



GE Digital

GE Digital APM Release Notes

V4.3.0.0.0 through V4.3.0.5.5

Release Notes

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About This Document

This file is provided so that you can easily print this section of the GE Digital 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 GE Digital APM Help system can be accessed within GE Digital APM itself or via the GE Digital APM Documentation Website (<https://www.meridium.com/secure/documentation/WebHelp/Home.htm>).

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

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GE Digital APM Release Notes


The GE Digital APM Release Notes describe changes to the baseline GE Digital 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 GE Digital 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.

GE Digital APM V4.3.0.0.0 Release Notes

 Beginning with GE Digital APM V4.3.0.6.0, Release Notes can be found [here](#).

Release notes for the following versions are available:

- [V4.3.0.0.0](#)
- [V4.3.0.0.2](#)
- [V4.3.0.0.3](#)
- [V4.3.0.0.4](#)
- [V4.3.0.0.5](#)
- [V4.3.0.0.6](#)
- [V4.3.0.1.0](#)
- [V4.3.0.1.1](#)
- [V4.3.0.1.2](#)
- [V4.3.0.1.3](#)
- [V4.3.0.1.4](#)
- [V4.3.0.1.5](#)
- [V4.3.0.2.0](#)
- [V4.3.0.2.2](#)
- [V4.3.0.2.3](#)
- [V4.3.0.2.4](#)
- [V4.3.0.2.5](#)
- [V4.3.0.2.6](#)
- [V4.3.0.2.7](#)
- [V4.3.0.2.8](#)
- [V4.3.0.2.9](#)
- [V4.3.0.2.10](#)
- [V4.3.0.2.11](#)
- [V4.3.0.2.12](#)
- [V4.3.0.2.13](#)
- [V4.3.0.3.0](#)
- [V4.3.0.3.1](#)
- [V4.3.0.3.2](#)
- [V4.3.0.3.3](#)
- [V4.3.0.3.4](#)

- [V4.3.0.3.5](#)
- [V4.3.0.3.5](#)
- [V4.3.0.3.6](#)
- [V4.3.0.3.7](#)
- [V4.3.0.3.8](#)
- [V4.3.0.4.0](#)
- [V4.3.0.4.1](#)
- [V4.3.0.4.2](#)
- [V4.3.0.4.3](#)
- [V4.3.0.4.4](#)
- [V4.3.0.5.0](#)
- [V4.3.0.5.1](#)
- [V4.3.0.5.2](#)
- [V4.3.0.5.3](#)
- [V4.3.0.5.4](#)
- [V4.3.0.5.5](#)

Release Notes - V4.3.0.0.0

△ IMPORTANT: Effective V4.3.0.0.0, our product name has changed from *Meridium Enterprise APM* to *GE Digital APM*. Throughout the V4.3.0.0.0 documentation, including these Release Notes, we refer to the product by its new name.

The following release notes are available for GE Digital APM V4.3.0.0.0:

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

You can also view the APM Connect release notes.

New Features - V4.3.0.0.0

The following new features are available in V4.3.0.0.0.

Calibration Management

- You can now transfer calibration data between GE Digital APM and the GE Druck documenting process calibrators. The following GE Druck calibrator devices are supported:
 - DPI 611 - Pressure Calibrator
 - DPI 612 - Pressure Calibrator
 - DPI 620 - Multifunction Calibrator
 - DPI 620 IS - Intrinsically Safe Multifunction Calibrator
 - DPI 620 Genii - Multifunction Calibrator, HART/Fieldbus Communicator
 - DPI 620 Genii IS - Intrinsically Safe Multifunction Calibrator, HART/Fieldbus Communicator(TS IDs: 260505, 260504, 238983)
- Calibration Management now supports automated calibration using CMX Calibration Management Software. (TS ID: 247857)

Configuration Manager

Datasheets

- The UoM Conversion Tool has been introduced in V4.3.0.0.0. You can use this feature to view numeric datasheet values in different units of measure (UOM). (TS ID: 247786)

eLog

- The eLog module has been introduced in V4.3.0.0.0.
You can use this module to document scheduled and unscheduled events that occur during the course of asset operation, to report findings related to shift periods, and to document when shifts begin and end. (TS ID: 249678)

Generation Availability Analysis (GAA)

- GAA now supports reporting to Canadian Electricity Association (CEA) in addition to NERC. (TS ID: 248096)

Layers of Protection Analysis (LOPA)

- The Layers of Protection Analysis module has been introduced in V4.3.0.0.0.
You can use this module to identify the required Safety Integrity Level (SIL) for SIL Assessment of an Instrumented Function defined in the SIS Management module and to determine the level of safeguarding required for a hazardous scenario defined in the Hazards Analysis module. (TS ID: 249995)

Management of Change (MOC)

- The Management of Change module has been introduced in V4.3.0.0.0.
You can use this module to effectively manage implementation of changes in your organization. Using MOC, you can manage changes using Change Projects in which changes are formally introduced, approved, and implemented as tasks. Additionally, you can relate records from other GE Digital APM entities to ensure that all impacted areas of the organization are recorded as changed elements in a Change Project. This provides your organization with a greater degree of auditability, which is essential in industries that require Management of Change as a regulatory compliance requirement. (TS ID: 280063)

Risk Based Inspection (RBI)

RBI 581

- A new feature, Inventory Grouping, has been introduced in V4.3.0.0.0. Using this feature, you can create inventory groups in a process unit and add components to the inventory group. GE Digital APM then calculates the value in the Inventory Group Mass field for all the components that belong to the inventory group.

The following changes have been made as part of the Inventory Grouping feature:

- Two new families, Inventory Group Configuration and Has Inventory Components, have been created. Inventory Group Configuration records store details about an inventory group. The Has Inventory Components family defines the relationship between the RBI Components and Inventory Group Configuration family.
- A new section **RBI 581 Inventory Groups** has been added to the **RBI Admin Preferences** page. If the **Use Calculated Inventory** check box is selected in an RBI 581 Consequence Evaluation, and if the associated component is linked to an inventory group, then the Inventory Group Mass field is dis-

abled and populated automatically.
(TS ID: 202260)

Enhancements - V4.3.0.0.0

The following enhancements have been made in V4.3.0.0.0.

Asset Criticality Analysis (ACA)

- Using the ACA Data Loader, you can now set the Asset Criticality Analysis and the ACA System to a global site reference. The following changes have been made to the ACA Data Loader template:
 - The Site ID column has been removed from the Analysis and System worksheets.
 - The Analysis Type column has been removed from the Analysis worksheet.
 - The Site Reference Name column has been added to the Analysis worksheet.

(TS ID: 229223)

Asset Health Manager (AHM)

- The **Reading History** workspace for health indicators or their sources is now paged to improve performance when there are a large number of readings. (TS ID: 305683)
- On the **Health Indicator Trend** chart, you can now enter a specific time range to adjust the amount of reading data shown on the chart. (TS IDs: 85956, 298164)

Asset Strategy Implementation (ASI)

- The **ASI Overview** page has been redesigned to enhance the usability. The following changes have been made to the page:
 - The **All** tab has been renamed to **Implementation Packages**.
 - The following tabs have been added:
 - **Maintenance Plans**
 - **Actions**
 - The **Maintenance Plans By Type** chart has been added.
 - The **Package Count** chart has been renamed to **Implementation Packages By State**.

To facilitate these enhancements, the following Catalog items have been added to the folder \\Public\Meridium\Modules\Asset Strategy Management\Implementation\Queries:

- ASI Overview Page - Actions
 - ASI Overview Page - Maintenance Plans
 - ASI - Maintenance Plans by Type Count
- (TS IDs: 309329, 309318, 309317, 309313, 309298)
- In the **Work Management Item Definitions** workspace, in the Family ID field on the datasheet, you can now select only the families related to the SAP system. (TS ID: 305481)
 - In the **ASI Package** workspace, in the tree, for a WMI that is already deleted, a Reset button (↺) now appears, which you can use to undo the deletion of the WMI. (TS ID: 302465)
 - Asset Strategy Implementation now supports SAP PI. (TS ID: 302020)
 - The ASI module has been redesigned to simplify the workflow. The following changes have been made to the module workspaces:
 - The **ASI Package** workspace has a new layout.
 - The WMI structure for packages has a new location.
 - You can now send an individual action to a package instead of sending the entire strategy to the package.
 - New URL routes have been added.(TS IDs: 288568, 283874, 280619, 277936)
 - You are now required to enter a value for the ID field of an Implementation Package record. (TS ID: 274559)
 - The Import from SAP button (↵) has been moved from the **ASM Overview** page to the **ASI Overview** page. The functionality remains the same. (TS ID: 274072)
 - The configuration option *Require a specific user to be assigned a state* on all baseline states of the Implementation Package family is now cleared by default. If you want to require users to be assigned to states, you can do so via Configuration Manager. (TS ID: 258921)

Asset Strategy Management (ASM)

- The **ASM Overview** page has been redesigned to enhance usability. The following changes have been made to the page:
 - The **System Strategies** and **Unit Strategies** tabs have been merged into a new tab, **System and Unit Strategies** tab.
 - The **Optimized Strategies** tab has been removed. The strategies in the **Optimized Strategies** tab now appear in the **Asset Strategies** or **System and Unit Strategies** tabs.
 - The following new tabs have been added:
 - **Risks**
 - **Actions**
 - Following columns have been added to the **Templates** tab:
 - **Criticality**
 - **Duty**
 - **Service**
 - The following charts have been added:
 - **Active Actions By Source**
 - **Active Actions By Implementation**
 - The **Strategy Count by State** chart has been renamed to **Asset Strategies By State**.
 - The **Active Strategy Action Count By Type** chart has been renamed to **Active Actions By Type**.


To facilitate these changes, the following Catalog items have been added:

- In the folder Public\Meridium\Modules\Asset Strategy\Queries:
 - Overview Page - System And Unit Strategies
 - Overview Page - Risks
 - Overview Page - Actions
 - ASM Active Actions By Implementation
- In the folder Public\Meridium\Modules\Asset Strategy\Queries\Dashboard Queries:
 - ASM Active Actions by Source

(TS IDs: 309327, 309325, 309324, 309323, 309322, 309321, 309320, 309315)


- The WMI Definition family will now be used only for SAP. (TS ID: 305035)
- To simplify the workflow, actions can now be implemented by health indicators rather than HI Sources. When you upgrade to V4.3.0.0.0, if an action was previously implemented as an HI Source, if that HI Source has a related health indicator, the action will be linked to that health indicator during the upgrade. If an HI

Source does not have a related health indicator, the action will no longer be implemented after the upgrade. (TS ID: 288519)

- You can now create General Recommendations directly from the **Recommendations** pane in ASM, and the recommendations are linked to the assets in strategy automatically. (TS ID: 285620)
- You are now required to enter a value for the Name field of Action and Risk records. (TS ID: 274521)
- When accessing an asset strategy, you can now access the details of an asset by selecting the hyperlink in the upper-left corner of the workspace. (TS ID: 273258)
- The **Implement Actions** workspace has been redesigned to simplify the workflow and improve usability. The following changes have been made to the workspace:
 - The **Implement** button has been added to facilitate implementation of actions.
 - You can now implement actions as policy instances, health indicators, and lubrication requirements.
 - You can now send notifications to an EAM system for an asset.
 - The actions grid now has only one row per action and the columns have changed to improve usability.
 - The Send to ASI Package button () has been moved to the **Implement Actions** workspace. The following changes have also been made to the button's behavior:
 - The button's icon has changed.
 - Selecting the button no longer navigates to ASI (instead, you can use the hyperlinked package name on the ASI Package workspace to navigate to ASI).
 - The button is only enabled when you select one or more unimplemented, unpackaged actions.
 - The **Send to ASI Package** windows have been redesigned.
 - The windows for implementing actions have been redesigned to improve usability.(TS IDs: 280619, 278606, 278594, 278226, 278225, 268499, 243908, 200348, 65267)
- You can now maximize charts on the **Risk Analysis** and **Risk Summary** pages for asset strategies to analyze them in a full-screen view. (TS ID: 251973)

- The workflow for applying a template to an asset strategy has been simplified so that you now apply templates to *assets* instead of *asset strategies*. If you apply a template to an asset that has no associated strategy, a strategy will be created for the asset. (TS ID: 249477)
- A new chart, **Cost Projection**, now appears in the **Risk Analysis** section. This chart displays the data shown in the Annual Action Cost and Action Cost Projection charts. (TS ID: 245891)
- After using the ASM Strategy and ASM Template Data Loaders, you can now view the information on the number of processed, rejected, updated, and created records. (TS ID: 244076)
- Now, an asset strategy cannot exist without a linked asset. Therefore, when you create an asset strategy, you are now required to link an asset before you can save the new strategy.

When you upgrade to V4.3.0.0.0, any strategies in your database that are not linked to assets will be converted to templates.

 **Note:** If you use the Asset Strategy Management Data Loader to load asset strategies, you must load them with assets.

(TS ID: 225761)

Calibration Management

- On the **Calibration Admin Preferences** page, you can now perform the following tasks:
 - Manage Calibration Strategies for each Profile Template.
 - Manage mappings based on the selected device types.
 - Manage the master templates for manual calibration that will be used in a Calibration Profile.
 - Modify Calibration Setup Defaults record to set the default values for Profile Templates.
- (TS IDs: 316625, 294774)
- Device mappings feature is now available. The following changes have been made to support this feature:
 - In the Calibration Template, Discrete family, the following fields are now enabled and the values are required:

- Activate Switch 1
- SW 1 Contact State
- The following queries have been added to the Catalog folder \\Public\Meridium\Modules\Calibration Management\Queries:
 - CalibrationDeviceDriverList
 - GetFamilyFeilds
 - CalibMapFamList
 - CalibMapFieldsList
 - CalibMapStratList
 - CalibrationMappingList
 - CalibTemplateTypeSysCode
 - GetLinkedCalibratorFields
 - GetLinkedFamilies
 - GetLinkedFields
 - GetLinkedStrategies
 - LinkStratToMap
 - MapListFinal
 - CalibTemDfltsList
 - CalibProfTempList
 - TemplateDefaults
 - MappDirSystemCodes
 - GetUnrelatedFamilies
 - CalibrationStrategyList
 - RetrieveFieldData
- The following families have been added:
 - Calibration Device Driver
 - Calibration Device Driver Has Mapping
 - Calibration Device Mapping
 - Calibration Mapping Family
 - Calibration Mapping Field
 - Calibration Mapping Has Family
 - Calibration Mapping Has Field
 - Calibration Mapping Has Strategy

- Calibration Profile Template Defaults
- Calibration Strategy
- The following System Code Tables have been added:
 - CALIBRATION_DRUCK_UOM_LIST
 - MI_CALIB_TEMPLATE_DEFAULTS_CODES
 - MI_CALIB_TEMPLATE_TYPE
 - MI_CALIBRATION_MAPPING_DIRECTION
- As part of the device mapping implementation, when you upgrade to V4.3.0.0.0, you can use the device mapping upgrade utility to upgrade data from the old device mapping families to the new device mapping families.
- To allow only members of the MI Calibration Administrator group to manage the master profile templates, the **Profile Templates** button has been removed from the **Calibration Management Overview** page, and placed in the **Mappings** section on the **Calibration Admin Preference** page.
- The Strategy field has been removed from the Calibration Template, Analog and Calibration Template, Discrete families and added to the Calibration Profile family.

(TS IDs: 309955, 308901, 295470, 294802, 294777, 294774, 294772)

- To support Beamex CMX Calibration software units of measure, a new system code table, CALIBRATION_CMX_UOM_LIST has been added. (TS ID: 303533)
- To support GE Druck documenting process calibrators, the following changes have been made:
 - On the Calibration Template, Discrete family, if the Calibration Type is *DPI 620* or *DPI Pressure Calibrator*, the following fields have been disabled:
 - SW 2 Setpoint
 - Activate Switch 2
 - SW 2 Contact State
 - Specified Minimum Dead Band Switch 2
 - Specified Maximum Dead Band Switch 2
 - Validate Deadband
 - In the Calibration Template, Analog family, if the Calibration Type is *DPI 620* or *DPI PRESSURE CALIBRATOR*, the Loop Power field now contains the values *Yes* and *No*.
 - In the Calibration Template, Discrete family, the following fields have been disabled:

- Ramp Time
- Repeat Count
- Reset Set Point
- You can now transfer calibration data between GE Digital APM and the GE Druck documenting process calibrators using USB port connections.
- Before you perform an automated calibration, you can modify the serial number in the **Settings** window.
- The following queries have been added to the Catalog folder \\Public\Meridium\Modules\Calibration Management\GE Druck\Queries:
 - DPI 612 Receive Query
 - DPI 620 Receive Query
 - DPI620SendQuery
 - DPI620SendQuery Display
 - DPIPCSendQuery
 - DPIPCSendQuery Display
- In the Calibration Profile family, two new fields, Calibration Type and Calibration Strategy, have been added.
 - When you select a Calibration Type, the list in the Profile Template field is filtered to only contain the profile templates associated with the selected Calibration Type.
 - When you select a Profile Template, the list in the Calibration Strategy is filtered to only contain the calibration strategies associated with the selected Profile Template.
- To support GE Druck documenting process calibrator units of measure, the following system codes have been added to the MI_CALIBRATION_REFERENCES system code table:
 - DPI 620 UOM CURRENT (DPI 620 Unit of Measure Current)
 - DPI 620 UOM FREQUENCY (DPI 620 Unit of Measure Frequency)
 - DPI 620 UOM PRESSURE (DPI 620 Unit of Measure Pressure)
 - DPI 620 UOM RESISTANCE (DPI 620 Unit of Measure Resistance)
 - DPI 620 UOM TEMPERATURE (DPI 620 Unit of Measure Temperature)
 - DPI 620 UOM VOLTAGE (DPI 620 Unit of Measure Voltage)
 - DPI PRESSURE CALIBRATOR UOM CURRENT (DPI Pressure Calibrator Unit of Measure Current)
 - DPI PRESSURE CALIBRATOR UOM PRESSURE (DPI Pressure Calibrator Unit of Measure Pressure)
 - DPI PRESSURE CALIBRATOR UOM VOLTAGE (DPI Pressure Calibrator Unit of Measure Voltage)

(TS IDs: 315489, 308955, 263702, 260505, 259376, 238979)

- To support Beamex CMX Calibration software units of measure, the CALIBRATION_CMX_UOM_LIST system code table has been added. (TS ID: 303533)
- To support automated calibration using Beamex CMX Calibration software, the following changes have been made:
 - A new subfamily, Calibration Template, CMX, has been added to the Calibration Template family. This subfamily stores the details of the calibration that must be performed using the Beamex CMX Calibration software. (TS ID: 252757)
 - Previously, on the **Profile Templates** page, when you select the Add button (+), a list of Calibration Templates appeared. Now, when you select the Add button (+), a drop-down list appears, displaying options Fluke Template, CMX Template, and Manual Template. You must select one of the options, and then select the type of Calibration Template that you want to create. (TS ID: 249831)
 - A new subfamily, Calibration, CMX, has been added to the Calibration family. This subfamily stores the details of the calibration that has been performed using the Beamex CMX Calibration software. (TS ID: 247861)
 - The Meridium Devices Service has been enhanced to support communication between GE Digital APM and Beamex CMX Calibration software via Beamex Business Bridge (B3) software. (TS ID: 247860)
 - On the **Calibration Management Overview** page, in the **Calibration Queue** section, the **Send to Calibrator** button had been renamed to **Send for Calibration**. (TS ID: 239014)
 - On the **Calibration Management Overview** page, in the **Calibration Events** section, the **Receive from Calibrator** button had been renamed to **Receive from Calibration**. (TS ID: 239014)
- A new Security Group, MI Calibration Viewer, has been added. This group has View permissions for all the Entity and Relationship families used in Calibration Management module. (TS ID: 190113)


Cognitive Analytics

- You can now delete or copy cognitions from the **Cognitive Analytics Overview** page. (TS ID: 266012)
- You can now create a script from the **Classifiers** section of the **Cognitive Analytics Overview** page. (TS ID: 264185)

- If the query specified for a cognition is modified, the related information in the **Details** workspace is now automatically refreshed upon navigating between tabs. For example, if you modify a query and then return to the **Details** workspace, you do not need to refresh the browser to see the updated information. (TS ID: 259375)
- On the **Details** workspace of a cognition, the value in the **Bulk Input Data** box now appears as a hyperlink. You can select the hyperlink to open the corresponding query in a new tab. (TS ID: 258444)
- The **Cognitive Analytics Overview** page now contains the following graphs:
 - **Number of records by Cognition:** Displays the number of records classified per cognition, for the 10 cognitions with the most records.
 - **Number of records reviewed in workbench by classifier:** Displays the number of records trained in the **Test Results** workspace of the **Scripts** page per machine learning classifier.(TS ID: 228422)

Configuration Manager

Datasheets

- Rather than a module-specific pane, Associated Pages can now be accessed via an Associated Pages button () on the datasheet. The functionality remains the same. (TS ID: 277323)
- You can now delete an existing value in a drop-down list, and then select a new value, including a null value, in the drop-down list. (TS ID: 271379)
- You can now add fields from **Available Items** pane to a datasheet without adding a datasheet section. (TS ID: 264322)
- On all the datasheets, the controls on the toolbar such as Datasheet selection, Save, or Print remain visible when you scroll to the bottom of datasheet. (TS ID: 151071)

Family Management

- In the **Behavior** section of the **Fields** in **Family Management**, a new option **APM Query** has been added to the **Valid Value** field. You can now populate values in a field by using the query. (TS ID: 275129)
- You can now create relationship between two families by using a foreign key. To support this enhancement, a new check box, **Foreign Key Relationship**, has been added to the **Manage Relationship Definition** window of **Relationship Definition** section. (TS ID: 253897)
- The **Information** and the **Behavior** sections of **Fields** in **Family Management** have been enhanced to make them more intuitive. (TS ID: 243722)
- A new column **Spread From Parent** has been added to the **Fields** section of Family Management. This column indicates whether a field has been spread from the parent family or not. (TS ID: 232859)


Import and Export

- The following new metadata types have been added to the Import and Export feature of the Configuration Manager:
 - The metadata type, *KPI*, has been added that allows you to import or export KPIs.
 - The metadata type, *Policies*, has been added that allows you to import or export policies.
 - The metadata type, *Strategy Macros*, has been added that allows you to import or export strategy macros.(TS IDs: 309283, 248283, 211261)
- A new metadata type, *All Metadata*, has been added to the Import feature of Configuration Manager. This metadata type allows you to import all the items in an import file without manually selecting each items in that file. (TS ID: 235058)
- You can now import or export the KPIs in a dashboard along with the other dashboard widgets. (TS ID: 250318)


Units of Measure and Conversions

- Two new units of measurement, *dL/g* and *G/MOL* has been added to the Units of Measure and Conversions feature of Configuration Manager. (TS ID: 240868)

Foundation

- If you try to log in to GE Digital APM with an expired license, if you are a Super User, a prompt will now appear that will allow you to enter a new license key and reactivate. (TS ID: 293555)
- A new button, Theme Settings, () has been added to the top navigation bar. You can use this button to display the contents of a grid in a compact view mode. (TS ID: 239532)

Reference Documents

- The **Reference Documents** section has been enhanced to make it more intuitive. (TS ID: 269182)
- In the Record Explorer, the **Reference Documents** menu that appears when you select the More button () , now displays the count of reference documents associated with a family. (TS ID: 235754)

Result Grid

- On the Result Grid, you can now select the column heading to sort the column in ascending or descending order. (TS ID: 257569)

Generation Availability Analysis (GAA)

- You can now create a log entry for a Primary Event and track the associated log entry for the event. You can use this log entry to document observations on events related to power generation during a shift. (TS ID: 297158)
- To improve usability, the **GAA Administrator** page has been redesigned with the following changes:
 - The **Generation Availability Analysis** workspace has been added. The following tasks are supported in this workspace:
 - You can view the list of Regulatory Organizations supported in GAA and the Unit Types and Unit States available for these Regulatory Organizations.
 - You can view, add, or modify Event Categories and Event Types. You can also associate the Event Categories and Event Types with a color

code, which are then used to represent them in the graphs in the **Unit Summary** workspace for a GAA Unit.

- You can view, add, or modify Amplification Codes, Cause Codes, and Fuel Types for the Regulatory Organizations.
- You can manage the mappings of the Amplification Codes and Cause Codes between North American Electric Reliability Corporation (NERC) and Canadian Electricity Association (CEA). You can also add or modify event transitions for Events in GAA.
- You can configure Regulatory reports for NERC and CEA.
- In the workspace for a GAA Unit, the following changes have been made:
 - The **Reports** tab has been renamed as **Performance & Reports**. In this section, you can now view the list of Performance records and Regulatory reports associated with the GAA Unit. You can also associate and disassociate reports with the GAA Unit.
 - The **Reference Documents** tab has been added. In this section, you can manage generated Regulatory reports, logs, and other documents related to the GAA Unit as Reference Documents.

(TS IDs: 286381, 272967, 262651, 261858, 261854, 261853, 261852, 255951, 221932)

- To support multiple weightage types, the Performance family has been split into the following three families:
 - GAA Performance Fuel
 - GAA Performance Indexes
 - GAA Performance Summary

(TS IDs: 278489, 262649)

- To generate Regulatory reports, the following Catalog items have been added to the folder Public\Meridium\Modules\Generation Management\Queries\NERC Queries:
 - NERC Event Report 07
 - NERC Performance Report 05

(TS ID: 275273)

- Management reports are now generated based on values in the fields in the GAA Performance Summary and GAA Performance Fuel families, instead of the GAA Performance family. To facilitate this enhancement, the *Performance 05* query in the folder Public\Meridium\Modules\Generation Management\Queries\Report Queries has been updated to use the GAA Performance Summary and GAA Performance Fuel families. (TS ID: 275566)

- The Cause Codes for 2016 are now included in the Cause Codes family, which populates the Cause Code field in a Cause Codes record. (TS ID: 272953)
- To support importing existing data to GAA, a relationship has been created between the MI Has Reference Documents relationship family and the GAA Unit family. (TS IDs: 257237, 257236)
- To support the mappings between NERC and CEA, the GAA Code Mapping family has been added. (TS IDs: 257237, 257236)
- You can now create multiple Primary Events simultaneously using the Bulk Data Form. (TS ID: 256923)
- To support reporting to CEA, the following new families have been added:
 - GAA Event Categories (TS ID: 255951)
 - GAA Event Transition (TS ID: 286380)
 - GAA Event Types (TS ID: 249941)
 - GAA Unit Types (TS ID: 249939)
 - GAA Unit States (TS ID: 249937)
 - GAA Supported Organizations (TS ID: 249428)
- To support the Revision History of a Primary Event, the Primary Event History family has been added. (TS ID: 253903)
- The Amplification Codes for 2016 are now included in the Amplification Codes family, which populates the Amplification Code field in an Amplification Codes record. (TS ID: 248101)
- To support reporting to CEA, the following changes have been made to various datasheets in Generation Availability Analysis:

Datasheet	Changes
Amplification Codes	<ul style="list-style-type: none"> • GADS Amplification Codes datasheet has been renamed to Amplification Codes. (TS ID: 259545)

Datasheet	Changes
Cause Codes	<ul style="list-style-type: none"> • GADS Cause Codes has been renamed to Cause Codes. • The following new fields have been added: <ul style="list-style-type: none"> ◦ Mapped ID ◦ Unique Key <p>(TS ID: 259545)</p>
GAA Company	<ul style="list-style-type: none"> • The Regulatory Reporting Organization 1 and Regulatory Reporting Organization 2 fields have been renamed to Primary Regulatory Body and Secondary Regulatory Body in the Identification tab. • The GADS Utility Code has been renamed to Primary Utility Code in the Identification tab. • The Secondary Utility Code field has been added to the Identification tab. <p>(TS ID: 258846)</p>
GAA Fuel Types	<ul style="list-style-type: none"> • The Fuel Type Code, Fuel Type Description, Heat Content Unit of Measure, NERC Fuel Code, NERC Fuel Description, and Solid/Liquid/Gas fields have been removed. • The Fuel Code, Fuel Description, and Regulatory Reporting Organization fields have been added. • The Heating Value Ranges has been renamed to GAA Fuel Types. • The Mapped ID field has been added to GAA Fuel Types records. <p>(TS IDs: 259540, 249938)</p>
GAA Plant	<ul style="list-style-type: none"> • The Regulatory Reporting Organization 1 and Regulatory Reporting Organization 2 fields have been renamed to Primary Regulatory Body and Secondary Regulatory Body in the Identification tab. • The Primary Plant code and Secondary Plant code fields have been added to the Plant tab. <p>(TS ID: 258846)</p>

Datasheet	Changes
GAA Unit	<ul style="list-style-type: none"> • The NERC Values tab has been renamed to Fuel Data tab. • The Regulatory Reporting Organization 1 and Regulatory Reporting Organization 2 fields have been renamed to Primary Regulatory Body and Secondary Regulatory Body in the Identification section. • The Primary Unit code and Secondary Unit code fields have been added to the References tab. <p>(TS IDs: 258846, 249938)</p>
GAA Configuration	<ul style="list-style-type: none"> • The GAA Reports family has been renamed to GAA Configuration. • The GAA Report records have been renamed to Performance & Reports records. <ul style="list-style-type: none"> • The Report Name field has been renamed to Record Name. • The Report Type field has been renamed to Record Type. • The following fields have been added: <ul style="list-style-type: none"> ◦ Associated Events Catalog Path ◦ Description ◦ Is Linked ◦ Performance Type ◦ Policy ID ◦ Weightage Type <p>(TS ID: 262650)</p>

- In the **Unit Summary** workspace, you can now view the losses for each event in the GAA Unit for a specified period. (TS ID: 208013)


Hazards Analysis

- In the Hazards Analysis data loader, a new worksheet, MI_IPL_CHEC, has been added. This worksheet is used to import IPL Checklist records that store your selection for the criteria that are used to determine if a Safeguard is an IPL. (TS ID: 284633)

- When you copy a System/Node in a Hazards Analysis, the associated Deviations or What Ifs, Causes, Consequences, Safeguards, and Risk Assessments are also copied and associated with the copy of the System/Node. (TS ID: 277084)
- You can now create or modify the criteria that are used to assess if the Safeguard is an Independent Protection Layer (IPL). To facilitate this enhancement, a new family, IPL Checklist, has been added. When you upgrade to V4.3.0.0.0, for each Safeguard that previously existed in your database, IPL Checklist records are created to store your selection for the criteria to assess if the Safeguard is an IPL. (TS IDs: 250283, 249987)
- You can now create or link a Layers of Protection Analysis (LOPA) to a Consequence for which you want to assess the required Safety Integrity Level (SIL). (TS ID: 249978)
- A new Security Group, MI Hazards Viewer, has been added. This group has View permissions for all the Entity and Relationship families used in Hazards Analysis module. (TS ID: 190113)

Inspection Field Data Collection

- The Inspection Recommendations offline form has been added to Inspection Field Data Collection. You can now add, modify, and delete Inspection Recommendations while offline.

