



Meridium Enterprise APM Release Notes

V4.1.0.0 through V4.1.7.4.0



Meridium Enterprise APM V4 Release Notes

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About This Document

This file is provided so that you can easily print this section of the Meridium Enterprise 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 the PDF.

The Meridium Enterprise APM Help system can be accessed within Meridium Enterprise 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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Meridium Enterprise APM Release Notes

The Meridium Enterprise APM Release Notes describe changes to the baseline Meridium APM product. If you are using customized database content, the behavior that you see in your system may differ from what is described here.

The following types of Release Notes are included, as applicable, for each release:

- **Changes to Hardware and Software Requirements:** A list of significant changes to hardware and software requirements from the previous release.
- **New Features:** A list of new features that are being introduced in the release.
- **Enhancements:** A list of significant improvements that have been made to each module in the release.
- **Resolved Issues:** A list of issues that existed in previous versions of Meridium APM that have been resolved in the release.
- **Restored Features:** Functionally equivalent V3.x features that were deferred from previous V4.x releases, but are now available in the release.
- **Obsolete Features:** A list of features that are now obsolete as a result of changes made in the release.
- **Deferred Features:** A list of functionally equivalent features that are not included in the release, but are planned for a future release.

Note: For each item in the Release Notes, one or more numbers are included in parentheses at the end of the description. These values represent work items that Meridium, Inc. uses to track changes made to the product.

Meridium Enterprise APM V4.1.0.0 Release Notes

Release notes for the following versions are available:

- [V4.1.0.0](#)
- [V4.1.0.1](#)
- [V4.1.0.2](#)
- [V4.1.0.3](#)
- [V4.1.1.0](#)
- [V4.1.1.1](#)
- [V4.1.1.2](#)
- [V4.1.1.3](#)
- [V4.1.1.4](#)
- [V4.1.1.5](#)
- [V4.1.5.0](#)
- [V4.1.5.1](#)
- [V4.1.5.2](#)
- [V4.1.5.3](#)
- [V4.1.5.4](#)
- [V4.1.5.5](#)
- [V4.1.5.6](#)
- [V4.1.6.0](#)
- [V4.1.6.1](#)
- [V4.1.6.2](#)
- [V4.1.6.3](#)
- [V4.1.6.4](#)
- [V4.1.6.5](#)
- [V4.1.6.6](#)
- [V4.1.6.7](#)
- [V4.1.6.8](#)
- [V4.1.6.9](#)
- [V4.1.6.10](#)
- [V4.1.7.0](#)
- [V4.1.7.0.1](#)
- [V4.1.7.1.0](#)
- [V4.1.7.2.0](#)

- [V4.1.7.3.0](#)
- [V4.1.7.4.0](#)

V4.1.0.0 Release Notes

The following release notes are available for Meridium Enterprise APM V4.1.0.0:

- [Enhancements](#)
- [Resolved Issues](#)
- [Restored Features](#)
- [Obsolete Features](#)
- [Deferred Features](#)

You can also view the APM Connect release notes.

Enhancements - V4.1.0.0

The following enhancements have been made in V4.1.0.0.

Asset Health Manager

- On the **Health Indicator Source Management** page, when you include or exclude sources, a notification now appears to indicate that the sources were included or excluded successfully. (TS ID: 160302)
- You no longer have to configure the values within the <meridiumConnections> tags in the AHM Service configuration file. Instead, this service now connects automatically to all valid data sources specified on the Meridium Enterprise APM Server. As a result of this change, you no longer have to modify the AHM Service configuration file before starting the service. (TS ID: 152368)
- You can now create Meridium General Recommendations based on events displayed on the **Health Summary** page. Recommendations that you create in this way are populated with information about the event and asset, as well as linked automatically to the related asset. (TS ID: 115014)

Asset Strategy Management

- In the **Actions** workspace, **Risks** workspace, and **Implement Actions** workspace, the **Status** column now contains icons, instead of letters, to represent:
 - New Records
 - Deleted Records
 - Modified Records

(TS ID: 155163)

Calibration Management

- The Equipment ID field in a Calibration datasheet is no longer a required field. (TS ID: 61334)
- You can now select a Calibration Template on a Calibration Task datasheet. As a result of this enhancement, a new field, Calibration Template ID, has been added to the Calibration Task datasheet. (TS ID: 156143)

- In addition to the Fluke 74x documenting process calibrator, Meridium Enterprise APM now supports the Fluke 75x documenting process calibrator. You can now transfer calibration data between Meridium Enterprise APM and the Fluke 75x documenting process calibrator. (TS ID: 162185)
- Before you perform an automated calibration, you can now verify or modify the following calibrator settings from the **Settings** window:
 - Communication Port
 - Baud Rate
 - Service Port

You can also test the connection of the calibrator from the **Settings** window. If the connection fails, a message appears that specifies the reason or provides a link to download the Meridium Device Service as applicable.

(TS ID: 162185)

Foundation

Catalog

- When you delete a catalog item, a confirmation message now appears before the item is deleted. (TS ID: 155114)

Configuration Manager

- On the **Manage Translations** page, you can now view the list of translated strings that were not uploaded, and you can choose to send an email containing the translated strings to Meridium, Inc. (TS ID: 160467)

Dashboards

- You now have the option to include underlying queries and graphs when exporting dashboard. (TS ID: 74301)

Help System

- You must now log in to Meridium Enterprise APM to access the Meridium Enterprise APM help documentation. (TS ID: 166353)

Queries

- Multi-value parameters are now supported in URL parameters for queries. (TS ID: 163722)

Hazards Analysis

- The Assets that are linked to a System/Node are now listed in a separate section called **Linked Assets**. You can add or remove Assets in this section. As a result of this enhancement, the Equipment ID and Functional Location ID fields have been removed from the System/Node datasheet. (TS ID: 167197)
- If you remove an Asset from a System/Node, the corresponding Asset Group is now also updated. You no longer need to remove the Asset manually from the Asset Group. (TS ID: 167197)

Inspection Management

- Asset Groups can now be used with the **Inspection Management Overview** workspace. (TS ID: 154297)

Metrics and Scorecards

- You can now view the **Associated Pages** in KPI and Scorecard. (TS ID: 170156)
- You can now set a Scorecard as your home page by selecting the option **Set as Home Page** on the Scorecard details page. (TS ID: 167617)
- You can now filter the KPIs that are associated with a Scorecard based on their performance. You can do this by using the **hu** button available on the KPI details page. (TS ID: 64765)
- You can now zoom in and out on a graph in a Metric View. (TS ID: 147694)
- You can now add the slicer member to a Metric View during the runtime. You can do this by using the **hu** button available on the **Metric View** page. (TS ID: 131318)

Policy Designer

- You no longer have to configure the values within the <meridiumConnections> tags in the configuration files for the Policy Execution Service and Policy Trigger Service. Instead, these services now connect automatically to all valid data sources specified on the Meridium Enterprise APM Server.

In addition, the default value for the execution server address in the Policy Trigger Service has been changed to *localhost*.

As a result of these change, you no longer have to modify the Policy Execution Service configuration file before starting the service. In addition, if you have only one Meridium Enterprise APM Server in your system architecture, you no longer have to modify the Policy Trigger Service configuration file. If, however, your system architecture contains more than one Meridium Enterprise APM Server, you will still need to modify the Policy Trigger Service configuration file in order to specify the name of the load-balanced cluster that you want to use for policy execution.

(TS IDs: 152368, 165886)

- Previously, emails sent from policies via the Email Contact node were sent from the email address associated with the user defined in the MeridiumConnections section of the AHM Service configuration file. Now, emails sent from policies use the **From** address specified in the **Email Settings** section of **Operations Manager**. (TS ID: 164324)

Process Data Integration

- By default, OPC Readings are now excluded from the global search. (TS ID: 157285)

Production Loss Analysis

- You can now specify the number of decimal places that appears for all the Monetary and Quantity fields in PLA. The values that are calculated by the Meridium Enterprise APM system will be displayed using the number of decimals defined in the **Settings** window on the **PLA Administrator** page.

When you upgrade from previous versions to V4.1.0.0, the precision value defined for the Cost of Losses field will be applied to all the monetary fields and the precision value defined for the Unaccounted Loss field will be applied to all the quantity fields.

(TS ID: 166986)

Risk Based Inspection

- Asset Groups can now be used with the **Risk Based Inspection Overview** workspace. (TS ID: 154297)

Rounds

- You can now edit Lubrication Management Routes using the **Route Management** page in Rounds Designer. When you upgrade from previous versions to V4.1.0.0, Lubrication Requirement schedules are now automatically upgraded to the format used in Meridium Enterprise APM V4.

Note: Lubrication Management Data Capture support remains limited to paper-based reports and data entry via Record Manager.

(TS IDs: 80026, 162046, 163344, 162041).

SIS Management

- When you copy an Instrumented Function, the linked SIL Assessment record is also copied. If the linked SIL Assessment is *LOPA Internal*, then when you copy the Instrumented Function, the LOPA, Conditional Modifiers, and Independent Layers of Protection are also copied. However, the other SIL Assessment records that are associated (and not linked) with the Instrumented Function are *not* copied. (TS ID: 137180)
- The **SIS Management Overview** page has been changed as follows:
 - The three tabs, **Sensors**, **Logic Solvers**, and **Final Elements**, have been replaced by a single tab, **Custom Failure Data**. The **Custom Failure Data** section displays the information for all the three types of custom devices, allowing you to create a new one, or modify or delete an existing one.
 - A new tab, **SIS Trip Reports**, has been added. The **SIS Trip Reports** section displays a list of SIS Trip Reports, allowing you to create a new one, or modify or delete an existing one.

(TS ID: 166472)

- The SIS Management module now uses exida's Safety Equipment Reliability Handbook (SERH) database version 2015.2.01. (TS ID: 174883)

Thickness Monitoring

- Asset Groups can now be used with the **Thickness Monitoring Overview** workspace. (TS ID: 154297)

Resolved Issues - V4.1.0.0

The following issues existed in one or more previous releases and have been resolved in V4.1.0.0.

Asset Criticality Analysis

- Previously, when you changed the ACA System Name and then added an Asset to the ACA system, the changes would not be updated. This issue has been resolved. (TS: 162395)
- Previously, for an asset, when you deleted the relationship to the Functional Location record from the **Asset Finder**, an error message did not appear. This issue has been resolved. (TS: 163844)
- Previously, when you created a new ACA Analysis or a new ACA system, the page changed after you selected **Save**. This issue has been resolved. (TS: 170081)
- Previously, when you viewed the **Analysis Overview Graph** in the **Risk** section of an **ACA**, if you selected the grid view, the **Show Legend** and **Show Label** options were available. This issue has been resolved. Now, in the grid view, the **Show Legend** and **Show Label** options are disabled. (TS ID: 127719)

Asset Health Manager

- Previously, an issue intermittently occurred in which the user credentials specified in the AHM Service configuration (Meridium.AHI.Service.exe.config) file could not be retrieved and therefore the service failed to connect to the corresponding data source. When this happened, Health Indicator records were not updated or created as expected. In addition, on the Meridium Enterprise APM Server, this issue caused the AHM Service log files (Meridium.AHI.Service<Timestamp>.log) to grow rapidly as numerous entries were added. This issue has been resolved. (TS ID: 159771)
- Previously, if you deleted a Health Indicator record in Record Manager, and this was the only Health Indicator record related to a particular source, the source was still marked as *included* in the list on the **Health Indicator Source Management** page. This issue has been resolved. Now, if the only Health Indicator related to a source is deleted, the source is marked automatically as *excluded*. Note that no notification regarding the exclusion is displayed to the user in this scenario. (TS ID: 160686)

- Previously, the **Policies** section of the **Health Summary** page did not show any values in the **Last Execution** column. This issue has been resolved. (TS ID: 165380)
- Previously, the **Health Indicator Status by Asset** graph on the **Health Overview** page did not show the correct number of health indicators for each asset. This issue has been resolved. (TS ID: 166137)
- Previously, if you acknowledged a health indicator status until a certain date, the current local time of the server was incorrectly used instead of UTC time to determine whether or not the expiration date had passed. This may have resulted in the acknowledgment expiring either earlier or later than expected. This issue has been resolved. (TS ID: 162726)
- Previously, if a reading record associated with a health indicator source record was deleted, the corresponding health indicator(s) were not updated correctly throughout Asset Health Manager. This issue has been resolved. Now, when a reading record is deleted, any corresponding health indicators will be updated to reflect the latest reading record that exists in the database. (TS ID: 61170)

Foundation

Asset Hierarchy

- Previously, when you added the Meridium, Inc. assets in Asset Groups, all 1256 assets would be added to your database, and you were able to add them more than once, duplicating them in your database. This issue has been resolved. You can now only add these assets to a group once. (TS ID: 159714)

Meridium Enterprise APM Mobile Application

- Previously, when you selected a hyperlink in the Meridium Enterprise APM mobile application, the link would not open in your device's browser. This issue has been resolved. Now, when you select a hyperlink, the link opens in your device's preferred browser. (TS ID: 161737)

Catalog

- Previously, when you opened a query in the Catalog, the **Open** button may have remained enabled after you navigated away from a selected query. This issue has been resolved. (TS ID: 101893)

- Previously, when deleting a Catalog folder, you were not notified that folder contents would also be deleted. This issue has been resolved. (TS ID: 120912)
- Previously, an error occurred when you created a new folder in the Catalog. This issue has been resolved. (TS ID: 130472)
- Previously, when you created a new folder in the Catalog, that folder was not highlighted automatically in the Catalog after it was saved. This issue has been resolved. (TS ID: 139105)
- Previously, when you saved an item in the Catalog, the Name and Caption fields were not required fields. This issue has been resolved. (TS ID: 139997)
- Previously, when you searched for an existing catalog item, the button normally selected to create a new Catalog item appeared in the left pane. This issue has been resolved. (TS ID: 155811)
- Previously, when viewing Catalog items, selecting the check box in the grid heading did not select all of the items in the grid. This issue has been resolved. (TS ID: 172815)
- Previously, retrieving a Catalog item with a space at the end of its path string from an Oracle database would return a null value. This issue has been resolved. (TS ID: 173128)

Configuration Manager

- Previously, when you uploaded translations containing place holders in a translated string, an error occurred that would halt the Manage Translation feature of Configuration Manager. This issue has been resolved. The translated strings will be uploaded as expected, and the strings that were not uploaded will appear in the **Upload Custom Translations** window. (TS ID: 160464)

Dashboards

- Previously, when you created a new dashboard, left it empty, and switched between the dashboard and another tab, the new empty dashboard may have appeared with the Edit Mode disabled. This issue has been resolved. Now, the Edit Mode is always enabled for dashboards that are empty. (TS ID: 162708)

- Previously, when you applied a filter query to a dashboard and then tried to remove the filter query in Edit Mode, an error message appeared when you tried to view the dashboard. This issue has been resolved. (TS ID: 159874)
- Previously, on Android devices, when you attempted to add a Hyperlink widget to a dashboard, the Android device's keyboard would obscure portions of the screen so that you could not complete the widget properly. This issue has been resolved. (TS ID: 163085)

Datasets

- Previously, the tab name for a dataset page displayed the value in the dataset's Name field rather than the Caption field. This issue has been resolved. Now, the page for a selected dataset displays the value in the dataset's Caption field as the tab label for that page. (TS ID: 145330)

Datasheet Builder

- Previously, whenever you closed a **Datasheet Dialog** box, an error message appeared. This issue has been resolved. (TS ID: 90228)
- Previously, whenever you changed the Short Date Format Set in the field behaviour for datasheets, the datasheet did not load and an error message appeared. This issue has been resolved. (TS ID: 156118)
- Previously, whenever you changed the fields in a Datasheet Builder and saved the datasheet, the Last Updated Date did not update to reflect the change in the **Data Information** page. This issue has been resolved. (TS ID: 159584)
- Previously, if an error appeared while closing a datasheet, and you then closed the error message, a spinner appeared on the datasheet and the page would stop responding. This issue has been resolved. (TS ID: 156893)
- Previously, on iOS devices, if you opened a family in Datasheet Builder, you could not scroll through the available items for that family. This issue has been resolved. (TS ID: 147497, 151350)
- Previously, when you opened the Datasheet Builder, the Field names in a Datasheet Builder were localized. This issue has been resolved. (TS ID: 157412)

- Previously, on iOS devices, whenever working with datasheets, scrolling was not smooth if you dragged from the fields or were working with a Result grid. This issue has been resolved. (TS ID: 156360)
- Previously, when you searched for a datasheet and attempted to select the hyperlink for the record that you want to open, you could not select the hyperlink if the page is not in edit mode. This issue has been resolved. (TS ID: 147008)
- Previously, when you edited the value on the datasheet for a Route or an ML, an MLTG or an MLT, and then selected save, the value did not save or update. This issue has been resolved. (TS ID: 167888)
- Previously, when you opened a Functional Location record, copied, and then pasted the reference document path, an error message appeared and the document path was not pasted. This issue has been resolved. (TS ID: 156882)
- Previously, when you created a record for family in **Family Management**, if you skipped a few required fields and saved the datasheet, the authentication dialog box appeared. This issue has been resolved. (TS ID: 169404)
- Previously, in bulk datasheet, when you switched from a functional location description cell to the next cell, and then selected **Cancel** button in the text editor, an exception error message appeared. This issue has been resolved. (TS ID: 167741)

Date Sources

- Previously, when you modified a new or existing data source and did not save the changes, if you navigated away from the page, no notification message was displayed to indicate that the modifications to the data source would be lost was displayed. This issue has been resolved. An appropriate message is now displayed in this scenario. (TS ID: 139083, 142939)
- Previously, on tablet devices, when creating a new data source, the part of the data source form was inaccessible. This issue has been resolved. (TS ID: 151504)
- Previously, in Security Manager, changes made to the data permissions for a family would not appear to other users until Redis was restarted. This issue has been resolved. (TS ID: 153503)
- Previously, in Operations Manager, configuring email settings via SMTP caused

data source values to change unexpectedly. This issue has been resolved. (TS ID: 166573)

Date Time Control

- Previously, on iOS devices, in the Date Time Control, when you selected the top half of the month arrow, the date widget would close. This issue has been resolved. (TS ID: 155610)

Global Search

- Previously, the Global Search index rebuild would not apply the rebuild to all servers in a multi-server setup, but would only apply it to a single server. This issue has been resolved. (TS ID: 160405)

Graphs

- Previously, when you made settings changes to axis gridlines in Graphs, you could not save your changes. This issue has been resolved. (TS ID: 156799)
- Previously, when you selected the Stacked Percent check box in the Settings menu in Graphs, the graph did not utilize the full range of the vertical axis. This issue has been resolved. (TS ID: 142034)
- Previously, when you accessed a graph and changed the Axis to Bottom Axis in the Series section of Settings, you received an error message stating that the graph could not be drawn. This issue has been resolved. (TS ID: 163097)
- Previously, when you attempted to access a graph or chart that did not exist, a blank screen would be displayed. This issue has been resolved. Now, when you access a graph or chart that does not exist, you will receive an error message. (TS ID: 145918)
- Previously, in graphs, if you had a hyperlink set somewhere on the page, then you would see the hyperlink cursor regardless of where your cursor hovered on that page. This issue has been resolved. (TS ID: 167054)
- Previously, in Graphs, when you viewed the Cumulative Failures Plot in Reliability Growth and selected the Labels button, the labels would obscure the plot, making it mostly unreadable. Also, if you zoomed in on a section of the plot and then selected the Labels button, the zoom was reset. This issue has been resolved. (TS

ID: 126124)

Login

- Previously, on the Meridium Enterprise APM login screen, when you changed the Meridium Enterprise APM Server name, the data sources pertaining to the previously selected Meridium Enterprise APM Server were not cleared from the data source list. This issue has been resolved. Now, when you change the Meridium Enterprise APM Server, the data sources pertaining to the previous server are cleared from the data sources list and the data sources for the newly selected server are loaded. (TS ID: 163084)

Query

- Previously, in update queries, expressions entered in the Update To field would not be retained in the expression builder if it was reopened. This issue has been resolved. (TS ID: 99842)
- Previously, in append queries, an unnecessary **Target Source** link appeared in the **SQL** section of the query's workspace. This issue has been resolved. (TS ID: 99843)
- Previously, in delete queries, an error occurred when you selected a relationship family as a target source. This issue has been resolved. (TS ID: 101912)
- Previously, when you selected the option to update or delete a query, the resulting confirmation windows lacked titles. This issue has been resolved. (TS ID: 151643, 146706)
- Previously, the Query Builder allowed you to enter a prompt ID containing a space, though the presence of a space would cause the query to fail. This issue has been resolved. Now, if the user enters a prompt ID containing a space, a message indicating that the prompt ID cannot have spaces will appear. (TS ID: 151669)
- Previously, on Android devices, an error occurred when you added a related source in a query. This issue has been resolved. (TS ID: 159474)
- Previously, in queries, an error occurred when you cleared the **Show Totals** check box. This issue has been resolved. (TS ID: 165530)
- Previously, if Meridium Enterprise APM was accessed via Internet Explorer 11, an

error occurred when you added a source in Query Designer. This issue has been resolved. (TS ID: 166104)

- Previously, when working with queries in an Internet Explorer browser, moving columns in the Design workspace via the drag-and-drop option resulted in an error. This issue has been resolved. (TS ID: 168899)
- Previously, when you entered a query path in the address bar, the query would open in the Dashboard tool tab rather than a Query tool tab. This issue has been resolved. Now, when you enter a query path in the address bar, the query opens as expected in a Query tool tab. (TS ID: 169161)
- Previously, when you ran a query, unnecessary notifications appeared when parameters were passed into the query. This issue has been resolved. (TS ID: 170962)
- Previously, in update queries, an unnecessary confirmation message appeared when navigating between workspace sections. This issue has been resolved. (TS ID: 171307)
- Previously, if the Query Privilege field in a Security User record was set to *Execute Only*, that Security User was able to access a query's **Design** and **SQL** sections, as well as select the **Create New** button on the **Query** page. These issues have been resolved. Now, in this scenario, the Security User is able to access only a query's **Results** workspace, and the **Create New** button is hidden on the **Query** page. (TS ID: 171314, 165328)
- Previously, when you navigated between the **SQL** and **Design** sections of the workspace, and error may have occurred that prevented you from accessing the designer or running the query. This issue has been resolved. (TS ID: 172997)
- Previously, an error occurred when you ran a delete query on a family that had a child family. This issue has been resolved. (TS ID: 175173)

Record Manager

- Previously, when you deleted a datasheet for an entity from Configuration Manager, and then opened the same entity from Record Explorer, multiple error messages appeared. This issue has been resolved. (TS ID: 166850)
- This issue is common to devices which use Mac OS X. Previously, on iOS devices,

when you opened a datasheet for an Equipment record, the heading for the **Equipment Identification** tab is not displayed correctly and "n" from the word "Identification" overflowed to the next line. This issue has been resolved. (TS ID: 159692)

- Previously, when you had a long Function Location name or Description Value, the name appeared distorted in the Record Explorer view. This issue has been resolved. (TS ID: 156472)
- Previously, on Microsoft Surface Devices, when the Record Explorer was hidden, the titles were not displayed correctly. This issue has been resolved. (TS ID: 150188)
- Previously, in Record Manager, when you navigated back from lower levels of Family Records, **Add New** and **Link Existing** options were displayed differently. This issue has been resolved. (TS ID: 168019)
- Previously, in Record Manager, when you opened an equipment record, selected the available related families, and linked multiple health records, the links would be created but the you would be navigated to the datasheet of one of the health indicators. This issue has been resolved. (TS ID: 160657)
- Previously, in Record Manager, when you opened an Equipment record, selected the available related families, selected the same record to link on the Health Indicator family that you had picked before, an error message appeared. This issue has been resolved. (TS ID: 160651)
- Previously, in Record Manager, you could not scroll horizontally or vertically in Bulk Data forms or Datasheets with fields disabled. This issue has been resolved. (TS ID: 159628)
- Previously, on iOS devices, the drop-down options menu in Record Manager moved locations on the screen when you scrolled. This issue has been resolved. (TS ID: 159641)

Rules Editor

- Previously, in the Rules Editor, errors occurred when you attempted to create rules for relationship families, or attempted to create subfolders. These issues have been resolved. (TS ID: 168890)

Security Manager

- Previously, when accessing the workspace for a Security User, if you collapsed the left pane, the site navigation links overlapped with the displayed user names. This issue has been resolved (TS ID: 168629)
- Previously, when creating a role, an error occurred if you attempted to save a role without a value in the Description field. This issue has been resolved. (TS ID: 174446)
- Previously, on the **Security Users** page, an error occurred if you selected a Security User, then navigated to a different tab, and then navigated back to the tab for the **Security Users** page. This issue has been resolved. (TS ID: 175343)

Teams

- Previously, when you viewed a Security User in a team member control, you would not see the user's photo, even though you could see the photo during team member selection. This issue has been resolved. Now, you can see photos for Security Users in both scenarios. (TS ID: 160967)

Hazards Analysis

- Previously, when you tried to promote a Recommendation to Asset Strategy Management and it failed, there was no message stating the reason. This issue has been resolved. (TS ID: 156380)

Inspection Management

- Previously, on the **Bundle Sub-Inspection** datasheet, if the user changed the value in the Total Number of Tubes in Bundle field to null and then saved the datasheet, the user would no longer be able to enter a numeric value in this field. This issue has been resolved. Now, if a user enters a null value in the Total Number of Tubes in Bundle field and then alters the field with a numeric value at a later time, the datasheet will be saved. (TS ID: 98875)
- Previously, when viewing the **Inspection Management Overview** workspace for a Functional Location, if you deleted a record on either the Inspections or the Inspection Tasks tab and then navigated away, the count on the tab indicating the actual number of records contained in that tab was not updated. This issue has been resolved. Now, after deleting a record on a Functional Location, when you switch tabs on the **Inspection Management Overview** page, the Inspections and Inspection Tasks tabs will maintain the correct number of records on their count

indicators. (TS ID: 157387)

- Previously, after adding a new team member through the bulk data form, if you navigated away from the page, the unsaved team member data was not retained on the **Team Members** tab. This issue has been resolved. (TS ID: 159854)
- Previously, when viewing a new Sub Work Pack, the icons on the left navigation pane would be enabled; however, if you switched tabs, the icons on the left pane were incorrectly disabled. This issue has been resolved. (TS ID: 164109)
- Previously, after modifying a Work Pack ID, if you navigated away from the selected tab, the Work Pack ID reverted to its previous value. This issue has been resolved. (TS ID: 164708)

Metrics and Scorecards

- Previously, the content based on the Generation Management (GM) and the Production Loss Analysis (PLA) cubes was erroneously included in the baseline content. This issue has been resolved. The content no longer appear in the Catalog folder and in the Metric View. (TS ID: 160825)

Policy Designer

- Previously, when a policy was scheduled for *One Time* execution, the policy would execute more than once if you kept the policy open past the scheduled execution time and then made and saved changes to the policy. This issue has been resolved. A policy scheduled for “One Time” execution will now only be executed once.

