



GE Digital

Meridium Enterprise APM Release Notes

V4.2.0.0.0 through V4.2.0.9.2

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 a print document format.

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


 **Note:** If you do not have access to the Meridium Enterprise APM Documentation Website, contact GE Global Support (<https://www.ge.com/digital/asset-performance-management>).

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Meridium Enterprise APM Release Notes

The Meridium Enterprise APM Release Notes describe changes to the baseline Meridium Enterprise 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 Enterprise 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 GE Digital uses to track changes made to the product.

Meridium Enterprise APM V4.2.0.0 Release Notes

Release notes for the following versions are available:

- [V4.2.0.0](#)
- [V4.2.0.1.0](#)
- [V4.2.0.2.0](#)
- [V4.2.0.2.1](#)
- [V4.2.0.2.2](#)
- [V4.2.0.3.0](#)
- [V4.2.0.3.1](#)
- [V4.2.0.3.2](#)
- [V4.2.0.3.3](#)
- [V4.2.0.4.0](#)
- [V4.2.0.4.1](#)
- [V4.2.0.4.2](#)
- [V4.2.0.4.3](#)
- [V4.2.0.4.4](#)
- [V4.2.0.5.0](#)
- [V4.2.0.6.0](#)
- [V4.2.0.6.1](#)
- [V4.2.0.6.2](#)
- [V4.2.0.7.0](#)
- [V4.2.0.7.2](#)
- [V4.2.0.7.4](#)
- [V4.2.0.8.0](#)
- [V4.2.0.8.1](#)
- [V4.2.0.8.2](#)
- [V4.2.0.8.3](#)
- [V4.2.0.8.4](#)
- [V4.2.0.8.5](#)
- [V4.2.0.9.0](#)
- [V4.2.0.9.1](#)
- [V4.2.0.9.2](#)

Release Notes - V4.2.0.0

The following release notes are available for Meridium Enterprise APM V4.2.0.0:

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

You can also view the APM Connect release notes.

New Features - V4.2.0.0

The following new features are available in V4.2.0.0.

Cognitive Analytics

- The Cognitive Analytics module has been introduced in V4.2.0.0.

You can use this module to classify your historic, transactional data into a standardized format. With Cognitive Analytics, you can create a cognition in which you can develop logic to identify and process fields from your historic data to produce classified data. Additionally, Cognitive Analytics allows you to use Machine Learning and Fuzzy Logic scripts to find patterns in your unstructured data to continuously improve the classification process.

(TS ID: 200583)

Inspection Field Data Collection

- The Inspection Field Data Collection feature is now available. This feature provides offline forms for Inspection Management, thus allowing users in the field to complete downloaded Inspections on a mobile device without being connected to a network. (TS IDs: 197652, 197653, 204703, 210515, 211466, 211468, 205953, 209189)

Life Cycle Cost Analysis (LCC)

- The Life Cycle Cost Analysis module has been introduced in V4.2.0.0.

You can use this module to balance costs, make replace vs. repair decisions, plan budgets, collect performance data, and build contingency plans for your organization. Using LCC, you will develop process models, acquire data, comparatively analyze scenario performance, report results, and track costs.

(TS ID: 176071, 230507)

Maps

- The Maps tool has been introduced in V4.2.0.0.

You can use this feature to create visual maps using queries.

(TS ID: 186940)

Performance Recommendation Management

- The Performance Recommendation Management module has been introduced in V4.2.0.0.

You can use this module to define and to record the method by which change can be implemented to correct conditions, intent, or behaviors through Performance Recommendation Management.

(TS ID: 209146)

Proof Test Data Collection

You can now:

- Customize the offline datasheets for Proof Test and Proof Test Details. (TS ID: 211063)
- Navigate to the offline tasks and navigate to them to enter data when you are in offline mode. (TS ID: 211064)
- Select proof tests and download them to the offline data store for offline access. (TS ID: 211060)
- Go to offline mode and see the list of Proof Test Tasks that were downloaded for the offline mode. (TS ID: 211062)
- Synchronize my offline data back to online and see my changes in the online proof tests details and any recommendations. (TS ID: 211065)

Scripts

- The Scripts tool has been introduced in V4.2.0.0.

You can use this feature to create scripts with the Python programming language that can be saved in the Catalog. Scripts can be used in a Classifier node or a Script node so that supervised machine learning algorithms or calculations can be executed in a Cognitive Analytics cognition.

(TS ID: 215877)

Enhancements - V4.2.0.0

The following enhancements have been made in V4.2.0.0.

AMS Analytics

- A new Security Group, MI AMS Asset Portal Viewer, has been added. This group has View permissions for the families used in AMS Analytics. (TS ID: 193072)
- The AMS Asset Recommendation family is now a child family of the Performance Recommendation family.
As part of this change, in new baseline databases, the State Configuration for the AMS Asset Recommendation family is enabled and configured to use the parent's (Performance Recommendation family's) State Configuration settings.
If you were previously using State Configuration for the AMS Recommendation family, when you upgrade to V4.2.0.0, you will need to complete an upgrade step to apply the new baseline State Configuration settings for the AMS Recommendation family.
(TS ID: 189888)
- On the **AMS Analytics Overview** page, when **Home** is selected in the **Asset** box in the page filter, the page now displays information *not related to an asset* or related to an *asset not in the Asset Hierarchy*. (TS ID: 190688)
- A search control has been added to the lists on the **AMS Analytics Overview** page. (TS ID: 207108)

Asset Criticality Analysis

Using the ACA Data Loader, you can now set the Basis for Assessment and the Not Applicable fields on a Risk Matrix. The ACA Data Loader template has been updated to specify:

- Basis for Assessment field for Safety, Environment, and Operations
- Not Applicable field for Safety, Environment, Operations, Financial

(TS ID: 206717)

Asset Health Manager

- On the **Health Summary** page, you can now view a summary of Risk information related to an Active Strategy that is associated with the selected asset. For each Risk, you can also view associated health indicator information (i.e., information for any health indicators that implement Actions that mitigate the Risk). (TS ID: 213230, 213231)
- The following enhancements have been made to the health indicator trend chart:
 - You can now view readings for multiple health indicators related to the same asset on a single trend chart.
 - You can now view events on the health indicator trend chart.
 - You can now view character readings on the health indicator trend chart.
 - When viewing a trend chart that includes OPC data, you can now select a button to download additional OPC data beyond the default of 2 days or 10,000 readings.
 - You can now select a button to open the **Health Summary** page in the context of the related asset.

(TS IDs: 187356, 187359, 187358, 215186, 160838, 210557)

- You can now consolidate events in Asset Health Manager in order to group duplicate events into a single event, called a master event. Master events appear in the **Health Summary** page instead of the events that you consolidate, and you can manage them as any other event record in AHM.

To support this enhancement, a new relationship family, Has Consolidated Events, has been added. In addition, a new option “**Allow Event Consolidation?**” has been added to the **Event Mapping** page in Asset Health Manager application settings.

The following families are delivered with a baseline relationship definition using this new relationship family, and their corresponding event mappings are configured to allow event consolidation by default:

- GE Tag Event
- AMS Asset Event
- AMS Asset Alert
- Policy Event

When you upgrade your database to V4.2.0.0, the relationship definition and setting to allow event consolidation will be configured automatically for these families.

(TS IDs: 207088, 207081, 207084)

- The **Asset Health Manager Overview** page contains a new tab, **Recommendations**, which you can select to view Health-related recommendations

(i.e., Meridium General Recommendation, AMS Asset Recommendation, Policy Recommendation, and Operator Rounds Recommendation) that are in an open state (i.e., not completed, superseded, or rejected). (TS ID: 185320)

- When you create a recommendation based on an event, the Associated Reference field in the recommendation is now populated automatically with the caption of the corresponding event family. (TS ID: 216842)
- On **Asset Health Overview** page, when **Home** is selected in the **Asset** box in the page filter, the page now displays information *not related to an asset* or related to *an asset not in the Asset Hierarchy*. (TS ID: 190688)
- A refresh button has been added to the pages within Asset Health Manager so that you can refresh the data on these pages without refreshing the rest of the pages in Meridium Enterprise APM. (TS ID: 163139)
- A search control has been added to the lists on the **Asset Health Manager Overview** page. (TS ID: 207108)
- A new Security Group, MI AHI Viewer, has been added. This group has View permissions for the families used in Asset Health Manager. (TS ID: 193074)
- The performance of the Asset Health Indicator Service has been improved by removing unnecessary checks for valid data sources. (TS ID: 199896)

Asset Strategy Implementation

- ASI now supports SAP Multi-Counter Maintenance Plans. (TS ID: 191914)

Asset Strategy Management

- On the overview pages for ASM, ASI for SAP, RCM, and FMEA, the lists and charts now show all strategies, not just strategies linked to assets in the hierarchy. (TS ID: 160235, 189881, 189901, 189902)
- A new Security Group, MI ASI Viewer, has been added. This group has View permissions for the families used in Asset Strategy Implementation. (TS ID: 193775)
- You can now view risk and action records, in the new **Risks and Actions** section, in

an abbreviated, expandable form called risk and action cards, which can be configured in the new **ASM Admin** section. (TS ID: 199469, 211906)

Calibration Management

- The **Calibration Management Overview** page is now contextually arranged based on the roles and personas of various users.

Specifically, this page now contains four tabs:

- **Calibration Tools:** Provides information related to Test Equipment and Standard Gas Cylinders. You can also configure calibrator settings in this section.
- **Calibration Profiles:** You can use this section to set up calibration profiles for multiple assets, and you can also customize details specific to an individual piece of equipment (such as input and output ranges).
- **Calibration Queue:** Provides a list of all the tasks that are due for calibration, to be sent for approval, or pending approval. You can create a Calibration Event manually or send multiple templates to a calibrator in this section.
- **Calibration Events:** Provides a list of all the Calibration Events that must be sent for approval, approved, or rejected. You can also create a Calibration Event or receive data from a calibrator in this section.

Three buttons - **Send to Calibrator**, **Receive from Calibrator**, and **Calibrator Settings** - have been removed from the **Calibration Management Overview** page, and placed in the **Calibration Queue**, **Calibration Events**, and **Calibration Tools** sections respectively.

A new button, **Profile Templates**, has been added on the **Calibration Management Overview** page, which allows you to manage the master templates used in a profile.

(TS IDs: 186106, 188224, 183180, 186908, 186908, 179063)

- You can now link tasks to templates in multiple profiles by creating a *single* Calibration Task. Meridium Enterprise APM creates copies of the task, and links each one to each applied profile. (TS ID: 183180)
- In addition to *new* tasks, you can now also link *existing* tasks to applied profiles. (TS ID: 183180)
- You can now filter templates on the **Manage Tasks** page based on whether they are linked to a task. (TS ID: 183180)
- The records in the **Calibration Queue** section are now filtered based on a default

date range set in the **Calibration Administration** page. You can, however, specify a different date range in the **Calibration Queue** section, or modify the default date range on the **Calibration Administration** page. (TS ID: 183186)

- The Calibration family is now configured with state management. You can now send a Calibration for approval, and a member of the MI Calibration Administrator Security Group can approve or reject the Calibration. (TS IDs: 183680, 188197)
- The **Calibration Closed** check box has been removed from the Calibration data-sheet (but not from the family). After you approve a Calibration, the value in this field is set to *True*, and the associated Calibration Task is cycled. (TS ID: 188228)
- In addition to a *scheduled* calibration, you can now perform an *ad-hoc* calibration. When you perform an ad-hoc calibration, the associated Calibration Task is *not* cycled. (TS ID: 188228)

Foundation

APM System Monitoring

- APM System Monitoring is a new feature that is accessible via the Operations Manager. APM System Monitoring allows you to review detailed information related to system performance, and provides visualizations of the data. (TS ID: 220852)

Bulk Data Form (BDF)

- You can now freeze the top rows of the Bulk Data Form to view and compare data in the lower rows of the form. (TS ID: 190872)

Configuration Manager

- You can now import or export family policies. (TS ID: 207254)
- A new button, **Field Chooser**, has been added to the **Fields** section of subfamilies. This button allows you to manually spread the fields from a parent family to its subfamilies. (TS ID: 207787)
- Users of the **MI APMNowAdmin** security group or users without Developers license have been granted the privileges to perform create, edit, or delete operations on **Family Reports**, **Associated Pages**, and **State Configuration** features in

Configuration Manager. (TS ID: 210086)

- A new type of metadata, **Scripts**, has been added to **Import** and **Export** feature. You can use this metadata to export or import scripts. (TS ID: 212784)
- You can now hide or show the state configuration on a datasheet for a subfamily, even if the state configuration is inherited from the parent family. You can do this by selecting or clearing the **Show States on Datasheet** check box. (TS ID: 213306)
- The field behavior of a field using the **Required**, **Disable Value**, **Validation**, and **Default Value** options has been enhanced to support conditional validation. (TS ID: 214426)

Content Change Management

- Content Change Management is a new feature that is accessible via the Configuration Manager. Content Change Management allows you to review and test changes made to database content before applying those changes to your production database. (TS IDs: 189313, 206437, 206438, 211266, 211434)

Datasheet

- You can now print Family Reports and the datasheet for a selected record. (TS ID: 207644)
- When using the Custom Layout option in the Datasheet Builder, you can now configure datasheets to accommodate up to four columns. (TS ID: 210655)

Left Navigation Menu

- To increase clarity and consistency, beginning in V4.2.0.0, the following changes have been made to the left navigation menu in Meridium Enterprise APM:
 - A new menu option, **Analytics**, has been added.
 - Modules appearing in the left navigation menu have been re-organized as summarized below:
 - **Dashboard** has been moved from **Tools**, and is now part of **Analytics**
 - **Graph** has been moved from **Tools**, and is now part of **Analytics**
 - **Report** has been moved from **Tools**, and is now part of **Analytics**

- **Metrics and Scorecards** has been moved from **Performance**, and is now part of **Analytics**
- **Proof Test Data Collection** has been moved from **Risk**, and is now part of **Strategy**
- **Policy Designer** has been moved from **Strategy**, and is now part of **Tools**
- The modules and features listed under each menu option now appear in alphabetical order.

(TS IDs: 234737, 219777)

Mobile

- An on-screen indicator is now available that allows you to easily determine whether or not the mobile application is online or offline. (TS ID: 226027)

R Scripts

- You can now specify DataFrame inputs in an R script. (TS ID: 188156)
- *DeployR Open 8.0.0* is now used in the Meridium Enterprise APM testing environment. (TS ID: 220336)

Record Manager

- When viewing a record in Record Manager, the entity ID of the root record now appears on the application tab. (TS ID: 201880)

Translations

- Translations have been updated for all supported languages in Meridium Enterprise APM.
- Dutch is now a supported language in Meridium Enterprise APM.

GE Analytics

- To assist in managing GE Tag Event records, State Management has been added to the GE Tag Event family. The following baseline states are available:

- **Open:** Indicates that the event is new and has not been acknowledged. This is the default state for GE Tag Event records.
- **Pending:** Indicates that the event has been reviewed and is awaiting action.
- **Closed:** Indicates that any related actions have been initiated or that it has been determined that no actions are needed.

To support this change, a new field, Disposition Reason, has been added to the GE Tag Event family. You must select a value in this field when you transition the event to the Closed state. The values that you can select in this field are defined by a new system code table, EVENT_DISPOSITION_REASON. (TS ID: 163169, 162794)

- On the **GE Analytics Overview** page, you can now view a list of potentially duplicate GE Tag Event records that were added within the last 24 hours. (TS ID: 169565)
- A new Security Group, MI GE Viewer, has been added. This group has View permissions for the families used in GE Analytics. (TS ID: 193073)
- A connection to GE Predix Smart Signal, via the GE Fleet connector, is now supported. (TS ID: 173208)
- A new widget, **Possible Duplicate Events in Last 24 Hours**, has been added to the **GE Analytics Overview** page. This graph shows a list of GE Tag Event records related to the same GE Tag record whose identifying information is identical. (TS ID: 169565)

Generation Availability Analysis

- The Primary Event family has been configured with state management. You can now send a Primary Event for approval. (TS ID: 209645)
- The GAA Performance family has been configured with state management. You can now send a Performance record for approval. (TS ID: 214789)
- You can now view the **Health Summary** page for an Asset if the selected GAA Unit is associated with the Asset. The integration with Asset Health Manager provides additional information about the past failures and the strategies that exist to mitigate or eliminate failures. (TS ID: 222163)
- You can now create a Root Cause Analysis (RCA) for a Primary Event and track the associated RCA for the Primary Event. This relationship enables you to conduct

root cause analysis on the Primary Event and analyze the causes of failure. To create the relationship between Primary Event and RCA, the Primary Incident Has RCA family has been added to GAA. (TS ID: 197262)

- To maintain consistency with industry terminology, beginning in V4.2.0.0, the following changes have been made to the terminology in the user interface of Generation Availability Analysis:
 - Captions for various families have been updated as summarized in the following table.

Family (Pre-V3.6.0.0 Caption)	Family (V4.2.0.0 Caption)
Primary Capacity Incident	Primary Event
Contributing Capacity Incident	Contributing Event
Capacity History	GAA Performance
Generation Company	GAA Company
Generation NERC Report	GAA Report
Generation Plant	GAA Plant
Generation Unit	GAA Unit

(TS ID: 205613)

- The Ambiguous Date and Time Preference field has been added to the Primary Event family. This field allows Meridium Enterprise APM to automatically consider the Daylight Saving Time adjustments for calculations. (TS ID: 227156)
- The GAA Unit Capacity family has been added to support different unit capacities for different periods for a GAA Unit.
(TS IDs: 228692, 228694, 228695)

- Captions for various tabs have been updated for Performance records as follows:

Pre-V3.6.0.0 Tab Caption	V4.2.0.0 Tab Caption
Identification	Unit Identification


Pre-V3.6.0.0 Tab Caption	V4.2.0.0 Tab Caption
Generation	Unit Generation Performance
NA	<p>Unit Time Information</p> <p>This is a new tab containing the following fields:</p> <ul style="list-style-type: none"> • Unit Service Hours has been moved from the Generation tab • Reserve Shutdown Hours has been moved from the Generation tab • Pumping Hours has been moved from the Generation tab • Synchronous Condensing Hours has been moved from the Generation tab • Available Hours has been moved from the Generation tab • Planned Outage Hours has been moved from the Loss Details tab • Forced Outage Hours has been moved from the Loss Details tab • Maintenance Outage Hours has been moved from the Loss Details tab • Extension of Scheduled Outages is a newly added field • Unavailable Hours has been moved from the Generation tab • Period Hours has been moved from the Generation tab • Inactive Hours is a newly added field
Loss Details	Unit Loss Details
Net Loss MWh	Unit Net Loss MWh
Starting Characteristics	Unit Starting Characteristics
Primary Fuel	Unit Primary Fuel Information
Secondary Fuel	Unit Secondary Fuel Information

(TS IDs: 201006, 201007, 201008, 201009, 201011)

- Captions for various security groups have been updated as summarized in the following table:

Family (Pre-V3.6.0.0 Caption)	Security Group (V4.2.0.0 Field Caption)
MI Generation Management	MI GAA Viewer
MI Generation Management Administrator	MI GAA Administrator
MI Generation Management Analyst	MI GAA Analyst

(TS ID: 192635)

 **Note:** The changes described above apply only to the captions that appear in the user interface. All underlying family, field, and query IDs are unchanged. Throughout the V4.2.0.0 documentation, including these Release Notes, we refer to these items by their new names.

- The Unit Has Record family has been added to GAA to allow you to configure and associate regulatory reports. (TS IDs: 217836, 217837)
- Privileges to the MI GAA Analyst Security Group for certain families has been changed as follows:

Family	Privileges (V3.6.0.0)	Privileges (V4.2.0.0)
GAA Plant	View, Update, Insert, Delete	View
GAA Unit	View, Update, Insert, Delete	View
Functional Location Has Generation Company	View, Update, Insert, Delete	View
Functional Location Has Generation Plant	View, Update, Insert, Delete	View
Functional Location Has Generation Unit	View, Update, Insert, Delete	View

Family	Privileges (V3.6.0.0)	Privileges (V4.2.0.0)
Has Plant	View, Update, Insert, Delete	View
Has Unit	View, Update, Insert, Delete	View

(TS ID: 194960)

Inspection Management

- You can now link a single Inspection to multiple RBI Degradation Mechanisms. The resulting Inspection Confidence Evaluations can be linked to RBI Degradation Mechanisms, which provide a confidence factor for each Degradation Mechanism and create a sub-report for a single inspection event. (TS IDs: 172523, 205524, 205795)

Policies

Policy Designer and Family Policies

- When values that would result in an invalid calculation are specified in the **Properties** window for a Calculation node, appropriate validation messages are now displayed at the top of the design canvas. (TS IDs: 191010, 191224)
- Previously, when a value from a Constant node was used in subsequent calculations, validation errors were displayed on the design canvas when:
 - No type was specified in the Constant node's **Properties** window.
 - A type was specified but it was not the type expected by the subsequent node, although the specified value was valid. For example, if a subsequent node expected an integer and you specified an integer in the Constant node, but you selected the type *Decimal*.

This issue has been resolved. Now, validation errors are shown based on the actual value specified in these scenarios, rather than solely based on the specified type.

(TS ID: 191039)

- A new node, *Text*, is available. You can use this node to create a custom text string based on constants and the values returned by other nodes in a policy execution.

(TS ID: 61583)

- The performance of the Policy Trigger and Policy Execution services has been improved by removing unnecessary checks for valid data sources. (TS ID: 199896)
- You can now use the R Script node to execute R scripts that have DataFrame inputs. (TS ID: 188156)
- You can now use the following constants to streamline the creation of calculations in policies.

Constant	Meaning
Pi, pi	Pi, rounded to 19 decimal places (i.e., 3.1415926535897932384)
E, e	Euler's number, rounded to 19 decimal places (i.e., 2.7182818284590452353)
Null, null	Null (i.e., no value)

These constants can be specified in a Constant or Point Value node, and then used as an input to any other node in your policy.

(TS ID: 61429)

- For module workflow policies, if a policy has been modified from its original version, you can now select a button to restore the policy to its original baseline version. (TS ID: 231557)

Policy Designer

- A list of module workflow policies (i.e., policies that are added during the deployment of certain modules to support the respective module workflows) is now available on the **Policy Designer Overview** page. In addition, module workflow policies are now identified by the text "Module Workflow Policy for <ModuleName>" which appears at the top of the **Details** workspace when you open the policy. (TS ID: 194963)
- A new auto-map feature has been added to the Edit Entity node. If the values that you want to use to update a record are contained in a collection, you can use this option instead of, or in addition to, specifying the corresponding value for each field individually.

When you use this feature, the first row in the collection that you specify section is used to populate the matching fields in the specified entity record(s). A matching field is one where the Column ID of the collection matches the Field ID of a field in the entity. (TS ID: 229491)

- You can now optionally specify security settings for an individual policy. When you do so, only *specific users* within the Policy Designer Security Groups are given Designer, User, or Viewer permission for a *specific policy*.

To support this enhancement, a new column, **Locked**, has been added to the policy lists on the **Policy Designer Overview** page. When a policy has individual security settings specified, *Yes* appears in the **Locked** column.

(TS IDs: 231516, 231517, 231518, 231553)

Family Policies

- When you review policy execution details, the logical result of a Field Value Changing node is now included on the **Execution Details** window for the node. (TS ID: 183444)
- You can now import and export family policies between different databases. To support this enhancement, the Family Key field in the Family Policy family has been deprecated and replaced with a new field, *Family*, which contains the ID of the family that is associated with the family policy. (TS ID: 206985)

Production Loss Analysis


- You can now import Production Events as an extension of the current PLA Data loader capabilities. (TS ID: 175959)
- In the **Plan Details** workspace, you can now control whether the entire upper grid or lower grid is displayed. (TS ID: 196271)
- You can now specify the basis for losses as either Maximum Sustained Capacity or Short Range Plan. (TS ID: 204499)
- The production event code selector has been enhanced for easier event code selection. (TS ID: 204511)
- You can now create a Production Plan manually, allowing you to modify the start

and end times, as well as planned quantities of each production detail record. (TS ID: 204541)

- A column has been added to the **Production Loss** grid to allow numeric values in the EDT (Estimated Down Time) Hours field to be entered. Once a value has been entered in the EDT Hours field, the Loss field value will be automatically populated based on the calculation $(\text{EDT Hours}/24) * \text{Short Range Plan per day}$, then the EDT value will be automatically populated based on the calculation $\text{Loss}/\text{Maximum Sustained Capacity rate (MSCR)}$. (TS ID: 204585)
- Date, time, and number fields in PLA are now formatted based on your culture settings. (TS ID: 235421)

Reliability Analytics

- You can now select sites from which to retrieve data when creating an analysis based upon a query for Production Analysis, Reliability Growth, Reliability Distribution or Probability Distribution analysis.

 **Note:** If you have the same or more sites than the query data for the analysis is based upon, then you will have access based on the limits of your security and/or role assignment. If you have less sites than the query data of the analysis is based upon, then you will only be able to read the analysis and will receive a warning message.

(TS ID: 228757)

- In Automation Rules, you can now specify from which site the data for a query or event/date-based analysis will be collected. (TS ID: 230328)
- In Reliability Distribution, the query data of all existing query based analyses are now based on all sites in your database. (TS ID: 230468)
- In Reliability Analytics, date, time, and number fields are now formatted based on your culture settings. (TS ID: 235421)

Reliability Centered Maintenance and Failure Modes and Effects Analysis

- You can now filter available template results on the **Select Template** screen of the RCM Apply Template Builder and the FMEA Apply Template Builder. (TS ID: 236435)

Risk Based Inspection

RBI 580

- The Calculated Inventory field has been added to the RBI Component – Piping datasheet. The calculation in this field is populated by changes in the Piping Circuit Length field of the RBI Component – Piping datasheet. (TS ID: 178234)
- The formula that is used to calculate Estimated Half-Life has been altered for the Criticality External Corrosion Degradation Mechanism Evaluation as follows:
Ext. Half Life = ((Initial Wall Thickness) – (Ext. Est. Wall Loss) – (Ext. Est. Min. Thickness)) / (2 * (Ext Corr. Rate))
 (TS ID: 190393)
- To design or view a policy, in addition to the MI Policy Designer and MI Policy Viewer Security Groups, you must now belong to the following additional Security Groups.

For a policy that is used...	...If you want to design a policy, then in addition to the MI Policy Designer security Group, you must belong to...	...If you want to view a policy, then in addition to the MI Policy Viewer Security Group, you must belong to...
To calculate an RBI Analysis	MI RBI Calculation Policy Designer	MI RBI Calculation Policy Viewer
To generate an RBI Recommendation	MI RBI Recommendation Policy Designer	MI RBI Recommendation Policy Viewer
In risk mapping	MI RBI Risk Mapping Policy Designer	MI RBI Risk Mapping Policy Viewer

(TS IDs: 204590, 210353)

- The following changes have been made to the RBI Recommendation record:
 - The **RBI Recommendation** datasheet is the default datasheet.
 - The NonRecurring? and the Target Completion Date fields have been added to the **RBI Recommendation** datasheet.

(TS ID: 228130)

- In addition to calculating analyses associated with a *single* asset, you can now calculate analyses associated with *multiple* assets that are related to a functional location. You can also calculate analyses that are associated with *all* the assets in a functional location. This includes RBI Criticality Analyses, RBI 581 Risk Analyses, What If Analyses, and RBI Pipeline Analyses. This does not, however, include RBI PRD Criticality Analyses. (TS IDs: 228138, 231163)

RBI 581

- In the RBI 581 Thinning and Lining Damage Evaluation and RBI 581 External Damage Evaluation families, even if you enter a value in the Last Known Inspection Date field, you do not need to enter a value in the Last Known Thickness field. If you do not enter a value in the Last Known Thickness field, the values in the Nominal Thickness and Date in Service fields are used to calculate the value in the Age field. (TS ID: 193679)
- The RBI 581 Data Loader has been introduced in V4.2.0.0. You can use this feature to import and create records for the following families:
 - RBI Component
 - RBI 581 Risk Analysis
 - RBI Consequence Evaluation
 - RBI 581 Thinning and Lining Evaluation
 - RBI 581 External Damage Evaluation
 - RBI 581 External Cracking Damage Evaluation
 - RBI 581 Cracking Damage Evaluation
 - RBI 581 Brittle Fracture Damage Evaluation
 - RBI 581 HTHA Damage Evaluation

Using the RBI 581 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 IDs: 198063, 200502, 200503, 200507, 200508)

- In addition to the information related to fluids used in RBI 580, the RepresentativeFluids reference table now contains information related to fluids used in RBI 581. (TS ID: 206569)
- In addition to the available degradation mechanisms in RBI 581 Thinning and Lining Damage Evaluation, you can now define a customized damage mechanism. A

new degradation mechanism, 581-Thinning Damage, has been added to RBI 581 Thinning and Lining Evaluation. If you link this degradation mechanism to an RBI 581 Risk Analysis, you can provide the details of governing thinning damage mechanism and corrosion rates manually. Meridium Enterprise APM calculates only the damage factor. As a part of this enhancement, the following changes have been made:

- A new field, Governing Thinning Damage Mechanism, has been added to the RBI 581 Thinning and Lining Evaluation family. This field appears in the **General** section of the RBI 581 Thinning and Lining datasheet. It is enabled only for 581-Thinning Damage.
- A new System Code Table, MI_581_GOV_THINNING_DAMAGE, has been created. This System Code table is used to provide a list of damage mechanisms in the Governing Thinning Damage Mechanism field.
- A new System Code ID, 581-Thinning Damage, has been added to the MI_DEGRADATION_MECHANISM_TYPES System Code table.
- For 581-Thinning Damage, the Selected Base Material Corrosion Rate field and Selected Cladding Material Corrosion Rate fields on the RBI 581 Thinning and Lining datasheet do not contain the value *Calculated Rate*.
- For 581-Thinning Damage, although you can enter values in the **Thinning Supplements** section of the RBI 581 Thinning and Lining datasheet, these values are not used to calculate the corrosion rate.

(TS ID: 206570)

- The Material Yield Strength field in the RBI 581 Risk Analysis family has now been added to the RBI 581 Brittle Fracture Damage Evaluation family, and appears in the **Output** section of the datasheet. This field is disabled and populated automatically. (TS ID: 206571)
- A new field, Scenario ID, has been added to the RBI 581 Risk Analysis family. This field appears as a text box in the **General** section on the datasheet. The value in this field is not copied when you duplicate or apply an analysis. If you have *not* modified the ID template of an RBI 581 Risk Analysis, then this field will be appended to the ID template. If you have modified the ID template, and if you want the Scenario ID to be appended to the ID template, then you must manually append it via Configuration Manager. (TS ID: 214543)
- To calculate the corrosion rate for a damage mechanism related to RBI 581 Thinning and Lining Damage Evaluation, the most conservative values are now considered based on the input variables. (TS ID: 230168)
- The Piping Stress reference table now includes information on Construction Code *ASME B31.3* and Code Year *2014*, thus adding 13,314 records to the Piping Stress

family. If there is no material grade value in the specification, the Material Grade field is populated with the value *NS* (to imply *not specified*). If two or more records have the same values for Material Specification and Material Grade, then the value in the Material Grade field is populated with a value in the following format: <Material Grade>-<Class>-<Size>-<Notes>. (TS ID: 236586)



Root Cause Analysis

- You can now search for Logic Tree Elements that can be imported into a Logic Tree based on the following selection criteria:
 - Analysis Type field in the RCA Analysis family: You can now show all Analysis Types and select one to show only results with a chosen Analysis Type.
 - Label field in the RCA Event family: You can now show all Labels and select one to show only results with a chosen Label.
 - Label field in the RCA Failure Mode family: You can now show all Labels and select one to show only results with a chosen Label.
 - Label field in the RCA Hypothesis family: You can now run a text search that allows "wildcard" entry.

(TS ID: 175038)

- In RCA, date, time, and number fields are now formatted based on your culture settings. (TS ID: 235421)

Rounds

- You can now use the following URL to open a specific checkpoint in the context of its associated Route in Rounds Designer: `rte=rounds/route-management/checkpoint/<CheckpointKey>`, where <CheckpointKey> is the numeric entity key of the Measurement Location or Lubrication Requirement record that you want to open. (TS ID: 200345)
- In Rounds Data Collection, you can now display a status for Lubrication Requirement records by selecting the following Reading Values:
 - Skip: If this value is selected, the Lubrication Requirement record is marked with a  symbol
 - Done: If this value is selected, the Lubrication Requirement record is marked with a  symbol

(TS ID: 195214)

- In Rounds Data Collection, you can now enter the Asset ID when creating a

standalone recommendation so that the recommendation can be linked to the asset. (TS ID: 180737)

- In Rounds Data Collection, you can now filter the Route to show:
 - Only Asset Headers
 - Only Measurement Locations
 - Only Lubrication Requirements
 - Checkpoints in alert
 - Incomplete checks

More than one filter can be selected. The results are displayed based on a logical *And* operation.

(TS ID: 128884)

- You can now use Rounds Data Loader to load data for Lubrication Requirement records and Lubrication Requirement Templates records. (TS ID: 207317)

- In Rounds Data Collection, you can now search in any column in the **Recommendations** list. (TS ID: 146057)

- In Rounds Data Collection, Recommendations are now viewed and edited using a configurable offline form. This enhancement enables configuration of the offline form to provide Rounds Data Collection users with additional fields, whereas the list of available fields was previously fixed.

As a part of this enhancement, the datasheets and corresponding offline forms are now available for the following scenarios:

- To suit customers who are using State Management (default).
- To suit customers who are using Status fields.

(TS ID: 189866, 214925, 211496)

- In Rounds Data Collection, you can now view the following details for the Route in the **Mark Done** dialog box:
 - **Readings Taken** text box displays the number of MLs/LRs completed
 - **Readings Expected** text box displays the number of MLs/LRs expected
 - **Recommendations Raised** text box displays the number of Recommendations added

(TS ID: 137726)

- In Rounds Data Collection, you can now view the Units of Measure (UOM) that are defined for a Numeric ML. (TS ID: 203761)
- In Meridium Enterprise APM, in Application Settings, the following changes have been made:
 - The icon for the Rounds administrative options now displays **RD** instead of **RA**.
 - The label for the icon is now **Rounds Designer**.
 - The title on the administrative page is now **Rounds Designer**.

(TS ID: 193442)

- On the **Rounds Designer Overview** page, you can now view the number of checkpoints that are using each template in the template grid under Related Checkpoints. (TS ID: 152694)
- In Rounds Designer, the following changes have been made to manage Routes:
 - When Route is initially opened, and a checkpoint is selected, the **Identification** tab is displayed.
 - If you select a different tab on a checkpoint (Schedule, Readings, Reference Documents), and then select a different checkpoint, the previous tab is displayed for the new checkpoint.
 - If you select a condition or use search, then the next time a checkpoint is selected, the same tab is displayed.

(TS ID: 203765)

- On the datasheet for any Measurement Location or Measurement Location template, the Action Taken values are now displayed separately in a new **Actions** section.