 **Note:** If you have customized any of the online behaviors for Full Inspection, General Inspection, Checklist Inspection or Recommendation families in previous versions of GE Digital APM, then your customizations will be overwritten with the offline baseline behaviors.

(TS IDs: 291987, 263456, 205957)

- You can now view, generate, configure, and download PDF versions of Inspection Reports and Inspection History Reports to use offline. (TS IDs: 291986, 210514)
- You can now add Reference Document images to inspections that are completed while offline. (TS ID: 248966)

Inspection Management

- The Item ID field has been added to the Inspection Task Layout datasheet. When defining Inspection scope, this field aids in profile selection. (TS ID: 302732)
- The Protected Equipment Type field is now included in the NR13 Technical Data query so that you can use PRD functionality with the NR13 module. (TS ID: 302633)
- The following enhancements have been made to the NR13 module:
 - The System Code Table *NR13_FLUID_CLASS* has been added. This table is used to populate values in the Fluid Class field of Fluid Code records.
 - The System Code Table *NR13_FLAMMABLE* has been added. This table is used to populate values in the Flammable field of Fluid Code records.
 - The field *Protected Equipment Type* has been added to the NR13 Technical Data family.
 - The relationship table *NR13 Equipment is Protected By* has been added. This relationship indicates that a piece of equipment is a Safety Device.
 - The report queries *NR13 Full Inspection Report* and *NR13 Technical Data* have been updated so that they now to display a list of protected equipment.

(TS ID: 294506)

- You can now schedule emails to be sent by the GE Digital APM system to alert assigned users when Inspection recommendations are due and when Inspection Recommendations need to be reevaluated. (TS ID: 254108)
- You can now generate Inspection Reports from the **Manage Task** page of the **Inspection Task** workspace. (TS ID: 210514)
- You can now generate Inspection Recommendations from General Findings records. (TS ID: 210502)
- The following updates have been made to the Inspection Management Data Loaders:
 - The Inspection Confidence Evaluation worksheet has been added.
 - The following fields have been removed from the baseline Full_Inspection and General_Inspection worksheets:
 - Extent
 - Degradation Mechanism
 - Inspection Type

(TS ID: 207023)

Life Cycle Cost Analysis (LCC)

- The **LCC Overview** page now contains a new tab, **My Analyses**, which lists the analyses for which you are assigned as a team member. (TS ID: 294940)
- A new query, Cost Data Query, has been added to the Catalog folder \\Public\Meridium\Modules\LCC\Queries. This query creates individual queries for each analysis in a database that you can use to export LCC data as Excel spreadsheets or datasets. The exported data can then be used in charts, graphs, and reports. (TS ID: 290537)
- The MI LCC Administrator Security Group has been added. Members of the MI LCC Administrator Security Group have full access of LCC for any site-accessible analysis and can change state assignments. (TS ID: 290515)
- The ability to manage State Assignments in Life Cycle Cost Analysis is now available. When you create a new Life Cycle Cost Analysis, it is in the *In Progress* state. When the analysis is complete, users with appropriate team member roles can then change the state to *Complete*, and the analysis will become view-only.

To facilitate this enhancement, the following two team member roles have been created in LCC:

- **Principal Analyst:** This team member is the creator of the analysis by default and can modify the state of an analysis.
- **Member:** This team member cannot modify the state of an analysis.

Super Users and members of the MI LCC Administrator security group can modify the state of any analysis without being members of the analysis.




(TS ID: 271565)

- You can now find and select scenarios from multiple Life Cycle Costs Analyses to be copied into a new Analysis. Copied Operating Costs and Capital Costs from the selected scenarios also appear in the **Details** subsection of the **Scenario Definition** section. (TS ID: 265212, 265209)
- The Annual Escalation Rate is now applied to all Known Interval costs and Imported Strategy Action costs for the Operating Profile. (TS ID: 252010)
- Annual Escalation Rate is now applied to Revenue over the span of the LCC

analyses. Previously, no escalation was applied to Revenue. (TS ID: 251972)

- To streamline adding Secondary Elements in the **Cost Data** section for a Scenario, you can now copy Secondary Elements. (TS ID: 187597)

Metrics and Scorecards

- Two new buttons,  and , have been added to the **Scorecard Details** page. Using these buttons, you can bulk update the measures of all the KPIs in a Scorecard and view the log of the bulk update. (TS IDs: 313118, 311404)
- A new Security Group, *MI Metric Viewer*, has been added. Members of this group have only *View* permission for the Metric Views, Key Performance Indicators, and Scorecards records. (TS ID: 264852)
- You can now use a bullet chart to view a KPI. A new button  has been added to the **KPI Details** page that enables you to view a KPI as a Dial Chart or a Bullet Chart. (TS ID: 257661)
- You can now set the best value and worst value for a Key Performance Indicator using GE Digital APM queries. (TS ID: 250852)

Mobile Proof Testing


- This module has been renamed from *Proof Test Data Collection* to *Mobile Proof Testing*. Throughout the V4.3.0.0.0 documentation, including these Release Notes, we refer to this module by its new name. (TS ID: 271310)
- You can now create Recommendations for Proof Tests when you are offline. You can also take photos of the affected assets and associate them to the Recommendations. When the Proof Tests are synchronized, the images attached to the Recommendations appear as Reference Documents in the Recommendations created for the Instrumented Function. (TS ID: 211068, 211066)

Operations Manager

Connections - PDI Systems

- Connections to GE Historian 7.0 SP1 are now supported for Process Data Integration. (TS ID: 270005)
- Connections to GE Cimplicity V9.5 are now supported for Process Data Integration. (TS ID: 279832)

Schedule Logs

- On the **Operations Manager** page, the **Scheduling** button has been renamed to **Schedule Logs**. (TS ID: 255964)
- You can now download the log files for the tasks that are successfully completed or failed. A new download button () has been added to the **Successful** and **Failed** tabs of the **Schedule Logs** page. (TS ID: 249018)

Policies

Family Policies

- A new node, the Baseline Rule node, has been added to family policies. You can use this node to run the existing GE Digital APM baseline family-level rule that corresponds to the policy's family and trigger. This allows you to use both family policies and baseline rules for a single family. (TS ID: 246665)
- The following nodes now include the system field outputs *Entity ID* and *Site Key*.
 - Current Entity
 - Current Relationship
 - Create Entity
 - Create Event
 - Create Production Event
 - Create Recommendation
 - Create Relationship(TS ID: 209122)

Family Policies and Policy Designer

- If the input specified for a Sum node is an empty collection, the resulting answer from the Sum node is automatically zero (0), which may considerably simplify the

policy design. Previously, in this scenario, depending on the policy design, the policy issued a warning and the execution of the policy may have stopped. (TS ID: 307333)

- In a Create Entity node's **Properties** window, you can now specify the Site Reference Key of the site to which the new record should be assigned. (TS ID: 300141)
- New logs for sync service and policy execution service are now written to **C:\ProgramData\Meridium\Logs**. (TS ID: 298076)

Policy Designer

- The Policy Designer license is required to take full advantage of Policy Designer functionality. However, you can now view the module workflow policies for the following modules even if the Policy Designer license is inactive:
 - Generation Availability Analysis (GAA)
 - Pipeline Management
 - Risk Based Inspection (RBI) 580
 - Risk Based Inspection (RBI) 581

(TS ID: 313025)

- You can now use the Constant node to configure a Data Frame as an input to a policy. (TS ID: 226237)
- The following nodes now include the system field outputs *Entity ID* and *Site Key*:
 - AMS Asset
 - Entity
 - GE Tag
 - Health Indicator
 - Measurement Location
 - OPC Tag
 - Create Entity
 - Create Event
 - Create Production Event
 - Create Recommendation
 - Create Relationship

(TS ID: 209122)

Production Loss Analysis (PLA)

- You can now reconcile Production Losses when the Actual Production meets or exceeds the Short Range Plan or MSCR. As a result of this enhancement, you can also add losses when the unreconciled losses count is zero. (TS ID: 309114)
- The Product Alias field has been added to the Production Profile family, and to the ProductionProfile datasheet in the Production Loss Analysis Data Loader. This modifiable field appears in the PLA Application Settings and is used to automatically populate the Product Name fields in Production Plans and Production Plan Templates. (TS IDs: 303628, 289573)
- When you create a new Production Event Code at the parent and child levels, the new code is now added to the list in alphabetical order. (TS ID: 302193)
- The queries whose results are displayed in the lists on the **PLA Overview** page can now be modified to add, delete, hide, or rearrange columns. (TS ID: 247785)

Recommendation Management

- You can now filter the following lists in a recommendation by site reference: **Reviewer Name**, **Assigned to Name**, **Final Approver Name**, and **Re-evaluation Notification**. (TS ID: 283313)

Reliability Analytics

- You can now select the **Report** button to create reports on any page within an analysis. The reports open in a new browser tab in a printable format. This feature replaces the **Reports** workspace, which is now deprecated. (TS IDs: 289571, 289039, 289038, 289037, 289035, 289034)
- In System Reliability, the last updated field beneath the Analysis summary title and scenario title is now updated in real time. (TS ID: 251721)

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

- The RCM and FMEA overview pages have been redesigned to simplify the workflow. The following changes have been made to the RCM and FMEA overview pages:
 - The **All** tab has been renamed to **Analyses**.
 - The following tabs have been added:
 - **Risks**
 - **Recommended Actions**
 - The following charts have been added:
 - **Analyses By State**
 - **Recommended Actions by Type**
 - **Recommended Actions by State**
 - The **Risks without Recommended Actions** chart has been updated to show the number of risks with recommended actions against the number of risks without recommended actions.

To facilitate these enhancements, the following Catalog items have been added:

- In the folder Public\\Meridium\\Modules\\FMEA
 - FMEA Analyses By State Query
 - FMEA Analysis Recommended Actions
 - FMEA Analysis Risks
 - FMEA Recommended Actions by State
 - FMEA Recommended Actions by Type
- In the folder Public\\Meridium\\Modules\\RCM
 - RCM Analyses By State Query
 - RCM Analysis Recommended Actions
 - RCM Analysis Risks
 - RCM Recommended Actions by State
 - RCM Recommended Actions by Type

(TS IDs: 309106, 309102, 309093, 309084, 308839, 308838, 308813)

- You can now promote an RCM or FMEA Analysis template or an FMEA Asset template to an ASM template. Promoting an RCM or FMEA template to an ASM template creates risks and actions in a new strategy template from corresponding failure effects and recommendations in the RCM or FMEA template, respectively. Additionally, when you make subsequent changes to the original RCM or FMEA template, you can also promote those changes to the ASM template. (TS IDs: 307876, 160858)

- Previously, the reports in RCM and FMEA were generated using asset data from the RCM FMEA Asset family. Now, the reports in RCM and FMEA are generated using asset data from the Asset Hierarchy. (TS IDs: 306022, 299751)
- Two new fields, Failure Mechanism and Failure Mechanism Description, have been added to the RCM FMEA Failure Mode family. You can use these fields to specify and describe the processes that result in a failure. (TS ID: 263484)
- Now, an analysis cannot exist without a linked asset. Similarly, you can only link virtual assets to RCM and FMEA analysis templates. Therefore, when you create an RCM or FMEA analysis, you are now required to link an asset before you can save the new analysis.
When you upgrade to V4.3.0.0.0, any analyses in your database that are not linked to any assets in the asset hierarchy will be converted to analysis templates.
(TS IDs: 255099, 225762)
- You can now view the information on the number of processed, rejected, updated, and created records after using the RCM and FMEA Data Loaders. (TS ID: 244076)
- The Template List query is now used to display the content in the **Select Template** window of the **Apply Template Builder** for RCM and FMEA. (TS ID: 236437)
- You can now copy and paste nodes in RCM and FMEA templates. (TS ID: 194959)

Risk Based Inspection (RBI)

- The PV Stress reference table now includes 296 additional records for Material Specification *SA-387* and Code Year *2010* to cover information on various classes. (TS ID: 315077)
- When you generate an RBI Recommendation for an Asset or an RBI Analysis, there is now a visual indication of whether the operation is still in progress or completed. (TS ID: 297787)
- The **Process Units** tab has been added to the **Risk Based Inspection Overview** page, replacing the **Corrosion Loops** tab. The **Process Units** section displays a list of all Process Units related to the specified level of the Asset Hierarchy. To facilitate this enhancement, on the **Asset Hierarchy** page for a Functional Location, in the **Risk** section, the hyperlink in the **Risk Based Inspection** row displays the count of the Assets and Process Units (instead of Corrosion Loops, as previously) related

to the selected Functional Location. (TS IDs: 267599, 254369, 254372, 260580)

- The Piping Stress reference table now includes information on Construction Code *ASME B31.1* and Code Year *2014*, thus adding 17,286 records to the Piping Stress family. (TS ID: 236586)
- You can now verify whether or not a toxic fluid is valid for RBI 581. A new field labeled *Toxic Fluid Valid for 581 Analysis* has been added to the following families:
 - Criticality Calculator RBI Components (and its child families)
 - RBI 581 Risk Analysis
 - RepresentativeFluids

This field appears as a check box on the RBI Component and RBI 581 Risk Analysis datasheets.

- When you select a toxic fluid that *is* valid for RBI 581, this check box is disabled and *selected*, indicating that the fluid you have selected is valid for RBI 581.
- When you select a toxic fluid that is *not* valid for RBI 581, this check box is disabled and *cleared*. In this scenario, if you attempt to calculate the RBI 581 Risk Analysis, an error message appears, indicating that the fluid you have selected is *not* valid for RBI 581.

(TS ID: 221704)

- You can now log in to GE Digital APM as a Security User who can only *access* all the records in RBI, but cannot create, modify, or delete a record. To facilitate this enhancement, the following changes have been made:
 - A new Security Group, *MI RBI Viewer*, has been created. This Security Group has only the *View* privilege to all the families used in RBI. A member of this Security Group can only access all the records used in RBI.
 - A new Security Role, *MI Mechanical Integrity Viewer*, has been created and assigned to the RBI Viewer Security Group.

(TS ID: 190090)

- When you link an RBI Component or a PRD Component to a Corrosion Loop, in the **Select RBI Components** window, the Components appear in a *flat* list, instead of in the Asset Hierarchy. This allows you to easily locate a component without navigating through the hierarchy. To facilitate this enhancement, the *Select RBI Components* query in the Public\Meridium\Modules\Risk Based Inspection\Queries folder has been modified. (TS ID: 187479)

RBI 580

- The financial risk mapping for an RBI Criticality Analysis or RBI Pipeline Analysis now includes production loss in addition to maintenance cost. The consequence is calculated as the sum of the production loss and maintenance cost. To facilitate this change, the following policies have been modified:

- DEFAULT-RISK_MAPPING-FINANCIAL
- PL-DEF-RISK_MAPPING-FINANCIAL
- PL-RISK_MAPPING-FINANCIAL
- RISK_MAPPING-FINANCIAL

(TS IDs: 258647, 255000)

- The following changes have been made to the Risk based Inspection (RBI) 580 Data Loader:

- The order of the columns in the Risk based Inspection (RBI) 580 Data Loader has been modified to match the order of the fields as they appear on the corresponding datasheets in GE Digital APM.
- The following columns have been added:

Column	Worksheet
PWHT	RBI_Component
Is Entry Possible?	RBI_Component
Source of Calculated Corrosion Rate	RBI_Component
Allowable Stress Override	RBI_Criticality Analysis
Allowable Stress	RBI_Criticality Analysis

- The following columns have been removed:

Column	Worksheet
PWHT	DME_Environmental_Cracking
Is Entry Possible?	DME_Environmental_Cracking

- The following columns have been renamed:

Old Name	New Name
Component Start Date	Component Date in Service
Course Number	Course Number (For Tank Bottom)

- The following column names have been appended with (*Channel Side for Exchanger Bundle*) to allow you to add the field values for channel side if the component is an Exchanger Bundle:
 - Operating Pressure
 - Operating Temperature
 - Initial Fluid Phase
 - Process Fluid
 - Toxic Fluid
 - Toxic Mixture
 - Percent toxic
 - Design Pressure
 - Design Temperature
- The column names for estimated corrosion rates and predictable corrosion locations have been updated to indicate whether they correspond to *inside* or *outside* the tube of an exchanger bundle.

(TS ID: 255961)

- 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. As needed, you can modify the logic that is used to populate the check box by modifying the policy. (TS ID: 252812)
 - The Asset Risk Report now includes the Inspection Confidence value of the Inspection Strategy that is associated with an RBI Recommendation. To facilitate this enhancement, the following fields have been added to the RBI Recommendation family:
 - Inspection Confidence
 - Inspection Strategy ID
- (TS ID: 252656)
- You can now perform bulk calculations for all RBI Criticality Analyses associated with a single asset, multiple assets, a Process Unit or a Corrosion Loop. Additionally, the **Analysis Calculation** window appears which displays information related to calculations, such as progress, assets, components, analyses, and completion statuses. You can also access the **Schedule Logs** page to view detailed information about the calculation process, and, for any failed analyses, a list of the required fields. (TS ID: 250634).
 - When you access the Inspection History of Criticality Other Damage Mech. Eval.,

the Inspections that are linked only to the selected Degradation Mechanism (DM) now appear. The Inspections that are linked to the other DMs no longer appear. (TS ID: 247792)

- The RBI_Components worksheet has been added to the Risk Based Inspection (RBI) 580 Data Loader workbook. This worksheet consolidates the following RBI Criticality Calculator Components worksheets, previously listed individually, into a single worksheet:
 - Cylindrical_Shell Worksheet.
 - Exchanger_Bundle Worksheet.
 - Exchanger_Header Worksheet.
 - Piping Worksheet.
 - Tank_Bottom Worksheet.

(TS ID: 246415)

- In the Risk Based Inspection (RBI) 580 Data Loader workbook, if you do not enter values in cells that correspond to fields required to calculate an analysis, then the analysis and related records are no longer created after you load data. (TS ID: 204975)

RBI 581

- In an RBI 581 Risk Analysis, in the Risk Summary ID field, the option *Consequence Driven* is no longer available. Instead, for consequence-driven scenarios:
 - The Risk Summary ID field is now populated with the value *Risk exceeded, Mitigation does not help*.
 - The Risk Summary Description field is now populated with the value *Residual Risk after applying highest level of Inspection*.

(TS ID: 314724)

- The performance of an RBI 581 Risk Analysis calculation has been improved by removing the following policies:
 - RBI 581 Financial Consequence Evaluation
 - RBI 581 Damage Factor - Thinning
 - RBI 581 External Corrosion Damage Factor
 - RBI 581 CUI Damage Factor

(TS IDs: 305997, 293594)

- In the **Potential Degradation Mechanisms** section for a component or a corrosion loop, a new column, **Methodology Type**, has been added to the grid, which displays the methodology type of each Potential Degradation Mechanism (PDM). In addition, when you select **Add PDM**:
 - The methodology type appears below each PDM.
 - The PDM appears as a hyperlink. If you select the link, the PDM record appears in Record Explorer on a new page.

Similarly, in the **Degradation Mechanisms** section of an RBI Criticality Analysis, RBI 581 Risk Analysis, RBI PRD Analysis, or RBI Pipeline Analysis, if you select the Add Item button (+):

- The methodology type appears below each Degradation Mechanism (DM).
- The DM appears as a hyperlink. If you select the link, the associated PDM record appears in Record Explorer on a new page.

(TS ID: 303556)

- Entering a value in the Furnished Cladding Thk field in an RBI 581 Risk Analysis is now mandatory when calculating an analysis linked to a cladded RBI Component. (TS ID: 298087)
- You can now create a What-If Analysis for an RBI 581 Risk Analysis. (TS ID: 278422)
- Integration between the RBI 581 and Thickness Monitoring modules has been enhanced. You can now use the Controlling Corrosion Rate of an Asset or Component that is defined in the associated Asset Corrosion Analysis in Thickness Monitoring to calculate the damage factor of an RBI 581 Thinning and Lining Damage Evaluation. To facilitate this enhancement, the following changes have been made:
 - A new field, Controlling Corrosion Rate, has been added to the RBI 581 Thinning and Lining Damage Evaluation family. This field appears as a text box in the **General** section of the datasheet.
 - A new system code, Controlling Corrosion Rate, has been added to the 581_CORR_TYPE System Code Table. Therefore, you can select *Controlling Corrosion Rate* in the Selected BM Corrosion Rate and Selected Cladding Corrosion Rate fields in an RBI 581 Thinning and Lining Damage Evaluation.
 - The *RBI 581 Damage Factor - Thinning* policy has been modified to calculate damage factor using the value in the Controlling Corrosion Rate field if the value in the Selected BM Corrosion Rate or Selected Cladding Corrosion Rate field is *Controlling Corrosion Rate*.
 - The *RBI 581 Damage Factor - AST Bottom Thinning* policy has been modified to calculate damage factor using the value in the Controlling Corrosion Rate field if the value in the Selected BM Corrosion Rate field is *Controlling Corrosion Rate*.

(TS ID: 258239)

- A new graph, RBI 581 ISO Risk Plot, has been added to various pages in RBI. The graph displays the SHE risk and financial risk of an RBI 581 Risk Analysis on a logarithmic scale. The low, medium, medium high, and high risk levels are marked on the graph based on the standards set by the International Organization for Standardization (ISO). You can also modify the graph settings by accessing the administrative settings for RBI. (TS ID: 247846)
- When you access the Inspection History of a Degradation Mechanism Evaluation (DME) other than 581-Internal Lining Component Damage, and the DM belongs to RBI 581 Thinning and Lining Damage Evaluation, the Inspections linked to 581-Internal Lining Component Damage no longer appear. Similarly, when you access the Inspection History for 581-Internal Lining Component Damage, now only the Inspections that are linked to that DM appear. (TS ID: 247792)
- In the Risk Based Inspection (RBI) 581 Data Loader workbook, if you do not enter values in cells that correspond to fields required to calculate an analysis, then the analysis and related records are no longer created after you load data. (TS ID: 204975)
- Integration between RBI 581 and Inspection Management has been enhanced such that Inspections linked to an Asset are now assigned *automatically* to a Degradation Mechanism Evaluation (DME) associated with the same Asset.

To facilitate this enhancement:

- A new tab, **Inspection Auto-Selection**, has been added to the **RBI Admin Preferences** page. The **Inspection Auto-Selection** workspace allows you to enable or disable this feature.
- A new family, RBI Inspection Auto-Selection Criteria, has been created, along with a few baseline records. These records store details about the criteria that must be used while assigning Inspections to a DME. You can create or modify these records if needed.

(TS ID: 183442)

Root Cause Analysis (RCA)

- Changes to node positions in RCA Event Diagrams and Logic Tree Diagrams are now automatically saved when you leave the corresponding section. (TS ID: 293292)
- When importing existing Failure Modes and Hypotheses to a Logic Tree node, the

Analysis Type list selection in the **Import** window is now set to the Analysis Type of the open Analysis by default. A *No Analysis Type Assigned* option has also been added to the Analysis Type list for analyses with no associated type. (TS ID: 251781)

- The export quality of the Logic Tree and Event Diagram has been improved so that it is now more readable. (TS ID: 251242)
- The **RCA Overview** page filter has been enhanced so that analyses with or without linked assets appear in the Asset Hierarchy at the Home level. When another asset level is selected in the hierarchy, only analyses with linked assets related to that asset appear. (TS ID: 244498)
- You can now delete a Hypothesis from the **Hypothesis List** pane. (TS ID: 239302)
- You can now import Failure Modes from Reliability Centered Maintenance (RCM) and Failure Modes and Effects Analysis (FMEA) to the Logic Tree diagram. To be available for import, Failure Modes must have an asset context which corresponds to one or more linked assets for the RCA Analysis. (TS ID: 182851)

Rounds Data Collection

- A new Map query, *Route Geolocation Data*, is available in the baseline GE Digital APM Catalog. You can use this query to view the geolocation data that is saved for readings, recommendations, and photos. This query is supported by two new sub-queries, Readings Geolocation data and Rounds Recommendation Geolocation. (TS ID: 294770)
- Performance has been enhanced throughout Rounds Data Collection. As part of this enhancement, a change was made to the display of checkpoints on a filtered Route. Now, when you filter a Route, the number displayed in the **Route Map** pane to the left of the Asset ID reflects the order of the filtered list, rather than the order of the full list. (TS ID: 251834)

Rounds Designer

- A new field, Capacity Unit of Measure, has been added in Lubrication Requirement and Lubrication Requirement Template records to replace the existing field, which has been deprecated. The new field contains a drop-down list, populated by the MI_LM_REFERENCES system code table, from which you can select an appropriate Unit of Measure.

When you upgrade to V4.3.0.0.0, this field will be populated automatically with a reference to the unit of measure that corresponds to the value in the deprecated Capacity Unit of Measure field. Therefore, prior to upgrading your database, we recommend that you review the values in the Capacity Unit of Measure field to consolidate any near-matches, and to ensure that corresponding values exist in the MI_LM_REFERENCES System Code Table.

(TS IDs: 302914, 279942, 162008)

- When using a Windows Mobile Device to upload readings, if the selected Route is incomplete, then, on the **Sync Data** screen, a reminder now appears stating that Routes must be marked as complete before they can be uploaded. (TS ID: 288359)
- On the Lubrication Requirement and Lubrication Requirement Template data-sheets, the Lubricant Manufacturer field now appears above the Lubricant field. Because the available lubricants are filtered by the specified manufacturer, this enhancement streamlines the creation of Lubrication Requirements. (TS ID: 279041)
- To facilitate a comprehensive lubricant management program, the following fields have been added to the Lubricant family and are displayed on the default data-sheet:
 - Lubricant Type
 - Trade Name
 - Description
 - ISO Grade
 - Viscosity Rating
 - Flash Point
 - Flash Point UOM
 - Manufacturer's Part Number
 - Storage Location
 - Material Number
 - Notes

In addition, the Record ID Template for the Lubricant family has been updated to the following format: <Manufacturer>~<Lubricant>~<Lubricant Type>.

(TS IDs: 279026, 267523, 145678)

- The Requires Equipment Shutdown field has been added in the following locations to help with designing Routes:

- Measurement Location family
- Measurement Location Template family
- Lubrication Requirement family
- Lubrication Requirement Template family
- Lubrication Requirement Worksheet (MI_LR_TMPLT) in the Rounds Template Data Loader Workbook.
- Measurement Location Worksheet (MI_MEAS_LOC) in the Rounds Routes Data Loader Workbook. This worksheet covers both Measurement Locations and Lubrication Requirements.
- Measurement Location Worksheet (MI_ML_TMPLT) in the Rounds Template Data Loader Workbook.

The Requires Equipment Shutdown field can be also used to filter checkpoints in Rounds Data Collection. The Shutdown Required? field has been deprecated.

(TS ID: 277571)

- The Checkpoint ID field is now populated automatically when you create a new Checkpoint. (TS ID: 273458)
- Performance when changing the order of checkpoints on a route has been significantly improved. To facilitate this enhancement, the route sequence is now stored in a reference table, and the Sequence fields on Checkpoint, Checkpoint Condition, Measurement Location, and Lubrication Requirement records have been deprecated.

To support this enhancement for Windows Mobile handheld devices, the following changes have been made:

- A new family, Rounds Sequence Information, has been added to store the route sequence information.
- A new button, **Save Route Sequence**, has been added to the route page in Rounds Designer. Selecting this button after reordering a Route allows the Route sequence to be immediately reflected when you download the route to a handheld device. Otherwise, Route Sequence Information records will be updated only on a defined schedule, when you access another tab, or after the **Rounds Designer** page has been closed.
- A new section, **Route Sequencing**, has been added to the Rounds Designer Application Settings. You can use this section to define a schedule on which to synchronize the Route sequence changes with the Rounds Sequence Information family.
- When you upgrade to V4.3.0.0.0, if you have modified the following queries, then you will need to copy the new baseline queries and reapply your modifications to take advantage of this enhancement:

- Public\Meridium\Modules\Lubrication Management\Queries\Report Queries\Lubrication Management Data Capture
- Public\Meridium\Modules\Operator Rounds\Queries\Report Queries\Measurement Location Data Capture
- Public\Meridium\Modules\Mobile\Operator Rounds\Measurement Locations

(TS IDs: 271375, 271166, 265666, 260429, 260428, 260394, 185936)

- You can now use the Rounds Readings Data Loader to load readings related to Lubrication Requirements. (TS ID: 240866)
- The Rounds data loaders now use the standard date format *yyy-mm-dd hh:m-m:ss*. This change affects the following fields:
 - In the Rounds Routes data loader, on the Route worksheet:
 - Next Date
 - Last Date
 - In the Rounds Routes data loader, on the Checkpoint Task worksheet:
 - Next Date
 - Non-compliance Date
 - Non Compliance Next Check Date
 - In the Rounds Reading data loader, on the Reading worksheet:
 - Reading Taken Date

(TS ID: 232995)

- The Recommendation Error Details field has been added to the Operator Rounds Recommendation In Error family to provide details about why the creation of a recommendation has failed. The field also appears on the Operator Rounds Recommendation in Error datasheet. (TS ID: 227153)
- You can now centrally manage component types and subtypes for Lubrication Requirements. To facilitate this enhancement:
 - A new entity family, Lubrication Component, has been added to store information about lubrication components.
 - The following changes have been made to the Lubrication Requirement and Lubrication Requirement Template families:

- The field *Component* has been deprecated.
- Two new fields, Component Type and Component Sub Type, have been added.
- The Component Type and Component Sub Type fields contain lists that are populated by the values in the corresponding fields in the Lubrication Component family.
- When you select a Component Type, the Component Sub Type list is filtered to only the subtypes corresponding to the selected type.
- The specified Component Type and Component Sub Type are shown in the Lubrication Requirement Summary when a Rounds Data Collection user selects a Lubrication Requirement on a Route.