To support this change, a new field, Schedule Executed, has been added to the Policy family.

(TS ID: 150880)

- Previously, when you used a Query node in the policy diagram, if you deleted from the query a column that was specified in a subsequent node in the policy model, the policy did not load properly. This issue has been resolved. Now, in this scenario, the policy will open and display a validation message indicating that any nodes using values from the removed column must be reconfigured. (TS ID: 156624)
- Previously, the following issues existed, which were related to upgraded policies

with pre-existing schedules:

- When you used a URL to open the policy in the **Design** section, a validation message indicating an invalid schedule appeared, although the schedule was valid.
- When you selected an execution result summary in the **Execution History** pane, the detailed execution results were not displayed on the model canvas.

These issues have been resolved. (TS ID: 156445)

- Previously, if you selected *Time Span* as the data type for a value associated with a Constant or Point Value node, no validation existed to ensure that you entered a valid time span format. In addition, when the policy was executed, certain time span formats (e.g., 1 min, 5 hours, 2w) were treated as strings instead of being converted to time spans that could be used in comparisons. These issues have been resolved. (TS ID: 61166)
- Previously, when validating policies with multiple different Boolean input values, when you made a selection for one Boolean input, all other Boolean inputs would change to the same selection. This issue has been resolved. (TS ID: 61047)
- Previously, for users with certain time zones, when policy validation returned a collection of readings, recently added readings may not have been included due to the difference between the user's time zone and UTC. This issue has been resolved. (TS ID: 160732)
- Previously, when you created a new Health Indicator record from the **Instances** pane, the newly created record was not automatically selected in the box corresponding with the Health Indicator node. This issue has been resolved. (TS ID: 156619)
- Previously, if you selected *Boolean* as the data type for a value associated with a Point Value node, and you then specified a Boolean value for the node in a policy instance, instance validation did not behave as expected. The Point Value node was shown as not used and an error message indicated that the value was not recognized as a valid Boolean. This issue has been resolved. Now, in this scenario, instance validation will recognize that a valid Boolean has been specified. (TS ID: 61075)
- Previously, if you mapped a value from a predecessor node to specify the names of the events created or closed by a Create Event or Close Event node in a policy model, the field or output name (e.g., Value) was used to determine whether the

Create and Close Event nodes matched. If the mapped field or output names were the same in both event nodes, the nodes were shown as matching even though the *values associated with* the mapped field or output were different. This issue has been resolved. Now, at the time the policy is executed, the values associated with the mapped field or output will be used to determine whether the Create Event and Close Event nodes match. (TS ID: 61366)

- Previously, when you connected an OPC Tag node to a Collection Filter node to filter the HDA Readings output, and then, in a separate logic path, connected the OPC Tag node to a calculation node also using the HDA Readings collection, the calculation node incorrectly used the filtered collection of HDA Readings when you validated or executed the policy. This issue has been resolved. (TS ID: 61101)
- Previously, in the Policy Event record datasheet, the Link to Policy field was not displayed. This issue has been resolved. (TS ID: 160523)

- Previously, when you ran instance validation for a policy that evaluated dates and times, the instance validation process used the time zone of the user rather than the time zone of the policy. This issue has been resolved.

In addition, when certain constant values (e.g., today, Jan, or Monday) were used to specify a date and time to be evaluated, the instance validation results showed the timestamp equivalent of the constant, rather than the constant value itself. This issue has also been resolved.

(TS ID: 165892)

- Previously, if a record updated by a policy was used as a triggering input to a policy configured for automatic execution (whether the same or a different policy), the subsequent policy execution was not triggered.

For example, this issue occurred if you used the Edit Entity node to modify a Health Indicator record in one policy, and the same Health Indicator record was used as a triggering input in another policy.

This issue has been resolved.

Note: This issue did not occur in Family Policies.

(TS IS: 172535)

- Previously, if you added a Create Entity or Delete Relationship node to the design canvas and then deleted it without configuring any properties, the message bar retained a validation error message related to the node. This issue has been resolved. (TS ID: 171656, 173366)

- Previously, if you reloaded a policy that contained an Edit Entity node that was not fully configured, an error occurred when you selected the node. This issue has been resolved. (TS ID: 160344)
- Previously, an error occurred when you deleted an output row in the **Properties** window for a Case node. This issue has been resolved. (TS ID: 174705)
- Previously, if you made changes to a policy instance but did not save it, no warning message appeared if you closed or refreshed the tab and your changes would be lost. This issue has been resolved. (TS ID: 173090)

Process Data Integration

- Previously, the connection from the PDI Service on the PDI Server to the Meridium Enterprise APM Server caused an increase in the IIS worker process memory usage on the Meridium Enterprise APM Server. Memory usage would grow by 1-1.5GB when the PDI Service was started. This issue has been resolved. (TS ID: 156845)

Production Loss Analysis

- Previously, when you deleted a Production Event associated with multiple losses, the values in **Production Event** column in the **Reconcile Loss** grid were not refreshed. This issue has been resolved. (TS ID: 163901)
- Previously, the precision for values that were displayed across PLA was inconsistent. This issue has been resolved. Now, the precision for all the values in PLA is set based on the value defined in the **Settings** window on the **PLA Administrator** page. (TS ID: 163903)
- Previously, negative values were accepted in the Loss field of the Production Loss family. This issue has been resolved. Now, when you enter negative values in the Loss field, an error appears. (TS ID: 163905)
- Previously, if you did not enter the **Start Time** while creating a Production Plan, you were allowed to select the **Next** button, but an error message appeared after you selected the **Finish** button. This issue has been resolved. An error message now appears if you select the **Next** button without entering the **Start Time**. (TS ID: 156135)
- Previously, when you regenerated a Concurrent plan to convert it to Sequential

plan, you were allowed to create the plan without providing different dates for all products. This issue has been resolved. Now, if you regenerate a Concurrent plan to convert it to Sequential plan, an error message will appear if you do not provide different dates for all products. (TS ID: 156135)

- Previously, in the **Production Plan** tab, when you selected , an error appeared. This issue has been resolved. (TS ID: 156135)
- Previously, on the **PLA Overview** page, the **New Plan** and **New Event** buttons were enabled for an MI Production Loss Accounting Manager user. This issue has been resolved. (TS ID: 166433)

Recommendation Management

- Previously, the More Options menu in the **Recommendations** pane did not include the **Reference Document** option for the Recommendation family. This issue has been resolved. (TS ID: 171293)

Reliability Analytics

- Previously, for a System Reliability Analysis, in the **Risks** section, in the **<Risk>/Risks to Reset** grid, you were not able to save changes in the **Risks to Reset** column. This issue has been resolved. (TS ID: 162015)
- Previously, in the Reliability Growth Analysis, you were not able to save an analysis with less than four datapoints. The PUT error that appeared did not indicate the reason for not saving the analysis. This issue has been resolved. Now, if you save an analysis with less than four datapoints, a message appears indicating that at least four datapoints are required to save an analysis. (TS ID: 160855)
- Previously, in a Reliability Growth Analysis, when you selected a datapoint and accessed the editor for Reliability Growth data (i.e., the **Reliability Growth Data** window), the selected datapoint was not highlighted. This issue has been resolved. (TS ID: 160859)
- Previously, in IE browsers, for a System Reliability Analysis, in the **Scenario** workspace, the fields in the **Properties** pane were misaligned. This issue has been resolved. (TS ID: 160698)
- Previously, for a Reliability Distribution Analysis, in the **CDF** plot, the x-axis was

labeled as *TTF*. This issue has been resolved. The x-axis is now labeled as *Time to Failure*. (TS ID: 160683)

- Previously, for a Reliability Distribution Analysis, you were not able to view data in a **Probability Plot** for TTR Distribution. This issue has been resolved. (TS ID: 159594)
- Previously, on the **Provide Information for Downtime** screen, the Downtime field was labeled as *Downtime Field*. This issue has been resolved. (TS ID: 156960)
- Previously, on Microsoft SurfacePro devices, in a Probability Distribution Analysis, when you switched between tabs, a Javascript error appeared. This issue has been resolved. (TS ID: 156912)
- Previously, on Microsoft SurfacePro devices, in a Probability Distribution Analysis, when you modified the distribution parameter, *Eta*, to an invalid value, the application stopped responding. This issue has been resolved. Now, when you modify *Eta* to an invalid value, an error message appears. (TS ID: 156912)
- Previously, in a Reliability Growth Analysis, the value that you specified in the Measurement Name field was not reflected in the **<Measurement Name>** column in the **<Measurement Name>** grid. This issue has been resolved. (TS ID: 156919)
- Previously, you were able to save a Reliability Growth Analysis with less than four datapoints. After creating the analysis, you were not able to update the analysis. This issue has been resolved. You can now save a Reliability Growth Analysis only if you have added at least four datapoints. (TS ID: 156874)
- Previously, when you created a Reliability Distribution Analysis, appropriate fields did not appear in the editor for Reliability Distribution data (i.e., the **Reliability Distribution Data** window). This issue has been resolved. (TS ID: 155150)
- Previously, for a System Reliability Analysis, in the **<Risk>/Risks to Reset** window, you had two options to cancel the operation. This issue has been resolved. The cancel option above the grid has been removed. (TS ID: 157193)
- Previously, for a System Reliability Analysis, in the **<Risk>/Risks to Reset** window, the bar above the grid did not use standard color. This issue has been resolved. (TS ID: 157193)

- Previously, in a Reliability Growth Analysis, the Time Units in the **COT** column on the editor for Reliability Growth data (i.e., the **Reliability Growth Data** window) always appeared as Days. This issue has been resolved. (TS ID: 156820)
- Previously, in a System Reliability Analysis, in the **Properties** pane of a Sensor, the **add caption** option appeared in the Deactivated Switches field. This issue has been resolved. The Deactivated Switches field now contains a list of all the Switch elements in the diagram allowing you to select the switch that the sensor will deactivate. (TS ID: 159413)
- Previously, when you modified the **Distribution Parameters** in a Probability Distribution Analysis, the page was blank until the parameters are updated. This issue has been resolved. (TS ID: 157120)
- Previously, in a System Reliability Analysis, in the **New Action** window, the values in the Condition Monitoring Type field were not localized. This issue has been resolved. (TS ID: 157161)
- Previously, in a System Reliability Analysis, when it took a long time to perform a copy-and-paste operation, no waiting icon indicated that the operation is in progress. This issue has been resolved. (TS ID: 156982)
- Previously, in the editor for Reliability Distribution data (i.e., the **Reliability Distribution Data** window), the caption on the **Add** button disappeared after you added one row. This issue has been resolved. (TS ID: 156954, 156953)
- Previously, you were not able to view the **RA Overview** page. This issue has been resolved. (TS ID: 159883)
- Previously, in the System Reliability Analysis, in the **Diagrams** section, the tool tip was missing for the tools in the **Palet** section. This issue has been resolved. (TS ID: 125917)
- Previously, in a System Reliability Analysis, when you modified Risks to Reset, Planned Resource Usage, Unplanned Resource Usage, or Resource Usage, and navigated back, the **Delete Confirmation** window appeared instead of the **Discard Changes** window. This issue has been resolved. (TS ID: 157185)
- Previously, in the Reliability Distribution Analysis, on the **Failure Type** screen, when you selected the **I have failures without replacement (as good as old)**

option, appropriate columns did not appear on the editor for Reliability Distribution data (i.e., the **Reliability Distribution Data** window). This issue has been resolved. (TS ID: 155703)

- Previously, in the Reliability Distribution plots, the auto-censored datapoints were not identified properly. This issue has been resolved. (TS ID: 155911)
- Previously, on iOS devices, the column header did not align with the data in the columns. This issue has been resolved. (TS ID: 153862)
- Previously, on iOS or Android devices, in a System Reliability Analysis, in the **Actions** section, the grid overlapped with the **Properties** pane. This issue has been resolved. (TS ID: 156641)
- Previously, in the System Reliability Analysis, in the **Actions** section, when you specified **TTF Distribution** and **Failure Consequence** values for a Simulation, an error appeared. This issue has been resolved. (TS ID: 164021)
- Previously, in a Reliability Distribution Analysis, you were not able to update the Confidence Level for a TTR Distribution. This issue has been resolved. (TS ID: 164245)
- Previously, in a Reliability Distribution Analysis, the Time Units did not appear in the editor for Reliability Distribution data (i.e., the **Reliability Distribution Data** window). This issue has been resolved. (TS ID: 163913)
- Previously, in a Reliability Distribution Analysis, you were not able to update the Confidence Level for a TTR Distribution. This issue has been resolved. (TS ID: 164245)
- Previously, on iPads, when more than three tabs were open, and you selected to access the first tab, an error message appeared. This issue has been resolved. (TS ID: 168272)

Risk Based Inspection

- Previously, when you added a new Degradation Mechanism (DM) to an existing RBI Analysis, data from the component to which the RBI Analysis was linked would be copied to the **Process Data** and **Design Data** sections of the analysis. This may

have caused fields to be cleared on both tabs. This issue has been resolved. Now, when you add a new DM to the analysis, existing data on the **Process Data** and **Design Data** sections will not be overwritten. (TS ID: 61509)

- Previously, if you performed an inventory calculation with the Initial Fluid Phase value set to *Gas*, the calculation did not correctly use the unit of measure defined for the user, resulting in incorrect calculated values. This issue has been resolved. Now the calculation uses the correct localized units of measure. (TS ID: 78058)
- Previously, when creating a copy of an RBI Analysis by duplicating or applying it, or creating a What-If Analysis, the values in the Toxic Duration field of the linked Consequence Evaluation and the Estimated Wall Remaining field of the linked Criticality Int. Corr. Deg. Mech. Eval. record were incorrectly copied to the corresponding fields in the records linked to the newly-created analysis. This issue has been resolved. (TS ID: 79148)
- Previously, on the RBI Component datasheet, the Material Grade field had values that did not match the corresponding values of the Material Grade field on the RBI Analysis datasheet. This issue has been resolved. Now, the RBI Component datasheet correctly checks the Code Year and the Material Spec field to populate the Material Grade field. (TS ID: 152768)
- Previously, when you selected an asset, and applied the Analysis from the **Analysis Details** workspace, you were not able to view and select the More menu. The issue is now resolved. (TS ID: 166429)
- Previously, when you created a copy of an RBI Analysis and attempted to set a mitigated risk value for the analysis, an error message appeared. This issue has been resolved. (TS ID: 170863)
- Previously, if you tried to calculate an RBI Pipeline Analysis, an error would appear if you did not enter values in the following fields.
In the RBI Pipeline Analysis datasheet:
 - Is Piggable?
 - Is CP System Present?In the Ext. Corr. Deg. Mech. Eval. and Int. Corr. Deg. Mech. Eval. datasheets:
 - Wall Thickness LossThis issue has been resolved. These fields now correctly appear as required for RBI Pipeline Analyses.
(TS ID: 175251)

Root Cause Analysis

- Previously, when you added a team member for which a Human Resource record did not already exist, the team member record was not populated in the Team Member report. This issue has been resolved. (TS ID: 70636)
- Previously, when you copied a Root Cause Analysis, no values were copied from the source analysis. This issue has been resolved. (TS ID: 160383)
- Previously, in the **Preserve Records** workspace, the date value in **Due Date** column was one less than the date that you selected in the Date Due field in the datasheet. This issue has been resolved. (TS ID: 152622)
- Previously, in the **Event Diagram** workspace, the tool tip was missing for the tools in the **Pallet** section. This issue has been resolved. (TS ID: 135562)
- Previously, when you enabled the Logic Gates, the **Confidence Factor** was set to *undefined* in the Logic Tree diagram. The value in the Confidence factor field, however, remained the same. This issue has been resolved. (TS ID: 167736)

Rounds

- Previously, when you opened a Route for data collection, and then closed the Route map panel, the **Trend** chart would not resize. This issue has been resolved. The Trend chart now resizes, when route map panel is closed. (TS ID: 155985)
- Previously, after the Measurement Locations had been updated, with changes to the Measurement Location Template using the **Update Existing MLs** button, the **Update Existing MLs** button remained enabled even though nothing was selected in the grid. This issue has been resolved. (TS ID: 160362)
- Previously, on iOS and Android devices, when you opened a Route and selected a Measurement Location, the Recommendation icon would not appear. Instead, only the pinboard icon appeared. This issue has been resolved. (TS ID: 160031)
- Previously, in the offline mode, when you opened a Route for Data Collection, and then added a Recommendation, the newly created Recommendation information would not appear in the panel, if the Recommendation headline was not specified. This issue has been resolved. Now, the Recommendation headline will be populated automatically. (TS ID: 159466)

- Previously, in Rounds Designer, when you selected any Route or Template Group, added a new Measurement Location or Template, and then drag-and-dropped the new node on any other node prior to saving it, the new node place holder disappeared. This issue has been resolved. (TS ID: 156696)
- Previously, in Rounds Data Collection, for numeric Measurement Locations where Allowable Value categories were used to constrain the possible reading values, the **Reading** Field allowed entry of any numeric value. This issue has been resolved. The **Reading** Field now requires the user to select a reading value from the drop-down list when numeric allowable values category is used. (TS ID: 164151, TS ID: 165156)
- Previously, on iOS and Android devices, when you selected a Route, and then scrolled in the Route explorer, an unexpected error message appeared. This issue has been resolved. (TS ID: 160749)
- Previously in Rounds Data Collection, if you added readings to a Route without a schedule which contained Measurement Locations with and without schedules, then closed and re-opened the data collection page for the Route, any Measurement Location without a schedule would appear on the Route. This issue has been resolved. (TS ID: 159495)
- Previously in Rounds Designer, when you selected a Route, added a new Measurement Location, and did not save the Measurement Location, you could use the **Search** feature to select another Measurement Location, resulting in the new Measurement Location being lost. This issue has been resolved. (TS ID: 165147)
- Previously, when using Rounds Designer on touch-screen devices, attempting to drag and drop a node would freeze the screen. This issue has been resolved. (TS ID: 150325)
- Previously, in Rounds Designer, when you changed the Category value for a Measurement Location, the **Allowable Values** list would not clear its previous values. This issue has been resolved. (TS: 146809)
- Previously, in Rounds Designer, when you updated the **Asset Id** for an ML data-sheet and selected **Save**, the workspace Heading was not immediately updated with the change. This issue has been resolved. (TS ID: 168409)
- Previously, when you created recommendations in Rounds Designer using the

Recommendation pane in Route Management, the asset information was not populated. This issue has been resolved. (TS ID: 155975)

- Previously, when you attempted to change the order of an Measurement Location Template Group, in certain cases, an error message appeared indicating that you could not change the order. This issue has been resolved. (TS ID: 159619)
- Previously, when you selected an ML, added a new condition, added an ML to this condition, dragged-and-dropped this ML to the Pinboard and then deleted the parent condition, the orphan ML appeared twice on the pinboard. This issue has been resolved. (TS ID: 160364)
- Previously, in Rounds Designer Overview, **Option** button was not displayed unless items were selected in the **Routes**, **Allowable Values**, **ML Templates** and **ML Template Groups** lists. This issue has been resolved. Now, the **Option** button is in inactive state until the items are selected. (TS ID: 162709)
- Previously, in Rounds Designer, when you selected a Route using the **Search** option and assigned the Route to a user, the section did not refresh and the search did not clear. This issue has been resolved. Lists in the Rounds Designer Overview now provide an enhanced search feature which allows the user to search in any column in the list. (TS ID: 159563)
- Previously, in Route Management or Template Group management, when you attempted to change the order number of a condition, in certain cases an error message did not appear when the requested change was invalid, and in others a valid requested change did not occur. This issue has been resolved. (TS ID: 168052)
- Previously, in Rounds Designer, you were able to save the same Scan ID on more than one route. This issue has been resolved. (TS ID: 156812)
- Previously, in Rounds Data Collection, when a new Recommendation was saved, any pre-existing Recommendations were no longer displayed in the **Recommendations** list. This issue has been resolved. (TS ID: 160377)
- Previously, in Rounds Designer, when you created a Measurement Location from a template, the schedule was not copied from the Measurement Location Template to the related Checkpoint Task. This issue has been resolved. (TS ID: 168885)
- Previously, in Rounds Data Collection, the recent values matching the Lower Level

1 Character alert level for an ML were displayed in the Measurement Trend chart with a green point marker instead of yellow. This issue has been resolved. (TS ID: 159511)

- Previously, in Rounds Designer, you could delete a Route that had users assigned to it. This issue has been resolved. (TS ID: 159416)
- Previously, in Rounds Data Collection, when you entered a reading that triggered conditional MLs and took readings for the conditional MLs, if you then removed the reading that had triggered the conditional MLs, the readings were not removed from all the conditional MLs which were no longer required. This issue has been resolved. (TS ID: 168121)
- Previously, in Rounds Data Collection, Routes without schedules where Measurement Locations were Due or Overdue did not appear in the Due or Overdue Routes lists if the Checkpoint Tasks for these Measurement Locations did not have values in the **Non-Compliance date** field. This issue has been resolved. (TS ID: 156307)
- Previously, in Rounds Designer, values displayed on the **Route Completion** chart were not correctly formatted. This issue has been resolved. (TS ID: 155917)

SIS Management

- Previously, you could modify a Protective Instrument Loop even if the state of the loop was not *Design*. This issue has been resolved. You can now modify the Protective Instrument Loop only if the state is *Design*. (TS ID: 168069)
- Previously, you could modify an SIL Analysis even if the state of the analysis was not *Planning*. This issue has been resolved. You can now modify an analysis only if the state is *Planning*. (TS ID: 168173)

Restored Features - V4.1.0.0

The following V3.x features were deferred from previous V4.x releases, but are now available in V4.1.0.0.

Asset Strategy Management

- You can now apply a template directly to an asset. (TS ID: 160676)
- You can now apply state management to multiple asset strategies and manage Actions en masse via System and Unit Strategy Management. (TS ID: 119126, 83686)

Asset Strategy Optimization

- The Asset Strategy Optimization module is now available. (TS ID: 62752)

Calibration Management

- You can now perform automated calibration using the Fluke 74x or Fluke 75x documenting process calibrators. (TS IDs: 61334, 162185)

Foundation

R Scripts

- R script functionality is now available. This includes an R script editor, which you can use to create and save R scripts to the Catalog, and the R Script node that you can use in Policy Designer to execute R scripts. (TS IDs: 164640, 163179, 164613)

Configuration Manager

- The **Authentication Required to Insert or Update Records** setting is now available. (TS ID: 160442)
- Revision history is now enabled for families with the **Authentication Required to Insert or Update Records** setting. (TS ID: 169864)
- You can now import or export R Scripts using the Import and Export tool. (TS ID:

161587)

- You can now validate baseline content using the **Content Validation** feature. (TS ID: 166127)

Graphs

- Logarithmic Scale is now enabled for Graphs. (TS ID: 76612)

Meridium Enterprise APM Mobile Application

- When using the Meridium APM Enterprise mobile application, Reference Documents can now be opened in your device's native browser, if that browser supports viewing PDF files. Otherwise, the browser can download the PDF file. (TS ID: 161289)

Risk Matrix

- The Protection Level Slider is now enabled in the Risk Matrix. (TS ID: 80787)

Failure Modes and Effects Analysis

- You can now run reports for the RCM and FMEA modules using catalog queries. These reports will run in the selected format from the analysis level. (TS ID: 147352)
- You can now copy and paste tree node elements. (TS ID: 64754)

Hazards Analysis

- The Revision History feature is now available. (TS ID: 104884)
- You can now attach a Reference Document to a Recommendation. (TS ID: 69738)

Inspection Management

- Reference Documents can now be used via any datasheet accessible in Inspection Management. (TS ID: 166504)

Metrics and Scorecards

- You can now view the scores of a KPI in a KPI details page by selecting the **Show Scores Only** check box on the KPI design page. (TS ID: 153429)
- You can now export the drill through result of a Metric View by selecting the **Export** button available in the **Drillthrough Result** window. (TS ID: 160143)
- You can now attach a Reference Document to a KPI and a Scorecard. (TS ID: 142641)

Policy Designer

- The R Script node. (TS ID: 161592)

Production Loss Analysis

- You can now delete a Production Event, which is not associated with a Production Plan, but is available in the database. (TS ID: 161224)
- You can now integrate PLA with Process Data Integration to create Production Data and Production Event records automatically. (TS ID: 61866)
- PLA now supports multiple time zones. (TS ID: 160600)

Reliability Analytics

- You can now disassociate a Distribution Analysis from a Spare Application. (TS ID: 156731)
- You can now view multiple plots for Probability Distribution Analyses, Reliability Distribution Analyses, Production Analyses, or Reliability Growth Analyses. You can access multiple analyses and compare multiple plots for the selected analyses. (TS IDs: 63644, 63646, 63645, 63648, 61870, 63937, 164580, 63936, 63681, 63682, 63683)

Reliability Centered Maintenance

- You can now run reports for the RCM and FMEA modules using catalog queries. These reports will run in the selected format from the analysis level. (TS ID: 147352)
- You can now copy and paste tree node elements. (TS ID: 64754)
- You can now link equipment to virtual assets, avoiding the need to swap out virtual assets individually via each failure mode. (TS ID: 152081)

Risk Based Inspection

- You can now review and change the state of multiple analyses using the **Change Analysis States** window. This replaces the **RBI - Review Analyses** page. (TS ID: 62844)
- You can now calculate multiple analyses from either the **Asset Summary** workspace or **Corrosion Loop Summary** workspace. (TS ID: 63246)
- Reference Documents can now be used via any datasheet accessible in Risk Based Inspection. (TS ID: 166504)

Root Cause Analysis

- You can now send e-mail notifications for alerts configured in RCA for Recommendations and Preserve Records. (TS ID: 106240, 62960)
- You can now send e-mails to send RCA Comprehensive Report for an analysis and link to access an analysis. (TS ID: 169448, 160604)

Rounds

- Rounds now supports the inclusion of Lubrication Requirements in routes, which may also contain Measurement Locations. Lubrication Requirements can also be linked to Checkpoint Conditions, providing additional route flexibility. To support this enhancement, Lubrication Requirements now use related Checkpoint Tasks for scheduling. Also, the relationships that are required for the use of Lubrication Requirements in Rounds are defined by default.