(TS ID: 60948)

- In Rounds Designer, the following changes have been made to the overview page:
 - The tab for the previously labeled **ML Templates** is now labeled **Templates**.
 - You can now create and manage both ML Templates and LR Templates from the **Templates** section.
 - You can now select and filter the templates by selecting one or all of the following:
 - Checkpoint Type
 - ML
 - LR

- Category Type
 - Numeric
 - Character
 - Check Off
 - Change Out
 - Tracking
- You can now view the type of a checkpoint in the **Checkpoint Type** column in the **Templates** section.
- You can now view the category of a checkpoint in the **Category Type** column in the **Templates** section as follows:
 - For Measurement Locations, you can view either Character or Numeric
 - For Lubrication Requirements, you can view either Check Off, Change Out, or Tracking

(TS ID: 162006)

SIS Management

- The management and usability of Safety Requirements Specifications (SRS) in Meridium Enterprise APM has been enhanced such that you can now:
 - Use Meridium supplied SRS Templates or create user-defined custom templates for various categories (e.g., Electrical, Environment, etc.). The Meridium supplied SRS templates represent the clauses define in IEC 61508 standard edition 2, Part 2, Clause 7.2.3 or IEC 61511 part 1, clause 10.3.1 regarding the content of SRS. Custom templates allow the import of existing brownfield site SRS.
 - Manage the approval process of SRS Templates and SRS Projects using the state management feature.
 - Create SRS Projects based on one or more approved SRS Templates.
 - Link an approved SRS Project to a SIL Analysis, Instrumented Function, Logic Solver, or Protective Loop.
 - View the revision history of an SRS Project.

(TS IDs: 202407, 202425, 207496, 202479, 203456)

Resolved Issues - V4.2.0.0

The following issues existed in one or more previous releases and have been resolved in V4.2.0.0.

AMS Analytics

- Previously, the **Reports** list on the **AMS Analytics Overview** page included detail and summary reports, but it should have only included summary reports (i.e., Event Trend Daily, Event Trend Monthly, and Event Description Breakdown Report). This issue has been resolved. (TS ID: 193728)
- Previously, when scheduling a data collection, occurrences were skipped if the Meridium Enterprise APM Server UTC time was earlier than that of an instance of Meridium Enterprise APM on a user's device. This issue has been resolved (TS ID: 210846)
- When using Internet Explorer in V4.1.6.0, an error stating that the folder path is not valid appeared when you tried to open reports included in the **Reports** list on the **AMS Analytics Overview** page. This issue has been resolved. (TS ID: 213303)
- Previously, the **Assigned To** column in the **Recommendations** list on the **AMS Analytics Overview** page displayed the value in the Assigned To Name (MI_REC_ASSIG_NM_CHR) field in the AMS Recommendation record, but it was intended to display the state owner as assigned by state management (value in MI_SM_STATE_OWNER_ID_C field). This issue has been resolved. (TS ID: 194996)
- Previously, when you created an AMS Asset Recommendation based on an AMS Asset Alert or Event, and the recommendation was linked to an Equipment record, the Technical Number field in the AMS Asset Recommendation was not populated as expected. This issue has been resolved.

In addition, the Asset ID field and Functional Location ID fields were previously populated with the *Record ID* of the linked asset. Now, if the recommendation is linked to an Equipment record, the Asset ID field is populated with the value in the Equipment ID field of the Equipment record. Or, if the recommendation is linked to a Functional Location record, the Functional Location ID field is populated with the value in the Functional Location field of the Functional Location record.

(TS ID: 194993)

Asset Criticality Analysis

- Previously, in Asset Criticality Analysis, you were not able to unlink all the Function Location records that were linked to the ACA system or delete the ACA system. This issue has been resolved. (TS ID: 211495)

Asset Health Manager

- Previously, for users with only the MI Health Admin, MI Health Power, or MI Health User role assigned, when you selected an asset on the **Health Summary** page, an error occurred due to insufficient privileges for the Has Consolidated Recommendations family. This issue has been resolved. The baseline Health roles now include the required View permission for the Has Consolidated Recommendations family. (TS ID: 206982)
- Previously, in the **Trend Chart** workspace of the **<Health Indicator Name>:<Description>** or **Health Indicator Source** page, when viewing data for a health indicator source other than an OPC Tag record, the graph displayed 10 years of data by default and the zoom controls to show a smaller date range were not enabled. This issue has been resolved. Now, 1 year of data is displayed by default, and you can use the zoom controls to increase or decrease the date range displayed, up to a maximum of 10 years. (TS ID: 211264)

Asset Strategy Implementation

- Previously, when you modified a work management item and then navigated away from the page without saving, you did not receive a warning message explaining that you had unsaved changes. This issue has been resolved. (TS ID: 168438)
- Previously, when you imported a maintenance plan from SAP, and then navigated to the package in ASI to view it, the maintenance plan was not hyperlinked, so you could not easily access it. This issue has been resolved. (TS ID: 204315)
- Previously, when you changed a field value on an implemented work management item, the status did not change to *Modified* as expected. This issue has been resolved. (TS ID: 215317)
- Previously, when you attempted to import a notification with start or end dates, but no corresponding start or end time, an error message appeared. This issue has been resolved. (TS ID: 241013)

Asset Strategy Management

- Previously, in ASM, when you attempted to implement an Action as Rounds without the correct permissions, a success message incorrectly appeared. This issue has been resolved. Now, you are unable to promote an Action to Rounds if you do not have MI Operator Rounds Administrator privileges. (TS ID: 197889)
- Previously, if a risk assessment had been conducted for a strategy, and all the categories were selected as *N/A*, a value of *0* for the risk rank was incorrectly displayed. This issue has been resolved. Now, if *N/A* is selected for the risk assessment categories, then no value is displayed for the Risk Rank or Risk Alias fields. (TS ID: 203885)
- Previously, if you chose **Import Operations as Actions** when importing data from SAP, the import incorrectly created actions from both operations and maintenance items. This issue has been resolved. Now, the import only creates actions from the operations that you select. (TS ID: 205745)
- Previously, if you accessed a strategy for which the associated asset had no performance recommendations, the **Recommendations** pane was not visible. This issue has been resolved. Now, the pane is still visible even if there are no recommendations on a strategy. (TS ID: 209306)
- Previously, for strategies controlled by a master template, the ASI icon on the toolbar was disabled. This issue has been resolved. (TS ID: 210816)
- Previously, when you added an Inspection Task to an Asset Strategy whose asset was promoted from RBI 581, and then attempted to select the Inspection Task's hyperlink immediately, an error message appeared. This issue has been resolved. (TS ID: 212681)
- Previously, if you added a risk to a strategy, but did not perform an unmitigated risk assessment on the risk, the Driving Unmitigated Risk Category field value incorrectly read *Safety*. This issue has been resolved. Now, if no risk assessment has been done, you do not see a value for the Driving Unmitigated Risk Category field. (TS ID: 218450)
- Previously, you could modify a strategy's datasheet even if the ASM license was not activated. This issue has been resolved. Now, if the ASM license is not activated, strategies and any other ASM datasheets are view-only. (TS ID: 218698)
- Previously, when you selected a link from search results to open one of the following types of records, the record could be modified, but should have been view-

only: Action, Action Revision, Active Strategy, Proposed Strategy, Risk, Risk Assessment Revision, Risk Revision, and Strategy Revision. This issue has been resolved. (TS ID: 221333)

- Previously, when you created a Unit Strategy and set a specific site reference and then created a System Strategy as a child to the Unit Strategy, the System Strategy inherited the site of the Unit, but you were able to change the site using the site control. This issue has been resolved. Now, when a child record inherits the site of the parent record, the site is locked and the site control view-only. (TS ID: 231174)
- Previously, when you created a new global System Strategy and a new global Asset Strategy within the **System Strategy** workspace, and then assigned an asset to the global Asset Strategy, some of the parent records did not receive the site assignment from the asset as expected. Instead, they remained *global* even though they contained an asset with a specific site assignment. This issue has been resolved. Now, when you associate a non-global asset with global parent records, all of the parent records inherit the site of the asset. (TS ID: 231175)
- Previously, the **Remove from Master** button to remove a controlled strategy was enabled for an ASM user with view-only privileges. This issue has been resolved. Now, if you have view-only privileges, the **Remove from Master** button is disabled. (TS ID: 235207)
- Previously, if you activated a strategy or strategy template, the Strategy Activation Date or Template Activation Date field showed an incorrect time because of a time-zone issue. This issue has been resolved. (TS ID: 237709)

Asset Strategy Optimization

- Previously, when updating an ASO analysis definition, iterations were not updated unless the iteration values were more than the existing values. This issue has been resolved. (TS ID: 229123)

Calibration Management

- Previously, the MI Calibration User and the MI Calibration Administrator Security Groups were not assigned any privileges to the Calibration Template Defaults family. Because of this, even if a Security User was assigned either of these groups, the user was not able to create a Calibration Template. This issue has been resolved. The following privileges have been assigned to the Security Groups:

Security Group	Privileges
MI Calibration Administrator	View, Insert, Update, Delete
MI Calibration User	View

(TS ID: 198781)

- Previously, when you attempted to save a newly entered Primary Input LRV, or Primary Input URV, or SW 1 Setpoint, or SW 2 Setpoint value in a Discrete Profile template, the save failed. This issue has been resolved. (TS ID: 202411)
- Previously, when you attempted to delete a locked calibration event, the deletion would fail without an error message. This issue has been resolved. (TS ID: 193069)
- Previously, when you selected a calibration event, the **Identification** datasheet loaded irrespective of the previous tab selection. This issue has been resolved. (TS ID: 217945)
- Previously, in a calibration event, you could not access the datasheet under the **Calibration Ranges** tab in the **Calibration** tab after switching tabs. This issue has been resolved. (TS ID: 218236)

Foundation

- Previously, when you canceled your **Sign Out** selection on a Meridium Enterprise APM page with unsaved changes, an error occurred. This issue has been resolved. (TS ID: 195285)
- Previously, the filters on module overview pages did not correctly display the selected asset context when additional filter parameters were applied. This issue has been resolved. (TS ID: 196314)
- Previously, in the **Group** section of the **Hierarchy** window, the + button did not function. This issue has been resolved. The + button has been removed from the **Group** Section of the **Hierarchy** window. (TS ID: 199455)
- Previously, you could not import a *Master/Detail* datasheet using the **Import**

feature. This issue has been resolved. (TS ID: 207307)

- Previously, when importing families with State Configuration where you have disabled the State Configuration in the source database, after importing, the State Configuration appeared enabled in the target database. This issue has been resolved. Now, if you enable or disable the State Configuration in the source, then after the import, the state of the State Configuration is retained in the target. (TS ID: 204539)
- Previously, in the Datasheet Builder, when you used a custom layout, you could not delete the field layout from the builder. This issue has been resolved. (TS ID: 206060)
- Previously, when you used to import the records and links , although the import operation completed successfully, the import log displayed an incorrect error message stating that the import was unsuccessful. This issue has been resolved. (TS ID: 218683)
- Previously, when you defined a conversion and then selected a conversion set, the **New Set Content** window did not display any content in the **To** drop-down box. This issue has been resolved. (TS ID: 221622)
- Previously, you were not able to import the files with the extension ZIP in uppercase. This issue has been resolved. (TS ID: 224814)
- Previously, if the user tried to log into a mobile device while offline, there was no clear indication that log in had failed. This issue has been resolved. You will now receive a notification that your log in has failed because the device was offline. (TS ID: 226027)
- Previously, the Risk Matrix did not resize properly on certain screen resolutions. This issue has been resolved.(TS ID: 226649)
- Previously, after importing the *Users, Privileges, and Assignments* metadata, the sites, default site, and the user's photograph were not imported. This issue has been resolved. (TS ID: 228726)
- Previously, the Asset Finder did not show all of the assets available to the user. This issue has been resolved. (TS ID 229037)

- Previously, in a parent family, if you defined a behavior for a field that had been spread to subfamily, the field in the child family did not inherit the behavior. This issue has been resolved. (TS ID: 229793)
- Previously, on mobile devices, Reference Documents did not display correctly after they were uploaded and saved. This issue has been resolved. (TS ID 240605)

Asset Groups

- Previously, you could not add a parent to an Asset Group that already had assets. This issue has been resolved. Now, an Asset Group's parent can be added or changed at any time for any static Asset Group, as long as it is a valid parent for the group. (TS ID: 222222)

Dashboards

- Previously, in **Dashboards**, if you hid and then unhid a widget, an error occurred. This issue has been resolved. (TS ID: 213744)
- Previously, in **Dashboards**, for all analyses, the X-axis on the charts was not fully visible. This issue has been resolved. (TS ID: 220033)
- Previously, in **Dashboards**, using multiple values in a filter did not work correctly. This issue has been resolved. (TS ID: 231093)

Recommendation Management

- Previously, in Internet Explorer 11, if you filtered a selection in Recommendations and then expanded the **Recommendations** pane, the filter disappeared and you could not change your selection. This issue has been resolved. (TS ID: 210276)
- Previously, in **Recommendations**, selections did not clear after Supersede, Approve, or Reject was selected for a Recommendation. This issue has been resolved. (TS ID: 211334)
- Previously, in the **Recommendations** pane, if you selected **Cancel** in the **State Assignments** window, the pane would become non-responsive. This issue has been resolved. (TS 214290)

Record Manager

- Previously, in Record Manager, you could not unlink an entity from itself. This issue has been resolved. (TS ID: 193807)
- Previously, in the Datasheet Builder, the Field Caption and Description fields were not updated after the layout was saved. This issue has been resolved. (TS ID: 211445)

R Scripts

- Previously, if you configured an R script with an output parameter of any vector type, the output of the R Script node could not be used as an input to another node. This issue has been resolved.

To support this fix for R scripts with the output type *Vector of values - Date & Time*, the policy execution engine sends date inputs to the R script in UTC. If your R script performs any calculations based on dates, the date output must also be in UTC and use the standard date format *yyyy-MM-dd hh:mm:ss.ff*. (TS IDs: 207114, 240859)

Scheduling

- Previously, when you scheduled a job, the **Scheduling** page did not display the date and time as per the culture setting of the user. This issue has been resolved. The date and time now appear on the **Scheduling** page according to the culture setting of the user. (TS ID: 227056)

Hazards Analysis

- Previously, when saving a system node in a new What If analysis record, two messages appeared instead of a single message. This issue has been resolved. (TS ID: 229889)
- Previously, when promoting a consequence to ASM in a new Hazop/What If analysis record, an empty error message appeared. This issue has been resolved. (TS ID: 229787)
- Previously, when adding the role detail for a team member in a Hazop/What If analysis record, the cell in the **Role** column displays zero by default. This issue has been resolved. (TS ID: 229888)

Inspection Management

- Previously, the MI_DEGRADATION_MECHANISM_TYPES System Code Table contained the following system codes which did not have a corresponding Potential Degradation Mechanism (PDM):
 - Sulfide Stress Cracking (SSC)
 - 581-885OF Embrittlement
 - 581-Mechanical Fatigue

Because of this, on an Inspection datasheet, in the **Inspection Confidence Evaluation** section, if you selected any of the aforementioned values in the **Degradation Mechanism** column, an error message appeared. This issue has been resolved by removing or setting to inactive the aforementioned system codes. (TS ID: 217500)

- Previously, when loading Bundle Sub-Inspections for a General Inspection, the Inspection Management Data Loader would fail. The relationship definition required to complete the data load does not exist between the Bundle Sub Inspection and the General Inspection family. As a result, no data was loaded to Meridium Enterprise APM. This issue has been resolved. Now, if a Bundle Sub-Inspection is loaded for a General Inspection, an error occurs and is logged by the data loader, but the data load completes. (TS ID: 211704)

- Previously, on the Inspection Family datasheet for a 653 External Checklist Inspection, you could approve and save an Inspection even if the Final Inspection Lock field was cleared. This issue has been resolved. Now, to save an Approved 653 External Checklist Inspection, the Final Inspection Lock field must be checked. (TS ID: 242560)

- Previously, when using NR13 in Inspection Management, the Special Boiler field in the NR13 Technical Data family was not set to *true* if:
 - The Designated As field contains the value *Boiler*.
 - The SPIE Certification field was set to *true*.
 - The Water Treatment field was set to *true*.
 - The value in the Frequency of Relief Valve Test field is less than or equal to 12.

This issue has been resolved. Now, if the criteria are met, the Special Boiler field in the NR13 Technical Data family is set to *true*. (TS ID: 243534)

- Previously, on the IM Admin Preferences page, in the Application Configurations section, if you cleared the value in the Associated Relationship Family field and then saved the changes, the Inspection Configurations section failed to properly reload. This issue has been resolved. Now, after clearing the Associated Relationship Family field and saving the change, the Inspection Configurations section loads as expected. (TS ID: 243592)

Policies

Family Policies and Policy Designer

- Previously, in V4.1.5.0, 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: 194030)

Policy Designer

- Previously, when a policy execution resulted in both an error and a warning, the **Policy Execution** chart on the **Policy Designer Overview** page counted the execution in both the Error and Warning category. This issue has been resolved. Now, when a policy execution results in both an error and a warning, the execution will be counted only in the Error category. (TS ID: 189576)
- Previously, in Policy Manager, when a user canceled a Sign Out selection on a Meridium Enterprise APM page with unsaved changes, an error would occur. This issue has been resolved. (TS ID: 195285)
- Previously, if an Edit Entity node was configured to make a change to a record in a family associated with a triggering Input node, no warning message appeared to indicate that a circular reference may exist. This issue has been resolved. (TS ID: 196327)
- Previously, the **My Policy Recommendations** and the **Overdue Policy Recommendations** lists included each relevant Policy Recommendation twice. This issue has been resolved. (TS ID: 196334)

Family Policies

- Previously, the **Access Denied** page appeared when a user in the MI APMNow Admin Security Group tried to access a Family Policy. This issue has been resolved. (TS ID: 224171)

Production Loss Analysis

- Previously, you could not scroll through the list of Products in the **Production Profile** window. This issue has been resolved. (TS ID: 222165)

- Previously, the date format determined by a user's culture were not respected in PLA, and all dates displayed in the MM/DD/YYYY format. This issue has been resolved. (TS ID: 227822)

Reliability Analytics

- Previously, the Reliability Growth Cumulative Plot tool tip reported the date for the observed data point twice, provided two forms of time, and the cumulative measurement only reported the end point. These issues have been resolved. (TS ID: 168920)
- Previously, on the **Analysis Summary** section, the **Time to Failure Distribution** tab was selected while the Time to Repair Distribution data was actually displayed. Now, the **Time to Failure Distribution** tab is selected, and the corresponding data is displayed. This issue has been resolved. (TS ID: 171421)
- Previously, when you saved parameters in Reliability Distribution and Probability Distribution, the analysis description appeared blank. This issue has been resolved. (TS ID: 175953)
- Previously, competing failure modes were not included in the Reliability Distribution plot. This issue has been resolved. (TS ID: 177406)
- Previously, if you were a user assigned to only the MI Reliability User Security Group, you could not see links to reliability analyses in the Asset Hierarchy. This issue has been resolved. (TS ID: 195160)
- Previously, on the **Reliability Distribution Data** page in the data editor, when a source query or dataset had a large number of fields, the column headers did not line up with the columns. This issue has been resolved. (TS ID: 195453)
- Previously, Reliability Distribution report data did not appear unless you refreshed the report. This issue has been resolved. (TS ID: 197245)
- Previously, Reliability Analytics Reports opened in the same tab as the analysis. This issue has been resolved. (TS ID: 197258)
- Previously, you could enter non-numeric values in the **Correction** tab. This issue

has been resolved. (TS ID: 197585)

- Previously, in Google Chrome, the Confidence Level in Reliability Growth always appeared as 90%. This issue has been resolved. (TS ID: 202803)
- Previously, in certain instances when producing reliability analyses from queries in Reliability Analytics, the data editor became corrupt and caused the Add button to become disabled. This issue has been resolved. (TS ID: 206449)
- Previously, the data editor in some Reliability modules did not allow modifications to be saved until all the data had been loaded. This issue has been resolved. (TS ID: 206788)
- Previously, you could not modify an Analysis with a large amount of data in the **Reliability Distribution Data** window. This issue has been resolved. (TS ID: 207398)
- Previously, in Reliability Growth, the **Data Editor** window flashed at the bottom of the screen upon loading more data. This issue has been resolved. (TS ID: 209203)
- Previously, for analyses with many data points, no message was displayed when the Reliability Growth Cumulative Plot could not be split at certain data points. This issue has been resolved. (TS ID: 211242)
- Previously, non-numeric entries were allowed in numeric only fields in the **System Reliability Properties** pane. This issue has been resolved. (TS ID: 219703)
- Previously, when you deleted an asset from an analysis in Reliability Growth or in Reliability Distribution, the analysis-to-asset relationship was not removed. This issue has been resolved. (TS ID: 220528, 220537)
- Previously, the analysis date in the Production Analysis report was not globalized according to the user's culture setting. This issue has been resolved. (TS ID: 238020)
- Previously, if the *beta* and *eta* points were small, you could not create a line using the regression fit method in Production Analysis. This issue has been resolved. (TS ID: 238881)

Reliability Centered Maintenance and Failure Modes and Effects Analysis

- Previously, in RCM and FMEA, the Interval Unit field in associated datasheets incorrectly allowed custom entered values. This issue has been resolved. Now, the value in this field is limited to the supplied values in the drop-down. (TS ID: 151245)
- Previously, RCM and FMEA had their own module-specific Analysis type templates for Failure Effect, Failure Mode, and Recommendation, even though they should both share these common template types. This issue has been resolved. (TS ID: 151844)
- Previously, if you attempted to replace an asset when creating a new FMEA analysis from a template, the asset replacement was ineffective. This issue has been resolved. Now, the selected asset replaces the asset in the template. (TS ID: 199002)
- Previously, in FMEA, when you added an asset to an FMEA template that you created, the FMEA Asset ID field was empty and not automatically populated as expected. Similarly, when you added a failure mode, a failure effect, and a recommendation to the template, the FMEA Mode ID, Effect ID, and Recommendation ID fields were also empty or populated incorrectly. These issues have been resolved. (TS ID: 195256)
- Previously, you could incorrectly apply Failure Mode and Failure Effect templates to RCM and FMEA analyses which belonged to a different Risk Matrix from the templates. This issue has been resolved. (TS ID: 204180)
- Previously, when you added a new function, functional failure, failure mode, or failure effect to an RCM analysis, no new node was concurrently added to the tree hierarchy to the left of the datasheet. This issue has been resolved. Now, a placeholder node appears in the tree when you add a new item. (TS ID: 204489)
- Previously, when you attempted to add a new failure effect to an RCM or FMEA analysis, while the Risk or Decision Logic tab of an existing failure effect was active, an error message appeared. This issue has been resolved. (TS ID: 210736)
- Previously, when an RCM or FMEA analysis had a large number of related items such that the tree on the left side of the workspace extended past the visible workspace, a scroll bar appeared; however, you could not scroll to view the last item in

the tree. This issue has been resolved. (TS ID: 210953)

- Previously, you were incorrectly allowed to add a linked asset to an RCM/FMEA analysis that changed the risk matrix. This issue has been resolved. Now, once risk has been incorporated into the analysis, the risk matrix is locked and you are unable to add assets that would change the risk matrix. (TS ID: 211770)
- Previously, you could incorrectly import a risk assessment from ACA that was created against an asset which had a conflicting risk matrix. This issue has been resolved. Now, you cannot import an ACA assessment if it has a different risk matrix than the asset's site. (TS ID: 214088)
- Previously, if you replaced the asset on a failure mode when applying a template to an RCM analysis, the associated recommendation was not updated with the new asset as expected. This issue has been resolved. Now, when you replace the asset on a failure mode when applying a template, the recommendation is updated as expected. (TS ID: 215070)
- Previously, if you assigned a virtual asset to a failure mode in a template, the asset for the associated recommendation was not updated. This issue has been resolved. (TS ID: 215078)
- Previously, in FMEA, if you replaced a template asset when creating analyses from an analysis template, the previous asset was not discarded as expected. This issue has been resolved. (TS ID: 215248)
- Previously, when you applied a template to an RCM or FMEA analysis, the node of the template you applied incorrectly became the root node. This issue has been resolved. Now, when applying a template, the selected node stays the same. (TS ID: 217207)
- Previously, when you created a new RCM or FMEA analysis and saved it, the tab title was not updated with the name of the analysis as expected. This issue has been resolved. (TS ID: 241052)
- Previously, if you modified a failure effect and then navigated to Risks or the Decision Logic Builder, an "unsaved changes" warning message did not appear, and the modified field values were lost. This issue has been resolved. (TS ID: 241409)

Reports

- Previously, when you modified the caption of a translated report, the modifications did not appear in the localized version of Meridium Enterprise APM. This issue has been resolved. (TS ID: 226021)

Risk Based Inspection

RBI 580

- Previously, when Appendix_F was used to generate a Recommendation for an External Corrosion Damage Mechanism Evaluation (DME), the Recommendation Interval was incorrectly populated when governed by the value in the Half-Life field. This occurred because the Estimated Half-Life value from the Internal Corrosion DME was being used instead of the Half-Life value from the External Corrosion DME. This issue has been resolved. Now, the Estimated Half-Life value from the External Corrosion DME is used to populate the Recommendation Interval. (TS ID: 160323)
- 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 correct date is displayed in the Years in Service field. (TS ID: 206790)
- Previously, when attempting to copy a Risk Complete RBI Analysis with a user-specified value in the Construction Code field, the copy failed. This issue has been resolved. Now, the Construction Code field is no longer restricted and the user-specified value copies successfully. (TS ID: 208103)
- Previously, the baseline database contained duplicate entries in the ME field in the Representative Fluids table. This issue has been resolved. (TS ID: 210229)
- Previously, on the **Risk Based Inspection Overview** page, in the **Current Risk Overview** graph, the analyses that were in the *Accepted by ASM* state were not included. This issue has been resolved. (TS ID: 210863)
- 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: 212380)

- Previously, if you *only* had the Risk Based Inspection license applied to Meridium Enterprise APM, when you viewed RBI Damage Mechanism Evaluation records in Record Manager, an error occurred and the process failed. This issue has been resolved. (TS ID: 213682)
- Previously, if you promoted an asset with a consolidated RBI Recommendation to Asset Strategy Management, the Action created for the recommendation was linked to the Risk of the *first* source RBI Recommendation. This issue has been resolved. The Action is now linked to the Risks of *all* source RBI Recommendations. (TS ID: 212380, 214664)
- Previously, the calculation used to populate the value in the Pipeline Probability of Failure - Third Party Damage (POF - TPD) field incorrectly subtracted one category point from the calculation. Instead of subtracting a category point, if the value in the Corrosion Rate field is less than 5 mpy and the value in the Wall Ratio field is less than 1.5, the POF - TPD calculation should add one category point to the calculation. This issue has been resolved. (TS ID: 215227)
- Previously, when generating a recommendation from an analysis that used either Appendix_B or Appendix_D to perform a calculation, an error occurred that caused the Inspection Criteria Met field to always return as *false*. This issue has been resolved. (TS ID: 216435)
- Previously, an error occurred if you attempted to promote an asset containing Consolidate Recommendations for either a Pipeline Analysis or a PRD Analysis to Asset Strategy Management (ASM). This issue has been resolved. (TS ID: 217239)
- Previously, the External Chloride Stress Corrosion Cracking and the Mechanical Fatigue Degradation Mechanisms did not have assigned Consequence Evaluations. This issue has been resolved. Now, both the External Chloride Stress Corrosion Cracking and the Mechanical Fatigue Degradation Mechanisms have been assigned the Criticality Consequence Evaluation. (TS ID: 234671)
- Previously, after promoting a recommendation to ASM with mitigation, the mitigated value was not displayed in the RBI risk Matrix. This issue has been resolved. (TS ID: 235478)
- Previously, the Non-Intrusive Requirement Met field was incorrectly enabled when the value in the Thinning Type field was not set to *General* or the Estimated Corrosion Rate field was higher than 0.005. This issue has been resolved. Now, the Non-Intrusive Requirement Met field can only be enabled if value in the Thinning

Type field is set to *General* and the Estimated Corrosion Rate is greater than or equal to 0.005. (TS ID: 235986)

- Previously, numeric data displayed in Pipeline Management could only be viewed in English Units of Measure. This issue has been resolved. Now, numeric data can be viewed in either the English or the Metric Unit of Measure. (TS ID: 237294)
- Previously, when generating Recommendations on an existing Meridium Enterprise APM Version 3.X legacy analysis, an error appeared indicating that Appendix F could not be executed and that Recommendations could not be generated. This was because the V3.X legacy analysis did not have a calculated value for the External Half Life field, a field that was added in Version 4.X. This issue has been resolved. Now, in this scenario, an error message appears, stating that the External Half Life field must contain a value before generating Recommendations. (TS ID: 238503)
- Previously, when saving a mitigated Financial Risk for an external Degradation Mechanism, the values in the Production Loss and Maintenance Cost fields did not save. This issue has been resolved. (TS ID: 239091)
- Previously, after PRD Recommendations were successfully consolidated, the Consolidated Recommendation (CREC) did not appear on the **Recommendations** pane. This issue has been resolved. Now, CRECs in the Proposed state appear on the **Recommendations** pane as expected. (TS ID: 239849)

RBI 581

- Previously, when you created a Criticality Calculator RBI Component of type *Storage Tank Bottom*, instead of inheriting only the PDMs that are valid for Storage Tank Bottom, the RBI Component inherited *all* the PDMs from the Corrosion Loop. This issue has been resolved. (TS ID: 160526)
- Previously, when you tried to promote an asset to Asset Strategy Management, if an RBI 581 Risk Analysis or an RBI Criticality Analysis was calculated *before* upgrading to Meridium Enterprise APM V4.0.0.0 or later, a *generic* error message appeared. This issue has been resolved. Now, the error message specifies that promoting to Asset Strategy Management has failed because the analysis is not linked to a Risk Assessment. (TS ID: 160784)

- Previously, when you duplicated an RBI 581 Risk Analysis that was linked to the 581-Cooling Water Corrosion DM, the value in the Calcium Hardness field was *not* copied to the new analysis. This issue occurred only if the value in the Cooling System Type field was *Recirculating* and the value in the Water Treatment Type field was *Untreated*. This issue has been resolved. (TS ID: 193644)
- Previously, if you entered the following values while evaluating the 581-Chloride Stress Corrosion Cracking damage mechanism, the value in the Calculated Susceptibility field was *Low* instead of *Medium*:

Field	Datasheet	Value
Operating Temperature	RBI 581 Risk Analysis	Any value less than or equal to 200 Degrees Fahrenheit
pH	RBI 581 Risk Analysis	Any value less than or equal to 10
Chloride Concentration Water Process	RBI 581 Cracking Damage Evaluation	Any value between 11 and 100 parts per million

Because of this, the values in the Base Damage Factor and the Final Damage Factor fields were incorrect. This issue has been resolved by correcting the RBI 581 Stress Corrosion Cracking policy. (TS ID: 195293)

- Previously, if you evaluated the 581-Soil Side Corrosion damage mechanism, and if the value in the Coating Type field was *Extruded Polyethylene with mastic rubber*, then the value in the Base Material Calculated Corrosion Rate was incorrect or blank. This issue has been resolved by correcting the Base Factor value for Extruded Polyethylene with mastic rubber in the Total Coating Effectiveness reference table. (TS ID: 196698)
- Previously, some of the 300 series stainless steel materials and 6Cr Low Alloy base and cladding materials were not supported by the 581-High Temperature Sulfuric and Naphthenic Acid DM. This issue has been resolved. (TS ID: 206552)
- Previously, the generation of recommendations failed because of a few invalid mapping records in the RBI Strategy Mapping Configuration. This issue has been resolved. The mappings between the following Degradation Mechanisms and Policies have been removed from the RBI Strategy Mapping Configuration:

Degradation Mechanism	Policy
581-Ferritic Component Corrosion Under Insulation	RBI 581 Tank Bottom Insp Recommendation
581-Atmospheric Tank Bottom Corrosion	RBI 581 Tank Shell Int Corrosion Recommendation
581-Internal Component Lining Damage	RBI 581 Tank Bottom Insp Recommendation
581-Atmospheric Tank Bottom Corrosion	RBI 581 Thinning and Lining Insp Recommendation
581-Cooling Water Corrosion	RBI 581 Tank Bottom Insp Recommendation
581-High Temperature Sulfidic and Naphthenic Acid Corrosion	RBI 581 Tank Bottom Insp Recommendation
581-High Temperature H ₂ /H ₂ S Corrosion	RBI 581 Tank Bottom Insp Recommendation
581-Ferritic Component Atmospheric Corrosion	RBI 581 Tank Bottom Insp Recommendation
581-Austenitic Component Atmospheric Cracking	RBI 581 Tank Bottom Insp Recommendation
581-Hydrochloric Acid Corrosion	RBI 581 Tank Bottom Insp Recommendation
581-Sulfuric Acid Corrosion	RBI 581 Tank Bottom Insp Recommendation
581-Alkaline Sour Water Corrosion	RBI 581 Tank Bottom Insp Recommendation
581-High Temperature Oxidation	RBI 581 Tank Bottom Insp Recommendation
581-Soil Side Corrosion	RBI 581 Tank Bottom Insp Recommendation
581-Amine Corrosion	RBI 581 Tank Bottom Insp Recommendation
581-Acid Sour Water Corrosion	RBI 581 Tank Shell Int Corrosion Recommendation

Degradation Mechanism	Policy
581-Austenitic Component Cracking Under Insulation	RBI 581 Tank Bottom Insp Recommendation
581-Hydrofluoric Acid Corrosion	RBI 581 Tank Bottom Insp Recommendation
581-Acid Sour Water Corrosion	RBI 581 Tank Bottom Insp Recommendation

(TS ID: 206554)

- Previously, the value in the Weighted Toxic Consequence Area field on an RBI 581 Consequence Evaluation datasheet was calculated incorrectly due to incorrect constants for Toxic Fluids. This issue has been resolved. Now, to verify the calculation, the following fields have been included in the Intermediate Outputs section of the RBI 581 Consequence Evaluation datasheet:
 - Toxic Release Rate Small
 - Toxic Release Rate Medium
 - Toxic Release Rate large
 - Toxic Release Rate Rupture
 - Total Toxic Release Mass Small
 - Total Toxic Release Mass Medium
 - Total Toxic Release Mass Large
 - Total Toxic Release Mass Rupture
 - Toxic Constant A Small
 - Toxic Constant A Medium
 - Toxic Constant A Large
 - Toxic Constant A Rupture
 - Toxic Constant B Small
 - Toxic Constant B Medium
 - Toxic Constant B Large
 - Toxic Constant B Rupture

These fields are disabled and populated automatically. (TS ID: 206556)

- Previously, if an RBI 581 Risk Analysis was linked to an RBI 581 Brittle Fracture Damage Evaluation, and if the value in the Furnished Base Material Thickness field

was greater than 4.0 inches, then the damage factor for that DME was calculated incorrectly. This issue has been resolved. (TS ID: 206557)

- Previously, the value in the Final Damage Factor field in the RBI 581 Cracking Damage Evaluation record was incorrect for the 581-HIC/SOHIC - HF and 581-HIC/SOHIC - H2S DMs. This issue has been resolved by modifying the Final Thinning Damage Factor (Cracking without Online Monitoring) RScript. (TS ID: 206558)
- Previously, in RBI 581, the UOM for the Chloride Concentration field did not match the input units in the Corrosion Rate reference table for HCl Corrosion. This issue has been resolved. Now, the UOM for Chloride Concentration and HCl Corrosion Rate are both set to *PPM*. (TS ID: 206559)
- Previously, you could not enter 0 in the Number of Highest Effective Inspections field in an RBI 581 External Cracking Damage Evaluation datasheet or an RBI 581 Cracking Damage Evaluation datasheet. This issue has been resolved. You can now enter a value from 0 to 6 in the Number of Highest Effective Inspections field. If you enter 0 and save the record, the value in the Highest Effective Inspection Level field is set to *Ineffective (None)*. (TS ID: 206560)
- Previously, in the Inspection Planning feature, the Degradation Mechanisms that did not mitigate the risk were not considered to calculate the values in the following fields in an RBI 581 Risk Analysis:
 - The Total Damage Factor in the **With Plan** tab
 - The Governing Damage Factor fields in the **Without Plan** tabThis issue has been resolved. (TS ID: 206564)

- Previously, in Oracle databases, an error occurred when calculating the Damage Factor for the 581-885F Embrittlement and 581-Sigma Phase Embrittlement Degradation Mechanisms because of a space at the end of the policy name. This issue has been resolved. (TS ID: 206565)

- Previously, in Oracle databases, if an RBI 581 Risk Analysis was linked to the 581-Atmospheric Tank Bottom Corrosion damage mechanism, then, when you calculated the analysis, the corrosion rate was not calculated. This issue has been resolved. (TS ID: 206566)

- Previously, the values in the Risk Summary ID and Risk Summary Description fields were incorrect on the Analysis datasheet for the 581-Internal Component Lining Damage and all the DMs that were related to RBI 581 Brittle Fracture Damage Evaluation, RBI 581 HTHA Damage Evaluation, and RBI 581 Mechanical Fatigue

Damage Evaluation. This issue has been resolved. (TS ID: 206568)

- The following fields have been removed from the RBI 581 Risk Analysis datasheet, and added to the Thinning and Lining Evaluation family:
 - The API 653 Maintenance Flag field has been added to the **Thinning Data** section of the RBI 581 Thinning and Lining datasheet.
 - The API 653 Maintenance Adjustments field has been added to the **Outputs** section of the RBI 581 Thinning and Lining datasheet.

