maintenance Plan records will be created to represent each unique interval, as shown in the following image.
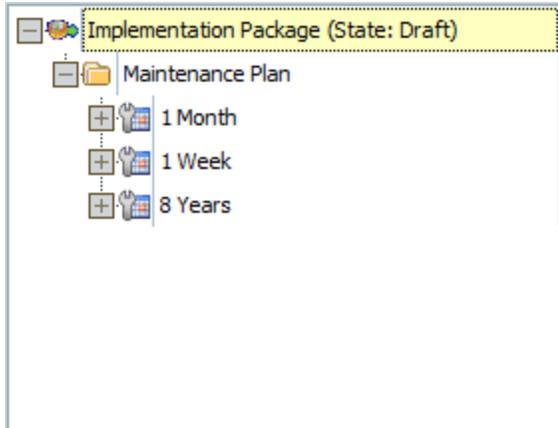
Below each Maintenance Plan node, a Maintenance Item node will appear to represent each Action that contains that interval. Using the Action names and intervals listed above, this would mean that the Maintenance Item nodes shown in the following image would appear below each Maintenance Plan node.

Below each Maintenance Item node, a Task List node will appear to represent the Equipment or Functional Location record for each Action, as shown in the following image.
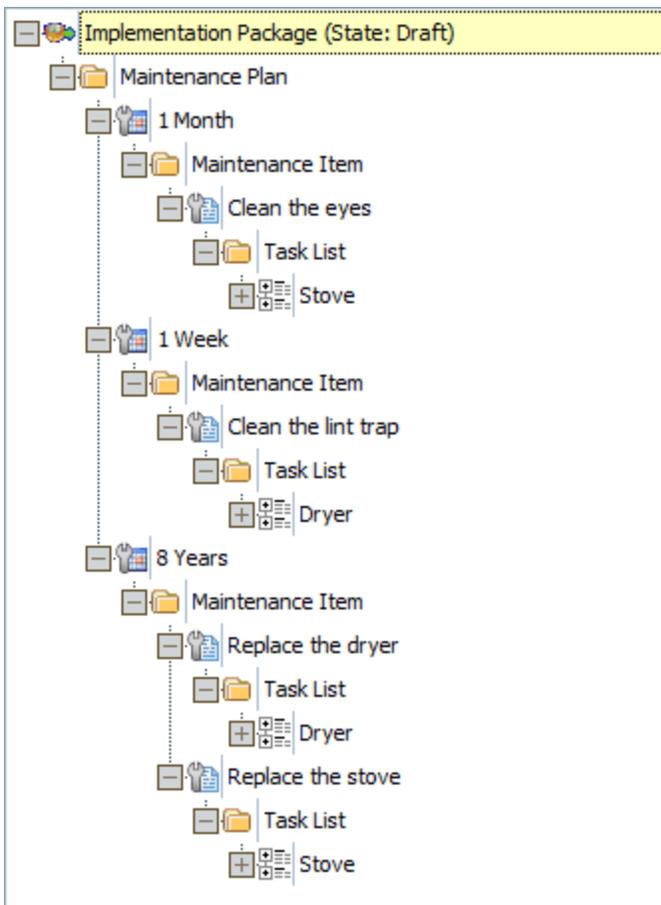
Below each Task List node, an Operation node will appear to represent the action that you want to perform, as shown in the following image.
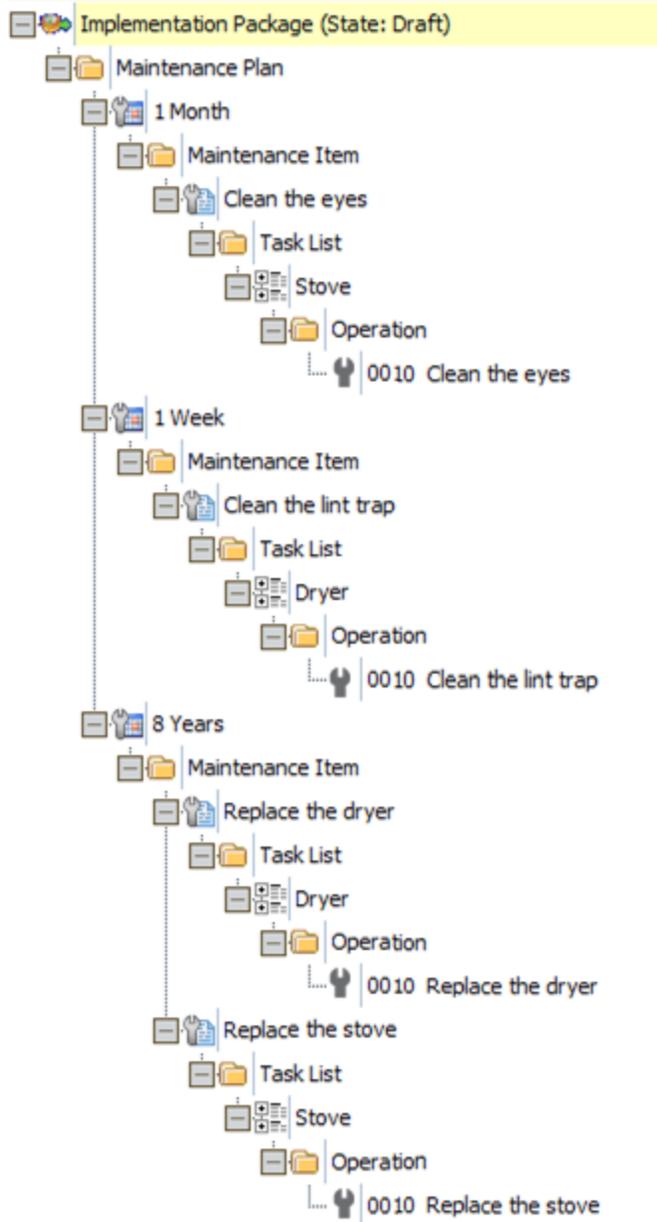
Values Mapped to Notification Records

The following table lists the fields that are populated in a Notification record when you create it from an Action. The table describes:

- The Notification fields that reflect values in the Action.
- The Notification fields that are populated with default values that do not reflect values in the Action.

Notification Field	Action Field	Notes
Notification Type	None	Set by default to M1.
Short Text	Name	None
Functional Location -OR- Equipment	None	Set by default to the Record ID of the Equipment or Functional Location record that is linked to the associated Asset Strategy record. Note that Meridium APM determines whether to populate the Functional Location field or the Equipment field based on the results of the queries *Get SAP ID for Equipment* and *Get SAP ID for Functional Location*.
Priority	None	Set by default to 3 - Medium

Values Mapped to Maintenance Item Records

The following table lists the fields that are populated in a Maintenance Item record when you create it from an Action. The table describes:

- The Maintenance Item fields that reflect values in the Action.
- The Maintenance Item fields that are populated with default values that do not reflect values in the Action.

Maintenance Item Field	Action Field	Notes
Item Description	Description	None
Category	None	Set by default to PM - Maintenance Order
Priority	None	Set by default to 3 - Medium
Functional Location -OR- Equipment	None	Set by default to the Record ID of the Equipment or Functional Location record that is linked to the associated Asset Strategy record. Note that Meridium APM determines whether to populate the Functional Location field or the Equipment field based on the results of the queries *Get SAP ID for Equipment* and *Get SAP ID for Functional Location.*

Values Mapped to Operation Records

When you create an Operation record from an Action, the Description field is populated with the value in the Description field in the Action Revision record.

Options for Creating Maintenance Package Records

To create a Maintenance Package record, you can use the:

- **AssignMaintenance Packages for Task List** window. You should use this option if you want to create multiple Maintenance Package records at one time, based upon a specific maintenance strategy, and link them to the Operation records that are linked to a specific Task List record.
- **Packaging Tasks** menu.
- Shortcut menu in the tree.
- **Implementation PackageBuilder**.

Accessing the Assign Maintenance Packages for Task List Window

You manage the Maintenance Packages for a Task List using the **Assign Maintenance Packages for Task List** window only if all the following conditions are met:

- The Implementation Package record is linked to an SAP System record with a valid connection.
- The Maintenance Strategy field in the Task List record contains a value.
- The Task List record is linked to at least one Operation record.

To access the Assign Maintenance Packages for Task List window:

1. Open the Implementation Package whose Maintenance Packages you want to manage.

2. In the tree, select the Task List node representing the Task List whose Maintenance Packages you want to manage.

3. On the **Task List Tasks** menu, click the **Manage Package Assignments** link.

   The **Assign Maintenance Packages for Task List** window appears.
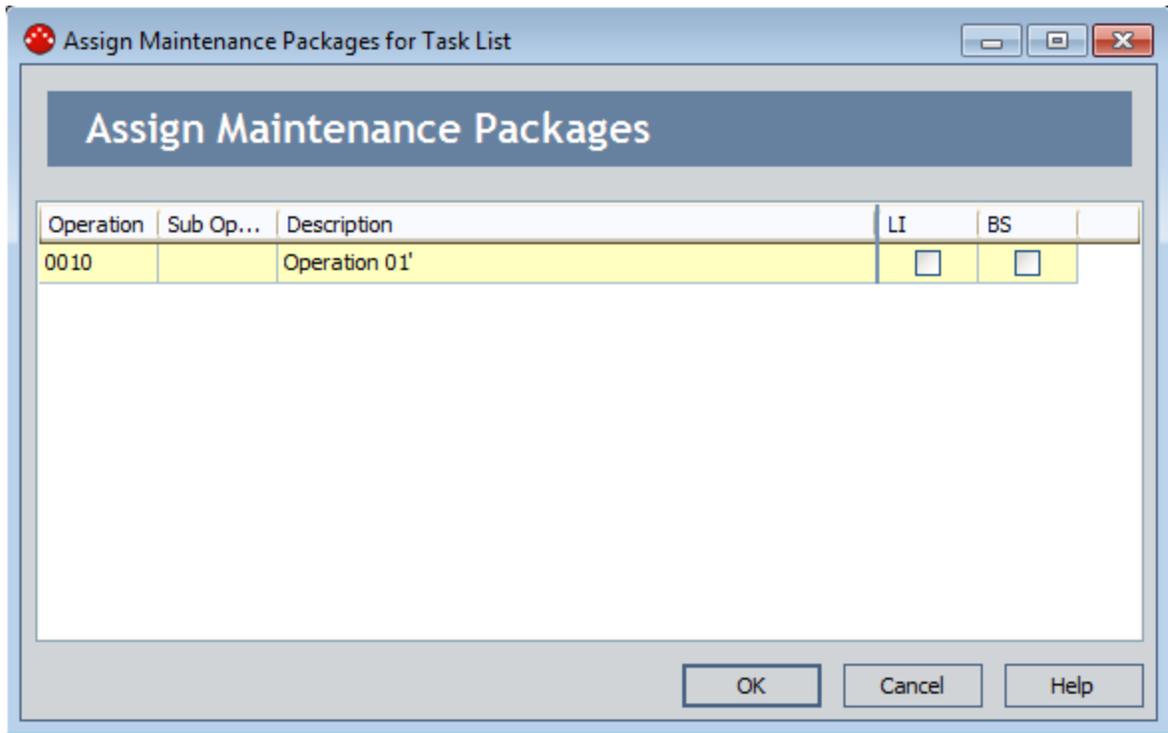
Using the Assign Maintenance Packages for Task List Window

You can use the **Assign Maintenance Packages for Task List** window to manage Maintenance Packages for the Task List represented by the Task List node that is selected in the tree. If you remember from the ASI data model, Maintenance Package records are linked to Operation records, which are linked to Task List records. The following image illustrates how records in these families are linked to one another in the Meridium APM database.
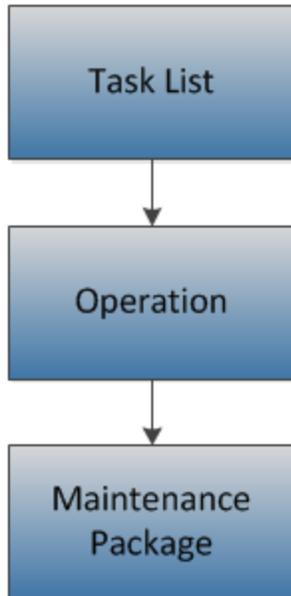
For each Task List record that is linked to one or more Operation records, you can use the **Assign Maintenance Packages for Task List** window to create and delete the Maintenance Package records that are linked to the Operation records

The **Assign Maintenance Packages for Task List** window contains the **Assign Maintenance Packages** grid, which displays:

- The Operation records that are linked to the Task List record represented by the selected Task List node.

  -and-

- Maintenance Package records that are linked to each Operation record in the grid.

The following image shows an example of what the **Assign Packages for Task List** window looks like. Shading and callouts have been added to the image to distinguish these items.
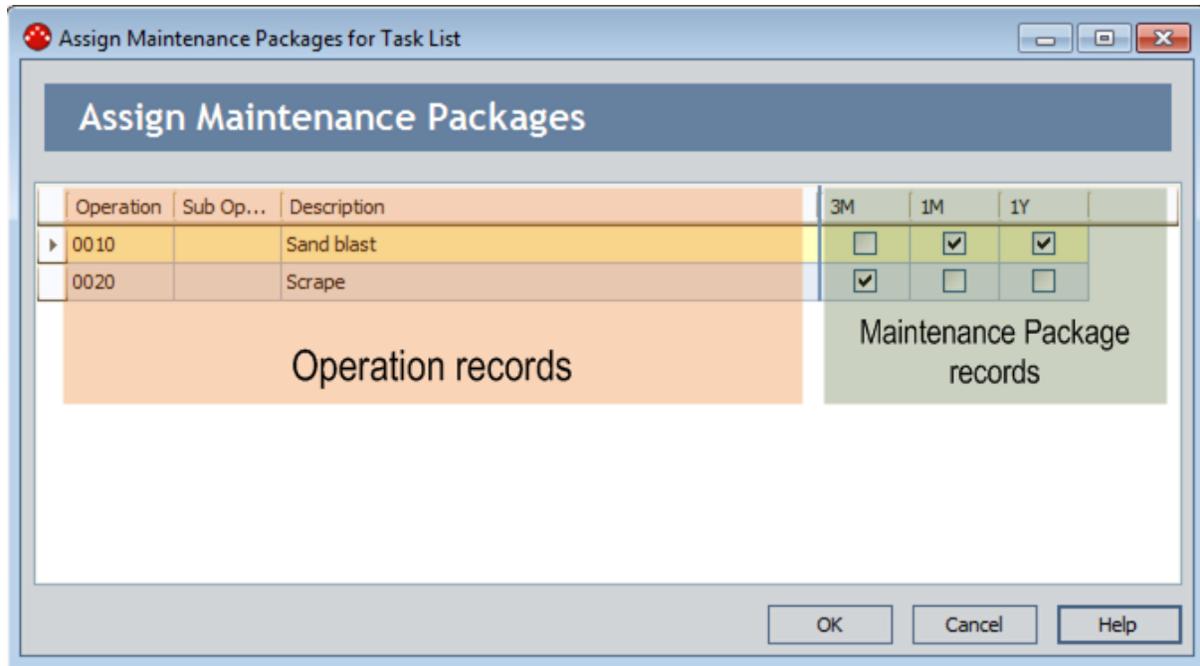
Each row in the orange highlighted area represents one Operation record. The following columns are included the grid in this area and contain values that are stored in corresponding fields in the Operation record:

- **Operation**
- **Sub Operation**
- **Description**

Each column in the green highlighted area corresponds to one cycle that is defined for the maintenance strategy that is specified in the Maintenance Strategy field in the Task List record. Keep in mind that maintenance strategies come from your SAP system (i.e., the SAP system that is defined in the SAP System record to which the Implementation Package record is linked). Likewise, a *cycle* is a value that is stored in the Maintenance Package record and comes from your SAP system. Each maintenance strategy will be associated with one or more cycles.

The columns that are included in the Maintenance Package records area will vary depending upon the cycles that are defined in your SAP system. Each cell in a cycle column contains a check box, which you can use to create and delete Maintenance Package records. Specifically, you can:

- *Select* a cycle check box to *create* a Maintenance Package record with the corresponding cycle and link it to the Operation record in that row. In other words, each selected check box represents one Maintenance Package record.

- *Clear* a cycle check box to *delete* the Maintenance Package record with the cycle in that column and remove the link between that record and the Operation record in that row. In other words, you can clear a check box to delete the Maintenance Package record it represents.

Consider the image of the **Assign Maintenance Packages for Task List** window shown above. In this image, you can see that:

- Maintenance Package records will be created and linked to the following Operation records:
  - Sand Blast
  - Scrape
- The following cycles are defined for the maintenance strategy specified in the Task List:
  - 3M
  - 1M
  - 1Y
- The *Sand Blast* Operation record is linked to two Maintenance Package records:
  - One with the Cycle *1M*.
  - One with the Cycle *1Y*.
- The *Scrape* Operation record is linked to a Maintenance Package record with the Cycle *3M*.

The following image shows what these records look like in the tree, where they are represented by nodes. Shading has been added to this image in these records:

- Orange shading highlights the Operation records.
- Green shading highlights the Maintenance Package records that are linked to the Operation records.
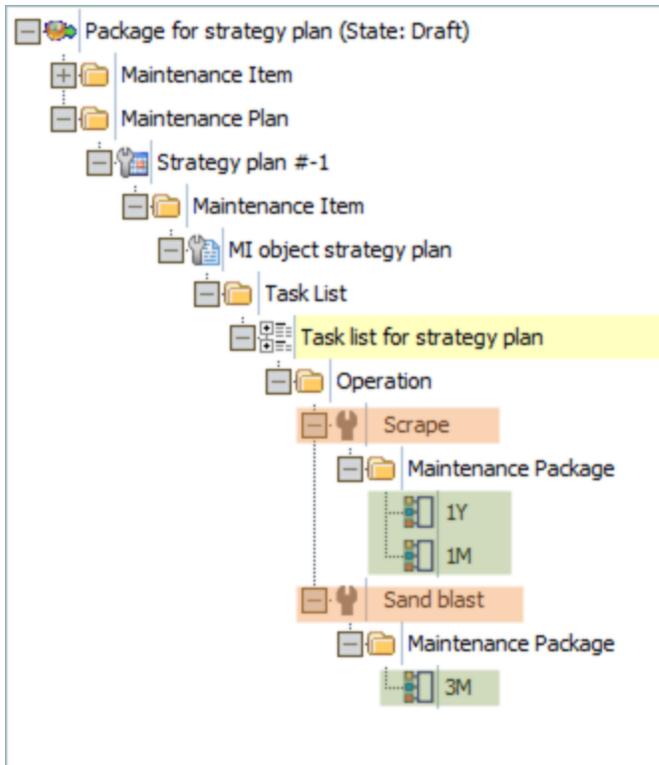
You can manage Maintenance Package records in this way only if the Implementation Package record is in *Draft* or *Modified* state. If the Implementation Package record is in a state other than *Draft* or *Modified*, the **Assign Maintenance Packages** grid is disabled.

Creating Maintenance Package Records Using the Assign Maintenance Packages for Task List Window

To create Maintenance Package records using the Assign Maintenance Packages for Task List window:

1. Access the **Assign Maintenance Packages for Task List** window.

2. Locate the row containing the Operation record to which you want to link the new Maintenance Package records.

3. In the Maintenance Package record area, for each Maintenance Package record that you want to create, select the check box in the cell that corresponds to the desired cycle for the Maintenance Package. For example, if you want to create one Maintenance Package record with the cycle *1M* and one Maintenance Package record with the cycle *1Y*, you would select the check boxes in the **1M** and **1Y** columns, as shown in the following image.
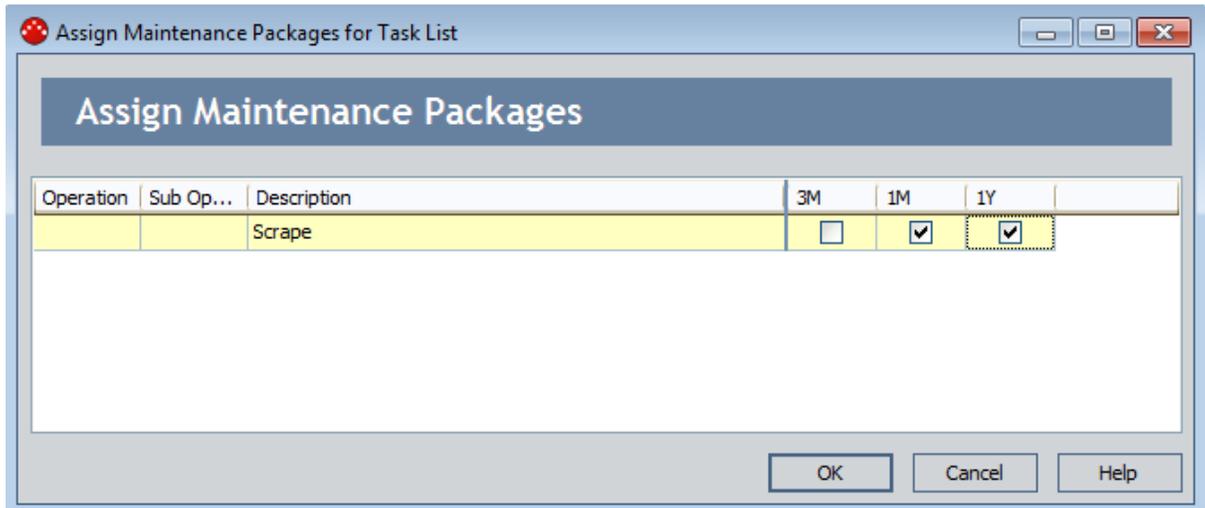
4. Click **OK**.