Note: Lubrication Management Data Capture support remains limited to paper-based reports and data entry via Record Manager.

(TS ID: 80026, 162040, 162180)

SIS Management

- You can now attach a Reference Document to a Recommendation. (TS ID: 69738)
- SIS Management now supports integration with Asset Health Manager. In SIS Management, you can access the **Health Summary** page of the Asset that is protected by an Instrumented Function. (TS ID: 78659)
- The SIS Trip Reporting feature is now available. (TS ID: 105855)
- You can now copy an Instrumented Function. This includes copying the linked SIL Assessment information and the related records as well. (TS ID: 137180)

Thickness Monitoring

- Reference Documents can now be used via any datasheet accessible in Thickness Monitoring. (TS ID: 166504)

Obsolete Features - V4.1.0.0

As of V4.1.0.0, the following items are no longer used in Meridium Enterprise APM.

Foundation

- The **Save as New** function for creating new family fields is no longer available. Based on customer feedback, this feature was determined to be superfluous and unnecessary. (TS ID: 86446)

Metrics and Scorecards

- You can no longer edit the Scorecard columns. By default, the KPIs in a Scorecard are displayed in tile view format. The KPI tile view displays the current value and percentage change from the previous value, which are the key measures for tracking a KPI. If needed, you can also view the details of a Scorecard in the table view. (TS ID: 160145)
- The Collection Frequency feature is no longer available. Instead, you can use the **Schedule, Alerts, and Privileges** tab of the KPI designer page to schedule a KPI for updating measures. (TS ID: 103752)

SIS Management

- Adding a Recommendation to an SIS Trip Report. If you want to add a Recommendation to an SIS Trip Report, you must add it to the related Instrumented Function. (TS ID: 105855)

Thickness Monitoring

- Importing data from an Excel spreadsheet via the TM Dataloggers interface. Now, the APM Connect Thickness Monitoring Data Loader must be used to import Excel data. (TS ID: 172676)

Deferred Features - V4.1.0.0

The following features are not available in Meridium V4.1.0.0, but are planned for a future release.

AMS Analytics

- AMS Analytics and a connection to Emerson AMS.

Asset Health Manager

- The display of health indicator statuses in Asset Hierarchy. (TS ID: 86796)
- Asset Hierarchy sorting and filtering based on health indicator status, filtering based on health indicator family field values, and filtering based on assets with or without health indicators (TS IDs: 91046, 86625, 86430)
- Trend chart for character health indicators. (TS ID: 103875)

Asset Strategy Implementation

- The option to exclude child items when copying and pasting Work Management Items. (TS ID: 147790)
- The ability to use Rounds.
- Visibility of Actions linked to Health Indicator sources. (TS ID: 143567)
- Production Resource Tool (PRT). (TS ID: 153718)

Asset Strategy Management

- Importing asset strategies and strategy templates. (TS IDs: 160688, 63042, 157251, 63638)
- Migrating strategies between databases.

Asset Strategy Optimization

- Optimize Actions. (TS ID: 65780)
- Diagram Validation. (TS ID: 117114)

Calibration Management

- Automated Calibration using Beamex and Meriam documenting process calibrators (TS IDs: 61319, 61334)
- Providing information on whether a calibrator is certified or out of certification (TS ID: 166241)

Foundation

Asset Criticality Analysis (ACA)

- Promoting analyses to and from ACA. (TS ID: 160858)
- Exporting and importing in the ACA module. (TS ID: 66952)

Configuration Manager

- Global number and date format. (TS ID: 160148)
- Global Preferences- Background Colors. (TS ID: 65297)

Graphs

- Exporting to a PDF and printing graphs. (TS ID: 81015)

GE System 1

- GE System 1 Analytics and connection to GE System 1, including the GE Tag node used in Policy Designer. (TS ID: 168928)

Inspection Management

- Inspection Grouping. (TS ID: 61244)
- Bulk review of Inspections. (TS ID: 163447)

Metrics and Scorecards

- Using Transpose in Metric Views. (TS ID: 128477)
- Export Import of KPI Schedules (TS ID: 173866)
- Selecting columns to include in a Scorecard. (TS ID: 70641)
- GM (Generation Management) cube is deferred from V4.0.0.0. Any previously deployed GM (Generation Management) cube, which worked in V3.6 and earlier releases, will continue to work in V4.0.0.0 after upgrading the product. You will be able to use the existing GM cube and the support will continue. (TS ID: 160466)

Process Data Integration

- Viewing trends for multiple OPC Tags simultaneously (i.e., the Process Data Viewer feature in V3). (TS ID: 62299)

Reliability Centered Maintenance and Failure Modes and Effects Analysis

- Promoting RCM and FMEA analyses directly to templates. (TS ID: 160858)

Reliability Analytics

- Action optimization in System Reliability Analysis.

Risk Based Inspection

- Importing and exporting RBI data for bulk review. (TS ID: 61326)
- Creating a bulk What-If analysis. (TS ID: 73475)

Root Cause Analysis

- Publishing an analysis in RCA. (TS IDs: 61730, 103887, 68585, 63432)
- Importing a Logic Gate or child nodes of a Hypothesis into a Logic Tree Diagram. (TS ID: 175309)
- Emailing capability to notify and track changes in an Asset in an RCA. (TS ID: 175610)
- Sending e-mail notifications for alerts configured in RCA for Hypothesis Verifications. (TS ID: 175610)

Rounds

- Selecting multiple nodes from the Route pane in Route Management. (TS ID: 173671)
- Unlinking a Measurement Location from a Measurement Location Template. (TS ID: 61751)
- Accessing a list of recent Routes. (TS ID: 61638)
- Storing the location data of a Reading via GPS. (TS ID: 130009)
- Offline access to the five most recent Recommendations in Rounds. (TS ID: 153853)
- Capturing multiple images while creating a Recommendation in Rounds.
- Ad hoc inspection of a single asset. (TS ID: 160740)

- Support for Bluetooth-connected barcode scanners. (TS ID: 124935)

SIS Management

- Revision History in SIS Management (TS IDs: 102226)

Thickness Monitoring

- Color Coding Preferences. (TS ID: 70840)
- Dataset integration with dataloggers. (TS ID: 83553)
- Corroded Area Measurements. (TS ID: 101752)
- Exporting data to Excel via the TM Dataloggers interface.

Release Notes - V4.1.0.1

Foundation - Asset Hierarchy

Previously, if you navigated away from the Asset Hierarchy before the page finished loading, one or more errors could appear. This issue has been resolved. Now, you can navigate to a different location without errors appearing. (TS ID: 177807)

Asset Criticality Analysis

Previously, if you were using Chrome 46 to access Meridium Enterprise APM, you were unable to complete the workflow for Asset Criticality Analysis. This issue has been resolved. Now, Asset Criticality Analysis is compatible with all currently supported versions of Chrome. (TS ID: 179786)

Release Notes - V4.1.0.2

Foundation

Previously, an error occurred if you tried to use a diagramming or design canvas in Meridium Enterprise APM on Chrome 48. This issue has been resolved. (TS ID: 193735)

Release Notes - V4.1.0.3

APM Foundation

- Previously, if an Asset Hierarchy rebuild request was submitted when the Asset Hierarchy Service was not running, and the user logged out before the service restarted, then, when the Asset Hierarchy Service restarted, the message would remain in the queue and the Asset Hierarchy would not rebuild. The Asset Hierarchy service would not throw an error if the notification service threw an error; instead, it would log the error. This issue has been resolved. (TS ID: 206225)

Asset Health Manager

- Previously, if the Data Source Description and Data Source ID did not match, the Asset Health Indicator Service could not find a data source. This issue has been resolved. (TS ID: 202121)

Notifications

- Previously, the Notification Service would crash intermittently when stopped and restarted after failures in other services. This has been resolved. (TS ID: 202761)

V4.1.1.0 Release Notes

The following release notes are available for Meridium Enterprise APM V4.1.1.0:

- [Enhancements](#)
- [Resolved Issues](#)
- [Restored Features](#)
- [Deferred Features](#)

You can also view the APM Connect release notes.

Enhancements - V4.1.1.0

The following enhancements have been made in V4.1.1.0.

Asset Criticality Analysis

- The ACA Data Loader has been introduced in V4.1.1.0.

The ACA Data Loader allows existing or new Asset Criticality Analyses to be delivered to the ACA module in Meridium Enterprise APM for further development, analysis or implementation. You can load data from other external systems into the ACA module via the data loader workbook. You can upload any existing analyses with updated risk assessment data that has been assessed outside the Meridium Enterprise APM application.

(TS ID: 66953, 177061)

Asset Health Manager (AHM)

- Performance when loading the **Health Summary** page for an asset with a large number of subsidiary assets has been improved. (TS ID: 181665)

Asset Strategy Management

- The ASM Data Loader has been introduced in V4.1.1.0.

The ASM Data Loader serves the following purposes:

- Provides functional equivalence with Meridium APM V3.x, enabling existing or new Asset Strategies to be imported into the ASM module for further development, analysis, and implementation.
- Provides users with a more effective Meridium Enterprise APM experience because the loaded content will be searchable and usable within the various Meridium Enterprise modules.
- Enables users to upload Asset Strategies for storage and to create templates in ASM that can be applied to one or more assets as a repeatable process.

After the data load, you can access the imported strategies, which will contain details such as when they were uploaded and by whom they were created, open them in ASM and use them in your workflows.

(TS ID: 160688)

Calibration Management

- When you perform automated calibration, the value in the **Select Type** box that corresponds to the Fluke documenting process calibrator has been renamed from *Fluke 74x-3.4.0* to *Fluke 74x - 75x*. (TS ID: 164228)
- When you send Calibration Templates to a calibrator, in the **Send to Calibrator** window, two boxes, **Select Calibrator** and **Calibrator details**, have been added. After you select a Test Equipment from the **Select Calibrator** list, the **Calibrator details** box displays the following information related to the Test Equipment:
 - Manufacturer
 - Model Number
 - Serial Number

In addition, a message appears below the **Select Calibrator** box, indicating if the calibrator is certified and specifying the date on which the certificate has expired or will expire.

When you receive data from the calibrator, the Calibration records that are created by Meridium Enterprise APM include the aforementioned details of the calibrator. These details are populated in the corresponding fields in the **Test Equipment** section of the Calibration datasheet.

(TS ID: 166241)

- The Calibration Data Loader has been introduced in V4.1.1.0.
You can use this feature to:
 - Import existing legacy calibration data into Meridium Enterprise APM so that you can retain visibility into previous performance and compare that performance with the current and the projected future performance.
 - Import calibration data from a documenting process calibrator that is not supported by Meridium Enterprise APM.

After you import the data, Meridium Enterprise APM creates the necessary records and their relationships in Calibration Management based on the data model.

(TS ID: 175307)

Production Loss Analysis

- The PLA Data Loader has been introduced in V4.1.1.0.
You can use this feature to import data from external sources into the PLA module. The data imported by the PLA Data Loader allows you to:
 - Access Production Plans
 - View Production Data that is associated with the Production Plan
 - View unaccounted losses, as well as losses that have been accounted for,

which are associated with the production data details.

(TS ID: 170074)

Risk Based Inspection

- The RBI 580 Data Loader has been introduced in V4.1.1.0. This feature is designed to allow you to import and create records for the following families:
 - Criticality RBI Component – Cylindrical Shell
 - Criticality RBI Component – Exchanger Bundle
 - Criticality RBI Component – Exchanger Header
 - Criticality RBI Component – Exchanger Tube
 - Criticality RBI Component – Piping
 - Criticality RBI Component – Tank Bottom
 - RBI Criticality Analysis
 - Consequence Evaluation
 - Criticality Env. Crack. Deg. Mech. Eval. (Environmental Cracking)
 - Criticality Ext. Corr. Deg. Mech. Eval. (Exterior Corrosion)
 - Criticality Int. Corr. Deg. Mech. Eval. (Internal Corrosion)
 - Criticality Other Damage Mech. Eval. (Other Damage)

Using the RBI 580 Data Loader, you can create or update up to 500 components at a time, allowing your organization to efficiently add data to your Meridium Enterprise APM database from other sources.

(TS ID: 177051)

Root Cause Analysis

- The RCA Template Data Loader has been introduced in V4.1.1.0.

The RCA Template Data Loader allows both primary and third party content to be delivered to Meridium Enterprise APM through either the RCA Data Model or through the RCA Logic Tree Data Model. The imported data can then be used to maintain relationships between the RCA data and the Failure Modes and Hypotheses. The RCA Template Data Loader transfers data from a fixed-format Excel document into either the RCA Data Model or the RCA Logic Tree. The imported data can be:

 - An RCA Analysis.
 - An RCA Event.
 - A Failure Mode.

- A Logic Gate.
- An RCA Hypothesis.
- An RCA Diagram/Analysis Relationship.

(TS ID: 170022)

Rounds

- The Rounds Data Loaders have been introduced in V4.1.1.0.

The Rounds Data Loaders allow users to load data required for the initial set up of Templates, Routes and Readings in the Rounds module, and to perform ongoing updates of Routes and Readings to the Rounds module in Meridium Enterprise APM. Users can load data from other external systems into the Rounds module via the data loader workbook.

Note: In this release, the Rounds Data Loaders only support Template Groups and Routes without Conditions.

(TS IDs: 177437, 171287, 177229, 177231)

Resolved Issues - V4.1.1.0

The following issues existed in one or more previous releases and have been resolved in V4.1.1.0:

Asset Strategy Management

- Previously, if you removed a Mitigating Action from an Asset Strategy and then approved the change, you would still see the Mitigated Risk marked as Modified in the Asset Strategy. This issue has been resolved. (TS ID: 179426)
- Previously, you could delete an Asset Strategy that had linked Actions, which would dissociate the Actions from both the Asset Strategy and the driving Action. This issue has been resolved. Now you cannot delete an Asset Strategy that has linked Actions. (TS ID: 182070)
- Previously, the Proposed Financial Risk was not equal to the Active Financial Risk on the **Review Strategy** page immediately after activating the Strategy. This issue has been resolved. (TS ID: 183212)
- Previously, when using Internet Explorer, you could not specify the Template Actions to include the strategy template when using the Apply Template Builder. This issue has been resolved. (TS ID: 183391)

Calibration Management

- Previously, when you attempted to create a Test Equipment that was out of certification, the record was not saved. This issue has been resolved. (TS ID: 179089)
- Previously, when you received calibration data from a documenting process calibrator, the Calibration, Analog records that were created did not display the calibration results. This issue has been resolved. (TS ID: 180129)

Foundation

Graphs

- Previously, when you selected a query with blank values and chose that column as the category value for a pie graph, an error message appeared. This issue has been resolved. (TS ID: 176846)

Installation

- Previously, if you uninstalled the Meridium Enterprise APM mobile application on a Surface device, a bundle of files remained that would prevent you from installing a different version of the Meridium Enterprise APM mobile application. This issue has been resolved. Now, uninstalling the application fully removes all files. (TS ID: 176045)

Login

- Previously, the “browser not supported” banner was erroneously displayed on certain supported iOS devices. This issue has been resolved. (TS ID: 176254)

Query

- Previously, if you deleted a query Catalog item from the Public folder on which a baseline dashboard graph was dependent, it caused the baseline portion of the dashboard upgrade to fail. This issue has been resolved. (TS ID: 174714)

Risk Matrix

- Previously, on an iPad, if you copied a risk matrix, the copy of the risk matrix was created but not displayed in the list of saved risk matrices on the **Risk Matrix** page. This issue has been resolved. (TS ID: 173201)
- Previously, when you entered Financial Consequence values for Maintenance Cost or Production Cost in the **Risk** tab of a Risk Matrix, the values were not accepted on the first attempt, but could be saved on the next attempt. This issue has been resolved. (TS ID: 178639)

Team Members

- Previously, when you added team members in a **Team Members** section, the loading indicator would continue spinning after you selected the **Add Team Member**. This issue has been resolved. (TS ID: 175372)

Hazards Analysis

- Previously, on the **Hazards Analysis Overview** page, by default, the Hazards Analysis Risk Overview graph did not display a scrollbar. Because of this, you could

view only the Systems/Nodes that appeared on the first page. This issue has been resolved. (TS ID: 169043)

- Previously, when you accessed the revision history of a What If Analysis, you were not able to view the changes that were made for a record in that revision. This issue has been resolved. (TS: 184841)

Inspection Management

- Previously, when you deleted a record displayed in the list in the **Inspections**, **Inspection Tasks**, or **Work Packs** sections on the **Inspection Management Overview** page, if the list was more than one page long, the record count in the corresponding tab was not updated correctly. This issue has been resolved. (TS ID: 176695)
- Previously, when you created a new Work Pack, the default title, *<empty>*, was not correctly displayed. This issue has been resolved. (TS ID: 177513)
- Previously, you could save an Inspection that was set to the Pending Approval state regardless of whether the **Inspection Lock** check box was selected. If a saved Inspection was set to Pending Approval, and the **Inspection Lock** check box was not selected, you could continue to make and save changes to the Inspection. This issue has been resolved. (TS ID: 183711)
- Previously, you could save an Inspection that was set to the Approved state regardless of whether the **Final Inspection Lock** check box was selected. If a saved Inspection was set to Approved and the **Inspection Lock** and **Final Inspection Lock** check boxes were not selected, you could continue to make and save changes to the Inspection. This issue have been resolved for all but Checklist Inspections. (TS ID: 183711)

Policy Designer

- In V4.1.0.0, Ad Hoc validation did not work for collection inputs. This issue has been resolved. (TS ID: 183188)
- Previously, when you specified a specific value from a collection in the **Entity Key (s)** field in **Properties** window for a Delete Entity or Edit Entity node, an error occurred when you reloaded the policy. This issue has been resolved. (TS ID: 184592)

Production Loss Analysis

- Previously, when filtering the assets on the **PLA Overview** page, if the **Period** field contained a number larger than 300 *and* the **Include analyses without any assets** field was set to **Yes**, an error occurred. This issue has been resolved. (TFS ID: 174830)

Reliability Analytics

- Previously, in System Reliability, when working in a Scenario, if you created a new Action for an asset that was selected from the Asset Hierarchy prior to selecting the **Actions** tab, that Action was not successfully created. This issue has been resolved. Now, you can create an Action from the **Action** tab even if the asset was selected prior to navigating to the **Action** tab. (TS ID: 176126)

Risk Based Inspection

- Previously, the MI RBI Administrator Security Group did not have View permissions for the Has Site Reference relationship family. This issue has been resolved. (TS ID: 175990)
- Previously, when you deleted a record displayed in the list in the **Corrosion Loops** section on the **Risk Based Inspection Overview** page, if the list was more than one page long, the record count in the corresponding tab was not updated correctly. This issue has been resolved. (TS ID: 176695)
- Previously, when viewing the Risk Matrix for a Degradation Mechanism, if the Mitigated and Unmitigated Risk values were the same, when you changed one of those Mitigated Risk values in the **Safety, Environment, Operations, or Financial** section, the Mitigated Risk values in the other sections were incorrectly removed. This issue has been resolved. (TS ID: 177890)
- Previously, the MI RBI Administrator and MI RBI Analyst Security Groups did not have any permissions for the RBI 581 Risk Analysis entity family. This issue has been resolved. Now, the Security Groups have View, Insert, Update, and Delete permissions for the RBI 581 Risk Analysis entity family. (TS ID: 178406, 178407)
- Previously, if you were using an Oracle database, when you attempted to generate a large number of recommendations, the operation would fail and IIS would stop functioning on the Meridium Enterprise APM Application Server. This issue has been resolved. (TS ID: 180720)

- Previously, after you added a Degradation Mechanism (DM) to an analysis, but before it appeared in the list of Degradation Mechanisms linked to the analysis, if you attempted to add the same DM again, the DM would incorrectly appear in the list of DMs more than once. This issue has been resolved. Now, you cannot link the same DM to an analysis more than once. (TS ID: 181692)

Rounds

- Previously, in Rounds Data Collection, Readings for a character Measurement Location were not saved if the Last Date field in the related Checkpoint Task was null. This issue has been resolved. (TS ID: 178108)

SIS Management

- Previously, for an Instrumented Function, the details of the linked SIL Assessment were not saved if you navigated away from the **SIL Assessment** section. This issue has been resolved.

Note: This issue occurred only if you accessed an existing Instrumented Function. It did not occur if you created a new Instrumented Function.

(TS ID: 175523)

- Previously, after you approved a Final Element Custom Device, if you accessed the datasheet for the Custom Device again, the button in the upper-right corner of the datasheet displayed the label **Approve**, although it should have displayed the label **Revoke Approval**. If you selected the **Approve** button for a Final Element Custom Device that was already approved, the approval was revoked. This issue has been resolved. (TS ID: 176110)
- Previously, if there was more than one Final Element Group or Sensor Group in a Protective Instrument Loop, then the Percentage of PFD was not plotted in the **Contribution** graph, although the PFD was calculated for each type of element. This issue has been resolved. (TS ID: 176542)

Thickness Monitoring

- Previously, the MI Thickness Monitoring Administrator Security Group did not have Delete permissions for the Thickness Measurement Location entity family. This issue has been resolved. (TS ID: 165065)

- Previously, on the **Thickness Monitoring Overview** page, in the **Excessive Corrosion** and **Assets Near or Past Retirement** sections, the **Asset ID** column did not have a hyperlink to access the asset. This issue has been resolved. Now, when you access the **Excessive Corrosion** or the **Assets Near or Past Retirement Date** sections, the **Asset ID** column will contain a hyperlink that will open the **Analysis Overview** workspace for the asset. (TS ID: 175880)
- Previously, on the **Thickness Monitoring Overview** page, in the **Assets Near or Past Retirement** section, the **Asset Controlling Retire Date** column was not visible. This issue has been resolved. (TS ID: 175882)
- Previously, if you tried to access the settings workspace for dataloggers before the **TM Dataloggers** page finished loading, the following error appeared: "TypeError: Cannot read property 'hide' of null." This issue has been resolved. (TS ID: 176123)

Restored Features - V4.1.1.0

The following V3.x features were deferred from previous V4.x releases, but are now available in V4.1.1.0.

Calibration Management

- You can now view the certification information of a calibrator. A new box labeled **Select Calibrator** has been added to the **Send to Calibrator** window. In the **Select Calibrator** box, when you select the Test Equipment that corresponds to the calibrator that you want to use, a message appears indicating if the calibrator is certified and specifying the date on which the certificate has expired or will expire. (TS ID: 166241)

SIS Management

- The Revision History feature is now available. (TS ID: 102226)

Deferred Features - V4.1.1.0

The following features are not available in Meridium V4.1.1.0, but are planned for a future release.

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- AMS Analytics and a connection to Emerson AMS.

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Configuration Manager

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- Color Coding Preferences. (TS ID: 70840)

- Dataset integration with dataloggers. (TS ID: 83553)
- Corroded Area Measurements. (TS ID: 101752)
- Exporting data to Excel via the TM Dataloggers interface.

Release Notes - V4.1.1.1

APM Connect

- The Mechanical Integrity Inspection Checklist Data Loader, which was released in APM Connect Data Loaders V 1.4.0, is no longer used to load Inspection Management data. Instead, a new Inspection Management Data Loader is available in V4.1.1.1. (TS ID: 179860)
- New to V4.1.1.1 is the APM Data Loader. The APM Data Loader is built on a flexible framework, designed to load different types of data. It can load data into any family defined in Meridium, or it can be used to relate records in one family to another family in APM based on the relationship definitions defined in the Family Management. Information on how to use the Data Loader functionality can be found on the [support website](#). (TS ID: 179535)

APM Foundation

- Previously, if you tried to use the Meridium Enterprise APM mobile application in offline mode on a Microsoft Surface device, the application would become non-responsive. This issue has been resolved. (TS ID: 185420)

Inspection Management

- The Inspection Management Data Loader has been introduced in V4.1.1.1. This feature is designed to allow you to import and create records for the following families:
 - Inspection Profile
 - Inspection Method
 - Full Inspection
 - General Finding
 - Inspection Recommendation
 - Reference Document

Using the Inspection Management Data Loader, you can create or update Full Inspections, as well as related records, allowing your organization to efficiently add data to your Meridium Enterprise APM database from other sources. The records can be associated with assets or Functional Locations. (TS ID: 179860)

- The Mechanical Integrity Inspection Checklist Data Loader has been made obsolete. You should no longer use the MechanicalIntegrity_InspectionChecklist_

DataLoader.xlsx workbook when performing a data load for Inspection Management.