(TS ID: 206578)

- Previously, when you calculated an RBI 581 Risk Analysis, validation messages did not appear if:
 - The value in the Target Minimum Damage Factor field for an individual DME was greater than the value in the Target Damage Factor Max field.
 - or-
 - The sum of the values in the Target Minimum Damage Factor fields for each DME was greater than the value in the Target Damage Factor Max field.

This issue has been resolved. (TS ID: 206589)

- Previously, if an RBI 581 Risk Analysis was linked to any of the following damage mechanisms, the field Is Cladding Present? was a required field:
 - 581-HIC/SOHIC - HF
 - 581-Hydrogen Stress Cracking
 - 581-Polythionic Acid Cracking

This issue has been resolved. Now, this field is not required to calculate the analysis. (TS ID: 206594)

- Previously, if you linked an RBI 581 Risk Analysis to 581-Internal Component Lining Damage, and if the value in the Liner Present field on an RBI 581 Thinning and Lining Damage Evaluation was *No* or blank, then an error message appeared when you calculated the analysis. This issue has been resolved. Now, the analysis is calculated, and the value in the Damage Factor field is *0*. (TS ID: 206596)
- Previously, if you linked an RBI 581 Risk Analysis to any of the following damage mechanisms, and if the value in the Liner Present field on an RBI 581 Thinning and Lining Damage Evaluation was *Yes*, then a validation message appeared when you calculated the analysis.

- 581-High Temperature Oxidation
- 581-Cooling Water Corrosion
- 581-High Temperature H2/H2S Corrosion
- 581-Amine Corrosion
- 581-Hydrofluoric Acid Corrosion
- 581-Sulfuric Acid Corrosion
- 581-Hydrochloric Acid Corrosion
- 581-Acid Sour Water Corrosion
- 581-High Temperature Sulfuric and Naphthenic Acid
- 581-Alkaline Sour Water Corrosion
- 581-Soil Side Corrosion

This issue has been resolved. (TS ID: 206596)

- Previously, if the value in either the Heat Traced? field or the Steam Out? field was Yes, the value in the Susceptibility field on an RBI 581 Cracking Damage Evaluation datasheet was incorrect. The value in the Operating Temperature field was not considered in calculating the susceptibility. This issue has been resolved as follows:

For the following amines...	...if the value in either the Heat Traced? field or the Steam Out? field is Yes, and the value in the Operating Temperature field is...	...then the value in the Susceptibility field is...
MEA and DIPA	Less than 100 Degrees Fahrenheit	Medium
DEA	Less than 140 Degrees Fahrenheit	Low
Other	Less than 180 Degrees Fahrenheit	Low

(TS ID: 206615)

- Previously, an error message appeared if you tried to calculate an RBI 581 Risk Analysis that was linked to the 581-Polythionic Acid Cracking damage mechanism. This issue has been resolved by correcting the RBI 581 Calculate Susceptibility – PASCC policy. (TS ID: 206616)
- Previously, the values in the Governing Damage Factor With Plan and Total Damage Factor With Plan fields on the datasheet of an RBI 581 Risk Analysis were not calculated. This issue has been resolved. (TS ID: 206617)

- Previously, when an RBI Component was linked to a Corrosion Loop, the default values specified in the **RBI 581 Admin Options** workspace were not copied to the analysis, consequence evaluations, or the Degradation Mechanism Evaluations (DMEs) in the component. This issue occurred if you had only the RBI 581 license. This issue has been resolved. (TS ID: 206633)
- Previously, if you logged in to Meridium Enterprise APM as a user who uses Metric Units of Measure, the values in the Allowable Stress, Flow Stress, and Calculated Tmin fields on the datasheet of an RBI 581 Risk Analysis were incorrect. This issue has been resolved. (TS ID: 210409)
- 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, when you promoted an asset to Asset Strategy Management, in the Action record that was created for an RBI Recommendation, the value in the Action Basis field was *RBI Recommendation*, instead of *RBI 581 Recommendation*. This issue has been resolved. (TS ID: 211502)
- 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: 211670)
- Previously, if you linked an RBI 581 Risk Analysis to the 581-Sulfuric Acid Corrosion damage mechanism, and if you did not enter a value in the Fluid Velocity field in the analysis, then no validation message appeared when you calculated the analysis. This issue has been resolved. (TS ID: 211694)
- Previously, the MI_DEGRADATION_MECHANISM_TYPES System Code Table contained the following invalid system codes:
 - Sulfide Stress Cracking (SSC)
 - 581-885F Embrittlement
 - 581-Mechanical Fatigue

Because of this, on an Inspection datasheet, in the **Inspection Confidence Evaluation** section, if you selected any of the aforementioned values in the **Degradation Mechanism** column, an error message appeared. This issue has been resolved by

removing the aforementioned system codes from the System Code Table. (TS ID: 217500)

- Previously, in an RBI 581 Risk Analysis, the values in the fields related to governing damage factors were calculated from the damage mechanisms that were *not* governing among all the damage mechanisms linked to a DME. This issue has been resolved. Now, the values in the fields related to governing damage factors are calculated only from the governing damage mechanisms. (TS ID: 219497)
- Previously, if the values in the Liner Present and the Online Monitoring Flag fields on an RBI 581 Thinning and Lining Damage Evaluation datasheet were Yes, then the Key Process Variable?, Electrical Resistance Probes?, and Corrosion Coupons? fields were *not* enabled. This issue has been resolved. Now, irrespective of the value in the Liner Present field, the Key Process Variable?, Electrical Resistance Probes?, and Corrosion Coupons? fields are enabled if the value in the Online Monitoring Flag field is Yes. (TS ID: 218237)
- Previously, on an RBI 581 Consequence Evaluation datasheet, if you selected the **Use Calculated Inventory** check box, and if you did not enter values in any of the fields in the RBI Component that were used to calculate the value in the Inventory Component Mass field, there was no validation message when you calculated the associated analysis. This issue has been resolved. (TS ID: 220545)
- Previously, the damage factor (DF) values of the damage mechanisms related to RBI 581 HTHA Damage Evaluation, RBI 581 Brittle Fracture Damage Evaluation, and RBI 581 Mechanical Fatigue Damage Evaluation were *not* considered while calculating the values in the Total Damage Factor Without Plan and Total Damage Factor With Plan fields in the associated RBI 581 Risk Analysis. Also, these values were not populated in the corresponding fields in the individual Degradation Mechanism datasheets. This issue has been resolved. (TS ID: 222407, 223638)
- Previously, the Date in Service field in the RBI 581 External Cracking Damage Evaluation family was not a required field. If you did not enter a value in the Date in Service field, however, the values in the Age and the Damage Factor fields were incorrect. This issue has been resolved. Now, Date in Service is a required field for RBI 581 External Cracking Damage Evaluation. (TS ID: 223635)
- Previously, when you generated an RBI 581 Recommendation, and then created an Inspection Task for the Action related to the RBI Recommendation, the **Override Interval** check box on the Inspection Task datasheet was *not* selected. This issue has been resolved. (TS ID: 224913)

- Previously, for a Storage Tank Bottom component, when you tried to link a PDM to the component, or a DM to an RBI 581 Risk Analysis, the 581-Internal Component Lining Damage DM was not listed in the **Degradation Mechanisms** section. This issue has been resolved. (TS ID: 225057)
- Previously, the Degradation Mechanism, *581-High Temperature Sulfidic and Naphthenic Acid*, was incorrectly labeled as *581-High Temperature Sulfuric and Naphthenic Acid*. This issue has been resolved. Now, the following changes have been made:
 - All instances of *581-High Temperature Sulfuric and Naphthenic Acid* in the UI are replaced with *581-High Temperature Sulfidic and Naphthenic Acid*.
 - In the MI_DEGRADATION_MECHANISM_TYPES System Code Table, the System Code ID *581-High Temperature Sulfuric and Naphthenic Acid* is set to *Inactive*. A new System Code ID, *581-High Temperature Sulfidic and Naphthenic Acid*, is added and set to *Active*.
 - For each baseline record in the following families, if the value in any of the following fields is *581-High Temperature Sulfuric and Naphthenic Acid*, then it is replaced with *581-High Temperature Sulfidic Acid and Naphthenic Acid*.

Family	Field
Materials for Degradation Mechanisms	Degradation Mechanism
Potential Degradation Mechanisms	Degradation Mechanism Description
RBI Strategy Mapping Configuration	Degradation Mechanism
Degradation Mechanisms	Degradation Mechanism <div style="border: 1px solid black; background-color: #ffffcc; padding: 5px;"> <p>Note: Additionally, the value in the Deg Mech Comments field is changed to <i>581-High Temperature Sulfidic Acid and Naphthenic Acid</i>.</p> </div>
RBI Degradation Mechanism Evaluation	Damage Mechanism <div style="border: 1px solid black; background-color: #ffffcc; padding: 5px;"> <p>Note: Additionally, the value in the Degradation Mechanism Description field is changed to <i>581-High Temperature Sulfidic Acid and Naphthenic Acid</i>.</p> </div>

(TS ID: 225438)

- Previously, in Oracle databases, while evaluating the 581-Soil Side Corrosion damage mechanism, the corrosion rate was not calculated and an error message appeared. This issue has been resolved. (TS ID: 227274)
- Previously, when you created a recurring Inspection Task, the **Override Interval** check box was selected instead of cleared. This issue has been resolved. (TS ID: 228615)
- Previously, in Oracle databases, while evaluating the 581-Atmospheric Tank Bottom Corrosion damage mechanism, if the value in the Thinning Type field was *General*, then the corrosion rate was calculated incorrectly. This issue has been resolved. (TS ID: 235960)
- Previously, when you tried to calculate multiple RBI 581 Risk Analyses simultaneously, sometimes, an error message appeared. This was because of a conflict while accessing DeployR Open. This issue has been resolved. (TS ID: 238145)
- Previously, in Oracle databases, if you duplicated or applied an RBI 581 Risk Analysis, and if the value in the Online Monitoring Flag field on an RBI 581 Cracking Damage Evaluation datasheet was *Yes (Y)*, then the value in the Online Monitoring Adjustment field was *not* copied. Instead, this field was populated with the default value of *1*. Because of this, when you calculated the copied analysis, the value in the Final Damage Factor field was incorrect. This issue has been resolved. (TS ID: 239260)
- Previously, the value in the Weighted NFNT Consequence Area field in an RBI 581 Consequence Evaluation was calculated incorrectly. Because of this, the values in other dependent fields were calculated incorrectly. This issue has been resolved by correcting the NFNT Consequence Area Calculation RScript. (TS ID: 242802)

Root Cause Analysis

- Previously, you could not create a Root Cause Analysis using imported templates when the Third Party Template check box was checked. This issue has been resolved. (TS ID: 187372)
- Previously, the add icon was enabled and the check boxes were selected by default on the **Select Failure modes/Hypothesis** page of the **Import** window when not expected. This issue has been resolved. (TS ID: 213305)

- Previously, the RCA data loader failed and produced an error due to the format of the Excel columns not being read as strings. This issue has been resolved. (TS ID: 221651)

Rounds

- Previously, in Rounds Data Collection, on iOS devices, a 2nd Route History record with In Progress status was created when you selected the **Mark Done** button. This issue has been resolved. (TS ID: 211769)
- Previously, the Rounds Data Loader documentation contained incorrect information. This issue has been resolved. In addition, the Template ID column in the Rounds Templates Data Loader Workbook has been moved to a more intuitive location. (TS IDs: 211247, 237738)
- Previously, in Rounds Data Collection, an incorrect Route History status was displayed when a user who was not subscribed to Offline access marked a Route Done via the Route Map pane in the Offline mode. This issue has been resolved. (TS ID: 213406)
- 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: 210198)
- 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: 224218)
- 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: 224213)

- Previously, on hand-held devices, when you connected the device to the server, sync issues occurred and the device could not connect to the server. This issue has

been resolved. (TS ID: 233258)

- Previously on a Windows Mobile hand-held device, an error message appeared when you installed the prerequisite software and the APM Mobile Framework, and then configured the device. This issue has been resolved. (TS ID: 209607)
- Previously, in Rounds Designer, when you added a new or an existing template to a MLTG, duplicate MLTs were created or linked. This issue has been resolved. (TS ID: 231020)
- Previously, when you logged in to Meridium Enterprise APM, as a user assigned to Operator Rounds Admin Security Group, you could not access the **Rounds Admin** page. This issue has been resolved. (TS ID: 224249)
- Previously, in Rounds Designer, if you selected a checkpoint where the Asset ID field was populated but the Asset Key field was not populated (e.g., an Asset ID such as *all floor areas* or *west stairwell*, which is not an asset with a record in the Meridium Enterprise APM database), and then used the **Add Checkpoint Template** option to add character measurement locations, then the transaction failed. This issue has been resolved. (TS ID: 224242)
- Previously, on all tablets, when you created a Standalone recommendation in Rounds Data Collection, a duplicate record was created. This issue has been resolved. (TS ID: 213990).
- Previously, in the Rounds Data Loader, when a Measurement Location was linked to a valid asset, the Measurement Location inherited its site key from the associated Route or its predecessor, rather than from the asset. This issue has been resolved. (TS ID: 231501)
- Previously, on iOS devices, when you marked a Route Done on the **Rounds Data Collection** page, a duplicate Route History record with an *In Progress* status was created. This issue has been resolved. (TS ID: 211769)
- Previously, on Windows Embedded Hand-held 6.5 devices, when you disconnected the device from the server, and then tried to synchronize the device again, sync issues occurred and, in some cases, the device would shut down. This issue has been resolved. (TS ID: 233245)
- Previously, in Rounds Data Collection, when you created a new Route with a

schedule, and then added MLs / LRs without schedule, you were not able to open the Route from the **Due Items** page in offline mode. This issue has been resolved. (TS ID: 235925)

- Previously, on Windows 8.1, Android, and iOS devices, when you opened the **Rounds Data Collection** page for a Route, and then selected an ML / LR, you were not able to see any linked Reference Documents in the **Reference Document** section. This issue prevented images newly added to Recommendations from being displayed in the **Reference Documents** section of the **Rounds Data Collection** page. This issue has been resolved. (TS ID: 223863)
- Previously, in the Rounds Routes Data Loader, if an error occurred when processing data for a row, the data was not loaded for that row and the subsequent rows that are part of the same batch. This issue has been resolved. (TS ID: 236718)
- Previously, in a baseline database, although the State Management configuration was inherited from the Performance Recommendation family, the State Management control did not appear on the **Operator Rounds Recommendation** datasheet. This issue has been resolved. (TS ID: 187460)
- Issues related to the Windows Mobile hand-held device that were resolved in V3 versions up to V3.6.0.11.0 are now also resolved in V4.2.0.0. (TS ID: 194032)
- Previously, if you selected **Mark Done** on a Route while a reading was still being uploaded, a duplicate Route History record with a status of *In Progress* was sometimes created. This issue has been resolved. (TS ID: 243344)
- Previously, if the Rounds upgrade utility failed to convert a schedule that included an end date, the utility stopped running. This issue has been resolved. Now, if this type of error occurs, the issue is recorded in the Rounds upgrade log and the utility continues running. (TS ID: 237795)
- Previously, when you used the Rounds Routes Data Loader to create standalone Measurement Locations, they were not linked to Checkpoint Tasks. This issue has been resolved. (TS ID: 244431)

SIS Management

- Previously, the layout of the datasheet for the Logic Solver did not appear properly. This issue has been resolved. (TS ID: 199526)

- Previously, the datasheet for the Logic Solver did not display the entire information. This issue has been resolved. (TS ID: 199528)
- Previously, when promoting a consequence to ASM in a new Hazop/What If analysis record, an empty error message appeared. This issue has been resolved. (TS ID: 229787)
- Previously, if you selected or cleared the **Hazard For Concurrent safe state** check box in an Instrumented Function, your change was not saved. This issue has been resolved. (TS ID: 232737)
- Previously, in the **Export to Exida Project** window, the word **import** was displayed in the stem sentence in the **Select Instrumented Functions** and **Select Protective Loops** tabs. This issue has been resolved. (TS ID: 210727)
- Previously, the **Availability** value was used in LOOP calculations to calculate the value of the **Meets Availability Target?** value. This issue has been resolved. Now, LOOP calculations are based on the **Risk Reduction Factor** value. (TS ID: 213592)
- Previously, proof tests contained a date validation where the completion date could not be greater than today. Because validation is performed on the server, in cases where there was a difference between the server time and time listed on the proof test, the proof test could not be saved. This issue has been resolved. The restriction where completion date could not be greater than today has been removed. (TS ID: 244396)

Thickness Monitoring

- Previously, the FormatValue rule did not allow a user who had a deleted V3 Thickness Monitoring Technician Human Resource Record that was recreated as the V4 equivalent, MI Thickness Monitoring Inspector role, to populate the Measurement Taken By field. This issue has been resolved. Now, a user once deleted from the V3 database and then added to the V4 database will have the Measurement Taken By field is correctly populated. (TS ID: 202824)
- Previously, when the Organize TMLs function was used to move TMLs from one TML Group to a new or existing TML Group, the corrosion analysis for the TML Group that received the moved TML was analyzed automatically; however, the source TML Group was not analyzed. This issue has been resolved. Now, both the source TML Group and the TML Group that received the moved TML are correctly processed by the corrosion analysis. (TS ID: 206751)


- Previously, after creating a new TM asset, the new asset did not appear on the Remaining Life chart even though it fit the requirements for the query. This issue has been resolved. (TS ID: 228764)
- Previously, when using the Bulk Analyze functionality in Thickness Monitoring, an error occurred after saving. This issue has been resolved. (TS ID: 229407)

Restored Features - V4.2.0.0

The following V3.x features were deferred from previous V4.x releases, but are now available in V4.2.0.0.

AMS Analytics

- You can now view alert trends by severity (**Asset Alert Trend by Severity** graph) and by description (**Asset Alert Trend by Description** graph) from the AMS Asset list on the **AMS Analytics Overview** page.

 **Note:** The **Asset Alert Trend by Severity** graph was previously called *Alert Trend by Asset*. The **Asset Alert Trend by Description** graph was previously called *Alert Trend by Asset by Event Description*.

(TS ID: 180029)

- You can now view Detailed Reports for an AMS Asset, Alert, or Event from the corresponding list on the **AMS Analytics Overview** page. (TS ID: 165379)

Asset Criticality Analysis

- You can now export single or multiple ACAs in a single excel file of same risk type, modify the risk value and import ACA back into the Meridium Enterprise APM application.

(TS ID: 204443, 218659)


- You can now access Associated Pages links for an Analysis, ACA System, and Functional Location or Equipment. (TS ID: 206193)

Asset Health Manager

- You can now view character readings on the health indicator trend chart. (TS ID: 187358)

GE Analytics


- GE Analytics and connection to GE System 1, including the GE Tag node used in Policy Designer. (TS ID: 101904, 124520)

 **Notes:**

- This module has been renamed from *GE System 1 Integration* to *GE Analytics*. Throughout the V4.2.0.0 documentation, including these Release Notes, we refer to this module by its new name. (TS ID: 166297)
- KPIs for GE Analytics are not yet available.

Generation Availability Analysis

- Generation Availability Analysis is now available.

 **Note:** This module has been enhanced and renamed from *Generation Management* to *Generation Availability Analysis*. Throughout the V4.2.0.0 documentation, including these Release Notes, we refer to this module by its new name.

Root Cause Analysis

- Once a logic tree element has been selected to be imported, you have the capability to import children that are associated with the selected element. (TS ID: 175309)

Rounds

- When taking a reading or creating a recommendation, you can now use a device's location service capabilities to save relevant geolocation data. (TS ID: 130009)

Obsolete Features - V4.2.0.0

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

Asset Strategy Implementation

- Visibility of Actions linked to Health Indicator sources in ASI has been deprecated. (TS ID:143567)
- Ability to use Rounds has been deprecated.

GE Analytics

- Health Indicators are no longer used to track GE System 1 KPIs. As a result, the following queries are no longer used in Meridium Enterprise APM. These queries have been marked as deprecated and are located in the folder `\\Public\Meridium\Modules\GE\Dashboard Queries`:
 - Emissions KPI
 - Emissions Technology Health Wrapper
 - Lubrication KPI
 - Lubrication Technology Health Wrapper
 - Performance KPI
 - Performance Technology Health Wrapper
 - Platform Health
 - Platform Health Base
 - Tech HIs List
 - Vibration KPI
 - Vibration Technology Health Wrapper

In addition, the GE Technology Health policy is no longer used. An alternate method for measuring GE System 1 KPIs will be available in a future release.

(TS ID: 166533)

Generation Availability Analysis

- Meridium Enterprise APM now automatically sorts the order of events based on start date rather than creation date. Therefore, the Resequence Incidents query is no longer used to sort Primary Events.

(TS ID: 197598)

- Generation Company, Generation Plant, and Generation Unit can now be created via the **GAA Administrator** page. Therefore, the following queries are no longer used in Meridium Enterprise APM:

- Create Company
- Create Plant
- Create Unit

(TS ID: 197608)

- Meridium Enterprise APM now considers the Daylight Saving Time adjustments for calculations automatically. Therefore, Daylight Saving Time Reference records are no longer used to include Daylight Saving Time adjustments when calculating the values in GAA. The Daylight Saving Time Reference family has been removed. (TS IDs: 227156, 217942)

- Support for EIA energy source codes and reporting to EIA has been discontinued. Hence, all the related fields have been removed from all the datasheets in the Generation Availability Analysis. (TS IDs: 197605, 197607)

- Support for AER fuel codes has been discontinued. Hence, all the related fields have been removed from all the datasheets in the Generation Availability Analysis. (TS IDs: 197605, 197607)

- Support for Common fuel codes has been discontinued. Hence, all the related fields have been removed from all the datasheets in the Generation Availability Analysis. (TS IDs: 197605, 197607)

- The following fields have been removed from the datasheets in the Generation Availability Analysis:

Datasheet	Fields Removed
GAA Company	<ul style="list-style-type: none"> • Company Financial Web Address • County • Enterprise <5 - 8> Code • Enterprise <5-8> Description • Stock Symbol

Datasheet	Fields Removed
GAA Plant	<ul style="list-style-type: none"> • DST Region • Enterprise <5 - 8> Code • Enterprise <5-8> Description
GAA Unit	<ul style="list-style-type: none"> • Enterprise <5 - 8> Code • Enterprise <5-8> Description • Report EIA906 Annually? • Report EIA906 Monthly? • Station • Unit Hyperlink Address • Unit Web Site Link

Datasheet	Fields Removed
GAA Performance	<ul style="list-style-type: none"> • Quaternary Ash Softening Temp • Quaternary Avg Heat Content • Quaternary Fuel BTUs - Contract • Quaternary Fuel BTUs - Electrical Generation • Quaternary Fuel BTUs - Plant Heat and Cooling • Quaternary Fuel BTUs Total • Quaternary Fuel BTUs - Process Steam • Quaternary Fuel Code • Quaternary Grindability Index • Quaternary Percent Alkalines • Quaternary Percent Ash • Quaternary Percent Moisture • Quaternary Percent Sulfur • Quaternary Quantity Burned • Quaternary Quantity Burned Unit of Measure • Tertiary Ash Softening Temp • Tertiary Average Heat Content • Tertiary Fuel BTUs - Contract • Tertiary Fuel BTUs - Electrical Generation • Tertiary Fuel BTUs - Plant Heat and Cooling • Tertiary Fuel BTUs Total • Tertiary Fuel BTUs - Process Steam • Tertiary Fuel Code • Tertiary Grindability Index • Tertiary Percent Alkalines • Tertiary Percent Ash • Tertiary Percent Moisture • Tertiary Percent Sulfur • Tertiary Quantity Burned • Tertiary Quantity Burned Unit of Measure

(TS IDs: 229627, 234310)

Risk Based Inspection

- Inspection Grouping is no longer used in Meridium Enterprise APM. All fields related to Inspection Grouping have been removed from Risk Based Inspection datasheets. (TS ID: 61244)
- The following fields have been deprecated from the following families:

Field	Family
Base Interpolated Damage Factor	<ul style="list-style-type: none"> • RBI 581 Cracking Damage Evaluation • RBI 581 External Cracking Damage Evaluation
Calculated Number of Inspections	<ul style="list-style-type: none"> • RBI 581 Cracking Damage Evaluation • RBI 581 External Cracking Damage Evaluation
Carbonate Concentration in Water	<ul style="list-style-type: none"> • RBI 581 Cracking Damage Evaluation

(TS IDs: 194017, 214254)

Deferred Features - V4.2.0.0

The following features are not available in Meridium V4.2.0.0, but are planned for a future release.

Asset Health Manager

- 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

- Searching in SAP for the standard text value that you want to append to the value in the Long Text field of a Maintenance Item record. (TS ID: 117765)
- Managing all maintenance packages for all operations under a particular task list. (TS ID: 117767)
- Managing asset and action assignments when executing copy/paste operations. (TS ID: 144110)
- The option to exclude child items when copying Work Management Items. (TS ID: 147790)
- Searching for the SAP Task List that you want to use to create a new Task List record. (TS ID: 232661)
- Using a link to manage the object list records that are linked to maintenance item records represented by the selected node. (TS ID: 238443)
- Creating implementation roles and filtering the WMI tree by each role. (TS ID: 243573)

Asset Strategy Management

- Migrating strategies between databases.

Asset Strategy Optimization

- Optimizing Actions. (TS ID: 65780)

Calibration Management

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

Generation Availability Analysis (GAA)

- Upgrading GAA from previous versions to V4.2.0.0 (TS ID: 187475)
- The following Security Groups in GAA:
 - MI Generation Management Forecast
 - MI Generation Management Nameplate
 - MI Generation Management Security(TS IDs: 184655, 184663, 184661, 184660, 184659, 184657, 184653, 184652, 184646, 184656)
- The following families in GAA:
 - Generation Forecast
 - Generation Fuel Annual Report
 - Generation Fuel Monthly Report
 - Generation Fuel Report
 - Generation Nameplate
 - Generation Nameplate Combined Cycle
 - Generation Nameplate Diesel
 - Generation Nameplate Fluidized Bed
 - Generation Nameplate Fossil Steam
 - Generation Nameplate Gas Turbine
 - Generation Nameplate Hydro
 - Generation Nameplate Miscellaneous

- Generation Nameplate Nuclear
- Generation Pool
- Generation Role
- Generation Role Assignment
- Generation Role Definition
- Generation Role Field Configuration
- Generation Unit Loading Profile
- Generation Unit Starting Profile

(TS IDs: 184655, 184663, 184661, 184660, 184659, 184657, 184653, 184652, 184646, 184656)

- The following fields and related functionality from the Performance record:

Tab	Fields
Unit Identification	<ul style="list-style-type: none"> • Capacity History Statistics Type • Zone • Refresh Incident Rollup
Unit Generation Performance	<ul style="list-style-type: none"> • Demonstrated Max Capacity (G) • Demonstrated Max Capacity (N) • Override Reserve Shutdown Hours • Sum of fuel BTUs • Heat Rate
Unit Starting Characteristics	<ul style="list-style-type: none"> • YTD attempted unit starts • YTD actual unit starts • YTD start reliability
Unit Primary Fuel Information	<ul style="list-style-type: none"> • EIA Fuel Reporting • Primary Quantity Burned Unit of Measure • Primary Fuel BTUs - Contract • Primary Fuel BTUs - Electrical Generation • Primary Fuel BTUs - Plant Heating and Cooling • Primary Fuel BTUs - Process Steam • Primary Fuel BTUs - Total

Tab	Fields
Unit Secondary Fuel Information	<ul style="list-style-type: none"> • EIA Fuel Reporting • Secondary Quantity Burned Unit of Measure • Secondary Fuel BTUs - Contract • Secondary Fuel BTUs - Electrical Generation • Secondary Fuel BTUs - Plant Heating and Cooling • Secondary Fuel BTUs - Process Steam • Secondary Fuel BTUs - Total

(TS ID: 234310, 234410)

- The following fields and related functionality from the GAA Plant and GAA Unit record:

Datasheet	Fields
GAA Plant	<ul style="list-style-type: none"> • Date/Time Alternate Format • GADS Region • GADS Subregion
GAA Unit	<ul style="list-style-type: none"> • Demonstrated Maximum Gross Capacity • Demonstrated Maximum Net Capacity • Summer Net Capacity • Winter Net Capacity

(TS ID: 229627)

Foundation

Asset Criticality Analysis (ACA)

- Promoting analyses to and from ACA. (TS ID: 160858)

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 Analytics

- KPIs for GE Analytics. (TS ID: 162791)

Metrics and Scorecards

- Selecting columns to include in a Scorecard. (TS ID: 70641)
- The GM (Generation Management) cube is deferred from V4.x. Any previously deployed GM (Generation Management) cube, which worked in V3.6 and earlier releases, will continue to work in any V4.x release 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

- Creating a bulk What-If analysis. (TS ID: 73475)

Root Cause Analysis

- Publishing an analysis in RCA. (TS IDs: 61730, 103887, 68585, 63432)
- 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 in 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)
- 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 - V4.2.0.1.0

The following release notes are available for Meridium Enterprise APM V4.2.0.1.0:

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

You can also view the APM Connect release notes.

Enhancements - V4.2.0.1.0

The following enhancements have been made in V4.2.0.1.0.

Asset Hierarchy

- Asset Hierarchy now supports complex hierarchies that may not follow the traditional structure of Functional Location and Equipment relationships. You can now build an Asset Hierarchy using other family attributes or iterative family relationships. A new family, MI_AH_ENTY, has been added to facilitate this enhancement. (TS ID: 244817)

Asset Strategy Implementation

- You can now link an existing task list in SAP to maintenance items. (TS ID: 244117)

Foundation

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: 252774)

- Translations have been updated for all supported languages in Meridium Enterprise APM.

Policy Designer

- The following dates and times are now displayed and saved in the standard ISO date format *YYYY-MM-DD HH: mm: ss*, where the time values use a 24-hour time format:
 - Dates and times that are written into the body of email messages.
 - Dates and times that are written into the Description field of Policy Recommendation and Policy Event records that are generated by policies.
 - Dates and times that are included in the validation and execution result text for the Return Value node.

In these areas, the standard ISO date format is used regardless of any global date format settings or operating system settings.

(TS IDs: 247324, 247323, 247589, 247590)

Rounds Designer

- You can now use Rounds Data Collection on small screen Android, iOS or Windows 8.1 devices with a minimum screen resolution of 320 pixels wide. (TS ID: 252502)
- In Rounds Designer, to support better localization, the JSON schedule text is no longer displayed in Schedule fields on Routes and Checkpoint Tasks in the user interface. To enable users to copy the JSON schedule text (e.g. for use in a data loader), alternative Route and Checkpoint Task datasheets are provided that show the Schedule Text field, from which you can copy and paste. (TS ID: 254282)

Resolved Issues - V4.2.0.1.0

The following issues existed in one or more previous releases and have been resolved in V4.2.0.1.0.

AMS Analytics


- Previously, when a scheduled AMS Quartz job terminated before completion, the job did not restart automatically. Jobs might be terminated due to the application going offline or a system failure event. This issue has been resolved. Now, if a scheduled job is terminated, the scheduled job will be restarted automatically. (TS ID: 247845)

Asset Health Manager

- Previously, in Asset Health Manager, negative values were not displayed correctly on a Trend chart unless health indicator limit values were defined. This issue has been resolved. (TS ID: 253042)
- Previously, if a large number of automatic Health Indicator creation requests were generated quickly (for example, by running the Tag to Asset Data Loader), the memory used by the Meridium AHI Service increased significantly. This issue has been resolved. (TS ID: 255141)

Asset Strategy Implementation

- Previously, if you deleted a WMI that contained child items that were linked to actions, then only the parent WMI was deleted, and the children WMIs and linked actions remained in the Meridium Enterprise APM database but were not linked to a parent. This issue has been resolved. Now, in this scenario, the parent WMI and any child WMIs are deleted, and the linked actions appear in the **Unpackaged Actions** section. (TS ID: 241614)

 **Note:** This behavior is different than V3. Starting in V4.2.0.1.0, if you want to retain the child WMIs, you must copy them to another location prior to deleting the parent WMI.

- Previously, when a user whose culture setting was German opened an existing package and navigated to an object list in the **SAP** section, an error message appeared and the datasheet was not displayed as expected. This issue has been resolved. (TS ID: 244762)

- Previously, when you imported a task list, an error message may have appeared stating that the object reference was not set to an instance of an object. This issue has been resolved. (TS ID: 246288)

Asset Strategy Management

- Previously, if the Template Evaluation Date on a template had passed and you attempted to update other fields and save the changes, an error message appeared. This issue has been resolved. Now, if you update the Template Evaluation Date to a future date, you will be able to make updates to other fields. (TS ID: 241606)
- Previously, if you assigned an existing action to mitigate a risk, and then attempted to cancel the process by changing the state of the strategy back to *Active*, then the state remained modified and the added action was not removed as expected. This issue has been resolved. (TS ID: 241609)
- Previously, when you attempted to save or expand a risk or mitigation that utilized a risk matrix with protection levels, an error message appeared. This issue has been resolved. (TS ID: 242439)
- Previously, when you used the Asset Strategy Management (ASM) Templates Data Loader to load strategy template records, performance issues occurred when loading APT content. This issue has been resolved. (TS ID: 233647)
- Previously, you could consolidate actions in an asset strategy template, although the action should not have been allowed. This issue has been resolved. (TS ID: 244053)
- Previously, a number of instances of text in ASM, ASI, RCM, and FMEA were not translated as expected. These issues have been resolved. (TS IDs: 185447, 243063, 244193, 244764, 244765, 244766, 244767, 245214, 249556)
- Previously, you could not import maintenance items from SAP directly into Meridium Enterprise APM. This issue has been resolved. (TS ID: 254251)

Calibration Management

- Previously, when you selected the Unlink Asset(s) button () to unlink the selected equipment, the rest of the equipment listed in the **Linked Assets** section was also

unlinked. This issue has been resolved. (TS ID: 250879)

- Previously, when creating a Test Equipment record, the following issues occurred:
 - No warning message appeared when you saved a Test Equipment record before providing values in the mandatory fields.
 - An error message appeared when you tried to save a Test Equipment record even after providing values in the mandatory fields.