When you upgrade to V4.3.0.0.0, a new Lubrication Component record will be created for each unique value in the Component field in Lubrication Requirement and Lubrication Requirement Template records prior to upgrading, and the Component Type field will be updated with a reference to the corresponding Lubrication Component record. Therefore, prior to upgrading your database, we recommend that you review the values in the Component field in Lubrication Requirement and Lubrication Requirement Template records to consolidate any near-matches.

(TS IDs: 214377, 214068, 145676)

- You can now centrally manage method types and subtypes for Lubrication Requirements. To facilitate this enhancement:
 - A new entity family, Lubrication Method, has been added.
 - The following changes have been made to the Lubrication Requirement and Lubrication Requirement Template families:
 - Three new fields, Lubricant Type, Method Type, and Method Sub Type, have been added.
 - The Method Type and Method Sub Type fields contain lists that are populated by the values in the corresponding fields in the Lubrication Method family.
 - When you select a Lubricant Type, the list in the Lubricant field is filtered to only the lubricants corresponding to the selected type of lubricant.
 - When you select a Lubricant, the list in the Method Type field is filtered to only the method types corresponding to the selected Lubricant.
 - When you select a Method Type, the list in the Method Sub Type field is filtered to only the subtypes corresponding to the selected type.
 - The existing Method fields have been marked as Deprecated and removed from the default datasheets.

- The specified Method Type and Method Sub Type are shown in the **Lubrication Requirement Summary** when a Rounds Data Collection user selects a Lubrication Requirement on a Route.

When you upgrade to V4.3.0.0.0, a new Lubrication Method record will be created for each unique value in the Method field in Lubricant records prior to upgrading. Therefore, prior to upgrading your database, we recommend that you review the values in the Method Type field in Lubricant records to consolidate any near-matches.

(TS IDs: 214080, 214077, 214070, 145677)

- A new entity family *Lubricant Manufacturer* has been added to store information about the manufacturer of a lubricant.

When you upgrade to V4.3.0.0.0, a new Lubricant Manufacturer record will be created for each value in the Manufacturer field in Lubricant records prior to upgrading, and the value will be replaced with a reference to the corresponding Lubrication Manufacturer record. Therefore, prior to upgrading your database, we recommend that you review the values in the Manufacturer field in Lubricant records to consolidate any near-matches.

(TS ID: 213441)

- The Priority field in Lubrication Requirement and Lubrication Requirement Template records now contains a dropdown list from which you can select the appropriate priority. The list is populated by a new system code table, MI_LUBR_PRIORITY.

When you upgrade to V4.3.0.0.0, a new entry in the system code table will be added during the upgrade for each value in the Priority field in Lubrication Requirement and Lubrication Requirement Template records prior to upgrading. The value in those fields will be replaced with a reference to the corresponding system code table entry. Therefore, prior to upgrading your database, we recommend that you review the values in the Priority field to consolidate any near-matches. (TS ID: 209334)

- Compliance tracking is now enabled for Lubrication Requirements. To facilitate this enhancement, on the **RD Overview** and **RDC Overview** pages, the graph summarizing compliance has been updated to include Lubrication Requirements and renamed to *Checkpoint Schedule Compliance (excluding conditional checks)*. (TS ID: 189147)

- The compliance tracking schedule settings have been moved to the Rounds Designer section of Application Settings. (TS ID: 185936)

- In the Lubrication Requirement Template datasheet, the following fields have been removed:
 - Asset ID
 - Asset Description(TS ID: 185322)
- For Lubrication Requirement records that were created based on a Lubrication Requirement Template, if the template is updated, you can now update the corresponding Lubrication Requirement records with the changes using the *Update Existing Checkpoints* feature. (TS ID: 173791)
- The Measurement Location Data Capture report has been enhanced to display conditional Measurement Locations. When you upgrade to V4.3.0.0.0, if you have modified the queries used in this report, then you will need to copy the new baseline queries and reapply your modifications to take advantage of this enhancement. (TS ID: 125501)
- A new tab, **Lubricants**, has been added to the **Rounds Designer Overview** page. You can use this tab to view and access the Lubricant records in your database, as well as to add a new Lubricant. (TS ID: 61071)

Security Manager

Roles

- A new Security Role, *MI APM Viewer*, has been added. Members of this role can only view the records of all the workflows to which they have privileges and license to access. (TS ID: 192977)

SIS Management

- You can now print the report for an SIS Trip Report record from the page for the selected trip report. The report displays the summary of the SIS Trip Report and its associated records. (TS ID: 315563)
- You can now create a Recommendation for an Instrumented Function whose SIL Assessment is associated with a LOPA Assessment, and then promote the Recommendation to ASM. (TS ID: 301283)
- You can now derive a qualitative risk rank mapping for an Instrumented Function

in SIS Management using the values calculated in LOPA. (TS ID: 301279)

- You can now create a Layers of Protection Analysis (LOPA) in the LOPA module, and then link it with an Instrumented Function for which you want to assess the required Safety Integrity Level (SIL). To facilitate this enhancement, a new family, LOPA Assessment, has been added to store the SIL Assessment values for Instrumented Functions.

When you upgrade to V4.3.0.0.0:

- If you were previously using LOPA to assess SIL values for Instrumented Functions, LOPA Assessment records are created by copying values from the LOPA records, and then linked to the corresponding Instrumented Functions.
- The values in Independent Layer of Protection records that existed previously in your database are copied to the corresponding fields in the Hazards Analysis Safeguard records. The safeguards are then linked to the LOPA with which the Independent Layers of Protection records were associated.

(TS IDs: 253781, 249999, 249996)

- When you delete an SIL Analysis, the Protective Instrument Loops associated with the SIL Analysis are deleted only if the elements in the loop are not associated with other Protective Instrument Loops belonging to different SIL Analyses. This ensures that shared elements are not deleted, which may then result in incorrect calculations in other associated loops. (TS ID: 275155)
- A new Security Group, MI SIS Viewer, has been added. This group has View permissions for all the Entity and Relationship families used in SIS Management module. (TS ID: 190113)

Thickness Monitoring

- You can now enter a value in the Historical Sequence field in a Thickness Measurement record using the Thickness Monitoring (TM) Equipment or Thickness Monitoring (TM) Functional Location Data Loader by adding a column on the Measurements worksheet in the data loader workbook. (TS ID: 305039)
- The performance of the Thickness Monitoring (TM) Equipment Data Loader and the Thickness Monitoring (TM) Functional Location Data Loader has been improved by allowing multiple batches to load simultaneously. (TS ID: 284672)
- The Remaining Life graph on the **TM Overview** page and the Remaining Life pie chart in the **Remaining Life** section have been updated to calculate and to display

the remaining life from the current day, instead of the Measurement Last Taken Date. (TS ID: 251669)

- You can now perform a bulk analysis of TM Corrosion Analyses from the **Assets** tab of the **Thickness Monitoring Overview** page. The **Bulk Analyze** window displays information related to calculations such as progress, assets, components, analyses, and completion statuses. You can also access a log to view detailed information about the calculation process, and, for any failed analyses, a list of the required fields. (TS ID: 250633)
- The Piping Stress reference table now includes information on Construction Code *ASME B31.1* and Code Year *2014*, thus adding 17,286 records to the Piping Stress family. (TS ID: 236586)

Tools

Data Loaders

- When you test the connections on the **Data Loaders** page, the communication channels between the APM Connect server and the Integration Web Services is no longer checked. This is because the Integration Web Services are no longer used by Data Loaders, and including it in the test could lead to misleading results. (TS ID: 312248)

General Dashboards

- You can now modify your personal dashboard from your home page. (TS ID: 211278)

Queries

- Now, when you run a query in unformatted mode, the results will still display formatted date values. Date values will always be displayed in the local time for the user. (TS ID: 312282)
- When modifying an expression via the **Advanced** section of the **Expression Builder** window, in addition to modifying the expression directly, you can now modify previously made selections in the builder to update the expression. (TS ID: 96555)


R Scripts

- GE Digital APM now supports DeployR Open V8.0.0 and DeployR Enterprise V8.0.0. (TS ID: 260853)

Reports

- You can now configure multiple GE Digital APM servers to a single report server. (TS ID: 251776)

Scripts

- The field that you select in the **Field to Classify** box in the **Workbench** workspace now appears as the first column in the **Test Results** workspace. (TS ID: 270668)
- The process for training machine learning scripts for predicting non-Boolean values has been streamlined so that, now, when you reject the script's prediction (by selecting ) for a particular record, if the value in the specified **Field to Classify** matches a value in the standard list, the **Actual** column is populated with that standard list value by default. (TS ID: 267163)
- Any user who is a member of the *MI Cognitive User* Security Group can now create, configure, and test General scripts. In addition, the **Workbench**, **Test Results**, and **History** workspaces are now available when working with a General script. (TS ID: 263819)
- A new tab, **Statistics**, has been added for a Machine Learning scripts. In this section, you can view a summary of the records that have been reviewed and incrementally trained, such as the number of records that were initially predicted correctly and incorrectly. (TS ID: 262962)
- If a query contains columns configured as a hyperlinks, the **Test Results** tab now displays the hyperlink. This feature allows you to easily access associated records while testing or training a script. (TS ID: 260533)
- If the query or dataset specified for a script is modified, the related information in the **Workbench** workspace is now automatically refreshed upon navigating between tabs. For example, if you modify a query or dataset and then return to the **Workbench** workspace, you do not need to refresh the browser to see the updated information. (TS ID: 259375)
- Previously, when you navigated between the **Test Results** workspace and another

workspace or page, the results displayed in the **Test Results** workspace were always recalculated, even if no changes impacting the results were made. Usability in this area has been enhanced such that the results are now recalculated only when the query or values in the **Workbench** workspace have been changed. (TS ID: 258913)

- In the **Workbench** workspace, the value in the **Query or Dataset** box now appears as a hyperlink that you can select to open the corresponding query or dataset in a new tab. (TS ID: 258444)
- In the **Workbench** workspace, you can now specify which columns from a query or data set you want to use as inputs to a Machine Learning or Fuzzy Logic script. (TS ID: 256631)
- To clarify the purpose of these fields, the following labels have been changed in the **Workbench** workspace:
 - The **Result Column** box has been renamed to **Field to Classify**.
 - The **Reference Column** box has been renamed to **Standard List Reference Field**.

(TS ID: 256631)

- In the **Test Results** workspace of a script, each row now contains a check box that you can clear if you want to exclude certain rows from incremental training. (TS ID: 244021)
- You can now use a dataset to supply the values for testing or training a script. (TS ID: 237075)
- A new family, Classifier Training History, has been added to store the ratings specified by users when they incrementally train a machine learning script. Data from this family is used to display training statistics on the **Statistics** tab when viewing a script and on the **Cognitive Analytics Overview** page. (TS ID: 258771)

Resolved Issues - V4.3.0.0.0

The following issues existed in one or more previous releases and have been resolved in V4.3.0.0.0.

AMS Analytics

- Previously, an error occurred when you attempted to view either the **Alerts By Description** or the **Alerts By Severity** graphs. This issue has been resolved. (TS IDs: 312326, 308868)
- Previously, an error occurred when you attempted to view the **Asset Alert Trend by Description** graph for an AMS Asset. This issue has been resolved. (TS ID: 264746)
- Previously, when a user without MI AMS Suite APM Administrator permissions, but with an active AMS Analytics license, attempted to access the **AMS Asset Data Sources** page, the following error message appeared: *Error occurred while trying to get a list of AMS Connections*. This issue has been resolved. Now, the **AMS Asset Data Sources** page can be accessed as expected. (TS ID: 258541)
- Previously, when you linked an AMS Asset Alert or AMS Asset Event record to an AMS Asset record, the event or alert, respectively, did not inherit the site of the AMS Asset. In addition, when you linked an AMS Asset record to an AMS Asset Folder record, the AMS Asset record did not inherit the site of the AMS Asset Folder record. This issue has been resolved. (TS ID: 246659)
- Previously, in the **Events** section of the **AMS Analytics Overview** page, when you tried to create an AMS Asset Recommendation based on an event, an error message appeared, indicating that the recommendation creation failed. This issue has been resolved. (TS ID: 244363)

APM Now

- Previously, if the **Must Change Password** check box for a Security User was selected and the Security User attempted to log in to GE Digital APM via the **SSO Index** page, the user was unable to change the password and could not log in. This issue has been resolved. (TS ID: 287507)

Asset Criticality Analysis (ACA)

- Previously, the ACA Data Loader did not import Site IDs related to ACA analyses. This issue has been resolved. Now, if you have a site assigned to an ACA analysis, it will be imported correctly. (TS ID: 306727)
- Previously, if you configured ACA to send criticality indicators to an SAP CMMS, an error occurred when the GE Digital APM system attempted to send the information. This issue has been resolved. (TS ID: 241986, 292976)

Asset Health Manager (AHM)

- Previously, the Active and Inactive instances count in the **Policies** section of the **Health Summary** page only counted the results currently loaded in the policy instances grid. This issue has been resolved. (TS ID: 302765)
- Previously, an error and various issues occurred when you used the Activate All (💡) or Deactivate All (💡) buttons to activate or deactivate a large number of policy instances (i.e., more than 1,000). These issues have been resolved. (TS IDs: 274235, 274234)
- Previously, for health indicators based on OPC Tags, a status icon did not appear for health indicators that had limits but no readings. This issue has been resolved. (TS ID: 271106)
- Previously, in a health indicator's **Configuration** workspace, if you entered a decimal fraction without a leading zero (e.g., .25 instead of 0.25) in one of the upper or lower level fields, the GE Digital APM system incorrectly identified the value as text, and an error message appeared, indicating the value should be a number. This issue has been resolved. Now, you can enter a decimal fraction without a leading zero, and the value is recognized as a number. (TS ID: 256815)
- Previously, if you were assigned to certain baseline Security Groups, you were unable to consolidate events. This issue has been resolved. Now, the following baseline Security Groups provide the appropriate level of permissions to consolidate events for the following families:

Family	Security Group with Permissions to Consolidate Events
AMS Asset Alert	MI AMS Suite APM User
AMS Asset Event	MI AMS Suite APM User
GE Tag Event	MI GE User

Family	Security Group with Permissions to Consolidate Events
Policy Event	MI AHI Administrator MI AHI User

In addition, the MI AHI Viewer group now has *View* permissions for the Policy Event family.

(TS IDs: 268475, 248037)

- Previously, when you specified filter criteria in the **Events** section after previously closing the **Health Summary** tab, an error message appeared. This issue has been resolved. (TS ID: 253286)
- Previously, if you canceled the operation when revoking a health indicator acknowledgment, then you were no longer able to revoke the acknowledgment. This issue has been resolved. (TS ID: 253249)
- Previously, if a data source without an active Asset Health license existed on the GE Digital APM Application Server, errors occurred in the Asset Health Indicator Service. This issue has been resolved. Now, if a data source is not licensed, the service will skip the connection. (TS ID: 247403)


Asset Strategy Implementation (ASI)

- Previously, when you selected a Measurement Location Group record in the ASI Package tree, an error occurred. This issue has been resolved. To facilitate this fix:
 - The Measurement Location and Measurement Location Group families have been removed from the Has Work Management Item relationship definition.
 - The Measurement Location Group, AMS Asset, GE Tag, KPI, OPC Tag, and Thickness Monitoring Task families have been removed from the Implements Action relationship definition.

(TS ID: 305481)

- Previously, when you implemented a package, no processing indicator appeared in the implementation window to let you know that the package was in the process of being implemented. This issue has been resolved. (TS ID: 290250)
- Previously, if you created a new ASI package and saved, and then modified the fields in the package and saved the changes, a warning message incorrectly appeared, stating that the current entity was updated by another user. This issue

has been resolved. (TS ID: 275400)

- Previously, when you loaded an active strategy and then selected the ASI button () to create a package from the strategy, the busy indicator did not appear right away, as expected. This issue has been resolved. (TS ID: 264297)
- Previously, if you expanded the **State Management** dialog box, and then closed the active tab, the **State Management** dialog box remained expanded in view and incorrectly overlaid other open pages. This issue has been resolved. (TS ID: 247514)
- Previously, when values were transferred from SAP into ASM, the value in the following fields retained the culture formatting of the SAP user:
 - Cycle Modification Factor
 - Component Quantity
 - IBIP: User Field for Quantity/Currency

This issue may have resulted in incorrect values appearing in these fields in GE Digital APM. This issue has been resolved.

(TS ID: 243930)

- Previously, when you cleared the Maintenance Strategy field in a maintenance plan and then saved the changes, the following issues occurred:
 - The changes to the field did not reflect in the corresponding child WMIs.
 - The **Manage Cycles** button was incorrectly disabled.

These issues have been resolved. (TS ID: 239838)

- Previously, if you pasted a task list to a maintenance item that already had a task list, the copied record did not appear on the WMI tree (as expected, because there can only be one task list under a maintenance item), but a success message appeared for the paste action. This issue has been resolved. Now, if you copy a task list and then select a maintenance item that already has a task list, the paste button is disabled. (TS ID: 236529)
- Previously, if you created a new implementation package and attempted to navigate to a different tab in the **Package Details** pane without saving, an error message appeared. This issue has been resolved. Now, the **Action Organizer**, **SAP**, and **Tasks** tabs are disabled and you cannot navigate away from the new package tab until you have saved the record. You can, however, navigate away from the main tab at the top of the page before saving, and your data will be retained. (TS ID:



223768)

- Previously, when you modified an existing package and then attempted to navigate away from it without saving, you were not prompted to save the package and your changes were lost. This issue has been resolved. Now, if you navigate away from the package, you are prompted to save. (TS ID: 218756)
- Previously, pasting a copied WMI node into the package structure tree was potentially confusing due to the naming convention used for the pasted node. This issue has been resolved. Now, when you copy and paste a WMI node into the package structure tree, the pasted node has a unique name to easily identify it. (TS ID: 216558)
- Previously, there were scenarios in which the Copy (📄) and/or Paste (📄) buttons were incorrectly enabled or disabled on the WMI toolbar of an implementation package. This issue has been resolved. (TS ID: 216502)
- Previously, if you created an implementation package, and then attempted to save the package without entering a value in the ID field, you were logged out of the application. This issue has been resolved. You must now enter a value in the ID field before you can save the package. (TS ID: 206640)
- Previously, if you created an implementation package from a strategy, and then packaged an action by building an operation, the action's Long Description field did not match the operation's Long Text field as expected. This issue has been resolved. (TS ID: 205814)
- Previously, if you deleted a strategy from the **ASI Overview** page, the package count on the **ASI Overview** page did not update automatically to account for the deletion, and you had to refresh the page for the count to be updated. This issue has been resolved. (TS ID: 196793)
- Previously, when you imported multiple assets at the same time that had different primary packages, the packages were not updated correctly. This issue has been resolved. (TS ID: 160426)
- When importing data from SAP into ASM, you can now search by both equipment and functional location, instead of just one or the other. (TS ID: 62476)


Asset Strategy Management (ASM)

- Previously, when you applied updates to an action that was already linked to a Calibration Task, Task ID field of the Calibration Task datasheet was updated based on the value in the Action Name field. This issue has been resolved. (TS ID: 304056)
- Previously, selections made in some of the grids in the Apply Template Builder were not retained. This issue has been resolved. Now, there is no option to apply a partial template; you can only apply entire templates. If you want to apply part of a template, you can do so using one of the following methods:
 - Save a copy of a template, remove the parts of it that you do not want to apply, and then apply the template copy to the strategy.
 - Apply the entire template and then remove the parts of it that you do not want in the strategy.

(TS ID: 290238)

- You can now navigate away from an asset strategy, system strategy, unit strategy, or asset strategy template tab without saving any changes, and the data will be retained. If you attempt to close any of those tabs without saving, the **Unsaved Changes** confirmation dialog will appear, prompting you to save. (TS ID: 278872)
- Previously, for a risk that was based on an ASO simulation, the Risk Rank field was disabled so that you could not provide a value. This issue has been resolved. (TS ID: 278401)
- The Criticality, Duty, and Service fields now appear on the Asset Strategy Template datasheet. (TS ID: 278397)
- Previously, if you changed a value on the Protection Level Slider bar on a risk or action, and made no other change, you could not save the change because the Save button () was disabled. This issue has been resolved. (TS ID: 277976)
- Previously, you were incorrectly allowed to add a new strategy without an asset to a system strategy in ASO. This issue has been resolved. Now, you can only import existing strategies that have assets. (TS ID: 277932)
- Previously, on iOS devices, when the **Resource Finder** window appeared after selecting the Import icon () in the **Resources** section, the **Import** and **Cancel** buttons were not visible and you could not close the window. This issue has been resolved. (TS ID: 271505)
- Previously, when the value in the Risk Rank field was less than 0.01, no data was

displayed on the **Risk Profile** chart in the **Strategy Overview** section and the **Risk Summary** chart in the **Risk Analysis** workspace. This issue has been resolved. (TS ID: 269036)

- Previously, in the **Risk Analysis** workspace for a unit or system strategy with no assessed financial risk, an unmitigated risk icon () appeared on the **Financial Risk** chart with a value of 0. This issue has been resolved. Now, if no risk has been assessed then no icon will appear on the chart. (TS ID: 262874)
- Previously, if you created a new strategy and then moved to another tab without saving the strategy, the focus on the tabs on the left pane shifted. This issue has been resolved. (TS ID: 258157)
- Previously, if you expanded the **State Management** dialog box, and then closed the active tab, the **State Management** dialog box remained expanded in view and incorrectly overlaid other open pages. This issue has been resolved. (TS ID: 247514)
- Previously, on a Risk or Action datasheet the options to print, turn on the help text, and access reference documents did not appear as expected. This issue has been resolved. (TS ID: 239603)
- Previously, when a strategy template had a custom required field, the template could not be applied as a master template. This issue has been resolved. (TS ID: 238467)
- Previously, when you attempted to apply a master template to a strategy, incorrect options appeared for actions and risks that you could apply. This issue has been resolved. Now, when you apply a template as a master, all the actions and risks are applied to the strategy. (TS ID: 237708)
- Previously, you could incorrectly implement an action with an item that was already implementing another action. This issue has been resolved. Now, only records that are not already implementing an action can be selected when you search for HI sources. (TS ID: 218394)
- Previously, if you deleted a strategy from the **ASM Overview** page, the strategy count by state on the **ASM Overview** page did not update to account for the deletion, and you had to refresh the page for the count to be updated. This issue has been resolved. (TS ID: 196793)

Asset Strategy Optimization (ASO)

- Previously, you could add and delete risks in *Active* state and assign new or existing action to mitigate the active risks. This issue has been resolved. Now, you cannot add, delete, or mitigate risks in *Active* state. (TS ID: 244226)
- Previously, in the **Grid View** for an ASO analysis, if you selected the Edit button (✎) in a row, and then selected the Cancel button (✕), an error occurred. This issue has been resolved. (TS ID: 243047)

Calibration Management

- Previously, when you set a set a due date range in the **Due Date Range** filter in the **Calibration Queue** section and moved to a new page, and then returned to the **Calibration Queue** section, the due date range was reset to the default value. This issue has been resolved. (TS ID: 315930)
- Previously, if you tried to link multiple assets, including linked and unlinked assets, to a calibration profile, you had to refresh the page in order to see an updated list of which assets had already been linked. This issue has been resolved. Now, a validation message appears to indicate the assets that have been linked. (TS ID: 311593)
- Previously, when you performed calibration using a Functional Test Calibration Template that did not contain Calibration Template Detail records, the Calibration Strategy field in the Calibration Event datasheet was not populated and the Calibration Result records were not created. This issue has been resolved. Now, when you save a Functional Test Calibration Template without creating the Calibration Template Details records, an error message appears, asking you to enter detail records. The Calibration Strategy field on the Functional Test Calibration Template datasheet is populated based on the number of Calibration Template Detail records that you create. (TS ID: 263852)
- Previously, in a Standard Gas Component record, when you modified the values in the Requested and the Analytical Result fields, and then saved the record, an error appeared, stating that the Standard Analytical Result is not within the tolerance range. Instead of the modified value, the value that existed in the Requested field before modification was considered for calculation of tolerance range. This issue has been resolved. (TS ID: 251137)
- Previously, in the **Calibration** tab of a calibration event, the calibration results were not displayed in the correct sequence. This issue has been resolved. (TS ID: 251137)

248138)

- Previously, when you selected the **Calibration Events** or **Calibration Profiles** tab for the first time, an error message appeared. This issue has been resolved. (TS ID: 247746)
- Previously, when you printed an analog report, the printed copy showed duplicate details of the report data. This issue has been resolved. (TS ID: 244965)
- Previously, when you did not have license or family privileges to Calibration Management, you were redirected to the **Access Denied** page without an error message. Now, in this scenario an error message appears with the details of the error. (TS ID: 244583)
- Previously, when you switched from the **Calibration Management Overview** page to the **Manage Calibration Tasks** page, the **Enter Parameter Values** window appeared. This issue has been resolved. (TS ID: 243980)
- Previously, when you performed a search of the created calibration templates, the search results did not display all the calibration templates that were created. This issue has been resolved. (TS ID: 243402)
- Previously, when you switched tabs within the **Calibration Management Overview** page, an error message appeared. This issue has been resolved. (TS ID: 243388)
- Previously, a warning message did not appear when a calibration record was closed before saving. This issue has been resolved. (TS ID: 242531)
- Previously, in the **Calibration** section of a Calibration Event, you could add or delete the Calibration Result records. This issue is resolved. (TS ID: 241897)
- Previously, when you deleted a calibration template, an error message appeared if the calibration template referenced an associated calibration. This issue has been resolved. (TS ID: 230393)
- Previously, in the calibration templates, the column heading and the values were not aligned properly. This issue has been resolved. (TS ID: 203107)
- Previously, in the Calibration Data Loader, an incorrect error message appeared in

the log when you did not provide values in some of the required fields. This issue has been resolved. (TS ID: 185008)

Cognitive Analytics

- Previously, when an executed cognition timed out, the value in the Status field in the **History** workspace remained as *Running*, and you could not see the actual status. This issue has been resolved. (TS ID: 244614)
- Previously, when you navigated between the properties windows of Logic nodes in the design canvas of a cognition, at times, an error message appeared stating that there was an error loading the page. This issue has been resolved. (TS ID: 243686)

Configuration Manager

- Previously, if you used a non-English culture setting, the culture-appropriate date and time formatting was not applied to every applicable field throughout GE Digital APM. This issue has been resolved. (TS ID: 310837)

Datasheets

- Previously, if you added a hyperlink field to a datasheet (e.g., the Equipment datasheet) and populated it with a hyperlink, and then searched for that type of record, HTML markup appeared in your search results. This issue has been resolved. (TS ID: 307380)
- Previously, if the **Active Status** check boxes was cleared for a family, the family still appeared as an option in the **Look In** and **Linked to** boxes when you performed a search, although records in those families would not appear in search results. This issue has been resolved. Now, if the **Active Status** check box is cleared, the family is completely excluded when performing a search. (TS ID: 297410)
- Previously, if a datasheet contained a dropdown list box that contained an unrestricted number of values, when you entered text in the box, the values displayed in the dropdown list box would not be filtered accordingly. This issue has been resolved. Now, as you enter the text in the dropdown list box, the values will be filtered and displayed in the box accordingly. (TS ID: 280276)
- Previously, if the field caption for a column on a datasheet or offline form was too long to be displayed in the column, the text wrapped to a second line. This issue

has been resolved. Now, if the word is too long to be displayed in the column, the field caption will be truncated and appended with an ellipsis. (TS ID: 271317)

- Previously, if the datasheet contained only one datasheet section, you could delete the section but the fields in that section did not get deleted. This issue has been resolved. Now, if the datasheet contains only one section, you cannot delete that section. (TS ID: 264322)
- Previously, on any datasheet, when you turned on the help text, the help text for large text box fields, such as the Required Date field, were not displayed correctly. This issue has been resolved. (TS ID: 251109)
- Previously, on any datasheet, if a site designated in the **Site** control had a long name, the State Configuration section on the top navigation bar was not displayed correctly. This issue has been resolved. (TS ID: 249672)

Foundation

Asset Groups

- Previously, when you added an asset to an asset group, only the child assets were added and not the parent asset. This issue has been resolved. Now, when you select a parent asset, a button appears that you can select to add child assets to an asset group. (TS ID: 317117)

Bulk Data Form

- Previously, records with an invalid date value were saved with a blank value in the date field. This issue has been resolved. Now, if an invalid date is used, the record is not saved, and an error message appears. You can either select a valid value from the calendar to correct the value, or delete the invalid value and replace it with a valid one. (TS ID: 320631)

Record Manager

- Previously, when you opened an MI Security User record in Record Explorer, an error occurred. This issue has been resolved. (TS ID: 313127)
- 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: 297465)

- Previously, for date fields in datasheet, the date and time displayed in the calendar feature did not reflect the time zone of the specified user. This issue has been resolved. (TS ID: 262328)

Reference Documents

- Previously, when you created a new Reference Document record and uploaded a file to it, an error message appeared. This issue has been resolved. (TS ID: 272014)
- Previously, when you tried to download a reference document via the GE Digital APM mobile application on a mobile device, the document did not download. This issue has been resolved. (TS ID: 257895)

Result Grid

- Previously, in the Result Grid of a query, for a user whose culture setting was a non-English setting, if a numeric filter value was entered with decimal comma (e.g., 123,45), the result did not appear. This issue has been resolved. (TS ID: 255307)
- Previously, on a Result Grid, when you entered a specific value to query (using the search feature), the cursor positioned itself back to the left of the typed characters. This issue has been resolved. (TS ID: 210065)

Risk Matrix

- Previously, in a Risk Matrix with a protection level slider, when a risk was closed and then reopened, the protection level would reset to 1. This issue has been resolved. Now, the protection level retains its value. (TS ID: 283887)

GE Analytics

- Previously, the DAQ ID field in the GE Tag Event family was a numeric field, which may have caused errors while transferring data from your GE system to your GE Digital APM system. This issue has been resolved. To facilitate this fix, the

numeric DAQ ID field has been deprecated, and a new DAQ ID field with a character data type has been added. When you upgrade, values from the old field are populated in the new field automatically. (TS ID: 288991)

- Previously, when you linked a GE Tag Event record to a GE Tag record, the GE Tag Event record did not inherit the site of the GE Tag record. This issue has been resolved. (TS ID: 246659)