Rounds Data Collection

- Previously, on all devices, when you opened a Route with a Numeric ML, the conditional MLs were not displayed. The issue has been resolved. (TS ID: 185329)

Security Manager

- Previously, in Lightweight Directory Access Protocol (LDAP), if you attempted to save or remove a domain record, an error would occur. This issue has been resolved. (TS ID: 187813)

Release Notes - V4.1.1.2

Foundation

Previously, an error occurred if you tried to use a diagramming or design canvas in Meridium Enterprise APM on Chrome 48. This issue has been resolved. (TS ID: 193735)

Release Notes - V4.1.1.3

Asset Health Manager

- Previously, if the Data Source Description and Data Source ID did not match, the Asset Health Indicator Service could not find a data source. This issue has been resolved. (TS ID: 205882)
- Previously, if your process historian contained over 1000 tags, health indicator statuses were not updated as expected for some OPC Tags. This issue has been resolved. (TS ID: 212852)

Policies

- Previously, when you configured a policy to send an email message to multiple email addresses, the email message was not sent when the policy was executed. This issue has been resolved. (TS ID: 210851)

Reliability Centered Maintenance and Failure Modes and Effects Analysis

- Previously, when using the Decision Logic Builder in RCM, if you answered the first question, then went back and changed your answer, and then saved the record, the answer was incorrectly stored in the *Hidden?* field, though it was stored and displayed correctly in the main field of the Decision Logic Builder. This issue has been resolved. (TS ID: 206720)

Reference Documents

- Previously, if you tried to link an external file to a Reference Document, the Reference Document would be inaccessible. This issue has been resolved. (TS ID: 207048)

Risk Based Inspection

- Previously, when calculating a What-If Analysis with a future Effective Date value, the Years in Service field on the **Intermediate Outputs** section of the Degradation Mechanism Evaluation displayed an incorrect value. This issue has been resolved. Now, the Years in Service field displays the correct date. (TS ID: 208301)

- Previously, after consolidating a recommendation in RBI and then promoting that consolidated recommendation to ASM, a Consolidated Recommendation Action was created; however, the Interval field on that Action was not populated. This issue has been resolved. Now the Action Interval field is correctly populated with the Recommended Interval value from the Consolidated Recommendation record. (TS ID: 208313)
- Previously, when viewing the **Consequence Evaluation** section of a risk completed RBI Analysis, the Product Leak Category field for Tube Bundles calculated, but did not display the calculated value on the **Consequence Evaluation** section. This issue has been resolved. (TS ID: 208314)

Thickness Monitoring

- Previously, when metric nominal thickness readings were created using the **Nominal Measurements** window, after the nominal thickness readings were saved, the metric measurements were incorrectly converted to inches. This issue has been resolved. Now, metric nominal thickness readings created using the **Nominal Measurements** window retain the metric nominal thickness values. (TS ID: 208298)

Release Notes - V4.1.1.4

Foundation

- Previously, when you created an ACA System whose System ID field contained a forward slash (/), the Meridium Enterprise APM server would disconnect. This issue has been resolved. (TS ID: 257518)
- Previously, when an Asset Hierarchy rebuild request was submitted while the Asset Hierarchy Service was not running, if the user logged out before the service restarted, then, when the service was restarted, the message would remain in the queue, and the Asset Hierarchy would not rebuild. This issue has been resolved. (TS ID: 254702)

Release Notes - V4.1.1.5

Asset Health Manager

- Previously, in the **This Asset** section of the **Health Summary** page, you could not scroll down past the first 10 assets in the list. This issue has been resolved. (TS ID: 266322)
- Previously, in the **Health Indicator Source Management** workspace of the **AHM Admin** page, when you selected the check box in the grid header with the intent to select all sources, only the first 100 items in the grid were actually selected. This meant that you could not include or exclude all sources in the grid at the same time. This issue has been resolved by enhancing the operations on this page. Two new buttons, **Include All Matching** and **Exclude All Matching**, have been added above the grid and a check box no longer appears in the grid header.
You can use the new buttons to include or exclude all sources that match the search or filter criteria that you have applied to the grid.
(TS ID: 259492)

Reliability Centered Maintenance and Failure Modes and Effects Analysis

- Previously, when you copied a recommendation in RCM or FMEA, the copy was not linked to the asset as expected. Also, you were unable to promote the copied recommendation to ASM. These issues have been resolved. (TS ID: 262952)

Result Grid

- Previously, in a Result Grid without pagination, when you scrolled through the results, the Result Grid interface would freeze, preventing you from viewing all of the results. This issue has been resolved. (TS ID: 266690)

V4.1.5.0 Release Notes

The following release notes are available for Meridium Enterprise APM V4.1.5.0:

- [Enhancements](#)
- [Resolved Issues](#)
- [Restored Features](#)
- [Obsolete Features](#)
- [Deferred Features](#)

You can also view the APM Connect release notes.

Enhancements - V4.1.5.0

The following enhancements have been made in V4.1.5.0.

AMS Analytics

- The following Security Groups have been granted the following privileges to the Catalog folder **\\Public\Meridium\Modules\AMS Asset Portal** and its subfolders.
 - MI AMS Suite APM Administrator: View and Create
 - MI AMS Suite APM Power User: View and Create
 - MI AMS Suite APM User: View(TS ID: 91282)
- You can now link multiple AMS Asset records to multiple Equipment records using the **Systems and Tags** feature of **Operations Manager**. (TS ID: 188169)
- You can now use the **AMS Data Source Configuration: New Data Source** datasheet to schedule data collections from AMS data sources. (TS ID: 186503)

Asset Health Manager

- On the **Health Indicator Source Management** page, after including or excluding a source, a dialog box now appears to indicate the number of health indicators that will be created or deleted, respectively. You can then confirm or cancel the change. (TS ID: 159900)
- On the **Health Indicator Source Management** page, each row now represents one health indicator source, and all linked assets are listed in that row. This enhancement better visualizes how including or excluding sources will affect the health indicators based on that source for all linked assets. (TS ID: 141125)

Asset Strategy Management

- The ASM Template Data Loader has been introduced in V4.1.5.0.
The ASM Template Data Loader serves the following purposes:
 - Provides functional equivalence with Meridium APM V3.x to enable existing or new Asset Strategy Templates to be imported into the ASM module for further development, analysis, or implementation.

- Provides customers with a more effective Meridium Enterprise APM experience because the loaded content will be searchable and usable within the various Meridium Enterprise APM modules.
- Enables the user to upload existing Asset Templates that can be applied to assets.

Following the data load, you can access the imported data, which will contain details such as when it was uploaded, and by whom it was created. You can open the imported Templates in ASM and start using them in your workflows.

(TS ID: 63638)

Foundation

- You can now import the records and links from an XML file that is generated by using the Content Generation Utility (CGU). (TS ID: 174467)
- You can now specify a field in a family as a masked field. The characters entered in a field specified as such will be masked on the corresponding datasheet. (TS ID: 183068)
- You can now assign site security to an Asset Group by setting a Site Reference. (TS ID: 178973)
- You can now create an Asset Group based on a query. (TS ID: 178976)
- Meridium Enterprise APM now supports the use of the Microsoft Edge browser. (TS ID: 180911)

Inspection Management

- You can now use the **Manage Human Resources** workspace in Application Settings to manage Human Resource records. You can use Human Resource records to manage Resource Roles and Resource Certifications pertinent to the Inspection Management module. (TS ID: 183662)
- The following updates have been added to the Inspection Management Data Loader:
 - The General Inspection worksheet has been added to the source files.
 - The following families have been added:
 - General Findings
 - Inspection Methods

- Inspection Profiles
- Inspection Recommendations
- Reference Documents
- The Inspection Management Data Loader can now load Inspection Tasks. (TS ID: 181277)

- The **Inspection Management Overview** page has been redesigned. You can now access overdue Inspection Tasks, overdue Inspections, and overdue Recommendations when selecting the associated tabs. (TS ID: 177623)

Metrics and Scorecards

- When using a device, you can now export a Metric View, Scorecard, or a KPI as a PDF. (TS ID: 154101)
- You can now export a Metric View in the PNG format. (TS ID: 173894)

Policies: Family Policies and Policy Designer

- The following changes have been made to the Policy Recommendation datasheet:
 - The Recommendation Type field is no longer displayed.
 - Recommendation Basis field is no longer displayed.
 - A new tab, **Alert**, has been added. This tab includes the standard recommendation alert fields. (TS ID: 189877)
- A new calculation node, *Is Null*, is available. You can use this node to specify a default value that should be used in subsequent calculations in the event that the input value is null. You can also use this node in combination with a logic node to specify an action to be taken in the event that an input value is null. (TS ID: 185099)
- Multiply, Divide, and Remainder nodes can now operate on time spans. (TS ID: 178093)
- The data type option *Date* has been removed from the Constant and Point Value nodes. This option is not necessary as the *Time & Date* data type option serves the same purpose. When you upgrade to V4.1.5.0, any policies that previously used

the Date data type will be automatically upgraded to using the Time & Date data type. (TS ID: 173089)

- You can now use the R Script node to execute R scripts that have vector or matrix inputs. (TS ID: 166193)
- The **Properties** window for comparison nodes now contains a **Name** field. This makes it easier to manage policies where multiple comparison nodes of the same type are used. (TS ID: 100650)

Risk Based Inspection (RBI)

- The RBI Corrosion Loop Data Loader has been added. Using this data loader, you can:
 - Create new or update existing Corrosion Loops
 - Link Potential Degradation Mechanisms to Corrosion Loops.
 - Create new or update existing Reference Documents.(TS ID: 186291)
- You can now use the **Global Preferences** workspace in Application Settings to apply graph preferences. (TS ID: 181278)
- The following updates have been made to the Risk Based Inspection Data Loader:
 - You can now link custom Degradation Mechanisms(DMs) and Degradation Mechanism Evaluations (DMEs).
 - The Custom Degradation Mechanism worksheet has been added to the source files.(TS ID: 179836)
- When viewing an RBI Analysis, you can now customize the information that will appear in the **Consequence Evaluation** section. (TS ID: 174362)
- You can now use the **RBI 581 Admin Options** workspace in Application Settings to create and define default field values. The settings can be defined to apply globally or to apply to a specific process unit. (TS ID: 170192)

- When viewing an RBI Analysis, you can now customize the information that will appear in the **Degradation Mechanisms** section. (TS ID: 163163)
- RBI 581 has been added as an additional offering within the existing RBI module. RBI 581 provides an end-to-end quantitative Risk Based Inspection (RBI) solution in Meridium APM based on the third edition of the API RP 581 Risk Based Inspection Methodology. The following concepts have been introduced in RBI 581:
 - Calculated Corrosion rates for the following Thinning Damage Mechanisms:
 - Acid Sour Water Corrosion.
 - Alkaline Sour Water Corrosion.
 - Amine Corrosion.
 - Atmospheric Tank Bottom Corrosion.
 - Cooling Water Corrosion.
 - High Temperature H₂/H₂S Corrosion.
 - High Temperature Oxidation.
 - High Temperature Sulfuric and Naphthenic Acid.
 - Hydrochloric Acid Corrosion.
 - Hydrofluoric Acid Corrosion.
 - Soil Side Corrosion.
 - Sulfuric Acid Corrosion.
 - Calculation of damage factors for the following Damage Mechanisms:
 - Atmospheric Tank Bottom Corrosion.
 - Brittle Fracture.
 - Cracking.
 - External Damage.
 - High Temperature Hydrogen Attack (HTHA).
 - Mechanical Piping Fatigue.
 - Thinning and Lining.
 - Calculation of Safety, Health, and Environmental (SHE) Risk and Financial Risk.
 - Cause of Failure (COF) Calculations for Pressure Vessels, Atmospheric Storage Tanks (AST) and Piping.
 - Cracking Susceptibility calculations for the following Cracking Damage Mechanisms:
 - Caustic Cracking.
 - Hydrogen Induced Cracking (HIC)/Stress-Oriented Hydrogen Induced Cracking (SOHIC) – HF.

- Hydrogen Induced Cracking (HIC)/Stress-Oriented Hydrogen Induce Cracking (SOHIC) – H₂S.
- Alkaline Carbonate Stress Corrosion.
- Polyphonic Acid Cracking.
- Hydrogen Stress Cracking.
- Chloride Stress Corrosion Cracking.
- Sulfide Stress Cracking.
- Other Cracking.
- Generating RBI Recommendation based on Damage Mechanisms and their required Inspective Effectiveness.
- Inspection Planning based on Risk and Damage Factors which provides comprehensive results for Quantitative Analyses.
- Point of Failure (POF) Calculations for Pressure Vessels, Atmospheric Storage Tanks (AST).

(TS ID: 105861)

Rounds

- Users can now collect data for Lubrication Requirements in the Rounds Data Collection user interface. (TS ID: 159532, 188759, 188760)
- By default, Operator Rounds Recommendations can be linked to Lubrication Requirements. When a user creates a recommendation in the mobile data collection user interface against a lubrication requirement, an Operator Rounds Recommendation is created. (TS ID: 182976)
- You can now use the **Rounds Admin** workspace in Application Settings to map Lubrication Requirement priority values to the colors (red, orange, yellow) that are displayed in the Rounds Data Collection user interface. (TS ID: 183375, 182861)
- On the **Rounds Designer Overview** page, Lubrication Requirement records can now be linked to Assets using the asset hierarchy dialog. (TS ID: 173607, 173606)
- You can now access the Asset Health Summary and trends from the **Rounds Data Collection Overview** page. The Asset Health Summary for the asset is accessed when the user selects the asset ID on top of the page. The Measurement Trend link is accessed by selecting the Last Reading value next to Measurement Trend chart. (TS ID: 169787)

- In the **Route History** section, in the **Closed by** field, you can now view for information on the user that marked the Route Done. (TS ID: 176333)
- When you open **Compliance Schedule** to set the schedule, the compliance task schedule defaults to the recommended schedule. The schedule defaults to starting at the current date/time, recurring every 15 minutes from start time, in the current user's time zone, and is never ending. (TS ID: 177848)
- On the **Data Collection** page, when you select the **Scan** button to scan an ML that is associated with a different Route, you can choose and remain on the current Route or go to the new Route. (TS ID: 179562)
- You can now use the Rounds Data Loaders to:
 - Add assignment of users to Routes. (TS ID: 182227)
 - Enable the user to re-sequence the checkpoints. (TS ID: 187115)
- You can now view the ML Compliance KPI charts on the **Rounds Designer Overview** page. (TS ID: 124958)
- When you add new Measurement Location and Lubrication Requirement records using the Route Manager menu options, the asset selection defaults to the asset associated with the previous checkpoint.
 - When you select **New ML** or **New LR** on the menu, the Asset associated with the new checkpoint defaults to the same asset associated with the currently selected ML/LR, or the ML/LR that is the predecessor to the currently selected condition.
 - When you select **ML/LR Template** on the menu, the Asset selection in the first page of the wizard defaults to the same asset associated with the currently selected ML/LR or the ML/LR that is the predecessor to the currently selected condition.(TS ID: 144239)
- The wizard that adds MLs/LRs from Templates has been renamed from *Add New Measurement Location* to *Add New Checkpoints* and the menu option *ML Template* has been renamed to *Checkpoint Template*. Throughout the V4.1.5.0 documentation, including these Release Notes, we refer to this wizard by its new name. (TS ID: 173610)

- In the OPR Recommendation datasheet, the layout has been modified as follows:
 - The **General Information** tab:
 - The caption **Recommendation Headline** is modified to **Headline**
 - The caption **Recommendation Description** is modified to **Description**
 - The caption **Function ID** is modified to **Functional Location**
 - A new caption **Technical Number** has been added
 - A new caption **Source ML or LR Description** has been added
 - A new **Alert** section has been added containing the following fields:
 - Alert Responsible Party When Due?
 - Days Before Due Date to be Alerted
 - Frequency of Alert After Due Date
 - Implementation Alert Text
 - Reevaluate?
 - Reevaluation Date
 - Reevaluation Alert List
 - Reevaluation Alert Body Text

(TS ID: 189862)

- On the **Rounds Data Collection Overview** page, the following changes have been made in the **Recommendation** section, which displays the list of recommendations:
 - The column **Type** has been added
 - The column **Assigned to** has been added
 - The column **Description** has been moved to the last

(TS ID: 189863)

- On the **Mobile Data Collection** page for Measurement Location records, the following changes have been made:
 - The heading section is now modified to display the Route ID and % completed.
 - The **< Previous** and **Next >** links are replaced with larger **<** and **>** icons.
 - Asset ID is displayed above the Checkpoint ID between the **<** and **>** icons.
 - The Checkpoint Sequence and Checkpoint Record ID [ENTY_ID] are displayed below the Asset ID.
 - The Checkpoint Description is displayed to the left of the **local and cloud save** icons.

(TS ID: 182814)

- On the **Rounds Designer Overview** page, if there are no existing Measurement Location records linked to the Measurement Location Template, a message indicating that no related Checkpoints have been found appears when you open the **Update Existing MLs** page. (TS ID: 152692)
- When you are working on the Node Pin Board, and there are pending or unsaved items, an update message appears when you close **Route Management** page. (TS ID: 160369)
- For OPR Recommendations with photos to be created successfully, the OPR Recommendation has been added as a predecessor to the Has Reference Document relationship in the baseline database. (TS ID: 190168)

R Scripts

- After specifying the R Server credentials, you can now test the connection to confirm that it is valid. (TS ID: 169712)
- If an R Script node does not execute due to errors within the R script, relevant error and warning messages from the R Server are now displayed in the policy validation and execution results. (TS ID: 166748)
- You can now specify vector and matrix inputs in an R script. (TS ID: 176333)

SIS Management

- In addition to creating a new Proof Test Task, you can now add an existing Proof Test Task (created in Asset Strategy Management) to an Instrumented Function or a Logic Solver. (TS ID: 177880)
- The SIS Management module is now integrated with the latest version of exSILentia (version 3.0.5.3). The following changes have been made to support this enhancement.
 - Fields have been added to the following families used in SIS Management.

Protective Instrument Loop family

Field Name	Field ID
Application Test Method	MI_PRE_I_LP_APPL_TEST_METH_C

Protective Instrument Loop Group family

Field Name	Field ID
ATI / PVST Enabled	MI_PRE_GRP0_ATIP_ENAB_L
ATI / PVST Interval	MI_PRE_GRP0_ATI_PVST_INTE_N
ATI / PVST Interval UOM	MI_PRE_GRP0_ATI_PVST_INT_UOM_C
ATI / PVST Coverage	MI_PRE_GRP0_ATIP_COVE_N
ATI / PVST Automatic/Manual	MI_PRE_GRP0_ATI_PVST_AUTO_C
Use Custom PVST Coverage	MI_PRE_GRP0_USE_CUS_PVST_COV_L

Protective Instrument Loop Logic Solver family

Field Name	Field ID
App Diagnostic Test	MI_PRE_SLR0_APP_DIAG_TEST_L
Diagnostic Test Interval	MI_PRE_SLR0_DIAG_TEST_INTE_N
Diagnostic Test Interval UOM	MI_PRE_SLR0_DG_TST_INT_UOM_C
Diagnostic Test Coverage	MI_PRE_SLR0_DIAG_TEST_COVE_N
Diagnostic Test Automatic / Manual	MI_PRE_SLR0_DG_TST_AUTO_MAN_C

- The following fields have been removed from the Protective Instrument Loop Final Element datasheet (but not from the family).

Field Name	Field ID
Partial Valve Stroke Testing	Partial Valve Stroke Testing
Custom PVST Coverage	MI_PRE_FLT0_CUSTM_PVST_CVRGE_N
Use Custom PVST Coverage	MI_PRE_FLT0_USE_PVSTCOV_L
PVST Interval	MI_PRE_FLT0_PVST_INTER_N
PVST Interval UOM	MI_PRE_FLT0_PVST_INTER_UOM_C

- The following values have been added to the MI_ARCHITECTURE_CONSTRAINT System Code Table. The values in this table are used in the Test Architecture Constraints field in the Protective Instrument Loop datasheet.

ID	Description
IEC 61508 : 2010	IEC 61508 : 2010 tables [per 61511-1 11.4.5]
IEC 61508 : 2000	IEC 61508 : 2000 tables [per 61511-1 11.4.5]
IEC 61511 ignore	IEC 61511 [ignore 11.4.3 for Type A devices]
IEC 61508 (Will get upgraded to IEC 61508 : 2010 or IEC 61508 : 2000)	IEC 61508
PVST Interval UOM	MI_PRE_FLT0_PVST_INTER_UOM_C

(TS ID: 187437)

Thickness Monitoring

- The following relationship families were added to allow you to configure Thickness Measurement Locations (TMLs) for Functional Locations:
 - Has Archived Corrosion Analyses
 - Has Corrosion Analyses
 - Has Corrosion Analysis Settings
 - Has Datapoints
 - Has TML Group
 - Has Tasks

(TS ID: 187628)

Resolved Issues - V4.1.5.0

The following issues existed in one or more previous releases and have been resolved in V4.1.5.0.

Asset Health Manager

- Previously, if the Data Source Description and Data Source ID did not match, the Asset Health Indicator Service could not find a data source. This issue has been resolved. (TS ID: 181171)
- In the **Configuration** workspace for a health indicator without a source, an error message appeared when you saved the health indicator after modifying its limit values. This issue has been resolved.

Note: This issue did not prevent the Health Indicator record from being saved.

(TS ID: 175589)

- Previously, on the **Health Summary** page, if you acknowledged a health indicator before creating a recommendation, the information that is usually populated in the Recommendation Description field (i.e., *<Health Indicator Name> ~ <Alert Status> ~ <Current Reading Date> ~ <Current Reading>*) was not included. This issue has been resolved. (TS ID: 174842)
- Previously, when configuring Event Mappings, if you specified a numeric field as the **Severity Field** for a family, no events were displayed in Asset Health Manager. This issue has been resolved. You can now specify either a numeric or character field. (TS ID 173646)
- Previously, on the **Health Indicator Source Management** section of the Asset Health Manager applications settings, when you began to enter text in the Search box, the focus shifted away from the Search box after a couple of seconds, so you were unable to search. This issue has been resolved. (TS ID: 175659)

Asset Strategy Management

- Previously, in ASM, when you applied a template to a template, if you selected the option to search by asset strategy, you were not able to search for the specified strategy in the grid. This issue has been resolved. (TS ID: 156994)
- Previously, when you re-promoted an RCM analysis after making changes, an

error message appeared, indicating that the recommendations could not be promoted. However, if you then accessed the strategy, the changes were reflected. This issue has been resolved. Now, you will not receive the error message re-promoting an RCM analysis after making changes. (TS ID: 159982)

- Previously, when you attempted to assign an asset to a strategy, if the asset was invalid, an error message appeared. However, the asset would remain linked to the strategy, and you were allowed to package actions for SAP based on the strategy even though it contained an invalid asset. This issue has been resolved. Now, if you try to package an action that is linked to an asset that does not exist in SAP, an error stating that the asset cannot be found in your CMMS will appear. (TS ID: 160066)
- Previously, the source reference in the **Implement Actions** workspace did not display the correct source of the Action when additional Actions were manually added to an Asset Strategy with existing Actions promoted from RBI. This issue has been resolved. (TS ID: 160251)
- Previously, when you superseded Actions, the Actual Annual Cost Projection did not update correctly. When the strategy became Active, proposed changes that did not impact calculations were not reflected. This issue has been resolved. (TS ID: 179896)
- Previously, in ASM, when you decreased the Unmitigated Financial Consequence to a value lower than the Mitigated Financial Consequence, and then saved the Risk, the Mitigated Financial Consequence was not lowered to match the Unmitigated Risk for all mitigating actions. This issue has been resolved. Now, if you decrease the Unmitigated Risk to below the value of the Mitigated Financial Consequence, the values will be the same when the Risk is saved. (TS ID: 180912)
- Previously, when you attempted to edit an FMEA or RCM recommendation template, the edits were not allowed and there was no save button present. This issue has been resolved. Now, you can edit recommendation templates as expected. (TS ID: 182880)
- Previously, status icons in both System and Unit Strategies did not appear when Actions and Risks were modified. This issue has been resolved. (TS ID: 183468)
- Previously, in System Strategies, the user was not able to load an Asset Strategy by selecting the Risks profile. This issue has been resolved. (TS ID: 183533)

- Previously, when you navigated from the **Implement Actions** page back to the **Actions** page, the **Recommendations** pane disappeared. This issue has been resolved. Now, the **Recommendations** pane is always available on the **Action** and **Risk** pages. (TS ID: 183535)
- Previously, in an ASM Template, if the Strategy Re-Evaluation Date in a Controlled Strategy datasheet was set to a date before the Strategy Activation Date, and you attempted to change the Re-Evaluation Date to a date after the Activation Date, an error message appeared and you were unable to update the dates. This issue has been resolved. (TS ID: 183674)
- Previously, when you used the RCM/FMEA Data Loader to import recommendations into Meridium Enterprise APM, the recommendations would not be linked to the appropriate assets. This issue has been resolved. (TS ID: 183713)
- Previously, in ASM, if you had not activated a valid license for Inspection Management, you would not see an option to implement or link actions in an inspection task, even if it was allowed in ASI. This issue has been resolved. (TS ID: 185360)
- Previously, when you loaded an RCM analysis from the **Overdue, Ongoing, and Complete** sections, it incorrectly loaded in the FMEA analysis view. This issue has been resolved. (TS ID: 185748)
- Previously, in RCM or FMEA, when you attempted to create an analysis from a template, the Create New Analysis icon was not enabled. This issue has been resolved. Now, you can create an RCM or FMEA analysis from a template. (TS ID: 190821)