These issues have been resolved.

(TS ID: 247794)

- Previously, when you accessed the localized German version of the Calibration Management module, you were not able to create an Analog Profile Template or a Discrete Profile Template. This issue has been resolved. (TS ID: 244901)

Cognitive Analytics

- Previously, when the maintainableitem.py script was run via a cognition, the values specified in the **Reference** field of a Classifier node were not handled as expected. This issue has been resolved. Now, if a Reference value does not correspond to a List Reference for a specific Standard List sub-set, but does match a word on the Generic sub-set, the Generic sub-set is used, but any matching words are omitted. As a result of this fix, the results of the cognition now match the results returned in the **Test Results** workspace when running the script via the **Scripts** page. (TS ID: 251609)

Deployment

- Previously, during database upgrade, site keys were not set properly for child records in which the Has Site Reference relationship existed. This issue has been resolved. (TS ID: 254087)
- Previously, when entering Database Server Connection Information, if Oracle Host, Port and Service information was entered instead of an Oracle Alias, then an error preventing connection occurred. This issue has been resolved. (TS ID: 254974)

Foundation

Configuration Manager

- Previously, when exporting the family policy for a relationship family, the .ZIP file generated did not contain the model file for the policy. This issue has been resolved. (TS ID: 246347)
- Previously, when you accessed a localized version of the Configuration Manager module, the following issues occurred:
 - On the **Fields** page, in the **Behavior** section, the numeric values displayed upon selecting the *Percent* option in the **Format Value** box were not properly localized.
 - On the **Fields** page, in the **Behavior** section, the numeric values displayed in the **Validation** box were not properly localized.
 - On the **Units of Measure and Conversion** page, in the **Conversion** section, the numeric values displayed in the **Base**, **Numerator**, **Denominator**, and **Offset** boxes were not properly localized.

These issues have been resolved. Now, depending on a Security User's culture setting, when appropriate, decimal points (e.g., 12.34) in numeric values entered in the **Behavior** and **Conversion** section will be converted and displayed automatically to decimal commas (e.g., 12,34).

(TS ID: 244706)

- Previously, there was a performance lag when you exported the metadata *Records and Links* in Excel format. This issue has been resolved. (TS ID: 242475)

Dashboards

- Previously, the main dashboard page would not open if you had Japanese characters in your first or last name. This issue has been resolved. (TS ID: 251778)

Datasheets

- Previously, when you accessed a localized version of any of the datasheets, the custom datasheet field captions that were edited through Datasheet builder were not properly translated. This issue has been resolved. (TS IDs: 241382, 241397, 244607)
- Previously, when you accessed a localized version of any of the datasheets, the names of the different tabs were not properly translated. This issue has been resolved. (TS IDs: 241390, 251106)

Graphs

- Previously, in Graphs, in localized versions of Meridium Enterprise APM, the culture settings did not apply appropriately for values containing decimals. This issue has been resolved. (TS ID: 247962)
- Previously, in Graphs, the Dimension Mapping function did not persist in all available languages. This issue has been resolved. (TS ID: 245163)

Maps

- Previously, if you used an expression column, the map would not load. This issue has been resolved. (TS ID: 244638)
- Previously, if your query contained a union join, it would not build the map. This issue has been resolved. (TS ID: 244636)
- Previously, when you tried to access the End User Help for Maps in Meridium Enterprise APM, an error occurred. This issue has been resolved. (TS ID: 244582)
- Previously, in the Meridium Enterprise APM mobile client, maps that were larger than 800 data points were slow to load. This issue has been resolved. To facilitate this fix, the maximum number of data points for maps is now 500 data points. (TS ID: 244388)

Mobile

- Previously, in Dashboards, internal hyperlinks to module overview pages did not work in the Hyperlinks Widget. This issue has been resolved. (TS ID: 254668)
- Previously, when using the Meridium Enterprise APM mobile application, if your Internet connection was lost or you logged out of the application while online, the login screen did not properly recognize whether you were online or offline, and you had to restart the application in order to log in again to the online version. This issue has been resolved. (TS ID: 241155)
- Previously, the version number of the Meridium Enterprise APM mobile application was always shown as 4.0.0. This issue has been resolved. Each update will now be labeled with the correct version number. (TS ID: 236803)
- Previously, Meridium Enterprise APM install and uninstall scripts did not have a digital signature, which led to some issues with installing the product on Windows

devices. This issue has been resolved. (TS ID: 231162)

Risk Matrix

- Previously, when using a Risk Matrix with a protection level slider, the following issues existed:
 - The risk ranks were incremented by factors of 10.
 - The protection level slider did not retain its selection when risk ranks with protection level values were saved.
 - The risk matrix in the analysis did not display the correct values after the risk matrix was reloaded.
 - You could set the mitigation protection level to be higher than the unmitigated protection level.
 - Mitigated risk assessments did not accurately reflect the appropriate unmitigated protection level value.
 - The unmitigated risk was not populated when the matrix was initially loaded.

These issues have been resolved.

(TS IDs: 232668, 232958, 239709, 239756, 239759, 239757)

Queries

- Previously, for users whose culture setting was German, query date prompts displayed the value *NaN* and did not accept selections. This issue has been resolved. (TS ID: 254272)
- Previously, when creating a hyperlink on a field in the **Design** workspace, if you selected the *Meridium APM* or *Manual* option in the **Specify Parameters** section of the **URL Builder** window, an error message appeared. This issue has been resolved. (TS ID: 251176)
- Previously, you could not set defaults for a multi-value prompt on a VARCHAR field. This issue has been resolved. (TS ID: 250460)
- Previously, after removing a family in the **Design** workspace, an error message appeared if you navigated to the **SQL** workspace. This issue has been resolved. (TS ID: 244336)

- Previously, queries using multi-value parameters would not return results in dashboard widgets. This issue has been resolved. (TS ID: 242069)
- Previously, the field captions in the **Design** workspace were not localized. This issue has been resolved. (TS ID: 241853)

Translations

- Previously, in Meridium Enterprise APM query prompts, if your Culture setting was German, then you were unable to select date and time parameters to properly show a graph for the indicated time period. This issue has been resolved. (TS ID: 253334)
- Previously, regardless of a Security User's culture setting, numeric values would only be recognized as valid if they contained decimal points (e.g., 12.34) or no decimal marks. Numeric values that should have, based on a Security User's culture setting, contained decimal commas (e.g., 12,34) as decimal marks were not recognized as valid values if they contained decimal commas. This issue has been resolved. (TS ID: 244644, 247962)
- Previously, when you accessed a localized version of any of the datasheets, result grids, offline forms, data grids, risk matrices, bulk data forms, or overview pages, the number formats were not properly localized for different cultures. These issues have been resolved. (TS IDs: 255323, 257144, 256118, 256918, 253670, 249644, 244813)

GE Analytics

- Previously, when GE Tags from a GE system were linked to assets (i.e., equipment or functional locations), their corresponding GE Tag Events were not linked directly to the asset as well. Because of this, the GE Tag Events did not appear on the **Health Summary** page for the asset. This issue has been resolved. Now, GE Tag Events are linked to the same asset to which GE Tags are linked. (TS ID: 247261)
- Previously, when the GE service processed a SmartSignal Hierarchy with missing child nodes, the service failed to process subsequent nodes. This issue has been resolved. Now, if there is a missing child node(s) in a SmartSignal Hierarchy, then the missing node is logged and the service continues to process subsequent nodes. (TS ID: 244667)

Generation Availability Analysis

- Previously, when you deleted a Contributing event, the Primary Event associated with the Contributing Event was also deleted. This issue has been resolved. (TS ID: 254133)
- Previously, when you accessed a localized version of the Generation Availability Analysis module, the following issues occurred:
 - In the **Unit Summary** workspace for a GAA Unit, in the **Events Breakdown** section, the data in the **Highest Impact Events** subsection appeared misaligned, and was not localized. (TS IDs: 253327, 243969)
 - On the **GAA Overview** page, the data in the **Events and Performance Report Statistics** grid was not localized.(TS ID: 253323)
 - In the **Unit Summary** workspace for a GAA Unit, in the **Events Breakdown** section, the data on the **Impact of Event Types** graph and the **Frequency of Event Types** graph was not localized. (TS ID: 253321)
 - In the **Performance & Reports** workspace for a GAA Unit, in the **Performance Records** section, the month names were not localized. (TS ID: 244199)
 - In the **Performance & Reports** workspace for a GAA Unit, in the **Performance Records** section, when you select the Search button (🔍), the text in the **Search By State** box was not localized. (TS ID: 243972)
 - In GAA application settings, in the **Capacity** section for a GAA Unit, the column headings were not localized. (TS ID: 241387)

These issues have been resolved.

- Previously, on the **GAA Overview** page, when you selected the Edit Filters button (🔧), set the **Start Date** to any year before the year containing data, and then set the **End Date** to any year after the year containing data, data did not appear on the **General Performance Metrics** graph. This issue has been resolved. (TS ID: 240820)

Hazards Analysis

- Previously, when you accessed a localized version of the Hazards Analysis module, the text in the **Deviations, Causes, Consequences**, and **Safeguards** sections within a HAZOP Analysis were not translated. This issue has been resolved. (TS ID: 254579)
- Previously, when you accessed the German version of the Hazards Analysis module, the **Mitigated Risk** value in the **Consequences** section was not displayed and the risk rank values in the **Consequences** and **Safeguards** sections were not displayed in the correct format. This issue has been resolved. (TS ID: 253038)

Inspection Management

- Previously, Inspection recommendation alert emails scheduled to be sent by the Meridium Enterprise APM system failed. This issue has been resolved. Now, emails alerts are sent to assigned users when Inspection recommendations are coming due. (TS IDs: 253062, 257697)
- Previously, when a user accessed a localized version of the Inspection Management module, the following issues occurred:
 - On the **IM Admin** page, in the **Manage Human Resources** section, the column values were not properly translated. (TS ID: 252879)
 - Text on error messages was not properly translated. (TS ID: 252024)

These issues have been resolved.

- Previously, when creating an Inspection on an asset whose Auto-Generate Findings option was enabled, if the asset for the Inspection contained a large number of profiles (i.e., 80 Inspection profiles), then the user would experience a delay. This issue has been resolved. (TS ID: 247605)

Life Cycle Cost Analysis (LCC)

- Previously, when a user accessed a localized version of the Life Cycle Cost Analysis (LCC) module, the following occurred:
 - When adding an invalid Distributed Cost, the warning message header was not properly translated. (TS ID: 255861)
 - On the **Add/Edit Resource** window, **Add Known Interval Cost** window, and **Add Distributed Cost** window, Cost values could not be entered using commas. (TS ID: 255841)
 - On the **LCC Summary** page, in each chart in the list, the X-axis, Y-axis, tool tips, and number values were not properly translated. (TS ID: 254001)
 - On the **LCC Summary** page, in the **Definition** section, the percent pattern was not correct, therefore you could not enter a value correctly with a comma and save. (TS ID: 253988)
 - On the **Import Operating Cost Data** window, when switching from importing a strategy action to importing a work history to the Cost Data grid, the **Data Mapping** section was missing. (TS ID: 253806)
 - On the **Import Operating Cost Data** window, when importing a strategy action, the **Finish** button was disabled on the **Confirmation** screen. (TS ID: 253793)
 - In the **Operating Profile** section, the Operating % values were not properly translated. (TS ID: 253790)

- On the **Import Operating Cost Data** window, on the **Data Selection** screen, the table headers were not properly translated. (TS ID: 253769)
- On the **LCC Summary** page, in the **Definition** section, the last updated line date format was not properly localized. (TS ID: 253282)
- In the **Cost Data** section, the UI appeared broken with only a partial amount of periods and no scroll capability. (TS ID: 247487)

These issues have been resolved.

Metrics and Scorecards

- Previously, when you accessed a localized version of the Metrics and Scorecards module, the following issues occurred:
 - On the KPI details page, in the **History** section, the column headings were not translated properly. (TS ID: 244440)
 - On the KPI details page, in the dial chart section, the text on the chart was not translated properly. (TS ID: 244440)
 - On the Scorecard details page, the text in the **Filters** menu, was not translated properly. (TS ID: 244440)
 - On the **Manage Cubes** page, the Cube name and the **Last processed on** text were not translated properly. (TS ID: 244440)
 - On the **Manage Cubes** page, the text in the **Analysis Services Server** box was not translated properly. (TS ID: 244440)
 - The text in the error messages and the confirmation messages was not translated properly. (TS ID: 244440)
 - In Metric View, the field captions appearing on the **Calculated Measure** window were not translated properly. (TS ID: 244440)
 - On exporting the drill-through result, the name of the CSV file generated was not translated properly. (TS ID: 244440)
 - In Metric View, on the **Edit graph settings** window, the numeric values in the **Minimum** and **Maximum** boxes were not translated properly. (TS ID: 244706)
 - Even if a Security User's culture setting required that decimal commas be used instead of decimal points, the decimal points (e.g., 12.34) in numeric values entered in the **Limits** section of the KPI design page were not converted automatically to decimal commas (e.g., 12,34) when the KPI was saved. (TS ID: 247178)
 - The subject and the message in the alert emails were not translated properly. (TS ID: 25213)

These issues have been resolved.

Policy Designer

- Various issues related to the display of numbers in cultures other than US-English have been resolved. (TS ID: 244707)

Production Loss Analysis (PLA)

- Previously, when a user accessed a localized version of the Production Loss Analysis (PLA) module, the following issues occurred:
 - In the **Production Summary** workspace, the tool tips in the Production Data Summary Plots were not properly translated. (TS ID: 253510)
 - In the **Production Data** workspace, in the **Production Loss** grid, the **Loss** column and **Equivalent Downtime Hours** column values were not translated properly. (TS ID: 253507)
 - In the **Production Data** workspace, extra values appeared in the **Unaccounted Loss** column. (TS ID: 253503)
 - On the **PLA Overview** page, the **Event Summary** chart values were not properly translated. (TS ID: 251695)
 - On the **Enter Parameter Values** window, the **Include analyses without any assets?** list was not properly translated. (TS ID: 251654)

These issues have been resolved.

Recommendation Management

- Previously, when you tried to access the End User Help for Performance Recommendation Management in Meridium Enterprise APM, an error occurred. This issue has been resolved. (TS ID: 244581)
- Previously, in Meridium General Recommendations, when you selected the option for an alert to be sent when the Recommendation was due, the alert was not sent. This issue has been resolved. (TS ID: 232634)

Reliability Analytics


- Previously, when you accessed a localized version of the Reliability Analytics module, the following instances were not translated properly:
 - On the **Reliability Growth** page, values in the left pane were not translated properly. (TS ID: 254678)
 - In Reliability Distribution, on the **Point Tooltip** window, values were not translated properly. (TS ID: 254373)
 - The window title was not properly translated in the **Production Analysis**

Builder window, **Probability Distribution Builder** window, **Reliability Distribution Builder** window, and **Reliability Growth Builder** window. (TS ID: 254075)

- In Spares Analyses, in the **Failure Consequence** section, the numeric field values were not localized properly. (TS ID: 253706)
- In Production Analyses, after selecting the Show Labels button (☐), the labels on the CDF plot were not properly translated. (TS ID: 253686)
- In the Reliability Growth Data Editor, the date format was not properly localized. (TS ID: 253649)
- In System Reliability, in the **Definition** section, the time unit lists were not properly localized. (TS ID: 253602)
- In Reliability Distribution, on the **PM Optimization** plot, the x-axis value (Days) was not properly translated. (TS ID: 253551)
- In Reliability Distribution, in the **Cumulative Distribution Function** plot, when the Show Labels button (☐) was selected, the x-values were not properly translated. (TS ID: 253547)
- In Reliability Distribution, in the **PM Optimization** workspace, the values in the lower subsection were not properly translated. (TS ID: 253479)
- In Reliability Distribution, in the **Failure Probability** workspace, the numerical values were not properly localized. (TS ID: 253425)
- In Reliability Distribution, in the **PM Optimization** workspace, the values in the lower subsection were not properly translated. (TS ID: 253422)
- In Reliability Distribution, in the **Distribution Options** subsection, the error message that appeared after entering an invalid value in the Use Confidence field was not properly translated. (TS ID: 253367)
- In Reliability Distribution, in the **Distribution Options** subsection and on the **Set Confidence Level** window, the percent values were not properly localized. (TS ID: 253362)
- In Production Analyses, on the **Production Weibull Plot**, the data point tool tips were not properly translated. (TS ID: 253359)
- In System Reliability, in the **Summary** subsection, the tool tips on the plots were not properly translated. (TS ID: 253246)
- In Reliability Distribution, in the **Analysis Summary** workspace, the values of the fields in the **Distribution Parameters** subsection were not properly translated. (TS ID: 253179)
- In Production Analyses, in the **Analysis Summary** workspace and in the **Production Data** workspace, the number patterns were not properly translated. (TS ID: 251740)
- In Spares Analyses, in the Spares plots, the legend was not fully translated properly. (TS ID: 251460)

- In Production Analyses, the **Add/Modify Demonstrated Line** window, **Add/Modify Nameplate Line** window, and **Add/Modify Custom Line** window were not properly translated. (TS ID: 251445)

These issues have been resolved.

- Previously, when you accessed a localized version of the Reliability Analytics module, the following issues occurred:
 - In Reliability Growth, some analyses with a cumulative operating time basis could not be opened in translated accounts. (TS ID: 254747)
 - In Spares Analyses, a simulation would not run successfully. (TS ID: 253696)
 - In Automation Rules, Probability Distribution, Production Analysis, Reliability Distribution, and Reliability Growth, the reports did not run and an error occurred. (TS ID: 253548)
 - In Spares Analyses, an error occurred when adding a failure distribution from an analysis and the failure distribution would not appear in the list. (TS ID: 253472)
 - In Reliability Distribution, in the **Analysis Summary** workspace, modifications to the TTR and TTR Distribution Type field would not save. (TS ID: 253466)
 - In Reliability Distribution, in the **Analysis Summary** workspace, an extra value was present beside Gamma in the lower subsection. (TS ID: 253428)
 - In Reliability Distribution, on the **Set Confidence Level** window, entering an invalid percentage for the Confidence Level field produced an invalid error message. (TS ID: 253366)
 - In Production Analyses, on the **Production Data** window, an error occurred when entering data using commas and decimals. (TS ID: 253346)
 - In Spares Analyses, in the **Analysis Summary** workspace, in the **Definition** section, an error occurred when the page was saved, whether changes were made or not. (TS ID: 253167)
 - in Spares Analyses, in the Spares plots, the legend was seen by default without using the Show Legend button (). (TS ID: 251465)
 - In Spares Analysis, in the **Failure Consequence** section, after selecting time unit values for the Preparation Time and Repair Time, the Total Correction Time was not calculated. (TS ID: 251251)

These issues have been resolved.


- Previously, in System Reliability, modification of the Number of Iterations field in the Definition section using decimals produced an invalid error message and required you to close the analysis to continue working. This issue has been resolved. (TS ID: 253580)

- Previously, in Probability Distribution, the Last Modified author, date, and time were not updated in real time as modifications were saved. This issue has been resolved. (TS ID: 246412)
- Previously, in Reliability Distribution, the Last Modified author, date, and time were not updated in real time as modifications were saved. This issue has been resolved. (TS ID: 246409)
- Previously, Spares Analysis appeared with different names due to localization in Internet Explorer. This issue has been resolved. (TS ID: 244697)
- Previously, the tool tip did not present the date assigned to a data point in a Production Analysis. This issue has been resolved. (TS ID: 244657)

Reliability Centered Maintenance and Failure Modes and Effects Analysis

- Previously, in RCM/FMEA, the date format was not properly localized according to the user's culture settings. This issue has been resolved. (TS ID: 248030)
- Previously, when you updated the risk in an RCM or FMEA failure effect, the corresponding risk assessment record in ASM was not updated as expected. This issue has been resolved. (TS ID: 250501)


Reports

- Previously, when you accessed a localized version of a report, the following issues occurred:
 - The menu options that appeared upon selecting the export button () were not translated properly.
 - The dates appearing below the report name were not translated properly.
 - The text on error messages was not translated properly.

These issues have been resolved. (TS ID: 244440)

Risk Based Inspection

RBI 580

- Previously, if you did not enter a value in the Estimated Rate field on a  Criticality Int. Corr. Deg. Mech. Eval. datasheet, and then tried to calculate the associated RBI Criticality Analysis, then an error message appeared. This issue has been resolved. (TS ID: 258070)
- Previously, on the RBI Criticality Analysis datasheet, if you selected the **Allowable Stress Override** check box, and did not enter a value in the Allowable Stress field, then a validation message did *not* appear. This issue has been resolved. Now, if the Allowable Stress field is blank, and you try to calculate the analysis that is linked to Criticality Int. Corr. Deg. Mech. Eval. or Criticality Ext. Corr. Deg. Mech. Eval., then a validation message appears. (TS ID: 254393)
- Previously, when you accessed a localized version of Meridium Enterprise APM, and then tried to assign an Inspection to a damage mechanism, an error message appeared. This issue has been resolved. (TS ID: 255090)
- Previously, the values in the following fields on the following datasheets were not localized.

Datasheet	Fields
Criticality Calculator External Corrosion DME	Coating Quality
Criticality Calculator RBI Component	Area Humidity Fluid Valid for 581 Analysis Cladding Present Internal Corrosion Type Stress Lookup Table
Criticality Ext. Corr. Deg. Mech. Eval	Coating Quality Insulation Condition
Degradation Mechanisms	Degradation Mechanism
RBI Criticality Analysis	Area Humidity Stress Lookup Table
RBI Pipeline Analysis	Area Humidity Stress Lookup Table

These issues have been resolved. (TS IDs: 178227, 244538)

- Previously, when you calculated an RBI Criticality Analysis, even if the **Allowable Stress Override** check box was selected, a validation message appeared, incorrectly stating that a value was required in the Code Year field. This issue has been resolved. (TS ID: 76579)

RBI 581

- Previously, when you accessed a localized version of Meridium Enterprise APM, if you selected a value in the Selected External Corrosion Rate or the Atmospheric Condition field on an RBI 581 External Damage Mechanism datasheet, an error message appeared. This issue has been resolved. (TS ID: 251329)
- Previously, the values in the following fields on the following datasheets were not localized.

Datasheet	Fields
Criticality Calculator RBI Component	Area Humidity Fluid Valid for 581 Analysis Cladding Present Internal Corrosion Type Stress Lookup Table
Degradation Mechanisms	Degradation Mechanism
RBI 581 Risk Analysis	Stress Lookup Table
RBI 581 Thinning and Lining Evaluation	AST Bottom Type

These issues have been resolved. (TS IDs: 178227, 244538)

Root Cause Analysis (RCA)

- Previously, when you accessed a localized version of the Root Cause Analysis (RCA) module, the following issues occurred:
 - On the **RCA Overview** page, the **Recommendation Summary** chart and **Cause Summary** chart values were not properly translated. (TS ID: 251690)
 - On the **Import** window, on the **Select Analysis Template** screen, the **Search In** lists were not properly translated. (TS ID: 251484)
 - In the **Logic Tree** workspace, in the **Palette** section, the node icons' tooltips were not properly translated. (TS ID: 251482)
 - In the **Event Diagram** workspace, in the **Palette** section, the node icons'

tooltips were not properly translated. (TS ID: 251477)

- On the **RCA Analysis Summary** page, in the **Recommendations** chart, the Pending tool tip and key were not properly translated. In the **Track Item** chart, the Y-axis value was not properly translated. (TS ID: 251476)

These issues have been resolved.

Rounds

- Previously, when you logged in as a user with multi-site access, created a Route, and added an ML or an LR linked to an asset having different site than the user's default site, the ML / LR inherited the users default site, and not the site of the asset. This issue has been resolved. (TS ID: 227784)
- In V4.2.0.0 only, the **Priority** dropdown list box in an Operator Rounds Recommendation used a field behavior with a static list of values rather than using the values from the system code table MI_PRIORITY. Prior to V4.2.0.0, 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 of these issues, the priority values were not localized. These issues have been resolved. (TS ID: 244918)
- Previously, for Windows Mobile handheld devices with non-English operating systems, the installation of the various components required on the handheld device failed. This issue has been resolved. (TS ID: 244098)
- 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: 250580)
- 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. (TS ID: 247282)
- Previously, a sync error message appeared after you installed the RFID software on an ecom iRoc Ci70 hand-held device. This issue has been resolved. (TS ID: 244576)
- Previously, in Rounds Data Collection, when you provided a Reading for a Route, and also selected a value in the Action Taken field or entered a comment, the **Mark Done** button was not enabled. This issue has been resolved. (TS ID: 250627)

- Previously, in Rounds Data Collection, the **Mark Done** button was not immediately disabled when new reading values were entered. This issue has been resolved. (TS ID: 254724)
- Previously, in Rounds Designer, you were able reuse the same Route ID to create a new Route. This issue has been resolved. (TS ID: 255383)
- Previously, when you accessed a localized version of the Rounds Designer module, the following issues occurred:
 - On the **Route** page, on the Route datasheet the values in the schedule field were not properly translated. (TS ID: 253042)
 - On the **Route** page, when you selected an ML or LR, in the schedule section, the values in the schedule field were not properly translated. (TS ID: 244864)
 - On the **Route** page, when you selected an existing condition or added a new condition, the value in the Select Relation field was not properly translated. (TS ID: 245006)

Security Manager

- Previously, when accessing Meridium Enterprise APM via Internet Explorer, if a large number of Security User records existed, then an error occurred with the navigation in the left pane on the **Security Users** page. This issue has been resolved. (TS ID: 254684)
- Previously, in LDAP, changes made to the site assignments of existing users were not updated during syncs. This issue has been resolved. (TS ID: 254601)
- Previously, when navigating to the workspace for an existing Security User, an error message appeared. This issue has been resolved. (TS ID: 250140)
- Previously, when creating relationship definitions between Predecessor and Successor families, an error message appeared when attempting to save. This issue has been resolved. (TS ID: 242090)

SIS Management

- Previously, when you attempted to select the Add Category button (+) to add a SRS Template to a SRS Project, an error appeared. This issue has been resolved. (TS ID: 251711)

- Previously, when you selected the Risk Matrix value in the **Risk Assessment** window, an error message appeared. This issue has been resolved. (TS ID: 251676)
- Previously, when you accessed the localized German version of the SIS Management module, the following issues occurred:
 - The **Mitigated Risk** icon did not appear in the **Mitigated Risk Assessment** window. (TS ID: 253344)
 - When you switched from the internal SIL validation method to the external SIL validation method, the **Loop Diagram & calculation** tab did not display any information. (TS ID: 251649)
 - On the **SIS Management Overview** page, the **Home** label and the text in the **SIL Distribution** section were not translated. (TS ID: 244901)
 - In an Instrumented Function, the **New Proof Test Task** label was not translated. (TS ID: 244901)
 - Text in the **Assessment Details** section, within the **SIL Assessment** tab of an Instrumented Function, was not properly displayed. (TS ID: 244901)
 - Text in the Offline Proof Tests was not translated. (TS ID: 244901)

These issues have been resolved.

Restored Features - V4.2.0.1.0

The following V3.x features were deferred from previous V4.x releases, but are now available in V4.2.0.1.0.

Asset Strategy Implementation

- You can now search for the SAP Task List that you want to use to create a new Task List record. (TS ID: 232661)

Deferred Features - V4.2.0.1.0

The following features are not available in Meridium V4.2.0.1.0, but are planned for a future release.

Asset Health Manager

- 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, 86430)
- The display of health indicator statuses in Asset Hierarchy. (TS ID: 86796)

Asset Strategy Implementation

- Searching in SAP for the standard text value that you want to append to the value in the Long Text field of a Maintenance Item record. (TS ID: 117765)
- Managing all maintenance packages for all operations under a particular task list. (TS ID: 117767)
- Managing asset and action assignments when executing copy/paste operations. (TS ID: 144110)
- The option to exclude child items when copying Work Management Items. (TS ID: 147790)
- Using a link to manage the object list records that are linked to maintenance item records represented by the selected node. (TS ID: 238443)
- Creating implementation roles and filtering the WMI tree by each role. (TS ID: 243573)

Asset Strategy Management

- Migrating strategies between databases.

Asset Strategy Optimization

- Optimizing Actions. (TS ID: 65780)

Calibration Management

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

Generation Availability Analysis (GAA)

- Upgrading GAA from previous versions to any V4.2.x release. (TS ID: 187475)
- The following Security Groups in GAA:
 - MI Generation Management Forecast
 - MI Generation Management Nameplate
 - MI Generation Management Security(TS IDs: 184655, 184663, 184661, 184660, 184659, 184657, 184653, 184652, 184646, 184656)
- The following families in GAA:
 - Generation Forecast
 - Generation Fuel Annual Report
 - Generation Fuel Monthly Report
 - Generation Fuel Report
 - Generation Nameplate
 - Generation Nameplate Combined Cycle
 - Generation Nameplate Diesel
 - Generation Nameplate Fluidized Bed
 - Generation Nameplate Fossil Steam
 - Generation Nameplate Gas Turbine
 - Generation Nameplate Hydro
 - Generation Nameplate Miscellaneous
 - Generation Nameplate Nuclear
 - Generation Pool
 - Generation Role
 - Generation Role Assignment

- Generation Role Definition
- Generation Role Field Configuration
- Generation Unit Loading Profile
- Generation Unit Starting Profile

(TS IDs: 184655, 184663, 184661, 184660, 184659, 184657, 184653, 184652, 184646, 184656)

- The following fields and related functionality from the Performance record:

Tab	Fields
Unit Identification	<ul style="list-style-type: none"> • Capacity History Statistics Type • Zone • Refresh Incident Rollup
Unit Generation Performance	<ul style="list-style-type: none"> • Demonstrated Max Capacity (G) • Demonstrated Max Capacity (N) • Override Reserve Shutdown Hours • Sum of fuel BTUs • Heat Rate
Unit Starting Characteristics	<ul style="list-style-type: none"> • YTD attempted unit starts • YTD actual unit starts • YTD start reliability
Unit Primary Fuel Information	<ul style="list-style-type: none"> • EIA Fuel Reporting • Primary Quantity Burned Unit of Measure • Primary Fuel BTUs - Contract • Primary Fuel BTUs - Electrical Generation • Primary Fuel BTUs - Plant Heating and Cooling • Primary Fuel BTUs - Process Steam • Primary Fuel BTUs - Total

Tab	Fields
Unit Secondary Fuel Information	<ul style="list-style-type: none"> • EIA Fuel Reporting • Secondary Quantity Burned Unit of Measure • Secondary Fuel BTUs - Contract • Secondary Fuel BTUs - Electrical Generation • Secondary Fuel BTUs - Plant Heating and Cooling • Secondary Fuel BTUs - Process Steam • Secondary Fuel BTUs - Total

(TS ID: 234310, 234410)

- The following fields and related functionality from the GAA Plant and GAA Unit record:

Datasheet	Fields
GAA Plant	<ul style="list-style-type: none"> • Date/Time Alternate Format • GADS Region • GADS Subregion
GAA Unit	<ul style="list-style-type: none"> • Demonstrated Maximum Gross Capacity • Demonstrated Maximum Net Capacity • Summer Net Capacity • Winter Net Capacity

(TS ID: 229627)

Foundation

Asset Criticality Analysis (ACA)

- Promoting analyses to and from ACA. (TS ID: 160858)

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 Analytics

- KPIs for GE Analytics. (TS ID: 162791)

Metrics and Scorecards

- Selecting columns to include in a Scorecard. (TS ID: 70641)
- GM (Generation Management) cube is deferred from V4.x. Any previously deployed GM (Generation Management) cube, which worked in V3.6 and earlier releases, will continue to work in any V4.x release 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)

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

- Creating a bulk What-If analysis. (TS ID: 73475)

Root Cause Analysis

- Publishing an analysis in RCA. (TS IDs: 61730, 103887, 68585, 63432)
- 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 in 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)
- 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 - V4.2.0.2.0

The following release notes are available for Meridium Enterprise APM V4.2.0.2.0:

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

You can also view the APM Connect release notes.

Enhancements - V4.2.0.2.0

The following enhancements have been made in V4.2.0.2.0.

Asset Strategy Management

- You can now link a GE Tag record to an action on the **Implement Actions** page. (TS ID: 252835)

Risk Based Inspection

RBI 580

- A new policy, RBI 580 Non-Intrusive Requirement, is now used to populate the **Non-Intrusive Requirement Met** check box on a Criticality Int. Corr. Deg. Mech. Eval. datasheet. You can modify the logic that is used to populate the check box by modifying the policy. (TS ID: 260882)
- You can now map the Production Loss field on a PRD Analysis to the Financial Risk Matrix. (TS ID: 255936)

Resolved Issues - V4.2.0.2.0

The following issues existed in one or more previous releases and have been resolved in V4.2.0.2.0.