   The Maintenance Package records are created and linked to the corresponding Operation records. Continuing with the previous example, the following image shows what the new Maintenance Package nodes would look like in the tree. A red outline has been added to this image to highlight the Maintenance Package nodes.
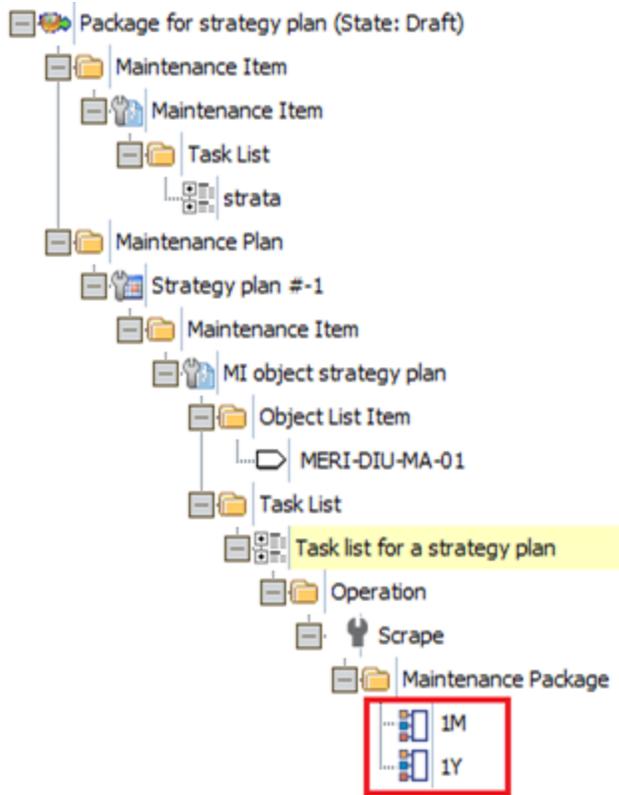
Deleting Maintenance Package Records Using the Assign Maintenance Packages for Task List Window

To delete Maintenance Package records using the Assign Maintenance Packages for Task List window:

1. Access the **Assign Maintenance Packages for Task List** window.

2. Locate the row containing the Operation record that is linked to the Maintenance Package records that you want to delete.

3. In the Maintenance Package records area, for each Maintenance Package record that you want to delete, clear the check box in the cell that represents that Maintenance Package. For example, if you want to delete the Maintenance Package record with the cycle *3M*, you would clear the check box in the **3M** column, as shown in the following image.
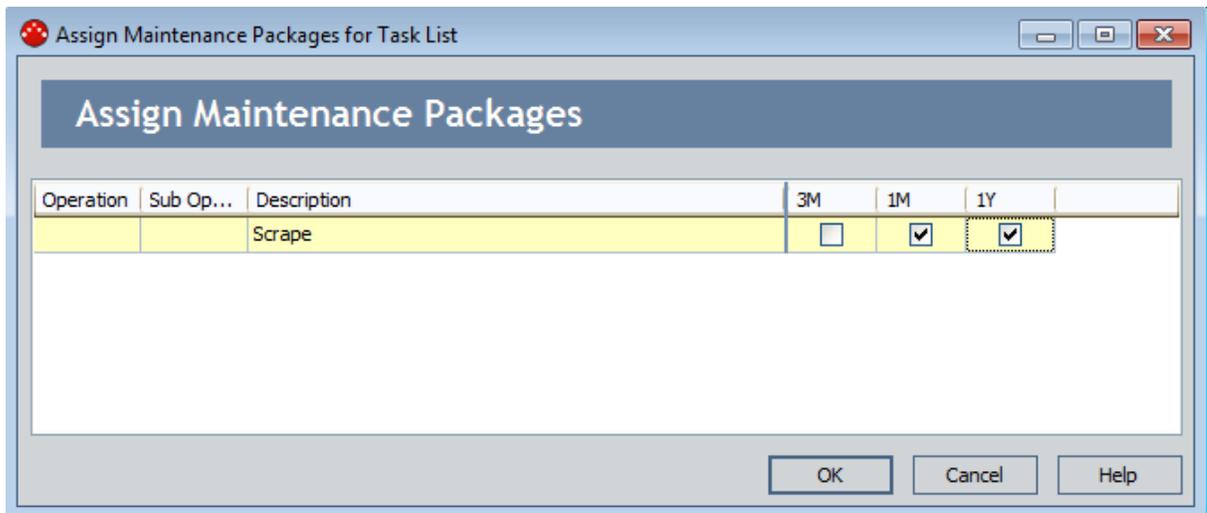
4. Click **OK**.

    The Maintenance Package records are deleted. Continuing with the previous example, the following image shows what the Maintenance Package nodes would look like in the tree now that the Maintenance Package record *3M* has been deleted. A red outline has been added to this image to highlight the Maintenance Package records.
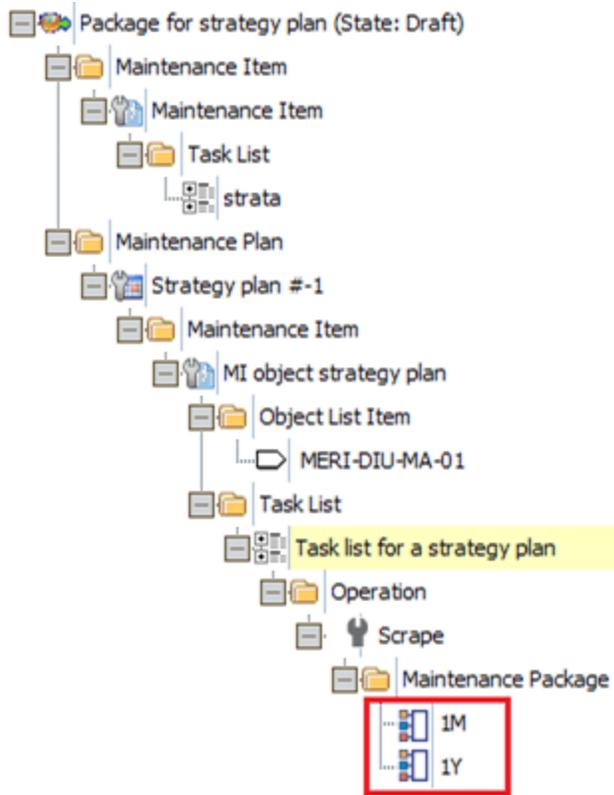
Options for Creating PRT Records

To create a PRT record, you can use the:

- [PRT Builder](#).
- [Packaging Tasks menu](#).
- [Shortcut menu in the tree](#).
- [Implementation Package Builder](#).

Accessing the PRT Builder

To access the PRT Builder:

1. In the tree, select the Task List node representing the Task List record to which you want to link new PRT records.

2. On the **Task List Tasks** menu, click the **Build PRT** link.

   The **PRT Builder** appears.
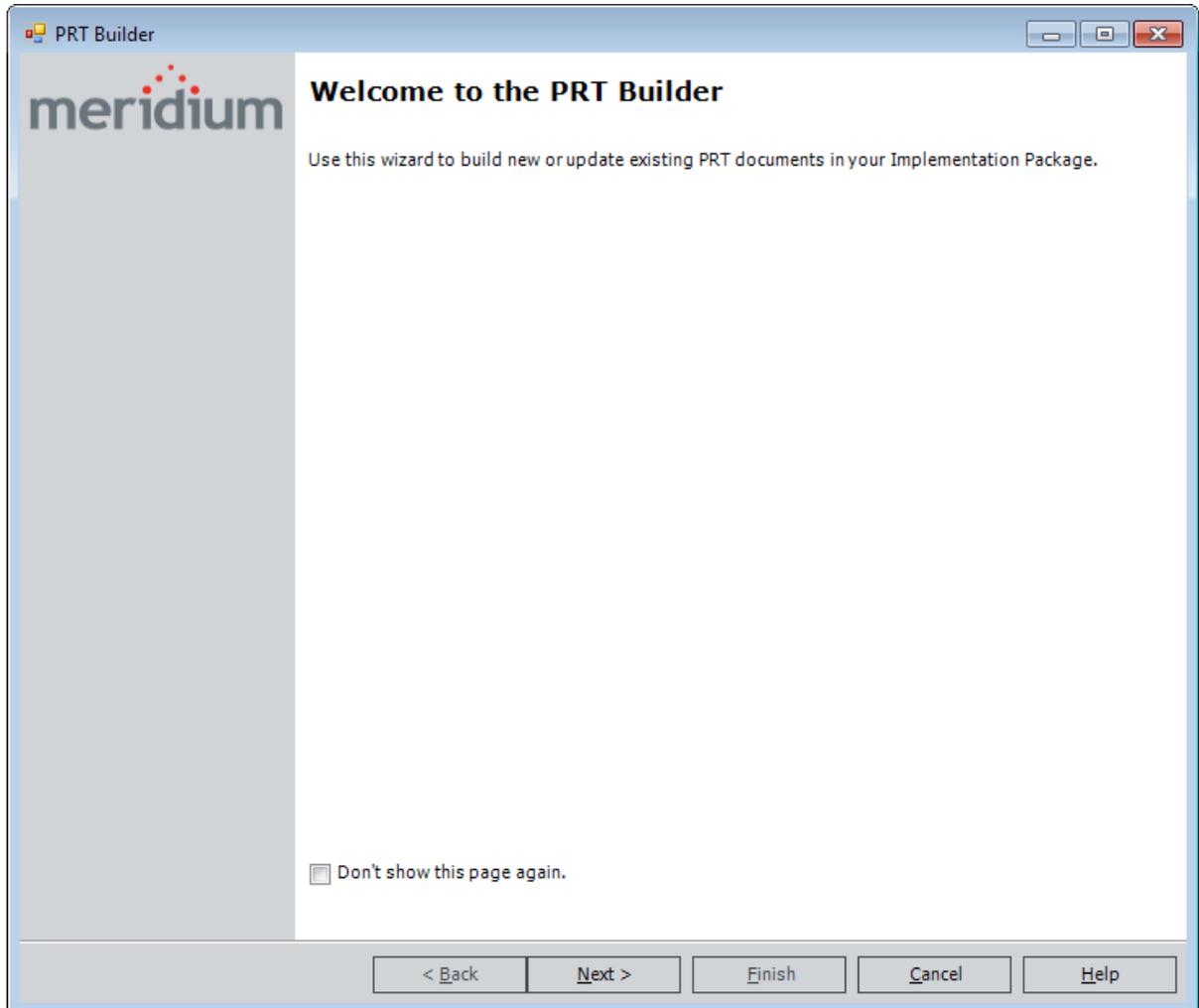
About the PRT Builder

Using the **PRT Builder**, you can:

- [Create a new PRT record and associate it with a new PRT file](#).
- [Modify an existing PRT file that is already associated with a PRT record](#).

After you use the **PRT Builder** to associate a PRT file with a PRT record, when you implement the Implementation Package, the PRT record will be transferred to the SAP system as a PRT, and the PRT file will be transferred to the SAP system as a Word document that is referenced from the PRT.

Creating a New PRT Record Using the PRT Builder

To use the PRT Builder to create a new PRT record:

1. Access the **PRT Builder**.

   The welcome screen appears.

2. Click the **Next** button.

   The **Select Builder Path** screen appears.
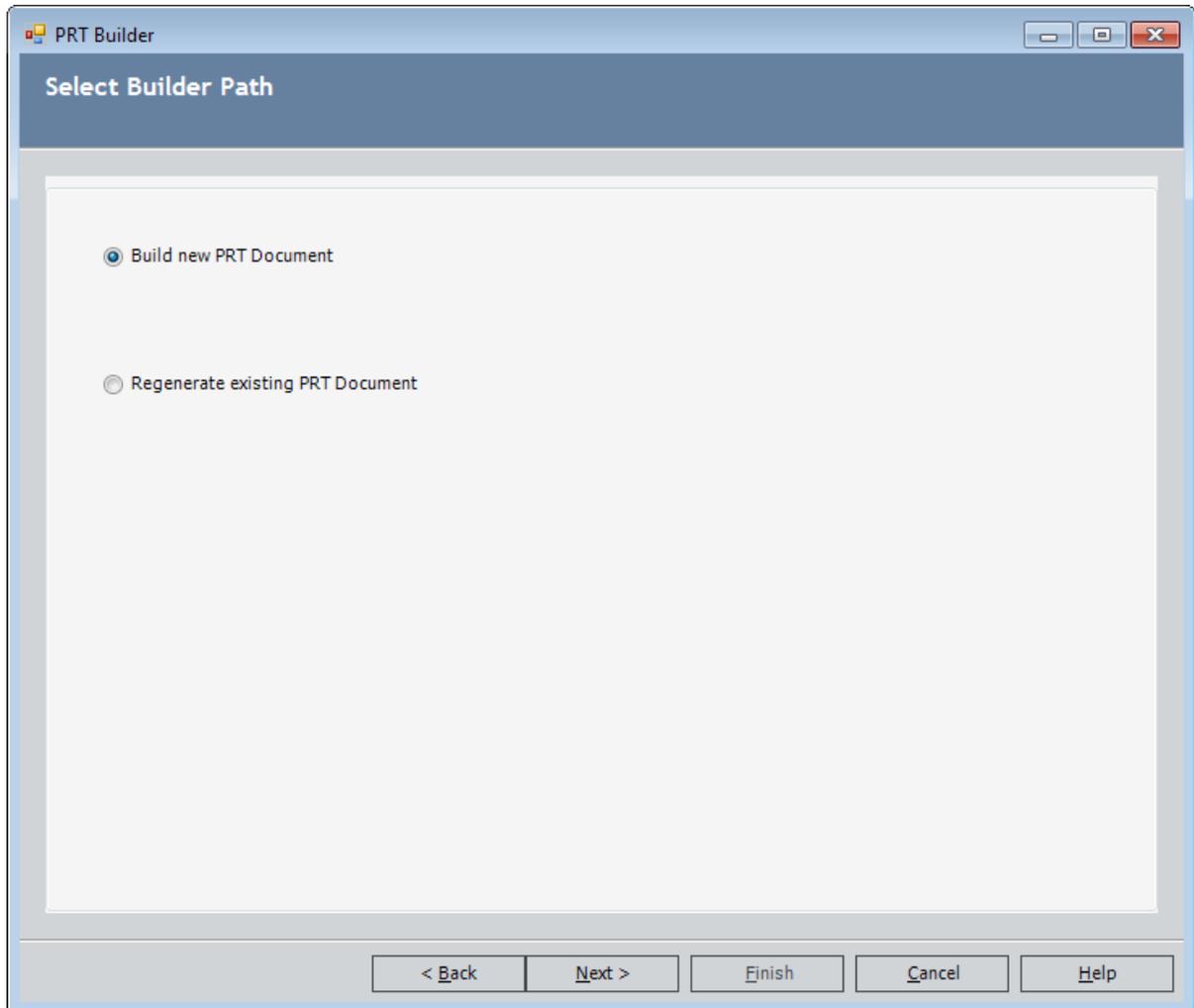
3. Accept the default selection, **Build new PRT Document**, and click the **Next** button.

   The **Define SAP Operation Details** screen appears.
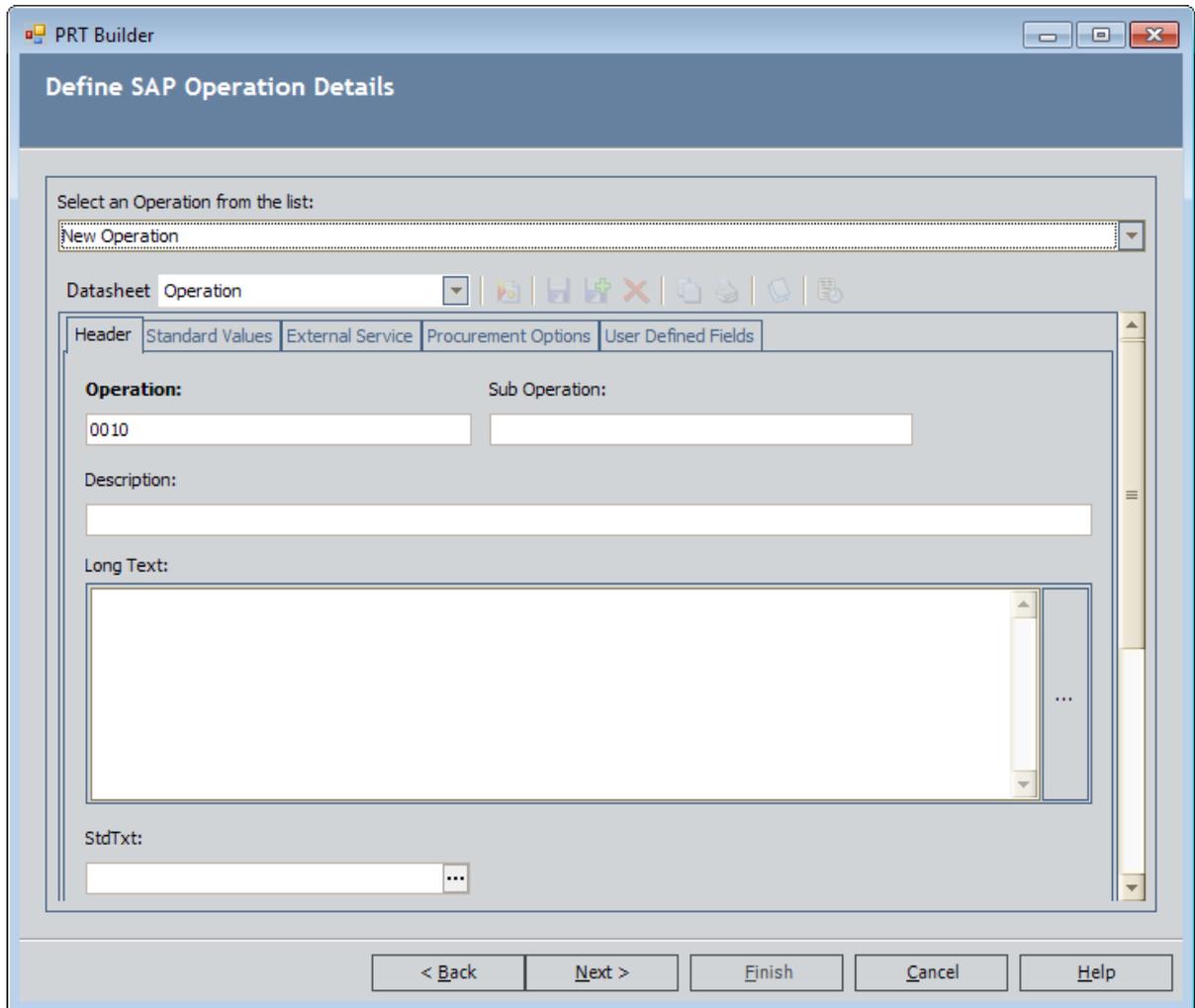
4. Use the **Select an Operation from the list** to select the Operation record to which you want to link the new PRT record.

- To link the PRT record to an existing Operation record, click the ⏷ button, and select the desired Operation record. The list contains all Operation records that are linked to the Task List record from which you accessed the **PRT Builder**.

   -or-

- If you want to link the PRT record to a new Operation record, accept the default selection, **New Operation**, and complete the fields on the Operation datasheet.

5. Click the **Next** button.

> **Note:** If you type a value in the **Sub Operation** text box, you will not be able to click the **Next** button because SAP does not support linking a PRT to a Sub Operation. If you have typed a value in the **Sub Operation** text box, to enable the

> **Next** button, delete the value that you typed and navigate to another field on the same screen.

The **Define SAP Maintenance Package Details** screen appears.

6. If you want to link a Maintenance Package record to the selected Operation record:

   a. Accept the default selection, **Define Maintenance Package for SAP Operation.**

   b. In the **Select a Maintenance Package from the list**, accept the default selection, **New Maintenance Package**.

   c. Complete the fields on the Maintenance Package datasheet.