Foundation

Asset Criticality Analysis (ACA)

- Previously, in ACA, the Criticality Distribution Graph did not consider all of the Risk Matrices related to all of the different sites. This issue has been resolved. (TS ID: 176979)
- Previously, on the **ACA Overview** page, when you opened an Analysis, the hyperlink for the Analysis ID was missing. This issue has been resolved. (TS ID: 178838)

- Previously, in ACA, when you created or edited a Hazop Analysis and added an equipment, the Equipment ID field overflowed with the equipment name. This issue has been resolved. (TS ID: 180604)
- Previously, in ACA, the same Recommendations were displayed for both the functional location and equipment levels. This issue has been resolved. (TS ID: 185843)
- Previously, in ACA, when you created a Recommendation from a functional location level or equipment level, you received an error message. This issue has been resolved. (TS ID: 180085)
- Previously, in ACA, when you opened multiple system definition datasheets on different pages, the system datasheets were not displayed properly. This issue has been resolved. (TS ID: 182452)

Asset Hierarchy

- Previously, if you quickly selected different levels of assets on the Asset Hierarchy page and then selected a link to access RBI or TM, the following error message may have appeared: "TypeError: Cannot read property 'querySelectorAll' of null". This issue has been resolved. (TS ID: 179425)
- Previously, if an Asset Hierarchy rebuild request was submitted when the Asset Hierarchy Service was not running, and the user logged out before the service started back, when the Asset Hierarchy Service restarted, the message would remain in the queue and the Asset Hierarchy would not rebuild. The Asset Hierarchy service would not throw an error if the notification service threw an error; instead, it would log the error. This issue has been resolved. (TS ID: 183236)

Bulk Data Form

- Previously, when you opened a Bulk Data Form for a family that had multiple datasheets, the first record was selected by default, but when you changed the datasheet, the first record was not selected. This issue has been resolved. (TS ID: 173947)
- Previously, when you selected to copy a Bulk Data Form, and then selected Delete from the options, the entry was deleted; however, the Paste option was disabled. This issue has been resolved. (TS ID: 175539)

- Previously, when you selected a Bulk Data Form, froze columns in the Bulk Data Form, and then printed the Bulk Data Form, you could not print all of the columns. This issue has been resolved. (TS ID: 175793)
- Previously, when you created a Bulk Data Form for a family and saved without entering values in two required fields, an error message appeared. This issue has been resolved. (TS ID: 175962)
- Previously, on a Master Detail datasheet, after you froze data columns, you could not print the Detail form. This issue has been resolved. (TS ID: 175313)
- Previously, on iPad devices, when you specified a value in a Date field in a Bulk Data Form, both the keypad and the calendar opened. This issue has been resolved. (TS ID: 159639)

Catalog

- Previously, if you attempted to move a Catalog folder within a Personal folder, an error would occur. This issue has been resolved. (TS ID 76797)
- Previously, when creating a new Catalog folder, double-clicking the **Done** button caused an error to occur. This issue has been resolved. (TS ID: 174807)
- Previously, if you added an item to a Catalog folder, you had to reload that Catalog folder to display the modified content. This issue has been resolved. (TS ID: 180028)

Configuration Manager

- Previously, if you enabled a State Configuration on an entity family, you could not delete that family even after disabling the State Configuration. This issue has been resolved. You can now delete a family that has State Configuration associated with it. (TS ID: 155614)
- Previously, if you made changes to a field in a family (for example, formatting a date field), there was no option to update the ID Template of the records associated with it. This is because, on the **Manage ID Template** window, the **Save** button was enabled only when the ID Template was modified. This issue has been resolved. You can now use **Update Existing Records** to update the changes made to the behavior of the field in all the associated records. (TS ID: 175633)

Dashboards

- Previously, when you created a dashboard, began adding widgets, and then navigated away from the page and returned, the dashboard was empty and you had to re-select your parameters. This issue has been resolved. (TS ID: 177404)
- Previously, in Dashboards, when you created a query widget with a prompt value, selected a value for the prompt, and then switched out of Edit Mode in the dashboard, the query widget did not retain any of the data that had just been loaded. This issue has been resolved. (TS ID: 183436)
- Previously, when you accessed a graph widget via the Catalog and attempted to open it in a new page, an error occurred if *ALL* was specified as the dashboard filter value. This issue has been resolved. (TS ID: 187424)

Dataset

- Previously, on the **Dataset** page, if you created a new dataset via the **Create New** button, and then closed the page for the new dataset without saving, an error would occur. This issue has been resolved. (TS ID: 177545)

Datasheet Builder

- Previously, whenever you closed a **Datasheet Dialog** box, an error message appeared. This issue has been resolved. (TS ID: 90228)
- Previously, if you changed the behavior of a field so that the Format Value was Short Date, the corresponding datasheet did not load and an error message appeared. This issue has been resolved. (TS ID: 156118)
- Previously, when you changed the fields in a Datasheet Builder and saved the datasheet, the Last Updated Date in the **Data Information** page was not updated correctly. This issue has been resolved. (TS ID: 159584)
- Previously, on any of the datasheets, if the field was a required field, then the help text was not displayed on the datasheet. This issue has been resolved. (TS ID: 179068)
- Previously, on datasheets on iPad devices, the alignment of the dropdown for the Datasheet ID was not correct. This issue has been resolved. (TS ID: 159624)

- Previously, when entering data into a short description field, if you entered more than the 255 characters, the data would be lost. This issue has been resolved. Now, you cannot enter more than 255 characters as expected. (TS ID: 173197)
- Previously, on any datasheet with a date field, when you changed or formatted the default value for the date and saved it, the value was not displayed for existing or new records. This issue has been resolved. (TS ID: 173941)

Graphs

- Previously, when you attempted to open a graph from a dashboard that contained no query parameters, an error message appeared. This issue has been resolved. (TS ID: 171717)
- Previously, when you switched between tabs before the Graphs page had fully loaded, an error message appeared. This issue has been resolved. (TS ID: 171963)
- Previously, if you attempted to view a PDF Plot of a Comparison Plot between two Reliability Distribution Analyses, an error message appeared. This issue has been resolved. (TS ID: 173263)
- Previously, when you accessed a graph, navigated away from the page for the graph, and then returned to the graph, an error message appeared. This issue has been resolved. (TS ID: 182839)
- Previously, when you created a pie chart using a query, the graph name in the grid would carry over into the next column if it was too long. This issue has been resolved. (TS ID: 180913)

Grids

- Previously, in many grids throughout Meridium Enterprise APM, if you entered text in the search box, and then exited by pressing the Tab button twice with the last text box selected, an error message appeared. This issue has been resolved. (TS ID: 174500)

Mobile

- Previously, you were unable to successfully upload Reference Documents using an iPad. This issue has been resolved. (TS ID: 147464)
- Previously, if your mobile device's operating system was not supported by the Meridium Enterprise APM mobile application, you received an error message stating that the browser is not supported, even though the error did not pertain to the browser, but the operating system. This issue has been resolved. Now, if the error is due to an incompatible operating system, the error message will state so. (TS ID: 176060)
- Previously, if you tried to use Help in the Meridium Enterprise APM mobile application, it was not available. This issue has been resolved in iOS and Android. (TS ID: 185440)

Operations Manager

- Previously, in Data Sources, you could not delete the first Data Source that was created on a server. This issue has been resolved. (TS ID: 134973)
- Previously, in Strategy Macros, records did not display information in the Owner field. This issue has been resolved. (TS ID: 176759)

Queries

- Previously, in Delete queries, adding a relationship family could unexpectedly remove previously added entity or relationship families from the query. This issue has been resolved. (TS ID: 101914)
- Previously, in the **Design** workspace, right-clicking the buttons for a node had the same effect as left-clicking the buttons. This issue has been resolved. (TS ID: 102352)
- Previously, in the **Prompt Settings** section of the **Expression Builder** window, units were not displayed. This issue has been resolved. (TS ID: 108580)
- Previously, if you added a source to the **Design** workspace, and then navigated away from the workspace without adding any fields to the grid, the source would be removed. This issue has been resolved. (TS ID: 112451)
- Previously, if you filtered query results, and then navigated away from the results,

when you returned to the results, the filtered results would be displayed, but the filter parameters would not be displayed. This could create a false impression that the query had been altered. This issue has been resolved. Now, if you filter query results, and then navigate away from the results, when you return to the results, it will be refreshed and will display unfiltered results. (TS ID: 174643)

- Previously, if you selected and then cleared the **Show Totals** check box in the **Design** workspace, and then ran the query, an error occurred. This issue has been resolved. (TS ID: 174812)
- Previously, if you deleted a query source and added a new source, the deleted source would remain in the **SQL** workspace. This issue has been resolved. (TS ID: 175335)
- Previously, in the **Prompt Settings** section of the **Expression Builder** window, selecting a default value caused an error message to appear. This issue has been resolved. (TS ID: 177420)
- Previously, in the **Design** workspace, in the **Conditions** section, the **Unique Records Only** and **Formatted** check boxes could be selected simultaneously, despite the options being mutually exclusive. This issue has been resolved. Now, you can only select one of these check boxes at any given time. (TS ID: 178685)
- Previously, a Delete query could not be executed unless it contained a condition. This issue has been resolved. (TS ID: 179423)
- Previously, if you modified a query type to Delete from a different type, an error occurred. This issue has been resolved. (TS ID: 179424)
- Previously, if a query contained more than two identical, recursive relationships, running the query resulted in an error. This issue has been resolved. (TS ID: 179855)
- Previously, an error occurred if you added a condition to a Date field. This issue has been resolved. (TS ID: 179857)
- Previously, an error occurred if you attempted to execute a cached UNION query. This issue has been resolved. (TS ID: 182838)

- Previously, an error occurred when a manual join was created using a query source as either the predecessor or successor. This issue has been resolved. (TS ID: 184846)
- Previously, an error occurred if the **Show Totals** check box was selected in a query using aggregate functions. This issue has been resolved. (TS ID: 184951)

Record Manager

- Previously, on the **Record Manager** page, the wrong icon was displayed on the right panel for opening the associated pages. This issue has been resolved. (TS ID: 174970)
- Previously, on the Record Manager page, multiple confirmation messages appeared if you saved a datasheet multiple times. This issue has been resolved. (TS ID: 182200)
- Previously, on mobile devices, the Associated Pages link in Record Manager did not appear correctly. This issue has been resolved. (TS ID: 108415)

Reference Documents

- Previously, if you tried to link an external file to a Reference Document, the Reference Document would be inaccessible. This issue has been resolved. (TS ID: 193454)

Search

- Previously, in the generic **Search** window used throughout Meridium Enterprise APM, no link results were returned if there were too many related records existing before linking a record. This issue has been resolved. (TS ID: 173814)
- Previously, if you attempted to perform a global search on Catalog items, as a non-administrator user, no results were returned regardless of whether or not there were actual results meeting your search criteria. This issue has been resolved. Now, the global search feature returns results for Catalog searches for non-Admin users. (TS ID: 178206)

Security Manager

- Previously, in Data Permissions, the check boxes in the **Permissions** column were not aligned properly. This issue has been resolved. (TS IDs: 152917, 155139)
- Previously, saving a modified Password Policy did not deactivate the save icon; therefore, it was unclear that the changes had been saved. This issue has been resolved. (TS ID: 156406)
- Previously, in Data Permissions, if you modified the permissions for a family and then navigated to the **Security Manager** page without saving the modifications, no dialog box indicating that unsaved changes would be lost appeared. This issue has been resolved. (TS ID: 167237)
- Previously, if you modified fields on the **Password Policy** page, and then attempted to navigate away from the page without saving, no notification that unsaved changes would be lost appeared. This issue has been resolved. (TS ID: 177532)
- Previously, if a password that was defined for a running service was changed and that service was not immediately restarted with the updated password in the configuration file, the service would continually attempt to login using the old password and the user was locked out. This issue has been resolved. Now, when a user changes a password that is defined for a running service, the configuration file is updated automatically and the user can login without issue. Also, a user account can now be unlocked from an administrator page within the Meridium Enterprise APM application. In addition, locked user accounts will be unlocked automatically after a 20 minute delay. (TS ID: 178297)
- Previously, if you created a new Site, added Security Users to that Site, and then saved, the Security Users that were added would not be assigned to the Site. This issue has been resolved. (TS ID: 179400)
- Previously, it was possible to associate the same Security Role with a Security Group multiple times. This issue has been resolved. (TS ID: 182086)

Tabs

- Previously, if you entered values or made selections on a page and then navigated to another page or modified your view of the page, the values were not retained when you returned to the original view of that page. This issue has been resolved. (TS ID: 182999)

Team Members

- Previously, in the **Team Members** section within various Meridium Enterprise APM modules, when you added users to a team, the new users did not always appear in the list of members for that team. This issue has been resolved. (TS ID: 178971)

Other Web Components

- Previously, on iPad devices, you could not open the **Associated Pages** or **Recommendations** pane. This issue has been resolved. (TS ID: 159625)

Hazards Analysis

- Previously, the **Linked Assets** section of the workspace of a System/Node did not display the list of Assets that were linked to the System/Node or to any of the Causes or Safeguards in the System/Node. This issue, however, occurred only if you accessed an existing System/Node. It did not occur if you created a new System/Node. This issue has been resolved. (TS ID: 156380)
- Previously, when you consolidated two or more Recommendations, the information in the **Alert** subsection was not populated. This issue has been resolved. (TS ID: 185085)
- Previously, when you logged in to Meridium Enterprise APM as a user who belonged to the HA Member Security Group, you could not access a What If Analysis. This issue has been resolved. (TS ID: 198710)

Inspection Management

- Previously, when creating a new related record, if you navigated away from and then returned to the Inspection datasheet, the datasheet did not appear. This issue has been resolved. (TS ID: 177045)

Metrics and Scorecards

- Previously, when you selected a Metric View from global search result, a **URL Not Supported** page appeared. This issue has been resolved. Now, when you select a Metric View from the global search results, the Metric View page appears. (TS ID: 175783)
- The MI Metrics User group was previously not a part of MI Foundation Power role.

This issue has been resolved. (TS ID: 176257)

- Previously, when you deleted a cube that was associated with KPIs and Metric Views, a user-friendly message was not displayed. This issue is now resolved and now when you delete a cube that is associated with KPIs and Metric Views, a user-friendly error message appears indicating that the cube cannot be deleted. (TS ID: 176949)
- Previously, on the **Metrics and Scorecards** page, the filter options were not displayed when you navigated between sections. This issue has been resolved. (TS ID: 175993)

Policies

Family Policies

- Previously, if you created a Before Update policy and included a Field Value Changing node and Edit Entity node that both operated on the same family and field, the policy may have triggered executions continuously. This issue has been resolved. (TS ID: 176166)

Policy Designer

- Previously, when a Health Indicator input node was used with Add Value to Health Indicator node, there was no indication to the user the Health Indicator node would not trigger a policy (which is expected behavior as to prevent unintended circular triggering of the policy). This issue has been resolved. Now, when a Health Indicator node is mapped into an Add Value to Health Indicator node, the **Trigger** check box in the **Properties** window for the Health Indicator node will be unchecked and disabled automatically in order to make it clear to a user that the node cannot trigger the policy. (TS ID: 176050)
- Previously, when certain policies using collection values were upgraded from V3.x to V4.x, execution details were not displayed on the policy canvas when you selected past execution history entries. This issue has been resolved. (TS ID: 175960)
- Previously, for policy instance validation, if certain nodes were not executed (whether due to errors or expected policy logic), fields used only by those nodes would *not* appear in the **Validation** pane. In addition, text boxes for the fields did not appear if you used the *Copy to Ad Hoc* feature. These issues have been resolved. (TS ID: 61116)

Family Policies *and* Policy Designer

- Previously, an error occurred when you executed a policy containing an Edit Entity node that used a date/time output from an R Script node. This issue has been resolved. (TS ID: 192201)
- Previously, if a value in a field with a character data type contained leading zeros (e.g., 000139506), the value was displayed in validation or execution results without the leading zeroes (e.g., 139506). This issue has been resolved.

Note: This issue was display-only and policies still functioned as expected.

(TS ID: 188845)

- Previously, the **Path** field on **Properties** window for the R Script node incorrectly contained the toggle icon that allows you to specify the output of a predecessor node. Because you must define the path for an R Script before the policy is executed (in order for you to provide the required R Script parameters), the toggle icon has been removed. You can now only enter a path or select a path from the Catalog browser. (TS ID 180034)
- Previously, when you selected an instance in the **Validation** pane, the scroll bar did not adjust in order to allow you to see all of the fields in the instance. This issue has been resolved. (TS ID: 177892)
- Previously, the *Entity Key* and *Content GUID* outputs from the following action nodes returned no values:
 - Add Value to Health Indicator node
 - Create Entity
 - Create Event node
 - Close Event node
 - Create Production Event node
 - Create Recommendation node

In addition, only the Create Entity node could be used with a Create Relationship node to create a relationship using a record created by the same policy.

These issues have been resolved. The *Entity Key* and *Content GUID* outputs now return values for the action nodes that create records. These outputs have been removed for the Close Event node.

In addition, any node that creates a record can now be used with a Create Relationship node.

(TS ID: 173200)

- Previously, when using a Chrome browser, the policy canvas area disappeared when you adjusted the browser's zoom setting to certain increments other than 100%. This issue has been resolved. (TS ID: 153846)
- Previously, if you specified a field with a defined type as the first input to a calculation node and then entered a constant value of a *different* type as the second input, policy validation errors were displayed in some scenarios where the calculation was actually valid. This issue has been resolved. (TS ID: 61168)
- Previously, if a policy contained a Threshold Statistics node and both the *Accumulated Time* and the *Count* outputs were used by successor nodes, when you validated the policy, the **Execution Details** window did not properly display the Accumulated Time output. Instead of displaying the result of the Accumulated Time calculation, the window displayed the result of the Count calculation. This issue has been resolved.

Note: This issue was display-only and policies still functioned as expected.

(TS ID: 61167)

Process Data Integration

- Previously, if multiple data source connections were specified in the PDI service configuration file and one of them was invalid, the server did not log in to the valid data sources that were listed after the invalid data source connection. This issue has been resolved. Now, the service will skip the invalid connection and log in to the valid connections. (TS ID: 156590)

Reliability Analytics

- Previously, in a System Reliability Analysis, if the TTR (Time to Repair) Distribution Type was set to Exponential, then the Distribution Parameter field was incorrectly labeled MTBF (Mean Time Between Failures). This issue has been resolved. Now, if the System Reliability Analysis TTR Distribution Type is set to Exponential, the TTR (Time to Repair) Distribution Parameter is correctly labeled MTBR (Mean Time Between Repairs). (TS ID: 174964)
- Previously, in a System Reliability Analysis, when viewing the **Impact Plot** tab, an error message was displayed despite the fact that the Impact Plot graph was correctly accessed. This issue has been resolved. Now, when you select the Impact Plot graph, no error message is issued. (TS ID: 176316)

- Previously, when importing a Scenario Sub-System for a System Reliability Analysis, even if the Sub-System was imported, an error message appeared. This issue has been resolved. Now, the error message only appears if there was a problem with the import process. (TS ID: 176904)
- Previously, after renaming and saving a Production Analysis, the entire browser was refreshed. This issue has been resolved. Now, when you rename an analysis, only the currently selected page refreshes. (TS ID: 177194)
- Previously, in System Reliability, the system would not allow Probability Comparison Plots with dissimilar distribution types. This issue has been resolved. Now, the system displays the Probability Comparison Plot with the x-axis scaling of the first selected distribution type. (TS IDs: 177410, 177414)
- Previously, in System Reliability, in the **Action Type Properties** section, the Interval and Duration fields contained drop-down boxes that made them appear editable although they were not. This issue has been resolved. Now, the Interval and Duration fields no longer appear editable. (TS ID: 178330)
- Previously, when Asset Strategy Optimization was used in System Reliability, the units of measure were not properly localized on the associated datasheets. This issue has been resolved. Now, the units of measure reflect the properly localized value. (TS IDs: 186378, 187860)
- Previously, in System Reliability, modified Scenario Properties were not properly saved. This issue has been resolved. Now, if the Scenario Properties are modified and saved, they will be saved without an error. (TS ID: 188303)

Risk Based Inspection

- Previously, in Pipeline Management, the PL-DEF-RISK_MAPPING-SAFETY policy had several Risk Mapping Detail Records that were mapped to the incorrect Source Fields. This issue has been resolved. Now, the policy Risk Mapping Detail Records map to the correct Source Fields. The following policy Risk Mapping Detail records

have been updated:

Policy Input Node	Degradation Mechanism	Incorrect Source Field	Correct Source Field
Flammable Category - Rupture	Carbonite Cracking	MI_CRCOEVAL_FLAM_CONS_CAT_C	MI_CRCOEVAL_FLAM_CON_RUP_PL_C
	Third Party Damage	MI_CRCOEVAL_FAA_RUP_PL_N	
	Graphitization		
Toxic Category - Rupture	Hot Hydrogen Attack	MI_CRCOEVAL_TOX_CONS_CAT_C	MI_CRCOEVAL_TOX_CON_RUP_PL_C
	Temper Embrittlement		
	Carbonate Cracking		

(TS ID: 194002)

- Previously, when using the Meridium Enterprise APM mobile application on an iPad to calculate analyses, a message appeared that rendered the app unresponsive. This issue has been resolved. (TS ID: 176805)
- Previously, when calculating RBI Analyses, even though the calculation would succeed, an error would appear. This issue has been resolved. (TS ID: 174899)

Rounds

- Previously, in Rounds Designer, when you selected an item that you dragged-and-dropped on to the Node Pin Board, closed the Node Pin Board, and then attempted to drag-and-drop an item in the Route pane to a new location, the selected item on the Node Pin Board was moved instead. This issue has been resolved. (TS ID: 173080)
- Previously, in Rounds Data Collection, an Ignored reading (i.e. a reading taken before the Next Date) was not displayed in the Mini Trend Chart. This issue has been resolved. (TS ID: 160376)

- Previously, in Rounds Data collection, the Route navigation pane was not displayed correctly when you navigated between the tabs. This issue has been resolved. (TS ID: 175541)
- Previously, on iPad devices, when you opened a Template Group in Rounds Designer and then selected a condition node, the text box for the order number was not aligned correctly. This issue has been resolved. (TS ID: 175767)
- Previously, in Rounds Data Collection, when you entered the description for a Measurement Location containing certain characters including "!" or "?", the Measurement Location description did not appear correctly in Rounds Data Collection. This issue has been resolved. (TS ID: 150948)
- Previously, in Rounds Data Collection, by default, the items in the Assigned Routes section were not sorted by Route ID. This issue has been resolved. (TS ID: 152106)
- Previously, in Rounds Designer, Route Scan IDs did not support the use of alphanumeric characters and were not required to be unique. This issue has been resolved. (TS ID: 175931)
- Previously, in Rounds Data Collection, when you saved a standalone Recommendation record, there was no indication that the recommendation was saved. This issue has been resolved. (TS ID: 154493)
- Previously, in Internet Explorer 11, when you accessed Rounds Data Collection, and then selected **Clear Reading** to clear the data from the Measurement Location Reading, the data was not deleted. This issue has been resolved. (TS ID: 175243)
- Previously, in Rounds Designer, when you dragged and dropped a Measurement Location from the Node Pin Board to the first location on the Route, the Measurement Location was not highlighted. This issue has been resolved. (TS ID: 160370)
- Previously, on iPad devices, in Rounds Data Collection, when you created and saved a Recommendation with a photo, edited the same Recommendation, and then saved it again, a duplicate copy of the photo was uploaded. This issue has been resolved. (TS ID: 150176)

- Previously, in Rounds Designer or Rounds Data Collection, when the Lubrication license was inactive, when you created Measurement Locations or Lubrication Records, Meridium Enterprise APM failed to retrieve the Lubrication Record Templates and did not work. This issue has been resolved. (TS ID: 182833)
- Previously, in Rounds Designer or Rounds Data Collection, you were not able to apply filters in the **Routes, Assigned Routes, Allowable Values** or **Template Group** sections. This issue has been resolved. (TS ID: 185754)
- Previously, in Rounds Designer, when you opened a Template Group, selected a Measurement Location Template, then made changes and tried to add a new Measurement Location Template without saving, an error message appeared. This issue has been resolved. (TS ID: 186477)
- Previously, in Rounds Designer, an error message appeared when you applied a Template Group with a condition to a Route. This issue has been resolved. (TS ID: 187116)
- Previously, in Android devices, in Rounds Data Collection, when you created a Recommendation from a Measurement Location within a Route, the **Recommendation** pane was not displayed correctly, when you selected the calendar in a date field, in the recommendation. This issue has been resolved. (TS ID: 187532)
- Previously, in Android devices, in Rounds Data Collection, when you opened the **Rounds Data Collection Overview** page in portrait orientation, the headings for some columns were not displayed correctly. This issue has been resolved. (TS ID: 187533)
- Previously, in Rounds Designer, when you deleted multiple Routes by selecting the check boxes, multiple messages appeared asking for confirmation to delete each Route. This issue has been resolved. (TS ID: 187337)
- Previously, in Rounds Data Collection, the color of the text for values triggering Upper Level 1 or Lower Level 1 alerts in the Mini Trend Chart made it unreadable. This issue has been resolved. (TS ID: 192751)
- Previously, in Rounds Designer, you were unable to create a Recommendation with a photograph. This issue has been resolved. (TS ID: 190168)

SIS Management

- Previously, after you promoted a Recommendation to Asset Strategy Management (ASM), the Proof Test Task that was created in ASM did not appear in SIS Management. This issue has been resolved. You can now access the Proof Test Task in the **Proof Test Tasks** section in the **SIS Management Overview** page. (TS ID: 168069)
- Previously, the *Proven In Use* field in exida's exSILentia was mapped to the *Approved to Use* field in Meridium Enterprise APM. Because of this, when you selected a Protective Instrument Loop Element from exida's exSILentia, the calculations for SIL architectural constraints were incorrect. This issue has been resolved. The mapping for the *Proven In Use* field has been corrected. (TS ID: 174868)
- Previously, if you consolidated two or more Recommendations, the information in the **Alert** subsection was not populated. This issue has been resolved. (TS ID: 185085)
- Previously, the results of a proof test were incorrect. This issue has been resolved. The results of a proof test are now calculated as follows:
 - For a sensor and a logic solver, if the As Found trip point error is less than or equal to the trip point error limit, the proof test is marked *Pass*. Otherwise, it is marked *Fail*.
 - For a final element, if the As Found travel time is less than the travel time limit, the proof test is marked *Pass*. Otherwise, it is marked *Fail*.(TS ID: 190951)
- Previously, you could not copy an Instrumented Function if it was linked to a Logic Solver that was associated with a *different* SIL Analysis. This issue has been resolved. If you copy an Instrumented Function, the Logic Solver information is not copied. (TS ID: 196229)

Thickness Monitoring

- Previously, in the Multiple Data Entry grid, an error appeared when the user selects the Options button. This issue has been resolved. Now the Options button functions as expected. (TS ID: 195817)
- Previously, an error appeared when you used Internet Explorer to access the Thickness Monitoring module from the Strategy section of the Meridium navigation

menu. This issue has been resolved. (TS ID: 195777)

- Previously, when using the Meridium Enterprise APM mobile application on an iPad to calculate analyses, a message appeared that rendered the application unresponsive. This issue has been resolved. (TS ID: 176805)

Restored Features - V4.1.5.0

The following V3.x features were deferred from previous V4.x releases, but are now available in V4.1.5.0.