APM System Monitoring

- Previously, in APM System Monitoring, you could not create or edit an alert or task. This issue has been resolved. (TS ID: 263135)

Asset Health Manager

- Previously, when you accessed the **Health Indicator Trend** page for an asset, selected the **Reading History** tab, and then navigated back to **Health Summary** page, the Health Indicators were not displayed immediately. This issue has been resolved. (TS ID: 257622)
- Previously, when you accessed the health indicator trend chart, only the linked Equipment and Functional Location records were displayed in the **Related Assets** list. This issue has been resolved. (TS ID: 258542)
- Previously, in the **Health Indicator Source Management** workspace of the on 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 **Excluding 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: 255043)

Asset Strategy Implementation

- Previously, when you created an asset strategy with an action that had no Interval or Interval Units values, and then approved the strategy and sent it to ASI, an error message appeared when you attempted to use the Action Organizer in ASI. This issue has been resolved. (TS ID: 258255)
- Previously, various instances of text in ASI, RCM, and FMEA were not translated as

expected. These issues have been resolved. (TS ID: 257612, 257748)

Asset Strategy Management

- Previously, when you modified the Description field on an asset strategy datasheet and saved your changes, the state of the strategy was automatically reverted back to *Active*. This issue has been resolved. Now, as expected, the state may only be changed through the state control. (TS ID: 258082)
- Previously, when a user with a non-English culture setting attempted to apply a template to an asset strategy, an error message appeared when they selected **Finish** at the end of the process. This issue has been resolved. (TS ID: 257877)
- Previously, an error message appeared if you closed an **ASM Overview** page before it had completely finished loading. This issue has been resolved. (TS ID: 262308)
- Previously, when you unlinked an action from a risk in an active master template, and then reactivated the template, the action remained associated with the risk in the controlled strategy, even though the mitigation was removed from the template. This issue has been resolved. (TS ID: 259784)

Foundation

Asset Hierarchy

- Previously, if you specified search criteria in the Asset Hierarchy and then cleared the criteria, the Asset Hierarchy displayed a blank search box. This issue has been resolved. Now, in this scenario, the hierarchy is displayed with *Home* selected. (TS ID: 257533)

Catalog

- Previously, if the description of a Catalog item or folder contained more than 255 characters, then, when you attempted to save the catalog item or folder, an error message appeared, but the message did not contain information about what caused the error. This issue has been resolved. Now, if you attempt to save a catalog item or folder whose description contains more than 255 characters, then an error message appears that indicates that the description is too long. (TS ID: 259788)

Datasets

- Previously, for users whose culture setting was German, if a date/time field was selected, an error message appeared, and the value could not be modified. This issue has been resolved. (TS ID: 256828)
- Previously, for users whose culture setting was German, if a numeric value was entered with a decimal comma (e.g., *1,50*), then, when the record was saved, the decimal comma would be removed from the value (i.e., the value *1,50* would become *150* when the record was saved). This issue has been resolved. (TS ID: 257460)
- Previously, if you accessed a dataset and then selected **Save As**, an error message would appear and you could not save the dataset. This issue has been resolved. (TS ID: 258253)

Datasheet

- Previously, in databases that have only one site stored in the Site Reference family, the **Site** control and the Site ID field were displayed on datasheets. This issue has been resolved. Now, if a database has only one site, these options do not appear on datasheets. (TS ID: 251873)

Mobile

- Previously, if you tried to log in to Meridium Enterprise APM while your device was not connected to the internet, there was no clear indication why your login had failed. This issue has been resolved. (TS ID: 250452)
- Previously, if you accessed the Meridium Enterprise APM mobile application on a Windows device or with Internet Explorer 11, if you tried to delete a parent assigned to an Asset Group, then the parent would not be deleted. This issue has been resolved. (TS ID: 258068)

Queries

- Previously, when exporting a query as an Excel file, instances of the ampersand symbol (&) were omitted. This issue has been resolved. (TS ID: 252851)

Risk Matrix

- Previously, when the **Risk Matrix** summary view loaded, it did not have a loading indicator. This issue has been resolved. (TS ID: 255927)
- Previously, you could not display the entire Risk Matrix on a small screen without scrolling. This issue has been resolved. (TS ID: 255900)

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: 255929)

GE Analytics

- Previously, you could not link GE Tags to Functional Location records. This issue has been resolved. (TS ID: 258645)
- Previously, when using the GE Analytics module to connect to a GE Fleet SmartSignal source, events were not received by the GE service. Because of this, GE Fleet SmartSignal Events were not imported into Meridium Enterprise APM. This issue has been resolved. Now, GE Fleet SmartSignal Events can be imported into Meridium Enterprise APM. (TS ID: 247643)

Generation Availability Analysis

- Previously, when a Contributing Event was copied and linked to a Primary Event, the copied Contributing Event incorrectly appeared more than once in the **Copy Contributing Event** window. This issue has been resolved. (TS ID: 257343)

Recommendation Management

- Previously, if you created a Recommendation for an asset or functional location, then, when you saved the Recommendation, the asset or functional location did not appear on the datasheet unless you closed the Recommendation and then reopened it. This issue has been resolved. (TS ID: 247877)

Reliability Analytics

- Previously, when modifying a production line in a Production Analysis, the warning message when entering an invalid Beta value was not given consistently, and the invalid value could be saved. This issue has been resolved. (TS ID: 258035)

Reliability Centered Maintenance and Failure Modes and Effects Analysis

- Previously, in RCM and FMEA, if you rapidly selected different nodes in the analysis tree, error messages appeared. This issue has been resolved. (TS ID: 254597)

Reports

- Previously, you could not pass a parameter to a report through a URL. This issue has been resolved. (TS IDs: 256829, 257987)

Risk Based Inspection

RBI 580

- Previously, the values in the following fields, which were populated from the Corrosion Factors Reference Table, were not populated with the most conservative value for a given fractional wall loss, number of inspections, and inspection confidence.
 - The DF field on the Criticality Int. Corr. Deg. Mech. Eval. datasheet
 - The Corrosion Factor field on the Criticality Ext. Deg. Mech. Eval. datasheetThis issue has been resolved. (TS ID: 257557)

RBI 581

- Previously, if you copied an RBI 581 Risk Analysis, and if the value in the Insulation Type field was *Pearlite* or *Foam/Cellular Glass*, then the value in the Corrosion Rate Adjustment Factor For Insulation Type field in the copied analysis was incorrect. This issue has been resolved. (TS ID: 262342)
- Previously, you could not access the Inspection History of a DM that was linked to an RBI Criticality Analysis unless you activated the RBI 581 license. This issue has been resolved. You can now access the Inspection History of a DM if, along with the Inspection Management license, you activated either the *Risk Based Inspection* or the *RBI 581* license, as applicable. (TS ID: 260939)

- Previously, when using Thickness Monitoring Locations (TMLs) to calculate either the Short Term Average Corrosion Rate or the Long Term Average Corrosion Rate field values in a Criticality Int. Corr. Deg. Mech. Eval. Or the RBI 581 Thinning and Lining Evaluation families in Risk Based Inspection, excluded TMLs and TMLs with negative corrosion rates were factored into the calculated averages. This issue has been resolved. (TS ID: 254709)

Root Cause Analysis

- Previously, the full Logic Tree diagram was not displayed on the design canvas when using the Internet Explorer or Microsoft Edge browsers. This issue has been resolved. (TS ID: 196446)

Rounds

- Previously, on Small Form Factor devices, if you collapsed and then expanded the **Route Map** pane after providing a reading, the content of the Route Map pane was not displayed correctly. This issue has been resolved. (TS ID: 257791)
- Previously, on Small Form Factor devices, the filter options were not displayed correctly on the **Rounds Data Collection Overview** page. This issue has been resolved. (TS ID: 258628)
- Previously, in V4.2.0.1.0, on Windows Mobile handheld devices, when you provided Readings for a Route with Measurement Locations, created a standalone recommendation, and then uploaded the Route, the following issues were seen:
 - The uploaded Reading values were not displayed in the **Readings** tab on the **Route Management** page.
 - Uploaded Readings inherited the site of the user, rather than the parent Measurement Location.
 - Standalone recommendations were not uploaded.

These issues have been resolved. (TS ID: 254975)

- Previously, in Rounds Designer, when you selected a Route, and then assigned team members to the route, the **Routes** list was not refreshed immediately, and there was no indication that the list was reloading. In a database containing a large number of Routes, the system may have stopped responding. This issue has been resolved by improving performance in this scenario. For example, the time to reload list of 500 routes has been reduced from over 1 minute to less than 1 second. In addition, a loading indicator now appears while the list refreshes. (TS

ID: 257670)

- Previously, the side bar was not properly formatted when you collapsed the Route pane while viewing a Route. This issue has been resolved (TS ID: 257739)
- 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: 261920)

SIS Management

- Previously, when a user whose culture setting was German downloaded a Proof Test Task for offline access, the field captions on the datasheet were not translated. This issue has been resolved. (TS ID: 258557)

Thickness Monitoring

- Previously, if you changed and saved a value in the Readings field on the **Measurements** section of the **Analysis Overview** page, the Verify Measurement field did not update correctly after the analysis was calculated. This issue has been resolved. (TS ID: 260767)

Deferred Features - V4.2.0.2.0

The following features are not available in Meridium V4.2.0.2.0, but are planned for a future release.

Asset Health Manager

- 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, 86430)
- The display of health indicator statuses in Asset Hierarchy. (TS ID: 86796)

Asset Strategy Implementation

- Searching in SAP for the standard text value that you want to append to the value in the Long Text field of a Maintenance Item record. (TS ID: 117765)
- Managing all maintenance packages for all operations under a particular task list. (TS ID: 117767)
- Managing asset and action assignments when executing copy/paste operations. (TS ID: 144110)
- The option to exclude child items when copying Work Management Items. (TS ID: 147790)
- Using a link to manage the object list records that are linked to maintenance item records represented by the selected node. (TS ID: 238443)
- Creating implementation roles and filtering the WMI tree by each role. (TS ID: 243573)

Asset Strategy Management

- Migrating strategies between databases.

Asset Strategy Optimization

- Optimizing Actions. (TS ID: 112125)

Calibration Management

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

Generation Availability Analysis (GAA)

- Upgrading GAA from previous versions to any V4.2.x release. (TS ID: 187475)
- The following Security Groups in GAA:
 - MI Generation Management Forecast
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 - MI Generation Management Security(TS IDs: 184655, 184663, 184661, 184660, 184659, 184657, 184653, 184652, 184646, 184656)
- The following families in GAA:
 - Generation Forecast
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 - Generation Fuel Report
 - Generation Nameplate
 - Generation Nameplate Combined Cycle
 - Generation Nameplate Diesel
 - Generation Nameplate Fluidized Bed
 - Generation Nameplate Fossil Steam
 - Generation Nameplate Gas Turbine
 - Generation Nameplate Hydro
 - Generation Nameplate Miscellaneous
 - Generation Nameplate Nuclear
 - Generation Pool
 - Generation Role
 - Generation Role Assignment

- Generation Role Definition
- Generation Role Field Configuration
- Generation Unit Loading Profile
- Generation Unit Starting Profile

(TS IDs: 184655, 184663, 184661, 184660, 184659, 184657, 184653, 184652, 184646, 184656)

- The following fields and related functionality from the Performance record:

Tab	Fields
Unit Identification	<ul style="list-style-type: none"> • Capacity History Statistics Type • Zone • Refresh Incident Rollup
Unit Generation Performance	<ul style="list-style-type: none"> • Demonstrated Max Capacity (G) • Demonstrated Max Capacity (N) • Override Reserve Shutdown Hours • Sum of fuel BTUs • Heat Rate
Unit Starting Characteristics	<ul style="list-style-type: none"> • YTD attempted unit starts • YTD actual unit starts • YTD start reliability
Unit Primary Fuel Information	<ul style="list-style-type: none"> • EIA Fuel Reporting • Primary Quantity Burned Unit of Measure • Primary Fuel BTUs - Contract • Primary Fuel BTUs - Electrical Generation • Primary Fuel BTUs - Plant Heating and Cooling • Primary Fuel BTUs - Process Steam • Primary Fuel BTUs - Total

Tab	Fields
Unit Secondary Fuel Information	<ul style="list-style-type: none"> • EIA Fuel Reporting • Secondary Quantity Burned Unit of Measure • Secondary Fuel BTUs - Contract • Secondary Fuel BTUs - Electrical Generation • Secondary Fuel BTUs - Plant Heating and Cooling • Secondary Fuel BTUs - Process Steam • Secondary Fuel BTUs - Total

(TS ID: 234310, 234410)

- The following fields and related functionality from the GAA Plant and GAA Unit record:

Datasheet	Fields
GAA Plant	<ul style="list-style-type: none"> • Date/Time Alternate Format • GADS Region • GADS Subregion
GAA Unit	<ul style="list-style-type: none"> • Demonstrated Maximum Gross Capacity • Demonstrated Maximum Net Capacity • Summer Net Capacity • Winter Net Capacity

(TS ID: 229627)

Foundation

Asset Criticality Analysis (ACA)

- Promoting analyses to and from ACA. (TS ID: 160858)

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 Analytics

- KPIs for GE Analytics. (TS ID: 162791)

Metrics and Scorecards

- Selecting columns to include in a Scorecard. (TS ID: 70641)
- GM (Generation Management) cube is deferred from V4.x. Any previously deployed GM (Generation Management) cube, which worked in V3.6 and earlier releases, will continue to work in any V4.x release 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)

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

- Creating a bulk What-If analysis. (TS ID: 73475)

Root Cause Analysis

- Publishing an analysis in RCA. (TS IDs: 61730, 103887, 68585, 63432)
- 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 in 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)
- 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 - V4.2.0.2.1

Root Cause Analysis

- Previously, when you accessed the Logic Tree Diagram, the Event Diagram, or SSRS reports for a Root Cause Analysis using the Internet Explorer browser, the Logic Tree and Event diagrams would appear incomplete. Also, you could not export the Logic Tree and Event diagrams using the Internet Explorer or Google Chrome browsers. These issues have been resolved. (TS ID: 289937)

Release Notes - V4.2.0.2.2

Root Cause Analysis

- Previously, Event diagrams and Logic Tree diagrams with a single node or node string were not clearly visible when exported. This issue has been resolved. Now, there is a width restriction of 20 nodes for Logic Tree diagrams when loading them via the Internet Explorer and Edge browsers. Diagrams that are more than 20-nodes wide may fail to load. (TS ID: 308760)

Release Notes - V4.2.0.3.0

The following release notes are available for Meridium Enterprise APM V4.2.0.3.0:

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

You can also view the APM Connect release notes.

Enhancements - V4.2.0.3.0

The following enhancements have been made in V4.2.0.3.0.

Asset Strategy Implementation

- The default Unit of Measure (UOM) field from SAP is now added to the Material record datasheet for ASI packages. (TS ID: 176886)

Foundation

- In Associated Pages, Rules, and Queries, you can now specify a hyperlink to an external website that will open in a new page in Meridium Enterprise APM. (TS ID: 266829)
- You can now use a Format rule to specify the required HTML in order to configure a hyperlink on a datasheet to open in a new page or window. (TS ID: 214911)

Production Loss Analysis (PLA)

- To aid in Product Selection, the **PLA Production Plan Builder** now includes the Product Description field. (TS ID: 265260)
- When creating a Production Event for a Production Unit, the Event Code list now appears based on the list created for the Production Units in Application Settings. (TS ID: 263145)
- You can now upload Production Profiles with multiple margins using the PLA Data Loader. (TS ID: 257789)
- You can now use PLA Application Settings to assign a Default Plan for a Production Unit. This enhancement shortens the number of steps required to create a Production Plan in the Production Plan Builder. (TS IDs: 251448, 249931)
- You can now use the PLA Production Profile to:
 - Define, modify, and delete margins in the **Margins** section of the Production Profile.
 - Define a default margin.

- Define margins in the Production Plan to be assigned to specific losses during Loss Reconciliation.
- Specify a Planning Rate to set the Short Range Planned value.

To facilitate this enhancement, a new family, Margin, has been added to the Meridium Enterprise APM database. The Margin family is related to the Production Profile family through the new Has Margin relationship family.

When you upgrade your database to V4.2.0.3.0, a Margin record will be created for each Production Profile record in your database, populated with the values from the Default Margin field of that Production Profile, and set as the default Margin for that Production Profile. The Default Margin field in the Production Profile family is then removed.

(TS ID: 262285, 249933, 231404)

- You can now modify the layouts for the PLA Production Data and Production Loss grids.
 - You can modify the queries that drive the grids.
 - You can add, delete, or rearrange new columns in the grid layout.

(TS ID: 247147)

- You can now create PLA Plan Templates to reduce the number of steps required to create a Production Plan. (TS ID: 244092)

- Administrative users can now assign Production Event Codes to Production Units, so that end users may choose from relevant Product Event Codes when creating a Production Event.

To facilitate this enhancement, a new tab, **Event Codes**, has been added to the **Units** workspace of the PLA Application Settings. The Production Event Codes that appear in the **Event Codes** section are based on the Production Unit whose settings you are viewing.

When you upgrade your database to V4.2.0.3.0, all Production Event Codes will be related to all Production Units. Therefore, after upgrading, you may want to review the administrative settings to modify the Event Codes that are associated with each Production Unit.

(TS ID: 162280)

- The Loss calculation has been updated to reflect the Margin selection in PLA Application Settings. (TS ID: 162273)

Risk Based Inspection - RBI 580

- The RBI 580 workflow has now been enhanced to support the renaming of Internal Corrosion and External Corrosion DMs and the adding of multiple Internal Corrosion DMs for a single RBI 580 Analysis. (TS ID: 267922)
- RBI-TM Integration now uses the Controlling Corrosion Rate value from Asset Corrosion Analysis in TM for new RBI Analyses. The following enhancements are provided:
 - A new field, Controlling Corrosion Rate, has been added to the Criticality Int. Corr. Deg. Mech. Eval. family which displays values in inches/year (or localized UOM).
 - A new System Code, Controlling Corrosion Rate, has been added to the System Code Table, RBI Internal Corrosion Type (RBI_INT_COR_TYP).
 - The Selected Corrosion Rate field on the Criticality Int. Corr. Deg. Mech. Eval. family now has the option to select the Controlling Corrosion Rate value.(TS IDs: 265005, 265004)

Root Cause Analysis (RCA)

- The **RCA Overview** page now contains the **My Analyses** tab that lists analyses for which you are named as a team member. (TS ID: 256381)

Security Manager

- If a user password stored in LDAP will expire in 30 or fewer days, then, when the user logs in to Meridium Enterprise APM, the user is prompted to change the password. (TS ID: 267558)

Resolved Issues - V4.2.0.3.0

The following issues existed in one or more previous releases and have been resolved in V4.2.0.3.0.

APM Now

- Previously, APM Now users signing on with SSO were unable to access the product help documentation via the APM Now interface. This issue has been resolved. (TS ID: 255342)

Asset Criticality Analysis

- Previously, the add button (+) in the **Analysis Summary** workspace disappeared when you switched to a different section. This issue has been resolved. (TS ID: 248139)
- Previously, when navigating within the **Analysis Summary** workspace for an ACA, an error occasionally appeared. This issue has been resolved. (TS ID: 243771)

Asset Health Manager

- Previously, for numeric health indicators, when certain combinations of limit values were not defined, the health indicator gauges on the **Asset Health Manager** page did not properly display the latest reading value or represent its status. This issue has been resolved. To facilitate this fix, the visual representation of health statuses on the gauges has been enhanced so that gray areas are no longer used to represent areas with undefined limits. Instead, the colored sections of a gauge now extend until the next limit value that is defined; as a result, sections of the gauge correspond to the status of a reading value in that range. (TS ID: 261232)

Asset Strategy Implementation

- Previously, when you selected a hyperlink in an implemented Work Management Item (WMI), the record opened in the currently open tab of your browser. This issue has been resolved. Now, when you select a hyperlink in an implemented WMI, the hyperlink opens in a new tab. (TS ID: 214674)
- Previously, if you closed an ASI package tab before it had completely loaded, an error message appeared. This issue has been resolved. (TS ID: 264298)

Asset Strategy Management

- Previously, when you linked an existing risk to an existing action with the **Actions** section in the primary, or left, side of the **Risks and Actions** workspace, the state of the strategy did not change to *Modified* as expected. This issue has been resolved. (TS ID: 271069)
- Previously, under certain conditions, on the **Risk Analysis** page, the Financial Risk chart values for *Active* and *Proposed* financial risk ranks were not equal after the strategy was activated. This issue has been resolved. Now, as expected, the proposed and active data for an active strategy will always be the same. (TS ID: 261914)
- Previously, if you modified an active strategy (e.g., by deleting or modifying a risk), the mitigating actions for the other risks in the strategy did not appear on the **Risks and Actions** workspace as expected, unless you refreshed the browser or reloaded the modified strategy. This issue has been resolved. (TS ID: 264318)
- Previously, in Risk Matrices, if you left Financial Risk field blank or marked it as *N/A*, the field value would incorrectly be displayed as *0* on the risk or action card. This issue has been resolved. Now, if you leave the field blank or marked *N/A*, the corresponding value on the risk or action card is blank. (TS ID: 247874)

Foundation

- Previously, if you were using SSO authentication, you could not access the End User Help when you loaded a page for the first time. This issue has been resolved. (TS ID: 266738)
- Previously, date values could unexpectedly be set 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: 263661)

Graphs

- Previously, on Windows devices, you could not view the axis properties in a graph's settings. This issue has been resolved. (TS ID: 267012)
- Previously, if you created a graph containing hyperlinks and viewed it in a dashboard, you could not view or access the hyperlinks. This issue has been resolved. (TS ID: 266100)

- Previously, on Windows devices, you could not modify a graph's settings. This issue has been resolved. (TS ID: 264654)

GE Analytics

- Previously, the GE connector did not support Oracle databases. This issue has been resolved. (TS ID: 264691)

Inspection Management

- Previously, an Inspection could not be created for an Inspection Task implemented from an Action that was promoted from RBI, if the ID and Description field values differed for the Degradation Mechanism. This issue has been resolved. (TS ID: 271357)
- Previously, the values in the Inspection Report Owner and Reviewers Name fields in an Inspection record were not filtered based on the site that was assigned to that record. Similarly, the values in the Author Name and Reviewer Name fields in an Inspection Recommendation record were not filtered based on the site that was assigned to that record. These issues have been resolved. (TS ID: 268461)
- Previously, on the **Inspection Management Overview** page, if you selected either the **Inspection**, **Recommendation**, or **Task** tab and then filtered the results in the table, the results in the table were not correctly filtered. This issue has been resolved. (TS ID: 266997)
- Previously, if you created a configured Checklist Inspection family for an Asset or Functional Location, an error appeared and the resulting Checklist Findings did not load on the datasheet. This issue has been resolved. (TS ID: 266966)
- Previously, if task execution and task revision families were not set up and an Inspection with the Task Complete field set to true was then updated, the Last Date/Next Date fields did not update correctly. This issue has been resolved. (TS ID: 266938)

Lifecycle Cost Analysis (LCC)

- Previously, the Strategy User Role included only the LCC Viewer Security Group and not the LCC User Security Group. This prevented Strategy Users from performing actions other than viewing LCC Analyses. This issue has been resolved by adding the LCC User Security Group to the Strategy User Security Role. (TS ID: 259517)

Process Data Integration

- Previously, when there was no existing PDI connections in Meridium Enterprise APM, the **PDI Systems** section of the **Connections** page was inaccessible using Internet Explorer or Microsoft Edge browsers. (TS ID: 264844)

Production Loss Analysis (PLA)

- Previously, when you created a Root Cause Analysis from a Production Event, the site for Root Cause Analysis was set based on the *Production Plan* and could be modified. However, the site should be set based on the *Production Event* and should not be modifiable. This issue has been resolved. (TS ID: 270767)
- Previously, when a PLA production event was created with a causing asset with no Functional Location and an RCA was created on that event, the RCA analysis would not appear on the **RCA Overview** page. This issue has been resolved. (TS ID: 264201)
- Previously, when creating a production plan, the Max Sustained Capacity Rate (MSCR) was rounded to the next whole number and you were unable to add a fractional loss higher than the MSCR. These issues have been resolved. Starting in 4.2.0.3.0, PLA will no longer use MSCR when creating plans; instead, PLA will use Planning Rate. (TS ID: 261587)
- Previously, the overview filter did not correctly display the count and data on the **Production Event** tab, Planned Production vs Losses chart, Top 10 Bad Actors chart, and Event Summary on the **PLA Overview** page when an Asset Group context was used. This issue has been resolved. (TS ID: 247553)

Reliability Analytics

- Previously, in Reliability Distribution, an error occurred when a Reliability Data Editor containing more than 50 data points was closed before allowing all of the data to load. This issue has been resolved. (TS ID: 266578)

- Previously, Recommendation Alerts failed in Oracle databases. This issue has been resolved. (TS ID: 264292)

Risk Based Inspection - RBI 580

- Previously, if a PRD Component protected an RBI Component, and if the PRD Component was linked to Criticality Over Pressure Deg. Mech. Eval., then an error message appeared when you tried to calculate the associated RBI PRD Criticality Analysis. This issue has been resolved. (TS ID: 268162)
- Previously, in certain instances, the Completion Date displayed in the RBI Degradation Mechanism Inspection History was incorrect by one calendar day. (TS ID: 267922)

Root Cause Analysis (RCA)

- Previously, an internal server error appeared when sending the Comprehensive Analysis Report to users from either the **Comprehensive Analysis Report** section or the **Analysis Link** section. This issue has been resolved. (TS ID: 260974)

Security Manager

- Previously, on the **Security Users** page, search results did not include users whose first name matched the searched term. This issue has been resolved. (TS ID: 268465)

SIS Management

- Previously, when you exported Protective Instrument Loop data from Meridium Enterprise APM to exSILentia, the Common Cause (Beta) field was not exported, resulting in an incorrect calculation of the Loop PFD Avg, Risk Reduction Factor, and MTTFS fields. This issue has been resolved. (TS ID: 267856)
- Previously, when using LOPA Internal method for SIL Assessment, if the value in the Required PIF PFD field was equal to the boundary values of a Safety Integrity Level, the Calculated SIL field was incorrectly populated with a higher SIL value. For example, if the required PFD was 10^{-2} (i.e., RRF 100), then the calculated SIL value was 2 instead of 1. This issue has been resolved. (TS ID: 264651)

Systems and Tags

- Previously, on the **Systems and Tags** page, when searching for a tag within a system, not all tag results were returned. This issue has been resolved. The search now returns all tags within the selected system. (TS ID: 253274)

Thickness Monitoring

- Previously, the values in the Measurement Taken By field in a Thickness Measurement record were not filtered based on the site that was assigned to that record. This issue has been resolved. (TS ID: 268461)
- Previously, if you entered new readings in a Thickness Measurement record using the Measurement Data Entry (MDE) workspace, then the value in the Verify Measurement field was populated incorrectly. This issue has been resolved. The Verify Measurement field in the new Thickness Measurement record for a TML is now populated with the correct value. (TS ID: 268174)

Restored Features - V4.2.0.3.0

The following V3.x features were deferred from previous V4.x releases, but are now available in V4.2.0.3.0.

Root Cause Analysis (RCA)

- You can now publish an RCA via the **In Progress** section and unpublish an RCA via the **Published** section. (TS ID: 251530)

Deferred Features - V4.2.0.3.0

The following features are not available in Meridium V4.2.0.3.0, but are planned for a future release.

Asset Health Manager

- 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, 86430)
- The display of health indicator statuses in Asset Hierarchy. (TS ID: 86796)

Asset Strategy Implementation

- Searching in SAP for the standard text value that you want to append to the value in the Long Text field of a Maintenance Item record. (TS ID: 117765)
- Managing all maintenance packages for all operations under a particular task list. (TS ID: 117767)
- Managing asset and action assignments when executing copy/paste operations. (TS ID: 144110)
- The option to exclude child items when copying Work Management Items. (TS ID: 147790)
- Using a link to manage the object list records that are linked to maintenance item records represented by the selected node. (TS ID: 238443)
- Creating implementation roles and filtering the WMI tree by each role. (TS ID: 243573)

Asset Strategy Management

- Migrating strategies between databases.

Asset Strategy Optimization

- Optimizing Actions. (TS ID: 112125)

Calibration Management

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

Generation Availability Analysis (GAA)

- Upgrading GAA from previous versions to any V4.2.x release. (TS ID: 187475)
- The following Security Groups in GAA:
 - MI Generation Management Forecast
 - MI Generation Management Nameplate
 - MI Generation Management Security(TS IDs: 184655, 184663, 184661, 184660, 184659, 184657, 184653, 184652, 184646, 184656)
- The following families in GAA:
 - Generation Forecast
 - Generation Fuel Annual Report
 - Generation Fuel Monthly Report
 - Generation Fuel Report
 - Generation Nameplate
 - Generation Nameplate Combined Cycle
 - Generation Nameplate Diesel
 - Generation Nameplate Fluidized Bed
 - Generation Nameplate Fossil Steam
 - Generation Nameplate Gas Turbine
 - Generation Nameplate Hydro
 - Generation Nameplate Miscellaneous
 - Generation Nameplate Nuclear
 - Generation Pool
 - Generation Role
 - Generation Role Assignment

- Generation Role Definition
- Generation Role Field Configuration
- Generation Unit Loading Profile
- Generation Unit Starting Profile

(TS IDs: 184655, 184663, 184661, 184660, 184659, 184657, 184653, 184652, 184646, 184656)

- The following fields and related functionality from the Performance record:

Tab	Fields
Unit Identification	<ul style="list-style-type: none"> • Capacity History Statistics Type • Zone • Refresh Incident Rollup
Unit Generation Performance	<ul style="list-style-type: none"> • Demonstrated Max Capacity (G) • Demonstrated Max Capacity (N) • Override Reserve Shutdown Hours • Sum of fuel BTUs • Heat Rate
Unit Starting Characteristics	<ul style="list-style-type: none"> • YTD attempted unit starts • YTD actual unit starts • YTD start reliability
Unit Primary Fuel Information	<ul style="list-style-type: none"> • EIA Fuel Reporting • Primary Quantity Burned Unit of Measure • Primary Fuel BTUs - Contract • Primary Fuel BTUs - Electrical Generation • Primary Fuel BTUs - Plant Heating and Cooling • Primary Fuel BTUs - Process Steam • Primary Fuel BTUs - Total

Tab	Fields
Unit Secondary Fuel Information	<ul style="list-style-type: none"> • EIA Fuel Reporting • Secondary Quantity Burned Unit of Measure • Secondary Fuel BTUs - Contract • Secondary Fuel BTUs - Electrical Generation • Secondary Fuel BTUs - Plant Heating and Cooling • Secondary Fuel BTUs - Process Steam • Secondary Fuel BTUs - Total

(TS ID: 234310, 234410)

- The following fields and related functionality from the GAA Plant and GAA Unit record:

Datasheet	Fields
GAA Plant	<ul style="list-style-type: none"> • Date/Time Alternate Format • GADS Region • GADS Subregion
GAA Unit	<ul style="list-style-type: none"> • Demonstrated Maximum Gross Capacity • Demonstrated Maximum Net Capacity • Summer Net Capacity • Winter Net Capacity

(TS ID: 229627)

Foundation

Asset Criticality Analysis (ACA)

- Promoting analyses to and from ACA. (TS ID: 160858)

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 Analytics

- KPIs for GE Analytics. (TS ID: 162791)

Metrics and Scorecards

- Selecting columns to include in a Scorecard. (TS ID: 70641)
- GM (Generation Management) cube is deferred from V4.x. Any previously deployed GM (Generation Management) cube, which worked in V3.6 and earlier releases, will continue to work in any V4.x release 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)

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

- Creating a bulk What-If analysis. (TS ID: 73475)

Root Cause Analysis

- 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 in 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)
- 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 - V4.2.0.3.1

Documentation

- The V4.2.0.3.0 help files installed on the Meridium Enterprise APM Server contained outdated information related to the Production Loss Analysis and Root Cause Analysis product workflows. To resolve this issue, the V4.2.0.3.0 distribution package contains updated files to replace those provided via the V4.2.0.3.0 installation process. (TS ID: 274178)

Release Notes - V4.2.0.3.2

Security Manager

- You can now run the LDAP synchronization process without creating a Field Mapping record to map site assignments from Microsoft Active Directory to Meridium Enterprise APM. If you run the synchronization without creating this Field Mapping record, Meridium Enterprise APM will assign the first user-created site in the database as the default site for each synchronized user. If no user-created site exists in the database, the Meridium Default site will be assigned as the default site for each synchronized user. (TS ID: 281190)
- The **Enable APM Security** check box has been added to the **LDAP Manager** page. If you select this check box, Meridium Enterprise APM Security Role assignment will not be modified during LDAP synchronization, allowing you the option of managing Security Role assignment exclusively within Meridium Enterprise APM, even when using LDAP synchronization. (TS ID: 281189)

Release Notes - V4.2.0.3.3

Asset Hierarchy Configuration

- Previously, when you rebuilt the Asset Hierarchy Configuration, the operation may have exceeded the allowed timeout limit, causing the rebuild to fail. This issue has been resolved. (TS ID: 328368)

Thickness Monitoring

- Previously, when calculating a TML that has a Remaining Life Factor value less than or equal to zero (0), an error occurred while attempting to calculate the Retirement Date. This issue has been resolved. Now, if the value in the Remaining Life Factor field is less than or equal to zero (0), the value in the Retirement Date field will be set to the value in the Measurement Taken Date field of the most recent Thickness Measurement. If the value in the Remaining Life Factor field is greater than zero (0), the value in the Retirement Date field will be set to the sum of the Measurement Taken Date field value and the Remaining Life Factor value. (TS ID: 325897)
- Previously, when a failure occurred during a bulk analysis calculation, the bulk analysis terminated at the asset where the error occurred. Any remaining assets were not processed; however, all assets displayed the Calculation Status *Successful*. Accurate details could only be accessed by selecting the **View Complete Log** button. This issue has been resolved. Now, each asset is analyzed and saved individually and will display a Calculation Status of *Calculation Failed* or *Calculation Completed*. (TS ID: 325893)

Release Notes - V4.2.0.4.0

The following release notes are available for Meridium Enterprise APM V4.2.0.4.0:

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

You can also view the APM Connect release notes.

Enhancements - V4.2.0.4.0

The following enhancements have been made in V4.2.0.4.0.

Foundation

- You can now select a specific level in the Asset Hierarchy and the Meridium Enterprise APM application will retain your selection for later use. (TS ID: 256908)

Performance Recommendation Management

- You can now filter Recommendations by individual Recommendation assignments. (TS ID: 256910)

Production Loss Analysis (PLA)

- The Top 10 Bad Actors chart on the **PLA Overview** page has been enhanced to make it more intuitive. The chart now calculates the cost of losses using queries to review the monetary value of causing assets and the cost of work histories associated with Production Events. (TS IDs: 271715, 270761)
- The ProductionEventCode worksheet has been added to the PLA Data Loader, which you can use to enter Production Event Codes. These Production Event Codes should correspond to the Production Units entered in the ProductionEvent worksheet. When adding or reconciling losses, the Event Codes entered in the worksheets will appear in the lists of codes in the **Production Data** workspace. (TS ID: 270688)
- The Display Event Code field has been added to the Production Event family to store the Production Event Code field value as it appears on the Production Event datasheet. (TS ID: 270678)
- In the Production Plan Builder, the welcome message has been removed to streamline the workflow. Now, the **Select Production Unit** screen appears when the **Production Plan Builder** window is first opened. (TS ID: 266955)

Risk Based Inspection


RBI 581

- For an RBI 581 Cracking Damage Evaluation, the age on plan date with inspection is now calculated as the difference between the values in the Plan Date and *Target Inspection Date* fields. The values in the Last Known Inspection Date, Date in Service, and Cracking Inspection Date fields are no longer used to calculate age on plan date with inspection. A new field, Age since Target Inspection Date, has been added to the RBI 581 Cracking Damage Evaluation family to store this value. (TS ID: 273749)
- For an RBI 581 External Cracking Damage Evaluation, the age is now calculated *without* using the value in the Cracking Inspection Date field. Only the values in the Last Known Inspection Date and Date in Service fields are used to calculate the age. (TS ID: 273749)
- The value in the Furnished Cladding Thk field in an RBI 581 Risk Analysis record is now used to calculate the cladding age, which is used to calculate the value in the Damage Factor field in the associated RBI 581 Thinning and Lining Evaluation. To incorporate this change, the Cladd Component Age R-script and the RBI 581 Damage Factor - Thinning policy have been modified. (TS ID: 273748)

SIS Management

- You can now generate the Protective Instrument Loop (PIL) report. This report includes a summary of calculated results for the Logic Solver, Sensor System, and Final Element System associated with the Protective Instrument Loop. (TS ID: 275097)

Thickness Monitoring

- In addition to *Equipment*, the **Assets Requiring a Calculation** section on the **Thickness Monitoring Overview** page now includes *Functional Locations* in the list of assets that require a calculation. (TS ID: 271039)
- You can now perform a bulk analysis on *all* the assets that are listed in the **Assets** and **Assets Requiring a Calculation** sections on the **Thickness Monitoring Overview** page, instead of only the assets that are listed in a single page. You can also view a list of bulk analyze operations that are in progress, successful, or have failed. To facilitate this enhancement, the View Scheduling button () has been added in the upper-right corner of the **Thickness Monitoring Overview** page. (TS ID: 271039)
- The Thickness Monitoring (TM) Equipment and Thickness Monitoring (TM) Functional Location Data Loaders have been introduced in V4.2.0.4.0. You can use this feature to import and create records for the following families:

- TML Group
- Thickness Measurement Location (TML)
- Corrosion Analysis Settings for an Asset, TML Group, or a TML
- Thickness Measurement

Using the Data Loaders, you can create or update multiple TMLs at a time, allowing your organization to efficiently add data to your Meridium Enterprise APM database from other sources.