   -or-

If you do not want to link a Maintenance Package record to the selected Operation record, clear the **Define Maintenance Package for SAP Operation** check box.

7. Click the **Next** button.

    The **Define SAP PRT Details** screen appears.

8. In the **Select a PRT from the list**, accept the default selection, **New PRT**, and complete the fields on the PRT datasheet. Note that you should not populate the Document, Document Part, or Document Version fields. These fields will be populated automatically when the Implementation Package is implemented.

9. Click the **Next** button.

    The **Select the Actions you would like to include in the PRT Document** screen appears, displaying a list of all Actions that have not yet been used to create a work item record (i.e., they appear on the **Unpacked Action** tab on the **Packaging <Package ID>** page) and all Actions that were used to create the Operation record that you selected on the **Define SAP Operation Details** screen.

10. In the grid, in the rows containing the Actions that you want to use to build the PRT file that will be referenced from the new PRT record, select the **Include With PRT** check box.

11. Click the **Next** button.

The **Select the PRT Template** screen appears.
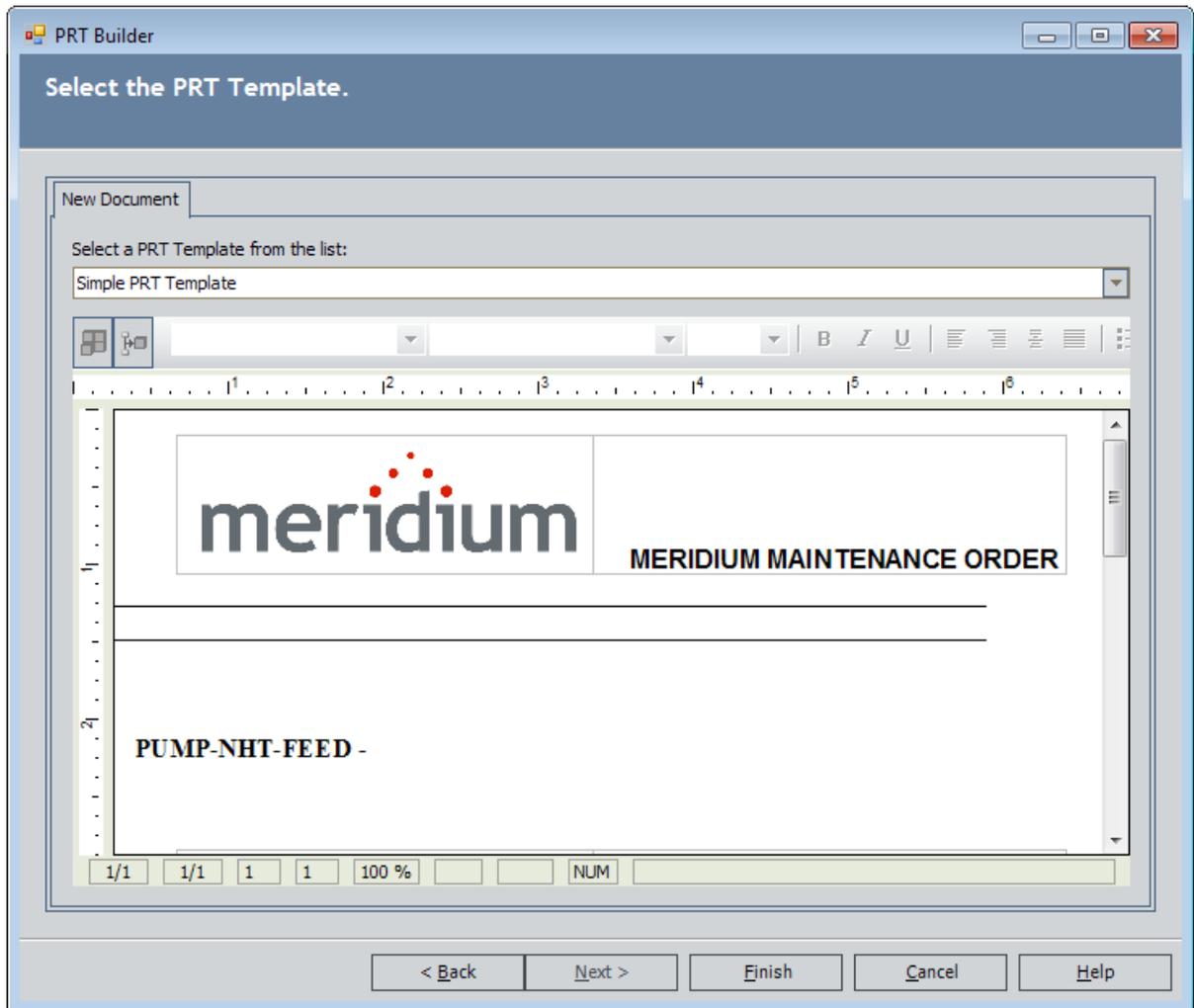
12. In the **Select a PRT Template from the list**, click the ▾ button, and select the PRT template file on which you want to base the PRT file that will be referenced from the new PRT record. The content in the workspace below your selection changes based on the selected PRT template file.

13. If desired, modify the formatting or add additional content to the PRT file. You can add text, images, and tables, but you cannot add merge fields or merge blocks.

14. When you are finished formatting the PRT file, click the **Finish** button.

15. The **Packaging** page returns to focus. In addition:

- The new PRT node appears in the tree below the Operation node representing the Operation record that you selected on the **Define SAP Operation Details** screen.

- If you chose to link a Maintenance Package record to the Operation record that you selected on the **Define SAP Operation Details** screen, the Maintenance Package node appears in the tree below that Operation node.

- The Actions that you selected on the **Select the Actions you would like to include in the PRT Document** screen appear on the **Packaged Actions** stab.

Modifying an Existing PRT File

To use the PRT Builder to modify a PRT file that is associated with an existing PRT record:

1. In the tree on the **Packaging** page, select the Task List record that is linked to the PRT record whose PRT file you want to modify.

2. [Access the **PRT Builder**](#).

   The welcome screen appears.

3. Click the **Next** button.

   The **Select Builder Path** screen appears.
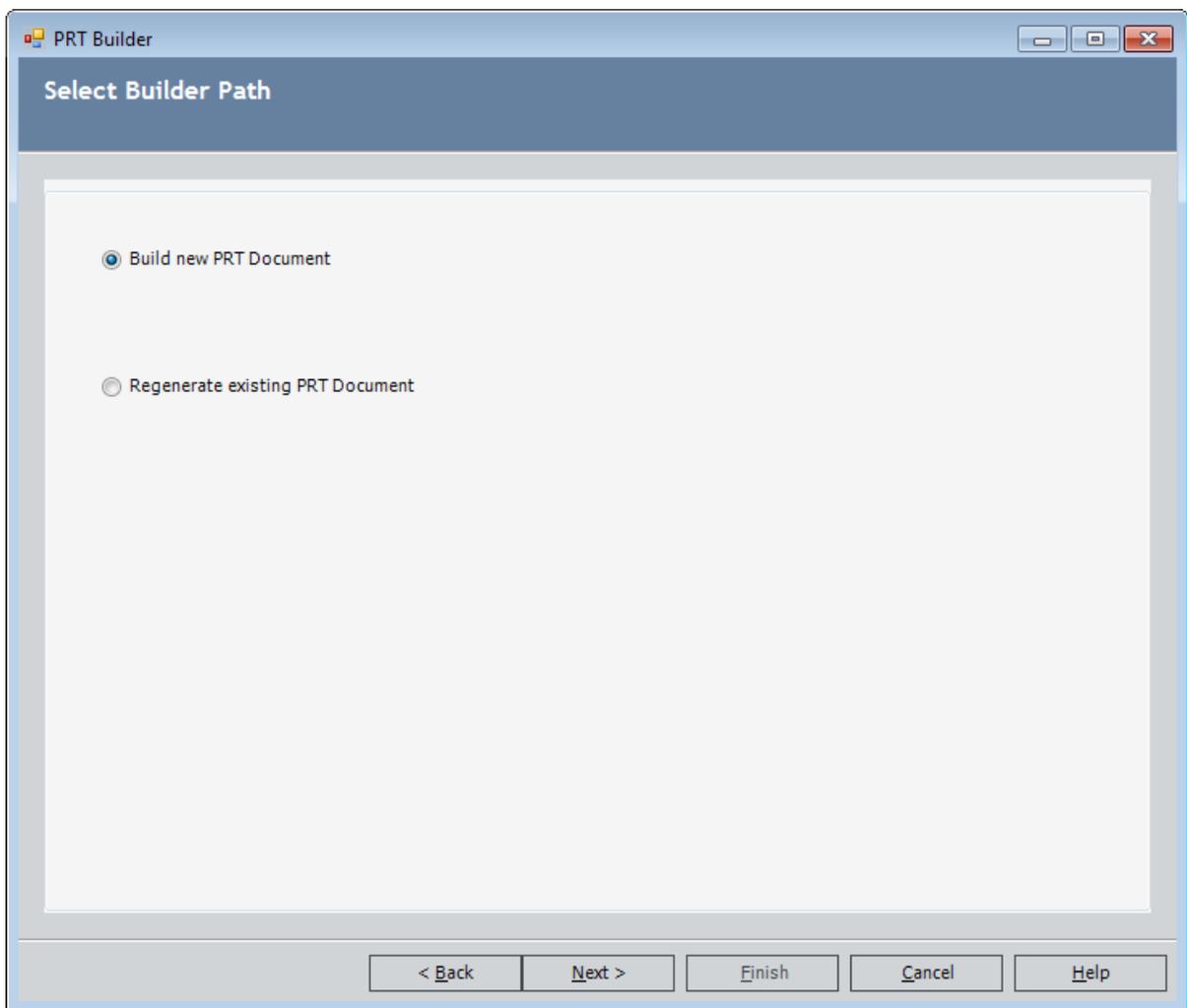
4. Select the **Regenerate existing PRT Document** option, and click the **Next** button.

   The **Define SAP Operation Details** screen appears.

5. In the **Select an Operation from the list**, accept the default selection. The list contains the Operation record that is associated with the PRT record.

6. Click the **Next** button.

    The **Define SAP Maintenance Package Details** screen appears.
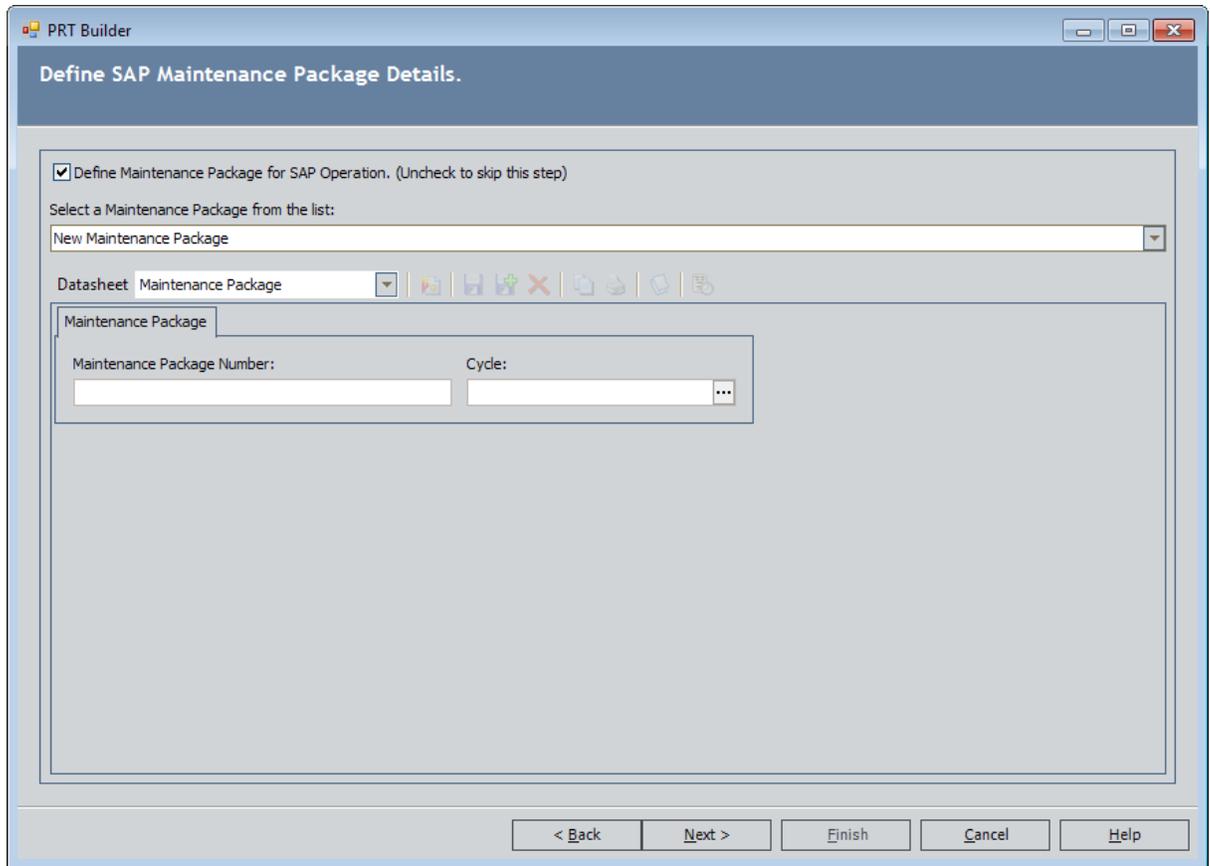
7. If you want to link a Maintenance Package record to the selected Operation record:

   a. Accept the default selection, **Define Maintenance Package for SAP Operation**.

   b. In the **Select a Maintenance Package from the list**, accept the default selection, **New Maintenance Package**.

   c. Complete the fields on the Maintenance Package datasheet.

   -or-

   If you do not want to link a Maintenance Package record to the selected Operation record, clear the **Define Maintenance Package for SAP Operation** check box.

8. Click the **Next** button.

   The **Define SAP PRT Details** screen appears.
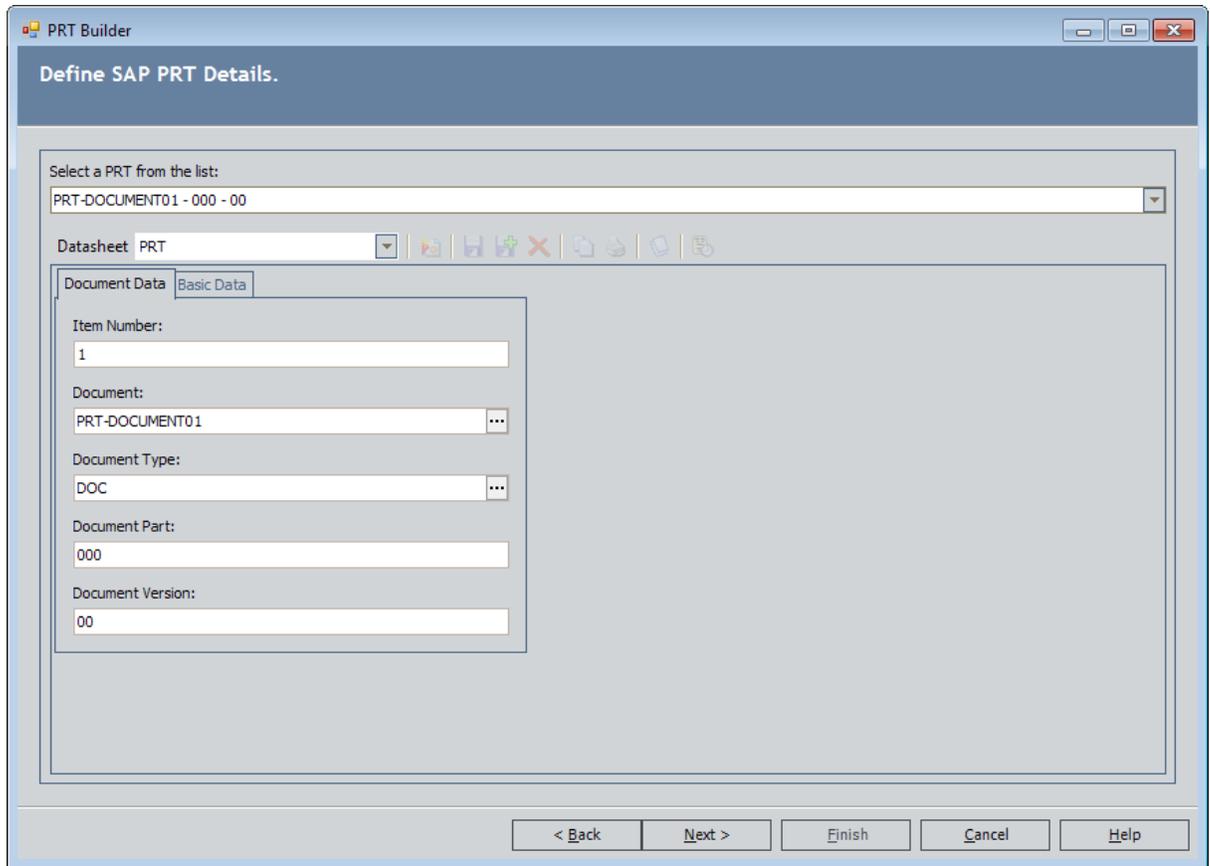
9. In the **Select a PRT from the list**, click the ▼ button, and select the PRT record whose PRT file you want to modify.

10. Click the **Next** button.

    The **Select the Actions you would like to include in the PRT Document** screen appears, displaying a list of all Actions that have not yet been used to create a work item record (i.e., they appear on the **Unpacked Action** tab on the **Packaging <Package ID>** page) and all Actions that were used to create the Operation record that was selected on the **Define SAP Operation Details** screen. The **Include With PRT** check box is selected for any Action that is currently associated with this Operation record.

11. In the grid, in the rows containing the Actions that you want to use to build the PRT file that will be referenced from the new PRT record, select the **Include With PRT** check box. If you want to remove any Actions from the PRT file, you can clear the **Include With PRT** check box in those rows.

12. Click the **Next** button.

    The **Select the PRT Template** screen appears.
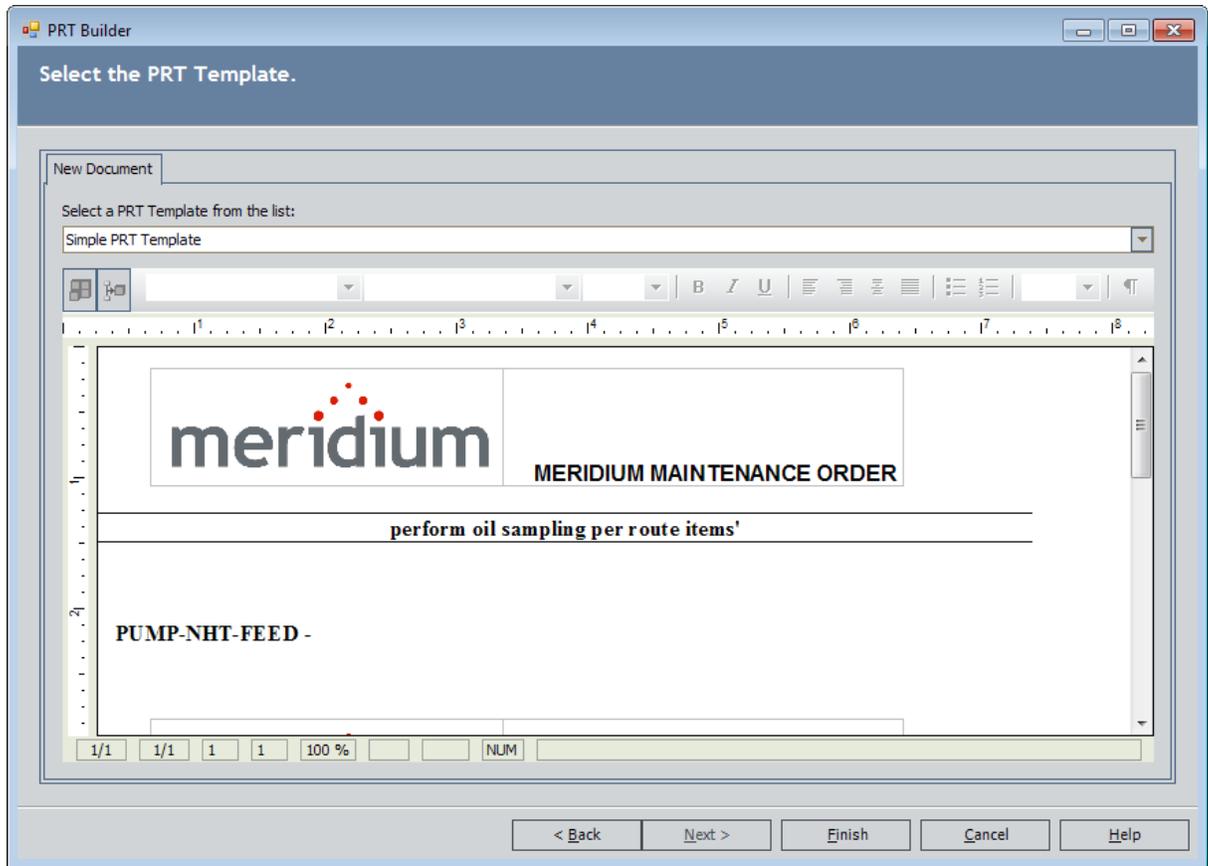
On the **New Document** tab, the **Select a PRT Template from the list** displays the PRT template file that was last used to build the PRT file. The **Previous Document Version** tab displays the current PRT file.