GE Digital APM Mobile Application

- Previously, when you opened or returned to the GE Digital APM mobile application while in offline mode, an error message appeared. This issue has been resolved. (TS ID: 281204)

Generation Availability Analysis (GAA)

- Previously, in Generation Availability Analysis, if you did not use a specific identifier for the asset group name, you could create duplicate groups in the Asset Hierarchy. This issue has been resolved. (TS ID: 284492)
- Previously, in GAA Unit Capacity records, when you changed the Gross Maximum Capacity or the Net Maximum Capacity of an existing Unit to a value lower than the Gross Dependable Capacity or the Net Dependable Capacity, respectively, you were able to save the record. This issue has been resolved. Now, when you save the record, an error message appears, indicating that the dependable capacity cannot be greater than the maximum capacity, and the record is not saved. (TS ID: 249542)
- Previously, in the **Unit Summary** workspace, in the **Generation Metrics** section, the performance data for a GAA Unit during a selected period, did not appear in the chronological order of the reporting month and year. This issue has been resolved. (TS ID: 247935)
- Previously, if you modified the Start Date, End Date, or the Event Type for a Primary Event after creating an associated Contributing Event, the Start Date, End Date, or the Event Type for the Contributing Event was not updated. This issue has been resolved. (TS ID: 240761)
- Previously, when you created a Primary Event, if you entered a value of more than 30 characters in the Verbal Description field, an error message appeared. This issue has been resolved. Now, you can enter a maximum of 255 characters in the

Verbal Description field. (TS ID: 239643)

Hazards Analysis

- Previously, in Hazards Analysis, you could not create a mitigated risk assessment for recommendations that did not have an associated mitigated risk. As a result, when you promoted such recommendations, the mitigated risk did not appear in the promoted strategy. This issue has been resolved. (TS ID: 301503)
- Previously, in the **Team Members** section of a Hazards Analysis, when you added a team member, two team members were added to the team although you selected only one team member. This issue has been resolved. (TS ID: 262037)
- Previously, when you closed a HAZOP or What-If analysis without saving the record, a warning message did not appear. This issue has been resolved. Now, a warning message appears, indicating that you have unsaved changes. (TS ID: 247728)
- Previously, when you switched from the **Linked Assets** section of a System/Node to another tab or page, and then returned to the **Linked Assets** section, the Add button (+) and the Delete button (🗑️) that previously appeared in the section, did not appear. This issue has been resolved. (TS ID: 245357)
- Previously, if you did not have license for the module or security permission for a family, you were redirected to the **Access Denied** page without an error message. This issue has been resolved. Now, an error message appears. (TS ID: 244583)
- Previously, when you accessed the **Recommendations** pane by selecting the Safe-guard instead of the Consequence in a Hazards Analysis, the Add button (+) was enabled and you could create a recommendation. This issue has been resolved. Now, the Add button (+) appears only when you access the **Recommendations** pane by selecting a Consequence. (TS ID: 244206)
- Previously, in a HAZOP analysis, when you created a new recommendation, promoted it to ASM, and then selected the link for the promoted strategy in the **Recommendations** pane, an error occurred. This issue has been resolved. (TS ID: 243236)
- Previously, when you created a recommendation and saved the data, in the **Alert** tab, two loading indicators appeared. This issue has been resolved. (TS ID: 241867)

- Previously, when you promoted recommendations in a Hazards Analysis that was in the *Active* state, the recommendations did not get promoted to ASM. This issue had been resolved. (TS ID: 237132)
- Previously, using the Hazards Analysis data loader, when you imported HAZOP Analysis data in which the System/Nodes and the assets did not contain the *HAZOP ID*, the data was imported successfully. This issue has been resolved. Now, the data is not imported and an error is recorded in the error log for the data import job. (TS ID: 195257)
- Previously, when using the Hazards Analysis data loader, when you imported HAZOP Analysis data that contained the mitigated risk assessments but did not contain the unmitigated risk assessments, data was imported successfully. This issue has been resolved. Now, the data is not imported and an error is recorded in the error log for the data import job. (TS ID: 193516)
- Previously, in the Oracle databases, in the **Analysis Summary** graph for a Hazard Analysis, the nodes did not appear in the order in which they were created. This issue has been resolved. (TS ID: 156753)

Inspection Management

- Previously, when you created a Checklist Inspection, if you set the value in the Completion Date field to a date in the future, the value in the Commencement Date field was populated with the same date as Completion Date. This issue has been resolved. (TS ID: 308336)
- Previously, when creating a new Inspection Task, if you cleared the Recurring box on the Inspection Task datasheet, the value in the Next Date field was shifted forward by one day. This issue has been resolved. (TS ID: 288613)
- Previously, on the **Manage Task** page, if you cleared the Recurring check box, the value in the Next Date field was populated incorrectly. This issue has been resolved. (TS ID: 272020)
- Previously, on some Inspection Management datasheets, if you scrolled down the page, the Save button (📄) was not always visible. This issue has been resolved. Now the Save button (📄) remains stationary on all Inspection Management datasheets. (TS ID: 254635)
- Previously, when you accessed a localized version of the Inspection Management

module, the following occurred:

- On the **IM Admin** page, in the Manage Human Resources section, the column values were not properly translated.
- Text on error messages was not properly translated.


These issues have been resolved.

(TS IDs: 252879, 254109)

- Previously, the entries in the error log for the Inspection Management Data Loader e were not localized. This issue has been resolved. (TS ID: 180047)
- Previously, when you searched for an existing Inspection, the **Inspection Management Overview** page did not open, and you were directed to an invalid URL. This issue has been resolved. (TS ID: 176122)
- Previously, on the **IM Admin Preferences** page, Time-Based Inspection (TBI) Settings could not be updated by members of the MI Inspection Security Group with the Inspection Administrator Human Resource Role. This issue has been resolved. Now, members of the MI Inspection Security Group have the following privileges when updating TBI Settings:
 - Create
 - Save
 - Delete
 - Edit

(TS ID: 163886)

Life Cycle Cost Analysis (LCC)

- Previously, if you were an LCC User without permissions to delete LCC Analyses, but did have permissions to delete analysis components, then the Delete icons () were not active for analyses and all of their components. This issue has been resolved. (TS ID: 285607)
- Previously, if you selected the **Repeat Annually** check box, but specified a total Operating Profile lasting longer than a year, then the profile would repeat the length of time entered, rather than repeating yearly. This issue has been resolved. You can no longer add a profile lasting longer than 1 year when the **Repeat Annually** check box is selected. (TS ID: 284397)
- Previously, the MI Strategy Role contained the wrong LCC Security Group and did

not allow the MI Strategy Role Security Group to create, modify, or delete LCC Analyses. This issue has been resolved. (TS ID: 245169)

- Previously, fields in the LCC Analysis and LCC Scenario families did not have a character length limit and allowed values longer than 255 characters for numeric and non-numeric entries. This issue has been resolved. (TS ID: 243789)
- Previously, you could not view the name of the primary or secondary element if you were not assigned to the site of the asset associated with the primary or secondary element. This issue has been resolved. (TS ID: 241876)

Operations Manager

Schedule Logs

- Previously, if a scheduled job failed and the error message contained more than 255 characters, then the scheduled job remained in the **In Progress** section and did not move to the **Failed** section. This issue has been resolved. (TS ID: 297267)
- Previously, when you modified the value in the **Occurrences** box on the **Edit Schedule** window, the modified value did not appear in the summary of the schedule. This issue has been resolved. Now, when you modify the value in the **Occurrences** box, the updated value appears in the summary of the schedule. (TS ID: 280117)


Policies

Family Policies

- Previously, when viewing policy execution history, if you selected the **Actions** or **Errors** check box, an error occurred if no policy executions matched the selected criteria. This issue has been resolved. (TS ID: 296123)


Family Policies and Policy Designer

- Previously, if you created a policy with a Text node containing the standalone characters “{” or “}” that were not intended to be part of a placeholder value, then the characters were not parsed correctly and an error occurred. This issue has been resolved in most scenarios.



 **Note:** Refer to KBA #[5444](#) for more information

(TS ID: 308194)

- Previously, when a Boolean value was selected in a Comparison node, the value *NaN* was displayed on the node in the model canvas instead of *yes* or *no*, as expected. This issue has been resolved.

 **Note:** This issue was display-only and the calculations still functioned as expected.

(TS ID: 296201)

- Previously, an error and various issues occurred when you used the Activate All () or Deactivate All () buttons to activate or deactivate a large number of policy instances (i.e., more than 1,000). These issues have been resolved. (TS IDs: 274235, 274234)
- Previously, for policies containing R Script nodes, when you validated a policy instance, validation ran successfully, but collection inputs to an R Script node were not displayed in the **Validation** pane. In addition, you could not copy the collection input values to use in Ad Hoc validation. These issues have been resolved. (TS ID: 271491)
- Previously, users assigned to a custom role were not able to access the policies in Policy Designer. This issue has been resolved. Now, the users assigned to any role that includes privileges for MI Policy Designer group will be able to access the policies in Policy Designer. (TS ID: 235992)
- Previously, if an invalid data source existed on the GE Digital APM Application Server, the Policy Trigger Service and Policy Execution Service shut down and could not be restarted. This issue has been resolved. (TS ID: 197508)

Production Loss Analysis (PLA)

- Previously, when you uploaded a manual Production Plan using the Production Loss Analysis Data Loader, the quantity appeared as 0 instead of the sum of planned values. This issue has been resolved. (TS ID: 322213)
- Previously, when a short range Production Plan with no weekend planned production contained Production Data with a null actual value, the plan appeared as *incomplete*. This issue has been resolved. (TS ID: 314711)

- Previously, when you modified the Asset Hierarchy context via the filter on the **PLA Overview** page, the graphs on the page were not updated. This issue has been resolved. (TS ID: 313582)
- Previously, when you logged in as a user who was not a Super User, the Add button (+) was disabled in the **Production Analyses** section and you could not create Production Analyses from Production Loss Analyses. This issue has been resolved. (TS ID: 311461)
- Previously, when you created a Production Plan and entered special characters in the Product Description field in the Production Profile, an error occurred. This issue has been resolved. (TS ID: 310568)
- Previously, when you loaded more than 1000 Production Events using the Production Loss Analysis Data Loader, the load failed. This issue has been resolved. (TS IDs: 305023, 302179)
- Previously, when you viewed, on a device with a 1280x800 screen, in the **Plan Details** workspace for a Production Plan with more than two products, the products overlapped one another. This issue has been resolved. (TS ID: 303935)
- Previously, when creating a Production Plan using the Production Plan Builder, if you used the **Previous** button to return to the **Select Production Unit** screen to add another product, the product you tried to add did not appear in the plan. This issue has been resolved. (TS ID: 296018)
- Previously, when you accessed the PLA Application Settings in a localized version of GE Digital APM, the following issues occurred:
 - In the **Event Codes** section, the Production Event Code tree header was not localized.
 - In the **Production Profile** section, the grid on the Margins datasheet was not localized.
 - In the **Definition** subsection of the **Production Profile** section, the Production Profile datasheet fields were not localized.
 - In the **Definition** section of the **Units** workspace, the Definition datasheet fields were not localized.

These issues have been resolved. (TS IDs: 293026, 292697, 292694, 292691)

- Previously, when you built a time-based sequential Production Plan with two

products, and then went back to the **Select Production Unit** screen and added another product, the new product did not appear on the **Time-based Plan** screen. This issue has been resolved. (TS ID: 288262)

- Previously, in the **Margins** subsection of the **Production Profile** section, you could save two margins as default. This issue has been resolved. (TS ID: 272303)
- Previously, when creating a Production Plan using the Production Plan Builder, if you navigated back to the **Select Production Unit** screen and modified your product selections, then new selections were not saved. This issue has been resolved. (TS ID: 269910)
- 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 did not appear on the **RCA Overview** page. This issue has been resolved. (TS ID: 264201)
- Previously, when you created a Root Cause Analysis from a Production Plan that was imported using the Production Loss Analysis Data Loader, an error occurred. When you linked a period loss to one or more Production Events, the Event appeared more than once in the **Production Events** workspace. These issues have been resolved. (TS ID: 244861)
- Previously, XI Readings in Production Data were not updated immediately. This issue has been resolved. (TS ID: 242077)
- Previously, when you created a time-based Production Plan using Production Profiles with similar names and data, only Production Data for one of the Production Profiles appeared in the **Production Data** workspace. This issue has been resolved. (TS ID: 178828)

Recommendation Management

- Previously, when you used Recommendation alerts in Hazards Analysis and SIS Management, email alerts were not generated automatically. This issue has been resolved. Now, if you have established Recommendation alerts in either Hazards Analysis or SIS, emails will be generated and sent as expected. (TS ID: 323541)
- Previously, when you searched the **Assigned To** field for a user in a recommendation that had the same first name and last name as another user, duplicate results appeared with no clear way to identify each individual user. This issue has been resolved. Now, only one listing per user appears, even if they have the same

first name and last name. (TS ID: 321587)

- Previously, Recommendation Asset and Functional Location IDs were not populated automatically in a new recommendation without refreshing. This issue has been resolved. (TS ID: 243732)
- Previously, on iOS devices, you could not consolidate a Recommendation unless the **Recommendations** pane was fully expanded. This issue has been resolved. The **Recommendation** pane now expands into full screen by default. (TS ID: 152927)

Reliability Analytics

- 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 default filter settings have been modified to include analyses with no asset. (TS ID: 307052)
- Previously, in System Reliability, when you attempted to run a simulation, no progress was made and the simulation eventually failed. This issue has been resolved. The simulation is now completed without errors. (TS ID: 301723)
- Previously, in Probability Distribution and Reliability Distribution, the y-coordinate value in the data table was incorrect. This issue has been resolved. (TS IDs: 306259, 299864)
- Previously, on iPad mini devices, when you defined a TTF or TTR Distribution in System Reliability, the **Properties** section contained overlapping text. This issue has been resolved. (TS ID: 294293)
- Previously, on iOS devices, when you accessed the **Production Analysis Data Editor** window, **Reliability Distribution Data Editor** window, or **Reliability Growth Data Editor** window, you could not modify data or use the scroll bars. These issues have been resolved. (TS IDs: 294129, 294121, 294110)
- Previously, when you accessed a Comparison Plot for multiple Reliability Growth Analyses, the data points were incorrectly displayed with the values of the parent analyses and were labeled with the time unit of *Days* instead of the appropriate time unit. These issues have been resolved. (TS ID: 290569)


- Previously, when you modified the date in the **Analysis Period** window of Reliability Growth, an error occurred, stating that the date was invalid if a date format other than the US date format was used. This issue has been resolved. (TS ID: 278827)
- Previously, when you generated a Reliability Growth Analysis Report, the <Measurement> Rate Trend Plot did not appear in the **Plots** section. This issue has been resolved. (TS ID: 278562)
- Previously, when you added an Application to a Spare, the default site in the **Populations** section was the user's default site instead of the site of the analysis. This issue has been resolved. (TS ID: 271697)
- Previously, if a user whose culture setting was Chinese accessed Reliability Growth, the values in the left pane and the graph titles in the **Analysis Summary** workspace were not translated properly. This issue has been resolved. (TS ID: 267228)
- Previously, in Automation Rules, the list of analyses in the **Automation Rules** section showed analyses that were created with data from all assets and events even though specific site(s) were selected. This issue has been resolved. (TS IDs: 258501, 258817)
- Previously, in the **Applications** section of Spares Analysis, the **Age Time Unit** list was not localized. This issue has been resolved. (TS ID: 252264)
- Previously, after selecting the **Production Analysis** tab, the Production Analysis list would produce a GET error and the list would not load. This issue has been resolved. (TS ID: 246883)
- Previously, on the **RA Overview** page, the lists in each section displayed a maximum of six rows. This issue has been resolved. (TS ID: 246695)
- Previously, when viewing the risks associated with a selected Action, under the **Scenario Actions** tab, the list of mitigated risks could overlap the **Properties** subsection if there were a large number of mitigated risks. This issue has been resolved. (TS ID: 243997)
- Previously, in Reliability Growth, the down time overlap calculation used the time unit of *days* for down time regardless of what was selected in the analysis. This

issue has been resolved. (TS ID: 224271)

- Previously, in Production Analysis, you could modify a view-only site after opening it a second time. This issue has been resolved. (TS ID: 224173)
- Previously, when using Production Analysis on an Android device, the browser reloaded when you renamed the production analysis, and an error occurred when data from the Analysis Data Tools was reloaded. This issue has been resolved. (TS ID: 175552)

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

- Previously, in FMEA, when you created a recommendation by applying an existing template, the Recommendation Type field was blank. This issue has been resolved. (TS ID: 317962)
- Previously, access to RCM and FMEA was based on one of the *baseline* Security Groups assigned to the user. Any user who was a member of a *custom* Security Group or Role was not able to access the RCM and FMEA modules even when they were assigned the required permissions. This issue has been resolved. Now, access is based on the security privileges assigned to families. (TS ID: 298325)
- Previously, when you accessed an RCM analysis, and then drilled down to the associated failure mode, failure effect, and recommendation records, the datasheets were incorrectly classified as FMEA datasheets. This issue has been resolved. Now, each of these records has one datasheet that is used for both RCM and FMEA. (TS ID: 271205)
- Previously, if you accessed an RCM or FMEA analysis template, selected the Team Members, Linked Assets, or Reference Documents tab, and then selected the Add button () to add an asset or function, an error message appeared. This issue has been resolved. (TS ID: 258251)
- Previously, when you accessed a failure effect record and expanded the recommendation pane, sometimes the Add button () would not appear as expected. This issue has been resolved. (TS ID: 256785)
- Previously, if you added a recommendation to a failure effect in RCM or FMEA, you needed to refresh the page to enable the Copy button (). This issue has been

resolved. Now, the Copy button () is enabled immediately when you add a recommendation. (TS ID: 252873)

- Previously, when you upgraded, duplicate asset groups were created from records in the RCM FMEA Asset family. This issue has been resolved. Now, you cannot create asset groups using RCM FMEA Asset family. (TS ID: 252029)
- Previously, if you expanded the **State Management** dialog box, and then closed the active tab, the **State Management** dialog box remained expanded in view and incorrectly overlapped other open pages. This issue has been resolved. (TS ID: 247514)
- Previously, Decision Logic families in RCM and FMEA were incorrectly site filtered. This issue has been resolved. Now, records in the Decision Logic families are not site filtered (i.e., they are available to all sites). (TS ID: 246397)
- Previously, if you navigated back and forth between screens in the RCM template builder, an error message appeared. This issue has been resolved. (TS ID: 237407)
- Previously, in RCM, if you promoted, consolidated, or superseded a recommendation that was added by applying a template using the **Add To Analysis** option, an error message appeared. This issue has been resolved, as the **Add To Analysis** option has been deprecated in V4.3.0.0.0. (TS ID: 228771)
- Previously, when you created an RCM analysis and then applied a functional failure or a failure mode template, although the template was applied successfully, the template's parent node no longer appeared in the analysis tree structure in the left pane. This issue has been resolved. (TS ID: 228220)
- Previously, if the Template Description field for RCM or FMEA templates had no value, the tab for the template page contained no label. This issue has been resolved. The tab now displays the template ID, which is a required field. (TS ID: 221030)
- Previously, when you accessed the RCM or FMEA Recommendations reports through the **Reports** tab, the reports returned duplicate recommendations. This issue has been resolved. (TS ID: 216821)
- Previously, when you created an RCM analysis from a template, the assets mapped to failure modes in the template builder were not placeholder assets


selected in a previous step of the template builder as expected. This issue has been resolved. (TS ID: 215037)

- Previously, in RCM, when creating a new failure mode, if you entered a value in any other field before entering a value in the Related Asset ID field, the Related Asset ID field became disabled. This issue has been resolved. (TS ID: 206690)

Risk Based Inspection (RBI)

- Previously, if the Material Type field in a PV Stress record contained a value, then the value in the Allowable Stress field in the following records was not populated.
 - RBI Criticality Analysis
 - RBI Pipeline Analysis
 - RBI 581 Risk Analysis

This issue has been resolved. (TS ID: 294107)

- Previously, if you decreased the size of the browser window, or zoomed out, the More Options button () on some pages in RBI did not appear. This issue has been resolved. (TS ID: 288933)

- Previously, the following issues existed in the documentation for Risk Based Inspection and RBI 581:
 - In the first time deployment instructions, the step to import data mapping and strategy mapping records was missing.
 - In the upgrade instructions, it was specified that importing the RBI Strategy Mapping Configuration and RBI Strategy Mapping Details records was not a required step.

These issues have been resolved. (TS IDs: 261305, 257898)

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: 321456)
- Previously, in a Criticality Ext. Corr. Deg. Mech. Eval. record, the value in the Corrosion Factor field was calculated incorrectly if the field values in the record satisfied one of the following conditions:

Number of Inspections	Inspection Confidence	Fractional Wall Loss	Issue
2	High	Higher than 0.4 and less than or equal to 0.45	In this case, the Corrosion Factor was 1160 instead of 160.
4	High	Higher than 0.2 and less than or equal to 0.25	In this case, the Corrosion Factor was 20 instead of 2.

Due to this, the value in the Probability Category field was calculated incorrectly. This issue has been resolved.

(TS ID: 321630)

- Previously, when you calculated an RBI PRD Analysis, the value in the Recommended Inspection Interval field was calculated incorrectly and exceeded the maximum intervals defined for each Risk Category. This issue has been resolved. (TS ID: 297079)
- Previously, when you created an RBI analysis with a toxic consequence calculation for some toxic gases, and then reduced the inventory, if the resulting calculated Evaporation Rate was between 0 and 1, the consequence category was not calculated correctly. This issue has been resolved. (TS ID: 294108)
- Previously, if the Selected Corrosion Rate field in the Criticality Int. Corr. Deg. Mech. Eval. family was included in a query, and if you ran the query in a formatted mode, an error occurred. This issue has been resolved. (TS ID: 289821)
- Previously, if you assigned an inspection that satisfied the following conditions to a Criticality Over Pressure Deg. Mech. Eval. record, then the value in the Probability of Failure on Demand field *increased* instead of *decreasing* or *remaining the same*:
 - The inspection was performed within one year of the previous inspection.
 - The value in the Over Pressure Test Results field was *Pass* and the value in the Weibull Updated Characteristic Life field decreased.

-or-

The value in the Over Pressure Test Results field was *Fail* and the value in the Weibull Updated Characteristic Life field increased.

Similarly, if you assigned an inspection that satisfied the following conditions to a Criticality Leak Deg. Mech. Eval. record, then the value in the Probability of Leak field *increased* instead of *decreasing* or *remaining the same*:

- The inspection was performed within one year of the previous inspection.
- The value in the Leak Test Results field was *No Leak* and the value in the Weibull Updated Characteristic Life field decreased.

-or-

The value in the Leak Test Results field was *Leak* and the value in the Weibull Updated Characteristic Life field increased.

These issues have been resolved. If the inspection satisfies the aforementioned conditions, then the *previous* inspection date is used to calculate the value in the Weibull Updated Characteristic Life field. (TS IDs: 282032)

- Previously, if you selected an RBI Component from a Corrosion Loop whose Source of Calculated Corrosion Rate field was set to *Component*, and then selected the Manage TML Groups button (إتسبأ), an error occurred. This issue has been resolved. (TS ID: 268188)
- Previously, on a Criticality RBI Pipeline Segment datasheet, in the Toxic Fluid field, if you selected a fluid that was valid for RBI 581, then an error message appeared stating that the fluid was not valid. This issue has been resolved. (TS ID: 266963)
- Previously, on a Criticality Calculator RBI Component datasheet, the **Toxic Fluid Valid for 581 Analysis** check box was not cleared even if:
 - You cleared the **Toxic Mixture** check box.
 - You selected a fluid valid for an RBI 581 Risk Analysis in the Toxic Fluid field and then cleared it, or selected a fluid that was not valid.

Similarly, the **Fluid Valid for 581 Analysis** check box was not cleared even if you selected a process fluid valid for an RBI 581 Risk Analysis in the Process Fluid field and then cleared it, or selected a fluid that was not valid. These issues have been resolved.

(TS ID: 266963)

- Previously, after assessing the mitigated risk, if you promoted the asset to Asset Strategy Management, in the **Risks and Actions** workspace, in the **Risks** section, the Strategy Mitigated Financial Risk value did not appear. This issue has been resolved. (TS ID: 264215)
- Previously, if you calculated an analysis that contained a duplicate Risk Analysis Mapping record, the calculation completed successfully, although risk mapping to

the Risk Matrix did not occur. This issue has been resolved. Now, if you try to calculate an analysis that contains a duplicate Risk Analysis Mapping record, the calculation fails, and a message appears in the log. (TS ID: 261163)

- Previously, the value in the UOM field for the Environmental Cost field in an RBI Consequence Evaluation and PRD Consequence Evaluation was *Dollars Per Day* instead of *United States Dollar*. This issue has been resolved. (TS ID: 258494)
- Previously, while assessing the mitigated risk for a DM, on the **Risk Matrix** window, if you selected **Done** multiple times, then multiple Risk Assessment records were created and linked to the DM. This issue occurred with DMs linked to any of the following analyses:
 - RBI Criticality Analysis
 - RBI PRD Analysis
 - RBI Pipeline Analysis
 - RBI 581 Risk Analysis

This issue has been resolved.

(TS ID: 258486)

- Previously, on the Risk Matrix for each Degradation Mechanism, the Mitigated icon (✓) appeared on the RBI Risk Matrix even when the Analysis was in the *Created* state. This icon incorrectly indicated to users that the promoted Analysis was in the *Risk Completed* state. This issue has been resolved. Now, the Mitigated icon (✓) does not appear for created analyses.(TS ID: 257876)
- Previously, the Production Loss field was not mapped to the Financial Risk. This issue has been resolved. Now, the Production Loss field is mapped to the Financial Risk based on the value in the Production Loss Category. Also, the consequence value for the Financial Risk is now being calculated based on the sum of the Production Loss and Maintenance Cost. (TS ID: 247358)
- Previously, when viewing the RBI Corrosion Loop Data Loader error log, the entries in the log were not localized. This issue has been resolved. (TS ID: 244810)
- Previously, although Inspection History was *not* used to calculate the damage factor of a Damage Mechanism that belonged to Criticality Other Damage Mech. Eval. or Criticality Third Party Deg. Mech. Eval., you could assign Inspections to the Damage Mechanism. This issue has been resolved. (TS ID: 238689)

- Previously, for a component of type *Storage Tank Bottom*, in the **Main** section of a Criticality Consequence Evaluation, the value in the Lost Production Category field was *not* used to calculate the value in the Driving CoF field in the Analysis Results section of an RBI Criticality Analysis. Because of this, the value in the Structural Minimum Thickness field in an associated Criticality Int. Corr. Deg. Mech. Eval. was calculated incorrectly. This issue has been resolved. (TS ID: 236673)
- Previously, for a Tank Shell component, the value in the Estimated Minimum Thickness field on a Criticality Int. Corr. Deg. Mech. Eval. datasheet was incorrect. Instead of considering the maximum value among the calculated minimum thickness and the value in the Structural Minimum Thickness field, the calculated minimum thickness value was used to populate the Estimated Minimum Thickness field. This issue has been resolved. (TS ID: 236672)
- Previously, if the value in the Consequence Category-Rolled Up field in an RBI Criticality Analysis record was *E*, then the value in the Structural Minimum Thickness field in an associated Criticality Int. Corr. Deg. Mech. Eval. record was *0*, instead of *0.03*. This issue has been resolved. (TS ID: 236671)
- Previously, the Susceptible to CUI field was required for Asset Grouping, even though Asset Grouping is obsolete in V4. This issue has been resolved. The Susceptible to CUI field has been removed from the following:
 - Risk Based Inspection (RBI) 580 Data Loader.
 - Cylindrical_Shell Worksheet.
 - Exchanger_Header Worksheet.
 - Tank_Bottom Worksheet.
 - Exchanger_Tube Worksheet.
 - Piping Worksheet.
 - Criticality Calculator RBI Components datasheet - Corrosion Data section.
 - RBI Criticality Analysis Data Sheet - Design Data section.(TS ID: 205829)
- Previously, when viewing the RBI 580 Data Loader error log, the entries in the log were not localized. This issue has been resolved. (TS ID: 180046)
- Previously, in the Asset Risk Report, values in some fields did not appear. This issue has been resolved. (TS ID: 154862)

RBI 581

- Previously, in an RBI 581 Risk Analysis, the Risk Summary ID and Risk Summary Description fields were blank for each of the following scenarios:
 - The damage factor for a governing damage mechanism (DM) on plan date was less than the minimum of the three target minimum damage factors (defined for the three governing DM methodologies) before or during inspection planning.
 - The analysis was linked only to non-mitigating DMs.

These issues have been resolved. (TS IDs: 314724, 314723, 314722)

- Previously, in an RBI 581 Cracking Damage Evaluation or RBI 581 External Cracking Damage Evaluation, if the value in the Number of Highest Effective Inspections field was $\bar{6}$, then inspection *did not* mitigate the risk during inspection planning. This issue has been resolved. Now, an inspection with a higher level of inspection confidence is applied to mitigate the risk. (TS ID: 305531)
- Previously, in RBI 581 External Cracking Damage Evaluation and RBI 581 Cracking Damage Evaluation records, if the value in the Number of Highest Effective Inspections field was a decimal number, during inspection planning, the value was rounded up to the next whole number before calculating the required level of inspection. Because of this, the values in the Number of Highest Effective Inspections and Total Damage Factor With Plan fields were incorrect. This issue has been resolved. (TS ID: 301109)
- Previously, in an RBI 581 Thinning and Lining Evaluation record, the Selected BM Corrosion Rate and Selected Cladding Corrosion Rate fields did not contain *Controlling Corrosion Rate* in the list of values. This issue has been resolved. (TS ID: 289821)
- Previously, after you calculated an RBI 581 Risk Analysis, the value in the Inspection Will Mitigate field was *Yes (Y)* instead of *No (N)* if both the following conditions were satisfied:
 - The risk was not mitigated on the plan date.
 - The Damage Mechanism (DM) in the analysis was linked to a B or C level inspection, and the damage factor for the DM was less than the target minimum damage factor value for the DM.