AMS Analytics

- AMS Analytics and a connection to Emerson AMS Intelligent Device Manager. (TS ID: 117296)

Foundation

- You can now export or import the field behavior by using the Import or Export tool. (TS ID: 178266)

Inspection Management

- You can now use the Approve Bulk Inspections feature to review and approved inspection documents. (TS ID: 163447)

Metrics and Scorecards

- You can now transpose the column members with the row members and vice versa in a Metric View design page. (TS ID: 128477)

Obsolete Features - V4.1.5.0

The following items are no longer used in Meridium Enterprise APM.

AMS Analytics

- The hierarchy tree in AMS Analytics that used AMS Asset Folder records to provide a structured view of AMS Assets is no longer supported. Instead, you can view AMS Assets via the equipment and functional locations in the Asset Hierarchy to which they are linked.

If you are not using Equipment and Functional Location records, to continue to view AMS Asset Folders and AMS Assets in a hierarchy, you can modify the application-wide Asset Hierarchy configuration in order to include the AMS Asset Folder and AMS Asset families.

As a result of this change, AMS Data Source records referring to CMMS Systems are no longer used.

(TS ID: 185089)

- The display of composite health index values stored in AMS Asset Folder records is no longer supported. (TS ID: 185089)

Asset Health Manager

- The following items have not been used in the last several versions of Meridium Enterprise APM and are now marked as deprecated:
 - Hierarchy Item Child Definition family
 - Hierarchy Item Definition family
 - MI_HIER_ITM_GROUP system code table

The application-wide Asset Hierarchy and Asset Group features have replaced the need for these items.

(TS ID: 61055)

Deferred Features - V4.1.5.0

The following features are not available in Meridium V4.1.5.0, but are planned for a future release.

AMS Analytics

- Viewing alert trends by severity (Alert Trend by Asset graph) and by description (Alert Trend by Asset by Event Description graph). (TS ID: 180029)
- Opening a Detailed Report for an AMS Asset, Event, or Alert via an Associated Pages link in Record Manager.

Note: These reports currently appear in the **Reports** list on the **AMS Analytics Overview** page; these will be removed from the list in a future release.

(TS ID: 165379)

Asset Health Manager

- Trend chart for character health indicators. (TS ID: 103875)
- Asset Hierarchy sorting and filtering based on health indicator status, filtering based on health indicator family field values, and filtering based on assets with or without health indicators (TS IDs: 91046, 86625, 86430)
- The display of health indicator statuses in Asset Hierarchy. (TS ID: 86796)

Asset Strategy Implementation

- The ability to use Rounds.
- Visibility of Actions linked to Health Indicator sources. (TS ID: 143567)
- The option to exclude child items when copying and pasting Work Management Items. (TS ID: 147790)

Asset Strategy Management

- Migrating strategies between databases.
- Importing asset strategies and strategy templates. (TS IDs: 160688, 63042, 157251, 63638)

Asset Strategy Optimization

- Optimize Actions. (TS ID: 65780)
- Diagram Validation. (TS ID: 117114)

Calibration Management

- Automated Calibration using Beamex and Meriam documenting process calibrators (TS IDs: 61319, 61334)

Foundation

Asset Criticality Analysis (ACA)

- Promoting analyses to and from ACA. (TS ID: 160858)
- Exporting and importing in the ACA module. (TS ID: 66952)

Configuration Manager

- Global Preferences- Background Colors. (TS ID: 65297)
- Global number and date format. (TS ID: 160148)

Graphs

- Exporting to a PDF and printing graphs. (TS ID: 81015)

GE System 1

- GE System 1 Analytics and connection to GE System 1, including the GE Tag node used in Policy Designer. (TS ID: 168928)

Inspection Management

- Inspection Grouping. (TS ID: 61244)

Metrics and Scorecards

- Selecting columns to include in a Scorecard. (TS ID: 70641)
- GM (Generation Management) cube is deferred from V4.0.0.0. Any previously deployed GM (Generation Management) cube, which worked in V3.6 and earlier releases, will continue to work in V4.0.0.0 after upgrading the product. You will be able to use the existing GM cube and the support will continue. (TS ID: 160446)
- Export/Import of KPI Schedules (TS ID: 173886)

Process Data Integration

- Viewing trends for multiple OPC Tags simultaneously (i.e., the Process Data Viewer feature in V3). (TS ID: 62299)

Reliability Centered Maintenance and Failure Modes and Effects Analysis

- Promoting RCM and FMEA analyses directly to templates. (TS ID: 160858)

Reliability Analytics

- Action optimization in System Reliability Analysis.

Risk Based Inspection

- Importing and exporting RBI data for bulk review. (TS ID: 61326)
- Creating a bulk What-If analysis. (TS ID: 73475)

Root Cause Analysis

- Publishing an analysis in RCA. (TS IDs: 61730, 103887, 68585, 63432)
- Importing a Logic Gate or child nodes of a Hypothesis into a Logic Tree Diagram. (TS ID: 175309)
- Emailing capability to notify and track changes in an Asset in an RCA. (TS ID: 175610)
- Sending email notifications for alerts configured in RCA for Hypothesis Verifications. (TS ID: 175610)

Rounds

- Selecting multiple nodes from the Route pane in Route Management. (TS ID: 173671)
- Unlinking a Measurement Location from a Measurement Location Template. (TS ID: 61751)
- Accessing a list of recent Routes. (TS ID: 61638)
- Storing the location data of a Reading via GPS. (TS ID: 130009)
- Offline access to the five most recent Recommendations in Rounds. (TS ID: 153853)
- Capturing multiple images while creating a Recommendation in Rounds. (TS ID: 153849)
- Ad hoc inspection of a single asset. (TS ID: 160740)
- Support for Bluetooth-connected barcode scanners. (TS ID: 124935)

Thickness Monitoring

- Color Coding Preferences. (TS ID: 70840)
- Dataset integration with dataloggers. (TS ID: 83553)
- Corroded Area Measurements. (TS ID: 101752)
- Exporting data to Excel via the TM Dataloggers interface.

Release Notes - V4.1.5.1

Asset Health Manager

- In V4.1.5.0, in the **This Asset** section of the **Health Summary** page, you could not scroll down past the first 10 assets in the list. This issue has been resolved. (TS ID: 203880)

Asset Strategy Implementation

- Previously, when you accessed ASI, there were instances in which connections to SAP were being left open. This issue has been resolved. Now, there will only ever be a maximum of one connection used for a system at any time, and none will remain open when not in use. (TS ID: 203758)

Asset Strategy Management

- You can now view the Risk Alias instead of Risk Rank if you configure your risk matrix as such. (TS ID: 203604)
- You can now configure additional read-only columns to appear at the end of the tables in the **Actions** workspace, the **Risks** workspace, and the **Risk Assessment** workspace. (TS ID: 203605)

Deployment

- Previously, if you attempted to upgrade a SQL Server Database Server from a version of Meridium APM prior to V3.6.0.3.0 to Meridium Enterprise APM V4.1.5.0, an error would occur and the upgrade would fail. This issue has been resolved. To prevent this error from occurring, before you upgrade a SQL Server Database Server from a version of Meridium APM prior to V3.6.0.3.0 to Meridium Enterprise APM V4.1.5.0, complete the file-replacement procedure described in the [Replace the Database Patches File topic](#). (TS ID: 204651)

Foundation

- Previously, in **Manage Translations**, when you updated any language file and uploaded it via the **Upload Custom Translations** window, an error message appeared. This issue has been resolved. You can now make updates to any language file and upload it via the **Upload Custom Translations** window. The updated language file will be uploaded and the file name will appear in the **Uploaded Lan-**

guages list in **Custom Translation** section. (TS ID: 196931)

- Previously, if you searched the Asset Hierarchy when site filtering was applied, records to which site filtering had been applied did not appear in search results. This issue has been resolved. (TS ID: 207352)
- Previously, when using a SQL Server database, if you added a field to an existing family or a new family, and then created a record for that family whose values included multi-byte characters (e.g., Chinese or Japanese characters), the characters would be replaced by a question mark. This issue has been resolved. (TS ID: 199065, 207761)

Inspection Management

- Previously, when configuring families for Inspection Management, if you added both a new Family and new Relationship Family on the **Family Management** page, and then created a new or added an existing Relationship Definition between the new Family and the Inspection family, the new Family was not correctly added to the Relationship Definition. This issue has been resolved. Now, if a new Family is added and is linked to the Inspection family through a Relationship Definition, the family relation is set. (TS ID: 198977)
- Previously, when using the Inspection Management Data Loader to import Full or General Inspections, if the Status field was set to Approved and the Final Inspection Lock was set to False, the system would end the data load. This issue has been resolved. Now, in this scenario, an error appears in the Data Loader log, indicating that the Inspection was skipped. (TS ID: 202055)
- You can now update Inspection Recommendations imported through the Inspection Management Data Loader for one Asset or Functional Location during the data import process. (TS ID: 201971)

LDAP

- Previously, when synchronizing directories via LDAP, a case-sensitive value check for LDAP group membership occurred, which could unintentionally exclude some user records. This issue has been resolved. (TS ID: 205794)

Single Sign-On

- You can now modify the IDP URL and enable or disable SSO via the **Host Names** page. This interface simplifies the setup of off site authentication for single sign-on. (TS ID: 207336)

Release Notes - V4.1.5.2

Policy Designer

- Previously in 4.1.5.0, the **Properties** window for Rule node did not display text boxes to specify any inputs defined by the selected rule. In addition, when the Rule node was selected in a subsequent node, the output values defined by the rule were not available to be selected. These issues have been resolved. (TS ID: 216832)

Release Notes - V4.1.5.3

Rounds

- Previously, using the *Rounds Route* Data Loader, you could only link existing Measurement Locations to assets. Further, you could not use the Asset ID field to link them (i.e., you could only use the Asset Key field). These issues have been resolved. To facilitate this fix, the Rounds Routes data loader workbook has been updated. (TS ID: 234644)
- Previously, the *Rounds Templates* data loader did not work as expected. This issue has been resolved. The Rounds Templates data loader workbook has been updated to correct the issues. In addition, certain columns in the workbook have been arranged in a more convenient order. (TS ID: 234644)

Release Notes - V4.1.5.4

Foundation

- Previously, code and files not required by Meridium Enterprise APM existed in the system. This issue has been resolved. (TS IDs: 249828, 249822, 249812, 249805)

Release Notes - V4.1.5.5

Family Policies

- Previously, when the Edit Entity node was used in a Before Update family policy, if an input other than the Current Entity node was specified, the records may not have been modified when the node was executed, although the policy execution history indicated that the execution was successful. This issue has been resolved. (TS ID: 287501)

Meridium Enterprise APM Mobile Application

- Previously, when using Meridium Enterprise APM V4.1.5.1 through V4.1.5.4, if you installed the Meridium Enterprise APM mobile application on an Android device, the most recent version of the application was not installed. This issue has been resolved. After applying the V4.1.5.5 patch, if you install the Meridium Enterprise APM mobile application on an Android device, the most recent version of the application will be installed. (TS ID: 271682)

Policy Designer and Family Policies

- Previously, the Or node was not always executed, even if at least one path leading into it was executed. This issue has been resolved. (TS ID: 285584)

Release Notes - V4.1.5.6

Policy Designer and Family Policies

- Previously, the *And*, *Or*, or *Case* node in a policy was not executed if an *And*, *Or*, or *Case* node immediately preceding it was not executed. In addition, if any immediately preceding node was not executed, the result of *Or* node was always *True*. These issues have been resolved. (TS IDs: 293895, 295202)

Rounds

- Previously, in V4.1.5.5, you could not use the Add button () in the left pane of a Route to add new items to the Route. This issue has been resolved. (TS ID: 294972)

V4.1.6.0 Release Notes

The following release notes are available for Meridium Enterprise APM V4.1.6.0:

- [New Features](#)
- [Enhancements](#)
- [Resolved Issues](#)
- [Restored Features](#)
- [Deferred Features](#)

You can also view the APM Connect release notes.

New Features - V4.1.6.0

Risk Based Inspection

- You can now configure and calculate Potential Degradation Mechanisms for RBI Analyses using RBI Custom Methodology Preferences. (TS IDs: 166142, 187841, 187842, 187843, 192816, 192819, 194971, 194973, 194975, 197266, 197591, 199939)

Enhancements - V4.1.6.0

The following enhancements have been made in V4.1.6.0.

AMS Analytics

- A refresh button, which allows you to view the updated statuses of each AMS data source, is now available on the **Status** tab of the **AMS Data Source Configuration** page. (TS ID: 197331)

Asset Strategy Management

- You can now configure your risk matrix to display the Risk Alias instead of the Risk Rank. (TS ID: 199209)
- You can now configure additional read-only columns to appear in the tables in the **Actions** workspace, the **Risks** workspace, and the **Risk Assessment** workspace. (TS ID: 199959)
- You can now add Reference Documents to Asset Strategies, Actions, Risks, System Strategies, and Unit Strategies. (TS ID: 200545)

Foundation

Rules Editor

- A new Entity-based rule has been added, which you can use to embed a hyperlink that will be shown along with a validation failure error message. (TS ID: 197511)
- A new Entity-based rule has been added, which you can use to return messages when the Field Validation is successful. (TS ID: 199965)
- You can now configure Macros to return JS modules to prompt users for additional input. The callback functions will be executed based upon the user input. This feature replaces the functionality currently offered by the UI Component in rules. (TS ID: 200806)

Inspection Management

- You can now update Inspection Recommendations imported through the Inspection Management Data Loader for an asset during the data import process. (TS ID: 201971)
- A new set of queries has been added that enables the Bulk Review of Inspection Reports based on a custom set of parameters. (TS ID: 203572)

Reliability Analytics

- For all of the Reliability Analytics modules, the Asset to Analysis relationship is now created automatically when the Equipment ID is used as the Asset ID in the analysis. (TS ID: 202116)

Reports

- You can now display the units of measurement for the numeric values in an SSRS Report. (TS ID: 156037)

Risk Based Inspection

- You can now link a Degradation Mechanism to an analysis or create an RBI 581 Risk Analysis, RBI Criticality Analysis, RBI PRD Criticality Analysis, or an RBI Pipeline Analysis even if there are no Data Mapping Groups to map the source and target families. (TS ID: 206211)
- A MI RBI Analyst and a MI RBI Administrator can now view, insert, update, or delete records in the RBI Risk Matrix Mapping family. (TS ID: 213127)

Rounds

- On iPad devices, when you select a numeric field in which to enter readings, the numeric keypad now appears instead of the QWERTY key pad. (TS ID: 152500)
- The Mark Done feature has been enhanced in the following ways:
 - When offline, you can now check whether a Route has been marked as Done.
When the device goes back on-line, this indication is updated when the Route has been uploaded.

- You can now edit a previously entered comment at any time before a Route is uploaded.

(TS ID: 157248)

- Previously, the Closed By field on the Route History record was updated only when a user marked the Route as Done. Now, to provide information about the user working on a Route, the Closed By field is updated when the Route History record is created. (TS ID: 203392)
- You can now mark a Route as Done on the **Rounds Data Collection** page. (TS ID: 134886)

Single Sign-on

- You can now modify the IDP URL and enable or disable SSO via the Host Names feature in Operations Manager. This interface simplifies the setup of off-site authentication for single sign-on. (TS ID: 197308)

Resolved Issues - V4.1.6.0

The following issues existed in one or more previous releases and have been resolved in V4.1.6.0.

ACA

- Previously, in Asset Criticality Analysis, when you accessed the context-sensitive help for any window, the ACA Workflow help page did not open. (TS ID: 197203)

AMS Analytics

- Previously, in Internet Explorer, in the **Systems and Tags** workspace, you could not perform standard browser functionality such as opening and closing new tabs. This issue has been resolved. (TS ID: 210458)
- Previously, when you filtered search results in the **Link Asset to Tag** window, after selecting the **Apply** button, the **Link Asset to Tag** window remained visible. This issue has been resolved. (TS ID: 210224)
- Previously, if you navigated from the **AMS Data Source Configuration** page to another tab and then returned to the record, the **Save** button on the **AMS Data Source Configuration** page was disabled. This issue has been resolved. (TS ID: 206142)
- Previously, if you scheduled the AMS Event Work Process prior to the AMS Asset Work Process, newly created AMS Assets were linked to the parent Data Source on the **Systems and Tags** page. This issue has been resolved. (TS ID: 205987)
- Previously, in Internet Explorer, if you selected the calendar icon in the **Status** section of the **AMS Data Source Configuration** page, the **Web Service Details** section was opened instead of the calendar. This issue has been resolved. (TS ID: 204503)
- Previously, when you attempted to save a newly added AMS data source, the save would fail. This issue has been resolved. (TS ID: 204318)
- Previously, an error occurred when you tried to open the reports included in the **Reports** list on the **AMS Analytics Overview** page. This issue has been resolved. (TS ID: 204548, 203661)
- Previously, on the **AMS Analytics Overview** page, the **Date/Time** column in both

the **Active Alerts** list and the **Events** list displayed the times in UTC rather than the local time. This issue has been resolved.

To facilitate this fix, a new column, **ID**, has been added to both lists. This column is now used instead of the **Date/Time** column to provide a hyperlink to open the associated record in Record Manager. (TS ID: 200413)

- Previously, on the **AMS Asset Data Sources** page, the **Data Source Enabled** column contained check boxes to indicate if the data source was enabled. Now, to avoid confusion, the **Data Source Enabled** column now displays **Yes** or **No**, depending on whether the data source is enabled, and it is not editable. (TS ID: 197333)

Asset Health Manager

- Previously, members of the MI AHI User security group (or a Role containing that group, i.e., MI Health User and MI Health Power) were able to access the AHM administrative pages in Application Settings. This issue has been resolved. Now, only users who are members of the MI AHI Administrator Security Group, or a Role containing that group, can access the AHM administrative pages. (TS ID: 197322)
- Previously, if your process historian contained over 1000 tags, health indicator statuses were not updated as expected for some OPC Tags. This issue has been resolved. (TS ID: 210422)

Asset Strategy Implementation

- Previously, when you implemented a Maintenance Plan in ASI, a corresponding plan was created in SAP, but an error message appeared in ASI even though the plan was created successfully in SAP. This issue has been resolved. (TS ID: 187751)
- Previously, when you accessed ASI, connections to SAP were left open in various scenarios. This issue has been resolved. Now, a maximum of one connection will be used for a system at a given time, and no connections will remain open when not in use. (TS ID: 201604)

Asset Strategy Management

- Previously, in ASM, when you updated or assigned an existing Risk in the Mitigated Risk section of an Action, the Strategy status was not updated to Modified as

expected. This issue has been resolved. (TS ID: 200189)

Calibration Management

- Previously, when you performed an automated calibration and closed a calibration event, the associated Calibration Task was not cycled to the next calibration date. This issue has been resolved. (TS ID: 210937)
- Previously, saving a Calibration Event with results created a null data record in the database. This issue has been resolved. (TS ID: 203639)

Foundation

- Previously, in Internet Explorer on Microsoft Surface devices, when you entered text and selected the global search icon, the search result window closed without providing results. This issue has been resolved. (TS ID: 194826)
- Previously, in **Manage Translations**, when you updated any language file and uploaded it via the **Upload Custom Translations** window, an error message appeared. This issue has been resolved. You can now make updates to any language file and upload it via the **Upload Custom Translations** window. The updated language file will be uploaded and the file name will appear in the **Uploaded Languages** list in **Custom Translation** section. (TS ID: 196931)
- Previously, in the Meridium Enterprise APM module overviews, when you navigated away from the overview to a new tab and then came back to the overview page, the overview page did not refresh to properly reflect changes in the tile count on the dashboards. This issue has been resolved. (TS ID: 198928)
- Previously, when using a SQL Server database, if you added a field to an existing family or a new family, and then created a record for that family whose values included multi-byte characters (e.g., Chinese or Japanese characters), the characters would be replaced by a question mark. This issue has been resolved. (TS ID: 199065)
- Previously, in **System Codes and Tables**, when you created or modified a System Code, you could not clear the **Active** check box. This issue has been resolved. (TS ID : 203250)
- Previously, if you used a drill-down graph widget in your Home dashboard, the dashboard would not work correctly. This issue has been resolved. (TS ID: 203790)

- Previously, the file **Resource.json** was not refreshing properly, which affected the localization of application data. This issue has been resolved. (TS ID: 204298)
- Previously, an error occurred when you tried to add a Human Resources Team Member specific to your site. This issue has been resolved. (TS ID: 211428)

Asset Hierarchy

- Previously, if you searched the Asset Hierarchy when site filtering was applied, records to which site filtering had been applied did not appear in search results. This issue has been resolved. (TS ID: 207229)

Catalog

- Previously, if you searched for fields containing Unicode characters (e.g., Japanese characters), no results would be displayed. This issue has been resolved. (TS ID: 202185)

Datasheet Builder

- Previously, you did not have an option to localize captions or section captions or section names (i.e., the section tabs did not have the globe icon). This issue has been resolved. (TS: 202236)

Dataset

- Previously, if you saved a dataset and then attempted to navigate away from the page, the **You have unsaved changes** dialog box would appear. This issue has been resolved. (TS ID: 198304)

Mobile Application

- Previously, in Datasets, Meridium Enterprise APM mobile application users could select the **Create New** button, which caused an error to occur. This issue has been resolved. Now, the **Create New** button is not displayed for Meridium Enterprise APM mobile application users. (TS ID: 199206, 199207)

Record Manager

- Previously, inactive System Code Tables could appear in Record Manager options and results. This issue has been resolved. (TS ID: 204090)

Result Grid

- Previously, in the result grids for queries, you could not select a row completely because all columns had a white background. This issue has been resolved. (TS ID : 202742)

Rounds Data Collection

- Previously, in Rounds Data Collection, when you accessed the **Recommendations** pane, performed a search, and then accessed Help, the **Recommendations** pane was hidden. This issue has been resolved. (TS ID: 194751)

Rules Editor

- Previously, in the Meridium Rules Editor, the **Save** button was not enabled until the DBType was changed. This issue has been resolved. (TS ID: 199027)
- Previously, you could not delete a client rule in the Meridium Rules Editor. This issue has been resolved. (TS ID: 199917)

Queries

- Previously, if you ran a delete query when the **Force Delete** check box was cleared, an error occurred. This issue has been resolved. (TS ID: 197119)
- Previously, if you entered Unicode characters (e.g., Japanese characters) as query filter criteria, the query would display no results. This issue has been resolved. (TS ID: 200164)
- Previously, Unicode values (e.g., Japanese values) were not recognized as valid values when passed in by query parameters. This issue has been resolved. (TS ID: 203484)
- Previously, the background color of columns containing hyperlinks could become gray unexpectedly. This issue has been resolved. (TS ID: 204114)

Inspection Management

- Previously, when configuring families for Inspection Management, if you added both a new Entity family and a new Relationship family on the Family Management page, and then created or added a Relationship Definition between the new Family and the Inspection family, the new Family was not correctly added to the Relationship Definition. This issue has been resolved. Now, in this scenario, the family relationship is set. (TS ID: 198977)
- Previously, when attempting to Review or Approve an Inspection, if you had recently received the Inspector or the Inspection Supervisor role, a validation error appeared and you were not able to change the status of the Inspection. This issue has been resolved. (TS ID: 200301)
- Previously, when using the Inspection Management Data Loader to import Full or General Inspections, if the Status field was set to *Approved* and the Final Inspection Lock was set to *False*, the system would stop the data load. This issue has been resolved. Now, if you try to import a Full or General Inspection with a Status field set to *Approved* and the Final Inspection Lock set to *False*, an error appears in the Data Loader Log , indicating that the Inspection was skipped. (TS ID: 202055)
- Previously, when selecting or on the **Inspection Management Overview** page to manage Equipment Profiles, to create Inspection Tasks, or to create Work Packs, if a network latency issue existed, these functions were sometimes disabled incorrectly. This issue has been resolved. (TS ID: 209808)

Metrics and Scorecards

- Previously, the **Update Measures** button on a KPI view page was disabled if the Metrics Manager license was inactive. This issue has been resolved. You can now select the **Update Measures** button to update a KPI measure even if the Metrics Manager license is inactive.(TS ID: 200519)

Policies

Policy Designer and Family Policies

- Previously, you could not use the vector or matrix output of an R Script node as an input to another R Script node. This issue has been resolved. (TS ID: 195711)
- Previously, for policies that use an Edit Entity node to modify a record that includes a date/time field, if you specified the updated date/time value directly in the Properties window for the node, an error occurred when you validated or executed the policy. This issue has been resolved (TS ID: 204258)

- Previously, if the query used by a Query node referenced fields with the same Field ID from 2 different families (e.g., the Entity Key fields), only references to the first column using that Field ID were retained in the Policy record. If you tried to reference the second column using the same Field ID, the selection saved to the Policy model referenced the first column. This issue has been resolved. (TS ID: 208024)
- Previously, when you configured a policy to send an email message to multiple email addresses, the email message was not sent when the policy was executed. This issue has been resolved. (TS ID: 201798)

Family Policies

- Previously, the Policy Designer license was incorrectly required to create new Family Policies. This issue has been resolved. Now, only the Family Policy license is needed to create Family Policies. (TS ID: 195751)

Policy Designer

- Previously, if a user was assigned to either the MI Health Power or MI Health Admin role, and no additional security groups were assigned, the user was not given privileges to create a new policy. This issue has been resolved. Now, users assigned to either the MI Health Power or MI Health Admin role can create new policies. (TS ID: 190133)
- In V4.1.5.0, the baseline Policy Recommendation family did not use the parent's (Performance Recommendation family's) State Configuration settings. This issue has been resolved.