13. To select a different PRT template file to use as the basis for this PRT file, on the **New Document** tab, in the **Select a PRT Template from the list**, click the ▼ button, and select the desired PRT template file.

    A message appears, indicating that any changes you have made to the content on the **New Document** tab will be lost.

14. Click **OK**.

    The content in the workspace below your selection changes based on the selected PRT template file.

15. If desired, modify the formatting or add additional content to the PRT file. You can add text, images, and tables, but you cannot add merge fields or merge blocks.

16. When you are finished formatting the PRT file, click the **Finish** button.

17. The **Packaging** page returns to focus. In addition:

    • If you chose to link a Maintenance Package record to the Operation record that was selected on the **Define SAP Operation Details** screen, the Maintenance

Package node appears in the tree below that Operation node.

- The Actions that you selected on the **Select the Actions you would like to include in the PRT Document** screen appear on the **Packaged Actions** tab.

Options for Creating Object List Item Records

To create an Object List Item record, on the **Packaging** page, you can:

- Click the **Maintain ObjectList** link on the **Maintenance Item Tasks** menu, which will cause the Meridium APM system to create it automatically. You can use this option only if your Implementation Package contains Asset Strategy records that are linked to records in the baseline *Equipment* or *Functional Location* family.
- Create them manually using the **Packaging Tasks** menu or the shortcut menu in the tree.

How the Maintain Object List Link Works

When you select a Maintenance Item record in the tree, the **Maintenance Item Tasks** menu appears, displaying the **Maintain Object List** link.

When you click the **Maintain Object List** link, the Meridium APM system searches the Actions that are associated with the selected Maintenance Item record and any Operation record to which it is linked. If those Actions belong to an underlying Asset Strategy that is linked to an Equipment record, one Object List Item record will be created for each of those underlying Equipment records.

This feature ensures that your Object List Item records are always in sync with the actions that are currently part of the Implementation Package. In general, you should use this feature before packaging any Implementation Package.

For example, suppose an Implementation Package contains the following Asset Strategies with the following Actions.

Asset Strategy 1 - Equipment 100
Action 1 Overhaul every 5 years
Action 2 Inspect every 1 month
Asset Strategy 2 - Equipment 200
Action 1 Overhaul every 2 years
Action 2 Inspect every 1 month
Asset Strategy 3 - Equipment 300
Action 1 Overhaul every 3 years
Action 2 Inspect every 1 month

If you were to associate all of these Actions with a Maintenance Item record, when you selected that Maintenance Item record and clicked the **Maintain Object List** link, the following Object List Item records would be created automatically:

- Equipment 100
- Equipment 200
- Equipment 300

In other words, one Object list Item record is created for each unique underlying Equipment record.

Note that when you click the **Maintain Object List** link, the Meridium APM system not only creates Object List Item records but also *deletes* Object List Item records when appropriate (e.g., an Action has been disassociated from a Maintenance Item record since the Object List Item record was last created).

Options for Creating Task List Records

To create a Task List record, on the **Packaging** page, you can:

- Create it automatically from an existing Task List in SAP. If you choose to create a Task List record from an existing SAP Task List, you can use either of the following options:

  - Create the Task List record as a *reference* to the existing SAP Task List. Task List records that are created as references to existing SAP Task Lists cannot be modified in the Meridium APM system. When the Implementation Package is implemented, the new SAP Maintenance Item that is created from the associated Meridium APM Maintenance Item record will be associated automatically with the *existing* SAP Task List from which you created the Task List record.

  - Create the Task List record as a *copy* of the existing SAP Task List. Task List records that are created as copies of existing SAP Task Lists can be modified in the Meridium APM system. When the Implementation Package is implemented, the new SAP Maintenance Item that is created from the associated Meridium APM Maintenance Item record will be associated automatically with a *new* SAP Task List.

  -or-

- Create them manually using the **Packaging Tasks** menu or the shortcut menu in the tree.

Creating a Task List Record from an Existing SAP Task List

> **Note:** You can create a Task List record from an SAP Task List only if the Maintenance Item record to which the new Task List record will be linked is not already linked to a Task List record. Also, the Implementation Package record must be in a state that allows it to be modified (e.g., Draft).

To create a Task List record from an existing SAP Task List:

1. Open the Implementation Package to which you want to add a new Task List record.

   The **Packaging** page appears.

2. In the tree, select the Maintenance Item node *under* which you want to create a new Task List node.

3. On the **Maintenance Item Tasks** menu, click the **Locate Task List** link.

   The **Locate Task List** window appears, displaying the **Search Criteria** tab.

4. In the **Task List Type** list, select the type of Task List that you want to use to create a new Task List record.

5. In the remaining text boxes, type values to limit the Task Lists that will be returned by the search. To return Task Lists with ANY value in a given field, accept the default selection: *

> Note: The **Maintenance Strategy** text box is disabled and displays the value in the Maintenance Strategy field of the Maintenance Item record to which the Task List record will be linked. This ensures that your search results will return Task Lists from the appropriate category.

6. When you are finished defining the search criteria, click the **Search** button.

The **Search Results** tab appears, displaying the Task Lists that the specified criteria.

7. On the **Search Results** tab, select the row containing the Task List that you want to use to create a new Task List record, and click **OK**.

   A message appears, asking if you want to create the Task List record as a *reference* to the selected Task List or as a *copy* of the selected Task List.

   Link or Copy Task List?

   You can create a new Task List record as a "Reference Only" or as a "Copy" of this Task List. Task List records that are created as "Reference Only" cannot be modified in Meridium APM.

   Click Yes to create the Task List record as a "Reference Only". Click No to create the Task List record as a "Copy."

   [Yes]   [No]   [Cancel]
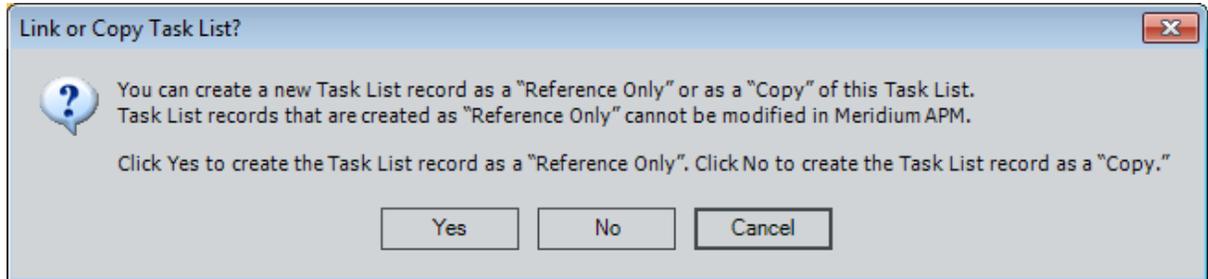
8. If you want to create the Task List record as a *reference* to the selected Task List, click the **Yes** button. Task List records that are created as a reference to an SAP Task List cannot be modified in the Meridium APM system.

   -OR-

   If you want to create the Task List record as a *copy* of the selected Task List, click the **No** button. Task List records that are created as a copy of an SAP Task List can be modified in the Meridium APM system.

   A new Task List record is created and linked to the selected Maintenance Item record. In addition, if the SAP Task List contains Operations and PRTs, new Operation and PRT records are also created. The tree is also updated to reflect the new records.

   If you created the Task List record as a *reference* to the SAP Task List, the fields on the Task List record and any successor Operation records are disabled. If you created the Task List record as a *copy* of the SAP Task List, the fields are enabled.

Associating an Action with an Existing Work Item

To associate an Action with an existing work item:

1. [Open the Implementation Package](#) that contains the work item that you want to associate with an Action.

   The **Packaging** page appears.

2. In the tree, select the node that you want to associate with an Action.

3. On the **Unpackaged Action** tab, select the row containing the Action that you want to associate with the selected node.

4. On the **Action Tasks** menu, click the **Link Action** link.

   The Action is removed from the grid on the **Unpackaged Actions** tab and added to the grid on the **Packaged Actions** tab. In addition, the Action Revision record is linked to the record that is represented by the selected node.

Removing the Association Between an Action and a Work Item

After you have associated an Action with a work item, you might decide that you no longer want that Action to be associated with that work item.

To remove the association between an Action and a work item:

1. [Open the Implementation Package](#) that contains the work item that you want to disassociate from an Action.

   The **Packaging** page appears.

2. In the tree, select the node that you want to disassociate from an Action.

3. Click the **Packaged Actions** tab.

4. On the **Packaged Actions** tab, select the row containing the Action that you want to disassociate from the selected node.

5. On the **Action Tasks** menu, click the **Unlink Action** link.

   The Action is removed from the grid on the **Packaged Actions** tab and added to the grid on the **Unpackaged Actions** tab. In addition, the corresponding Action Revision record is unlinked from the record that is represented by the selected node.

About Updating Work Item Records with Changes to Actions

If someone makes a change to an Action in an Asset Strategy, a new Action Revision record is created to capture the updated values. If you have created one or more records from that Action, you will need to update those records so that they reflect the values in the most recent Action Revision record.

For example, consider the Asset Strategy *Dryer Strategy* with an Action of *Clean the lint trap*, where the interval is *1 week*. The first time this Action is created, an Action record and an Action Revision record are created to store the Action values. Suppose that you create an Inspection Task record from this Action via ASI.

If someone later modifies the Action via ASM to change the interval to *2 weeks*, a new Action Revision record will be created to store the updated value. You will then want to update the Inspection Task record to reflect the new interval, too.

In a scenario like this:

- The **Unpackaged Actions** tab will contain a row for the Action, where the values in the grid reflect the *updated* Action values.
- The **Packaged Actions** tab will contain a row for the Action, where the values in the grid reflect the *previous* Action values.

Only changes to values in the following fields will trigger an Action to appear on the **Unpackaged Action** tab:

- Action Basis
- Name
- Description
- Action Type
- Condition Monitoring Type
- Interval
- Interval Units
- Performance Interval
- Performance Interval Units
- Nonrecurring
- Existing Plan
- Mandatory
- Shutdown Required
- Recommended Resource

Updating a Work Item Record After an Action is Changed

To update a work item record after an Action is changed:

1. Open the Implementation Package that contains the work item record that you want to update.

   The **Packaging** page appears.

2. In the tree, if it is not already selected, select the root Implementation Package node.

3. In the grid on the **Unpackaged Actions** tab, in the row that contains the icon, in the **Work Management Item ID** column, click the hyperlink.

   The node representing the associated work item record is highlighted in the tree.

4. In the grid, select the same row in which you clicked the hyperlink.

5. On the **Action Tasks** menu, click the **Apply Updates** button.

   The work item record is updated. The Action is removed from the grid on the **Unpackaged Actions** tab and added to the grid on the **Packaged Actions** tab.

About Transferring Actions to Other Implementation Packages

For any Action that appears on the **Unpackaged Actions** tab, you can:

- [Transfer it to another existing Implementation Package](#).
- [Create a new Implementation Package to which it will be transferred automatically](#).
- [Transfer it back to its original primary Implementation Package](#).

Transferring an Action to an Existing Implementation Package

To transfer an Action to an existing Implementation Package:

1. On the **Packaging** page, select the **Unpackaged Actions** tab.

2. In the row containing the Action that you want to transfer to an existing Implementation Package, right-click the row, point to **Move To**, and click **Existing Secondary Package**.

The **Existing Secondary Package** window appears, displaying the results of the Catalog query Move to Existing Secondary Package. By default, the query is configured to display all existing Implementation Packages, except for the Implementation Package that you are currently viewing on the **Packaging** page, where those Implementation Packages are associated with the same SAP system as the current Implementation Package.

3. In the **SAP System** list, accept the default selection.

> **Note:** If you want to transfer the Action to an Implementation Package that is associated with a different SAP system than the current Implementation Package, you can select the appropriate SAP system in the **SAP System** list. The Meridium APM Best Practice for ASI, however, assumes that you want to transfer the Action to an Implementation Package that is associated with the same SAP system as the current Implementation Package.

4. In the grid, select the row containing the existing Implementation Package to which you want to transfer the Action, and click **OK**.

The Action is transferred to the selected Implementation Package, and the **Unpackaged Actions** tab returns to focus, where the transferred Action is removed from the grid. In addition, if you transferred the Action from a *primary* Implementation Package, you can click the **Externally Packaged Actions** tab to see the Action.
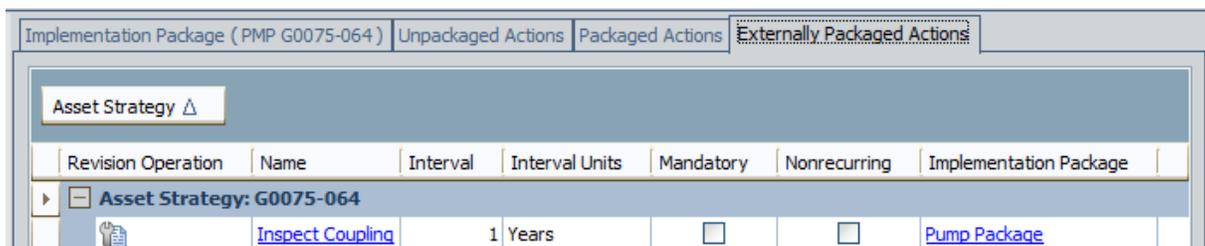
Transferring an Action to a New Implementation Package

To transfer an Action to a new Implementation Package:

1. On the **Packaging** page, select the **Unpackaged Actions** tab.
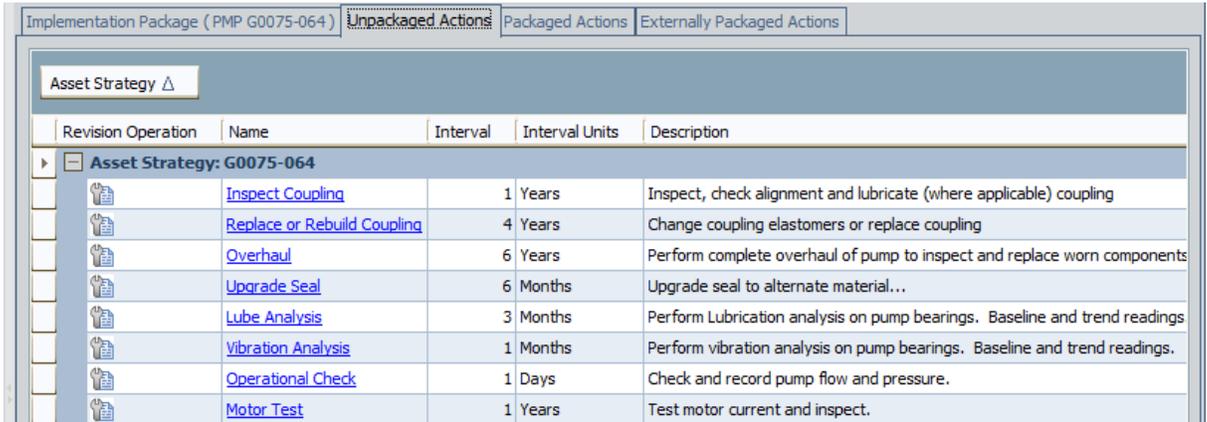
2. In the row containing the Action that you want to transfer to a new Implementation Package, right-click the row, point to **Move To**, and click **New Secondary Package**.
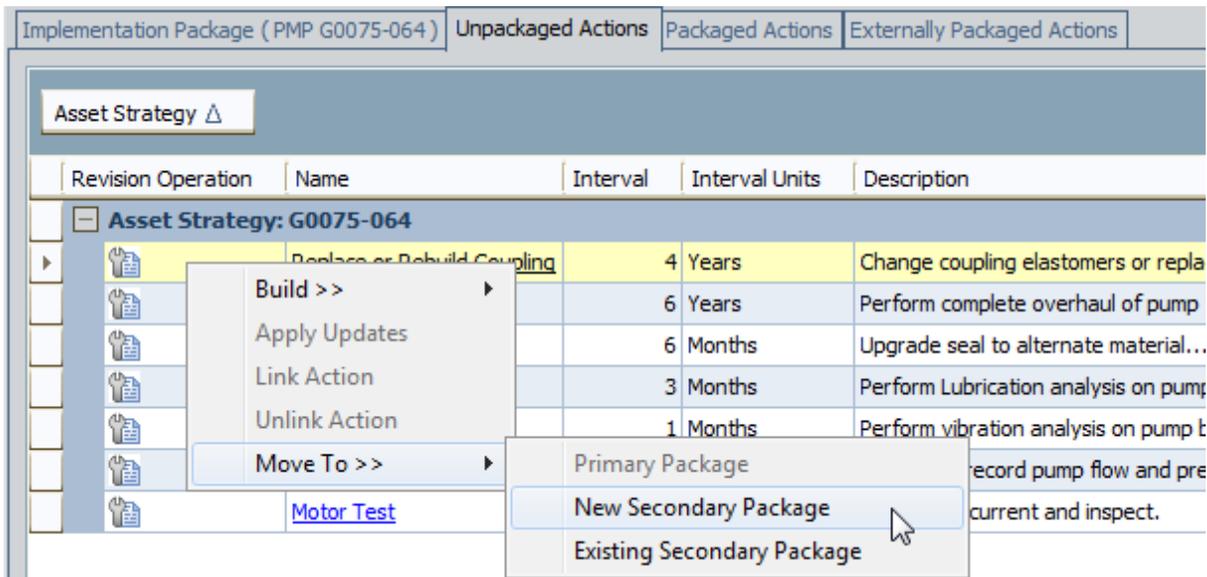
The **New Secondary package (Implementation Package)** window appears. By default, the value in the **ID** text box is *New Secondary Package*.
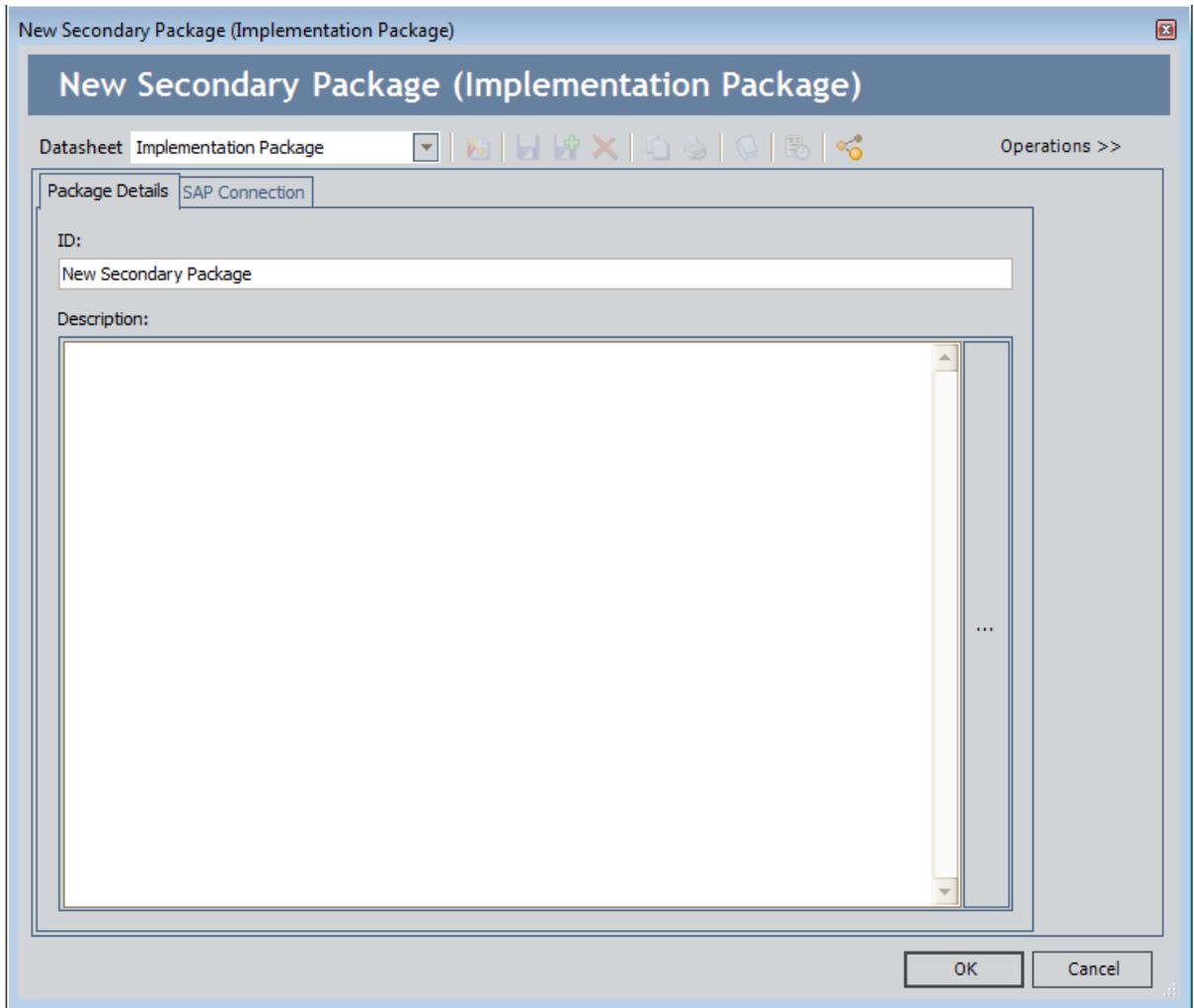
3. In the **ID** text box, replace the default ID with a new ID that accurately describes the new Implementation Package.