(TS IDs: 270968)

Resolved Issues - V4.2.0.4.0

The following issues existed in one or more previous releases and have been resolved in V4.2.0.4.0.

AMS Analytics

- Previously, on the **Systems and Tags** page, when searching for an AMS Tag within an AMS system, not all tag results were returned. This issue has been resolved. Now, the search returns all tags within the selected system. (TS ID: 268575)

APM Connect

SAP Adapters

- Previously, in the SAP context file, when the parameter value for WMI_USE_HARMONIZE was true, some Inspection Tasks were discontinued when transferred from SAP to Meridium Enterprise APM. This issue has been resolved. Now, Inspection Tasks are created as expected. (TS ID: 258079)

Asset Criticality Analysis (ACA)

- Previously, in the Chinese translation of Meridium Enterprise APM, you could not search for team members in Asset Criticality Analysis (ACA). This issue has been resolved. (TS ID: 275154)

Asset Health Manager

- Previously, if you did not have a license to access a family whose records were included in the **Health Indicator Source Management** page, the page did not load. This issue has been resolved. Now, in this scenario, the page loads records for all families to which you do have access. (TS ID: 278236)

Asset Strategy Management

- Previously, when you attempted to apply a template to a strategy containing added risks, an error message appeared. This issue has been resolved. (TS ID: 274096)

Foundation

R Scripts

- Previously, in the R Scripts System Requirements topic in the documentation, the link to the DeployR website for additional installation instructions did not work. This issue has been resolved. (TS ID: 272524)

Reference Document

- Previously, in Record Manager, when you created a new Reference Document record and uploaded a file to that record, an error message appeared. This issue has been resolved. (TS ID: 272014)


GE Analytics

- Previously, on the **Systems and Tags** page, when searching for an GE Tag within an GE system, not all tag results were returned. This issue has been resolved. Now, the search returns all tags within the selected system. (TS ID: 268574)

Hazards Analysis

- Previously, when you superseded or consolidated recommendations, and then promoted those recommendations to ASM, the risks associated with the superseded or consolidated recommendations were not promoted to the strategy. This issue has been resolved. Now, the risks associated with the superseded or consolidated recommendations are promoted to the strategy and all the risks are linked to a single action in the strategy. (TS ID: 273405)

Inspection Management

- Previously, when General Findings were generated for a Full Inspection, the Inspection Scope defined in the Inspection Task was not considered. Because of this, the number of General Findings that were generated was incorrect. This issue has been resolved. (TS ID: 275921)
- Previously, when viewing the Inspection Task datasheet on the **Manage Task** page, if you selected the Options () button in the upper right corner, the drop-down menu did not contain the Reference Documents link. This issue has been resolved. (TS ID: 274634)

Life Cycle Cost Analysis (LCC)

- Previously, an error occurred when you deleted a secondary element from the cost data grid. This issue has been resolved. (TS ID: 277624)

Performance Recommendation Management

- Previously, you could not filter analyses with associated Recommendations by Recommendation Type. This issue has been resolved. (TS ID: 266675)

Policy Designer

- Previously, if a query was used as an input to an IsNull node, fields containing no value were not recognized as null. This issue has been resolved. (TS ID: 274522)
- Previously, when you opened or refreshed a policy that included a configured Text node, the page loading indicator appeared and the page stopped responding. This issue has been resolved. (TS ID: 274800)
- In V4.2.0.3.0, various issues existed with the Edit Entity node's **Properties** window. These issues have been resolved. To facilitate this fix, a change made in V4.2.0.3.0, which was to address a scenario where certain policies were shown as having unsaved changes after the policy was copied, has been reverted. (TS IDs: 275436, 275438, 257394)
- Previously, in the **Properties** window for an Edit Entity node, if you selected a field to edit and saved the policy, then removed the selection and saved the policy, an error occurred when you selected the Edit Entity node again after reloading the policy. This issue has been resolved. (TS ID: 275435)
- Previously, for policies with a Measurement Location input node configured to automatically trigger the policy, adding a new reading to a related Measurement Location triggered multiple policy executions. This issue has been resolved. (TS ID: 277036)

Production Loss Analysis (PLA)

- Previously, when trying to access the **Plan Template** workspace in Production Loss Analysis Application Settings using the Internet Explorer or Microsoft Edge browser, an error occurred. This issue has been resolved. (TS ID: 278104)
- Previously, PLA plan periods that spanned the beginning of Daylight Saving Time

were calculated incorrectly. The periods combined the first day of Daylight Savings Time with the next entry period, extending the period by 25 hours. This issue has been resolved. (TS ID: 273788)

- Previously, an error occurred stating that the PLA Data Loader could not insert the same key many times when trying to complete an import with values in the Causing Asset column on the Production Event worksheet. This issue has been resolved. (TS ID: 271577)
- Previously, when an asset group was selected in the hierarchy, the asset totals were not properly populated in the **Production Events** section, **Planned Production vs. Losses** section, **Top 10 Bad Actors** section, and the **Event Summary** section. This issue has been resolved. (TS ID: 247553)

Reliability Analytics

- Previously, in Production Analysis, Probability Distribution, Reliability Distribution, and Reliability Growth, when trying to modify and save an analysis from the data editor, an error occurred stating that you were unable to edit the analysis. This issue has been resolved. (TS ID: 278191)
- 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: 272044)
- Previously, you could not create a Reliability Growth Analysis using only three data points. This issue has been resolved. (TS ID: 267225)

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

- Previously, in FMEA, if you added a new virtual asset to an analysis and then added another virtual asset, the two virtual assets incorrectly had the same value in the Asset ID field. This issue has been resolved. (TS ID: 276198)
- Previously, when you consolidated recommendations in RCM or FMEA that were based on a virtual asset, and then linked a real asset, the real asset did not propagate to the recommendations as expected, so you were unable to promote the recommendations to ASM. This issue has been resolved. (TS ID: 273766)

- Previously, when you superseded recommendations on different failure effects, and then promoted to ASM, some of the related risks were promoted, but not all of them as expected. This issue has been resolved. (TS ID: 271680)
- Previously, when you created an RCM or FMEA analysis from a template with a different Asset ID, the Related Asset Type value did not update with the Related Asset ID as is expected. This issue has been resolved. (TS ID: 265077)

Risk Based Inspection

- Previously, when calculating a large number of analyses using the bulk analyze function in Risk Based Inspection, if the user was logged out by either the Sign Out button or by a session timeout, the calculation ceased and a message appeared indicating that the user's session had expired. This issue has been resolved. Now, if a user is logged out of Meridium Enterprise APM while a calculation is in progress, the calculation continues as expected. (TS ID: 278145)
- Previously, the units of measure (UOM) in the Total SHE Risk Without Plan and Total Financial Risk Without Plan fields on the RBI 581 Risk Analysis datasheet were incorrect. This issue has been resolved. The UOM in the Total SHE Risk Without Plan and Total Financial Risk Without Plan fields are now Square feet per year and USD per year respectively. (TS ID: 276571)
- Previously, if you attempted to access a Potential Degradation Mechanism record with active Risk Based Inspection (580) license and inactive RBI 581 license, an error occurred. This issue has been resolved. (TS ID: 275637)
- Previously, when you superseded recommendations from two different RBI Degradation Mechanisms, and then promoted to ASM, only the risk from the RBI Degradation Mechanism related to the master recommendation was promoted. This issue has been resolved. (TS ID: 244332)

Rounds Data Collection

- Previously, you could open and modify the same Route in two different tabs within Meridium Enterprise APM. As a result, the completion status and history for the Route may have been confusing or incorrect. This issue has been resolved. You can now open a Route in only one tab at a time. (TS ID: 272288)
- Previously, inactive conditional Measurement Locations were downloaded to Windows Mobile handheld devices. This issue has been resolved. Now, only active

conditional Measurement Locations are downloaded. (TS ID: 250602)

- Previously, when you viewed a numeric Measurement Location record on a Windows Mobile handheld device and the Region Setting field on the device was set to a language other than English, the translated units of measure did not appear as expected if the number of characters in the translated text exceeded the field size. This issue has been resolved. (TS ID: 251955)
- Previously, when you accessed the **Recommendations** pane from the first checkpoint on a Route, the buttons to create Recommendations were inactive. This issue has been resolved. (TS ID: 274688)

SIS Management

- Previously, when you superseded or consolidated recommendations, and then promoted those recommendations to ASM, the risks and risk mitigation were not properly promoted to the strategy. This issue has been resolved. Now, in the promoted strategy, an action is created for the promoted recommendation and the risk rank values appear correctly. (TS IDs: 277524, 273405)

Tools

Scripts

- Previously, when you tested a classifier multiple times with the same set of data, the returned results (more specifically, the Score and sometimes the Prediction results) for a particular record were not the same each time. This issue has been resolved. (TS ID: 273262)
- Previously, when you tested a script, then sorted the results in the **Test Results** grid, and then navigated through the results on the **Details** window, the results shown on the **Details** window did not match the sort order previously selected in the **Test Results** grid. This issue has been resolved. Now, when you view the test results on the **Details** window, they will follow the current sort order selected for the **Test Results** grid. (TS ID: 275690)

Thickness Monitoring

- Previously, when calculating a large number of analyses using the bulk analyze function in Thickness Monitoring, if the user was logged out by either the Sign Out button or by a session timeout, the calculation ceased and a message appeared indicating that the user's session had expired. This issue has been resolved. Now,

if a user is logged out of Meridium Enterprise APM while a calculation is in progress, the calculation continues as expected. (TS ID: 278145)

Obsolete Features - V4.2.0.4.0

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

Thickness Monitoring

- The Thickness Monitoring (TM) Data Loader is no longer used to load data. You can now use the following enhanced data loaders, which are introduced in V4.2.0.4.0:
 - Thickness Monitoring (TM) Equipment Data Loader
 - Thickness Monitoring (TM) Functional Location Data Loader

Deferred Features - V4.2.0.4.0

The following features are not available in Meridium V4.2.0.4.0, but are planned for a future release.

Asset Health Manager

- 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, 86430)
- The display of health indicator statuses in Asset Hierarchy. (TS ID: 86796)

Asset Strategy Implementation

- Searching in SAP for the standard text value that you want to append to the value in the Long Text field of a Maintenance Item record. (TS ID: 117765)
- Managing all maintenance packages for all operations under a particular task list. (TS ID: 117767)
- Managing asset and action assignments when executing copy/paste operations. (TS ID: 144110)
- The option to exclude child items when copying Work Management Items. (TS ID: 147790)
- Using a link to manage the object list records that are linked to maintenance item records represented by the selected node. (TS ID: 238443)
- Creating implementation roles and filtering the WMI tree by each role. (TS ID: 243573)

Asset Strategy Management

- Migrating strategies between databases.

Asset Strategy Optimization

- Optimizing Actions. (TS ID: 112125)

Calibration Management

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

Generation Availability Analysis (GAA)

- Upgrading GAA from previous versions to any V4.2.x release. (TS ID: 187475)
- The following Security Groups in GAA:
 - MI Generation Management Forecast
 - MI Generation Management Nameplate
 - MI Generation Management Security(TS IDs: 184655, 184663, 184661, 184660, 184659, 184657, 184653, 184652, 184646, 184656)
- The following families in GAA:
 - Generation Forecast
 - Generation Fuel Annual Report
 - Generation Fuel Monthly Report
 - Generation Fuel Report
 - Generation Nameplate
 - Generation Nameplate Combined Cycle
 - Generation Nameplate Diesel
 - Generation Nameplate Fluidized Bed
 - Generation Nameplate Fossil Steam
 - Generation Nameplate Gas Turbine
 - Generation Nameplate Hydro
 - Generation Nameplate Miscellaneous
 - Generation Nameplate Nuclear
 - Generation Pool
 - Generation Role
 - Generation Role Assignment

- Generation Role Definition
- Generation Role Field Configuration
- Generation Unit Loading Profile
- Generation Unit Starting Profile

(TS IDs: 184655, 184663, 184661, 184660, 184659, 184657, 184653, 184652, 184646, 184656)

- The following fields and related functionality from the Performance record:

Tab	Fields
Unit Identification	<ul style="list-style-type: none"> • Capacity History Statistics Type • Zone • Refresh Incident Rollup
Unit Generation Performance	<ul style="list-style-type: none"> • Demonstrated Max Capacity (G) • Demonstrated Max Capacity (N) • Override Reserve Shutdown Hours • Sum of fuel BTUs • Heat Rate
Unit Starting Characteristics	<ul style="list-style-type: none"> • YTD attempted unit starts • YTD actual unit starts • YTD start reliability
Unit Primary Fuel Information	<ul style="list-style-type: none"> • EIA Fuel Reporting • Primary Quantity Burned Unit of Measure • Primary Fuel BTUs - Contract • Primary Fuel BTUs - Electrical Generation • Primary Fuel BTUs - Plant Heating and Cooling • Primary Fuel BTUs - Process Steam • Primary Fuel BTUs - Total

Tab	Fields
Unit Secondary Fuel Information	<ul style="list-style-type: none"> • EIA Fuel Reporting • Secondary Quantity Burned Unit of Measure • Secondary Fuel BTUs - Contract • Secondary Fuel BTUs - Electrical Generation • Secondary Fuel BTUs - Plant Heating and Cooling • Secondary Fuel BTUs - Process Steam • Secondary Fuel BTUs - Total

(TS ID: 234310, 234410)

- The following fields and related functionality from the GAA Plant and GAA Unit record:

Datasheet	Fields
GAA Plant	<ul style="list-style-type: none"> • Date/Time Alternate Format • GADS Region • GADS Subregion
GAA Unit	<ul style="list-style-type: none"> • Demonstrated Maximum Gross Capacity • Demonstrated Maximum Net Capacity • Summer Net Capacity • Winter Net Capacity

(TS ID: 229627)

Foundation

Asset Criticality Analysis (ACA)

- Promoting analyses to and from ACA. (TS ID: 160858)

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 Analytics

- KPIs for GE Analytics. (TS ID: 162791)

Metrics and Scorecards

- Selecting columns to include in a Scorecard. (TS ID: 70641)
- GM (Generation Management) cube is deferred from V4.x. Any previously deployed GM (Generation Management) cube, which worked in V3.6 and earlier releases, will continue to work in any V4.x release 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)

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

- Creating a bulk What-If analysis. (TS ID: 73475)

Root Cause Analysis

- 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 in 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)
- 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 - V4.2.0.4.1

Translations

- The V4.2.0.4.0 files installed on the Meridium Enterprise APM Server contained outdated translations for the French, Italian, and Russian languages. To resolve this issue, the V4.2.0.4.0 distribution package contains updated files to replace those provided via the V4.2.0.4.0 installation process. (TS ID: 280304)

Release Notes - V4.2.0.4.2

Security Manager

- You can now run the LDAP synchronization process without creating a Field Mapping record to map site assignments from Microsoft Active Directory to Meridium Enterprise APM. If you run the synchronization without creating this Field Mapping record, Meridium Enterprise APM will assign the first user-created site in the database as the default site for each synchronized user. If no user-created site exists in the database, the Meridium Default site will be assigned as the default site for each synchronized user. (TS ID: 281191)
- The **Enable APM Security** check box has been added to the **LDAP Manager** page. If you select this check box, Meridium Enterprise APM Security Role assignment will not be modified during LDAP synchronization, allowing you the option of managing Security Role assignment exclusively within Meridium Enterprise APM, even when using LDAP synchronization. (TS ID: 281188)

Release Notes - V4.2.0.4.3

Risk Based Inspection

RBI 581

- Previously, in an RBI 581 Risk Analysis, if you selected *H2O (Water)* in the Representative Fluid field, then the value in the Weighted NFNT Consequence Area field in the associated RBI 581 Consequence Evaluation was calculated. This issue has been resolved. Now, the value in the Weighted NFNT Consequence Area field is *not* calculated for water, and the field is populated with the value *0*. (TS ID: 290094)

Release Notes - V4.2.0.4.4

Risk Based Inspection

RBI 580

- Previously, in a Criticality Int. Corr. Deg. Mech. Eval. record associated with a piping component, the value in the Pressure at Minimum Thickness field was calculated incorrectly. This issue has been resolved. (TS ID: 335448)

Release Notes - V4.2.0.5.0

The following release notes are available for Meridium Enterprise APM V4.2.0.5.0:

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

Enhancements - V4.2.0.5.0

The following enhancements have been made in V4.2.0.5.0.

Production Loss Analysis

- To correctly display equivalent downtime in hours, the calculation for Equivalent Downtime Hours has been updated to *Equivalent Downtime Hours = Loss/MSHR*. To support this enhancement, the Maximum Sustained Hourly Rate field has been added to the Production Profile family. A value must be entered in this field in order for Equivalent Downtime Hours to be calculated when reconciling losses. (TS ID: 284419)
- To streamline the creation of a production plan from a template, in the grid in the **Production Period** section of the **Review Plan** window, you can now select which products you want to include in the production plan. (TS ID: 280642)
- The Line Number field in the PLA data loader has been enhanced to no longer require that the value begin with 0 when assigning a line number to production lines. (TS ID: 278436)
- To reduce repetitive steps, on the **Select Production Unit** screen in the Product Plan Builder, the Description field is now populated by default with the corresponding product description that was entered in the corresponding Production Profile. (TS ID: 272043)

Risk Based Inspection


RBI 580 and RBI 581

- When you create or delete an RBI Analysis or a What-if Analysis, there is now a visual indication whether the operation is still in progress or completed. In addition, when you apply or duplicate an RBI Analysis, all the options on the page are disabled until the operation is complete. (TS ID: 272686)

Rounds Data Collection

- In the Application Settings for Rounds, you can now specify default values for the Download Horizon and Sync Interval device settings that will be used for new Rounds Data Collection users. Super Users can now also update the device settings for all Rounds Data Collection users, thereby overwriting any settings

specified by individual users.

 **Note:** Individual users can still modify their own device settings at any time.

(TS ID: 274936)

- Settings that you specify in the **Device Settings** window are now stored as a user preference. This means that your settings will be maintained regardless of the device that you use to access the Meridium Enterprise APM application. (TS ID: 274936)
- When you mark a Route as Done while offline, the Route information displayed in the **Overdue Items** or **Due Items** list, as applicable, now provides a summary of the Route's completion. In addition, if you modify the comment that you entered when you marked the Route as Done, the window and confirmation message that appear now clearly indicate that only the comment has been modified, not the completion status of the Route. (TS ID: 278851)
- For Routes that are enabled for offline access, a synchronizing indicator now appears in place of the offline subscription indicator on the **RDC Overview** page whenever the Route synchronization is in progress. In addition, Routes cannot be opened until the synchronization is complete. (TS ID: 243256)

Resolved Issues - V4.2.0.5.0

The following issues existed in one or more previous releases and have been resolved in V4.2.0.5.0.

APM Connect Integration Support

- Previously, the SAP Work Management Adapters erroneously required an active *Asset Strategy Management* license in order to locate a Task List from SAP on an Inspection Task in Meridium Enterprise APM. This issue has been resolved. Now, the only required license to populate the Task List field in Meridium Enterprise APM is the *SAP Work Management* license. (TS ID: 277949)

Asset Criticality Analysis

- Previously, in an Asset Criticality Analysis system, when you added an asset under a functional location, the risk associated with the functional location was not inherited by the asset. This issue has been resolved. Now, when you add an asset to an existing functional location, the Risk will be inherited by the asset as expected. (TS ID: 276530)
- Previously, if the Asset Criticality Analysis Data Loader contained an underscore in the column name, the Data Loader would not load and an error message appeared. This issue has been resolved. (TS ID: 277842)

Asset Health Manager

- Previously, when you created a new Measurement Location in either Rounds Designer or Record Manager, duplicate Health Indicators appeared on the associated asset's **Health Summary** page. This issue has been resolved. Now, when creating a new Measurement Location, only one Health Indicator associated with the asset appears on the **Health Summary** page. (TS ID: 279729)

Asset Strategy Implementation

- Previously, if you sorted an action into a WMI group, the action's long description in the revision history was changed incorrectly. This issue has been resolved. (TS ID: 277937)

Asset Strategy Management

- Previously, when you attempted to link multiple actions to a measurement location template, only one Measurement Location record was created with all of the actions linked to it. This issue has been resolved. Now, when you link multiple actions, one Measurement Location record is created for each action being implemented. (TS ID: 287224)
- Previously, when you copied a failure effect node in an analysis hierarchy using the **Copy Selected Node and Related Records** option, and then pasted the node into the hierarchy, not all of the associated risk ranks were copied as well. This issue has been resolved. (TS ID: 282858)
- Previously, when linking Calibration and Inspection Tasks from an active strategy, you could not override the baseline action mapping rules to enable rule customization. This issue has been resolved. As expected, you can now override action mapping rules to enable rule customization with Calibration and Inspection Tasks. (TS ID: 280892, 280893)
- Previously, when you saved a strategy, an error occurred if you attempted to select one of the left navigation tabs within the strategy before the strategy save was complete. This issue has been resolved. (TS ID: 277975)

Documentation

- Previously, the Rounds workflows that are included in the Product Workflows section of the documentation contained descriptions with incorrect information. These issues have been resolved. (TS ID: 281817)

Foundation

Asset Hierarchy

- Previously if you searched in the Asset Hierarchy, selected an item, and then cleared the search criteria, the Asset Hierarchy returned to the previous selection instead of your new selection from the search results. This issue has been resolved. Now, the Asset Hierarchy retains your selection after you close the search. (TS ID: 273802)

Configuration Manager

- Previously, in the **Custom Metadata** section of the **Manage Translations** page, when you selected a language, and then selected the **Export Untranslated Metadata** button, the .XLS file downloaded did not contain the untranslated static

text from the SSRS Report. This issue has been resolved. Now, if you download the file via the **Export Untranslated Metadata** button, the file will also contain the static untranslated text from the SSRS Report. (TS ID: 276972)

Dashboards

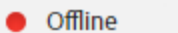
- Previously, if you were not a member of the MI Foundation User Security Role, an error may have occurred when you accessed the APM Foundation Dashboard. This issue has been resolved. Now, the **Asset Criticality Analyses Completed – 12 months** and **Criticality Distribution Current** graphs no longer appear by default on the APM Foundation Dashboard. When you upgrade to V4.2.0.5.0, your existing APM Foundation Dashboard, including any custom modifications, will be replaced with the updated version. (TS ID: 284607)

Datasheets

- Previously, when you created a datasheet that contained a hyperlink field and the URL syntax was contained within quotation marks (e.g., "https:/..."), the hyper-linked text would not appear on the datasheet. This issue has been resolved. (TS ID: 277533)

Meridium Enterprise APM Mobile Application

- Previously, when working offline, there was no indicator to notify you that your device was offline. This issue has been resolved. Now when you are working offline, the following indicator appears on the lower-left corner of the page:

 . (TS ID: 264915)

Operations Manager

- Previously, when you scheduled a strategy macro run, the date and time for the scheduled strategy macro run could be saved incorrectly due to an issue with referencing the Security User's time zone. This issue has been resolved. (TS ID: 283236)

Risk Matrix

- Previously, if the Low Risk Threshold value was set lower than the lowest risk rank, an error occurred. This issue has been resolved. Now, if you set the Low Risk Threshold value lower than the lowest risk rank, a message appears, stating that you cannot set the Low Risk Threshold value to be lower than the risk rank. (TS ID: 281122)

Rules

- Previously, an internal service error occurred when you created a strategy rule in the baseline database. This issue has been resolved. (TS ID: 281139)

Scheduling

- Previously, when you upgraded Meridium Enterprise APM from V3 to any version of V4, the schedule summary of a job appeared in the schedule section, but the scheduled jobs did not execute according to the schedule. This issue has been resolved. (TS ID: 284925)

Search

- Previously, if you created a new family and added fields and records to the new family, the new records were not included in the results of the global Meridium Enterprise APM search. This issue has been resolved. (TS ID: 268288)

State Assignments

- Previously, when you modified the state assignments for a record, the state assignments menu did not close as expected when you opened the **State Assignments** window. This issue has been resolved. (TS ID: 284613)
- Previously, when you modified the state assignments for a record, the drop-down list of Security Users may have included:
 - Users whose Security Role assignments did not include the Security Role assignments necessary to modify the state assignment for the selected record.
 - Users whose site assignments did not include the site associated with the selected family.

These issues have been resolved. (TS ID: 283311, 283235)

Life Cycle Cost Analysis (LCC)

- Previously, when you had two analyses open and closed one of them, the **Scenario Definition** section for the closed analysis continued to appear and you could not open a scenario in the remaining analysis. This issue has been resolved. (TS ID: 278736)

Policies

- Previously, in a load-balanced environment, hyperlinks included in the policy execution history and in email messages sent via the Email Contact node may not have worked. This issue occurred if the location specified by the BaseURL setting in the Meridium Application Settings configuration file (C:\ProgramData\Meridium\MeridiumAppSettings.xml) was not directly accessible without going through the load-balancer. This issue has been resolved. Now, to ensure that the location is always accessible, the data source host name, if specified, is used to create hyperlinks instead of the BaseURL value. If the data source host name is set to the wildcard (*) then the BaseUrl setting from the configuration file will be used. (TS ID: 277926)

Production Loss Analysis

- Previously, for a user with a European culture setting, after entering the Plan Start Time and Plan End Time on the **Time-based Plan** screen for a time-based sequential plan or plan template, the End Time appeared as invalid in the lower grid. This issue has been resolved. (TS ID: 281163)
- Previously, the short range production plan was calculated using Standard Batch size. This issue has been resolved. The short range production plan is now calculated using Planning Rate. (TS ID: 280241)
- Previously, the **History** option did not appear on the datasheets in the Production Loss Analysis module, even if the **Keep History** check box was selected in Family Management. This issue has been resolved. (TS ID: 278339)

Recommendation Management

- Previously, when using an Oracle database, the **Assigned to Name** filter did not filter Recommendations by name unless you first refreshed the underlying query used to display the filtered results. This issue has been resolved. (TS ID: 288445)

Reliability Analytics

- Previously, in a global Production Analysis, Reliability Distribution Analysis, and Reliability Growth Analysis, the Site Reference Key and site designation were automatically set to the site of the linked equipment with the smallest Site Reference Key if the analysis contained failure from an equipment. This issue has been resolved. By default, the Site Reference Key and site designation are now set to global. (TS ID: 278818, 278813, 278645)

- Previously, if you created a Reliability Distribution using a query with an invalid Date field, an error occurred and caused the browser page to stop responding. This issue has been resolved. (TS ID: 278696)
- Previously, in Spares Analysis, when you added an additional row in the **Populations** section of a spare, the site of the analysis reverted to the logged in user's default site rather than the analysis site. This issue has been resolved. (TS ID: 278660)
- Previously, the **History** option did not appear on the datasheets in the Reliability Analytics module, even if the **Keep History** check box was selected in Family Management. This issue has been resolved. (TS ID: 278339)

Reliability Centered Maintenance and Failure Modes and Effects Analysis

- Previously, when an RCM FMEA user with view-only template privileges attempted to apply a template, an authorization error occurred. This issue occurred because edit privileges for the analysis family were incorrectly required in order to apply the template. This issue has been resolved. (TS ID: 280277)

Risk Based Inspection

RBI 581

- Previously, in an RBI 581 Risk Analysis, when you selected *H2O (Water)* in the Representative Fluid field, then the value in the Weighted NFNT Consequence Area field in the associated RBI 581 Consequence Evaluation was calculated. This issue has been resolved. Now, the value in the Weighted NFNT Consequence Area field is *not* calculated for water, and the field is populated with the value 0. (TS ID: 279384)

Root Cause Analysis

- Previously, the **History** option did not appear on the datasheets in the Root Cause Analysis module, even though the **Keep History** check box was selected in Family Management. This issue has been resolved. (TS ID: 278339)

Rounds Data Collection

- Previously, when using Rounds Data Collection, if you created a recommendation and closed the **Recommendations** pane without saving, you were not prompted to save your changes. Further, the **Recommendations** pane was not displayed correctly if you tried to add subsequent recommendations. This issue has been resolved. Now, a warning message appears if you close the **Recommendations** pane with unsaved changes. (TS IDs: 279157, 278845)
- Previously, when taking readings while offline, if you selected **Clear Reading** for each Measurement Location on the Route and then closed the tab, when you opened the Route again, the readings were not actually cleared. This issue has been resolved. (TS ID: 278727)
- Previously, on Android devices, after disconnecting your device from a network, the first Route that you opened to collect data took a significant amount of time to appear and, if you closed the tab before it completed loading, multiple error messages and an incorrect page appeared. This issue has been resolved. You can now open a Route as expected on the first attempt after disconnecting a device from a network. (TS ID: 279190)
- Previously, when you scanned a barcode that matched a Measurement Location that was not on the current Route, the dialog box that appeared displayed the Measurement Location and Route Entity Keys. This issue has been resolved. Now, the Measurement Location's Entity ID and its associated Route ID are displayed. (TS ID: 277363)
- Previously, when you scanned a barcode that matched multiple Measurement Locations not on the current Route, the option that appeared was to navigate to one of these Routes at random. This issue has been resolved. The following logic is now used when you scan a barcode:
 - If you scan a barcode that *is* associated with a Measurement Location on the current Route as well as a different Route, the Measurement Location on the current Route will be opened automatically.
 - If you scan a barcode that is associated with a Route that is *not* the current Route, a dialog box appears that allows you to navigate to the matching Route.
 - If you scan a barcode that is associated with a Measurement Location on more than one Route but not on the *current* Route, or if you scan the barcode from the RDC Overview page, a dialog box appears that allows you to navigate to the matching Measurement Location whose related Checkpoint Task has the earliest Next Date. If multiple Measurement Locations have the same Next Date, you can navigate to the first Route, sorted alphabetically, that contains the Measurement Location.

(TS ID: 277363)

- Previously, when using a Small Form Factor device, you could not enter a comment in the **Mark Route Done** window because a scrollbar did not appear. This issue has been resolved. (TS ID: 277475)
- Previously, when using an Android device while offline, the Meridium Enterprise APM mobile application took an excessively long time to load the **RDC Overview** page. This issue has been resolved. (TS ID: 279127)
- Previously, when you reconnected a device after working offline, the number of Recommendations shown on the **RDC Overview** page was incorrectly high. More specifically, the number of Recommendations shown was increased by the actual number of reconnections. Additionally, repetitive **Connected** and **Disconnected** messages appeared. These issues have been resolved. Now, when reconnecting after being offline, the correct number of Recommendations is shown on the **RDC Overview** page, and only the necessary messages appear. (TS ID: 279031)
- 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: 277817)
- Previously, in V4.2.0.3.0 and V4.2.0.4.0, the graph did not appear in the **Measurement Trend** section of the workspace for a checkpoint on a Route. This issue has been resolved. (TS ID: 279211)
- Previously, if a Route was designed with a checkpoint condition within another checkpoint condition, only the first condition appeared in the Route in Rounds Data Collection. This issue has been resolved. (TS ID: 279854)
- Previously, when using a browser to access Rounds Data Collection while offline, you could not open Routes unless the Route had previously been opened while you were online. (TS ID: 280542)
- Previously, the following issues related to recommendations existed:
 - When you created a recommendation based on a numeric Measurement Location, the default Recommendation Headline indicated that the Measurement Location was in an alert condition, whether or not it actually was.

- If you created a recommendation while offline, the recommendation was not saved to the database when you reconnected the device to a network.

These issues have been resolved.

(TS ID: 278848)

- Previously, when you connected to a network after working offline, a message appeared indicating that a standalone recommendation had been saved, although you had not created a recommendation. In addition, if you had created a recommendation, multiple messages appeared. These issues have been resolved. Now, the messages that appear correspond to the recommendations that you actually created. (TS ID: 220314)
- Previously, when using an Android device while offline, it took an excessively long time to open a new Route for the first time, and when it did open, you sometimes could not enter readings. These issues have been resolved. (TS ID: 278838)
- Previously, each time you modified a Recommendation, the count of created Recommendations increased by one, although no new Recommendation was created. This issue has been resolved. (TS ID: 290106)

Rounds Designer

- Previously, for Measurement Locations that already existed in a Route when you opened the Route, if you attempted to move a Measurement Location from the Route level to under a checkpoint condition, the Measurement Location that you were attempting to move disappeared. This issue has been resolved. (TS ID: 277771)
- Previously, for the first Measurement Location that you added to a Route, the **Identification** section of the datasheet incorrectly contained a **Schedule** box. This issue has been resolved. Fields relating to schedules now appear only in the **Schedule** box. (TS ID: 279022)
- Previously, when you tried to create and save a Checkpoint Condition that contained a decimal value as a successor to a numeric Measurement Location, a dialog box appeared stating that you had unsaved changes and asked if you wanted to continue to close the route. If you selected **No**, the Checkpoint Condition's decimal value reverted to zero. If you selected **Yes**, multiple error messages appeared, although your new Checkpoint Condition was actually saved with the correct decimal value. These issues have been resolved. Now, you can successfully create and save a Checkpoint Condition with a decimal value as a successor to a

numeric Measurement Location. (TS ID: 283282)

SIS Management

- Previously, when you accessed the **SIS Overview** page using an Oracle database, results did not appear on the **Proof Testing Results** graph, although data existed in the database. This issue was caused because the SQL statements for the dashboard queries in SIS contained the terms "PASS" or "FAIL" instead of "Pass" or "Fail," respectively, and Oracle databases are case sensitive. This issue has been resolved. The dashboard queries in SIS have been corrected and the results now appear on the **Proof Testing Results** graph. (TS ID: 281143)

Tools

Catalog

- Previously, if you moved a parent folder into a folder that was one of its child folders, neither folder appeared in search results. This issue has been resolved. (TS ID: 280870)

Queries

- Previously, for users whose culture setting was Japanese, when you added criteria to fields via the expression builder, Japanese characters were added to the query code, causing an error to occur when the query was run. This issue has been resolved. (TS ID: 287437)
- Previously, if a query name contained dashes, the query did not run on an Oracle database. This issue has been resolved. (TS ID: 278360)
- Previously, if an append query was assigned a WHERE clause, an error occurred when the query was run. This issue has been resolved. (TS ID: 277908)

Deferred Features - V4.2.0.5.0

The following features are not available in Meridium V4.2.0.5.0, but are planned for a future release.

Asset Health Manager

- 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, 86430)
- The display of health indicator statuses in Asset Hierarchy. (TS ID: 86796)

Asset Strategy Implementation

- Searching in SAP for the standard text value that you want to append to the value in the Long Text field of a Maintenance Item record. (TS ID: 117765)
- Managing all maintenance packages for all operations under a particular task list. (TS ID: 117767)
- Managing asset and action assignments when executing copy/paste operations. (TS ID: 144110)
- The option to exclude child items when copying Work Management Items. (TS ID: 147790)
- Using a link to manage the object list records that are linked to maintenance item records represented by the selected node. (TS ID: 238443)
- Creating implementation roles and filtering the WMI tree by each role. (TS ID: 243573)

Asset Strategy Management

- Migrating strategies between databases.