In addition, the following fields were not populated:

- Risk Summary ID
- Risk Summary Description

This issue has been resolved. (TS ID: 279764)

- Previously, after you calculated an RBI 581 Risk Analysis, the value in the Coating Adjustment field in the associated RBI 581 External Cracking Damage Evaluation was calculated incorrectly. This issue has been resolved. (TS ID: 278793)
- Previously, if you copied an RBI 581 Risk Analysis that was linked to an RBI 581 Thinning and Lining Evaluation, the values in the Short Term Avg. Corr. Rate and Long Term Avg. Corr. Rate fields were *not* updated based on the corresponding values in the associated Asset Corrosion Analysis in Thickness Monitoring. This issue has been resolved. (TS ID: 273402)
- Previously, on a Criticality Calculator RBI Component or RBI 581 Risk Analysis datasheet, the **Toxic Fluid Valid for 581 Analysis** check box was not cleared even if:
 - You cleared the **Toxic Mixture** check box.
 - You selected a fluid valid for an RBI 581 Risk Analysis in the Toxic Fluid field and then cleared it, or selected a fluid that was not valid.

Similarly, the **Fluid Valid for 581 Analysis** check box was not cleared even if you selected a process fluid valid for an RBI 581 Risk Analysis in the Process Fluid field and then cleared it, or selected a fluid that was not valid. These issues have been resolved.

(TS ID: 266963)

- Previously, if you created a new RBI Component for an asset in RBI and then opened the Inspection Profile datasheet for that same asset in Inspection Management, the newly added component was not available in the drop down for the RBI Component field. This issue has been resolved. (TS ID: 250358)
- Previously, in a Criticality RBI Component – Tank Bottom record, if the **Has Release Prevention Barrier?** check box was selected, then the value in the Maximum Fill Height in AST field in the associated RBI 581 Consequence Evaluation was blank. This issue has been resolved. The Maximum Fill Height in AST field is now populated with the value *0.25 feet*. (TS ID: 263718)
- Previously, Security Groups were not assigned security permissions to the RBI 581 Env Cracking Insp Recommendation Policy.

In addition, in an Oracle database, Security Groups were not assigned security permissions to the following policies:

- RBI 581 885 Embrittlement Sigma Damage Factor
- RBI 581 AST Bottom Corrosion Rate

These issues have been resolved. Now, Security Groups have been assigned permissions to the policies as follows:

Policy	Security Groups	Security Per- missions
RBI 581 885 Embrittlement Sigma Damage Factor	MI RBI Calculation Policy Viewer	Viewer
RBI 581 AST Bottom Corrosion Rate	MI RBI Calculation Policy Viewer	Viewer
RBI 581 Env Cracking Insp Recommendation	MI RBI Recommendation Policy Designer	Designer
	MI RBI Recommendation Policy Viewer	Viewer

(TS ID: 244390)

- Previously, although Inspection History was *not* used to calculate the damage factor of the following Damage Mechanisms (DMs), you could assign Inspections to Degradation Mechanism Evaluations (DMEs) of the following DMs:
 - 581-High Temperature Hydrogen Attack
 - 581-Internal Component Lining Damage
 - 581-Piping Mechanical Fatigue
 - All DMs that belonged to RBI 581 Brittle Fracture Damage Evaluation

This issue has been resolved. (TS ID: 238689)

- Previously, in the **Degradation Mechanisms** section of an RBI 581 Risk Analysis, if you selected the *581-Internal Component Lining Damage* DM, the Inspection History button (🔒) was disabled. Because of this, you could not access the Inspection History of the DM. This issue has been resolved. (TS ID: 238689)
- Previously, in an RBI 581 Thinning and Lining Evaluation, the following issues existed:
 - You could enter 0 in the No Highest Effective Insp field irrespective of the value in the Highest Effective Insp field.
 - If the value in the Highest Effective Insp field was *InEffective (None)*, then you could not enter a value other than 0 in the No Highest Effective Insp field.

These issues have been resolved such that:

- If you enter 0 in the No Highest Effective Insp field, then the Highest Effective Insp field is disabled and populated with the value *InEffective (None)*.
- You can now enter a value other than 0 in the No Highest Effective Insp field even if the value in the Highest Effective Insp field is *InEffective (None)*.

(TS ID: 235903)

Root Cause Analysis (RCA)


- Previously, after an analysis was published, you could still update and delete the analysis. This issue has been resolved. Controls to perform modifications to published analyses are now unavailable. (TS ID: 316666)
- Previously, when you copied a Root Cause Analysis, the **Team Members** column appeared blank in the **Analysis Summary** workspace and in the **Verifications** pane. This issue has been resolved. (TS ID: 316621)
- Previously, when you modified and saved a team member's role and then selected the Edit button (✎), the roles that you assigned to the members appeared incorrectly. This issue has been resolved. (TS ID: 312180)
- Previously, when you applied version V4.2.0.2.0, Logic Trees with one Failure Mode and one Hypothesis would not appear. This issue has been resolved. (TS ID: 300860)
- Previously, you could not save the RCA Logic Tree diagram after exporting it. If you were using Internet Explorer, the tree did not appear, or, if you were using Chrome, the **Save As** window did not appear. These issues have been resolved. (TS ID: 267909)
- Previously, an internal server error appeared when you attempted to email users the Comprehensive Analysis Report in the **Comprehensive Analysis Report** section and **Analysis Link** section. (TS ID: 260974)
- Previously, the tab counts were not displayed on the **RCA Overview** page for secured users. This issue has been resolved. (TS ID: 260390)
- Previously, when a Functional Location (FLOC) in the hierarchy was linked to an analysis, all of the child elements for the selection were included in the linked assets list and had to be manually removed from the list one-by-one. This issue has been resolved. (TS ID: 250659)
- Previously, for users with the Japanese culture setting, the comprehensive report of a Root Cause Analysis did not load. This issue has been resolved. (TS ID: 244949)

- Previously, the PlannedProductionvsLosses query returned incorrect data. This issue has been resolved. (TS ID: 244498)
- Previously, when you accessed an Event Diagram or Logic Tree diagram via the GE Digital APM mobile application on a Microsoft Surface Pro device, an error occurred. This issue has been resolved. (TS ID: 244102)
- Previously, when you selected the **Definition** tab on the **Analysis Summary** page of an RCA Template uploaded with the RCA Data Loader, an error occurred. This issue has been resolved. (TS ID: 243417)
- Previously, when creating a new RCA Analysis and Logic Tree, the search results were no longer present when you navigated back to the **Select Analysis/Template** section of the **Import** window. This issue has been resolved. (TS ID: 213338)
- Previously, when using the Edge or Internet Explorer browser, the entire logic tree was not displayed. This issue has been resolved. (TS ID: 196446)

Rounds Data Collection

- Previously, when you moved a Checkpoint from the Node Pin Board back to the **Route Map** pane at an asset header insertion point, the Checkpoint was not inserted at the expected location in the Route. This issue has been resolved. (TS ID: 320571)
- Previously, when using the Internet Explorer or Microsoft Edge browser and a non-English culture user culture setting, when you selected the **Next (>)** button after entering a Checkpoint reading, an error occurred. This issue has been resolved. (TS ID: 312303)
- Previously, when entering numeric reading values with an iOS device, you could not enter a decimal point or comma. This issue has been resolved. (TS ID: 320066)
- 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: 302641)
- Previously, if a Route had a schedule defined at the Route level and all checkpoints on the Route also contained their own schedules which were due after the Route


was due, the Route incorrectly appeared in the **Due** or **Overdue** lists on the **RDC Overview** page. If you attempted to open the Route, various additional issues occurred. These issues have been resolved. Now, in this scenario, the Route does not appear in the **Due** or **Overdue** lists. (TS IDs: 292056, 288635)

- 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 in these additional fields was not saved. This issue has been resolved. (TS ID: 289648)
- Previously, if your user time zone was different from the time zone of the device, the **Overdue Items** and **Due Items** lists on the **RDC Overview** page and the checkpoints displayed in a Route did not display the due checkpoints as expected. This issue has been resolved. (TS ID: 283293)
- Previously, when using Rounds Data Collection on a Small Form Factor device, various information on the screen was not refreshed after you completed an action such as marking a Route as Done or subscribing to a Route for offline access. This issue has been resolved. (TS ID: 269277)
- Previously, on Small Form Factor Devices, the Scan button () was not displayed on the **RDC Overview** page or when viewing a Route. This issue has been resolved. (TS ID: 269256)
- Previously, in the **Assigned Routes** section of the **RDC Overview** page, if you searched in the **Status** column for in-progress routes, no routes were found, even if there were routes with the status *In Progress*. This issue has been resolved. (TS ID: 244553)
- Previously, geolocation data was not saved for readings taken for Lubrication Requirements. This issue has been resolved. (TS ID: 243670)

Rounds Designer

- Previously, after you deleted multiple Routes, if your database contained a large number of Routes, then the **Routes** tab took a long time to load. If you were using the Internet Explorer 11 browser, then the list may have not loaded. This issue has been resolved. (TS ID: 323837)
- Previously, when a user with access to multiple sites added an existing checkpoint

to a Route assigned to a specific site, in some cases the checkpoint was not added to the Route, due to the checkpoint having a different site. This issue has been resolved. Now, the list of available checkpoints is filtered to show only those that match the site of the Route. (TS ID: 321212)

- 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: 317620)
- Previously, when you loaded Checkpoint Templates and Template Groups using the Rounds Template Data Loader, the Checkpoint Templates were not sequenced correctly within the Template Groups. This issue has been resolved. (TS ID: 313959)
- Previously, when you navigated away from the **Schedule** section of a Measurement Location with unsaved changes, the changes in the date fields were lost if you selected **Cancel** on the **You have unsaved changes** dialog box. This issue has been resolved. (TS ID: 304316)
- Previously, if you added a value to an Allowable Values record that was longer than the configured field length for the Allowable Value field, no warning appeared and the value was not saved. This issue has been resolved. (TS ID: 293154)
- Previously, in the **Strategy** section on the <Asset Name> page for an asset, the number of Routes shown in the hyperlink for Rounds Designer was incorrect. This issue has been resolved. (TS ID: 274335)
- Previously, if you selected the **Mark Done** button on a Route, but then closed the **Mark Route Done** window without actually marking the Route as Done, if you then selected the filter button () in the **Route Map** pane, the filter options did not appear. This issue has been resolved. (TS ID: 270906)
- Previously, when you used the **Update Existing Checkpoints** button to update measurement locations with changes from their source template, if a template included numeric health indicator limits, an error may have occurred and some measurement locations may not have been updated. This issue has been resolved. (TS ID: 266937)
- Previously, in certain scenarios, if you cleared all readings taken for a Route, a "Route Marked Done" message appeared when you attempted to open the Route

again. This issue has been resolved. (TS ID: 264270)

- Previously, if you created a route without adding a value in the Route ID field, the route saved successfully, but you were unable to access it again from the **RD Overview** page. This issue has been resolved. Now, Route ID is a required field, and you cannot save a route that only has blank spaces as the value in the Route ID field. (TS ID: 256121)
- Previously, if you created a Lubrication Requirement from a Lubrication Requirement Template, the values in the Description, Lubricant, and UOM fields in the Lubrication Requirement Template were not copied into the new Lubrication Requirement. This issue has been resolved. (TS ID: 246886)
- Previously, when using the Rounds Routes Data Loader, if you tried to load an existing checkpoint and identified that it was linked to a route that was different than the route to which the checkpoint was already linked, the data for the checkpoint would not be updated, yet no warning message was added to the log text for that data import job. This issue has been resolved. Now, a warning message is added to the log text, indicating that the update for the checkpoint was skipped. (TS ID: 244709)
- Previously, when you created a checkpoint (i.e., Measurement Location or Lubrication Requirement) based on a template, the Non-Compliance Date Interval was not copied to the checkpoint. This issue has been resolved. (TS ID: 243768)
- Previously, if no Lubrication Requirement Template records existed in the database, an error occurred when you attempted to save a new Lubrication Requirement record. This issue has been resolved. (TS ID: 243335)

Security Manager

Users

- Previously, date values could be set unexpectedly to the time zone of the browser used to access GE Digital APM, rather than to the time zone associated with the logged in Security User. This issue has been resolved. (TS ID: 261939)
- Previously, when you added a user in the **Team Members** section and the user had a photo in their corresponding Human Resource record, the user was added to the **Team Member** section but the photo of the user did not appear. This issue has been resolved. (TS ID: 282811)

SIS Management

- Previously, when importing project files from exSILentia in which the value in the Test Architectural Constraints field in the loop data was *IEC 61508 : 2010 tables [per 61511-1 11.4.5]*, an error occurred and data did not get imported. This issue was caused because the value for the Test Architectural Constraints field in the Protective Instrument Loop record was populated with the description for the system code *IEC 61508 : 2010* from the System Code Table MI_ARCHITECTURE_CONSTRAINT. This issue has been resolved. Now, the Test Architectural Constraints field is populated with the ID of the system code (i.e., *IEC 61508 : 2010*). (TS ID: 323298)
- Previously, in the loop diagram for a Protective Instrument Loop that had multiple Final Element Groups associated with a Final Element System, the Final Element Groups appeared disconnected from the Final Element System when the loop was not in the *Design* state. This issue has been resolved. (TS ID: 320316)
- Previously, when assessing SIL using the Risk Matrix Internal method, the maximum risk value across all categories was incorrectly calculated, resulting in incorrect calculation of Mitigated Risk Rank. This issue has been resolved. (TS ID: 263178)
- Previously, when you attempted to create or view a loop diagram, an error occurred. This issue has been resolved. (TS ID: 248237)
- Previously, in the Risk Matrix for a Risk Matrix Internal assessment of an Instrumented Function, same values were displayed for the mitigated and unmitigated risk ranks. This issue has been resolved. Now, the correct values for mitigated and unmitigated risk ranks appear. (TS ID: 247706)
- Previously, in the **Common Cause Failure** subsection of an Instrumented Function, the Add button (+) to add a related Instrumented Function appeared although there was no Common Cause Failure. This issue has been resolved. (TS ID: 244917)
- Previously, when you create a Process Hazards Analysis (PHA) Internal record, the **View Risk Matrix** button appeared on the datasheet before the datasheet was saved. This issue has been resolved. Now, the **View Risk Matrix** button is enabled only when you select the Cause-Consequence pair for which you want to view the Risk Matrix. (TS ID: 244914)
- Previously, if you did not have license for the module or security permission for a

family, you were redirected to the **Access Denied** page without an error message. Now, an error message appears. (TS ID: 244583)


- Previously, on the **SIS Overview** page, in the **SIS Trip Reports** section, data did not appear according to the site assigned to the user. This issue has been resolved. (TS ID: 240839)
- Previously, in a Proof Test report, the steps did not appear in order. This issue has been resolved. (TS ID: 230361)
- Previously, when exporting data to Exida using the Internet Explorer browser, if you attempted to cancel the export process, two **Cancel** buttons appeared. This issue has been resolved. (TS ID: 228892)
- Previously, the following areas were not localized:
 - Some fields on the Final Element Group Details datasheet
 - Some fields on the Logic Solver Details datasheet
 - The Alarm Setting (High/Low) field on the Sensors datasheet
 - Some fields on the Sensor Group Details datasheet

These issues have been resolved. (TS IDs: 210377, 210375, 210373, 210371)

- Previously, when you changed the SIL mode of an external assessment, an error occurred. This issue has been resolved. (TS ID: 209839)
- Previously, the **Print Template** and **Perform Proof Test** buttons appeared on the Proof Test datasheet. This issue has been resolved. Now, these buttons appear only on the Proof Test Task datasheet. (TS ID: 209507)
- Previously, when you attempted to create a new SIS Trip Report, an error occurred. This issue has been resolved. (TS ID: 207037)
- Previously, on the Final Element Group datasheet which contained identical Final Elements, the ATI / PVST Interval, the ATI / PVST Interval UOM, and the ATI / PVST Automatic/Manual fields were enabled irrespective of the type device contained in the final elements. This issue has been resolved. Now, you can select the ATI / PVST Enabled field to enable the ATI / PVST Interval, the ATI / PVST Interval UOM, and the ATI / PVST Automatic/Manual fields only if the final elements in the group contained a device of type *Remote Actuated Valve*. (TS ID: 197057)

- Previously, when you created an Instrumented Function, the datasheet ID did not appear on the datasheet. This issue has been resolved. (TS ID: 178518)

Thickness Monitoring

- Previously, if you customized the query and changed the order of the columns on the **Assets** and **Asset Requiring a Calculation** tabs on the **Thickness Monitoring Overview** page, and then attempted to complete a bulk analysis, the analysis calculation failed. This issue has been resolved. The bulk analyze process is no longer dependent upon the order of the tabs on the **Thickness Monitoring Overview** page. (TS ID: 309530)
- Previously, on the **Analysis Overview** page, if you changed the value in the Analysis Type box in the **Remaining Life** section, and then selected the **TMLs** tab, the value selected in the Analysis Type box was not retained. This issue has been resolved. (TS ID: 305793)
- Previously, if the length of the Equipment ID of an Equipment exceeded 50 characters, you could not calculate the Asset Corrosion Analyses linked to the Equipment. This issue has been resolved. (TS ID: 288981)
- Previously, if you decreased the size of the browser window, or zoomed out, the More Options button () on the **Asset Summary** page did not appear. This issue has been resolved. (TS ID: 288933)
- Previously, when a custom rule was configured for calculating a measurement value, if you entered multiple readings and then attempted the calculation, an error occurred. This issue has been resolved. Now, calculations complete even if a custom rule is added to the calculation. (TS ID: 260621)
- Previously, on the **Analysis Overview** page, in the **Remaining Life** section, the first time that you selected the ≤ 5 section of the **Remaining Life** chart, no TMLs appeared. This issue has been resolved. (TS ID: 255880)
- Previously, when a user's Thickness Monitoring Human Resource role was either added or removed, the values in the dropdown for the Measurement Taken By field in the **Measurements** section did not appear, and the user was forced to restart IIS to see the values. This issue has been resolved. Now, a user with a recently added or deleted Human Resource role can successfully choose a value from the Measurement Taken By dropdown without restarting IIS. (TS ID: 243504)

- Previously, on a Thickness Measurement Location datasheet, if you selected *API 653* in the Design Code field, then no values appeared in the Code Year (Allowable Stress Lookup), Material Grade, and Material Specification fields. This issue is resolved by including the tank stress data related to API 653, thus adding 29 records. (TS ID: 230489)
- Previously, if you had multiple tabs open in Thickness Monitoring, and you entered data in the Custom field on the **Measurement Data Entry** page, and then closed the **Measurement Data Entry** tab quickly, an error occurred. This issue has been resolved. (TS ID: 226463)
- Previously, on **MI Asset Report**, the **Thickness Monitoring Summary** section did not properly round the Remaining Life and the Controlling Corrosion rate fields to the ten-thousandth. This issue has been resolved. (TS ID: 213483)
- Previously, when you relocated a TML to a different TML group or asset, an error occurred even though the calculations completed successfully. This issue has been resolved. (TS ID: 206752)
- Previously, when calculating a TML that has a Remaining Life value less than or equal to 0, an error occurred while attempting to calculate the Retirement Date. This error occurred because the value in the Remaining Life Factor field was less than or equal to zero (0). 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. Otherwise, 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 plus the Remaining Life Factor value. (TS ID: 205907)
- Previously, on the **Nominal Measurement** window, the time in the measurement fields was incorrectly populated, which also occasionally caused errors in date fields. This issue has been resolved. Now, the default time applied to all fields on the **Nominal Measurement** window is midnight (00:00:00). This new setting also applies to the Add Measurement function on in the TMLs section and the measurement data entry window. Values entered on the **Measurement Data Entry** window, while using the common Measurement Taken date field, now displays the correct time of 00:00:00. (TS ID: 156910)

Tools

Graphs

- Previously, when using the GE Digital APM mobile application on a Microsoft Surface Pro device, when you selected a graph, the hyperlinked information on the graph did not appear as expected. This issue has been resolved. (TS ID: 294707)
- Previously, when using stacked area line graphs, the graph labels were labeled *null* if you did not have any valid data points. This issue has been resolved. Now, if you do not have valid data points, the graph labels are blank. (TS ID: 290091)
- Previously, if you did not save a graph that you had modified before leaving the page, a notification asking you to save your work did not appear, and your work was not saved. This issue has been resolved. Now, if you do not save your work, a notification will appear. (TS ID: 246671)

Queries

- Previously, when you exported to a file the results of a formatted query containing fields with the Long Time, Short Time, or Month Day format, the values in those fields were modified unexpectedly during export. This issue has been resolved. (TS IDs: 311821, 311816)

Scripts

- Previously, when you selected the **History** tab of a Machine Learning script that has no training data, the **Test Results** tab became enabled, and you could test the data provided in the **Query or Dataset** box, which produced erroneous predictions. This issue has been resolved. Now, when you select the **History** tab of a Machine Learning script that has no training data, the **Test Results** tab remains disabled, and you cannot test the script until training data has been added. (TS ID: 244535)
- Previously, when you created a Machine Learning script and changed its result column from a column that contains Boolean values to a column that contains character values, after testing the script, a blank drop-down list appeared when you rejected the script's prediction and selected the corresponding cell in the **Actual** column. This issue has been resolved. Now, when you select the cell in the **Actual** column, the values available from the standard list appear. (TS ID: 241612)

Restored Features - V4.3.0.0.0

The following V3.x features were deferred from previous V4.x releases, but are now available in V4.3.0.0.0.

Asset Strategy Implementation (ASI)

- You can now manage all maintenance packages for any operation under a particular task list. (TS ID: 117767)
- You can now search for the SAP Task List that you want to use to create a new Task List record. (TS ID: 232661)

Calibration Management

- The device mappings feature is now available. (TS ID: 294774)

Configuration Manager

Units of Measure and Conversions

- You can now use Units of Measure and Conversions in Configuration Manager. (TS ID: 247786)

Generation Availability Analysis (GAA)

- You can now migrate from the Generation Management module in V3.6.0.0.0 to the Generation Availability Analysis (GAA) module in V4.3.0.0.0. (TS IDs: 284568, 282097, 281729, 281723, 281132, 281096, 281094, 227130, 227120, 227119, 227118, 227077)

SIS Management

- You can now create a Proven In Use Justification record, which stores details on the basis for use of a Protective Instrument Device that is associated with any of the following subsystems:
 - Sensor in a Protective Instrument Loop
 - Final Element in a Protective Instrument Loop
 - Custom Device (i.e., Custom Sensor or Custom Final Element)

- Sensor in a Protective Instrument Loop Template
 - Final Element in a Protective Instrument Loop Template
- (TS ID: 311414)

Obsolete Features - V4.3.0.0.0

The following items are no longer used in GE Digital APM.

Asset Strategy Implementation (ASI)

- To enhance usability, the following tabs have been removed from the **ASI Overview** page:
 - In Progress
 - Implemented
 - Single Cycle Plan
 - Strategy Plan

As part of these changes, the following Catalog items have been removed from the folder \\Public\Meridium\Modules\Asset StrategyManagement\Implementation\Queries:

- ASIInProgressPackages
- ASIImplemented Packages
- ASISingleCyclePackages
- ASIStrategyPlanPackages


(TS ID: 309330)

- The **SAP System Definitions** workspace has been removed from the **Asset Strategy Implementation Admin** page. You can now manage a SAP system definition via the datasheet for the EAM System record. (TS ID: 294443)
- The management of tasks has been moved to **Implement Actions** workspace in ASM. Therefore, the **SAP** and **Tasks** tabs have been removed from the **ASI Package** workspace. (TS ID: 288567)
- The concept of a primary and secondary package has been removed. Rather than sending an entire strategy to a package, you can now send individual actions. (TS ID: 280619)

Asset Strategy Management (ASM)

- The WMI Definition family is now used only for defining items within the ASI Admin feature. Therefore, in the **Work Management Item Definitions** workspace, the Group Name field has been removed from the datasheet. (TS ID: 305035)

- You can no longer copy an asset node in ASO. (TS ID: 277932)
- To simplify the ASM workflow, the Activation Date and Activated By fields for the Asset Strategy and Asset Strategy Template families have been deprecated. These fields are no longer needed because the State Management feature provides the full activation history for a strategy. (TS ID: 268138)
- To simplify the ASM workflow, the Strategy Owner and Template Owner fields for the Asset Strategy, System Strategy, Unit Strategy, Strategy Template, and Strategy Revision families have been deprecated. These fields previously existed to prevent deletion of the strategy or template by anyone except the owner. Now, you do not have to be a Strategy/Template Owner to delete a strategy or template. (TS ID: 255110)
- The MI ASM Analyst, MI RCM User, and MI ASI User security roles have been removed as they are no longer needed. These roles were previously used for state management and have now been replaced by the baseline security roles delivered for each module.

 **Note:** The MI ASM Analyst, MI RCM User, and MI ASI User security groups are unchanged.

(TS ID: 254632)

- The ability to collapse the **Risk and Cost Summary** charts in a system strategy's **Risk Analysis** workspace has been removed. (TS ID: 242221)
- Now, an asset strategy cannot exist without a linked asset. Any strategies without assets saved in your system will be converted to templates after upgrading. (TS ID: 225761)

Configuration Manager

- You can no longer create field behaviors for Relationship families. (TS ID: 300108)
- In the **Units of Measure and Conversions** feature, the unit *MM/YEAR* in the **Units of Measure** section has been marked as deprecated. (TS ID: 68918)

Foundation

Result Grid

- The following sorting options have been removed from the Result Grid:
 - Sort Ascending
 - Sort Descending
 - Clear Sorting

(TS IDs: 258208, 257569)

Generation Availability Analysis (GAA)

- To generate Regulatory reports for a GAA Unit, the following queries have been replaced with new queries:

This query has been removed ...	and replaced with...
Public\Meridium\Modules\Generation Management\Queries\NERC Queries\NERC GADS Event Report 07	Public\Meridium\Modules\Generation Management\Queries\NERC Queries\NERC Event Report 07
Public\Meridium\Modules\Generation Management\Queries\NERC Queries\NERC GADS Performance Report 05	Public\Meridium\Modules\Generation Management\Queries\NERC Queries\NERC Performance Report 05

(TS ID: 275273)

- The following fields were not used and have been removed from the Events data-sheet in GAA:
 - Total Equivalent Derate Hours w/out Shadowing
 - Total Equivalent Derate MWh w/out Shadowing

(TS ID: 242084)

Production Loss Analysis (PLA)

- When you filter the information displayed on the **PLA Overview** page, the **Include analyses without any assets?** check box has been removed from the **Enter Parameter Values** window. Analyses which are not linked to assets now appear at the Home level of the hierarchy. (TS ID: 191179)

Reliability Analytics

- The queries previously used to display the SSRS reports in Reliability Analytics are no longer used, although they still appear in the Catalog. These queries are no longer necessary, as the reports now load in a new browser tab in a print preview format instead of loading in the Reports workspace, which is deprecated. (TS IDs:

289034, 289035, 289037, 289038, 289039, 289571)

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

- To enhance usability, the following items have been removed from the RCM and FMEA overview pages:
 - Overdue tab
 - Complete tab
 - Ongoing tab
 - All RCM FMEA Risks Without Recommendations chart
 - Criticality Distribution of All Assets chart

As part of these changes, the following Catalog items have been removed:

- From the folder \\Public\Meridium\Modules\FMEA\Analysis:
 - Overview Page - Complete
 - Overview Page - Ongoing
 - Overview Page - Overdue
 - Criticality of RCM FMEA Assets
- From the folder \\Public\Meridium\Modules\RCM\Analysis:
 - Overview Page - Complete
 - Overview Page - Ongoing
 - Overview Page - Overdue

(TS IDs: 308824, 183011)

- The ability to create or apply failure effect and recommendation templates has been removed. Any existing templates will be removed during upgrade. (TS ID: 291206)
- The Site ID and Unit ID fields have been deprecated and removed from the baseline datasheet for the RCM FMEA Analysis family. These fields were deprecated because they are no longer needed on account of Site Filtering. (TS ID: 231207)
- Now, an RCM analysis must be associated with an Asset from the hierarchy rather than an RCM FMEA Asset. Therefore, the **Add To Analysis** option from the **Apply Template Builder** wizard, which allows you to add an RCM FMEA Asset to the RCM analysis, has been deprecated. (TS ID: 228771)

- The scenario for an RCM or FMEA analysis without a linked real asset has been removed. Now, you can no longer link virtual assets to an RCM or FMEA analysis. Any analyses without assets saved in your system will be converted to templates during upgrade. (TS IDs: 225762, 255099)

Risk Based Inspection (RBI)

RBI 581

- The following policies are no longer used in RBI:
 - RBI 581 Financial Consequence Evaluation
 - RBI 581 Damage Factor - Thinning
 - RBI 581 External Corrosion Damage Factor
 - RBI 581 CUI Damage Factor

The calculations performed by these policies are now included in the object model, thus improving the performance of analysis calculations.

(TS ID: 305997)

Deferred Features - V4.3.0.0.0

The following features are not available in GE Digital APM V4.3.0.0.0, but are planned for a future release.

Asset Criticality Analysis (ACA)

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

Asset Health Manager (AHM)

- 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 (ASI)

- Creating implementation roles and filtering the WMI tree by each role. (TS ID: 243573)
- Using a link to manage the object list records that are linked to maintenance item records represented by the selected node. (TS ID: 238443)
- The option to exclude child items when copying Work Management Items. (TS ID: 147790)
- Managing asset and action assignments when executing copy/paste operations. (TS ID: 144110)
- 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)

Asset Strategy Management (ASM)


- Migrating strategies between databases.

Asset Strategy Optimization (ASO)

- Optimizing Actions. (TS ID: 65780)

Calibration Management

- Automated Calibration using Beamex and Meriam documenting process calibrators.

 **Note:** Automated calibration using Beamex documenting process calibrators, Beamex MC5 and Beamex MC6, is supported using Beamex Business Bridge (B3) Version 1 (1.2.0) software for Beamex CMX Calibration software.