4. In the **Description** text box, type a description of the new Implementation Package.

   Note: The new Implementation Package inherits the SAP system from the Implementation Packaging containing the selected Action. While you can select a different SAP system using the ellipsis button on the **SAP Connection** tab, the Meridium APM Best Practice for ASI assumes that you want the new Implementation Package to inherit the SAP system from the current Implementation Package.

5. Click **OK**.

   The Implementation Package record is saved and linked to the selected SAP System record. In addition, the **Packaging** page returns to focus, and the transferred Action is removed from the **Unpackaged Actions** tab. In addition, if you

transferred the Action from a primary Implementation Package, you can click the **Externally Packaged Actions** tab to see the Action.

Revision Operation	Name	Interval	Interval Units	Mandatory	Nonrecurring	Implementation Package
	Asset Strategy: G0075-064					
	Inspect Coupling	1	Years	☐	☐	Pump Package

Transferring an Action Back to Its Primary Implementation Package

To transfer an Action back to its original primary Implementation Package:

1. On the **Packaging** page, select the **Unpackaged Actions** tab.

2. In the row containing the Action that you want to transfer to its original primary Implementation Package, right-click the row, point to **Move To**, and click **Primary Package**.
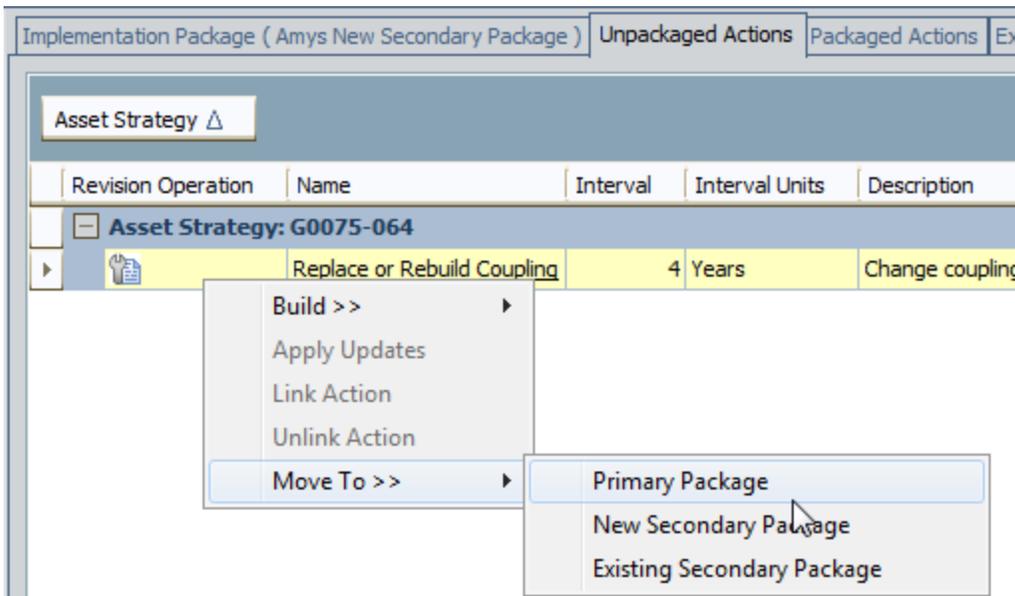
The Action is transferred to its primary Implementation Package, and the **Unpackaged Actions** tab returns to focus, where the transferred Action is removed from the grid.

Navigating Between Packages Containing Common Asset Strategies

When you are viewing an Implementation Package, you can use the following instructions to navigate to another Implementation Package containing one or more of the Asset Strategies that belong to the current Implementation Package. For example, if you are viewing an Implementation Package containing the Asset Strategies *Pump 101 Strategy*, *Pump 102 Strategy*, and *Pump 103 Strategy*, you can navigate from that Implementation Package to any other Implementation Package containing one or more of those Asset Strategies.

To navigate between Implementation Packages:

1. On the **Packaging** page, on the **Asset Strategy Tasks** menu, click the **Navigate** link.

   The **Select Package for Navigation** window appears, displaying the results of the Catalog query Locate Packages for Navigation. By default, the query is configured to display all Implementation Packages (except for the current Implementation Package) that contain one or more of the Asset Strategies that belong to the current Implementation Package.
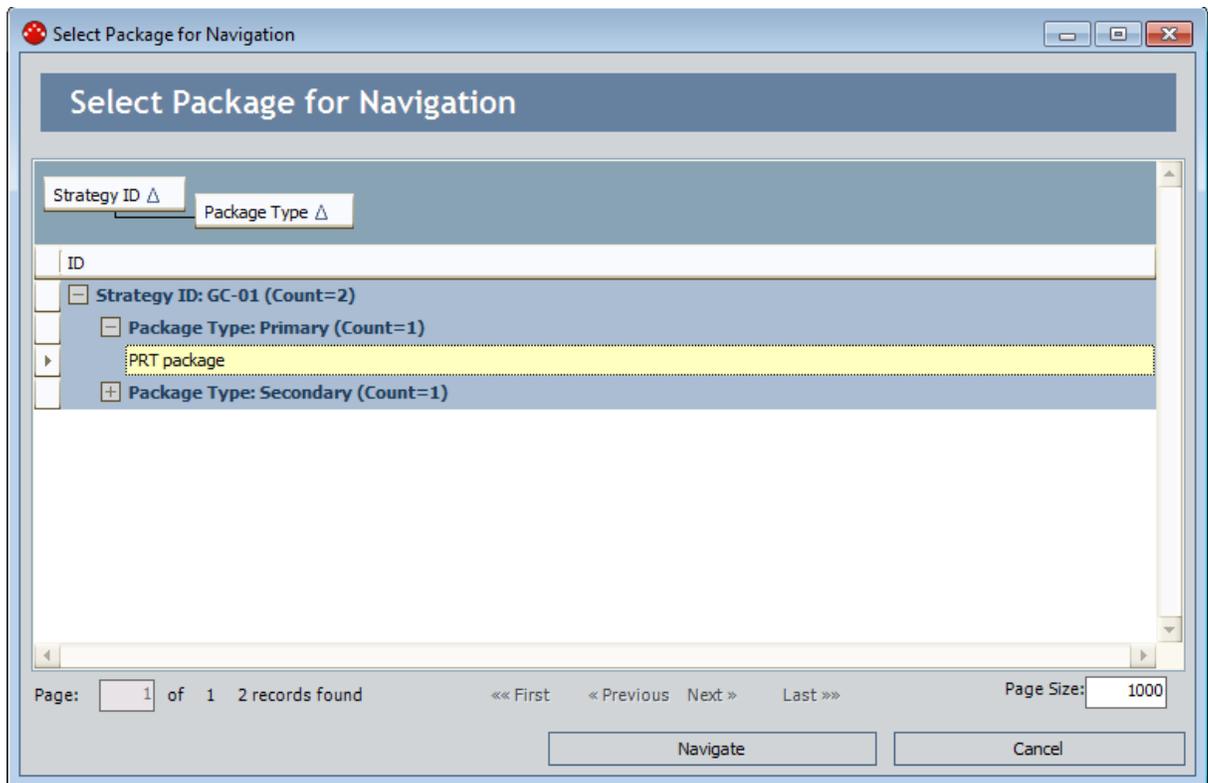
2. In the grid, select the row containing the Implementation Package to which you want to navigate, and click the **Navigate** button.

   The selected Implementation Package appears on the **Packaging** page.

Navigating From a Primary Package to a Secondary Package

If you are viewing a primary Implementation Package, you can navigate to any secondary Implementation Package to which you have transferred an Action from the current primary Implementation Package.

To navigate from a primary Implementation Package to a secondary Implementation Package:

1. [Open the primary Implementation Package](#).

2. On the **Packaging** page, click the **Externally Packaged Actions** tab.

3. In the grid, select the row containing the Action belonging to the secondary Implementation Package to which you want to navigate.

4. In the selected row, in the **Implementation Package** column, click the hyperlink.

   The secondary Implementation Package appears on the **Packaging** page.

Populating Records with Standard Text from SAP

Using the **Select Standard Text** window, you can search in SAP for the standard text that you want to copy to a Work Item record. You can access the **Select Standard Text** window using the **Append Standard Text** link, which appears on the context-sensitive task menu for specific Work Item families. The following table lists the Work Item families for which you can obtain standard text from SAP and the task menu from which you can access the **Select Standard Text** window.

Work Item Family	Task Menu
Maintenance Plan	Maintenance Plan Tasks
Maintenance Item	Maintenance Item Tasks
Task List	Task List Tasks
Operation	Operation Tasks
Notification	Notification Tasks

The task menus listed in the table appear only when you select in the tree a node representing a record in the corresponding family. For example, to the see the **Task List Tasks** menu, you will need to select a *Task List* node in the tree.

When you append standard text from SAP to a Work Item record, the Meridium APM system will import the standard text from SAP and automatically copy it to the Long Text field in the current record, with the exception of Notification records. Standard Text is copied to the Description field in Notification records. If the Long Text or Description field (for Notification records) already contains a value, the Standard Text will be appended to the existing value.

The following instructions provide details on performing this procedure. These instructions assume that you are viewing an Implementation Package on the **Packaging** page.

To append standard text from SAP to a Work Item record:

1. In the tree, select the node representing the record to which you want to append standard text from SAP.

   The context-sensitive task menu for that family appears in the task menu pane.

2. On the context-sensitive task menu for that family (e.g., **Task List Tasks**), click the **Append Standard Text** link.

   The **Select Standard Text** window appears, and the **Search Criteria** tab is selected by default.
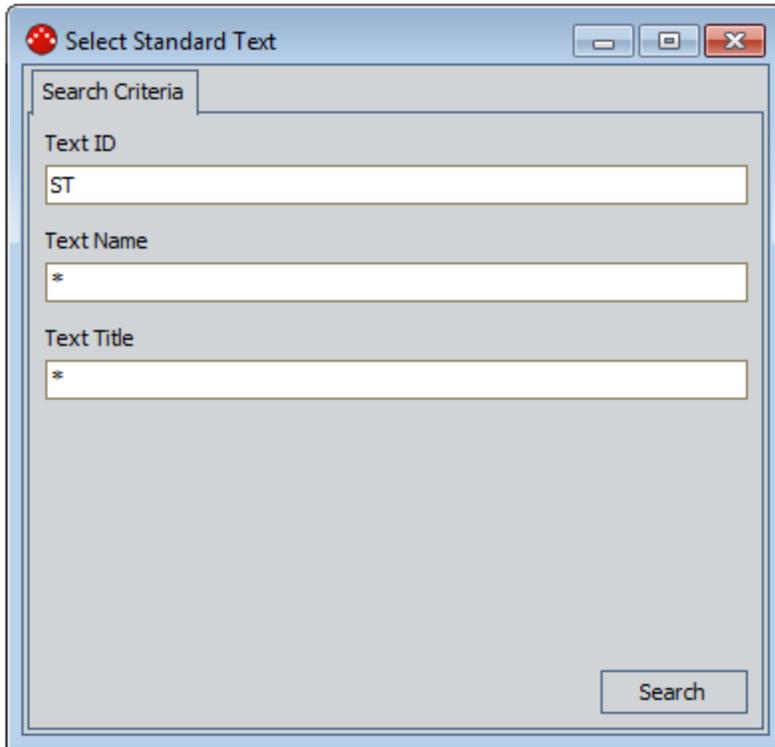
3. In the **Text ID** cell, accept the default value *ST*.

4. In the **Text Name** cell, you can:

   - Accept the default value ***, which will return ALL the standard text values from SAP.

   -OR-

- Enter the name associated with the desired standard text in SAP.

5. In the **Text Title** cell, you can:

- Accept the default value ***, which will return ALL the standard text values from SAP.

   -OR-

- Enter the title associated with the desired standard text in SAP.

6. Click the **Search** button.

   The **Search Results** tab appears, displaying the results for the search criteria you entered on the **Search Criteria** tab.
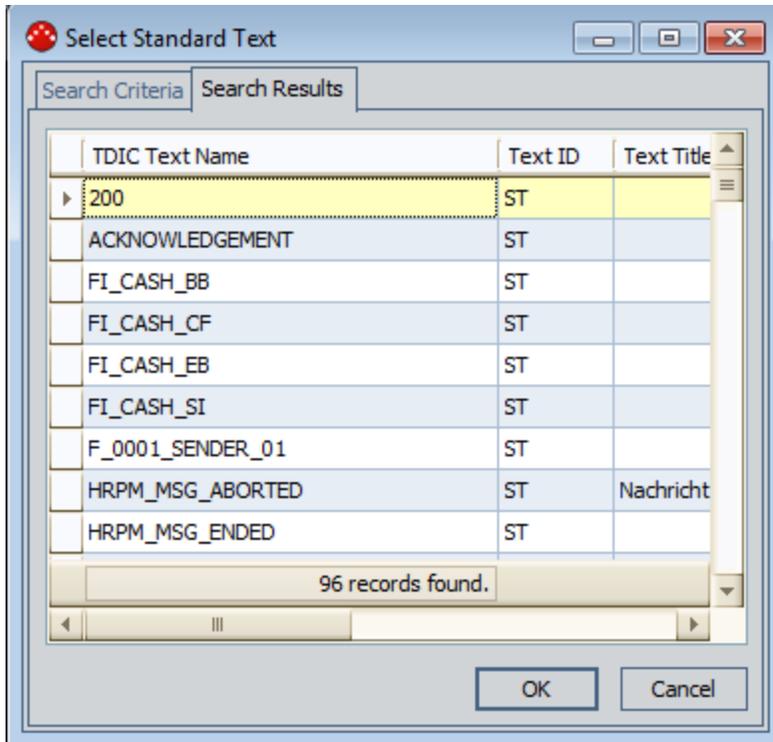
7. In the search results, select the row containing the standard text that you want to copy to the current record.

8. Click **OK**.

   The selected standard text is copied to the Long Text field or Description (for Notification records) field in the record represented by the currently selected node.

Searching for SAP Data from a Meridium APM Datasheet

After you create a record that represents an SAP work item, some fields in that record will need to be populated manually. Because the fields should store SAP values that will be transferred to the SAP database when you implement the Implementation Package, Meridium APM provides a way for you to use the datasheet to query the SAP database for a list of valid values that the SAP database will accept.

To search for SAP data from a Meridium APM datasheet:

1. Open the desired Implementation Package record.

   The **Packaging** page appears.

2. In the tree, select a node that represents an SAP work item (e.g., a Maintenance Plan node).

3. In the datasheet section to the right of the tree, in the field that you want to populate with a valid value from the SAP database, click the ⋯ button.

   > Œ**Hint:** Meridium APM text fields also use an ⋯ button to indicate that you can access the Text Editor.

   The **Select a <Field Caption>** window appears, where **<Field Caption>** is the caption of the field from which you accessed the window.
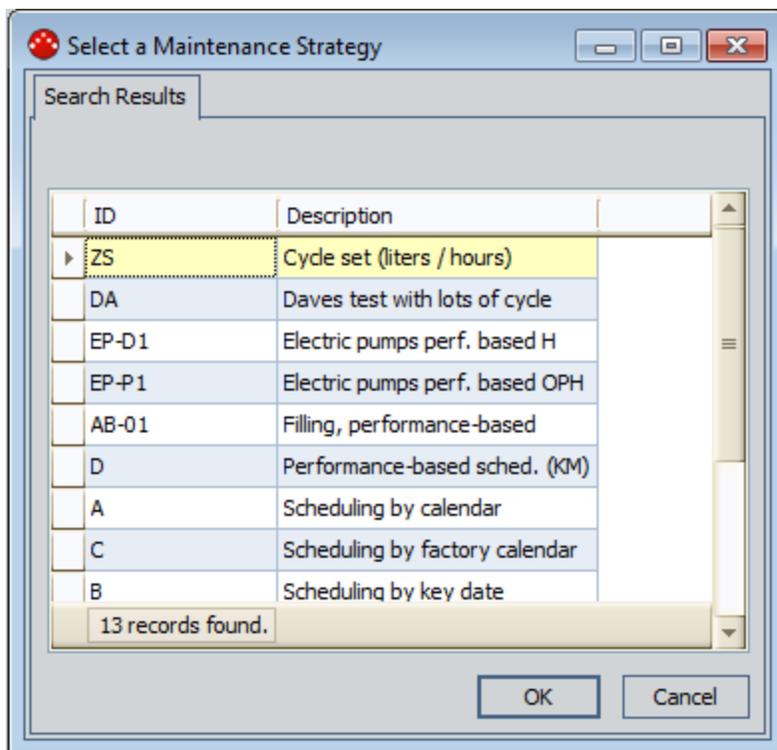
4. If a **Search Criteria** tab appears:
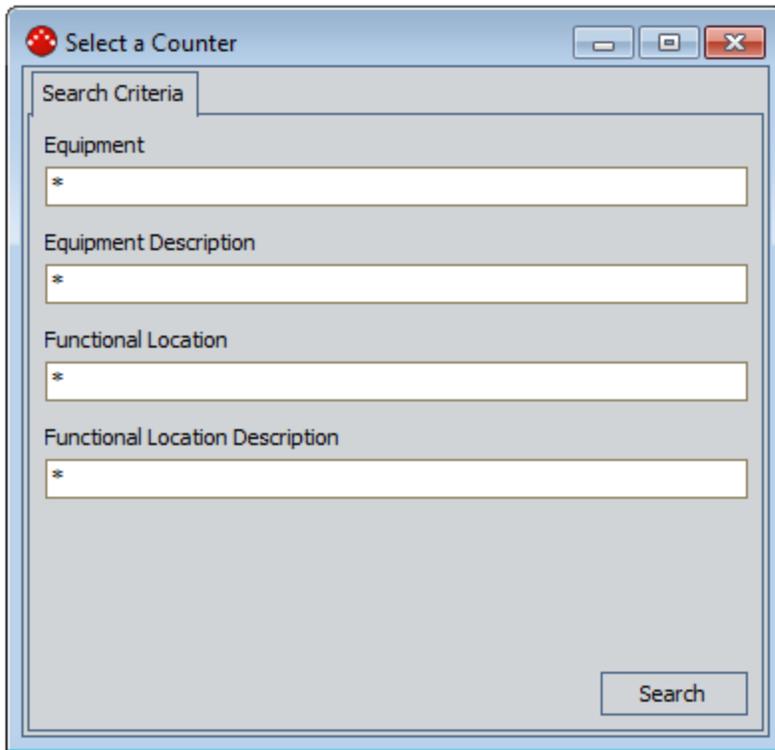
...type the desired criteria in the available cells. To return all values, you can select the default selection, which is the asterisk (*) symbol.

-OR-

If a **Search Criteria** tab does not appear, proceed to step 5 of these instructions.

5. On the **Search Results** tab, select the row containing the value that you want to use for populating the field, and click **OK**.

The selected value appears in the field.

Populating the Equipment or Functional Location Field in a Task List Record Automatically

If a Maintenance Item record contains a value in either the Functional Location or Equipment field, after you create a Task List record that is linked to that Maintenance Item record, you can use the following instructions to copy that value to the Task List record.

To populate the Equipment or Functional Location field in a Task List record automatically:

1. Open the desired Implementation Package record.

   The **Packaging** page appears.