Asset Strategy Optimization

- Optimizing Actions. (TS ID: 112125)

Calibration Management

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

Generation Availability Analysis (GAA)

- Upgrading GAA from previous versions to any V4.2.x release. (TS ID: 187475)
- The following Security Groups in GAA:
 - MI Generation Management Forecast
 - MI Generation Management Nameplate
 - MI Generation Management Security(TS IDs: 184655, 184663, 184661, 184660, 184659, 184657, 184653, 184652, 184646, 184656)
- The following families in GAA:
 - Generation Forecast
 - Generation Fuel Annual Report
 - Generation Fuel Monthly Report
 - Generation Fuel Report
 - Generation Nameplate
 - Generation Nameplate Combined Cycle
 - Generation Nameplate Diesel
 - Generation Nameplate Fluidized Bed
 - Generation Nameplate Fossil Steam
 - Generation Nameplate Gas Turbine
 - Generation Nameplate Hydro
 - Generation Nameplate Miscellaneous
 - Generation Nameplate Nuclear
 - Generation Pool
 - Generation Role
 - Generation Role Assignment

- Generation Role Definition
- Generation Role Field Configuration
- Generation Unit Loading Profile
- Generation Unit Starting Profile

(TS IDs: 184655, 184663, 184661, 184660, 184659, 184657, 184653, 184652, 184646, 184656)

- The following fields and related functionality from the Performance record:

Tab	Fields
Unit Identification	<ul style="list-style-type: none"> • Capacity History Statistics Type • Zone • Refresh Incident Rollup
Unit Generation Performance	<ul style="list-style-type: none"> • Demonstrated Max Capacity (G) • Demonstrated Max Capacity (N) • Override Reserve Shutdown Hours • Sum of fuel BTUs • Heat Rate
Unit Starting Characteristics	<ul style="list-style-type: none"> • YTD attempted unit starts • YTD actual unit starts • YTD start reliability
Unit Primary Fuel Information	<ul style="list-style-type: none"> • EIA Fuel Reporting • Primary Quantity Burned Unit of Measure • Primary Fuel BTUs - Contract • Primary Fuel BTUs - Electrical Generation • Primary Fuel BTUs - Plant Heating and Cooling • Primary Fuel BTUs - Process Steam • Primary Fuel BTUs - Total

Tab	Fields
Unit Secondary Fuel Information	<ul style="list-style-type: none"> • EIA Fuel Reporting • Secondary Quantity Burned Unit of Measure • Secondary Fuel BTUs - Contract • Secondary Fuel BTUs - Electrical Generation • Secondary Fuel BTUs - Plant Heating and Cooling • Secondary Fuel BTUs - Process Steam • Secondary Fuel BTUs - Total

(TS ID: 234310, 234410)

- The following fields and related functionality from the GAA Plant and GAA Unit record:

Datasheet	Fields
GAA Plant	<ul style="list-style-type: none"> • Date/Time Alternate Format • GADS Region • GADS Subregion
GAA Unit	<ul style="list-style-type: none"> • Demonstrated Maximum Gross Capacity • Demonstrated Maximum Net Capacity • Summer Net Capacity • Winter Net Capacity

(TS ID: 229627)

Foundation

Asset Criticality Analysis (ACA)

- Promoting analyses to and from ACA. (TS ID: 160858)

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 Analytics

- KPIs for GE Analytics. (TS ID: 162791)

Metrics and Scorecards

- Selecting columns to include in a Scorecard. (TS ID: 70641)
- GM (Generation Management) cube is deferred from V4.x. Any previously deployed GM (Generation Management) cube, which worked in V3.6 and earlier releases, will continue to work in any V4.x release 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)

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

- Creating a bulk What-If analysis. (TS ID: 73475)

Root Cause Analysis

- 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 in 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)
- 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 - V4.2.0.6.0

The following release notes are available for Meridium Enterprise APM V4.2.0.6.0:

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

You can also view the APM Connect release notes.

Enhancements - V4.2.0.6.0

The following enhancements have been made in V4.2.0.6.0.

Foundation

Graphs

- You can now specify whether or not the labels on a graph should be truncated. (TS ID: 259934)

Rounds Designer

- Performance has been improved in the following areas:
 - Loading the **Readings** workspace for a Measurement Location with a large number of related readings.
 - Loading the **Route History** workspace for a Route with a large number of Route History records.

(TS ID: 288618)

- For Route and Checkpoint schedules that are set to recur every certain number of hours or minutes after the specified Start Time, for time zones that use Daylight Saving Time (DST), you can now specify whether you want the schedule to adjust for DST automatically.

For example, consider the following scenarios for a Route schedule that is set for “Every 4 hours since Start Time”:

- If you select Adjust for Daylight Savings, the Route will be due at the same *time of day* whether or not DST is in effect (e.g., it always due 8am, 12pm, 4pm, etc.). In this scenario, the actual hour increment between the Route due dates may be 3 hours or 5 hours when entering or leaving DST, respectively.
- If you do not select Adjust for Daylight Savings, the Route will be due *every 4 hour increment*, whether or not DST is in effect (e.g., a Route that is due at 8am during DST in the summer is due at 7am in winter).

 **Note:** All schedules previously used this method.

(TS ID: 274640)

Thickness Monitoring

- You can now calculate the Maximum Allowable Working Pressure (MAWP) for pressure vessels. (TS ID: 280066)

Resolved Issues - V4.2.0.6.0

The following issues existed in one or more previous releases and have been resolved in V4.2.0.6.0.

Asset Criticality Analysis (ACA)

- Previously, when you added a new analysis in ACA, the query used to retrieve the analyses incorrectly returned the same analysis twice. This issue has been resolved. Now, the query will return the correct result, you will not see duplicate analyses in the query result, and the **ACA Overview** page lists the correct number of analyses. (TS ID 284283)
- Previously, new asset groups for each type of asset were created in an ACA system when functional locations and equipment were linked to the system, even if those asset groups already existed. This issue has been resolved. Now, the ACA system reuses existing asset groups rather than creating a new asset group for each type of asset. (TS ID: 284036)

Asset Strategy Management

- Previously, when you applied a template, copied the risk of the template, and then applied the template again, an error occurred. This issue has been resolved. (TS ID: 288122)
- Previously, on iOS devices, when you attempted to import a resource into an ASO analysis, the **Resource Finder** window contained no **Import** or **Cancel** buttons to complete or abandon the action. This issue has been resolved. (TS ID: 185820)

Foundation

Manage Translations

- Previously, in an Oracle database, in the **Custom Metadata** section of the **Manage Translation** page, when you selected **Export Untranslated Metadata** button, an error occurred. This issue has been resolved. (TS ID: 288532)

Scheduling

- Previously, if you set the recurrence of a scheduled job to run frequently (e.g., every two minutes), it sometimes ran earlier than the scheduled time. This issue

occurred because multiple instances of the same scheduled job ran concurrently. This issue has been resolved. (TS ID: 290950)

Meridium Enterprise APM Mobile Application

- Previously, when using the Meridium Enterprise APM mobile application in offline mode, the online and offline messages that appeared did not accurately reflect your online or offline status. This issue has been resolved. (TS ID: 281804)
- Previously, if you were using the Meridium Enterprise APM mobile application in offline mode, you could not access the Asset Hierarchy once you reconnected to a network. This issue has been resolved. (TS ID: 280359)

Policies

Family Policies and Policy Designer

- 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: 285591)

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, even though the policy execution history indicated that the execution was successful. This issue has been resolved. (TS ID: 287505)

Production Loss Analysis

- Previously, when you modified the sequence of a Time-Based Sequential Production Plan, the Plan End Date Time of a Time-Based Sequential Production Plan appeared as the End Time in the last row of the grid, regardless of the sequence you specified. This issue has been resolved. (TS ID: 293920)
- Previously, when you created a Production Plan from a Plan Template that was not a Time-Based Concurrent plan, the **Description** column did not appear in the grid in the **Production Period** section of the **Review Plan** window. This issue has been resolved. The **Description** column now appears in all Production Plan Templates. (TS ID: 291509)

- Previously, when you created a Production Plan with two shifts, the period was incorrectly calculated when entering or leaving Daylight Saving Time. This issue has been resolved. (TS ID: 289475)

Recommendations

- Previously, in a load-balanced environment, hyperlinks included in the Recommendation alerts may not have worked. This issue occurred if the location specified by the BaseURL setting in the Meridium Application Settings configuration file **C:\ProgramData\Meridium\MeridiumAppSettings.xml** was not directly accessible without going through the load-balancer. This issue has been resolved. Now, to ensure that the location is always accessible, the data source host name, if specified, is used to create hyperlinks instead of the BaseURL value. If the data source host name is set to the wildcard (*) then the BaseUrl setting from the configuration file will be used. (TS ID: 277921)
- Previously, when using the Microsoft Edge browser, the state control in Recommendations did not appear correctly. This issue has been resolved. (TS ID: 267823)

Reliability Centered Maintenance and Failure Modes and Effects Analysis

- Previously, if a user whose culture setting was non-English tried to apply a template to an FMEA analysis, when they selected the template to apply and then selected **OK**, an error occurred. This issue has been resolved. (TS ID: 294265)

Risk Based Inspection

RBI 581

- Previously, in an RBI 581 Risk Analysis in the *Created* state, the values in the API 653 Maintenance Flag and API 653 Maintenance Adjustment fields were *not* copied to the corresponding fields in the associated RBI 581 Thinning and Lining Evaluation during an upgrade. Because of this, the value in the Damage Factor field was calculated incorrectly. This happened only for analyses that were created before upgrading to Meridium Enterprise APM V4.2.0.0 or later. This issue has been resolved. (TS ID: 257663)

Risk Matrix

- Previously, when using a Risk Matrix with a protection level slider, the unmitigated protection level slider did not retain the correct value. This issue has been

resolved. (TS ID: 277974)

Root Cause Analysis


- Previously, when you accessed the SSRS reports for a Root Cause Analysis using the Internet Explorer browser, the Logic Tree and Event diagrams would appear incomplete. This issue has been resolved. (TS ID: 288446)
- Previously, when you modified the state of a hypothesis with custom validation that did not contain an error message, an internal server error appeared instead of a detailed error message. This issue has been resolved. (TS ID: 288183)
- Previously, the entire RCA Logic Tree did not appear when exported using Internet Explorer, and the **Save As** window did not appear when exporting a Logic Tree using Google Chrome, leaving you unable to save the diagram. These issues have been resolved. (TS ID: 267909)

Rounds Data Collection

- Previously, the geolocation data that was automatically saved when you provided readings or created a recommendation was incorrect. In certain circumstances, it also may have appeared in the Rounds Data Collection user interface that the reading was not saved to the database, although it actually *was* saved successfully. This issue has been resolved. (TS ID: 294609)
- Previously, if a Route with a schedule contained a Measurement Location that was due prior to the Next Date of the Route and you did not take a reading for that Measurement Location, when you marked the Route as Done, the Route continued to appear in the **Overdue Items** list on the **RDC Overview** page. In addition, if you attempted to open the Route, the message "Route marked done" appeared. These issues have been resolved. (TS ID: 293956)
- Previously, if your network connection was lost while a Route *not* enabled for off-line access was open, and you were subsequently automatically logged out of the Meridium Enterprise APM mobile application due to inactivity, when you logged back into the application, the message "Route marked done" appeared and the Route no longer appeared on the Route lists on the **RDC Overview** page. This issue has been resolved. Now, in this scenario, the Route is not marked done automatically and you can access it as expected to complete the Route. (TS ID: 293512)
- Previously, if the reading recorded for a Measurement Location used an Allowable

Value that contained blank spaces following the value, an error occurred if you attempted to clear the reading. Additionally, you could not select the value in the workspace for the Measurement Location. This issue has been resolved. (TS ID: 293101)

- Previously, if a Route contained checkpoints that were due *after* the time that the Route was opened for data collection but *within* the specified download horizon, if you marked a partially completed Route as Done while working online and then opened it again to add more readings, incorrect information was displayed and various errors may have occurred. This issue has been resolved. (TS ID: 291594)
- Previously, when you attempted to save a reading, if the device's geolocation services were unable to obtain coordinates, a loading indicator appeared indefinitely and the reading was not saved. This issue has been resolved. (TS ID: 291593)
- Previously, when saving a Recommendation, only the values entered in the fields included on one of the two baseline Operator Rounds Recommendation offline forms was saved. If additional baseline or custom fields were added to the offline form, data entered into these additional fields was not saved. This issue has been resolved for a limited number of fields. Now if the Mandatory Date or Functional Location ID fields are added to the offline form, values entered in these fields are saved in Recommendations as expected.

 **Note:** This issue will be resolved for all fields in a future release.

(TS ID: 291149)

- Previously, when you logged in to the Meridium Enterprise APM mobile application while offline, your previously saved settings did not appear on the **Device Settings** window. This issue has been resolved. (TS ID: 289042)
- Previously, in certain upgraded databases, if you cleared the first reading taken for a checkpoint since the upgrade, an error occurred due to inconsistent formatting of the Next Date value. In addition, the completion status of the Route was not updated correctly. This issue has been resolved. Now, you can successfully clear readings from checkpoints, regardless of the version from which you upgraded. (TS ID: 288135)
- Previously, when using a Windows device, selecting the scan button did not access the device's camera as expected. This issue has been resolved. (TS ID: 287872)
- Previously, for Routes that you marked **Done** while working offline, the **Marked Done On** date that appears on the **RDC Overview** page incorrectly displayed the

date when the Route was previously completed. This issue has been resolved. (TS ID: 287825)

Rounds Designer

- Previously, an error may have occurred when you attempted to save a change to a Measurement Location Template. In addition, errors may have occurred, and Measurement Locations may not have been created as expected, when adding checkpoints to a Route using the **Checkpoint Template** menu option. These issues have been resolved. (TS ID: 292346)
- Previously, if a Recommendation was created in Rounds Data Collection and no subsequent readings were taken on the Route, the Recommendation was not counted in the **Recommendations Created** column in the **Route History** workspace in Rounds Designer. This issue has been resolved. (TS ID: 290990)
- Previously, the following issues in the **Readings** workspace made it difficult to work with readings related to a Measurement Location:
 - In Google Chrome, the grid in the workspace was misaligned and data in the last column was inaccessible.
 - In Internet Explorer, scroll bars did not appear so that you could not view or modify all data.

These issues have been resolved. (TS ID: 288617)

Security Manager

- Previously, if you changed the value in the Name field for a Domain record and then ran the LDAP synchronization process, the value in the Domain field for each Security User associated with the Domain record was not updated. This issue has been resolved. (TS ID: 291519)

Thickness Monitoring

- Previously, if you changed the value in the TML ID field after adding a customized rule, and you then created multiple copies of that TML, an error occurred. This issue has been resolved. (TS ID: 284231)
- Previously, the formula used to calculate Maximum Allowable Working Pressure (MAWP) for piping was incorrect. This issue has been resolved. (TS ID: 280066)

Deferred Features - V4.2.0.6.0

The following features are not available in Meridium V4.2.0.6.0, but are planned for a future release.

Asset Health Manager

- 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, 86430)
- The display of health indicator statuses in Asset Hierarchy. (TS ID: 86796)

Asset Strategy Implementation

- Searching in SAP for the standard text value that you want to append to the value in the Long Text field of a Maintenance Item record. (TS ID: 117765)
- Managing all maintenance packages for all operations under a particular task list. (TS ID: 117767)
- Managing asset and action assignments when executing copy/paste operations. (TS ID: 144110)
- The option to exclude child items when copying Work Management Items. (TS ID: 147790)
- Using a link to manage the object list records that are linked to maintenance item records represented by the selected node. (TS ID: 238443)
- Creating implementation roles and filtering the WMI tree by each role. (TS ID: 243573)

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- Migrating strategies between databases.

Asset Strategy Optimization

- Optimizing Actions. (TS ID: 112125)

Calibration Management

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

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- Upgrading GAA from previous versions to any V4.2.x release. (TS ID: 187475)
- The following Security Groups in GAA:
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 - MI Generation Management Security(TS IDs: 184655, 184663, 184661, 184660, 184659, 184657, 184653, 184652, 184646, 184656)
- The following families in GAA:
 - Generation Forecast
 - Generation Fuel Annual Report
 - Generation Fuel Monthly Report
 - Generation Fuel Report
 - Generation Nameplate
 - Generation Nameplate Combined Cycle
 - Generation Nameplate Diesel
 - Generation Nameplate Fluidized Bed
 - Generation Nameplate Fossil Steam
 - Generation Nameplate Gas Turbine
 - Generation Nameplate Hydro
 - Generation Nameplate Miscellaneous
 - Generation Nameplate Nuclear
 - Generation Pool
 - Generation Role
 - Generation Role Assignment

- Generation Role Definition
- Generation Role Field Configuration
- Generation Unit Loading Profile
- Generation Unit Starting Profile

(TS IDs: 184655, 184663, 184661, 184660, 184659, 184657, 184653, 184652, 184646, 184656)

- The following fields and related functionality from the Performance record:

Tab	Fields
Unit Identification	<ul style="list-style-type: none"> • Capacity History Statistics Type • Zone • Refresh Incident Rollup
Unit Generation Performance	<ul style="list-style-type: none"> • Demonstrated Max Capacity (G) • Demonstrated Max Capacity (N) • Override Reserve Shutdown Hours • Sum of fuel BTUs • Heat Rate
Unit Starting Characteristics	<ul style="list-style-type: none"> • YTD attempted unit starts • YTD actual unit starts • YTD start reliability
Unit Primary Fuel Information	<ul style="list-style-type: none"> • EIA Fuel Reporting • Primary Quantity Burned Unit of Measure • Primary Fuel BTUs - Contract • Primary Fuel BTUs - Electrical Generation • Primary Fuel BTUs - Plant Heating and Cooling • Primary Fuel BTUs - Process Steam • Primary Fuel BTUs - Total

Tab	Fields
Unit Secondary Fuel Information	<ul style="list-style-type: none"> • EIA Fuel Reporting • Secondary Quantity Burned Unit of Measure • Secondary Fuel BTUs - Contract • Secondary Fuel BTUs - Electrical Generation • Secondary Fuel BTUs - Plant Heating and Cooling • Secondary Fuel BTUs - Process Steam • Secondary Fuel BTUs - Total

(TS ID: 234310, 234410)

- The following fields and related functionality from the GAA Plant and GAA Unit record:

Datasheet	Fields
GAA Plant	<ul style="list-style-type: none"> • Date/Time Alternate Format • GADS Region • GADS Subregion
GAA Unit	<ul style="list-style-type: none"> • Demonstrated Maximum Gross Capacity • Demonstrated Maximum Net Capacity • Summer Net Capacity • Winter Net Capacity

(TS ID: 229627)

Foundation

Asset Criticality Analysis (ACA)

- Promoting analyses to and from ACA. (TS ID: 160858)

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 Analytics

- KPIs for GE Analytics. (TS ID: 162791)

Metrics and Scorecards

- Selecting columns to include in a Scorecard. (TS ID: 70641)
- GM (Generation Management) cube is deferred from V4.x. Any previously deployed GM (Generation Management) cube, which worked in V3.6 and earlier releases, will continue to work in any V4.x release 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)

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

- Creating a bulk What-If analysis. (TS ID: 73475)

Root Cause Analysis

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

Release Notes - V4.2.0.6.1

Asset Criticality Analysis

- Previously, when you used the ACA Data Loader to load analyses into the ACA module, not all relationships between Equipment and Risks were created as expected. This issue has been resolved. (TS ID: 328178)

Asset Hierarchy Configuration

- Previously, when you rebuilt the Asset Hierarchy Configuration, the operation may have exceeded the allowed timeout period, causing the rebuild to fail. This issue has been resolved. (TS ID: 326488)

Meridium Enterprise APM Mobile Application

- Previously, in V4.2.0.6.0, when you installed the Meridium Enterprise APM mobile application on an iPhone, the application icon did not display the expected logo. This issue has been resolved. (TS ID: 328105)

Release Notes - V4.2.0.6.2

Asset Criticality Analysis

- Previously, when you imported data using the Asset Criticality Analysis (ACA) Data Loader, all required relationships between Equipment and Risks may not have been created. This issue has been resolved. Now, when you import data, the required relationships are created. (TS ID: 331024)

Release Notes - V4.2.0.7.0

The following release notes are available for Meridium Enterprise APM V4.2.0.7.0:

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

Enhancements - V4.2.0.7.0

The following enhancements have been made in V4.2.0.7.0.

Production Loss Analysis

- The following enhancements have been made to the Production Loss Analysis (PLA) Data Loader Excel workbook:
 - The MSCR and MSHR fields have been added to the PlanDetails worksheet. Values in the MSCR field will be uploaded to the Production Data workspace for the Production Plan in the PLA module, not from the values stored in the Production Profile.
 - The EDT field has been added to the ProductionLoss worksheet. Values entered in the EDT field will be uploaded to the Production Data workspace for the Production Plan in the PLA module.
 - The Profile MSHR field has been added to the ProductionProfile worksheet. Values in the Profile MSHR field are uploaded to the Max Sustained Hourly Rate field on the Production Profile datasheet in the Production Loss Analysis application settings.

(TS IDs: 300217, 292528)

- You can now enter Manual-Sequential plan data into the Production Loss Analysis (PLA) Data Loader, and the data will be loaded as Manual-Concurrent plans. (TS ID: 297072)

Proof Test Data Collection

- You can now view the result criteria and the test criteria for a Proof Test on the Functional Test Detail offline form. (TS ID: 296993)

Rounds Data Collection

- The **Clear Route Data from Local Storage** check box has been added to the **Device Settings** window. You can use this option to remove any Route information from your device that does not align with changes made by a Route administrator in Rounds Designer. (TS ID: 296786)

Resolved Issues - V4.2.0.7.0

The following issues existed in one or more previous releases and have been resolved in V4.2.0.7.0.

Analytics

Dashboards

- Previously, Dashboards that contained Japanese characters were not displayed properly. This issue has been resolved. (TS ID: 293913)

Asset Criticality Analysis

- Previously, when you deleted an analysis in ACA, the count of analyses did not update to reflect your change unless you manually refreshed the graph. This issue has been resolved. Now, the analysis count is refreshed automatically. (TS ID: 263957)

Asset Strategy Management

- Previously, an error occurred if you attempted to activate a strategy in ASM that contained risks that were promoted from a HAZOP analysis. This issue has been resolved. (TS ID: 297906)
- Previously, if you applied updates to an action implemented by an inspection task, after applying the updates, a hyperlink to the revised action's implementation no longer appeared in the **Implementation** column of the **Manage Actions** workspace. This issue has been resolved. (TS ID: 297668)
- Previously, if you did not have an active Asset Strategy Management license, you could not unlink actions or apply updates to actions. This issue has been resolved. Now, you can unlink actions and apply updates when you have only the standard license for Meridium Enterprise APM. (TS ID: 293253)
- Previously, an error occurred if you attempted to expand a Risk card while using the Internet Explorer web browser. This issue has been resolved. (TS ID: 292951)

Foundation

- Previously, if you attempted to modify the state assignment of a record without having the necessary permissions, you could make selections to modify the state assignment, but, when you selected **Done** on the **State Assignments** window, an error message appeared and the modification was not saved. This issue has been resolved. Now, if you do not have the necessary permissions to modify the state assignment of a record, you cannot access the **State Assignments** window. (TS ID: 284674)

Asset Hierarchy

- Previously, in Asset Groups, when you selected an asset using the Add Asset button (+) the child assets were not selected. This issue has been resolved. Now, when you select an asset, all of the child assets are selected and added to your Asset Group. (TS ID: 274617)

Configuration Manager

- Previously, in a Content Change Management project with multiple developers, if you attempted to remove one or more developers from the project, rather than removing the specified developers, the Meridium Enterprise APM system removed the same number of randomly selected developers assigned to the project. This issue has been resolved. (TS ID: 296289)
- Previously, when you uploaded the modified translation Microsoft Excel file by using the **Upload Custom Translations** button and you selected the **To help improve the quality of the baseline translations, a copy of your custom translations will be also be sent to Meridium, Inc. at translations@meridum.com** check box, an error message appeared. This issue has been resolved. (TS ID: 294552)

Hazards Analysis

- Previously, when you attempted to copy a System/Node in Hazards Analysis, the value in the Hazards Analysis Key field, which must be unique for each System/Node, was also copied. Because of this, you were not able to copy a System/Node to a Hazards Analysis. This issue has been resolved. You can now copy a System/Node, and the value in the Hazards Analysis Key field is not copied to the new System/Node. (TS ID: 301700)

Meridium Enterprise APM Mobile Application

- Previously, if you were using the Meridium Enterprise APM mobile application in offline mode and your session ended due to inactivity, when you logged back into the application, the data sources did not load. This issue has been resolved. (TS ID: 301700)

266922)

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 ID: 295888)
- 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: 294370)

Production Loss Analysis

- Previously, when you uploaded PLA data for a Time-Based Sequential plan using the Production Loss Analysis (PLA) Data Loader, the second product listed in the ProductionProfile worksheet was populated with the Maximum Sustained Hourly Rate (MSCR) from the Production Profile instead of from the PlanDetails worksheet. This issue has been resolved. (TS ID: 302324)
- Previously, if you modified the Start Date and End Date in a Production Event such that the new End Date was earlier than the original Start Date, then an error message appeared stating the Start should be less than the End Date. This issue has been resolved. (TS ID: 301442)
- Previously, when you loaded data using the Production Loss Analysis (PLA) Data Loader, Production Loss records were not created and the data load failed because the server could not establish a relationship between Production Losses to OEE codes, Impact Codes, and Production Events. This issue has been resolved. (TS ID: 300829)
- Previously, when you deleted a Production Event, an internal server error occurred. This issue has been resolved. (TS ID: 297625)
- Previously, when using the Internet Explorer browser, if a user with view-only privileges accessed the **Plan Details** workspace for a Production Plan with more than two products, no scroll bars appeared to navigate the list of products. This issue has been resolved. (TS ID: 296898)
- Previously, Production Event times in the Production Loss Analysis (PLA) Data

Loader were required to be specified in UTC. This issue has been resolved. Production Event times can now be entered in the time zone of the Production Unit. (TS ID: 296581)


- Previously, when you created a Production Event and attempted to link multiple work histories using the **Record Explorer** pane, the linked work history records did not appear in the Work History Link field. This issue has been resolved. Now, you can search for a work history and link it to a Production Event using the **Record Explorer** pane, as well as delete it. (TS ID: 290519)

Recommendations

- Previously, when you created or modified a recommendation within ACA and did not save your changes before you switched to another page in Meridium Enterprise APM, your modifications were lost. This issue has been resolved. Now, in this scenario, modifications will remain intact when you return to the previously opened ACA page and re-open the **Recommendation** pane. (TS ID: 211435)

Reliability Centered Maintenance and Failure Modes and Effects Analysis

- Previously, if you added exactly 24 child nodes to the tree for an RCM or FMEA analysis, duplicate child nodes appeared in the tree. This issue has been resolved.

 **Note:** This issue was display-only. The duplicate child nodes were not saved in the Meridium Enterprise APM database.

(TS ID: 294105)

Risk Based Inspection

- Previously, after you promoted an asset to Asset Strategy Management, you could not unlink an Action from an Inspection Task if the Asset Strategy Management license was inactive. This issue has been resolved. (TS ID: 293252)

Rounds Data Collection

- Previously, if you created a Recommendation while connected to a network, then disconnected from the network and modified the Recommendation, duplicate Route History records appeared in Rounds Designer. This issue has been resolved. (TS ID: 296307)

- Previously, if you navigated away from a checkpoint or Route before saving changes to the datasheet, if you selected **Cancel** in the **You have unsaved changes** dialog box, a blank page appeared and the unsaved changes were lost. This issue has been resolved. (TS ID: 294610)
- Previously, when you entered values for a new recommendation in Rounds Data Collection and then navigated away from or closed the Route without saving, any unsaved changes were lost. This issue has been resolved. (TS ID: 294379)
- Previously, in Rounds Data Collection, when you attempted to access certain Routes that contained conditional Measurement Locations, errors occurred and the Route did not load. This issue has been resolved. (TS ID: 302037)

Rounds Designer

- Previously, if you adjusted the schedule of a checkpoint in a way that would create a duplicate non-compliant reading, the compliance scheduled task failed and no additional non-compliant readings were created. This issue has been resolved. (TS ID: 298023)

Tools

Queries

- Previously, if you created an Append query in the **Design** workspace, when you ran the query, an error message stating that *Append To cannot be null* appeared even if the **Append To** cell was populated. This issue has been resolved. (TS ID: 301474)

Deferred Features - V4.2.0.7.0

The following features are not available in Meridium V4.2.0.7.0, but are planned for a future release.

Asset Health Manager

- 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, 86430)
- The display of health indicator statuses in Asset Hierarchy. (TS ID: 86796)

Asset Strategy Implementation

- Searching in SAP for the standard text value that you want to append to the value in the Long Text field of a Maintenance Item record. (TS ID: 117765)
- Managing all maintenance packages for all operations under a particular task list. (TS ID: 117767)
- Managing asset and action assignments when executing copy/paste operations. (TS ID: 144110)
- The option to exclude child items when copying Work Management Items. (TS ID: 147790)
- Using a link to manage the object list records that are linked to maintenance item records represented by the selected node. (TS ID: 238443)
- Creating implementation roles and filtering the WMI tree by each role. (TS ID: 243573)

Asset Strategy Management

- Migrating strategies between databases.

Asset Strategy Optimization

- Optimizing Actions. (TS ID: 112125)

Calibration Management

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

Generation Availability Analysis (GAA)

- Upgrading GAA from previous versions to any V4.2.x release. (TS ID: 187475)
- The following Security Groups in GAA:
 - MI Generation Management Forecast
 - MI Generation Management Nameplate
 - MI Generation Management Security(TS IDs: 184655, 184663, 184661, 184660, 184659, 184657, 184653, 184652, 184646, 184656)
- The following families in GAA:
 - Generation Forecast
 - Generation Fuel Annual Report
 - Generation Fuel Monthly Report
 - Generation Fuel Report
 - Generation Nameplate
 - Generation Nameplate Combined Cycle
 - Generation Nameplate Diesel
 - Generation Nameplate Fluidized Bed
 - Generation Nameplate Fossil Steam
 - Generation Nameplate Gas Turbine
 - Generation Nameplate Hydro
 - Generation Nameplate Miscellaneous
 - Generation Nameplate Nuclear
 - Generation Pool
 - Generation Role
 - Generation Role Assignment

- Generation Role Definition
- Generation Role Field Configuration
- Generation Unit Loading Profile
- Generation Unit Starting Profile

(TS IDs: 184655, 184663, 184661, 184660, 184659, 184657, 184653, 184652, 184646, 184656)

- The following fields and related functionality from the Performance record:

Tab	Fields
Unit Identification	<ul style="list-style-type: none"> • Capacity History Statistics Type • Zone • Refresh Incident Rollup
Unit Generation Performance	<ul style="list-style-type: none"> • Demonstrated Max Capacity (G) • Demonstrated Max Capacity (N) • Override Reserve Shutdown Hours • Sum of fuel BTUs • Heat Rate
Unit Starting Characteristics	<ul style="list-style-type: none"> • YTD attempted unit starts • YTD actual unit starts • YTD start reliability
Unit Primary Fuel Information	<ul style="list-style-type: none"> • EIA Fuel Reporting • Primary Quantity Burned Unit of Measure • Primary Fuel BTUs - Contract • Primary Fuel BTUs - Electrical Generation • Primary Fuel BTUs - Plant Heating and Cooling • Primary Fuel BTUs - Process Steam • Primary Fuel BTUs - Total

Tab	Fields
Unit Secondary Fuel Information	<ul style="list-style-type: none"> • EIA Fuel Reporting • Secondary Quantity Burned Unit of Measure • Secondary Fuel BTUs - Contract • Secondary Fuel BTUs - Electrical Generation • Secondary Fuel BTUs - Plant Heating and Cooling • Secondary Fuel BTUs - Process Steam • Secondary Fuel BTUs - Total

(TS ID: 234310, 234410)

- The following fields and related functionality from the GAA Plant and GAA Unit record:

Datasheet	Fields
GAA Plant	<ul style="list-style-type: none"> • Date/Time Alternate Format • GADS Region • GADS Subregion
GAA Unit	<ul style="list-style-type: none"> • Demonstrated Maximum Gross Capacity • Demonstrated Maximum Net Capacity • Summer Net Capacity • Winter Net Capacity

(TS ID: 229627)

Foundation

Asset Criticality Analysis (ACA)

- Promoting analyses to and from ACA. (TS ID: 160858)

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 Analytics

- KPIs for GE Analytics. (TS ID: 162791)

Metrics and Scorecards

- Selecting columns to include in a Scorecard. (TS ID: 70641)
- GM (Generation Management) cube is deferred from V4.x. Any previously deployed GM (Generation Management) cube, which worked in V3.6 and earlier releases, will continue to work in any V4.x release 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)

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

- Creating a bulk What-If analysis. (TS ID: 73475)

Root Cause Analysis

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

Release Notes - V4.2.0.7.2

Family Policies and Policy Designer

- When using the **Auto-map field values?** option in the Edit Entity node, you can now update each specified record with *different* values. Previously, the values in the last row of the collection containing the new values were used to update *all* specified records.

The exact records that are modified is now determined as follows:

- If the collection containing the new values contains a column with the exact name `ENTY_KEY`, the specified records that have matching Entity Keys are updated. Any other records are not updated.
- If the collection does not contain a column with the name `ENTY_KEY`, *all* specified records are updated with values from the *first row* in the collection.

(TS ID: 334620)

Release Notes - V4.2.0.7.4

Rounds Data Collection

- Previously, when you used Rounds Data Collection on a mobile device to create recommendations, if you selected **Save** more than once, duplicate recommendations were created. This issue has been resolved. Now, a busy indicator is displayed after you select **Save**, and you are no longer able to select it more than once. (ID: TFS346641)
- Previously, when you took readings on a Route with the **Only Incomplete Checkpoints** option selected and closed the Route before marking it done, the readings were not saved. This issue has been resolved. (ID: TFS346640)

Rounds Designer

- Previously, when you updated Measurement Locations belonging to an ML Template and the date format of your Meridium Enterprise APM Culture setting was dd/mm/yyyy, an error occurred. This issue has been resolved. (ID: TFS346370)
- Previously, when you sorted recommendations by creation date and the date format of your Meridium Enterprise APM Culture setting was dd/mm/yyyy, the recommendations were not sorted correctly. This issue has been resolved. (ID: TFS345622)

Release Notes - V4.2.0.8.0

The following release notes are available for Meridium Enterprise APM V4.2.0.8.0:

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

You can also view the APM Connect release notes.

Enhancements - V4.2.0.8.0

The following enhancements have been made in V4.2.0.8.0.

Asset Hierarchy

- When you access a Dashboard, parameters that you previously selected are now retained so that you do not have to reselect the parameters each time you access the Dashboard. (TS ID: 286789)

Inspection Management

- The Item ID column has been added to the **Manage Scope For Task** page. The Item ID column is populated by the Inspection Task datasheet and it displays the type of equipment for which the task was created. (TS ID: 311152)

Root Cause Analysis

- The **RCA Overview** page filter has been modified to include analyses not in asset context. (TS ID: 305774)

Rounds Data Collection

- For character Measurement Locations that do not have any allowable values specified, you can now enter reading values as free form text. (TS ID: 309103)

Search

- The last search term that you entered in the global Search feature is now saved as a user preference. As a result, the term will be remembered the next time that you log in to Meridium Enterprise APM. (TS ID: 256906)

Resolved Issues - V4.2.0.8.0

The following issues existed in one or more previous releases and have been resolved in V4.2.0.8.0.