When you upgrade to V4.1.6.0, you will need to complete an upgrade step to apply the correct State Configuration settings for the Policy Recommendation family if:

- You are upgrading *from* V4.1.5.x
- and-
- You used Policy Recommendations *for the first time* in V4.1.5.x

(TS ID: 195352)

Production Loss Analysis

- Previously, when running a Report, the Printed By field on the cover page showed an incorrect name by default. This issue has been resolved. (TS ID: 202885)

Reliability Analytics

- Previously, when accessed from Reliability Analytics, the Recommendations displayed the grid for strategic recommendations instead of the grid for performance recommendations. This issue has been resolved. (TS ID: 201812)
- Previously, in System Reliability Analysis, you could not add Reliability Growth Analyses, Reliability Distribution Analyses, or assets associated with the analyses to the System Reliability Analysis diagrams. This issue has been resolved. (TS ID: 202118)
- Previously, in System Reliability Analysis, you could not import Growth or Distribution parameters into risks for a selected asset. This issue has been resolved. (TS ID: 202120)
- Previously, when running a Report, the Printed By field on the cover page showed an incorrect name by default. This issue has been resolved. (TS ID: 202885)

Reliability Centered Maintenance and Failure Modes and Effects Analysis

- Previously, when you attempted to access a report in an FMEA analysis, an entity key was incorrectly requested. This issue has been resolved. (TS ID: 195083)
- Previously, when you attempted to access a custom report from RCM or FMEA, an entity key was incorrectly requested. This issue has been resolved. Now, when you run custom reports, the entity key of the analysis is passed to the report automatically as long as you use a parameter ID of Entity_Key in your custom reports. (TS ID: 196855)
- Previously, for RCM or FMEA, if you configured a new field with the Always Required behavior, an error message appeared when you added an item to an RCM or FMEA analysis. This issue has been resolved. (TS ID: 202609)

Risk Based Inspection

- Previously, when viewing lists of Degradation Mechanisms, Potential Degradation Mechanisms or when viewing a field that references the MI_DEGRADATION_MECHANISM_TYPES system code table, the System Code Table *ID* appeared in the list instead of the System Code Table *Description*. This issue has been resolved.

Now, the System Code Description appears in all Degradation Mechanisms and Potential Degradation Mechanisms lists and on the fields shown in the following table:

System Code Description	System Code ID
Findings	MI_FIND_001_RBI_DEGR_MECH_C
Inspection Method	MI_INSPMETH_DAMAGE_MECH_C
RBI Degradation Mechanism Evaluation	MI_RBDEMEEV_DAM_MECH_C
RBI Degradation Mechanism	MI_DEGR_MECH_DEG_MECH_DES_C
RBI Recommendations	MI_RBIRECOM_DAMAG_MECHA_C[FA1] [FA2]

(TS IDs: 187855, 200977)

- Previously, when mitigating risk on an RBI Analysis, if a custom Risk Matrix was configured with a custom Financial category, you could not save the mitigated risk assessment. In addition, if the custom Financial risk was mapped to an unmitigated risk assessment, you could not save the risk assessment. These issues have been resolved. You can now save risk assessments for a custom Risk Matrix as expected. (TS ID: 203835)
- Previously, when attempting to copy a Risk Complete RBI Analysis with a user-specified value in the Construction Code field, the copy would fail. This issue has been resolved. Now, the Construction Code field is no longer restricted and you can copy the user-specified value successfully. (TS ID: 207645)
- Previously, if you linked an RBI 581 Risk Analysis to the 581-Alkaline Sour Water Corrosion DM, the values in the Base Material Calculated Corrosion Rate and Cladding Material Calculated Corrosion Rate fields were calculated incorrectly. This issue has been resolved. (TS ID: 210944)
- Previously, in Oracle databases, if you linked an RBI 581 Risk Analysis to the DMs related to RBI 581 External Damage Evaluation and selected the value *Calculated* in the Selected External Corrosion Rate field, then the value in the Base Material Calculated Rate field was calculated incorrectly. This issue has been resolved. (TS ID: 210960)
- Previously, if there were multiple consolidated Recommendations in an RBI

Analysis, and if you promoted the associated Asset to Asset Strategy Management, an Action was created for each consolidated Recommendation. You could not, however, create an Inspection Task for all the Actions. This issue has been resolved. (TS ID: 211501)

- Previously, when repeatedly promoting an RBI Analysis with Consolidated Recommendations to ASM, the resulting Strategies from the first two promotions could successfully be set to the *Active* state. After the first two promotions of the same RBI Analysis, any subsequent attempts at promoting the RBI Analysis to ASM resulted in Strategies that could not be modified from the *Pending Review* state. This issue has been resolved. Now, you can promote the same RBI Analysis with Consolidated Recommendations to ASM repeatedly and set the states of all the created Strategies to *Active*. (TS ID: 211518)
- Previously, when you promoted an Asset to Asset Strategy Management, Actions were created for each Recommendation associated with the Asset. If you, however, created a non-recurring Inspection Task for one of these Actions, then:
 - The value in the **Last Date** box was populated with the date on which the Inspection Task was created or updated.
 - The **Override Interval** check box was cleared.
 - The value in the **Desired Interval Basis** box was *RBI Recommendation*.

This issue occurred only if you created Recommendations manually. This issue has been resolved. Now, in this scenario:

- The value in the **Last Date** box is blank.
- The **Override Interval** check box is selected.
- The value in the **Desired Interval Basis** box is *Undefined*.

(TS ID: 211797)

- Previously, if you consolidated two or more Recommendations, and if you promoted the associated Asset to Asset Strategy Management, instead of creating one Risk Assessment record for a consolidated Recommendation, multiple Risk Assessment records were created. This issue has been resolved. (TS ID: 211961)

Root Cause Analysis

- Previously, when you entered event details in the **Logic Tree** workspace, the event icon was not activated as expected. This issue has been resolved. (TS ID: 160104)
- Previously, when accessed from RCA, the **Recommendations** pane displayed the grid for strategic recommendations rather than the performance

recommendations. This issue has been resolved. (TS ID: 201812)

- Previously, when running a Report, the Printed By field on the cover page showed an incorrect name by default. This issue has been resolved. (TS ID: 202885)

Rounds

- Previously, in Rounds Data Collection, when you took Readings and then returned to the **Rounds Data Collection Overview** page, the count of Lubrication Requirement and Measurement Location records that were due was displayed incorrectly in the **Due Items** tab and the **Overdue Items** tab, and **Due on** or **Due After** fields appeared blank. This issue has been resolved. (TS ID: 195538)
- Previously, when you imported Readings for Character type Measurement Location records into Meridium Enterprise APM using the Rounds Data Loader, an error message appeared when the **Reading Value Numeric** field was left blank. This issue has been resolved. (TS ID: 198232)
- Previously, in Rounds Data Collection, by default, the first Measurement Location on the Route was selected even through there were Lubrication Requirements preceding the first Measurement Location. This issue has been resolved. (TS ID: 195521)
- Previously, in Rounds Data Collection, when you created a new recommendation with a captured image, the recommendation was not saved to the database, and it appeared in the **Recommendations** pane with a blank State value. This issue has been resolved. (TS ID: 197206)
- Previously, in Rounds Data Collection, when you created a new recommendation related to a Lubrication Requirement, the recommendation was no longer displayed upon closing and then re-opening the **Recommendations** pane. This issue has been resolved. (TS ID: 196189)
- Previously, you could not access Rounds Data Collection if you were a member of only the MAPM Security Group. This issue has been resolved. (TS ID: 200501)
- Previously, in Rounds Designer, when you moved a Measurement Location record created at a condition level to Route level, the corresponding checkpoint task was not linked to the Measurement Location. This issue has been resolved. (TS ID: 200454)

- Previously, on the **Rounds Data Collection Overview** page, the **Measurement Location Schedule Compliance Chart** was not filtered based on the Asset Hierarchy settings. This issue has been resolved. (TS ID: 195235)
- Previously, on iPad devices, when you edited an existing recommendation with a photo, multiple copies of the photo may have been uploaded to the database. This issue has been resolved. (TS ID: 150176)
- Previously, in Rounds Data Collection, you could not take more than one photo for a recommendation in the same transaction. This issue has been resolved. The user can now take up to 5 photos while creating a recommendation. (TS ID: 195538)
- Previously, in Rounds Designer, you could not link more than one stored reference document for a Measurement Location record in the same transaction. This issue has been resolved. (TS ID: 196324)
- Previously, in Rounds Data Collection, when you accessed a Route, selected a Numeric Measurement Location, and then entered a non-numeric value, the data was replaced by a zero. This issue has been resolved. (TS ID: 154494)
- Previously, in Rounds Data Collection, when you opened a Route, and then collected readings while offline, the counts on the **Due Items** and **Overdue Items** lists were doubled. This issue has been resolved. (TS ID: 157199)
- Previously, in Rounds Designer, you could not assign a Route to users in the MI Lubrication Management User security group using the **Assign Team Member** window. This issue has been resolved. (TS ID: 200510)
- Previously, in Rounds Data Collection, when you marked a Route as Done while offline, the Route continued to appear in the **Due Items** and **Overdue Items** lists even after you went on-line and the completed Route was uploaded. This issue has been resolved. (TS ID: 183028)
- Previously, in Rounds Data Collection, Routes which have been unassigned from a user may have still appeared for that user while in the Offline mode. This issue has been resolved. (TS ID: 195058)
- Previously, in Rounds Data Collection, Measurement Location or Lubrication Requirement records without Reading History were not displayed on the Route in

Offline mode. This issue has been resolved. (TS ID: 195024)

- Previously, the Asset Hierarchy page did not correctly display the count of the Routes for assets linked to Lubrication Requirement records. This issue has been resolved. (TS ID: 200016)
- Previously, when you created a Route including Measurement Locations with conditions, assigned the Route to a user who accessed it in Data Collection, and then modified it to remove Measurement Locations with conditions, the Route became unusable for all the assigned users in Data Collection. This issue has been resolved. (TS ID: 195023)
- Previously, in Rounds Data Collection, if a Measurement Location had conditional Lubrication Requirements, or a Lubrication Requirement had conditional Measurement Locations, the conditional checkpoints were not displayed on the **Rounds Data Collection** page. This issue has been resolved. (TS ID: 197393)

SIS Management

- Previously, in Oracle databases, Proof Test Tasks were not displayed when you selected the **Proof Test Task** tile. This occurred only in Oracle database with queries that contained long table names as aliases. This issue has been resolved. (TS ID: 209513)

Restored Features - V4.1.6.0

The following V3.x features were deferred from previous V4.x releases, but are now available in V4.1.6.0.

Rounds

- You can now capture up to 5 images while creating a Recommendation in Rounds. (TS ID: 153849)

Deferred Features - V4.1.6.0

The following features are not available in Meridium V4.1.6.0, but are planned for a future release.

AMS Analytics

- Viewing alert trends by severity (Alert Trend by Asset graph) and by description (Alert Trend by Asset by Event Description graph). (TS ID: 180029)
- Opening a Detailed Report for an AMS Asset, Event, or Alert via an Associated Pages link in Record Manager.

Note: These reports currently appear in the **Reports** list on the **AMS Analytics Overview** page; these will be removed from the list in a future release.

(TS ID: 165379)

Asset Health Manager

- Trend chart for character health indicators. (TS ID: 103875)
- Asset Hierarchy sorting and filtering based on health indicator status, filtering based on health indicator family field values, and filtering based on assets with or without health indicators (TS IDs: 91046, 86625, 86430)
- The display of health indicator statuses in Asset Hierarchy. (TS ID: 86796)

Asset Strategy Implementation

- The ability to use Rounds.
- Visibility of Actions linked to Health Indicator sources. (TS ID: 143567)
- The option to exclude child items when copying and pasting Work Management Items. (TS ID: 147790)

Asset Strategy Management

- Migrating strategies between databases.
- Importing asset strategies and strategy templates. (TS IDs: 160688, 63042, 157251, 63638)

Asset Strategy Optimization

- Optimize Actions. (TS ID: 65780)
- Diagram Validation. (TS ID: 117114)

Calibration Management

- Automated Calibration using Beamex and Meriam documenting process calibrators. (TS IDs: 61319, 61334)

Foundation

Asset Criticality Analysis (ACA)

- Promoting analyses to and from ACA. (TS ID: 160858)
- Exporting one or more ACAs in to the ACA module. (TS ID: 66952)
- Accessing Associated pages at the ACA system level and at the asset level. (TS ID: 206193)

Configuration Manager

- Global Preferences- Background Colors. (TS ID: 65297)
- Global number and date format. (TS ID: 160148)

Graphs

- Exporting to a PDF and printing graphs. (TS ID: 81015)

GE System 1

- GE System 1 Analytics and connection to GE System 1, including the GE Tag node used in Policy Designer. (TS ID: 168928)

Inspection Management

- Inspection Grouping. (TS ID: 61244)

Metrics and Scorecards

- Selecting columns to include in a Scorecard. (TS ID: 70641)
- GM (Generation Management) cube is deferred from V4.0.0.0. Any previously deployed GM (Generation Management) cube, which worked in V3.6 and earlier releases, will continue to work in V4.0.0.0 after upgrading the product. You will be able to use the existing GM cube and the support will continue. (TS ID: 160446)
- Export/Import of KPI Schedules (TS ID: 173886)

Process Data Integration

- Viewing trends for multiple OPC Tags simultaneously (i.e., the Process Data Viewer feature in V3). (TS ID: 62299)

Reliability Centered Maintenance and Failure Modes and Effects Analysis

- Promoting RCM and FMEA analyses directly to templates. (TS ID: 160858)

Reliability Analytics

- Action optimization in System Reliability Analysis.

Risk Based Inspection

- Importing and exporting RBI data for bulk review. (TS ID: 61326)
- Creating a bulk What-If analysis. (TS ID: 73475)

Root Cause Analysis

- Publishing an analysis in RCA. (TS IDs: 61730, 103887, 68585, 63432)
- Importing a Logic Gate or child nodes of a Hypothesis into a Logic Tree Diagram. (TS ID: 175309)
- Emailing capability to notify and track changes in an Asset in an RCA. (TS ID: 175610)
- Sending email notifications for alerts configured in RCA for Hypothesis Verifications. (TS ID: 175610)

Rounds

- Selecting multiple nodes from the Route pane in Route Management. (TS ID: 173671)
- Unlinking a Measurement Location from a Measurement Location Template. (TS ID: 61751)
- Accessing a list of recent Routes. (TS ID: 61638)
- Storing the location data of a Reading via GPS. (TS ID: 130009)
- Offline access to the five most recent Recommendations in Rounds. (TS ID: 153853)
- Ad hoc inspection of a single asset. (TS ID: 160740)
- Support for Bluetooth-connected barcode scanners. (TS ID: 124935)

Thickness Monitoring

- Color Coding Preferences. (TS ID: 70840)
- Dataset integration with dataloggers. (TS ID: 83553)
- Corroded Area Measurements. (TS ID: 101752)
- Exporting data to Excel via the TM Dataloggers interface.

Release Notes - V4.1.6.1

Database Comparison Tool

- Previously, if you used the Database Comparison Tool to compare an Oracle database, and then attempted to revert an item to baseline, an error would occur. This issue has been resolved. (TS ID: 216780)

Asset Strategy Management

- In V4.1.6.0, limited customization of columns in certain ASM grids was made available, but the columns were not able to be configured individually. This issue has been resolved. Now, each custom column that can be added has individual criteria for its configuration. (TS ID: 216249)

Release Notes - V4.1.6.2

Asset Strategy Management

- Previously, when you attempted to save changes to a Risk Assessment and the customization rules produced an exception, the screen would freeze. This issue has been resolved. (TS ID: 226156)
- Previously, when you updated values for a risk, saved them, and then viewed the values in the Action mitigated SHE and Financial Risk columns, the changed values were not reflected. This issue has been resolved. (TS ID: 223183)

Foundation

- Previously, whenever you used operator symbols with text, the encoding did not happen correctly and the text was rendered as HTML tags. The actual value was not displayed in both the picklist and Result Grid. This issue has been resolved. (TS ID: 224829)

Inspection Management

- Previously, when defining the Inspection Scope on a newly created Inspection Task that had the Override Interval field enabled and a value in the Desired Interval field, the system disregarded the Override Interval field and updated the value in the Desired Interval field. This issue has been resolved. Now, when defining an Inspection Scope, the system checks for an enabled Override Interval field and, if present, does not update the Desired Interval field. (TS ID: 223923)

Thickness Monitoring

- Previously, on the **TM Admin Preferences** page, when a metric value was entered in the Readings Tolerance field, the value entered was incorrectly converted. This issue has been resolved. (TS ID: 223924)
- Previously, when using the Multiple Data Entry form in Thickness Management to enter measurement reading values for a custom UI field, an error occurred as a result of network latency. This issue has been resolved. (TS ID: 223925)
- Previously, the Thickness Measurement Locations displayed on the TML **Remaining Life** graph were incorrectly rounded, and the labels on the graph did not

accurately depict the correct values. This issue has been resolved. Now, the years remaining on each TML are rounded either down (less than or equal to X.4) or up (greater than or equal to X.5) based on the decimal point and the labels on the graph have been updated to provide continuity. (TS ID: 223926)

Release Notes - V4.1.6.3

APM Connect

- Previously, after scheduling Work Order generation, on the **APM Connect Configuration** page, work orders that were created from inspection tasks were not imported into SAP as scheduled. Rather, they were processed by the scheduler a day later if the Meridium Enterprise APM Server local time zone was ahead of UTC time. This issue has been resolved. Now, the time entered into the scheduler is converted to UTC so that there is no discrepancy, and all work orders appear in SAP as expected. (TS ID: 228433)

Inspection Management

- Previously, when creating an Inspection against a Task from an Action that was promoted from RBI, where the ID and Descriptions of the Degradation Mechanisms did not match, an error occurred and the Inspection was not created successfully. This issue has been resolved. (TS ID: 233284)

Foundation

- Previously, on Japanese interfaces, in Record Manager, when the text in the left pane had too many characters, the text was not wrapped correctly and overlapped the text in the workspace. This issue has been resolved. (TS ID: 232006)

Rounds

- On Windows devices, when taking a photo while creating a Recommendation in Rounds Data Collection, the front-facing camera is selected by default. Previously, on certain devices (e.g., 7-inch Panasonic ToughPad), the camera controls that enable you to change to the rear-facing camera were not displayed. This issue has been resolved. You can now select the rear-facing camera. (TS ID: 235780)
- Previously, on Windows devices, the following issues existed when you used the device camera to scan a barcode:
 - The front facing camera was activated instead of the rear facing camera.
 - An error occurred if you selected the Cancel button to exit the camera window.
 - On the Rounds Data Collection Overview page, the page elements overlapped the camera window so that you could not see the barcode.

These issues have been resolved. (TS ID: 235783)

Release Notes - V4.1.6.4

Foundation

- Previously, the Risk Matrix with a protection level slider was not calculating probability/consequence by protection level correctly. This issue has been resolved. (TS ID: 237104)
- Previously, when using a Risk Matrix with a protection level slider, when you adjusted the protection level slider the previously assessed risk icon disappeared. After saving and reopening, the Risk Assessment window would display the new protection level, but with the former consequence and probability. This issue has been resolved. (TS ID: 238651)
- Previously, when you accessed the Risk Matrix and you tried to add a Risk to your system, you received an error message. This issue has been resolved. (TS ID: 239086)
- Previously, in Internet Explorer 11, if the Risk Matrix with a protection level slider was moved in an unmitigated Risk Matrix, it was very slow to respond. This issue has been resolved. (TS ID: 239220)

Policies

- Previously, node-level validation in the Multiply, Divide, Exponent, and Remainder nodes incorrectly considered it an error when a value with an Integer data type was specified for one value in the calculation and a value with a different data type was specified for the other value. This issue has been resolved. (TS ID: 237064)

Release Notes - V4.1.6.5

Asset Criticality Analysis

- Previously, for an Asset Criticality Analysis (ACA), when you accessed the **Documents** section, you were not able to download the external Reference Document associated with the selected ACA. This issue has been resolved. (TS ID: 240293)

Asset Strategy Implementation

- Previously, when you modified field values on a WMI record, the status was not changed to *Modified* due to a precision issue on datasheets for date/time fields. This resulted in updates not being pushed to SAP as expected. This issue has been resolved. (TS ID: 243591)

Foundation

- Previously, when you opened a Bulk Datasheet for Equipment records, and then selected the Equipment with Characteristics datasheet, pagination did not occur and you were not able to view the next set of records. This issue has been resolved. (TS ID: 243140)
- Previously, cached browser data could cause the values in date fields to revert unexpectedly to the current date. This issue has been resolved. (TS ID: 242183)

Risk Based Inspection

- Previously, when saving a mitigated Financial Risk for a Degradation Mechanism, the values in the Production Loss, Maintenance Cost, and Probability Value fields did not save. This issue has been resolved. (TS ID: 240596)

Security Manager

- Previously, creating a new Security User caused the site assignments to be removed from all existing Security User records. This issue has been resolved. (TS ID: 243900)

Release Notes - V4.1.6.6

Foundation

Configuration Manager

- Previously, on the **Family Management** page, in the **Fields** section, when you modified a field of an existing family, via the **Edit Field** window, and then saved the modifications, an error message would appear. This issue has been resolved. (TS ID: 247788)

Translations

- In V4.1.6.6, the Chinese translation of the following modules and features in the End User Help is now available:
 - Asset Criticality Analysis
 - Asset Health Manager
 - Asset Strategy Implementation
 - Asset Strategy Management
 - Asset Strategy Optimization
 - Foundation: Core Analysis
 - Foundation: Tools
 - Failure Modes and Effects Analysis
 - Policy Designer
 - Production Loss Analysis
 - Product Workflows
 - Reliability Centered Maintenance
 - Reliability Analytics
 - Root Cause Analysis

(TS ID: 247698)

Rounds

- Previously, when you deleted a Route that was In Progress and the user was off-line, an error message appeared when you logged in again as a Rounds Data Collection user. This issue has been resolved. (TS ID: 239303)
- Previously, when you imported Allowable Values using the Rounds Allowable

Values data loader, the data loader queued successfully, but did not proceed beyond the *INPRGS* state. This issue has been resolved. (TS ID: 244645)

- Previously, in Rounds Data Collection, while creating a Recommendation, notifications were not triggered when you selected the **Create Work Request** check box. This issue has been resolved.

When you apply this patch, you must run a database script to fully implement this fix.