2. In the tree, select the Maintenance Item node representing the record that is linked to the Task List record whose Equipment or Functional Location field you want to populate automatically.

3. On the **Maintenance Item Tasks** menu, click the **Synchronize Reference Object** link.

   If the Maintenance Item record contains a value in the Functional Location field, the value is copied to the Functional Location field in the Task List record. Likewise, if the Maintenance Item record contains a value in the Equipment field, the value is copied to the Equipment field in the Task List record. In addition, the field in the Task List record to which the value was copied is disabled, ensuring that the two values will never be different.

   > **Note:** If you later decide to create a general Task List from this Task List record, you can remove the value from the Equipment or Functional Location field in the Maintenance Item record, which will cause it to be removed automatically from the Task List record.

Saving Values in a Work Item Record

As you create new records that represent work items and the records are linked to the Implementation Package record, the Meridium APM system saves the records and the links automatically. If, however, you modify a value on any of the datasheets, you will need to save those changes manually.

To save modified values in a record that represents a work item:

- After you have modified a value in a datasheet to the right of the tree, on the **Common Tasks** menu, click the **Save <Entity ID>** link, where **<Entity ID>** is the Record ID of the selected record.

  The updated values are saved to the Meridium APM database.

Packaging an Implementation Package

After you are finished creating work items records, you can package the Implementation Package. Doing so makes all records that are linked to the Implementation Package read-only. A reviewer can then evaluate the Implementation Package and decide to implement it, which will create the appropriate items in the SAP system, or revert it to a modifiable state for additional work.

To package an Implementation Package:

1. Open the Implementation Package whose state you want to set to Packaged.

   The **Packaging** page appears.

2. On the **State Configuration Tasks** menu, click the **Package** link.

   A message appears, asking if you are sure you want to perform the operation.

3. Click the **Yes** button.

   The state of the Implementation Package record changes from Draft to Packaged. In addition, in the tree, the label next to the root node changes to reflect the updated state.
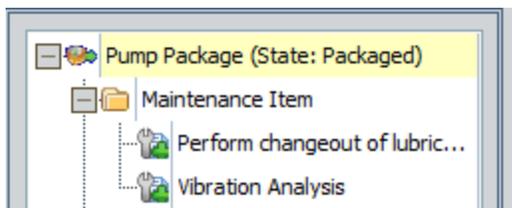
Implementing an Implementation Package

To set the state of an Implementation Package record to Implemented:

1. [Open the Implementation Package](#) whose state you want to change to Implemented.

   The **Packaging** page appears.

2. On the **State Configuration Tasks** menu, click the **Implement** or **Update** link, whichever is available.

   > **Note:** The **Implement** link will be available if the Implementation Package record state has *never* been set to Implemented. The **Update** link will be available if the Implementation Package record state has been set to Implemented and then Modified (through the Revise operation).

   A message appears, asking if you are sure you want to perform the operation.

3. Click the **Yes** button.

   The **Processing Implementation Package <Package ID>** window appears, where **<Package ID>** is the ID of the selected Implementation Package. This window displays the results of the implementation process. Specifically, it indicates whether or not the items were created successfully. If an item was not created, you will see a warning message indicating the cause of the problem.

   > **Note:** If you used to Action to create a record representing a *Meridium APM* work item, such as an Inspection Task record, this window will display a warning message for that item. The warning message will indicate that the item was not implemented because no Execution Mapping is defined. You can disregard this message for any record that represents a *Meridium APM* work item.

4. When you are finished reviewing the status, click the **Close** button.

   A message appears, asking if you want to save the results to an external file. If you do not want to save the results, you can click the **No** button, and the Implementation Package record state will change to *Implemented*. The remaining instructions assume, however, that you want to save the results to a file.

5. On the message, click the **Yes** button.

   The **Save As** dialog box appears.

6. Navigate to the location in which you want to save the file, type a name for the file, and click the **Save** button when you are finished.

   The results of the implementation process are saved to the specified Text file, and the Implementation Package record state changes to Implemented. In addition, in the tree, the label next to the root node changes to reflect the updated state.

Field Values That are Disabled After Implementation

The following table lists the Meridium APM fields that are disabled automatically after you [implement an Implementation Package](implement%20an%20Implementation%20Package).

Family	Field
Maintenance Plan	ID
Maintenance Item	Maintenance Item
Maintenance Item	Category
Maintenance Item	Work Center
Maintenance Item	Work Center Plant
Task List	Equipment
Task List	Functional Location
Task List	Group
Task List	Planning Plant
Task List	Key Date
Task List	Plant
Material	Material Number
Notification	Notification Type

Reverting an Implementation Package to the Draft State

After an Implementation Package is [packaged](#), you cannot:

- Add additional records to the Implementation Package.
- Remove work items from the Implementation Package.
- Create new work item records from Actions.
- Remove the association between a work item record and an Action.

After an Implementation Package is packaged, however, you might decide that you want to make additional changes. To make these changes, you will need to change the state back to Draft.

To revert the state of an Implementation Package back to Draft:

1. [Open the *Packaged* Implementation Package](#) whose state you want to revert to Draft.

   The **Packaging** page appears.

2. On the **State Configuration Tasks** menu, click the **Revert** link.

   A message appears, asking if you are sure you want to perform the operation.

3. Click the **Yes** button.

   The state of the Implementation Package record changes from Packaged to Draft. In addition, in the tree, the label next to the root node changes to reflect the updated state.

Setting an Implemented Implementation Package to a Modifiable State

After an Implementation Package record is implemented, you cannot:

- Add additional records to the Implementation Package.
- Remove work item records from the Implementation Package.
- Create new work item records from Actions.
- Remove the association between a work item record and an Action.

To set the state of an Implemented Implementation Package record to a state where it can be modified:

1. Open the *implemented* Implementation Package whose state you want to change.

   The **Packaging** page appears.

2. On the **State Configuration Tasks** menu, click the **Revise** link.

   A message appears, asking if you are sure you want to perform the operation.

3. Click the **Yes** button.

   The state of the Implementation Package record changes from *Implemented* to *Modified*. In addition, in the tree, the label next to the root node changes to reflect the updated state.
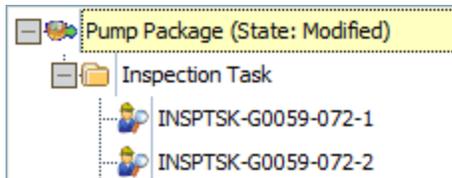
   You can now make the desired changes and reimplement the Implementation Package when you are finished making changes.

Viewing Items in SAP After an Implementation Package Has Been Implemented

After an Implementation Package has been [implemented](#), you can access the SAP system from Meridium APM to see any SAP item that was created from a Meridium APM record.

Note that you can access only Maintenance Plans, Maintenance Items, and Task Lists directly from the associated Meridium APM record. You cannot access Operations, PRTs, Materials, or Object List Items directly from the associated Meridium APM record.

To view an item in SAP after the Implementation Package has been implemented:

1. [Open the *implemented* Implementation Package](#) that contains a record that was used to create an item in the SAP system.

   The **Packaging** page appears.

2. In the tree, select the node associated with the SAP item that you want to view.

3. In the datasheet section to the right of the tree, locate the cell that contains a hyperlink, and click the hyperlink.

   The SAP Login screen appears.

4. Log into the SAP system using a valid user name and password.

   The SAP system appears, displaying the item that is associated with the node that you selected in the tree.

About Updating Items in SAP With Changes in ASI

After an Implementation Package has been implemented, if any of the following records that belong to it are modified or deleted, or the links between the records are removed, when you reimplement the Implementation Package (via the Update operation), the corresponding SAP items will be updated, deleted, or disassociated accordingly:

- Maintenance Item
- Maintenance Plan
- Task List
- Object List Item
- Operation
- Material
- Maintenance Package
- PRT
- Notification

> **Note:** This update functionality will work correctly only if the version of your SAP system supports it (i.e., SAP systems running ECC 6 EhP 5 and higher). Otherwise, when you implement the Implementation Package, a message will appear, indicating that the updates are not allowed.

To facilitate the SAP updates, each of the records listed above contains the Implementation Status field, where the value determines whether or not SAP updates are needed upon implementation of the Implementation Package. The Implementation Status field can contain any of the following values:

- **Added:** The record is new and has not yet been sent to SAP. In this case, when the Implementation Package is implemented, the corresponding SAP item will be created.

- **Modified:** One or more values in the record have changed since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will be updated accordingly.

- **Deleted:** The record has been flagged for deletion since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will be deleted.

- **Unchanged:** The record has not changed since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will remain untouched.

The Implementation Status field is not available on any baseline datasheets. Instead, the value is used to determine the image that is displayed next to the node name in the tree on the **Packaging** page.

Note: Some fields in Meridium APM records are disabled automatically after the Implementation Package is implemented.

About Deleting Implementation Package Records

When you delete an Implementation Package record, the records that are linked to it as successors will not be deleted (e.g., Inspection Task records) from the Meridium APM database. Only the Implementation Package record and the *linksbetween* the Implementation Package record and the successor records will be deleted.

You cannot delete an Implementation Package record that is linked to any work item records that were created from Actions. If an Implementation Package contains records that were created from Actions, you will need to delete those links before you can delete the Implementation Package record. To determine if an Implementation Package fits this description, you can look at the **Packaged Actions** tab on the **Packaging** page for that package. If it contains any items, you cannot delete the Implementation Package record.

In addition, you cannot delete an Implementation Package containing work item records that cannot be deleted (i.e., they are already flagged for deletion, they represent reference Task Lists, or their corresponding Work Management Item Definition Configuration record points to rules indicating that deletion is not allowed).

You can [delete a single Implementation Package record from the **Implementation Package Update** page](#), or you can delete multiple Implementation Package records at one time via the **Implementation Package List** page.

Deleting Implementation Package Records via the Implementation Package Update Page

The following instructions provide details on deleting a single Implementation Package record via the **Implementation Package Update** page. You can delete *multiple* Implementation Package records at one time using the **Implementation Package List** page.

To delete an Implementation Package record via the Implementation Package Update page:

1. On the **Implementation Package Update** page, open the Implementation Package record that you want to delete.
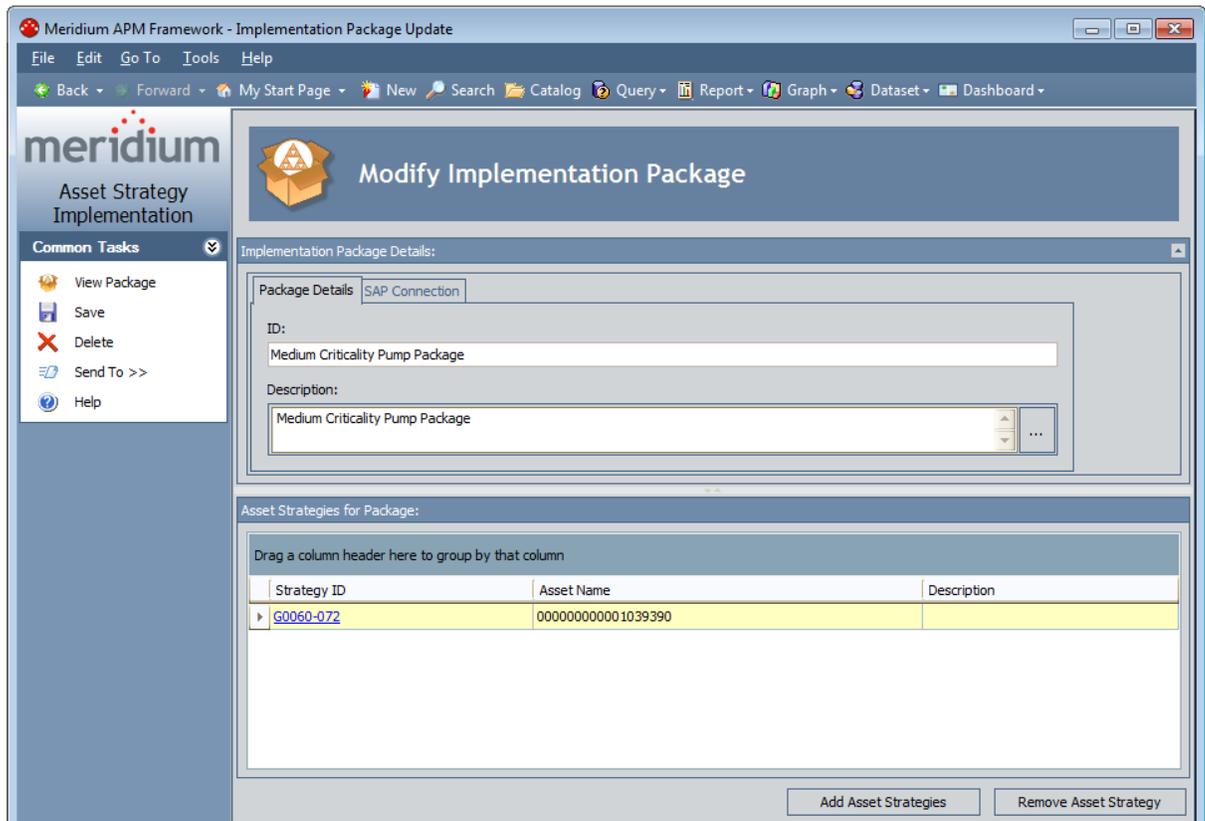
2. On the **Common Tasks** menu, click the **Delete** link.

   The Implementation Package record is deleted, and the **Implementation Package List** page appears.

Deleting Work Item Records Representing Meridium APM Items

To delete records that represent Meridium APM work items (e.g., Task records):

1. Open the Implementation Package that contains the work item record that you want to delete.

   The **Packaging** page appears.

2. In the tree, right-click the node that represents the record that you want to delete.

   A shortcut menu appears.

3. On the shortcut menu, point to **Delete**, and then click one of the following options:

   - **Delete** <**Record Description**>, where <**Record Description**> is the description of the corresponding record. This option will delete only the record represented by the node that you right-clicked.

   -or-

- **Delete <Record Description> and all Child Work Management Items**, where **<Record Description>** is the description of the corresponding record. This option will delete the record represented by the node that you right-clicked *and* the records represented by all successor nodes of that node.

  If the node you selected does not have any successor nodes, the node is removed from the tree, and the corresponding record is deleted from the database.

  -or-

  If the node you selected has successor nodes and you selected to delete the successors, the selected node and its successor nodes are removed from the tree, and the corresponding records are deleted from the database.

Deleting Work Item Records Representing SAP Items

When you delete a work item record representing an SAP item (e.g., Maintenance Item) that has already been sent to SAP through the [Implement](#) or Update operation, the record is *flagged* for deletion but not actually deleted from the database. In addition, the corresponding node remains in the tree with an updated image to indicate that it has been flagged for deletion. When you reimplement the Implementation Package, any records that are flagged for deletion are deleted from the Meridium APM database, and their SAP counterparts are then deleted or unlinked from corresponding items, as appropriate.

If a Task List record was [created from an existing SAP Task List](#), when you delete that Task List record or any successor Operation records to which it is linked, the records *are* deleted immediately from the Meridium APM system instead of being flagged for deletion.

> **Note:** Some SAP items cannot be deleted due to SAP restrictions. In these cases, when you send to SAP a record that has been flagged for deletion in the Meridium APM system, a message appears, indicating that the SAP item was not actually deleted.

To delete records that represent SAP work items:

1. [Open the Implementation Package](#) that contains the record that you want to delete.

   The **Packaging** page appears.

2. In the tree, right-click the node that represents the record that you want to delete.

   A shortcut menu appears.

3. On the shortcut menu, point to **Delete**, and then click one of the following options:

   - **Delete <Record Description>**, where **<Record Description>** is the description of the corresponding record. This option will delete only the record represented by the node that you right clicked.

     -or-

   - **Delete <Record Description> and all Child Work Management items**, where **<Record Description>** is the description of the corresponding record. This option will delete the record represented by the node that you right-clicked and the records represented by all successor nodes of that node.

   If the node you selected does not have any successor nodes, the image next to the node changes to one indicating that the SAP counterpart will be deleted the next time the Implementation Package is implemented.

   -or-

If the node you selected has successor nodes and you selected to delete the successors, the image next to the selected node and all of its successors changes to one indicating that the SAP counterpart will be deleted the next time the Implementation Package is implemented.

 Note: If the deleted node is a child of a parent node (e.g., the deleted node is an Operation that belongs to a parent Task List node), the image next to the parent node changes to indicate that it has been modified.

Undoing the Deletion for Work Items Representing SAP Items

To undo the deletion of records that represent SAP work items:

1. Open the Implementation Package that contains the record for which you want to undo the deletion.

   The **Packaging** page appears.

2. In the tree, right-click the node that represents the deleted record for which you want to undo the deletion.

   A shortcut menu appears.

3. On the shortcut menu, point to **Delete**, and then click **Undo Delete of<Record Description>**, where **<Record Description>** is the description of the corresponding record.

   The deletion is undone, and the red X is removed from the node's image.

ASI Associated Pages

The **Associated Pages** menu appears on the **Packaging** page and will display the Associated Pages that have been defined for the family of the record whose node is currently selected in the tree. There are no baseline Associated Pages defined for the ASI families.

About the ASI Catalog Folder Structure

The main ASI Catalog folder is \\Public\Meridium\Modules\Asset Strategy Management\Implementation. This folder contains a subfolder, Queries, which contains [baseline queries that are used by default in ASI](#).

If desired, you can store additional items in the main ASI Catalog folder or in the Queries subfolder. In addition, you can create new subfolders to store additional items.

> **Note:** All Public folders exist by default. Any baseline item in the Baseline folder is also available in the corresponding Public folder. Throughout this documentation, however, we refer to items in the Public folder.

Queries Folder

The queries listed in the following table are provided in the Catalog folder \\Public\Meridium\Modules\Asset Strategy Management\Implementation\Queries. In this table, the values listed in the **Query** column refer to the query *names*. The baseline captions are the same as the names.

> **IMPORTANT:** With the exception of the *Get SAP ID for Equipment* and *Get SAP ID for Functional Location* queries, you should *not* modify these queries in any way or move them to another Catalog folder. Also, while modifying the design of the *Get SAP ID for Equipment* and *Get SAP ID for Functional Location* queries is allowed, if you are using the baseline Equipment and Functional Location families, it is not necessary.

Query	Behavior and Usage
Asset Is Equipment	This query is not used by ASI.

Query	Behavior and Usage
Get Equipment for SAP ID	Returns the Equipment record that contains the ID corresponding to the value supplied for the SAP Equipment ID prompt and is linked to the SAP System record identified by the value supplied for the SAP System prompt. In the baseline Meridium APM database, the query returns records in the *Equipment* family. This query is not meant to be run on its own. Instead, the Meridium APM system runs this query automatically to determine which Equipment record to link to the new Asset Strategy record when you create an Asset Strategy by importing Maintenance Items, Notifications, or Operations from SAP. When the Meridium APM system runs this query, it performs several actions automatically: • It passes the Equipment ID of the imported SAP item to the SAP Equipment ID prompt in the query. • It locates the Site Reference record that you selected on the **Select SAP Object(s)** screen of the **Asset Strategy Builder** and locates the SAP System record that is linked to that Site Reference record. It then passes the value in the Name field in that SAP System record to the SAP System prompt in the query. If the query returns a record using the provided values, the Meridium APM system links that record to the new Asset Strategy record. If the query does not return a record using that value, the Meridium APM system runs the Get Functional Location for SAP ID query. **Note:** Because the documentation for importing SAP items to create Asset Strategies assumes that you began the workflow by importing Equipment and Functional Location records using the SAP Interfaces, this documentation assumes that you will link your Asset Strategy records to either an Equipment or Functional Location record. You will not, therefore, need to modify the baseline Get Equipment for SAP ID query to include a family other than the baseline Equipment family.