AMS Analytics

- Previously, on the **AMS Analytics Overview** page, when you selected **Home** in the **Asset** box in the page filter, the page did not display all AMS Asset records in the Meridium Enterprise APM database. This issue has been resolved. (TS ID: 301888)

Asset Criticality Analysis

- Previously, when using the ACA Data Loader, you were could not run a data loading job that contained more than 1000 records. This issue has been resolved. (TS IDs: 304971, 305885)
- Previously, State Management in ACA did not follow the established State Management conventions and allowed an analysis to be placed in a *Completed* state even if it was not actually completed. This issue has been resolved. (TS ID: 305704)

Asset Hierarchy

- Previously, when you created an Asset Group from a query using the feature *Save a Static Copy*, duplicate asset records were created. This issue has been resolved. (TS ID: 264035)

Failure Elimination


- Previously, when you attempted to create a Production Event, you could not manually enter the date as dd/mm/yyyy, even if you were using European culture settings. This issue has been resolved. (TS ID: 301328)

Foundation

Configuration Manager

- Previously, in Oracle databases, when you enabled the content validation and then selected the **Export** button, the export file did not generate. This issue has been resolved. (TS ID: 294542)

- Previously, if you used a formatted query that contained a date field with *General Long Time* as the date format, the query result was not displayed in *General Long Time* format and you could not export the query result to a file or a dataset. This issue has been resolved. (TS ID: 311802)
- Previously, when using the Internet Explorer or Microsoft Edge browser and a non-English culture user culture setting, fields formatted with the *General Short Time* format displayed incorrect dates and times. This issue has been resolved. (TS ID: 307370)
- Previously, if you used a non-English culture setting, the culture-appropriate date and time formatting was not applied to every applicable field throughout Meridium Enterprise APM. This issue has been resolved. (TS ID: 305493)
- Previously, if you used a culture setting other than *English (United States)*, and you entered a date format that did not match the accepted format for your specified culture, the date may have been incorrectly reformatted. This issue has been resolved. Now, if you enter a value that does not match the accepted format, the field is highlighted with a red border to show that the format is incorrect. If you do not correct the date format and choose to save the record, a null value will be saved in the date field. In addition to this fix, the list of accepted date formats has been expanded.

 **Note:** To avoid any irregularities with date formatting, use the Calendar feature that appears when you select a date field.

(TS ID: 312305)

Import and Export

- Previously, if you tried to export untranslated metadata, an error would occur. This issue has been resolved. (TS ID: 297776)

SSO

- Previously, if you had only one data source in your Meridium Enterprise APM system and logged out while SSO was enabled, no message indicating that you had logged out appeared, and you were logged back in automatically. This issue has been resolved. (TS ID: 309273)

Inspection Management

- Previously, in V4.1.7.0 through V4.2.0.7.0, the set of queries that enable the Bulk Review of Inspection Reports based on a custom set of parameters was not available. This issue has been resolved. (TS ID: 304629)
- Previously, when you created an Inspection Recommendation in an analysis, site filtering was not applied to the lists for the following fields, and they took longer than expected to load:
 - Assigned To
 - Author Name
 - Final Approval Name
 - Reviewer Name

These issues have been resolved. (TS ID: 308252)

Process Data Integration

- Previously, when synchronizing OPC tags, the Meridium Enterprise APM Server became unresponsive due to high CPU usage. This issue has been resolved. (TS ID: 302182)
- Previously, all tags on a policy instance were added to the OPC Tag subscription list. This issue has been resolved. Now, only OPC tags that are triggers on a policy instance, or linked to an asset, will be included in the tag subscription list. (TS ID: 302181)

Production Loss Analysis

- Previously, when you uploaded Production Plans using the Production Loss Analysis Data Loader, the Quantity in the **Plan Details** workspace was not updated to be the sum of quantities from the Planned Production value in the PlanDetails worksheet. This issue has been resolved. (TS ID: 312823)
- Previously, the PlannedProductionvsLosses query returned incorrect data. This issue has been resolved. (TS ID: 311020)
- Previously, when using the Production Loss Analysis Data Loader to load and link Production Losses to Production Events, an error occurred and only partial data was loaded. This issue has been resolved. (TS ID: 309011)
- Previously, the work history upgrade utility took longer than expected to retrieve data if the database contained a large number of Production Event records. This

issue has been resolved. (TS ID: 308421)

- Previously, when you attempted to create a Production Event, you could not manually enter the date as dd/mm/yyyy, even if you were using European culture settings. This issue has been resolved. (TS ID: 301328)

Recommendations

- Previously, if you had two users with the same first and last name, there was no way to differentiate between the assignments for either user. This issue has been resolved. Now, the Assigned to field is formatted as *LastName, FirstName / Unique User ID*. (TS ID: 307922)
- Previously, when you accessed the Recommendation Management module for the first time, no page filter parameters were specified by default, which resulted in no content displayed on the **Recommendation Management** page. This issue has been resolved. Now, when you access the module for the first time, a prompt appears for you to specify filter parameters. (TS ID: 305953)
- Previously, if you had only View permissions for General Recommendations and attempted to create a Recommendation via the **Recommendation Management** page, an error occurred that required the browser to be restarted. This issue has been resolved. Now, you will only be given the option to create a Recommendation if you have the correct permissions. (TS ID: 305895)

Reliability Analytics

- Previously, when you created a recommendation in an analysis, site filtering was not applied to the lists for the following fields, and they took longer than expected to load:
 - Assigned To
 - Author Name
 - Final Approval Name
 - Reviewer Name

These issues have been resolved. (TS ID: 308260)

- Previously, when you accessed the **RA Overview** page, the charts took longer than expected to load. This issue has been resolved. To enhance the performance of the **RA Overview** page, the filter has been modified to include analyses not in

asset context. (TS ID: 307052)

Reliability Centered Maintenance (RCM)

- Previously, in RCM analysis, when you added a new recommendation, you could not modify any of the field values without first reloading the recommendation. This issue has been resolved. (TS ID: 297924)

Root Cause Analysis

- Previously, when you created a recommendation in a Root Cause Analysis, site filtering was not applied to the lists for the following fields, and they took longer than expected to load:

- Assign to Name
- Final Approval Name

These issues have been resolved. (TS ID: 308259)

- Previously, Event diagrams and Logic Tree diagrams with a single node were unclear and difficult to read. This issue has been resolved. (TS ID: 307952)
- Previously, when you accessed the **RCA Overview** page, the **Track Results by Recommendation Implementation Year** chart did not make progress and an error occurred. This issue has been resolved and the performance has been enhanced for the **Track Results by Recommendation Implementation Year** chart and **Recommendation Summary** chart. (TS ID: 305774)
- Previously, in a Root Cause Analysis (RCA), the default date format was mm/d-d/yyyy regardless of your culture settings. This issue has been resolved. (TS ID: 302658)

Rounds Designer

- Previously, when a large number of templates (e.g., 800) existed in your database, the **Templates** section on the **RD Overview** page took an excessive amount of time to load the relevant records, and an error message may have appeared, in which case the records did not load at all. This issue has been resolved. To facilitate this fix, the **Related Checkpoints** column has been removed from the **Templates** section of the **RD Overview** page. (TS ID: 301094)

State Management

- Previously, after upgrading from a version of Meridium Enterprise APM prior to V4.0.0.0, the **State Assignments** window may have displayed state assignments that were no longer valid, and if you tried to change the state assignment of a record that was created before you upgraded, an error may have occurred. These issues have been resolved. (TS ID: 310088)

Thickness Monitoring

- Previously, when entering data in the Thickness Monitoring Data Loader worksheets, the data loader expected you to enter the entity key of a Human Resource record in the Measurement Taken By field. If you entered a name instead of an entity key, an error occurred. This issue has been resolved. You can now enter a name in the Measurement Taken By field. (TS ID: 305285)
- Previously, when entering TML measurements using either the Thickness Monitoring Data Loader or the **Measurements** section of the **Analysis Overview** page, you could not enter a measurement value of zero (0). This issue has been resolved. (TS ID: 305245)

Tools

Queries

- Previously, if you ran a query containing a date function in formatted mode, and then exported the results, the date values in the exported file appeared in an unexpected format. This issue has been resolved. Now, the exported results match the query results. (TS ID: 308843)
- Previously, if you ran a query containing a date function in formatted mode, and then attempted to export the results, an error may have occurred. This issue has been resolved. Now, if you run a query containing a date function in formatted mode, the query results can be exported, and will be exported in the date format that matches your culture settings. (TS ID: 308743)

Obsolete Features - V4.2.0.8.0

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

Metrics and Scorecards

- The Drillthrough feature of Metric Views is no longer available in the Meridium Enterprise APM mobile application. (TS ID: 264832)

Deferred Features - V4.2.0.8.0

The following features are not available in Meridium V4.2.0.8.0, but are planned for a future release.

Asset Health Manager

- 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, 86430)
- The display of health indicator statuses in Asset Hierarchy. (TS ID: 86796)

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- Searching in SAP for the standard text value that you want to append to the value in the Long Text field of a Maintenance Item record. (TS ID: 117765)
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- Managing asset and action assignments when executing copy/paste operations. (TS ID: 144110)
- The option to exclude child items when copying Work Management Items. (TS ID: 147790)
- Using a link to manage the object list records that are linked to maintenance item records represented by the selected node. (TS ID: 238443)
- Creating implementation roles and filtering the WMI tree by each role. (TS ID: 243573)

Asset Strategy Management

- Migrating strategies between databases.

Asset Strategy Optimization

- Optimizing Actions. (TS ID: 112125)

Calibration Management

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

Generation Availability Analysis (GAA)

- Upgrading GAA from previous versions to any V4.2.x release. (TS ID: 187475)
- The following Security Groups in GAA:
 - MI Generation Management Forecast
 - MI Generation Management Nameplate
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- The following families in GAA:
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 - Generation Fuel Annual Report
 - Generation Fuel Monthly Report
 - Generation Fuel Report
 - Generation Nameplate
 - Generation Nameplate Combined Cycle
 - Generation Nameplate Diesel
 - Generation Nameplate Fluidized Bed
 - Generation Nameplate Fossil Steam
 - Generation Nameplate Gas Turbine
 - Generation Nameplate Hydro
 - Generation Nameplate Miscellaneous
 - Generation Nameplate Nuclear
 - Generation Pool
 - Generation Role
 - Generation Role Assignment

- Generation Role Definition
- Generation Role Field Configuration
- Generation Unit Loading Profile
- Generation Unit Starting Profile

(TS IDs: 184655, 184663, 184661, 184660, 184659, 184657, 184653, 184652, 184646, 184656)

- The following fields and related functionality from the Performance record:

Tab	Fields
Unit Identification	<ul style="list-style-type: none"> • Capacity History Statistics Type • Zone • Refresh Incident Rollup
Unit Generation Performance	<ul style="list-style-type: none"> • Demonstrated Max Capacity (G) • Demonstrated Max Capacity (N) • Override Reserve Shutdown Hours • Sum of fuel BTUs • Heat Rate
Unit Starting Characteristics	<ul style="list-style-type: none"> • YTD attempted unit starts • YTD actual unit starts • YTD start reliability
Unit Primary Fuel Information	<ul style="list-style-type: none"> • EIA Fuel Reporting • Primary Quantity Burned Unit of Measure • Primary Fuel BTUs - Contract • Primary Fuel BTUs - Electrical Generation • Primary Fuel BTUs - Plant Heating and Cooling • Primary Fuel BTUs - Process Steam • Primary Fuel BTUs - Total

Tab	Fields
Unit Secondary Fuel Information	<ul style="list-style-type: none"> • EIA Fuel Reporting • Secondary Quantity Burned Unit of Measure • Secondary Fuel BTUs - Contract • Secondary Fuel BTUs - Electrical Generation • Secondary Fuel BTUs - Plant Heating and Cooling • Secondary Fuel BTUs - Process Steam • Secondary Fuel BTUs - Total

(TS ID: 234310, 234410)

- The following fields and related functionality from the GAA Plant and GAA Unit record:

Datasheet	Fields
GAA Plant	<ul style="list-style-type: none"> • Date/Time Alternate Format • GADS Region • GADS Subregion
GAA Unit	<ul style="list-style-type: none"> • Demonstrated Maximum Gross Capacity • Demonstrated Maximum Net Capacity • Summer Net Capacity • Winter Net Capacity

(TS ID: 229627)

Foundation

Asset Criticality Analysis (ACA)

- Promoting analyses to and from ACA. (TS ID: 160858)

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 Analytics

- KPIs for GE Analytics. (TS ID: 162791)

Metrics and Scorecards

- Selecting columns to include in a Scorecard. (TS ID: 70641)
- GM (Generation Management) cube is deferred from V4.x. Any previously deployed GM (Generation Management) cube, which worked in V3.6 and earlier releases, will continue to work in any V4.x release 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)

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

- Creating a bulk What-If analysis. (TS ID: 73475)

Root Cause Analysis

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

Release Notes - V4.2.0.8.1

Production Loss Analysis

- Previously, when 6000 or more Production Plans existed in the database, the **PLA Overview** page was unresponsive. This issue has been resolved. (TS ID: 314717)

Release Notes - V4.2.0.8.2

The following issues existed in one or more previous releases and have been resolved in V4.2.0.8.2:

Graphs

- Previously, in environments using a SQL database, modifying a pie graph by changing the values of the dataset resulted in the generation of a graph displaying both the old and newly modified dataset values. This issue has been resolved. (TS ID: 321022)

Production Loss Analysis

- Previously, in the **Production Data** workspace, when you modified a value in the **Actual** column to a value greater than the sum of the values in the **Short Range Plan** and **Losses** columns, an error message appeared. This issue has been resolved. (TS ID: 323871)
- Previously, when you attempted to upload a *manual* Production Plan with multiple Production Profiles using the Production Loss Analysis (PLA) Data Loader, an error occurred and the plan was not uploaded. This issue has been resolved. (TS ID: 323519)
- Previously, when you uploaded *manual* Production Plans using the Production Loss Analysis (PLA) Data Loader, values in the **Actual** and **Losses** columns were not loaded in the **Production Data** workspace. This issue has been resolved. (TS ID: 323499)

Rounds Data Collection

- Previously, Internet Explorer users experienced the following performance issues when deleting routes:
 - Routes took an excessively long time to be deleted.
 - Internet Explorer may have stopped responding.
 - The **RD Overview** page and **Route** list may not have loaded.

These issues have been resolved. (TS ID: 323906)

- Previously, when you created a Route using a Template Group which contained Measurement Location Templates under conditions, duplicate checkpoints may have been created under the conditions. This issue has been resolved. (TS ID: 322448)
- Previously, when you opened a Route with inactive conditional MLs or LRs, the route was not displayed and the page became unresponsive. This issue has been resolved. (TS ID: 321023)

Release Notes - V4.2.0.8.3

Asset Criticality Analysis (ACA)

- Previously, when you ran the ACA Data Loader, existing risk values for Equipment and Functional Locations were not updated to reflect the new values specified in the data loader. This issue has been resolved. (TS ID: 326957)

Foundation

Asset Hierarchy

- Previously, when you rebuilt the Asset Hierarchy, the operation may have exceeded the allowed timeout limit, causing the rebuild to fail. This issue has been resolved. (TS ID: 327314)

Reports

- Previously, when you attempted to open a report in the Report Designer, an error occurred. This issue has been resolved. (TS ID: 327535)
- Previously, on the **Data Source** page, if you had entered the machine name in the **Data Source Host** box, the Report Designer did not display the data source name. This issue has been resolved. (TS ID: 326674)

Security Manager

- Previously, when you mapped an LDAP field to the MI_HR_BADGE_ID field, the LDAP synchronization process did not update the mapped id fields in Meridium Enterprise APM. This issue has been resolved. (TS ID: 326486)

Inspection Management

- Previously, the **Inspection Management Overview** page was slow to load and appeared to have frozen in environments that had numerous records and utilized customized queries. This issue has been resolved. Now, a busy indicator is displayed while the page is loading. (TS ID: 327230)

Production Loss Analysis (PLA)

- Previously, when you added a Production Unit record, the Timezone field incorrectly displayed Russian Standard time as (UTC+4:00). This issue has been resolved. Now, Russian standard time is displayed as (UTC+3:00). (TS ID: 321034)

Risk Based Inspection (RBI)

- Previously, if you accessed the section for a **Corrosion Loop**, then selected an RBI Component whose Source of Calculated Corrosion Rate field was set to *Component*, and then selected the Manage TML Groups button ([\[اسإ\]](#)), an error occurred. This issue has been resolved. (TS ID: 325526)

SIS Management

- Previously, when you attempted to import a project file from exSILentia and the data in the .exi file satisfied one or more of the following conditions, an error occurred and the data was not imported:
 - The length of the text in the SIF Description field of the Instrumented Function was greater than 255 characters.
 - The value in the Target SIL field of the loop was less than zero.
 - The Test Architectural Constraints field of the loop contained the value *IEC 61508 : 2010 tables [per 61511-1 11.4.5]*.

This issue has been resolved. To facilitate this fix, the following changes have been made:

- The allowable length for the PIF Description field of the Instrumented Function family in Meridium Enterprise APM has been increased from 255 characters to 800 characters. The SIF Description field of the Instrumented Function in the .exi file, which is mapped to the PIF Description field in Meridium Enterprise APM, can now contain text of length less than or equal to 800 characters.
- When importing .exi files, if the Target SIL field of the loop in the .exi file contains a value less than zero or greater than five, then the values for the Target SIL field of the loop and the Selected SIL field of the Instrumented Function are not imported.
- The value for the Test Architectural Constraints field in the Protective Instrument Loop record was populated previously with the *description* for the system code *IEC 61508 : 2010* from the System Code Table MI_ARCHITECTURE_CONSTRAINT, which resulted in the error when importing the .exi file. Now, the Test Architectural Constraints field is populated with the *ID* for the system code (i.e., *IEC 61508 : 2010*).

(TS ID: 325860)

Release Notes - V4.2.0.8.4

Reliability Analytics

- Previously, datapoints were displayed with an unlimited number of decimal places when you selected while viewing one of the following plots:
 - Probability
 - Failure Rate
 - Probability Density Function (PDF)
 - Cumulative Distribution Function (CDF)

This issue has been resolved. Now, when is selected, datapoints are displayed with two decimal places. (TS ID: 340239)

- Previously, when you modified an existing Automation Rule, if you removed any of the previously mapped fields in the Reliability Automation Rule Builder, any additional modifications were not saved. This issue has been resolved. (TS ID: 338351)
- Previously, when you merged multiple Automation Rule analyses, the analyses were removed from the **Rule Information** section, but the newly created merged analysis did not appear. This issue has been resolved. Now, the merged analysis appears in the list of analyses in the **Rule Information** section. (TS ID: 337194)
- Previously, in a Reliability Growth Analysis, the y-axis of the **MTBF Trend** graph was labeled *MTB {0} PlotF (Days)*. This issue has been resolved. Now, the y-axis is labeled *MTBF Plot (Days)*. (TS ID: 336519)

Hazards Analysis

- Previously, in the **Hazards worksheet** section of a Hazards Analysis System/Node, the **Mitigated Risk** and **Unmitigated Risk** values did not appear when the **Use Maximum Risk Rank** check box on the related Risk Matrix was selected. This issue has been resolved. (TS ID: 339248)

Release Notes - V4.2.0.8.5

SIS Management

- The SIS Management module now uses Exida's Safety Equipment Reliability Handbook (SERH) latest database version 2017.4.01. (ID: DE366674)

Release Notes - V4.2.0.9.0

The following release notes are available for Meridium Enterprise APM V4.2.0.9.0:

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

Enhancements - V4.2.0.9.0

The following enhancements have been made in V4.2.0.9.0.

Family Policies and Policy Designer

- When using the **Auto-map field values?** option in the Edit Entity node, you can now update each specified record with *different* values. Previously, the values in the last row of the collection containing the new values were used to update *all* specified records.

The exact records that are modified is now determined as follows:

- If the collection containing the new values contains a column with the exact name ENTY_KEY, the specified records that have matching Entity Keys are updated. Any other records are not updated.
- If the collection does not contain a column with the name ENTY_KEY, *all* specified records are updated with values from the *first row* in the collection.

(TS ID: 327168)

Rounds Data Collection

- When you attach an image to an Operator Rounds Recommendation while using Rounds Data Collection, the Reference Document record for the image is now linked to the recommendation. This allows you to locate images associated with recommendations more easily. (TS ID: 325132)

Resolved Issues - V4.2.0.9.0

The following issues existed in one or more previous releases and have been resolved in V4.2.0.9.0.

Asset Criticality Analysis (ACA)

- Previously, when you attempted to transition states in an ACA analysis, the state of the analysis did not change. This issue has been resolved. (TS ID: 312500)
- Previously, when you ran the ACA Data Loader, existing risk values for Equipment and Functional Locations were not updated to reflect the new values specified in the data loader. This issue has been resolved (TS ID: 325388)

Foundation

Asset Groups

- Previously, when you attempted to search for an asset in certain scenarios, e.g., when creating an RBI component, an error occurred when you selected **OK** or **Cancel**. This issue has been resolved. (TS ID: 312364)
- Previously, in Asset Groups, if you entered information into the **Group Description** box and then navigated away, the option to save your changes did not appear. This issue has been resolved. (TS ID: 298130)

Datasheets

- Previously, if you used an incorrect date format on a datasheet, the field was highlighted in red, but a detailed error message did not appear. This issue has been resolved. Now, if you use an incorrect data format, an error appears to notify you that the format must be corrected. (TS ID: 314141)

Recommendation Management

- Previously, when you attempted to view linked recommendations in Recommendation Management, an error occurred. This issue has been resolved. (TS ID: 316491)

Record Manager

- Previously, dates were not formatted as expected when you used a Bulk Data Form. This issue has been resolved. (TS ID: 315995)
- Previously, in Record Explorer, if you selected to have either *All Possible Families* or *Related Families* as a preference, the preference was not stored in Record Explorer. This issue has been resolved. Now, once you make a selection, the option will remain each time you access Record Explorer. (TS ID: 311701)
- Previously, if you had View/Insert permissions and attempted to add a record in Record Manager, the **Save** button did not appear. This issue has been resolved. Now, the **Save** button appears when you add a new record in Record Manager. (TS ID: 304386)

Reference Documents

- Previously, when you tried to download a reference document via the Meridium Enterprise APM application on a mobile device, the document did not download. This issue has been resolved. (TS ID: 257895)

Inspection Management

- Previously, if the Inspector, Inspection Supervisor, or Inspection Administrator team member roles were deleted, the Security Users whose roles were deleted were no longer displayed in:
 - The Inspection Report Owner or Reviewers Name fields on existing Inspection records.
 - The Author Name or Reviewer Name fields on existing Inspection Recommendation records.

This issue has been resolved. (TS ID: 322454)

Metrics and Scorecards

- Previously, if you created a Metric View by using MDX Query and then changed the graph type via the **Edit graph settings** window, the graph type did not change. This issue has been resolved. (TS ID: 241961)
- Previously, if you created a Metric View using MDX Query, the next level of data did not appear when you selected the **Drilldown** button. This issue has been resolved. (TS ID: 311108)

Policy Designer

- Previously, when changes were made to a policy that contained, or previously contained, an OPC Tag node configured to trigger the policy's execution, notifications to the PDI Service may not have been updated according to your changes, which may have resulted in the policy being executed unexpectedly, or not being executed when expected. This issue has been resolved. Now, when you make changes to a policy that contains an OPC Tag node, the notifications to the PDI service are updated accordingly, and the policy will be executed when expected. (TS IDs: 310227, 310242, 324828)

Process Data Integration

- Previously, due to an issue with session timeouts, not all of the expected data in a configured process historian was transferred to the Meridium Enterprise APM database. Error messages in the Process Data Integration Service log stated that the session had expired. This issue has been resolved. (TS ID: 324184)
- Previously, when OPC Tag records were synchronized after the first synchronization, the Last Sync Time was not updated correctly, which caused OPC Tag records to be incorrectly removed from the Meridium Enterprise APM database. This issue has been resolved. (TS ID: 324186)
- Previously, in 4.2.0.8.0, readings from OPC Tags were not created in the Meridium Enterprise APM database. This issue has been resolved. (TS ID: 324188)
- Previously, the Process Data Integration Service placed messages in queues for modules whether or not they were licensed, which may have resulted in a significant performance impact to your Meridium Enterprise APM server. This issue has been resolved. Now, messages are placed only in queues that are used by licensed modules. (TS ID: 320579)

Production Loss Analysis

- Previously, the **Planned Production vs Losses** chart on the **PLA Overview** page did not display month and year values when the Category of the Dimension Mapping for the chart was set to *MonthWise*. This issue has been resolved and the month and year are now displayed in the YYYY.MM format. (TS ID: 323931)
- Previously, when you compiled a new database using the Rules Editor, an error occurred because the Production Loss and Production Event families contained the wrong version number in the Rules Library XML. This issue has been resolved.

(TS ID: 321252)

Reliability Analytics

- Previously, in Reliability Growth and Reliability Distribution, when you modified a date value in one of the following windows, the user's time zone was not applied correctly:
 - **Reliability Distribution Data** window
 - **Reliability Growth Data** window
 - **Set Analysis Period** window

This issue has been resolved. (TS ID: 312517)

Risk Based Inspection

- Previously, if you accessed the **Corrosion Loop Overview** section, selected an RBI Component whose Source of Calculated Corrosion Rate field was set to *Component*, and then selected the Manage TML Groups button (🔗), an error occurred. This issue has been resolved. (TS ID: 325163)
- Previously, the documentation for Risk Based Inspection specified that you could duplicate or apply an RBI PRD Criticality Analysis, although you could *not* do so. This issue has been resolved. Now, the content related to duplicating or applying an RBI PRD Criticality Analysis has been removed. (TS ID: 324892)
- Previously, in a Criticality Int. Corr. Deg. Mech. Eval. record associated with a piping component, the value in the Pressure at Minimum Thickness field was calculated incorrectly. This issue has been resolved. (TS ID: 323191)

Rounds Data Collection

- Previously, when accessing Rounds Data Collection with an iPhone, you could not enter a decimal point. This issue has been resolved. (TS ID: 327265)
- Previously, when you accessed an asset with a long name and description using an iPad in Landscape mode, the values did not appear correctly. This issue has been resolved. (TS ID: 325884)
- Previously, when you selected the **Clear Route Data from Local Storage** check box on the **Device Settings** window, a message did not appear indicating that the

device's local storage was cleared, nor did the **Overdue** and **Due** tabs reflect the change. This issue has been resolved. (TS ID: 325382)

- Previously, when you synchronized a Windows Mobile device, if a Route contained inactive checkpoints with active child checkpoints under conditions, no checkpoints were downloaded to the mobile device. This issue has been resolved. (TS ID: 322568)
- Previously, when working in an environment with an intermittent network connection, if you marked done and uploaded multiple Routes with a large number readings that did not have values in their Comments fields, then duplicate Route History records were created. This issue has been resolved. (TS ID: 306271)

Security Manager

- Previously, the documentation incorrectly indicated that, to assign Meridium Enterprise APM Security Roles via LDAP synchronization, the **Enable APM Security** check box must be selected. This issue has been resolved. Now, the documentation indicates that, to assign Meridium Enterprise APM Security Roles via LDAP synchronization, the **Enable APM Security** check box must be cleared. (TS ID: 314380)

SIS Management

- Previously, when you attempted to import a project file from exSILentia and the data in the .exi file satisfied one or more of the following conditions, an error occurred and the data was not imported:
 - The length of the text in the SIF Description field of the Instrumented Function was greater than 255 characters.
 - The value in the Target SIL field of the loop was less than zero.
 - The Test Architectural Constraints field of the loop contained the value *IEC 61508 : 2010 tables [per 61511-1 11.4.5]*.

This issue has been resolved. To facilitate this fix, the following changes have been made:

- The allowable length for the PIF Description field of the Instrumented Function family in Meridium Enterprise APM has been increased from 255 characters to 800 characters. The SIF Description field of the Instrumented Function in the .exi file, which is mapped to the PIF Description field in Meridium Enterprise APM, can now contain text of length less than or equal to 800 characters.
- When importing .exi files, if the Target SIL field of the loop in the .exi file contains a value less than zero or greater than five, then the values for the

Target SIL field of the loop and the Selected SIL field of the Instrumented Function are not imported.

- The value for the Test Architectural Constraints field in the Protective Instrument Loop record was populated previously with the *description* for the system code *IEC 61508 : 2010* from the System Code Table MI_ARCHITECTURE_CONSTRAINT, which resulted in the error when importing the .exi file. Now, the Test Architectural Constraints field is populated with the *ID* for the system code (i.e., *IEC 61508 : 2010*).

(TS ID: 325008)

Tools

Dashboards

- Previously, dashboard elements did not resize properly when you changed the size of the screen. This issue has been resolved. Now, when you change the screen size, the dashboard elements adapt to fit the screen automatically. (TS ID: 311850)

Graphs

- Previously, in environments using a SQL database, modifying a pie graph by changing the values of the dataset resulted in the generation of a graph displaying both the old and newly modified dataset values. This issue has been resolved. (TS ID: 324064)
- Previously, when you attempted to access a hyperlink on a heat map graph via the Meridium Enterprise APM mobile application on a Microsoft Surface Pro device, an error occurred. This issue has been resolved. (TS ID: 294707)

Queries

- Previously, if you added one or more manual joins to a query, a compilation error occurred when you ran the query. This issue has been resolved. (TS ID: 312904)

Deferred Features - V4.2.0.9.0

The following features are not available in Meridium V4.2.0.9.0, but are planned for a future release.

Asset Health Manager

- 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, 86430)
- The display of health indicator statuses in Asset Hierarchy. (TS ID: 86796)

Asset Strategy Implementation

- Searching in SAP for the standard text value that you want to append to the value in the Long Text field of a Maintenance Item record. (TS ID: 117765)
- Managing all maintenance packages for all operations under a particular task list. (TS ID: 117767)
- Managing asset and action assignments when executing copy/paste operations. (TS ID: 144110)
- The option to exclude child items when copying Work Management Items. (TS ID: 147790)
- Using a link to manage the object list records that are linked to maintenance item records represented by the selected node. (TS ID: 238443)
- Creating implementation roles and filtering the WMI tree by each role. (TS ID: 243573)

Asset Strategy Management

- Migrating strategies between databases.

Asset Strategy Optimization

- Optimizing Actions. (TS ID: 112125)

Calibration Management

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

Generation Availability Analysis (GAA)

- Upgrading GAA from previous versions to any V4.2.x release. (TS ID: 187475)
- The following Security Groups in GAA:
 - MI Generation Management Forecast
 - MI Generation Management Nameplate
 - MI Generation Management Security(TS IDs: 184655, 184663, 184661, 184660, 184659, 184657, 184653, 184652, 184646, 184656)
- The following families in GAA:
 - Generation Forecast
 - Generation Fuel Annual Report
 - Generation Fuel Monthly Report
 - Generation Fuel Report
 - Generation Nameplate
 - Generation Nameplate Combined Cycle
 - Generation Nameplate Diesel
 - Generation Nameplate Fluidized Bed
 - Generation Nameplate Fossil Steam
 - Generation Nameplate Gas Turbine
 - Generation Nameplate Hydro
 - Generation Nameplate Miscellaneous
 - Generation Nameplate Nuclear
 - Generation Pool
 - Generation Role
 - Generation Role Assignment

- Generation Role Definition
- Generation Role Field Configuration
- Generation Unit Loading Profile
- Generation Unit Starting Profile

(TS IDs: 184655, 184663, 184661, 184660, 184659, 184657, 184653, 184652, 184646, 184656)

- The following fields and related functionality from the Performance record:

Tab	Fields
Unit Identification	<ul style="list-style-type: none"> • Capacity History Statistics Type • Zone • Refresh Incident Rollup
Unit Generation Performance	<ul style="list-style-type: none"> • Demonstrated Max Capacity (G) • Demonstrated Max Capacity (N) • Override Reserve Shutdown Hours • Sum of fuel BTUs • Heat Rate
Unit Starting Characteristics	<ul style="list-style-type: none"> • YTD attempted unit starts • YTD actual unit starts • YTD start reliability
Unit Primary Fuel Information	<ul style="list-style-type: none"> • EIA Fuel Reporting • Primary Quantity Burned Unit of Measure • Primary Fuel BTUs - Contract • Primary Fuel BTUs - Electrical Generation • Primary Fuel BTUs - Plant Heating and Cooling • Primary Fuel BTUs - Process Steam • Primary Fuel BTUs - Total

Tab	Fields
Unit Secondary Fuel Information	<ul style="list-style-type: none"> • EIA Fuel Reporting • Secondary Quantity Burned Unit of Measure • Secondary Fuel BTUs - Contract • Secondary Fuel BTUs - Electrical Generation • Secondary Fuel BTUs - Plant Heating and Cooling • Secondary Fuel BTUs - Process Steam • Secondary Fuel BTUs - Total

(TS ID: 234310, 234410)

- The following fields and related functionality from the GAA Plant and GAA Unit record:

Datasheet	Fields
GAA Plant	<ul style="list-style-type: none"> • Date/Time Alternate Format • GADS Region • GADS Subregion
GAA Unit	<ul style="list-style-type: none"> • Demonstrated Maximum Gross Capacity • Demonstrated Maximum Net Capacity • Summer Net Capacity • Winter Net Capacity

(TS ID: 229627)

Foundation

Asset Criticality Analysis (ACA)

- Promoting analyses to and from ACA. (TS ID: 160858)

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 Analytics

- KPIs for GE Analytics. (TS ID: 162791)

Metrics and Scorecards

- Selecting columns to include in a Scorecard. (TS ID: 70641)
- GM (Generation Management) cube is deferred from V4.x. Any previously deployed GM (Generation Management) cube, which worked in V3.6 and earlier releases, will continue to work in any V4.x release 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)

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

- Creating a bulk What-If analysis. (TS ID: 73475)

Root Cause Analysis

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


Release Notes - V4.2.0.9.1

Asset Hierarchy Configuration

- Previously, when you rebuilt the Asset Hierarchy Configuration, the operation may have exceeded the allowed timeout period, causing the rebuild to fail. This issue has been resolved. (TS ID: 329181)


GE Analytics


- GE Analytics in Meridium Enterprise APM V4.2.0.9.1 supports Enterprise Impact V17.1. (TS ID: 330671)

 **Note:** Due to limitations within Enterprise Impact V17.1, this enhancement does not support multiple DAQs for an enterprise.

Release Notes - V4.2.0.9.2

Calibration Management

- When you create or modify a record in Calibration Management, there is now a visual indication of whether the operation is still in progress or complete. In addition, when you access a datasheet, the Save button () appears only after the datasheet is loaded completely. (ID: TFS344821)
- You can now access the **Calibration Management Overview** page of an asset by providing the entity key of the asset in the URL in the following format: `asset-safety/calibration/calibration-mgmt/<Entity key of the asset>`

 **Note:** On the **Calibration Management Overview** page of an asset, the graphs do not appear.

(ID: TFS344820)

- Previously, on the **Calibration Management Overview** page, the record count on the tabs did not appear. This issue has been resolved. (ID TFS344819)
- When you create a Calibration (i.e., Calibration Event) manually, you can now access the **Calibration** or **Test Equipment** sections only after you save the datasheet in the **Identification** section. Based on the values in the Calibration Type and Calibration Strategy fields, Calibration Results then appear in the **Calibration** section. (ID: TFS344818)
- Previously, when you accessed a page, workspace, or a section in Calibration Management, or navigated to a different page, workspace, or section, sometimes, an error message appeared. This issue has been resolved. (ID: TFS344817)

Queries

- Previously, when you exported a query result set to an Excel file, an error occurred when you tried to open the file. This issue has been resolved. (ID: TFS342499)