(TS IDs: 61319, 61334)

Configuration Manager

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

Generation Availability Analysis (GAA)

- 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)

- 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
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 IDs: 234410, 234310)

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

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

- The following Security Groups in GAA:
 - MI Generation Management Forecast
 - MI Generation Management Nameplate
 - MI Generation Management Security

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

GE Analytics

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

Metrics and Scorecards

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

Operations Manager

Systems and Tags

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

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

- 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 (RCA)

- 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)

- Standard APM State Management functionality in RCA. (TS ID: 63432)

Rounds

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

Thickness Monitoring

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

Tools

Graphs

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

Release Notes - V4.3.0.0.2

Oracle Database Server Upgrade

- Previously, when upgrading an Oracle Database Server to V4.3.0.0.0, an ORA-01483 error could occur, preventing you from successfully upgrading the database. This issue has been resolved. (TS ID: 343579)

Release Notes - V4.3.0.0.3

Queries

- Previously, when you exported query results as an Excel file, an error occurred when you tried to open the file. This issue has been resolved. (ID: TFS347816)

Reliability Analytics

- Previously, when you added an Action to a System Reliability Analysis, the Action Type list selection appeared as *No Name* if the option was not a baseline System Code. This issue has been resolved. (ID: TFS347817)

Release Notes - V4.3.0.0.4

Inspection Management

- Previously, you could not generate an inspection report by selecting the **Generate Report** button on the page for an Inspection task. This issue has been resolved. (ID: TFS357480)
- Previously, if the value in the Controlling Corrosion Rate field in an Asset Corrosion Analysis was less than zero, when you attempted to renew a TML, an error occurred. This issue has been resolved. (ID: TFS357472)
- Previously, if you updated an inspection with a Completion Date that was earlier than the Last Date of the inspection task, the Last Date was not updated. This issue has been resolved. Now, the Last Date is updated with the most recent Completion Date of an inspection that has the **Inspection Task Complete** check box selected. (ID: TFS357471)

Risk Based Inspection (RBI 580 and RBI 581)

- Previously, on the **Risk Based Inspection Overview** page, while generating RBI Recommendations for analyses associated with all the assets, if you attempted to consolidate the RBI Recommendations, they were not consolidated. This issue has been resolved. (ID: TFS357457)

Root Cause Analysis

- When you send a summary of findings or Recommendation Alert via email, the email address is now configurable using the **Email Setting** workspace in RCA application settings. (ID: TFS355588)

Release Notes - V4.3.0.0.5

Failure Modes and Effects Analysis

- To enhance performance, the obsolete query previously used to preload associated data when accessing FMEA analyses has been removed. (ID: TFS365073)

Operations - Risk Matrix

- Previously, on the Risk Matrix Layout datasheet, the selected option in the **Use Maximum Risk Rank** check box was ignored and the **Total Risk** value did not correctly mirror the value contained in the maximum unmitigated risk cell of that Risk Matrix. This issue has been resolved. Now, the **Total Risk** value displays the same value as the maximum unmitigated risk cell. (ID: TFS364948)

Reliability Centered Maintenance

- To enhance performance, the obsolete query previously used to preload associated data when accessing RCM analyses has been removed. (ID: TFS365073)

Root Cause Analysis

- Previously, when a user without an Update privilege to an RCA Recommendation attempted to modify the recommendation in Recommendation Management, the page stopped responding. This issue has been resolved. Now, the user can close the error message that appears and use the application. If, however, you want to modify the recommendation, follow the instructions provided in KBA 6328. (ID: TFS365816)

Release Notes - V4.3.0.0.6

Asset Criticality Analysis

- Previously, if you attempted to use the ACA Data Loader to load a file containing more than 1,000 assets using an Oracle database, an error occurred. This issue has been resolved. (ID: TFS371094)

Release Notes - V4.3.0.1.0

The following release notes are available for GE Digital APM V4.3.0.1.0:

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

You can also view the APM Connect release notes.

Enhancements - V4.3.0.1.0

The following enhancements have been made in V4.3.0.1.0.

APM Connect

- APM Connect now supports S/4 Hana (1511 and 1610) SAP environments for the following SAP Adapters:
 - Functional Location Extraction
 - Equipment Extraction
 - Work History Extraction
 - Notification Management

(TS ID: 326636)

Asset Health Manager (AHM)

- A new field, Do not automatically create health indicator, has been added to the Checkpoint and Checkpoint Template families. If the check box for this field is selected in one of these records, then health indicators will not be created automatically when those new checkpoints are linked to assets.

The field appears as a new column in the **Health Indicator Source Management** workspace.

(TS IDs: 308578, 308579, 308580)

Calibration Management

- The Calibration Data Loader has been enhanced to support the device mapping feature. The following updates have been made to the Calibration Data Loader:
 - The MI_TMCADSCT worksheet has been added. This worksheet is used to import Calibration Template, Discrete records that store details on the discrete calibration that should be performed for a specific piece of equipment or location.
 - On the PROF_TEMPLATES worksheet:
 - The following columns have been added:
 - Reset Set Point
 - Ramp Time
 - Repeat Count
 - The SW 1 Contact State and Is Master Template columns now require a value.

- On the MI_TMCAAN00 worksheet, the Template State column now does not require a value.
- The following columns have been removed:

Worksheet	Column
PROF_TEMPLATES	Calibration Strategy
MI_TMCAAN00	Calibration Family ID
MI_TMCAAN00	Calibration Strategy
MI_TMCAAN00	SW 1 Setpoint (Discrete)
MI_TMCAAN00	Activate Switch 1(Discrete)
MI_TMCAAN00	SW 1 Contact State
MI_TMCAAN00	Calibration Type

(TS ID: 323696)

Configuration Manager

Family Management

- You can now configure a numeric field as a multi-value field. (TS ID: 318448)

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: 324981)

- In the **Properties** window for a Collection Filter node, the following comparison operators are now available:

- Starts with
- Contains
- Ends with

You can use these operators to filter text data more easily when you are using a Collection Filter node. (TS ID: 318820)

Foundation

- In a cluster environment, you can now dedicate a virtual machine to run scheduled jobs. (TS ID: 320346)

Metrics and Scorecards

- A new dimension, *Site*, has been added to Work History cube that allows the user to filter cube data. (TS ID: 323636)

Production Loss Analysis

- A warning message now appears when you enter a value greater than the planned production value in the **Production Data** workspace. (TS ID: 317128)

Recommendations

- To provide consistency across name values, fields in the Recommendation Management module that reference Security Users now use the following format: <Last Name>, <First Name> ~ <User Name> (e.g., *Smith, Jane ~ jsmith*). (TS ID: 328373)

Reliability Analytics

- In System Reliability, the **Analysis Summary** workspace now contains a **Resources** section in which you can create, update, and delete resources. (TS ID: 323339)

Risk Based Inspection (RBI)

RBI 580 and RBI 581

- For each family field that is used to calculate an analysis, the user help text now indicates that a value is required to calculate the analysis. (TS ID: 327808)

RBI 580

- If you modify the value in the Source of Calculated Corrosion Rates field in an RBI Component, the values in the following fields in a Criticality Int. Corr. Deg. Mech. Eval. record are now updated automatically to match the corrosion rate of the selected source:
 - Long Term Avg. Corr. Rate
 - Short Term Avg. Corr. Rate
 - Controlling Corrosion Rate

This happens only if the RBI Component is linked to a TML Group, and the associated RBI Criticality Analysis is in *Created* state.

(TS ID: 270992)

RBI 581

- If you modify the value in the Source of Calculated Corrosion Rates field in an RBI Component, the values in the following fields in an RBI 581 Thinning and Lining Evaluation record are now updated automatically to match the corrosion rate of the selected source:
 - Long Term Avg Corr Rate
 - Short Term Avg Corr Rate
 - Controlling Corrosion Rate

This happens only if the RBI Component is linked to a TML Group, and the associated RBI 581 Risk Analysis is in *Created* state.

(TS ID: 270992)


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: 319957)
- When you select a Lubrication Requirement on a route, the following fields now appear in the **Lubrication Requirement Summary** section:

- Lubricant Type
- Manufacturer
- Requires Shutdown

(TS ID: 326789)

Rounds Designer

- In the Route Pane, you can select  to open a menu that now includes options to expand or collapse *all* checkpoints. (TS ID: 326038)
- A new field, Do not automatically create health indicator, has been added to the Checkpoint and Checkpoint Template families. If the field is selected, then health indicators will not be created automatically when new checkpoints are created and linked to assets. (TS IDs: 308578, 308579, 308580)
- You can now enter Route descriptions that are up to 125 characters long.

 **Note:** If you are using a Windows Mobile Device, GE Digital recommends that you do not enter Route descriptions longer than 40 characters.


(TS ID: 321664)

- When you modify an allowable value, existing Measurement Location and Measurement Location Template records can now be synchronized automatically to match the new allowable values. To facilitate this enhancement:
 - New fields have been added to the Measurement Location and Measurement Location Template families.
 - Before Update and After Update family policies have been delivered for the Operator Rounds Allowable Values family.
 - The Operator Rounds Allowable Values family name no longer includes the word *Deprecated*.

This feature is inactive by default and can be activated by an administrative user.
(TS IDs: 326015, 324126)

- A new field, Related Route History Entity Key, has been added to the Reading family. You can use this field to create a query to view a report that combines readings taken on the Route with the Route History record. (TS ID: 327821)

Thickness Monitoring

- The tabs on the top navigation bar when using the Thickness Monitoring module now display page-specific captions to aid in navigation. (TS ID: 327807)
- A new page, **TM Quick View**, has been added, which you can access using the More () menu on the **Analysis Overview** page. The **TM Quick View** page displays a cumulative view of measurements by month and year for all TMLs associated with a specific asset or TML group and its subcomponents. By default, TML measurements within a 10 year range of the current date are shown. (TS ID: 324661)

Tools

- A new column, **Caption**, has been added to the **Maps**, **Dashboards**, and **Graphs** pages. In addition to the value in the **Name** column, the value in the **Caption** column provides a title or explanation for the items in each row. Text values in the **Caption** column can be localized. (TS ID: 322960)

Resolved Issues - V4.3.0.1.0

The following issues existed in one or more previous releases and have been resolved in V4.3.0.1.0.

AMS Analytics

- Previously, on the **AMS Analytics Overview** page, the **Event ID** column in both the **Active Alerts** and the **Events** workspaces displayed the related AMS Asset ID, and the associated links accessed the related AMS Asset record in Record Manager. This issue has been resolved. Now, the column displays the unique Event ID and the link accesses the *corresponding AMS Asset Event record* in Record Manager. (TS ID: 323540)
- Previously, when viewing an AMS Trend Chart, on the **Enter Parameters** window, if you selected Year for the value in the **Period** box, the default dates were January to December, instead of one year from the date listed in the **Date** box. This issue has been resolved. (TS ID: 316079)

Asset Criticality Analysis (ACA)

- 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: 328179)
- Previously, a user without ACA permissions could access the **Asset Criticality Analysis** page using a hyperlink. This issue has been resolved. Now, if you do not have ACA permissions, you cannot access the **Asset Criticality Analysis** page. (TS ID: 323181)
- Previously, when you added assets to Asset Groups, the record count on the **ACA Analysis Summary Overview** page did not update to match. This issue has been resolved. (TS ID: 251070)

Asset Health Manager (AHM)

- Previously, the number of readings displayed in trend charts was limited based on the trend type. This issue has been resolved. Now, all trend charts can show up to 10,000 readings. If more than 10,000 readings exist, a message appears indicating that the data has been truncated, and asks whether or not you would like to see more data. If you do, the next 10,000 readings appear. This message recurs for all

possible readings. (TS IDs: 274231)


- Previously, when you filtered contents in the **Trend Chart** workspace or the **Events** section, the **To** and **From** boxes in the **Date Range** section were incorrectly populated. This issue has been resolved. Now the **To** and **From** boxes are populated with the date and time from the user's time zone. (TS IDs: 275731, 328283)
- Previously, if you entered an invalid date range (i.e., if the end date was more recent than the start date) in the **Events** section of the **Health Summary** page, no error message appeared. This issue has been resolved. (252681)
- Previously, when using the date range filter on the **Trend Chart** page, the chart returned 10 years of data regardless of the selection you made in the filter control. This issue has been resolved. Now, the data returned matches the time range that you specify in the filter. In addition, when you select Reset in the filter control, the time range is reset to 1 year. (TS ID: 308678)

Asset Strategy Implementation (ASI)

- Previously, when you built an SAP plan using the **Actions are Operations** option, the Description field in the Task List family was updated based on the value in the Asset Name field of the Asset Strategy family although the Asset Name field was no longer used. This issue has been resolved. Now, the Description field in the Task List family is updated based on the Entity ID of the asset. (TS ID: 326772)

Calibration Management

- Previously, when you installed third-party calibration management software, the software used the same GE Device Driver version as GE Digital APM. This issue has been resolved. Now, the Meridium Device Service uses GE Device Driver 1.6.0.0 to prevent third-party calibration management software from using the same GUID and DLL of the device driver used by GE Digital APM. (TS ID: 324142)
- Previously, in V4.3.0.0.0, when you attempted to import data using the Calibration Data Loader, the data did not load. This issue has been resolved.

 **Note:** This issue existed only in V4.3.0.0.0.

(TS ID: 323696)

- Previously, when you created a Calibration Strategy for an automated calibration, you could not send data to the calibrator if you did not define the new strategy in the following System Code Tables:
 - MI_CALIBRATION_STRATEGIES.
 - MI_CALIBRATION_REFERENCES, in one of the following system codes:
 - CALIBRATION ANALOG STRATEGIES
 - CALIBRATION DISCRETE STRATEGIES
 - FUNCTIONAL TEST STRATEGIES

This issue has been resolved. Now, when you create a Calibration Strategy for an automated calibration, you do not need to define it in the System Code Tables. (TS ID: 322060)

- Previously, if you did not create a Calibration Strategy for Bemeax CMX calibration software by entering *CMX* in the Strategy Name field, and then defined the new Calibration Strategy in the System Code Table MI_CALIBRATION_STRATEGIES, you could not send and receive data from the Beamex CMX calibration software. This issue has been resolved. Now, you do not need to create a Calibration Strategy for Beamex CMX calibration software and define it in the System Code Table. (TS ID: 322060)

Configuration Manager

- Previously, members of the *MI APMNow Admin* Security Group could not access the Site feature of Configuration Manager. This issue has been resolved. (TS ID: 323517)
- Previously, when you selected the Move all button () to export all the dashboard content, the dashboard content was not exported and the export log file contained an incorrect message. This issue has been resolved. (TS ID: 323312)
- Previously, when using Internet Explorer to access offline forms, if you cleared the check box for a Boolean field, the corresponding field value was not properly set to *false*. Because of this, if you then enabled a Boolean check box, the corresponding field value was not set to *true*. This issue occurred because dependent field behaviors were not functioning properly. This issue has been resolved. (TS ID: 300681)

Data Loaders

- Previously, when you attempted to load data that contained braces ({}), an error occurred and the data did not load. This issue has been resolved. (TS ID: 327231)

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: 328512)
- Previously, when you attempted to add more than 500 assets at one time to an asset group, the load failed. This issue has been resolved. (TS ID: 324631)
- Previously, if you selected a tile before the **Enter Parameter Values** window had fully appeared, an error occurred. This issue has been resolved. Now, you cannot select any tiles until the **Enter Parameter Values** window has fully appeared. (TS ID: 319144)

Bulk Data Form

- Previously, when the *Family Is Managed By Product Module* property for a family was set to True, the horizontal scroll bar did not operate as expected in the Bulk Data form when you viewed the family and its related records. This issue has been resolved. (TS ID: 323443)
- Previously, if you accessed a Bulk Data Form, then selected a cell in the **Site** column, and then attempted to save the record or navigate away, an error occurred. This issue has been resolved. (TS ID: 319488)

Same Sign-On



- Previously, if a user logged in via SSO refreshed a page in GE Digital APM, the user was logged out. This issue has been resolved. (TS ID: 327469)
- Previously, when using SSO to log in to GE Digital APM, two pages not needed for SSO log in would appear, and selecting an option on the first page would disrupt the log in process. This issue has been resolved. Now, the unneeded pages do not appear when using SSO to log in. (TS ID: 323792)

Hazards Analysis

- Previously, when you accessed a What-If analysis using the global search, in the **Hazards worksheet** section of the associated System/Nodes, the What-Ifs, Causes, Consequences, and Safeguards did not appear. This issue occurred because the URL for navigating to the module contained the path to access only a HAZOP Analysis. This issue has been resolved. Now, the URL for navigating to the module contains the path to Hazards Analysis (i.e., What-If or HAZOP) and the records associated with the System/Nodes in a What-If analysis appear in the **Hazards worksheet** section. (TS ID: 324531)
- Previously, you could modify the values in the **IPL Checklist** section of a Safeguard although the associated Hazards Analysis was not in the *Planning* state. This issue has been resolved. (TS ID: 324487)
- Previously, when you accessed System/Node, What-If, Deviation, Cause, Consequence, and Safeguard records using the Record Manager, you could modify the values in these records although the related Hazards Analysis was not in the *Planning* state. This issue has been resolved. Now, in the Record Manager, you can only view these records; you cannot modify them. (TS ID: 324205)
- Previously, in a What-If Analysis, when you copied a System/Node, the associated What-Ifs, Causes, Consequences, Safeguards, and Risk Assessments were not copied. This issue has been resolved. Now, when you copy a System/Node in a What-If analysis, the associated records are also copied. (TS ID: 322099)

Inspection Management

- Previously, the **Inspection Management Overview** page took a long time to load and appeared to stop responding 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: 329156)
- Previously, in Inspection Management, if you created a new Security User whose first and last name were the same first and last name as another Security User in the GE Digital APM system, the users' names were duplicated and you could not distinguish between the two. This issue has been resolved. Now, to provide consistency across drop-down name values, fields in the Inspection Management module that reference Security Users now use the following format: <Last Name>, <First Name> ~ <User Name> (e.g., Smith, Jane ~ jsmith). (TS ID: 327991)
- Previously, when viewing Checklist Inspections in the Inspection Data section, if

you selected the Reports button () to access a report, an error occurred. This issue has been resolved. Now, to access an Inspection Report, you can select the More button (), and then select **Print** on the menu. (TS ID: 327118)

- 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: 322928)

Layers of Protection Analysis (LOPA)

- Previously, when you accessed the records associated with a LOPA using the Record Manager, you could modify the values in these records although the related LOPA was not in the *Planning* state. This issue has been resolved. Now, in the Record Manager, you can only view these records; you cannot modify them. (TS ID: 325098)


Life Cycle Cost Analysis (LCC)

- Previously, when you accessed the **LCC Overview** page, only the USD currency symbol (\$) appeared in the charts. This issue has been resolved. Now, no currency symbols appear in the charts. (TS ID: 325164)

Management of Change (MOC)

- Previously, in the Application Settings for MOC, when you unlinked a Question from a Checklist, the Question was deleted from the database. This issue has been resolved. Now, the Question that you unlink is not deleted from the database. (TS ID: 324195)

Metrics and Scorecards

- Previously, in a Scorecard, when you filtered the KPIs based on their performance and then updated their measures by selecting the Update Scorecard KPIs button (), the KPIs disappeared. This issue has been resolved. (TS ID: 322006)

- Previously, if the system running the Report Designer had a non-English user culture setting, you could not open a report from the Catalog. This issue has been resolved. (TS ID: 323892)

Operations Manager

Strategy Macros

- Previously, when you scheduled a strategy macro run, the strategy macro run failed. This issue has been resolved. (TS ID: 329180)

Systems and Tags


- Previously, when you viewed the reading history for OPC Tag readings in the **Systems and Tags** page, the grid displayed the oldest reading first. This issue has been resolved. Now, the grid displays the most recent reading first. (TS ID: 321893)
- Previously, when you pointed to the line plotted on the graph in the **Trend Chart** workspace accessed from the **Systems and Tags** page, datapoints appeared as undefined. This issue has been resolved. Now, when you point to the line plotted on the graph, datapoints appear with details of the reading. (TS ID: 330075)

Policy Designer

- Previously, if you mapped an output from an Entity node to a Comparison node, and *Field* was selected in the **Display** list on the Comparison node **Properties** window, the field caption did not appear on the node in the policy diagram. This issue has been resolved. Now, the field caption appears on the Comparison node. (TS ID: 323821)
- 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 ID: 322998)
- Previously, if the **Data Type** list was set to *Decimal* on the **Properties** window of a Constant, Return, or a Point Value node, if you entered a value containing

characters other than numbers or valid radix and decimal separators, the expected notification message did not always appear. This issue has been resolved. Now, if you enter an invalid decimal value, a notification appears indicating that the value needs to be modified. (TS ID: 318909)

- Previously, if the **Timestamp** section in the **Properties** window of an Add Value to Health Indicator node contained no value, the AHI Service did not update the status of the Health Indicator when the policy was executed, and there was no indication that an error had occurred. This issue has been resolved. Now, if the Add Value to Health Indicator node does not contain a value in the **Timestamp** section, the policy execution fails and an error appears in the policy execution log. (TS ID: 312991)
- Previously, for policies that contained an OPC Tag node configured to trigger the execution of the policy, restarting the PDI service caused duplicate policy executions. This issue has been resolved. Policies now execute as expected.

 **Note:** Policies containing OPC Tag nodes may also be triggered when the OPC Tag record is synchronized with the process historian and when readings are added or modified.

(TS ID: 324133)

- Previously, negative numbers in policy nodes and execution results appeared in scientific format. This issue has been resolved. (TS ID: 321943)
- Previously, if you removed a column from a query that was used in a Collection Filter node, the corresponding field in the Collection Filter **Properties** window appeared blank. This is expected behavior. However, no errors appeared in this scenario, and the Collection Filter node did not work as expected because no query field was specified. This issue has been resolved. Now, in this scenario, the empty field is outlined in red, and a notification appears, indicating that necessary information is missing. (TS ID: 258794)
- Previously, if you mapped a value of Boolean type to one input of an Add or Subtract node, the other input field was incorrectly set to a Boolean input, and the notification messages were not as expected. This issue has been resolved. Now, in this scenario, you are prompted to select valid inputs for the node type, the input field to which a Boolean value is mapped is highlighted with a red border to indicate that it is not valid, and notification messages appear as expected. (TS ID: 321528)
- Previously, when you attempted to save a policy with name longer than 50

characters, the following generic error message appeared: *Failed to save policy*. This issue has been resolved. Now, when you attempt to save a policy with a name longer than 50 characters, a more specific error message appears. (TS ID: 288600)

Process Data Integration

- 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 GE Digital APM server. This issue has been resolved. Now, messages are placed only in queues that are used by licensed modules. (TS ID: 320778)

Production Loss Analysis (PLA)

- Previously, for a user with a European culture setting, after you entered 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: 330464)
- 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 correctly displayed as *(UTC+3:00)*. (TS ID: 328184)
- 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: 327715)
- Previously, when you attempted to import costs from a Production Event with no start date, you could modify the default start date and the costs could not be imported. This issue has been resolved. (TS ID: 327491)
- Previously, if you created a Production Plan from a Plan Template, when you selected **Finish**, an error occurred. This issue has been resolved. (TS ID: 323925)
- Previously, when you accessed the Asset Hierarchy without the correct Production Loss Analysis Security Group assignments, an error message appeared, indicating that an internal server error occurred. This issue has been resolved. (TS ID: 323916)

- Previously, when you added or deleted a Production Loss in the **Production Data** workspace, the Unaccounted Loss color indicator did not change. This issue has been resolved. (TS ID: 323152)
- Previously, when you reconciled losses using the Internet Explorer browser, the **Impact Code** and **Event Code** boxes displayed the wrong end of the text string, making it difficult to see which option was selected. This issue has been resolved. (TS ID: 321028)



Recommendations

- Previously, users with only View permissions for recommendations were able to delete recommendations. This issue has been resolved. Now, users with only View permissions for recommendations cannot delete recommendations. (TS ID: 223878)

Record Manager


- Previously, if you deleted a large number of records (i.e., 1000 or more records), the system became unresponsive for several minutes. This issue has been resolved. (TS ID: 324112)

Reliability Analytics

- Previously, when you accessed the report for a Production Analysis without a Process Reliability Line, only the cover page appeared. This issue has been resolved. (TS ID: 330649)
- Previously, in the **Reliability Automation Rules Builder** window, on the **Choose an Asset Family** screen, when you selected the Show Family Hierarchy icon () , an error occurred. This issue has been resolved. (TS ID: 328223)
- Previously, in the **Reliability Growth** section on the **RA Overview** page, the **Analysis Start Date** and **Analysis End Date** columns were blank for new analyses. This issue has been resolved. (TS ID: 325326)
- Previously, when you modified the Distribution Type of a detail plot on the **Probability Distribution** page using the **Distribution Options** button () , you could not modify the data points in the data editor unless you first refreshed the browser tab. This issue has been resolved. (TS ID: 325165)


- Previously, when you accessed the Asset Hierarchy without the correct Reliability Analytics Security Group assignments, an error message appeared, indicating that an internal server error occurred. This issue has been resolved. (TS ID: 323913)
- Previously, when you extrapolated a Reliability Growth Analysis based on continuous operating time (COT) that contains event dates to any date beyond the last event date, an error occurred. This issue has been resolved. (TS ID: 323464)
- Previously, in System Reliability, you could not modify or delete existing resources. This issue has been resolved. The **Analysis Summary** workspace now contains a **Resources** section in which you can create, update, and delete resources. (TS ID: 323339)

Reports

- Previously, when you created reports using the Report Designer and then selected the **Deploy** button, the reports did not deploy. This issue has been resolved. (TS ID: 321813)
- Previously, on mobile or tablet devices, when you downloaded the reports in any format using the Export drop down menu button (), an error message appeared. This issue has been resolved. (TS ID: 323935)
- Previously, when you selected a report in the Catalog search results, the report did not appear. This issue has been resolved. (TS ID: 323140)
- Previously, on the **Data Source** page, if you had provided the application server name in the **Data Source Host** box, the Report Designer did not list the data source for that application server. This issue has been resolved. (TS ID: 326625)

Risk Based Inspection (RBI)

RBI 580 and RBI 581

- Previously, if you accessed the **Corrosion Loop Overview** section, then 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: 324974)

- Previously, on the **Risk Based Inspection Overview** page, in the **Assets** section, if you selected the check box corresponding to an asset, navigated away from the page, and then accessed the page again, the Calculate (📊) and Change States (🔗) buttons were still enabled although the check box was cleared, and you could calculate or change the state of the analyses in the previously selected asset. This issue has been resolved. Now, you must select the check box again to calculate or change the state of analyses in the asset. (TS ID: 323970)

RBI 580

- Previously, in an RBI PRD Criticality Analysis, the values in the following fields were sometimes calculated incorrectly.

Field	Family
Probability of Leak	Criticality Leak Deg. Mech. Eval.
Probability of Failure on Demand	Criticality Over Pressure Deg. Mech. Eval.

This issue has been resolved. (TS ID: 326761)

RBI 581

- Previously, the value in the *Total POF With Plan* field in an RBI Degradation Mechanisms record was used to plot the probability of failure on the default risk matrix. This issue has been resolved. Now, the value in the *Total POF - RBI Date* field is used to plot the probability of failure. To facilitate this fix, the baseline RBI Risk Matrix Mapping records have been updated. (TS ID: 322997)

Root Cause Analysis

- Previously, when a user with view-only privileges accessed the **Event Diagram** workspace and paused the mouse pointer over a node connector, the option to delete the connector appeared. This issue has been resolved. (TS ID: 329648)
- Previously, when you generated a Comprehensive Analysis Report from a Root Cause Analysis whose state was *In Progress*, the Date Published value generated was 01/01/1001. This issue has been resolved. Now, the Comprehensive Analysis Report Date Published value is blank when the Root Cause Analysis state is *In Progress*. (TS ID: 325865)
- Previously, when you accessed the Asset Hierarchy without the correct Root

Causes Analysis Security Group assignments, an error message appeared, indicating that an internal server error occurred. This issue has been resolved. (TS ID: 323919)

- Previously, a Security User associated with the MI PROACT Administrator or MI PROACT Team Member Security Group who did not have Delete permissions to the RCA Analysis family could not unlink assets from an analysis. This issue has been resolved. (TS ID: 287181)

Rounds Data Collection

- Previously, when you accessed a Route with more than 2 Lubrication Requirements, you could not view checkpoints after the second Lubrication Requirement. This issue has been resolved. In addition, performance when loading a Route has been enhanced. (TS ID: 327169)
- Previously, you could not open Reference Documents when using Rounds Data Collection on a mobile device. This issue has been resolved. (TS ID: 324965)
- Previously, when you accessed a Route with three or more levels that contained an inactive conditional Measurement Location or Lubrication Requirement in the second level, the Route datasheet did not load. This issue has been resolved. (TS ID: 324664)
- Previously, the **State** column was incorrectly labeled **Status** in the **Recommendations** section of the **Rounds Data Collection Overview** page. This issue has been resolved. (TS ID: 329077)
- Previously, when you took readings on a Route with the **Only Incomplete Checkpoints** filter applied and closed the Route before marking it done, the readings were not saved. This issue has been resolved. (TS ID: 329379)
- Previously, when you scanned a tag to unlock a measurement location using an Ecom i.roc handheld device with a low frequency reader, the device stopped responding. This issue has been resolved. (TS ID: 323702)
- Previously, when you enabled state functionality and selected the **Show States on Datasheets** check box in the **State Configuration** section for the Operator Rounds Recommendation family, the state control menu did not appear on the **Recommendation** window (i.e., the window that appears when you select a Recommendation ID in the **Recommendation** section of the **Rounds Data Collection**

Overview page). This issue has been resolved. (TS ID: 313056)

Rounds Designer

- Previously, after you assigned users to a Route in Rounds Designer, the **User Count** column on the **Rounds Designer Overview** page did not update. This issue has been resolved. (TS ID: 325383)
- Previously, when you added an ML Template Group to a checkpoint Template in a new Route, the contents of the Select Value field did not appear on the second and subsequent conditional nodes. This issue has been resolved. (TS ID: 324809)
- Previously, when a value for the Related Asset ID field was provided in the Measurement Location worksheet, the Rounds Routes Data Loader did not link assets to checkpoints as expected. This issue has been resolved. (TS ID: 324389)
- Previously, due to caching, it may have taken up to 30 minutes before newly created Categories and Allowable Values appeared in the relevant drop-down lists on the Measurement Location and Measurement Location Template datasheets. This issue has been resolved. Now, newly created values appear within 30 seconds. (TS ID: 323717)
- Previously, when you uploaded records using the Rounds Data Loader, the number of records processed was calculated incorrectly. This issue has been resolved. (TS ID: 312039)
- Previously, when you added a new Checkpoint Condition to a Route when a Checkpoint Condition was already selected, an error message appeared, warning you that unsaved changes would be lost. This issue has been resolved. An error message no longer appears in this scenario. (TS ID: 287834)
- Previously, if you attempted to add a Template Group containing more than 100 Measurement Location Templates to a Route, the action timed out, and the Template Group was not added. This issue has been resolved. Now, performance is improved, and you can add a Template Group containing up to 150 Measurement Location Templates. (TS ID: 295365)

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: 328185)

SIS Management

- Previously, when you accessed the records associated with an SIL Analysis using the Record Manager, you could modify the values in these records although the related SIL Analysis was not in the *Planning* state. This issue has been resolved. Now, in the Record Manager, you can only view these records; you cannot modify them. (TS ID: 325097)
- 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.