Query	Behavior and Usage
Get Functional Location for SAP ID	Returns the Functional Location record that contains the ID corresponding to the value supplied for the SAP Functional Location ID prompt and is linked to the SAP System record identified by the value supplied for the SAP System prompt. In the baseline Meridium APM database, the query returns records in the *Functional Location* family. This query is not meant to be run on its own. Instead, the Meridium APM system runs this query automatically to determine which Functional Location record to link to the new Asset Strategy record when you create an Asset Strategy by importing Maintenance Items, Notifications, or Operations from SAP. When the Meridium APM system runs this query, it performs several actions automatically: • It passes the Functional Location of the imported SAP item to the SAP Functional Location ID prompt in the query. • It locates the Site Reference record that you selected on the **Select SAP Object(s)** screen of the **Asset Strategy Builder** and locates the SAP System record that is linked to that Site Reference record. It then passes the value in the Name field in that SAP System record to the SAP System prompt in the query. If the query returns a record using the provided values, the Meridium APM system links that record to the new Asset Strategy record. **Note:** Because the documentation for importing SAP items to create Asset Strategies assumes that you began the workflow by importing Equipment and Functional Location records using the SAP Interfaces, this documentation assumes that you will link your Asset Strategy records to either an Equipment or Functional Location record. You will not, therefore, need to modify the baseline Get Functional Location for SAP ID query to include a family other than the baseline Functional Location family.
Get SAP ID for Equipment	After providing a prompt for an Entity Key, returns the record with the provided Entity Key. In the baseline Meridium APM database, the query returns records in the *Equipment* family. This query is not meant to be run on its own. Instead, Meridium APM runs this query automatically to determine whether to populate the *Equipment* or *Functional Location* field when you build Notification or Maintenance Item records from Actions.
Get SAP ID for Functional Location	After providing a prompt for an Entity Key, returns the record with the provided Entity Key. In the baseline Meridium APM database, the query returns records in the *Functional Location* family. This query is not meant to be run on its own. Instead, it is run automatically to determine whether to populate the *Equipment* or *Functional Location* field when you build Notification or Maintenance Item records from Actions.

Query	Behavior and Usage
Locate Packages for Navigation	Returns all existing the Implementation Packages that contain one or more of the Asset Strategies that belong to the current Implementation Package. This query is not meant to be run on its own. Instead, it is run automatically when you click the **Navigate** link on the **Packaging** page.
Locate Strategies to Package	Returns a list of Active Asset Strategy records that are not linked to an Implementation Package record. This results of this query are displayed on the **Select Asset Strategy to Add to Package** window, which you can access via the **Implementation Package Update** page. You can add criteria to this query, but you should not remove any criteria from the query.
Locate_ Packages	After providing a prompt for State and Implementation Role, returns a list of all Implementation Package records that meet the specified criteria. This query is run when you click the **Packaging** link on the **Asset Strategy Implementation Start Page**.
Locate_ Packages_ for_Execution	This query is not used by ASI.
Locate_ Packages_ for_System_ Strategy	Returns a list of all Implementation Package records that are linked to the Asset Strategy record to which a given System Strategy record is linked. This query is run when you click the **Strategy Implementation** link on the **Navigation** menu when you are viewing a System Strategy.
Locate_ Packages_ for_Unit_ Strategy	Returns a list of all Implementation Package records that are linked to the Asset Strategy record that is linked to the System Strategy record to which a given Unit Strategy record is linked. This query is run when you click the **Strategy Implementation** link on the **Navigation** menu when you are viewing a Unit Strategy.
Move to Existing Secondary Package	After providing a prompt for an SAP system, returns all existing Implementation Packages associated with the selected SAP system, *except* for the current Implementation Package. This query is not meant to be run on its own. Instead, it is run automatically when you send an Action to a new or existing Implementation Package.

About the Get SAP ID for <Equipment or Functional Location> Query

After providing a prompt for an Entity Key, the query *Get SAP ID for Equipment* returns the record with the provided Entity Key. In the baseline Meridium APM database, the query returns records in the *Equipment* family. This query is not meant to be run on its own. Instead, Meridium APM runs this query automatically to determine whether to populate the *Equipment* or *Functional Location* field when you build Notification or Maintenance Item records from Actions.

When Meridium APM runs the query, Meridium APM provides the prompt with the Entity Key of the predecessor record that is linked to the underlying Asset Strategy record:

- If the Entity Key identifies a record that belongs to the query's source family, the *Equipment* field in the Notification and Maintenance Item records will be populated automatically with the ID of that record. Meridium APM uses the value that is returned by the query as the ID. In the baseline query, the query returns the *Equipment ID*.

- If the Entity Key does not identify a record that belongs to the query's source family, Meridium APM runs the query *Get SAP ID for Functional Location*. If the Entity Key identifies a record that belongs to that query source's family (which is the Functional Location family if you have not modified the query), the *Functional Location* field in the Notification and Maintenance Item records will be populated automatically with the ID of that record.

For example, suppose an Asset Strategy record is linked to the Equipment record HX-112. If you build a Notification record from an Action that belongs to this Asset Strategy, Meridium APM will:

- Identify the Entity Key of the Equipment record HX-112.

- Supply this Entity Key to the prompt in the Get SAP ID for Equipment query.

- Identify the Equipment ID returned by the query: *HX-112*.

- Populate the Equipment field in the Notification record with *HX-112*.

You will *not* need to modify the baseline query if your Asset Strategy records are linked to records in the baseline Equipment or Functional Location family.

Action Mapping

The following table provides an alphabetical list and description of the fields that exist for the Action Mapping family. The information in this table reflects the baseline state and behavior of these fields.

Field Cap-tion	Data Type	Description	Behavior and Usage
Class Name	Character	The rule class that will be invoked when you use an Action to create a Meridium APM record, such as an Inspection Task record or a Maintenance Item record.	You will need to type the name of the class.
Description	Text	A description of the mapping.	You can type any description you choose.
Name	Character	The name of the mapping.	The value in this field is displayed in the **Action Mapping** column on the **Work Management Item Definitions tab** of the **Implementation Administration** page.
Project Path	Character	The path to the Rules Library rule project that stores the rule that will be invoked when you use an Action to create a Meridium APM record, such as an Inspection Task record or a Maintenance Item record.	You will need to type the path to the rule project.

Execution Mapping

The following table provides an alphabetical list and description of the fields that exist for the Execution Mapping family. The information in this table reflects the baseline state and behavior of these fields.

Field Caption	Data Type	Description	Behavior and Usage
Class Name	Character	The rule class that will be invoked when you [implement the Implementation Package](#).	You will need to type the name of the class.
Description	Text	A description of the mapping.	You can type any description you choose.
Name	Character	The name of the mapping.	The value in this field is displayed in the **Execution Mapping** column on the [Work Management Item Definitions tab](#) of the **Implementation Administration** page.
Project Path	Character	The path to the Rules Library rule project that stores the rule that will be invoked when you implement the Implementation Package.	You will need to type the path to the rule project.

Implementation Authorization

The following table provides an alphabetical list and description of the fields that exist for the Implementation Authorization family. The information in this table reflects the baseline state and behavior of these fields.

Field Cap-tion	Data Type	Description	Behavior and Usage
Authorization Type	Character	A value that indicates whether the Implementation Role (identified by the Implementation Role record to which the Implementation Authorization record is linked) is assigned to a Security User or Security Group.	On the datasheet, you can select one of the following values from a list: • Security Group • Security User
Authorization User(s)	Character	Identifies the Security User or Security Group to which the Implementation Role (identified by the Implementation Role record to which the Implementation Authorization record is linked) is assigned.	On the datasheet, you can select a value from the list. • If the Authorization Type field contains the value *Security Group*, the Authorized User(s) list will contain all active Security Groups that exist in the database. • If the Authorization Type field contains the value *Security User*, the Authorized User(s) list will contain all active Security Users that exist in the database.

Implementation Role

The following table provides an alphabetical list and description of the fields that exist for the Implementation Role family. The information in this table reflects the baseline state and behavior of these fields.

Field Caption	Data Type	Description	Behavior and Usage
Image	Binary	Stores code identifying the image. This value is used internally by the Meridium APM system.	The image will appear in the tree on the **Packaging** page after a Security User that is assigned to the Implementation Role adds a work item to the tree.
Name	Character	A name for the Implementation Role.	The name will be displayed throughout the interface to identify the Implementation Role, so be sure to specify a name that will make sense to your users.

PRT Template

The following table provides an alphabetical list and description of the fields that exist for the PRT Template family. The information in this table reflects the baseline state and behavior of these fields.

Field Caption	Data Type	Description	Behavior and Usage
ID	Character	An identifying name for the PRT Template record.	You can type any name that you choose.
Template	Binary	Stores code identifying the PRT template file. This value is used internally by the Meridium APM system.	The value in this field is created when you build the PRT template file (using the **Edit Template** link on the **Implementation Administration** page).

Work Management Item Child Definition

The following table provides an alphabetical list and description of the fields that exist for the Work Management Item Child Definition family. The information in this table reflects the baseline state and behavior of these fields.

Field Caption	Data Type	Description	Behavior and Usage
Child Family ID	Character	The successor family whose records you want to link to records belonging to the family that appears in the **Family ID** cell in the Work Management Item Definition record to which this Work Management Item Child Definition record is linked.	On the datasheet, you can select a family from a list containing all families that are related to the Implementation Package family through the Has Work Management Item relationship. For example, suppose you want to be able to link Preventative Maintenance Task records to Task Grouping records. If the Family ID field in the predecessor Work Management Item Definition record contains the value *Task Grouping*, in the **Child Family ID** list, you would select *Preventative Maintenance Task*.
Child Family Relationship ID	Character	The relationship family that relates the family that appears in the **Family ID** cell in the predecessor Work Management Item Definition record to the family that is stored in the Child Family ID field in this Work Management Item Child Definition record.	On the datasheet, you can select the appropriate relationship family from the list.

Work Management Item Definition

The following table provides an alphabetical list and description of the fields that exist for the Work Management Item Definition family. The information in this table reflects the baseline state and behavior of these fields.

Field Cap-tion	Data Type	Description	Behavior and Usage
Added Icon	Binary	Stores code identifying the image that is used when a record belonging to the family identified in the Family ID field contains the value *Added* in the Status field. This value is used internally by the Meridium APM system.	This icon is used to indicate that the record is not yet implemented in SAP, with the exception of the following families for which updates in SAP are not supported. The image will appear in the tree after the associated work item record is created. ■ Measurement Location Group ■ Measurement Location ■ Calibration Task ■ Inspection Task
Allow Link Existing	Logical	A value that indicates whether or not you are allowed to add existing records in the family that is stored in the Family ID field to records in its predecessor family using the shortcut menu in the tree on the **Packaging** page.	On the datasheet, you can select or clear the check box. For example, if you selected *Preventative Maintenance Task* in the **Family ID** list, its successor family is the Implementation Package family, and the **Allow Link Existing** check box is selected, when you right-click the Implementation Package node in the tree, the **Find an existing Preventative Maintenance Task to link to <Root Implementation Package Name> Implementation Package** option will appear.

Field Cap-tion	Data Type	Description	Behavior and Usage
Deleted Icon	Binary	Stores code identifying the image that is used when a record belonging to the family identified in the Family ID field contains the value *Deleted* in the Status field. This value is used internally by the Meridium APM system.	This icon is used to indicate that the record has been deleted from the Meridium APM system but this change has not yet been implemented in SAP, with the exception of the following families for which updates in SAP are not supported. The image will appear in the tree after the associated work item record is marked for deletion. ■ Measurement Location Group ■ Measurement Location ■ Calibration Task ■ Inspection Task
Family ID	Character	The family ID of the family representing the type of work item record that you want to add to an Implementation Package.	On the datasheet, the list displays all families that are related to the Implementation Package family through the Has Work Management Item relationship. This field is required. For example, if you want to be able to add Preventative Maintenance Task records to an Implementation Package, you would select *Preventative Maintenance Task* in the **Family ID** list. This would allow you to add Preventative Maintenance Task records to an Implementation Package using the shortcut menu when you right-click the Implementation Package node in the tree on the **Packaging** page.

Field Caption	Data Type	Description	Behavior and Usage
Group Name	Character	The **Packaging Tasks** shortcut menu to which you want to add a link that allows you to create work item records in this family.	On the datasheet, the list displays the description of all System Codes in the MI_WKMGMTDF_GROUP System Code Table. For example, suppose you selected *Preventative Maintenance Task* in the **Family ID** list. If you select *Tasks* in the **Group Name** list, when you click the **Tasks** link on the **Packaging Tasks** menu, the shortcut menu will contain the **Preventative Maintenance Task** link.
Icon	Binary	Stores code identifying the image that is used when a record belonging to the family identified in the Family ID field contains the value *Unchanged* in the Status field. This value is used internally by the Meridium APM system.	This icon is used to indicate that the record has not been modified in the Meridium APM system since it was sent to SAP, with the exception of the following families for which updates in SAP are not supported. The image will appear in the tree if the associated work item record is unchanged. ■ Measurement Location Group ■ Measurement Location ■ Calibration Task ■ Inspection Task

Field Caption	Data Type	Description	Behavior and Usage
Modified Icon	Binary	Stores code identifying the image that is used when a record belonging to the family identified in the Family ID field contains the value *Modified* in the Status field. This value is used internally by the Meridium APM system.	This icon is used to indicate that the record has been modified in the Meridium APM system and the changes are not yet implemented in SAP, with the exception of the following families for which updates in SAP are not supported. The image will appear in the tree after the associated work item record is modified. ■ Measurement Location Group ■ Measurement Location ■ Calibration Task ■ Inspection Task
Parent Family ID	Character	The family ID of the family whose records will be predecessors to records that belong to the family that is stored in the Family ID field.	On the datasheet, the list displays all families that are related to the Implementation Package family through the Has Work Management Item relationship. For example, if you selected *Preventative Maintenance Task* in the **Family ID** list and you want to be able to link Preventative Maintenance Task records to predecessor Task Grouping records, you would select *Task Grouping* in the **Parent Family ID** list. This will cause the **Create a new Preventative Maintenance Task to link to 'Task Grouping'** option to be available on the shortcut menu when you right-click a Task Grouping record in the tree.

Field Caption	Data Type	Description	Behavior and Usage
Parent Family Relationship ID	Character	The relationship family that relates the family that is stored in the Family ID field to the family that is stored in the Parent Family ID field.	On the datasheet, the list displays all relationship families that exist in the database. For example, suppose you selected *Preventative Maintenance Task* in the **Family ID** list and *Task Grouping* in the **Parent Family ID** list. If the Task Grouping family is related to the Preventative Maintenance Task family through the Has Tasks relationship, you would select *Has Tasks* in the **Parent Family Relationship ID** list.
Sequence	Number	A number that determines the order in which the family identified by the value in the Family ID field will appear on the **Packaging Tasks** submenu, the shortcut menu in the tree, and the **Work Management Item Definitions** grid on the **Implementation Administration** page.	You can type any number beginning with 0.

Work Management Item Definition Configuration

The following table provides an alphabetical list and description of the fields that exist for the Work Management Item Definition Configuration family. The information in this table reflects the baseline state and behavior of these fields.

Field Cap-tion	Data Type	Description	Behavior and Usage
Class Name	Character	The rule class that will be invoked when you right-click a work item node in the tree on the **Packaging** page.	You will need to type the name of the class.
Description	Text	A description of the configuration.	You can type any description you choose.
Name	Character	The name of the con-figuration.	The value in this field is displayed in the **Definition Configuration** column on the **Work Management Item Definitions tab** of the **Implementation Administration** page.
Project Path	Character	The path to the rule that will be invoked when you right-click a work item node in the tree on the **Packaging** page.	You will need to type the path to the rule project.

Implementation Package

The following table provides an alphabetical list and description of the fields that exist for the Implementation Package family. The information in this table reflects the baseline state and behavior of these fields.

Field Cap-tion	Data Type	Description	Behavior and Usage
Description	Text	A description of the Imple-mentation Pack-age.	You an type any description you choose. This field is disabled if the Imple-mentation Package record is set tot he *Packaged* or *Implemented* state.
ID	Character	The ID of the Implementation Package.	You can type any ID you choose.
SAP System	Character	The name of the SAP system to which you will transfer the items in the Implementation Package.	On the datasheet, you can click the ⋯ button to display the **Find Items** window, where you can search for the SAP System record representing the SAP system to which you want to transfer items in the Implementation Package.

About These Descriptions

Throughout most of the Meridium APM documentation, family field descriptions are provided in a table format, where the table describes the purpose and behavior of all fields that are defined for a specific family.

In ASI, however, most of the fields that are defined for families representing SAP items (e.g., Maintenance Plan) correspond directly to an SAP field. We assume that you are familiar with your SAP data structure and fields, so we do not provide descriptions of the values that these fields are meant to store. In other words, because they store the same values that their corresponding SAP counterpart fields store, we assume that you understand what to type or select in the fields in the Meridium APM system.

We do, however, provide information about the behavior of some fields on the data-sheet if that behavior cannot be inferred based upon prior knowledge of SAP functionality. For example, if a field is required in the Meridium APM system in order to save a record, we note the requirement. Likewise, if a field is populated automatically in the Meridium APM system as a result of selecting a value in another field, this is also noted.

Note that for all families, *all* fields are disabled after the Implementation Package is implemented.

Maintenance Item

Note the following information about specific Maintenance Item fields:

- **Equipment:** The Equipment field is disabled if the Maintenance Item record is linked to a Task List record and the associated Task List has been implemented in SAP or if the Task List record contains a value in the Equipment field.

  If a Maintenance Item record contains a value in either the Functional Location or Equipment field, after you create a Task List record that is linked to that Maintenance Item record, you can use the **Synchronize Reference Object** link on the **Maintenance Item Tasks** menu to copy that value to the Task List record.

- **Functional Location:** The Functional Location field is disabled if the Maintenance Item record is linked to a Task List record and the associated Task List has been implemented in SAP or if the Task List record contains a value in the Functional Location field.

  If a Maintenance Item record contains a value in either the Functional Location or Equipment field, after you create a Task List record that is linked to that Maintenance Item record, you can use the **Synchronize Reference Object** link on the **Maintenance Item Tasks** menu to copy that value to the Task List record.

- **Implementation Status:** This field can contain any of the following values:

  - **Added:** The record is new and has not yet been sent to SAP. In this case, when the Implementation Package is implemented, the corresponding SAP item will be created.

  - **Modified:** One or more values in the record have changed since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will be updated accordingly.

  - **Deleted:** The record has been flagged for deletion since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will be deleted.

  - **Unchanged:** The record has not changed since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will remain untouched.

  The Implementation Status field is not available on any baseline datasheets. Instead, the value is used to determine the image that is displayed next to the node name in the tree on the **Packaging** page.

- **Item Description:** This field is required.

- **Maintenance Item:** After the Implementation Package is implemented, this field is populated automatically with a hyperlink that you can click to open the **ITS System Information** screen in Internet Explorer, where you can log in to the SAP system to view the Maintenance Item.

Maintenance Package

Note the following information about specific Maintenance Package fields:

- **Implementation Status:** This field can contain any of the following values:
  - **Added:** The record is new and has not yet been sent to SAP. In this case, when the Implementation Package is implemented, the corresponding SAP item will be created.
  - **Modified:** One or more values in the record have changed since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will be updated accordingly.
  - **Deleted:** The record has been flagged for deletion since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will be deleted.
  - **Unchanged:** The record has not changed since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will remain untouched.

The Implementation Status field is not available on any baseline datasheets. Instead, the value is used to determine the image that is displayed next to the node name in the tree on the **Packaging** page.

Maintenance Plan

Note the following information about specific Maintenance Plan fields:

- **Description:** This field is required.

- **Factory Calendar:** This field is disabled if the value in the Scheduling Indicator field is empty. If the Scheduling Indicator field is cleared *after* a value already exists in the Factory Calendar field, the Factory Calendar field will be cleared automatically.

- **Implementation Status:** This field can contain any of the following values:

  - **Added:** The record is new and has not yet been sent to SAP. In this case, when the Implementation Package is implemented, the corresponding SAP item will be created.

  - **Modified:** One or more values in the record have changed since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will be updated accordingly.

  - **Deleted:** The record has been flagged for deletion since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will be deleted.

  - **Unchanged:** The record has not changed since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will remain untouched.

  The Implementation Status field is not available on any baseline datasheets. Instead, the value is used to determine the image that is displayed next to the node name in the tree on the **Packaging** page.

- **ID:** After the Implementation Package is implemented, this field is populated automatically with a hyperlink that you can click to open the **ITS System Information** screen in Internet Explorer, where you can log in to the SAP system to view the Maintenance Plan.

- **Interval:** This field is required.

- **Interval Unit:** This field is required.

- **Maintenance Strategy:** If you modify the value stored in the Maintenance Strategy field in a predecessor Maintenance Plan record, that value will be automatically copied to the Maintenance Strategy field in the successor records, with one exception. If you modify the value stored in the Maintenance Strategy field in a Maintenance Plan record that is linked to predecessor Maintenance Package records, the Maintenance Package records will be deleted automatically.

  Likewise, if you modify the value stored in the Maintenance Strategy field in a successor record, that value will be automatically copied to the Maintenance Strategy field in the predecessor records.

Material

Note the following information about specific Material fields:

- **Implementation Status:** This field can contain any of the following values:
  - **Added:** The record is new and has not yet been sent to SAP. In this case, when the Implementation Package is implemented, the corresponding SAP item will be created.
  - **Modified:** One or more values in the record have changed since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will be updated accordingly.
  - **Deleted:** The record has been flagged for deletion since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will be deleted.
  - **Unchanged:** The record has not changed since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will remain untouched.