(TS ID: 247281)

- Previously, in Rounds Data Collection, when you opened a Route in the offline mode, a highchart error appeared. This issue has been resolved. (TS ID: 247284)

- Previously, when accessing an Operator Rounds Recommendation in the Rounds Data Collection page, the **Priority** dropdown list box displayed only the *codes* in the MI_PRIORITY system code table instead of the *codes and descriptions*. As a result, the priority values were not localized. This issue has been resolved. (TS ID: 247321)

- Previously, using the Rounds Route Data Loader, you could only link existing Measurement Locations to assets. Further, you could not use the Asset ID field to link them (i.e., you could only use the Asset Key field). These issues have been resolved. To facilitate this fix, the Rounds Routes data loader workbook has been updated. (TS ID: 248317)

Release Notes - V4.1.6.7

Calibration Management

- Previously, in the **Calibration** tab of the **Calibration Event** datasheet, you could modify fields even after you selected the **Calibration Closed** check box and saved the calibration. This issue has been resolved. (TS ID: 252932)

Foundation

- Previously, for some localized field captions, a number within parentheses would be incorrectly appended to the field captions (e.g., the field caption *Spannung* would appear as *Spannung(1)*). This issue has been resolved. (TS ID: 257907)

Inspection Management

- Previously, even if an Inspection record was marked as Approved and the Final Inspection Lock had been enabled, the IM Data Loader still allowed the record to be updated. This occurred if the user employing the IM Data Loader was the Report Owner and if the Final Inspection Lock field was set to either *null* or *false* in the data loader worksheet. This issue has been resolved. Now, once the Final Inspection Lock field has been set, the Inspection will remain locked and modifications to the record cannot be made. (TS ID: 258796)

Risk Based Inspection

- The performance of RBI calculations has been improved when using custom RBI methodology preferences. Because of this, the time taken to calculate a custom RBI analysis has decreased even if multiple users calculate analyses at the same time. (TS ID: 259756)
- You can now map the Production Loss field to the Financial Risk Matrix. (TS ID: 259334)

Release Notes - V4.1.6.8

Asset Strategy Management

- Previously, when a user whose culture setting was non-English attempted to apply a template to an asset strategy, an error message appeared when the user selected **Finish** at the end of the process. This issue has been resolved. (TS ID: 263415)

Foundation

- Previously, date values could be set unexpectedly to the time zone of the browser used to access Meridium Enterprise APM, rather than to the time zone associated with the logged in Security User. This issue has been resolved. (TS ID: 263413)
- Previously, the dates on the Result Grid were not appearing according to the user culture selected. This issue has been resolved. (TS ID: 261949)

Meridium Enterprise APM Mobile Application

- Previously, in the Meridium Enterprise APM mobile application, if you were idle for twenty minutes in offline mode, the application would log you out and you would not be able to log back in until you were connected to the Internet. This issue has been resolved. Now, you will remain logged in to the Meridium Enterprise APM mobile application in offline mode for 24 hours after becoming idle. (TS ID: 263657)

Risk Based Inspection

- Previously, while assessing the mitigated risk for a Degradation Mechanism (DM), on the **Risk Matrix** window, if you selected **Done** multiple times, then multiple Risk Assessment records were created and linked to the DM. This issue occurred with DMs linked to any of the following analyses:
 - RBI Criticality Analysis
 - RBI PRD Analysis
 - RBI Pipeline Analysis
 - RBI 581 Risk Analysis

This issue has been resolved. (TS ID: 263412)

Rounds

- Previously, when you subscribed to a Route for offline data collection, the **Due Items** list on the **RDC Overview** page displayed Routes that were due anytime within the download horizon, regardless of when within that period they were actually due. Similarly, when you opened a Route, Measurement Locations and/or Lubrication Requirements that were due anytime within the download horizon were included in the Route. This issue has been resolved. Now, the list displays only the Routes that are actually due for data collection, and the Routes contain only the Measurement Locations and/or Lubrication Requirements that are actually due. (TS ID: 261924)
- Previously, if the network connection was interrupted after you took a reading but before the reading was uploaded to Meridium Enterprise APM, the reading was not uploaded as expected when the connection was reestablished. This issue has been resolved. (TS ID: 261360)

Thickness Monitoring

- Previously, on the **Nominal Measurement** window, the times in measurement fields were incorrectly populated, which also occasionally caused errors in date fields. This issue has been resolved. Now, the default time applied to all fields on the **Nominal Measurement** window is midnight (00:00:00). This new setting also applies to the Add Measurement function in the **TMLs** section as well as the measurement data entry grid. The common Measurement Taken date field on the measurement entry grid will now display the correct time of 00:00:00. (TS ID: 263409)

Release Notes - V4.1.6.9

The following issues existed in one or more previous releases and have been resolved in V4.1.6.9.

Foundation

Dashboards

- Previously, when you logged into Meridium Enterprise APM, an error occurred when you tried to navigate to a dashboard. This issue has been resolved. You can now navigate to a dashboard without errors. (TS ID: 270943)

Datasets

- Previously, when creating a manual dataset, if you added a second row of data and saved the dataset, an error occurred. This issue has been resolved. (TS ID: 228018)

Search

- Previously, if you tried to search for a term that contained a plus or minus sign with a space directly after the plus or minus sign, the system would remove both the space and the plus or minus sign from your search term. This issue has been resolved. Now, any plus or minus signs that have spaces directly after them are correctly removed from the search terms, but spaces are included. (TS ID: 267160)

Reliability Centered Maintenance (RCM) and Failure Modes and Effects Analysis (FMEA)

- Previously, if a user with a non-English culture setting created a new analysis from a template and then selected the **Replace these assets with new selections** option, the **Next** button in the builder was not enabled. This issue has been resolved. (TS ID: 271592)

Rounds Data Collection

- Previously, if you took all readings for a Route and then marked the Route as Done, the Route continued to appear in the **Due Items** list and showed *0/0 MLs/LRs* as due. Further, an error occurred if you attempted to open the Route. This issue has been resolved. Now, in this scenario, the Route will not appear on

the **Due Items** list. (TS ID: 277338)

- Previously, you could open and modify the same Route in two different tabs within the application. As a result, confusing or incorrect Route completion progress and history may have been created. This issue has been resolved. You can now open a Route in only one tab at a time. (TS ID: 272378)
- Previously, if a mobile device was disconnected from a network when a Route was marked as Done, the Route was not synchronized to the server as expected when you reconnected the device to a network (i.e., the Route remained on the **Due Items** or **Overdue Items** list and a Route History record was not created). This issue has been resolved. (TS ID: 271553)

Release Notes - V4.1.6.10

The following issues existed in one or more previous releases and have been resolved in V4.1.6.10.

Foundation

- Previously, in the **Design** workspace for a query, when a user whose culture setting was non-English cleared the **Display** check box for a field in the query and then ran the query, the field could still appear in the query result. This issue has been resolved. (TS ID: 285482)
- Previously, for records whose IDs were automatically generated based on templates, the record IDs of two records created simultaneously in different time zones could display different times, and could also display different numeric values tied to culture-specific units of measure. These issues have been resolved. (TS ID: 274376)

Risk Based Inspection

- Previously, when a user accessed an RBI Analysis or a Pipeline Analysis, the Date Criticality Calculated field displayed an incorrect date due to an issue with referencing the correct time zone. This issue has been resolved. (TS ID: 272698)

Thickness Monitoring

- Previously, on the Thickness Measurement datasheet, the Measurement ID and Calculated Date fields could display incorrect dates due to an issue with culture settings. This issue has been resolved. (TS ID: 268458)

V4.1.7.0 Release Notes

The following release notes are available for Meridium Enterprise APM V4.1.7.0:

- [New Features](#)
- [Enhancements](#)
- [Resolved Issues](#)
- [Deferred Features](#)
- [Obsolete Features](#)

You can also view the APM Connect release notes.

New Features - V4.1.7.0

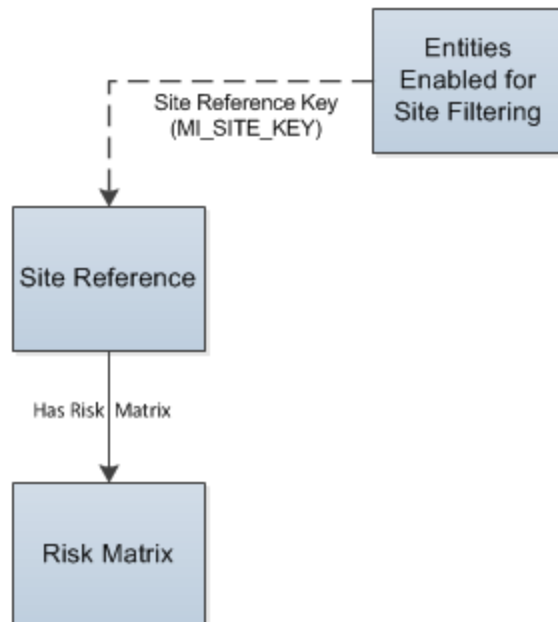
The following new features are available in V4.1.7.0:

Foundation

Site Filtering is a new feature in V4.1.7.0 designed to help users who are assigned to specific sites find relevant records more easily. Site Filtering is a useful tool for companies that have facilities at multiple sites because users are prevented from viewing records associated with sites to which they are not assigned.

Starting in V4.1.7.0, Site Filtering is not an optional configuration in Meridium Enterprise APM. Most baseline entity families in Meridium Enterprise APM will have site filtering enabled by default, however, certain families will not be enabled for site filtering, which means that records in these families are available to users assigned to any site.

On the families enabled for site filtering, a Site Reference Key is used to identify the site with which a record is associated. In the following image, you can see that entity families are related to a Site Reference via the MI_SITE_KEY system field. Each Site Reference is related to a Risk Matrix by the Has Risk Matrix relationship family.



Refer to the End User help for further explanations of the terms and concepts regarding Site Filtering, as well as details about how Site Filtering impacts specific modules. Refer

to the Installation and Upgrade help for details about how users and records will be assigned to sites when you upgrade to V4.1.7.0.

Notes:

- Site Filtering is not a security feature. While Site Filtering can limit the number of results shown, it should not be considered a measure to block data access to certain users. Site Filtering improves the performance of Meridium Enterprise APM so that the data shown is curated specifically to the data that is most useful and necessary for your needs.
- Site Filtering replaces the Has Site Reference relationship and data filtering using family filters that were features of V3.
- The following enhancements to the Site Filtering feature will be provided in future releases:
 - The ability to transport records between sites in bulk.
 - The ability to create view-only sites.
 - The ability to filter state management by sites.

(TS ID: 213387)

Enhancements - V4.1.7.0

The following enhancements have been made in V4.1.7.0.

Asset Criticality Analysis

- ACA Data Loaders have been updated to support Site Filtering. Records will be loaded into Meridium Enterprise APM and will be filtered based on the Site Reference Key from the asset in the ACA data loader worksheet. Site Filtering in ACA affects the following records:
 - ACA
 - ACA System
 - Equipment and Functional Location

(TS ID: 225887)

Inspection Management

- The State Management control is now available on Inspection Management data-sheets when State Management is enabled in Configuration Manager. (TS ID: 229025)

Risk Based Inspection

- The Select Protected Asset query and the Unlinked Corrosion Loops query have been updated to enable Site Filtering. (TS ID: 228088)

Rounds

- Rounds Data Loaders have been updated to support Site Filtering. Site Filtering can be applied to the following records via the Rounds Data Loaders:
 - Template Group records
 - Measurement Location Template records

All other Rounds records which can be site filtered will inherit the Site Reference Key based on the asset to which they are linked.

(TS ID: 225177)

Resolved Issues - V4.1.7.0

The following issues existed in one or more previous releases and have been resolved in V4.1.7.0.

APM Connect

- After scheduling Work Order generation, on the **APM Connect Configuration** page, work orders that were created from inspection tasks were not imported into SAP as scheduled. Rather, if the Meridium Application Server local time zone was ahead of UTC time, they were processed by the scheduler one day later than expected. This issue has been resolved. Now, the time entered into the scheduler is converted into UTC so that there is no time discrepancy, and all work orders appear in SAP as expected. (TS ID: 228433)

Asset Health Manager

- Previously, a title did not appear on the page containing the health indicator trend chart. This issue has been resolved. The page title **<Health Indicator Name>:<Description>** now appears. (TS ID: 228150)

Calibration Management

- Previously, when using the global Meridium search to open a Calibration Template, an error message appeared when you selected a Template ID. This issue has been resolved. (TS ID: 229215)
- Previously, when sending a Calibration Template to the calibrator device, an error message appeared saying that the device service needs to be installed even though the device service is running. This issue has been resolved. (TS ID: 229768)

Foundation

- Previously, Super Users had to be assigned to multiple sites. This issue has been resolved. Super Users now have access to every site automatically. (TS ID: 213492)
- Previously, the configuration settings for **Sites** were located in **Security Manager**. The configuration settings for Sites are now located in **Configuration Manager**. (TS ID: 214715)
- Previously, if you tried to rebuild an Asset Hierarchy in **Asset Hierarchy**

Configuration as a member of the MI Configuration Role user group, it would not actually rebuild the Asset Hierarchy. This issue has been resolved. (TS ID: 229363)

Inspection Management

- Previously, when defining the Inspection Scope on a newly created Inspection Task that had the Override Interval field enabled and a value in the Desired Interval field, the system disregarded the Override Interval field and updated the value in the Desired Interval field. This issue has been resolved. Now, when defining an Inspection Scope, the system checks for an enabled Override Interval field and, if present, does not update the Desired Interval field. (TS IDs: 221391, 223923)
- Previously, an error occurred when accessing the **IM Application Settings** page with an Oracle database. This issue has been resolved. (TS ID: 226652)

Metrics and Scorecards

- Previously, the KPI Critical Asset Mechanical Downtime (Monthly) was not available as the baseline content. The KPI Critical Asset Mechanical Downtime (Monthly) is now available as baseline content. (TS ID: 210139)

Policy Designer

- Previously in V4.1.5.0, the **Properties** window for the Rule node did not display text boxes to specify any inputs defined by the selected rule. In addition, when the Rule node was selected in a subsequent node, the output values defined by the rule were not available to be selected. These issues have been resolved. (TS ID: 228308)
- Previously, for policies upgraded from V3, if a past policy execution included a node that was not executed, an error occurred when you selected the corresponding execution result summary in the **Execution History** pane. This issue has been resolved. (TS IDs: 200031, 228735)

Risk Based Inspection

- Previously, during the RBI 581 upgrade process, if you imported the Strategy Mapping Configuration and the Strategy Mapping Details files from the Records and Links folder and you also manually imported the Strategy Mapping records from KBA #[2888](#), then you could not generate Recommendations for RBI 580 Analyses. This was caused by duplicate records that were imported during the upgrade

process. This issue has been resolved. Now, the Meridium Enterprise APM system ignores duplicate records that were created during the import process and Recommendations are generated successfully. (TS ID: 228699)

Root Cause Analysis

- Previously, the Case field in an RCA Recommendation did not populate when creating a new recommendation. This issue has been resolved. (TS ID: 228625)

Rounds

- Previously, in Rounds, the Routes Data Loader did not successfully import Template records with the ML Template ID and Asset Key values. This issue has been resolved. (TS ID: 228701)

SIS Management

- Previously, in a Protective Loop, in a scenario where the **Diverse** checkbox was not selected in a group (sensor/final element):
 - When creating a new sensor in a sensor group, the newly added sensor did not capture the details of the existing sensor. In other words, they were not identical.
 - When creating a new final element in a final element group, the newly added final element did not capture the details of the existing final element. In other words, they were not identical.

These issues have been resolved. (TS ID: 225386)

- Previously, in an Instrumented Function, when a user selected a Layer of Protection Analysis (LOPA) assessment, the **Failure Rate UOM** field did not get set to *PF* even when a user linked it to a LOPA. This issue has been resolved. (TS ID: 224884)

Thickness Monitoring

- Previously, on the **TM Admin Preferences** page, when a metric value was entered in the Readings Tolerance field, the value entered was incorrectly converted. This issue has been resolved. (TS IDs: 223271, 223924)

- Previously, when using the Multiple Data Entry form in Thickness Management to enter measurement reading values for a custom UI field, an error occurred as a result of network latency. This issue has been resolved. (TS IDs: 223169, 223925)
- Previously, the Thickness Measurement Locations displayed on the TML **Remaining Life** graph were incorrectly rounded, and the labels on the graph did not accurately depict the correct values. This issue has been resolved. Now, the years remaining on each TML are rounded either down (less than or equal to X.4) or up (greater than or equal to X.5) based on the decimal point and the labels on the graph have been updated to provide continuity. (TS IDs: 225803, 223926)

Deferred Features - V4.1.7.0

The following features are not available in Meridium V4.1.7.0, but are planned for a future release.

AMS Analytics

- Viewing alert trends by severity (Alert Trend by Asset graph) and by description (Alert Trend by Asset by Event Description graph). (TS ID: 180029)
- Opening a Detailed Report for an AMS Asset, Event, or Alert via an Associated Pages link in Record Manager.

Note: These reports currently appear in the **Reports** list on the **AMS Analytics Overview** page; these will be removed from the list in a future release.

(TS ID: 165379)

Asset Health Manager

- Trend chart for character health indicators. (TS IDs: 103875, 187358)
- Asset Hierarchy sorting and filtering based on health indicator status, filtering based on health indicator family field values, and filtering based on assets with or without health indicators (TS IDs: 91046, 86625, 86430)
- The display of health indicator statuses in Asset Hierarchy. (TS ID: 86796)

Asset Strategy Implementation

- The ability to use Rounds.
- Visibility of Actions linked to Health Indicator sources. (TS ID: 143567)
- The option to exclude child items when copying and pasting Work Management Items. (TS ID: 147790)

Asset Strategy Management

- Migrating strategies between databases.
- Importing asset strategies and strategy templates. (TS IDs: 160688, 63042, 157251, 63638)

Asset Strategy Optimization

- Optimize Actions. (TS ID: 65780)
- Diagram Validation. (TS ID: 117114)

Calibration Management

- Automated Calibration using Beamex and Meriam documenting process calibrators. (TS IDs: 61319, 61334)

Foundation

Asset Criticality Analysis (ACA)

- Promoting analyses to and from ACA. (TS ID: 160858)
- Exporting one or more ACAs from the ACA module. (TS ID: 66952)
- Accessing Associated pages at the ACA system level and at the asset level. (TS ID: 206193)

Configuration Manager

- Global Preferences- Background Colors. (TS ID: 65297)
- Global number and date format. (TS ID: 160148)

Graphs

- Exporting to a PDF and printing graphs. (TS ID: 81015)

GE System 1

- GE System 1 Analytics and connection to GE System 1, including the GE Tag node used in Policy Designer. (TS ID: 168928)

Inspection Management

- Inspection Grouping. (TS ID: 61244)

Metrics and Scorecards

- Selecting columns to include in a Scorecard. (TS ID: 70641)
- GM (Generation Management) cube is deferred from V4.0.0.0. Any previously deployed GM (Generation Management) cube, which worked in V3.6 and earlier releases, will continue to work in V4.0.0.0 after upgrading the product. You will be able to use the existing GM cube and the support will continue. (TS ID: 160446)
- Export/Import of KPI Schedules (TS ID: 173886)

Process Data Integration

- Viewing trends for multiple OPC Tags simultaneously (i.e., the Process Data Viewer feature in V3). (TS ID: 62299)

Reliability Centered Maintenance and Failure Modes and Effects Analysis

- Promoting RCM and FMEA analyses directly to templates. (TS ID: 160858)

Reliability Analytics

- Action optimization in System Reliability Analysis.

Risk Based Inspection

- Importing and exporting RBI data for bulk review. (TS ID: 61326)
- Creating a bulk What-If analysis. (TS ID: 73475)

Root Cause Analysis

- Publishing an analysis in RCA. (TS IDs: 61730, 103887, 68585, 63432)
- Importing a Logic Gate or child nodes of a Hypothesis into a Logic Tree Diagram. (TS ID: 175309)
- Emailing capability to notify and track changes in an Asset in an RCA. (TS ID: 175610)
- Sending email notifications for alerts configured in RCA for Hypothesis Verifications. (TS ID: 175610)

Rounds

- Selecting multiple nodes from the Route pane in Route Management. (TS ID: 173671)
- Unlinking a Measurement Location from a Measurement Location Template. (TS ID: 61751)
- Accessing a list of recent Routes. (TS ID: 61638)
- Storing the location data of a Reading via GPS. (TS ID: 130009)
- Offline access to the five most recent Recommendations in Rounds. (TS ID: 153853)
- Ad hoc inspection of a single asset. (TS ID: 160740)
- Support for Bluetooth-connected barcode scanners. (TS ID: 124935)

Thickness Monitoring

- Color Coding Preferences. (TS ID: 70840)
- Dataset integration with dataloggers. (TS ID: 83553)
- Corroded Area Measurements. (TS ID: 101752)
- Exporting data to Excel via the TM Dataloggers interface.

Obsolete Features - V4.1.7.0

The following items are no longer used in Meridium Enterprise APM.

Foundation

- The relationship family Has Site Reference is no longer used in Meridium Enterprise APM for establishing the relationship between an entity and a site. Now, entity families in Meridium Enterprise APM, including Equipment and Functional Locations, store a Site Reference Key in the system field MI_SITE_KEY. This change is part of the new Site Filtering feature. Please refer to the New Features section of the release notes for more information about Site Filtering. (TS ID: 213387)

Release Notes - V4.1.7.1.0

Database Upgrade

- Previously, when upgrading an Oracle database to V4.1.7.0, the Asset Group Utility could timeout, causing the upgrade to fail. V4.1.7.1.0 delivers a new version of the file **MI_DB_PATCHES_4010700.zip**. If the **MI_DB_PATCHES_4010700.zip** file *in the V4.1.7.0 distribution package* is replaced with the **MI_DB_PATCHES_4010700.zip** file *in the V4.1.7.1.0 distribution package*, then, the next time the Oracle database upgrade to V4.1.7.0 is attempted, the Asset Group Utility should not timeout. (TS ID: 242249)

Risk Based Inspection

- Previously, when saving a mitigated Financial Risk for a Degradation Mechanism, the values in the Production Loss, Maintenance Cost, and Probability Value fields did not save. This issue has been resolved. (TS ID: 244412)
- You can now map the Production Loss field to the Financial Risk Matrix. (TS ID: 244412)

Release Notes - V4.1.7.0.1

Database Upgrade

- Previously, when upgrading an Oracle database to V4.1.7.0, the Asset Group Utility could timeout, causing the upgrade to fail. V4.1.7.0.1 delivers a new version of the file **MI_DB_PATCHES_4010700.zip**. If the **MI_DB_PATCHES_4010700.zip** file *in the V4.1.7.0 distribution package* is replaced with the **MI_DB_PATCHES_4010700.zip** file *in the V4.1.7.0.1 distribution package*, then, the next time the Oracle database upgrade to V4.1.7.0 is attempted, the Asset Group Utility should not timeout. (TS ID: 242249)

Release Notes - V4.1.7.1.0

Database Upgrade

- Previously, when upgrading an Oracle database to V4.1.7.0, the Asset Group Utility could timeout, causing the upgrade to fail. V4.1.7.1.0 delivers a new version of the file **MI_DB_PATCHES_4010700.zip**. If the **MI_DB_PATCHES_4010700.zip** file *in the V4.1.7.0 distribution package* is replaced with the **MI_DB_PATCHES_4010700.zip** file *in the V4.1.7.1.0 distribution package*, then, the next time the Oracle database upgrade to V4.1.7.0 is attempted, the Asset Group Utility should not timeout. (TS ID: 242249)

Risk Based Inspection

- Previously, when saving a mitigated Financial Risk for a Degradation Mechanism, the values in the Production Loss, Maintenance Cost, and Probability Value fields did not save. This issue has been resolved. (TS ID: 244412)
- You can now map the Production Loss field to the Financial Risk Matrix. (TS ID: 244412)

Release Notes - V4.1.7.2.0

The following issues existed in one or more previous releases and have been resolved in V4.1.7.2.0.

APM Connect

- Previously, when using the APM Family Data Loader, the source workbook contained the improper value in the Primary Family ID column. This issue has been resolved. Now, the column has the correct value, PRIMARY_FAMILY_ID. (TS ID: 250625)

Asset Criticality Analysis

- Previously, if you tried to search for ACA Team Members in the Chinese version of Meridium Enterprise APM, you did not receive any results. This issue has been resolved. (TS ID: 262211)

Foundation

Graphs

- Previously, in Graphs, when you tried to use the scroll bar in 3D to view the X-axis when there were more X-axis values than Y-axis values, the graph would zoom in to a point where it would be unreadable. This issue has been resolved. (TS ID: 258454)

Translations

- A Chinese translation of the following modules and features in the End User Help is now available:
 - Asset Criticality Analysis
 - Asset Health Manager
 - Asset Strategy Implementation
 - Asset Strategy Management
 - Asset Strategy Optimization
 - Foundation: Core Analysis
 - Foundation: Tools
 - Failure Modes and Effects Analysis
 - Policy Designer

- Production Loss Analysis
- Product Workflows
- Reliability Centered Maintenance
- Reliability Analytics
- Root Cause Analysis

(TS ID: 252773)

Reliability Analytics

- Previously, in Spares Analysis, the Total Correction Time was not calculated when logged in as a non-English culture user, and the Failure Consequence page did not have defaults for time units, causing an error to occur. This issue has been resolved. (TS ID: 251251)
- Previously, in System Reliability Analysis, for non-English culture users, the time units for items being added to the diagram were not set automatically, causing an error message to appear when attempting to create a Reliability diagram. This issue has been resolved. (TS ID: 251227)

Reliability Centered Maintenance (RCM) and Failure Modes and Effects Analysis (FMEA)

- Previously, the Decision Logic feature in the RCM and FMEA modules of Meridium Enterprise APM could not be accessed. This issue has been resolved. (TS ID: 260330)

Release Notes - V4.1.7.3.0

The following issues existed in one or more previous releases and have been resolved in V4.1.7.3.0.

Reliability Analytics

- Previously, in Automation Rules, the Asset Installation Date and Downtime fields were mapped automatically and you could not clear the mappings. This issue has been resolved. (TS ID: 267529)

Reliability Centered Maintenance (RCM) and Failure Modes and Effects Analysis (FMEA)

- Previously, when an RCM or FMEA analysis had enough related items added to make the tree on the left side of the workspace run off of the page, a scroll bar appeared; however, you were unable to scroll and view the last item in the tree. This issue has been resolved. (TS ID: 268148)

Release Notes - V4.1.7.4.0

The following issues existed in one or more previous releases and have been resolved in V4.1.7.4.0.

Security Manager

- You can now create a Field Mapping record that, during LDAP synchronization, will generate Meridium Enterprise APM Security User IDs based on the values in a selected Microsoft Active Directory field. (TS ID: 294359)