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 and its revision family in GE Digital 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 GE Digital 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.

(TS ID: 325009)

Thickness Monitoring

- Previously, when using the Bulk Analysis feature in Thickness Monitoring, if validation errors occurred, the process completed but the progress bar on the log never reached 100%. This issue has been resolved. Now, even if validation errors occur, the progress bar reaches 100% and the errors appear in the log. (TS ID: 329533)
- Previously, for users whose culture setting was French, an error occurred when

accessing the **Thickness Monitoring Overview** page, and the page did not load. This issue has been resolved. (TS ID: 327588)

- Previously, when using a datalogger to send measurements to Thickness Monitoring, if your local time zone was behind UTC (e.g., Mexico City: UTC -6), measurements logged with your datalogger device could not be saved to the TML and an error occurred. This issue has been resolved. (TS ID: 327021)
- Previously, when you created a Thickness Measurement Location (TML) under a TML Group rather than directly under the asset, the TML was not shown in the count of TMLs on the **Assets** page of the Asset Hierarchy. This issue has been resolved. (TS ID: 326657)

Tools

Catalog

- Previously, if you saved a Catalog item whose description was longer than 255 characters, an error message indicating that the description exceeded the maximum allowable length appeared; however, after selecting **Cancel**, the Description field for the Catalog item displayed the excess characters, suggesting that the excess characters had been saved when they had not. This issue has been resolved. Now, after selecting **Cancel**, the value in the Description field is refreshed to display a maximum of 255 characters. (TS ID: 329182)
- Previously, when you renamed a Catalog item, such as a query, both the old name and the new name appeared in separate rows in the associated list of recently accessed Catalog items, such as the list of queries on the **Query** page. This issue has been resolved. Now, only the new name for a renamed Catalog item appears in the associated list of recently accessed Catalog items. (TS ID: 321032)
- Previously, on the **Save As** window, you could not enter more than 100 characters in the **Description** box, despite the field having a character limit of 255. This issue has been resolved. Now, you can enter up to 255 characters in the **Description** box on the **Save As** window. (TS ID: 319132)
- Previously, when saving a file, the default save location was not always the last save location selected, which forced users saving multiple files to modify the save location each time. This issue has been resolved. Now, the default save location is the last location where the user saved a file. If the user has not saved a file, the default location is the personal folder. (TS ID: 318116)

Datasets

- Previously, when you exported a dataset to an Excel file, if the dataset included a Date field, the file was created, but the Date column was blank. Also, if the dataset included a Numeric field, the file could not be opened in Excel. These issues have been resolved. (TS ID: 323004)

Data Loaders

- Previously, when you used the Equipment and Functional Location Data Loader to load a large number of Functional Location records (e.g., 50,000), the process took an excessively long time to complete. This issue has been resolved. Performance when loading a large number of records using the Equipment and Functional Location Data Loader has been significantly improved. (TS ID: 323905)

Graphs

- Previously, when selecting a data source for a new Graph from the Catalog using a mobile device, after you selected a value on the **Enter Parameters Window**, multiple prompts appeared and the selected query did not appear in the **Query Path** box. This issue has been resolved. Now, the selected query appears as expected. (TS ID: 323861)
- Previously, on the **Graph Result** page, in the **Data Source** workspace, if you modified a query or created a new query to populate a pie graph, the query data did not automatically display on that pie graph. To view the changes, you were required to select the Show Data button (☰) to see the new content. This issue has been resolved. Now, when you modify or add a query for a pie graph, the contents of that query are displayed on the pie graph as expected. (TS ID: 326732)

Maps

- Previously, for users assigned to the Everyone Security Group, if you selected **Browse** on the **Maps** page and then selected a map, the map that you selected did not appear. This issue occurred because the proper permissions were not attributed to the Everyone User Security Group. This issue has been resolved. (TS ID: 324011)

Queries

- Previously, when you exported a query result set to a file, if the query contained a column whose **Include** check box was cleared, any columns whose **Display** check

boxes were cleared were incorrectly included in the file. This issue has been resolved. (TS ID: 326489)

- Previously, if you attempted to export a query result set to a file when the Numeric field or Date field contained a hyperlink, an error occurred. This issue has been resolved. (TS ID: 325487)
- Previously, if you attempted to export a query result set to a dataset when the Numeric field contained a hyperlink, an error occurred. This issue has been resolved. (TS ID: 304413)
- Previously, when you exported a query result set to a dataset, if the query was formatted and included a null date value or null numeric value, an error occurred and the dataset was not created. This issue has been resolved. (TS IDs: 325348, 300243)
- Previously, if you selected the **Formatted** and **Limit Results to Top** check boxes in the **Design** workspace for a query, then entered a value in the **Limit Results to Top** box, and then ran the query, a number of records greater than the entered value appeared in the **Results** workspace. This issue has been resolved. (TS ID: 323195)
- Previously, when you exported a query result set to a file, if the query included the *Top* parameter to limit the result set to a subset of records, the file that was created contained all records. This issue has been resolved. (TS IDs: 323134, 321921)
- Previously, if a user with a culture setting that formats dates as *dd/mm/yyyy* attempted to export to an Excel file a query result set containing a date with a day value less than 13, the file was created, but dates with day values less than 13 appeared in the incorrect *mm/dd/yyyy* format. This issue has been resolved. (TS ID: 322419)
- Previously, if a user with a culture setting that formats dates as *dd/mm/yyyy* attempted to export to a dataset a query result set containing a date with a day value greater than 12, an error occurred and the dataset was not exported. This issue has been resolved. (TS ID: 300290)
- Previously, if you selected a default value for a date prompt on the **Expression Builder** window, an error occurred. This issue has been resolved. (TS ID: 312756)
- Previously, if the Query Privilege for a Security User was set to Restricted By

Timeout Limit and you ran a query that exceeded the timeout limit, no error message appeared and the query could be saved. This issue has been resolved. Now, if you attempt to save a query that has exceeded the timeout limit, an error message appears, indicating that the query cannot be saved. (TS ID: 305409)

- Previously, if you accessed GE Digital APM via the Internet Explorer browser and had an open page for an Append query, then selected the tab for a different page, and then reselected the tab for the Append query, the **Append Query – Target Source** window appeared, despite the target source having been selected previously. This issue has been resolved. (TS ID: 301967)
- Previously, when exporting a query result set to a dataset, if you attempted to save the dataset in a way that would overwrite an existing dataset, an error occurred. This issue has been resolved. Now, you can overwrite an existing dataset when exporting a query result set to a dataset. (TS ID: 300249)
- Previously, if you accessed GE Digital APM via the Internet Explorer browser, created a Crosstab query, and then ran the query, an error occurred and values in the **Crosstab** row were cleared. This issue has been resolved. (TS ID: 294157)

Obsolete Features - V4.3.0.1.0

The following items are no longer used in GE Digital APM.

Calibration Management

- The **Calibration Closed** check box has been removed from the Calibration data-sheet. Now, you can close a Calibration by changing the state from *Pending Approval* to *Approved* via the State Management feature. (TS ID: 323102)
- The System Code Table MI_CALIBRATION_STRATEGIES has been deprecated. In the System Code Table MI_CALIBRATION_REFERENCES, the following system codes have been deprecated:
 - CALIBRATION ANALOG STRATEGIES
 - CALIBRATION DISCRETE STRATEGIES
 - FUNCTIONAL TEST STRATEGIES

Now, you do not need to define a new Calibration Strategy for automated calibration and Beamex CMX calibration software in the System Code Tables. (TS ID: 322060)

Deferred Features - V4.3.0.1.0

The following features are not available in GE Digital APM V4.3.0.1.0, but are planned for a future release.

Asset Criticality Analysis (ACA)

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

Asset Health Manager (AHM)

- 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 (ASI)

- Creating implementation roles and filtering the WMI tree by each role. (TS ID: 243573)
- Using a link to manage the object list records that are linked to maintenance item records represented by the selected node. (TS ID: 238443)
- The option to exclude child items when copying Work Management Items. (TS ID: 147790)
- Managing asset and action assignments when executing copy/paste operations. (TS ID: 144110)
- 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)

Asset Strategy Management (ASM)


- Migrating strategies between databases.

Asset Strategy Optimization (ASO)

- Optimizing Actions. (TS ID: 112125)

Calibration Management

- Automated Calibration using Beamex and Meriam documenting process calibrators.

 **Note:** Automated calibration using Beamex documenting process calibrators, Beamex MC5 and Beamex MC6, is supported using Beamex Business Bridge (B3) Version 1 (1.2.0) software for Beamex CMX Calibration software.

(TS IDs: 61319, 61334)

Configuration Manager

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

Generation Availability Analysis (GAA)

- 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)

- 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
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 IDs: 234410, 234310)

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

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

- The following Security Groups in GAA:
 - MI Generation Management Forecast
 - MI Generation Management Nameplate
 - MI Generation Management Security

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

GE Analytics

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

Metrics and Scorecards

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

Operations Manager

Systems and Tags

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

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

- 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 (RCA)

- 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)

- Standard APM State Management functionality in RCA. (TS ID: 63432)

Rounds

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

Thickness Monitoring

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

Tools

Graphs

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

Release Notes - V4.3.0.1.1

Family Management

- Previously, after you entered a second value in a required, multi-value field, the message *This field is required* appeared below the field and you could not save the record. If you removed this value or entered a third value, the message no longer appeared. This issue has been resolved. Now, this message only appears below required fields when they are blank. (TS ID: 340452)

Inspection Management

- Previously, if you selected the Create-recommendation button (📄) on the upper-right corner of the **Inspection Overview** page to access a Full Inspection or General Inspection report and you did not have an active NR13 license, an error occurred. This issue has been resolved. Now, the Create-recommendation button (📄) is only enabled if you have an active NR13 license. If you do not have an active NR13 license, you should select the Options button (⋮) in the report workspace and use the print option to access the reports. (TS ID: 341969)

Installation and Upgrade

- Previously, if you upgraded GE Digital APM from a version of Meridium Enterprise APM prior to V4.0.0.0, State Assignments may not have been applied to all records as expected. This issue has been resolved. (TS ID: 341696)

Queries

- Previously, you were unable to configure a query prompt to return all records when a prompt was left blank. This issue has been resolved. Now, when you leave the prompt blank, it is populated with the wildcard character % and all records are returned. (TS ID: 341762)

Rounds Designer

- Previously, when you accessed a Route, navigated to a Measurement Location, and selected the **Readings** tab, the Readings may have taken a long time to appear or may not have been displayed if there were a large number of Readings linked to the Measurement Location. This issue has been resolved. Now, when you select the **Readings** tab, only readings from the past 30 days are displayed. (TS ID: 341613)

Release Notes - V4.3.0.1.2

Production Loss Analysis (PLA)

- Previously, on the **PLA Administrator** page, in the **Codes** workspace, if the number of Production Event Codes was 25, then duplicate records appeared in the list. This issue has been resolved. (ID: TFS346218)
- In the **Production Data** workspace, when assigning an OEE Code that contains a child OEE Code to a Production Loss, you must now select the child OEE Code. In addition, on the Production Event datasheet, when assigning a Production Event Code that contains a child Production Event Code to a Production Event, you must now select the child Production Event Code. (ID: TFS346155)
- Previously, when you uploaded the Production Loss Analysis (PLA) Data Loader workbook, if Daylight Saving Time (DST) began in the time span between the Start Time and End Time specified on the ProductionPlan worksheet, then the Production Plan was not created. This issue has been resolved. (ID: TFS346097)
- Previously, on the **PLA Overview** page, in the **Production Plans** and **Production Data** sections, the lists were sorted alphabetically based on the Production Unit. This issue has been resolved. Now, the lists are sorted chronologically, with the latest on top. (ID: TFS346096)
- Previously, on the **PLA Overview** page, in the **PLANNED PRODUCTION VS LOSSES** section, the actual production values appeared as bars instead of lines in the graph. In addition, the legend did not appear. These issues have been resolved. (ID: TFS346095)
- Previously, when a member of the MI Production Loss Accounting Manager Security Group selected the **Production Analyses** tab on the **PLA Overview** page, an error occurred. This issue has been resolved. Now, the **Production Analyses** tab appears only if the user has an active *Reliability Manager* license and is a member of at least one of the following Security Groups:
 - MI Reliability Administrator
 - MI Reliability User
 - MI Reliability Viewer(ID: TFS346094)
- Previously, when you accessed the **Codes** workspace, the list of Production Event

Codes appeared incorrectly. This issue has been resolved. (ID: TFS344203)

Queries

- Previously, joins against non-family tables did not appear correctly in the **Design** workspaces of queries and produced invalid query results. This issue has been resolved. (ID: TFS346068)
- Previously, if a query contained logical OR criteria, then, in the **Design** workspace for the query, the information displayed when hovering over any expression in the column displayed the value stored in the first line of the criteria rather than the appropriate hyperlink value. This issue has been resolved. (ID: TFS345896)
- Previously, if you created a query containing a date prompt and you selected a default value for the date prompt, when the query ran, the default date did not appear in the prompt as expected. This issue has been resolved. (ID: TFS345626)

Recommendation Management

- Previously, when you searched Performance Recommendations, a maximum of 1,000 records appeared on the **Recommendation Management** page, even when there were more than 1,000 records. This issue has been resolved. Now, all records appear when more than 1,000 Performance Recommendations are returned. (ID: TFS345353)

Record Manager

- Previously, when using GE Digital APM in Internet Explorer, you could scroll through the text in the **Text Editor** text box of a datasheet using only the scroll bar. This issue has been resolved. Now, you can use both the scroll bar and the mouse wheel to scroll through the text in the **Text Editor** text box. (ID: TFS346017)

Rounds Designer

- Previously, when you selected the **Readings** tab to access readings for a Measurement Location, only readings from the past 30 days appeared. This issue has been resolved. Now, the 50 most recent readings appear. (ID: TFS345683)

Search

- Previously, if you attempted to access a Functional Location record via global search, an Object expected error may have occurred. This issue has been resolved. (ID: TFS346504)
- Previously, in global search, symbols such as hyphens included in search strings were disregarded (e.g., a search for *P-6* would not return a record whose name was *P-656*). This issue has been resolved. (ID: TFS346056)
- Previously, if the value in the Query Location field of a Conditional Alert ended in a backslash (\), the Conditional Alert could not be accessed as expected. This issue has been resolved. (ID: TFS345684)

Release Notes - V4.3.0.1.3

Foundation

Record Manager

- Previously, when you sent a Conditional Alert email, the web query link was unresponsive. This issue has been resolved. The server parameter for the MI_ProcessConditionalAlerts rule has been corrected. (ID: TFS352031)
- Previously, execution of the strategy rule for Conditional Alerts could fetch expired user data, causing an error to occur. This issue has been resolved. (ID: TFS351482)
- Previously, selecting the **Send Web Query** check box for a Conditional Alert resulted in an error, and, even if the check box was cleared, each email sent using the Conditional Alert included a link to the query. This issue has been resolved. Now, emails sent using a Conditional Alert will include a link to the query only if the **Send Web Query** check box for the Conditional Alert is selected. (ID: TFS351478)
- Previously, when you used the Variable Distribution list to add recipients to a Conditional Alert, the email was not sent. This issue has been resolved. (ID: TFS351476)
- Previously, when you used Conditional Alerts to send automatic Conditional Alerts via email, the column headings displayed the field ID instead of the field caption in the email. This issue has been resolved. (ID: TFS348640)

Search

- Previously, if you searched the Asset Hierarchy, results were only returned if you were logged in as a Super User. This issue has been resolved. (ID: TFS349136)

Production Loss Analysis (PLA)

- Previously, in the **Codes** workspace or in the **Production Event Code** box on the Production Event datasheet, when you scrolled down the list of child Production Event Codes, duplicate values appeared in the list. This issue has been resolved. (ID: TFS347918)

Queries

- Previously, if you accessed a subquery via the **Design** workspace of its parent query, fields in the subquery were incorrectly replaced with fields from the parent query, and the join properties of the subquery were incorrectly modified. This issue has been resolved. (ID: TFS351267)
- Previously, when you exported query results as an Excel file, an error may have occurred when you tried to open the file. This issue has been resolved. (ID: TFS349137)

Rounds

- Previously, when you had a large number of checkpoints in a non-compliant state, non-compliant readings were not created as expected. This issue has been resolved. (ID: TFS352028)
- Previously, when you attempted to install Operator Rounds on a Windows Mobile Device, the installation did not work as expected. This issue has been resolved. (ID: TFS349339)

Rules Editor

- Previously, if you attempted to compile the rules for a custom project that referenced a project in the Client folder in the Rules Library, the project failed to compile. This issue has been resolved. (ID: TFS349793)

Release Notes - V4.3.0.1.4

Inspection Management

- Previously, you could not generate an inspection report by selecting the **Generate Report** button on the page for an Inspection Task. This issue has been resolved. (ID: TFS356883)
- Previously, if you updated an inspection with a Completion Date that was earlier than the Last Date of the inspection task, the Last Date was not updated. This issue has been resolved. Now, the Last Date is updated with the most recent Completion Date of an inspection whose **Inspection Task Complete** check box selected. (ID: TFS356256)

Rounds

Rounds Data Collection

- Previously, if your database contained a very large number of readings, when you attempted to download routes to the Windows APM Mobile Framework, the synchronization process failed. This issue has been resolved. (ID: TFS356608)
- Previously, on a Windows Mobile Device, if your Culture setting was defined as anything other than English, when you marked a Route done, the Route History record was not updated. This issue has been resolved. (ID: TFS356606)
- Previously, on a Windows Mobile Device, all checkpoint due dates appeared in UTC rather than the local time for the device. This issue has been resolved. (ID: TFS356605)
- Previously, on a Windows Mobile Device, Routes were not downloaded to the device when expected. This issue has been resolved. (ID: TFS355478)

Thickness Monitoring

- Previously, if the value in the Controlling Corrosion Rate field in an Asset Corrosion Analysis was less than zero, when you attempted to renew a TML, an error occurred. This issue has been resolved. (ID: TFS355691)

Tools

Reports

- Previously, when using GE Digital APM in Google Chrome 65.0.3325.181, if you attempted to open an SSRS report that contained spaces in its name or catalog path, the report did not open. This issue has been resolved. (ID: TFS353935)

Release Notes - V4.3.0.1.5

Configuration Manager

Family Management

- Previously, in the **Manage ID Template** window, while entering a delimiter for a field in the **Delimiter** box, if you entered a space, the space did not appear in the **New ID Template** value in the following scenarios:
 - Space is the only character in the entered value.
 - Space is the first or last character in the entered value.

This issue has been resolved. (ID: TFS366189)

Foundation

Record Manager

- Previously, when you used Conditional Alerts to send automatic Conditional Alerts via email, the column headings displayed the field ID instead of the field caption in the email. This issue has been resolved. (ID: TFS366686)

Inspection Management

- Previously, when you deleted an Inspection, Inspection Task, or Work Pack, although a message appeared, indicating that the record was successfully deleted, the busy indicator remained on the page. Also, the record did not appear to have been deleted until you refreshed the page. These issues have been resolved. (ID: TFS365489)

Production Loss Analysis

- Previously, for a manual Production Plan, in the **Plan Details** workspace, if you added a row using the **Insert Row Above** or the **Insert Row Below** option, in the **Production Data** workspace, a value did not appear in the **MSHR** column for the Production Data record corresponding to the new row. This issue has been resolved. (ID: TFS371690)
- Previously, for users whose Culture setting required the comma to be used as the decimal separator (for example, German), the following issues occurred:

- In a Production Data record, you could not enter a comma in the Actual and Short Range Plan fields.
- In the **Production Data** workspace, the value that appeared in the **MSHR** column was incorrect if the value in the Maximum Sustained Hourly Rate field in the corresponding Production Profile record was a decimal fraction.
- In a Production Data record, the value in the Short Range field was incorrect if the corresponding planned production amount in the **Plan Details** workspace was a decimal fraction.

These issues have been resolved. (ID: TFS370859)

Release Notes - V4.3.0.2.0

The following release notes are available for V4.3.0.2.0:

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

You can also view the APM Connect release notes.

Enhancements - V4.3.0.2.0

The following enhancements have been made in V4.3.0.2.0.

Application Settings

Production Loss Analysis (PLA)

- In PLA Application Settings, you can now set the number of decimal places to be displayed in the **Planned** column in the **Production Summary** workspace. You can use the **Quantity Precision** box in the **Settings** window to set this value. (TS ID: 322450)

Asset Strategy Management

- The Asset Strategy Management and Asset Strategy Management Templates data loaders have been enhanced to improve data import performance. (TS IDs: 324804, 323905)

Foundation

- When you attempt to access more than eight tabs in the GE Digital APM application, a message now appears with a list of tab names. This allows you to identify and close unused tabs. After you close an unused tab, the tab that you attempted to access opens automatically. (TS ID: 323926)
- On module overview pages throughout GE Digital APM, when you select the Filter icon (⌵), and then select an item in the **Assets** list, the name of the selected asset is displayed below the Filter icon (⌵). Also, on the **Enter Parameter Values** window, the **Asset Hierarchy** box has been renamed **Asset**. (TS ID: 318094)

GE Analytics

- GE Analytics now supports multiple DAQs with Enterprise Impact V17.1 Service Pack 1. (TS IDs: 294103, 309134)

Metrics and Scorecards

- The Work History cube can now be processed using an Oracle database. (TS ID: 329454)

Operations Manager

Risk Matrix


- The Financial Impact field has been added to the Risk Rank family. This field, whose caption appears as *Unmitigated Financial Impact* on a Risk Matrix, displays the estimated monetary value attributed to a specific Risk category. To facilitate this feature, the Show Financial Impact field has been added to the Risk Matrix family. To view the Unmitigated Financial Risk value on a Risk Matrix, you can select the **Show Financial Impact** check box on a datasheet from the Risk Matrix family. (TS ID: 327115)

Strategy Macros

- You can now create multiple scheduled runs for a single strategy macro, as well as select the Security User whose account will be used to execute each scheduled run. This Security User selection allows you to apply the site filtering associated with a particular user to a scheduled strategy macro run. (TS ID: 328848)

Policy Designer

- You can now schedule a policy to be executed as frequently as every minute.

 **Note:** To avoid performance impacts, policies should not be scheduled to execute at a high frequency in most circumstances.

(TS ID: 332238)

Production Loss Analysis (PLA)

- To prevent child level OEE codes from being missed when assigning codes to Production Losses in the **Production Data** workspace, you are now required to select the child level OEE code. In addition, when assigning a code to a Production Event, you are now required to select the child level Production Event Code. (TS ID: 331685)
- Throughout the PLA module, loading indicators have been added to indicate when data is being loaded. (TS ID: 331232)

Reliability Analytics

- The View More Details button (***) has been added to all of the Reliability Analytics data editors to allow you to identify the cause of each failure in the plots that plot failures. (TS ID: 308554)

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

- The following data loaders have been enhanced to improve data import performance:
 - Failure Modes and Effects Analysis (FMEA) Data Loader
 - Failure Modes and Effects Analysis (FMEA) Asset Templates Data Loader
 - Failure Modes and Effects Analysis (FMEA) Analysis Templates Data Loader
 - Reliability Centered Maintenance (RCM) Data Loader

(TS IDs: 324804, 323905)

Risk Based Inspection (RBI)

RBI 580 and RBI 581

- In RBI Criticality Analysis, RBI Pipeline Analysis, and RBI 581 Risk Analysis records, the following fields will now be validated when the analysis is calculated, such that:
 - The value in the Operating Pressure field is less than or equal to the value in the Design Pressure field.
 - The value in the Operating Temperature field is less than or equal to the value in the Design Temperature field.

(TS ID: 285479)

RBI 580

- The following fields have been added to the Criticality Calculator Ext. Corr. Deg. Mech. Eval. datasheet:
 - Number of Penetrations
 - Number of Terminations
 - Number of Vertical Runs

The values in these fields, along with the value in the Total Piping Length field in the RBI Analysis, are used for calculating the complexity of the piping circuit, which impacts the value in the Age field of the piping component. (TS ID: 327553)

- You can now use the Risk Based Inspection (RBI) 580 Data Loader to update an analysis that is in the *Created* state. (TS ID: 328036)
- The following Damage Mechanism Evaluations will now be validated during calculation of RBI Criticality Analysis, such that the date in the Inspection Date field is equal to or later than the date in the Date in Service field:
 - Criticality Ext. Corr. Deg. Mech. Eval
 - Criticality Env. Crack. Deg. Mech. Eval
 - Criticality Int. Corr. Deg. Mech. Eval(TS ID: 285479)

RBI 581

- You can now use the Risk Based Inspection (RBI) 581 Data Loader to update an analysis that is in the *Created* state. (TS ID: 323930)

Root Cause Analysis

- When linking assets to a Root Cause Analysis, the **Asset Finder** window now includes the Add All Children button (+) to enable you to link parent and children assets. (TS ID: 334362)


Rounds Data Collection

- When you access a Route for which you want to provide readings, the cursor now automatically appears in the **Reading** box in each checkpoint workspace when you navigate between checkpoints. This allows you to enter data more easily. (TS ID: 329568)
- You can now select an asset in the **Route Map** pane to view a list of the checkpoints and associated **Reading** boxes in the workspace for the selected asset. Using this list view, you can enter or select readings on a Route more easily. Additionally, the Create Recommendation button (≡) appears next to the box for the checkpoint when you provide readings, which allows you to quickly create recommendations for checkpoints in the list view. (TS ID: 330286, 332696)

Rounds Designer

- The **Route History** and **Readings** grids now use standard query grids instead of a bulk data forms to display data. This enhancement significantly improves

performance. In addition, you can now select a column heading to sort data, and you can select a row in the grid to edit or delete the row. (TS IDs: 325381, 324101)



- You can now modify the Next Date values for all checkpoints with defined schedules on a Route at the same time. To facilitate this enhancement, when you select  in the Route pane, the option **Reset Checkpoint Next Date** now appears in the drop-down menu. (TS ID: 280060)

Security Manager

LDAP

- Now, during LDAP synchronization, if the *culture* LDAP Field value for a user does not match a valid GE Digital APM culture value, the culture *en-US* will be assigned to the user. If the *timeZone* LDAP Field value for a user does not match a valid GE Digital APM time zone value, the default time zone specified on the **User Defaults** page will be assigned to the user. (TS ID: 330264)
- When configuring LDAP integration, you can now specify that the GE Digital APM login password for users should never expire. To facilitate this enhancement, a new check box, **Enable Password Change**, has been added to the **LDAP Manager** page. By default, this check box is selected. If you clear the check box and run the LDAP synchronization, then you will not be prompted to change the password for logging in to GE Digital APM. (TS ID: 336415)

Thickness Monitoring

- If a Thickness Measurement Location (TML) is categorized as *Growth* or *High Loss*, you can now compare the latest measurement value with the previous measurement value. To facilitate this enhancement, in the **Analysis Overview** workspace, in the **TMLs** section, the grid now includes the **Near Measurement Value** column. For each TML in the grid, this column displays the measurement value of the Thickness Measurement created before the latest one. (TS ID: 335009)
- The **TM Quick View** page has been enhanced to improve usability. To facilitate this enhancement, the following changes have been made:
 - The Filter button () has been moved to the upper-left corner of the page.
 - The boxes to specify the date range that previously appeared on the page have been removed. To filter data, you can now select the Filter button () and then specify the date range.

- The TMLs for which measurements have *not* been taken now appear along with the TMLs which contain at least one measurement.

(TS IDs: 331498, 329951)


- On various pages in Thickness Monitoring, the list of TMLs are now displayed in a results grid, which provides the following features:
 - Selecting multiple TMLs
 - Filtering search results
 - Changing the order of the columns
 - Pagination

(TS ID: 330283)

- In the **Measurement Data Entry** workspace, you can now enter multiple readings in the **Readings** box by specifying the values separated by semi-colon. In addition, the **Readings** window now appears only if you select the More Options button (•••) in the **Readings** box. (TS ID: 325497)

- Color-coding is now applied to:
 - The list of Thickness Measurement Locations (TMLs) in the **TMLs** section in the **Analysis Overview** workspace.
 - The list of Thickness Measurements in the **Measurements** section in the workspace for the TML.

Color-coding indicators are applied based on whether the TMLs and Thickness Measurements meet certain criteria, as described in the following table:

Category	Visual Cue	Purpose
Below T-Min		Indicates that the latest measurement value is less than the minimum thickness.
Overdue		Indicates that the scheduled next inspection date or the projected T-Min date of a TML is overdue. This category is not applicable to Thickness Measurements.
High Loss		Indicates that the percentage of decrease between the latest measurement and the previous one is greater than a specified value.
Growth		Indicates that there is an increase in the latest measurement value from the previous one.
Normal		Indicates that the measurement is normal.

In addition, you can now:

- View the number of records that belong to each category.
- Filter the records based on category.
- Specify the high loss value that should be considered for the High Loss category. To facilitate this enhancement, on the **TM Admin Preferences** page, in the **Global Preferences** workspace, the **High Loss** box has been added.

(TS ID: 70840)

Tools

Queries

- On the **Expression Builder** window, the **Ignore Time** check box has been added to the **Prompt Settings** section. When creating a prompt of the data type *Date/Time*, if you select the **Ignore Time** check box, the prompt requires only a date to be selected. If you do not select this check box, the prompt requires both a date and time to be selected. (TS ID: 311761)

Resolved Issues - V4.3.0.2.0

The following issues existed in one or more previous releases and have been resolved in V4.3.0.2.0.