The Implementation Status field is not available on any baseline datasheets. Instead, the value is used to determine the image that is displayed next to the node name in the tree on the **Packaging** page.

Notification

Note the following information about specific Notification fields:

- **Implementation Status:** This field can contain any of the following values:
  - **Added:** The record is new and has not yet been sent to SAP. In this case, when the Implementation Package is implemented, the corresponding SAP item will be created.
  - **Modified:** One or more values in the record have changed since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will be updated accordingly.
  - **Deleted:** The record has been flagged for deletion since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will be deleted.
  - **Unchanged:** The record has not changed since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will remain untouched.

  The Implementation Status field is not available on any baseline datasheets. Instead, the value is used to determine [the image that is displayed](#) next to the node name in [the tree](#) on the **Packaging** page.

- **Notification Number:** After the Implementation Package is [implemented](#), this field is populated automatically with a hyperlink that you can click to open the **ITS System Information** screen in Internet Explorer, where you can log in to the SAP system to view the Notification.

- **Notification Type:** This field is required.

- **Short Text:** This field is required.

Object List Item

Note the following information about specific Object List Item fields:

- **Equipment Description:** This field is populated automatically after the Equipment Number field is populated.

- **Equipment Number:** If the Functional Location ID field is empty, this field is required.

- **Functional Location ID:** If the Equipment Number field is empty, this field is required.

- **Functional Location Label:** This field is populated automatically after the Functional Location ID field is populated.

- **Implementation Status:** This field can contain any of the following values:

  - **Added:** The record is new and has not yet been sent to SAP. In this case, when the Implementation Package is implemented, the corresponding SAP item will be created.

  - **Modified:** One or more values in the record have changed since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will be updated accordingly.

  - **Deleted:** The record has been flagged for deletion since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will be deleted.

  - **Unchanged:** The record has not changed since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will remain untouched.

The Implementation Status field is not available on any baseline datasheets. Instead, the value is used to determine the image that is displayed next to the node name in the tree on the **Packaging** page.

Operation

Note the following information about specific Operation fields:

- **Calc:** Depending upon what you select in the **Calc** list, other fields will be enabled or disabled. This behaviors are described in the following list:
  - If you select *Calculate Duration*, the Normal Duration and Normal Duration Unit fields will be disabled.
  - If you select *Calculate Work*, the Work and Work Unit fields will be disabled.
  - If you select *Calculate Number of Capacities*, the Number of Resources field will be disabled.
  - If you select *Calculate Manually* or leave this field blank, all the fields are enabled.
- **Implementation Status:** This field can contain any of the following values:
  - **Added:** The record is new and has not yet been sent to SAP. In this case, when the Implementation Package is implemented, the corresponding SAP item will be created.
  - **Modified:** One or more values in the record have changed since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will be updated accordingly.
  - **Deleted:** The record has been flagged for deletion since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will be deleted.
  - **Unchanged:** The record has not changed since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will remain untouched.

  The Implementation Status field is not available on any baseline datasheets. Instead, the value is used to determine the image that is displayed next to the node name in the tree on the **Packaging** page.
- **Plant:** This field is populated automatically after the Work Center field is populated.
- **StdTxt:** When you populate the StdTxt field in an Operation record, a message appears, asking if you want to overwrite the value in the Description field or append the value in the Long Text field with the selected value.
  - If you choose to overwrite the value in the Description field, the Description field becomes disabled.
  - If you choose to append the value in the Long Text field, the StdTxt field is cleared after the value in the Long Text field is appended with the standard text value.

PRT

Note the following information about specific PRT fields:

- **Document:** This field is populated automatically when the Implementation Package is implemented.

- **Document Part:** This field is populated automatically when the Implementation Package is implemented.

- **Document Version:** This field is populated automatically when the Implementation Package is implemented.

- **Implementation Status:** This field can contain any of the following values:

  - **Added:** The record is new and has not yet been sent to SAP. In this case, when the Implementation Package is implemented, the corresponding SAP item will be created.

  - **Modified:** One or more values in the record have changed since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will be updated accordingly.

  - **Deleted:** The record has been flagged for deletion since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will be deleted.

  - **Unchanged:** The record has not changed since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will remain untouched.

The Implementation Status field is not available on any baseline datasheets. Instead, the value is used to determine the image that is displayed next to the node name in the tree on the **Packaging** page.

Task List

Note the following information about specific Task List fields:

- **Description:** This field is required.

- **Equipment:** If the Equipment field contains a value, an Equipment Task List will be created in SAP. If the Functional Location field contains a value, a Functional Location Task List will be created in SAP. If neither field contains a value, a general Task List will be created in SAP.

- **Equipment Description:** This field is populated automatically after the Equipment field is populated.

- **Functional Location:** If the Equipment field contains a value, an Equipment Task List will be created in SAP. If the Functional Location field contains a value, a Functional Location Task List will be created in SAP. If neither field contains a value, a general Task List will be created in SAP.

- **Functional Location Label:** This field is populated automatically after the Functional Location field is populated.

- **Group:** After the Implementation Package is implemented, this field is populated automatically with a hyperlink, which displays the **ITS System Information** window in Internet Explorer, where you can log in to the SAP System to view the SAP Task List.

- **Implementation Status:** This field can contain any of the following values:

    - **Added:** The record is new and has not yet been sent to SAP. In this case, when the Implementation Package is implemented, the corresponding SAP item will be created.

    - **Modified:** One or more values in the record have changed since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will be updated accordingly.

    - **Deleted:** The record has been flagged for deletion since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will be deleted.

    - **Unchanged:** The record has not changed since it was last sent to SAP. In this case, when the Implementation Package is reimplemented, the corresponding SAP item will remain untouched.

    The Implementation Status field is not available on any baseline datasheets. Instead, the value is used to determine the image that is displayed next to the node name in the tree on the **Packaging** page.

- **Key Date:** The value in this field is set by default to the current date and time.

- **Maintenance Strategy:** This field is disabled if the associated Task List has been implemented in SAP.

- **Status:** The value in this field is set by default to *4*.

System Code Tables Used by ASI

The following table provides a list of the System Code Tables that are used by ASI.

Table ID	Table Description	Function
MI_ WKMGMTDF_ GROUP	Work Man-agement Item Definition Groups	Used to populate the: • **Group Name** list on the Work Management Item Definition datasheet. • **Packaging Tasks** menu on the **Implementation Packaging** page in the Meridium APM Framework application.
MI_ OPERTION_ CALC	Operation Calc	Used to populate the **Calc** list on the Operation datasheet.
MI_ MAINTPLN_ INDICATOR	Maintenance Plan Scheduling Indicator	Used to populate the **Scheduling Indicator** list on the Maintenance Plan datasheet.

URL Paths for ASI Features

The following table lists and describes the paths for the Meridium APM Asset Strategy Implementation (ASI) features. Note that to construct a valid URL, you must prepend **meridium://** to the path. In some cases, you must define parameters following the path.

Feature	URL Path	Description
Asset Strategy Imple-mentation Start Page	ASM/Implementation	Displays the **Asset Strategy Implementation Start Page**. This path does not accept parameters.
Imple-mentation Administration Page	ASM/Implementation/Admin	Displays the **Implementation Administration** page. This path does not accept parameters.
PRT Builder	ASM/Implementation/BuildPRT	Displays the **PRT Builder**, which lets you build a new PRT file or modify an existing PRT file. This path *requires* one parameter: EntyKey. The PRT file that you create using the **PRT Builder** will be associated with the PRT record that is linked to the Operation record that you select in the **PRT Builder**. This Operation record will be linked to the Task List record with the specified Entity Key.

Feature	URL Path	Description
Imple-mentation Pack-age Creation Page	ASM/Implementation/Create	Displays the **Implementation Package Creation** page. Note that this path accepts one parameter, Key, but providing this parameter will launch the **Implementation Package Update** page, which is considered a separate feature of ASI and is explained in a separate row of this table. If you want to access the **Implementation Package Creation** page, where you can create a new Implementation Package record, you should use the ASM/Implementation/Create URL path *without* the Key parameter.
Imple-mentation Pack-age Update Page	ASM/Implementation/Create	If you want to access the **Implementation Package Update** page, this path *requires* one parameter: Key. From the **Implementation Package Update** page, you can manage links between the Implementation Package record with the specified Entity Key and Asset Strategy records.

Feature	URL Path	Description
Imple-mentation Package List page	ASM/Im-plementation/Execution -OR- ASM/Im-plementation/Packaging	Displays the **Implementation Package List** page appears, which displays a list of all Implementation Package records. Note that this URL accepts one parameter, Key, but providing this parameter will display the **Packaging** page, which is con-sidered a separate feature of ASI and is explained in a sep-arate row of this table. If you want to access the **Imple-mentation Package List** page, where you can view a list of Implementation Package records, you should use the ASM/Im-plementation/Execution or ASM/Im-plementation/Packaging URL path *without* the Key para-meter.
Packaging <Package ID> Page	ASM/Im-plementation/Execution -OR- ASM/Im-plementation/Packaging	If you want to access the **Pack-aging** page, these paths *require* one parameter, Key. Both URLs will then display the **Packaging** page for the Imple-mentation Package record with the specified Entity Key.

Feature	URL Path	Description
Maintain Object List	ASM/Implementation/Maintain_Object_List	Tells the Meridium APM system to search the Action Revision records that are linked to the selected Maintenance Item record and any Operation record to which it is linked. If those Action Revision records are associated with an underlying Asset Strategy record that is linked to an Equipment record, one Object List Item record will be created for each of those underlying Equipment records. This path *requires* one parameter: EntyKey, where the EntyKey is the Entity Key of the Maintenance Item record whose Object List Items you want to maintain.

Examples of ASI URLs

- meridium://ASM/Implementation

  Displays the **Asset Strategy Implementation Start Page**.

- meridium://ASM/Implementation**/ADMIN**

  Displays the **Implementation Administration** page.

- meridium://ASM/Implementation**/BuildPRT?Key=123456**

  Displays the **PRT Builder**, where you can create or modify a PRT file. The PRT file will be associated with the PRT record that is linked to the Operation record that you select in the **PRT Builder**. This Operation record will be linked to the Task List record with the Entity Key 123456.

- meridium://ASM/Implementation**/CREATE**

  Displays the **Implementation Package Creation** page, where you can create a new Implementation Package record.

- meridium://ASM/Implementation**/EXECUTION**

  Displays the **Implementation Package List** page.

- meridium://ASM/Implementation**/PACKAGING**

  Displays the **Implementation Package List** page.

- meridium://ASM/Implementation**/CREATE?KEY=1234567**

  Displays the **Implementation Package Update** page, where you can manage links between the Implementation Package record with the Entity Key 1234567 and Asset Strategy records.

- meridium://ASM/Implementation**/EXECUTION?**KEY=1234567

  Displays the **Packaging** page for the Implementation Package record with the entity key 1234567.

- meridium://ASM/Implementation**/PACKAGING?**KEY=1234567

  Displays the **Packaging** page for the Implementation Package record with the entity key 1234567.

- meridium://ASM/Implementation/Maintain_Object_List/**EntyKey=1234567**

  Tells the Meridium APM system to maintain the Object List for the Maintenance Item record with the Entity Key 1234567.

Values Mapped to SAP Maintenance Plans

The following table explains the Maintenance Plan fields that are used to populate SAP Maintenance Plan fields when you implement an Implementation Package.

Meridium APM Field Caption	SAP Field ID	SAP Field Caption
ID	WARPL	Maintenance Plan
Category	MPTYP	Maintenance Plan Category
Maintenance Strategy	WSTRA	Maintenance Strategy
Interval	ZYKL1	Maintenance Cycle
Interval Unit	ZEIEH	Unit for the Performance of Maintenance Tasks
Counter	POINT	Measuring Point
Offset	OFFS1	Maintenance Package Offset
Interval Description	PAK_TEXT	Text for Maintenance Package/Cycle (Time/Performance)
Description	WPTXT	Maintenance Plan Text
Sort Field	PLAN_SORT	Sort Field for Maintenance Plans
Authorization Group	BEGRU	Technical Object Authorization Group
Shift Factor for Late Completion	VSPOS	Shift Factor for Late Completion
Shift Factor for Early Completion	VSNEG	Shift Factor for Early Completion
Tolerance for Late Completion	TOPOS	Tolerance for Late Completion (%)
Tolerance for Early Completion	TONEG	Tolerance for Early Completion (%)
Cycle Modification Factor	SFAKT	IBIP: Cycle Modification Factor
Scheduling Indicator	STICH	Scheduling Indicator
Factory Calendar	FABKL	Factory Calendar Key

Meridium APM Field Caption	SAP Field ID	SAP Field Caption
Scheduling Period	ABRHO	Scheduling Period
Scheduling Unit	HUNIT	Unit in Scheduling Interval
Call Horizon	HORIZ	Call Horizon for Maintenance Plan Calls
Call Confirm	CALL_CONFIRM	Only Create New Call Object After Completing Predecessor
Start Date	STADT	Start Date
Start Counter	SZAEH	Start Counter Reading

Values Mapped to SAP Maintenance Items

The following table explains the Maintenance Item fields that are used to populate SAP Maintenance Item fields when you implement an Implementation Package.

Meridium APM Field Caption	SAP Field ID	SAP Field Caption
Maintenance Item	WAPOS	Maintenance Item
Category	MPTYP	Maintenance Plan Category
Maintenance Strategy	WSTRA	Maintenance Strategy
Item Description	PSTXT	Item Short Text
Functional Location	TPLNR	Functional Location
Equipment	EQUNR	Equipment Number
Assembly	BAUTL	Assembly
Planning Plant	IWERK	Maintenance Planning Plant
Maintenance Planner Group	WPGRP	Planner Group for Customer Service and Plant Maintenance
Order Type	AUART	Order Type
Activity Type	ILART	Maintenance Activity Type
Work Center	GEWERK	Main Work Center for Maintenance Tasks
Work Center Plant	WERGW	Plant Associated with Main Work Center
Business Area	GSBER	Business Area
Group	PLNNR	Key for Task List Group
Group Counter	PLNAL	Group Counter
System Condition	ANLZU	Overall Condition of Technical System
Notification Type	QMART	Notification Type
Priority	PRIOK	Priority

Values Mapped to SAP Maintenance Items

The following table explains the Object List Item fields that are used to populate SAP Object List Item fields when you implement an Implementation Package.

Meridium APM Field Caption	SAP Field ID	SAP Field Caption
Sort Field	SORTF	Object List Sort Field
Equipment Number	EQUNR	Equipment Number
Functional Location ID	TPLNR	Functional Location
Functional Location Label	STRNO	Functional location Label

Values Mapped to SAP Task Lists

The following table explains the Task List fields that are used to populate SAP Task List fields when you implement an Implementation Package.

Meridium APM Field Caption	SAP Field ID	SAP Field Caption
Equipment	EQUNR	Equipment Number
Functional Location	TPLNR	Functional Location
Group	PLNNR	Key for Task List Group
Description	KTEXT	Work Center Description
Work Center	ARBPL	Work Center
Planning Plant	WERKS	Maintenance Planning Plant
Usage	VERWE	Use by User or System
Planner Group	VAGRP	Responsible Planner Group/Department
Status	STATU	Status
Maintenance Strategy	STRAT	Maintenance Strategy
System Condition	ANLZU	Overall Condition of Technical System
Assembly	ISTRU	Assembly
Key Date	STTAG	Key Date
Plant	AWERK	Plant

Values Mapped to SAP Operations

The following table explains the Operation fields that are used to populate SAP Operation fields when you [implement an Implementation Package](#).

Meridium APM Field Caption	SAP Field ID	SAP Field Caption
Operation	VORNR	Operation/Activity Number
Sub Operation	UVORN	Suboperation
Work Center	ARBPL	Work Center
Control Key	STEUS	Control Key
Plant	WERKS	Plant
StdTxt	KTSCH	Standard Text Key
Description	LTXA1	Operation Short Text
Currency	WAERS	Currency Key
Cost Element	SAKTO	Cost Element
Purchasing Organization	EKORG	Purchasing Organization
Purchasing Group	EKGRP	Purchasing Group for External Processing
Material Group	MATKL	Material Group
Normal Duration	DAUNO	IBIP: Normal Operation Duration
Normal Duration Unit	DAUNE	Normal Duration/Unit
Work	ARBEI	IBIP: Operation Labor
Work Unit	ARBEH	Unit for Work
Number of Resources	ANZZL	IBIP: Char. - No. of Required Capacity
User Field Key Word ID	SLWID	Key Word ID for User-defined Fields
User Field 0	USR00	User Field with 20 Characters
User Field 1	USR01	User Field with 20 Characters
User Field 2	USR02	User Field with 10 Characters
User Field 3	USR03	User Field with 10 Characters

Meridium APM Field Caption	SAP Field ID	SAP Field Caption
User Field 4	USR04	IBIP: User Field for Quantity (Length 10,3)
User Field 4 Units	USE04	User field: Unit for Quantity Fields
User Field 5	USR05	IBIP: User Field for Quantity (Length 10,3)
User Field 5 Units	USE05	User field: Unit for Quantity Fields
User Field 6	USR06	IBIP: User Field for Values (Length 10,3)
User Field 6 Units	USE06	User field: Unit for Quantity Fields
User Field 7	USR07	IBIP: User Field for Values (Length 10,3)
User Field 7 Units	USE07	User field: Unit for Quantity Fields
User Field 8	USR08	User field for Date
User Field 9	USR09	User field for Date
User Field 10	USR10	User-defined Field: Indicator for Reports
User Field 11	USR11	User-defined Field: Indicator for Reports
Calc	INDET	Key for Calculation
Activity Type	LARNT	Activity Type
Order Quantity	BMEIH	Operation Order Quantity Unit
Order Quantity Unit	BMVRG	IBIP: Purchase Order Quantity Operation
Execution Factor	AUFKT	Execution Factor
System Condition	ANLZU	System Condition

Values Mapped to SAP Materials

The following table explains the Material fields that are used to populate SAP Material fields when you implement an Implementation Package.

Meridium APM Field Caption	SAP Field ID	SAP Field Caption
Material Number	IDNRK	Material Number
Quantity	MENGE	Quantity

Values Mapped to SAP PRTs

The following table explains the PRT fields that are used to populate SAP PRT fields when you implement an Implementation Package.

Meridium APM Field Caption	SAP Field ID	SAP Field Caption
None. The value in the FHMAR field is always set to *D*.	FHMAR	Production Resources/Tools Category
Control Key	STEUF	Control Key for Management of Production Resources/Tools
Document	DOKNR	Document Number
Document Part	DOKTL	Document Part
Document Type	DOKAR	Document Type
Document Version	DOKVR	Document Version
Item Number	PSNFH	Item Number for Production Resource/Tool
Quantity	MGVGW	Standard Value for PRT Quantity
Quantity Unit	MGEINH	Quantity Unit of Production Resource/Tool

Values Mapped to SAP Maintenance Packages

The following table explains the Maintenance Package fields that are used to populate SAP Maintenance Package fields when you implement an Implementation Package.

Meridium APM Field Caption	SAP Field ID	SAP Field Caption
Cycle	KTEXTZYK<#> Note: <#> is a number between one (1) and 32 that is determined by the sequence of the Operations on the associated Task List, regardless of the Operation number.	Short Text for the Maintenance Cycle (Time/Performance)

Values Mapped to SAP Notifications

The following table explains the Notification fields that are used to populate SAP Notification fields when you implement an Implementation Package.

Meridium APM Field Caption	SAP Field ID	SAP Field Caption
Notification Type	NOTIF_TYPE	Notification Type
Equipment	EQUIPMENT	Equipment Number
Functional Location	FUNCT_LOC	Functional Location
Short Text	SHORT_TEXT	Short Text
Priority	PRIORITY	Priority
Required Start Date	DESSTDATE -AND- DESSTTIME	Required Start Date -AND- Required Start Time
Required End Date	DESENDDATE -AND- DESENDDATE	Required End Date -AND- Required End Time
None. The value in the NOTIF_DATE field is populated automatically with the date and time that the Notification was created.	NOTIF_DATE	Date of Notification
None. The value in the NOTIFTIME field is populated automatically with the date and time that the Notification was created.	NOTIFTIME	Notification Time

Implementation Package

A collection of records that define the work that you want to perform and the Asset Strategies that contain the original work requests (i.e., Action records).

Implementation Role

A type of work that is performed by people within your organization. In ASI, you can create Implementation Role records to categorize these work types.

Primary Implementation Package

The Implementation Package to which the Asset Strategy and its Actions are originally added.

Secondary Implementation Package

Any Implementation Package to which an Action is transferred.

Work Item Record

Records that represent the work that should be completed when the Implementation Package is implemented. Throughout the documentation, we refer to them as *work item records* because they can belong to any family.