Application Settings

Asset Health Manager

- Previously, the **Include All Matching** and **Exclude All Matching** buttons did not operate as expected in all cases when the source records filtered included Measurement Locations in which the **Do not create health indicator** check box was selected. This issue has been resolved. Now, when you select either of these buttons, Health Indicator records are included or excluded as expected. (TS ID: 330904)

Asset Criticality Analysis (ACA)

- Previously, in the **Analysis Summary** workspace, in the **Overview** section of a system, when you selected the Show Data button (☰) and attempted to delete an equipment, an error occurred. This issue has been resolved. (TS ID: 327222)
- Previously, if you selected the Asset Criticality number on the page for an Alert or Case, the information that appeared was related to system-level asset criticality rather than asset-level criticality. This issue has been resolved. (TS ID: 318788)

Asset Health Manager

- Previously, when viewing the **Trend Chart** workspace for multiple Health Indicators with OPC Tag sources, on the **Filters** menu, the **Apply** button was disabled and would only be enabled if you selected the **Reset** button. This issue has been resolved. Now, on the **Filters** menu, the **Apply** button is enabled by default. (TS ID: 329227)
- Previously, in a trend chart for multiple Health Indicators with sources other than OPC Tags, on the **Events Displayed on Trend** window, if you selected all event types, an error occurred. This issue has been resolved. (TS ID: 329580)
- Previously, if you selected multiple health indicators on the **Health Summary** page, in some scenarios the Create Recommendation button (📌) was disabled. This issue has been resolved. Now, if at least one health indicator is selected, you

can create a recommendation. As a result of this change, you can now create a recommendation for one or more health indicators that have a status of Normal. (TS ID: 243624)

- Previously, in Oracle databases, in certain scenarios, the **Health Summary** page did not load for assets with a health indicator that had an acknowledgment note. This issue has been resolved. (TS ID: 335264)

Calibration Management

- Previously, the *Beamex Send Query Display* query required two parameters, Template ID and Equipment Technical Number, while GE Digital APM provided only one parameter, Template ID. Due to this, you could not send data to the Beamex CMX calibration software. This issue has been resolved. Now, the *Beamex Send Query Display* query requires only the Template ID parameter. (TS ID: 331414)
- Previously, when you generated a Calibration report, the number of decimal places in the values in the Calibration report and the Calibration record did not match. This issue has been resolved. (TS ID: 330630)
- Previously, when you saved a Calibration record for an automated calibration, in the **Calibration** section, in the **Calibration Results** subsection, you could modify the values. This issue has been resolved. Now, in the **Calibration Results** subsection, you cannot modify the values. (TS ID: 330606)

Documentation

- Previously, in the GE Digital APM Supported Software and Devices topic and the Thickness Monitoring System Requirements topic, the names for Olympus Thickness Gages did not include the alternate brand name *Panametrics*. This issue has been resolved. Now, the device names are documented as follows:

Old Name	New Name
Olympus 37DL Plus Ultrasonic Thickness Gage	Olympus (Panametrics) 37DL Plus Ultrasonic Thickness Gage
Olympus 38DL Plus Ultrasonic Thickness Gage	Olympus (Panametrics) 38DL Plus Ultrasonic Thickness Gage

(TS ID: 331924)

Foundation

- Previously, you could access GE Digital APM with two different data sources on the same web browser simultaneously. Due to this, when you created a record in one of the data sources, the same record was created in the other data source. This issue has been resolved. Now, when you access GE Digital APM with two different data sources on the same web browser simultaneously, you will be logged out of the first instance of GE Digital APM automatically. (TS ID: 334830)
- Previously, when using GE Digital APM in Google Chrome 60.0.3112.101, if you searched for a record, selected the **View in Bulk Data Form** button (📄) in the global search results, and then selected the check box corresponding to an item, the **Open** and **Cancel** buttons disappeared. This issue has been resolved. (TS ID: 332216)
- Previously, on the **Dashboard** page, in the Calendar widget, when you selected a category to view the events in the day view and then switched to the week or month view, all the events were displayed irrespective of the category selected. This issue has been resolved. (TS ID: 331571)

Asset Groups

- Previously, on the **Assets** page, when you accessed an Asset group that had more than 500 assets, there was no indication that the assets were being loaded. This issue has been resolved. Now, while the assets are being loaded, a loading indicator (🌀) appears. (TS ID: 328704)

Bulk Data Form

- Previously, when you printed a Bulk Data Form that had more than 10 records, the values in some drop-down lists were not displayed in the printed file. This issue has been resolved. (TS ID: 337884)

Record Manager

- Previously, on Android devices, when you attempted to download a Microsoft PowerPoint reference document from Record Manager, an error occurred. This issue has been resolved. (TS ID: 335631)
- Previously, in the **Detail** section of a Master Detail datasheet, you could add, delete, link, or unlink records, despite *not* having the appropriate datasheet-level privileges as specified on the **Datasheet Builder** page. This issue has been resolved. (TS ID: 332768)

- Previously, when linking records, if you excluded a family from the search, records that had been unlinked from the excluded family did not appear in the search results. This issue has been resolved. Now, in this scenario, all records that are not currently linked to the excluded family appear in the search results. (TS ID: 331656)
- Previously, when you attempted to add a new datasheet to the Equipment with Characteristics datasheet, an error occurred. This issue has been resolved. (TS ID: 312737)
- Previously, when you created a record belonging to a family that contained a field with a valid values list whose source was a system code table with no values, an error occurred. This issue has been resolved. (TS ID: 304343)

GE Digital APM Mobile Application

- Previously, when you installed the GE Digital APM mobile application on a Microsoft Surface Pro, a permission denied error occurred preventing installation. This issue has been resolved. (TS ID: 330592)

Inspection Management

- Previously, using the Inspection Management (IM) Assets or the Inspection Management (IM) Functional Location Data Loader, if you created an archived Inspection that was linked to an Inspection Recommendation, the values in the Author Name and Reviewer Name fields in the Inspection Recommendation were not populated. In addition, the Inspection Document Status field was populated with the value *Draft* instead of *Approved*. (TS ID: 337320)
- Previously, if the first and last names of two users matched, then two seemingly identical entries appeared in the following fields:

Fields	Family
Witnessed By (Shell) Witnessed By (Tube)	Pressure Test Inspection
Witnessed By (Shell) Witnessed By (Tube)	Pressure Test Sub-Inspection

This issue has been resolved. To facilitate this fix, in addition to the first and last names of a user, now the user ID also appears in the aforementioned fields. (TS

ID: 331499)

Layers of Protection Analysis (LOPA)

- Previously, in Internet Explorer, when you accessed GE Digital APM with Oracle database, the first Safeguard that you created for a LOPA did not appear in the list of Safeguards in the **Safeguards and IPLs** section. This issue has been resolved. (TS ID: 336431)
- Previously, when using GE Digital APM with Oracle database V12.1.0.1, if you accessed the **LOPA Overview** page, an error occurred. This issue has been resolved. To facilitate this fix, the following dashboard queries for LOPA have been modified:
 - LOPA_ASSET_CONTEXT_APPROVED
 - LOPA_ASSET_CONTEXT_UNDER_REVIEW

(TS ID: 333405)

Metrics and Scorecards

- Previously, when you created a KPI, some of the hierarchy members selected through the **Add to Hierarchy Members** window did not appear in the **Hierarchy Member** box. This issue has been resolved. (TS ID: 228952)
- Previously, when you deployed the Work History cube, an error message appeared. This issue has been resolved. (TS ID: 336030)

Operations

Risk Matrix

- Previously, when the **Use Aliases?** check box was selected on a Risk Matrix configuration, the risk category sections on that Risk Matrix incorrectly displayed dashes when no value was present. This issue has been resolved. Now, if the risk assessment has not been completed, then no value is displayed on the risk category sections of the Risk Matrix. (TS ID: 334675)
- Previously, if the **Use Aliases?** check box was selected and if you included the Risk Threshold variable (i.e., {t}) in the **Alias Format Mask** box on the Risk Matrix Layout datasheet, the correct risk threshold alias did not appear on the Risk Matrix. This issue has been resolved. (TS ID: 334674)

- Previously, on the Risk Matrix Layout datasheet, if the **Use Maximum Risk Rank** check box was cleared, the **Use Aliases?** check box was incorrectly enabled. However, selecting the **Use Aliases?** check box when the **Use Maximum Risk Rank** check box was cleared resulted in an invalid configuration of the Risk Matrix. This issue has been resolved. Now, if the **Use Maximum Risk Rank** check box is cleared, the **Use Aliases?** check box is disabled. (TS ID: 332602)
- Previously, on the Risk Matrix Layout datasheet, the selected option in the **Use Maximum Risk Rank** check box was ignored and the **Total Risk** value did not correctly mirror the value contained in the maximum unmitigated risk cell of that Risk Matrix. This issue has been resolved. Now, the **Total Risk** value displays the same value as the maximum unmitigated risk cell. (TS ID: 332570)

Schedule Logs

- Previously, if a user with a Russian time zone scheduled a job to load data, an error occurred and the scheduled job remained in the **Waiting** stage. This issue has been resolved. (TS ID: 309127)


Systems and Tags

- Previously, when you unlinked an OPC Tag from an asset, the health indicator was not removed. Consequently, if you linked it again, no health indicator was added because one already existed. This issue has been resolved. Now, health indicators are added and removed as expected. (TS ID: 324613)

Policies

Family Policies

- Previously, in a family policy with two Current Entity nodes, when you navigated from the **Design** workspace to the **Details** workspace, an error occurred. This issue has been resolved. (TS ID: 331344)
- If you upgraded your GE Digital APM database to V4.3.0.0.0 or V4.3.0.1.0, if you modified the Close Description field value in a Policy Event record, the Close Description field value changed to *Closed*. This issue, caused by a Before Update family policy erroneously delivered to the baseline GE Digital APM database, may have caused unexpected changes to, or loss of, data.

 **Note:** The fix for this issue rectifies only baseline (i.e., unmodified) policies. If you manually reconfigured the Before Update family policy for the Policy Event family, the V4.3.0.2.0 upgrade will not remove the policy. Please consult GE Digital for further assistance.

(TS ID: 337424)

Policy Designer

- Previously, if you entered an invalid value in the **End Time** box in the **Properties** window for a Close Event node, no indication that there was an error appeared. This issue has been resolved. Now, in this scenario, the **End Time** box is outlined in red, and an error message appears in the notification bar. (TS ID: 275355)
- Previously, when an input node supplied a null end time value for a Close Event node at execution, no indication that there was an error appeared. This issue has been resolved. Now, in this scenario, when the policy is executed, an error message appears in the **Properties** window and the **Execution History** section. (TS ID: 331299)
- Previously, in the **Collection** section of the **Properties** window for a Collection Filter node, if you selected an invalid value from the drop-down menu (i.e., a single value), a notification appeared, directing you to enter a value, but the notification remained when you selected a valid collection. This issue has been resolved. Now, if you select a single value, the **Collection** box is outlined in red; a notification appears, directing you to select a collection; and, when you select a valid collection, the notification is removed. (TS ID: 329609)
- Previously, when an error message related to a Constant node appeared, if you deleted the Constant node, the error message remained. This issue has been resolved. Now, if you delete the node that caused the error, the error message is removed as expected. (TS ID: 322376)
- Previously, updates made to Policy Event records that were created by a policy, and thus contained a hyperlink to the policy instance, could not be saved. This issue has been resolved. (TS ID: 238841)
- Previously, if the Data Type field was set to Data Frame on the **Properties** window of a Constant node, if you incorrectly mapped multiple inputs to the node, only one notification message appeared. This issue has been resolved. Now, if you incorrectly map multiple inputs to a Constant node with a Data Frame Data Type, all the expected notification messages appear. (TS ID: 321527)

- Previously, Info level messages were not recorded in the Policy Execution Service log files stored in **C:\ProgramData\Meridium\Logs**. This issue has been resolved. Now, Info level messages are recorded as expected. (TS ID: 321942)
- Previously, if you copied values from a policy instance to an *Ad Hoc* validation, then modified information in the **Details** workspace, and then saved the policy, multiple incorrect, duplicate values appeared in the **Validation** pane, and an error occurred when you selected the **Instances** tab. This issue has been resolved. (TS ID: 322367)
- Previously, in Oracle databases, on the **Policy Designer Overview** page, when you selected the **Execution Result Summary** column in the **Active Policies** or **Inactive Policies** grid, an error occurred. This issue has been resolved. To facilitate this fix, you can no longer sort the grid by the **Execution Result Summary** column. (TS ID: 242558)
- Previously, the **Execution History** pane did not display more than 100 execution summaries. This issue has been resolved. You can now view all execution summaries for a policy via the **Execution History** pane. To facilitate this fix, the **Execution History** pane loads 50 execution summaries at a time, and you can navigate to additional summaries using a drop-down list box. (TS ID: 335595)
- Previously, in the **Properties** window for an Edit Entity node, no boxes appeared in the **Field** and **Value** columns unless you manually added them or you selected a value in the **Family ID** list and then saved and reloaded the policy. In addition, if you saved and attempted to reload the policy with no value selected in the **Family ID** list, the policy did not reload. This issue has been resolved. Now, boxes appear in the **Field** and **Value** columns by default, and you can reload a policy with an Edit Entity node with no value selected in the **Family ID** list. (TS IDs: 337891, 337896)
- Previously, for a policy with a User node, if you searched for a user in the **Instances** pane, no results appeared. This issue has been resolved. (TS ID: 338136)
- Previously, if **Result Set** was selected in the **Entity Key(s)** section of the **Properties** window for an Edit Entity node, if you replaced **Result Set** with another value and then saved and attempted to reload the policy, the policy did not load. This issue has been resolved. (TS ID: 338071)

Production Loss Analysis (PLA)

- Previously, when a member of the MI Production Loss Accounting Manager security group selected the **Production Analyses** tab on the **PLA Overview** page, an error occurred. This issue has been resolved. Now, the **Production Analyses** tab does not appear on the **PLA Overview** page unless a user has an active *Reliability Manager* license and is a member of a Reliability Analytics security group. (TS ID: 337874)
- Previously, when you accessed the **PLA Overview** page, the line representing Actual production values incorrectly appeared as a bar in the **Planned Production vs. Losses** section and the legend did not appear. This issue has been resolved. Now, the Actual production values appear as a line and the legend appears by default. (TS ID: 337624)
- Previously, when you upgraded your database from a version prior to V4.3.0.0.0 to V4.3.0.0.0 or V4.3.0.1.0, the Product selections in the Plan Templates were not retained. This issue has been resolved. (TS ID: 337502)
- Previously, when you accessed the **PLA Overview** page, the **Planned Production vs Losses** section contained data from Production Plans and Production Plan Templates. This issue has been resolved. Now, the **Planned Production vs Losses** section on the **PLA Overview** page contains only Production Plan data. (TS ID: 337373)
- Previously, when you modified hierarchy selections on the **Assets** page while the **PLA Overview** page was open in another tab, the chart sections on the **PLA Overview** page did not update with the newly selected asset's data. This issue has been resolved. Now, in this scenario, all of the content on the **PLA Overview** page displays modified hierarchy selections made on the **Assets** page. (TS ID: 334679)
- Previously, Production Plans were displayed and sorted alphabetically by Production Unit, from oldest to newest when viewed on the **Production Plan** or **Production Data** tabs. This issue has been resolved. Now, Production Plans are displayed chronologically, with the newest on top, when viewed on the Production tabs. (TS ID: 331680)
- Previously, when you uploaded the Production Loss Analysis Data Loader workbook, if Daylight Saving Time (DST) began in the time span between the Start Time and End Time specified in the workbook, then the Production Plan was not created. This issue has been resolved. (TS ID: 330733)
- Previously, when creating a Plan Template, if you selected the **Finish** button more

than once, multiple Plan Templates with the same name were created. This issue has been resolved. (TS ID: 330407)

- Previously, if you selected the **Finish** button more than once when saving a new Production Plan that was created using a Plan Template, an error message appeared. This issue has been resolved. Now, a busy indicator is displayed when you select the **Finish** button. (TS ID: 330154)

Reliability Analytics

- Previously, in the **Action** section of a System Scenario, when you selected the **Show Mitigated Risks** button for an action type that does not modify the Failure Distribution or Consequence, the **New TTF Distribution** and **New Failure Consequence** columns appeared even though they were not applicable. This issue has been resolved. The **New TTF Distribution** and **New Failure Consequence** columns now appear only for the action types that modify the Failure Distribution or Consequence. In addition, values in these columns now appear as *Yes* or *No* rather than as *True* and *False*. (TS ID: 330584)
- Previously, if you were a member of the MI Reliability User Security Group who did not have Delete privileges for the Spares Analysis family, but who did have View, Update, and Insert privileges, you could delete Spares Analyses but could not delete analysis components. This issue has been resolved. Now, a user with these privileges can delete analysis components, but cannot delete analyses. (TS ID: 328335)

Risk Based Inspection (RBI)

RBI 580 and RBI 581

- Previously, if you linked a TML Group to an RBI Component in Thickness Monitoring, and then accessed the **Manage TML Groups** window for the RBI Component in Risk Based Inspection, the check box corresponding to the TML Group was not automatically selected. This issue also occurred if you unlinked a TML Group. This issue has been resolved. (TS ID: 322958)

RBI 580

- Previously, in Oracle databases, when you attempted to generate the Asset Risk report, an error occurred. This issue has been resolved. (TS ID: 331163)

Rounds Data Collection


- Previously, when you entered a reading on a device connected to a network, it could sometimes take as long as ten seconds for the reading to be automatically saved. This issue has been resolved. (TS ID: 330285)
- Previously, when you selected the Asset ID at the top of the workspace for the selected asset or checkpoint, the **Health Summary** page for that asset did not appear. This issue has been resolved. (TS ID: 332235)
- Previously, on a small-screen device with Android version 4.4, when you selected the **Assigned Routes** and **Recommendations** tabs, an error occurred. This issue has been resolved. (TS ID: 331709)
- Previously, when the **RDC Overview** page was refreshed, *In Progress* Routes were automatically marked done. This issue has been resolved. (TS ID: 332241)
- Previously, when you used Rounds Data Collection in the GE Digital APM mobile application, if you opened the keyboard in the workspace for a Measurement Location, then modified the device orientation, and then collapsed the keyboard, the keyboard collapsed, but the screen space it occupied remained unused by the application. This issue has been resolved. Now, when you collapse the keyboard, the application occupies the full screen of the mobile device. (TS ID: 213993)

Rounds Designer

- Previously, when you added a checkpoint to a Checkpoint Condition that was a successor to another Checkpoint Condition, the Asset ID of the checkpoint was not automatically populated. This issue has been resolved. (TS ID: 330074)
- Previously, when you entered a long value in a field in a Lubrication Requirement record, the value was not displayed correctly. This issue has been resolved. (TS ID: 329499)
- Previously, when you viewed the Route History for a Route, the grid displayed the oldest Route History record first. This issue has been resolved. Now, the grid displays the most recent Route History record first. (TS ID: 293132)
- Previously, in the **Reports** section of the **RD Overview** page, when you selected an Overdue Measurement Location or Overdue Lubrication Requirement report, the report did not display content as expected. This issue has been resolved. (TS ID: 321742)

Thickness Monitoring

- Previously, on the **TM Quick View** page, when you attempted to sort TMLs in the grid based on columns that contained numeric values or dates, the TMLs were not sorted correctly. This issue has been resolved.

 **Note:** You cannot sort TMLs based on the columns that contain consolidated measurements for each month (e.g., the **Jan 2017** column) because they can contain multiple values.

(TS ID: 332453)

- Previously, if the first and last names of two users matched, then two seemingly identical entries appeared in the Measurement Taken By field in a Thickness Measurement. This issue has been resolved. To facilitate this fix, in addition to the first and last names of a user, now the user ID also appears in the Measurement Taken By field. (TS ID: 331493)
- Previously, if you performed a bulk analysis on a set of assets, then navigated to the **Schedule Logs** page, and then performed a bulk analysis again on the same set of assets, the progress bar on the **Bulk Analyze** window displayed an incorrect count and duplicate entries of assets, although the calculation was successful. This issue has been resolved. (TS ID: 330084)
- Previously, in the Measurement Value field in a Thickness Measurement, if you entered a value less than 0.0001, an error occurred. This issue has been resolved. (TS ID: 307272)

Tools

Catalog


- Previously, if a member of the MI Foundation Power Security Role saved a Catalog item, the **Integrity** button disappeared from the left navigation menu. This issue has been resolved. (TS ID: 327226)

Graphs

- Previously, in the **Settings** pane of a pie graph, in the **Series** section, the following issues existed:
 - In V4.2.0.0 or later, when you selected the **Hyperlink** check box, the hyperlink check boxes corresponding to each category were not selected. When

you accessed the pie graph again, the hyperlink check boxes were cleared.

- In V4.3.0.1.0, the hyperlink check boxes were not available.

These issues have been resolved. To facilitate this fix, the hyperlink check boxes corresponding to each category have been replaced with the Link icon (). (TS ID: 330822)

Queries

- Previously, when you added a field to a query that was used as a datasource for other queries, the new field did not appear as an available field for use in the other queries. This issue has been resolved. (TS ID: 332911)
- Previously, if you used an expression in conjunction with a Functional Location to create a query prompt, when you ran the query, the values in the column dependent on the query prompt selection did not appear as expected. This issue has been resolved. (TS ID: 329556)

Restored Features - V4.3.0.2.0

The following V3.x features were deferred from previous V4.x releases, but are now available in V4.3.0.2.0.

Thickness Monitoring

- The Color-coding feature is now available. (TS ID: 70840)

Obsolete Features - V4.3.0.2.0

The following items are no longer used in GE Digital APM.

Asset Strategy Implementation (ASI)

- To enhance security, the **Last Updated By** column has been removed from all associated sections of the **ASI Overview** page. Now, the user ID does not appear anywhere on the **ASI Overview** page. (TS ID: 330066)

Asset Strategy Management (ASM)

- To enhance security, the **Last Updated By** column has been removed from all associated sections of the **ASM Overview** page. Now, the user ID does not appear anywhere on the **ASM Overview** page. (TS ID: 330066)

Failure Modes and Effects Analysis (FMEA)

- To enhance security, the **Last Updated By** column has been removed from all associated sections of the **FMEA Overview** page. Now, the user ID does not appear anywhere on the **FMEA Overview** page. (TS ID: 330066)

Reliability Centered Maintenance (RCM)

- To enhance security, the **Last Updated By** column has been removed from all associated sections of the **RCM Overview** page. Now, the user ID does not appear anywhere on the **RCM Overview** page. (TS ID: 330066)

Deferred Features - V4.3.0.2.0

The following features are not available in GE Digital APM V4.3.0.2.0, but are planned for a future release.

Asset Criticality Analysis (ACA)

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

Asset Health Manager (AHM)

- 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 (ASI)

- Creating implementation roles and filtering the WMI tree by each role. (TS ID: 243573)
- Using a link to manage the object list records that are linked to maintenance item records represented by the selected node. (TS ID: 238443)
- The option to exclude child items when copying Work Management Items. (TS ID: 147790)
- Managing asset and action assignments when executing copy/paste operations. (TS ID: 144110)
- 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)

Asset Strategy Management (ASM)


- Migrating strategies between databases.

Asset Strategy Optimization (ASO)

- Optimizing Actions. (TS ID: 112125)

Calibration Management

- Automated Calibration using Beamex and Meriam documenting process calibrators.

 **Note:** Automated calibration using Beamex documenting process calibrators, Beamex MC5 and Beamex MC6, is supported using Beamex Business Bridge (B3) Version 1 (1.2.0) software for Beamex CMX Calibration software.

(TS IDs: 61319, 61334)

Configuration Manager

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

Generation Availability Analysis (GAA)

- 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)

- 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
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 IDs: 234410, 234310)

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

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

- The following Security Groups in GAA:
 - MI Generation Management Forecast
 - MI Generation Management Nameplate
 - MI Generation Management Security

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

GE Analytics

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

Metrics and Scorecards

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

Operations Manager

Systems and Tags

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

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

- 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 (RCA)

- 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)

- Standard APM State Management functionality in RCA. (TS ID: 63432)

Rounds

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

Thickness Monitoring

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

Tools

Graphs

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

Release Notes - V4.3.0.2.2

Asset Health Manager

- Previously, if your time zone was specified as GMT, you could not access the **Asset Health Overview** page, the **Health Summary** page, or the **Trend Chart** workspace. This issue has been resolved. (TS ID: 342360)

Root Cause Analysis

- Previously, in a Logic Tree diagram, when you added multiple Failure Modes to a Failure Event or multiple Hypothesis nodes to a Failure Mode, the nodes overlapped one another and you could not view each node individually. This issue has been resolved. Now, each new node is visible when initially added. (TS ID: 342389)
- In RCA Application Settings, you can now specify the Logic Tree diagram Auto-Arrange settings in the **Default Settings** workspace. You can use the Logic Tree Auto-Arrange options to set this value. You can override the Logic Tree Auto-Arrange setting using the **Auto Arrange** check box on the Logic Tree diagram. (TS ID: 342389)

Release Notes - V4.3.0.2.3

Asset Health Manager

- Previously, if your time zone was specified as GMT, you could not access the **Asset Health Overview** page, the **Health Summary** page, or the **Trend Chart** workspace. This issue has been resolved. (ID: TFS342361)

Rules Editor

- Previously, if you attempted to compile the rules for a custom project that referenced a project in the Client folder in the Rules Library, the project failed to compile. This issue has been resolved. (ID: TFS344484)

Release Notes - V4.3.0.2.4

Asset Strategy Management (ASM)

- Previously, with an active Asset Strategy Management license, you were unable to access the **Action Task Mapping** workspace from the **ASM Admin** page unless you also had active Calibration and Inspection licenses. This issue has been resolved. (ID: TFS345679)

Failure Modes and Effects Analysis (FMEA)

- Previously, when you accessed an asset, the list of Failure Modes could take an excessively long time to appear. This issue has been resolved. (ID: TFS345522)

Inspection Management

- Previously, if you selected the **Print** button () on the upper-right corner of the **Inspection Management Overview** page to access a Full Inspection or General Inspection report and you did not have an active NR13 license, an error occurred. This issue has been resolved. Now, the **Print** button is only enabled if you have an active NR13 license. If you do not have an active NR13 license, you should select the **Options** button () in the report workspace and use the print option to access the reports. (ID: TFS345967)

Recommendation Management

- Previously, if a Security User belonged to only the MI Recommendation Management group, the Asset Health link in the left navigation menu was disabled and he or she could not access recommendations. This issue has been resolved. (ID: TFS345637)

Rounds Data Collection

- Previously, if you selected **Mark Done** on a Route before all readings were saved to the server, the Route History record remained incomplete, and the readings were not uploaded to the server. This issue has been resolved. Now, when you select **Mark Done**, any readings not yet stored on the server are automatically saved to the server before the Route is marked done. (ID: TFS343467)
- Previously, when you entered a reading in the workspace for an asset, the reading did not save to the device immediately. This could result in loss of data. This issue

has been resolved. Now, readings are saved immediately to the device when you select an area outside of the box in which you added the reading (e.g., when you select another box). (ID: TFS346353)

- Previously, when you entered a reading value for a checkpoint, if you entered 0 in the **Reading** box, the reading value was not saved. This issue has been resolved. (ID: TFS342137)

Security Manager

- Previously, when you exported Security Groups and Privileges and you chose a Security Group associated with a module or feature with an inactive license, an error occurred when you opened the Excel file ExportLog. This issue has been resolved. (ID: TFS342970)

Queries

- Previously, when you exported query results as an Excel file, the following issues may have occurred:
 - If your query was not formatted, date and time values in the exported file were incorrect and no longer in the time zone associated with your Security User account.
 - If you selected the **Formatted** check box in the **Design** workspace for the query, decimal marks were represented by decimal points in the exported file, regardless of your culture setting.
 - An error may have occurred when you tried to open the file.

These issues have been resolved. (IDs: TFS343714, TFS343397)

Release Notes - V4.3.0.2.5

Family Management

- You can now show or hide a field in a datasheet. To facilitate this change, the **Hide Field** option has been added to the **Behavior** section of the workspace for a new field and the window that appears when you select a field to modify. (IDs: TFS346838, TFS346837)

Lightweight Directory Access Protocol (LDAP)

- Previously, after synchronizing user records from Microsoft Active Directory, if you had cleared the **Enable Password Change** check box on the **LDAP Manager** page, the users whose passwords would expire within 30 days were prompted to change their passwords. This issue has been resolved. Now, if you clear the **Enable Password Change** check box, the users whose passwords would expire in 30 days will not be prompted to change their passwords after synchronization. (ID: TFS346932)

Risk Based Inspection (RBI 580 and RBI 581)

- After you generate and consolidate RBI Recommendations for an asset, the validation message that appears now includes the following information:
 - The number of recommendations that have been consolidated (i.e., recommendations in the Consolidated state)
 - The number of recommendations that have been created after consolidating (i.e., recommendations in the Proposed state)

For example, if two recommendations have been created by consolidating four recommendations, then the validation message includes the following text: 2 consolidated recommendations have been created from 4 recommendations based on Task Type and Degradation Mechanism.

(ID: TFS346833)

- Previously, on the **Risk Based Inspection Overview** page, while generating RBI Recommendations for analyses associated with all the assets, if you attempted to consolidate the RBI Recommendations, they were not consolidated. This issue has been resolved. (ID: TFS346832)

Same Sign-On (SSO)

- Previously, when you logged in to GE Digital APM using the Same Sign-On service, an error message appeared. This issue has been resolved. (ID: TFS346966)

Release Notes - V4.3.0.2.6

Security Manager

- Previously, after synchronizing user records from Microsoft Active Directory, if you had cleared the **Enable Password Change** check box on the **LDAP Manager** page, the users whose passwords would expire within 30 days were prompted to change their passwords. This issue has been resolved. Now, if you clear the **Enable Password Change** check box, the users whose passwords would expire in 30 days will not be prompted to change their passwords after synchronization. (ID: TFS347549)
- Previously, when you used custom mappings, the LDAP synchronization process did not update the mapped fields. This issue has been resolved. (ID: TFS347432)

Release Notes - V4.3.0.2.7

Asset Strategy Implementation

- Previously, if you configured the rules for a field that used the ValueHelperDialog and then compiled the database, an error occurred. This issue has been resolved. (ID: TFS347807)

Operations

Risk Matrix

- Localized currency symbols have been added to the following fields on the Risk Matrix:
 - Benefit
 - Consequence
 - Financial Risk
 - Maintenance Cost
 - Production Loss
- (ID: TFS348355)

Release Notes - V4.3.0.2.8

APM Connect

EAM Adapters

- Previously, Work History records were unlinked from related Functional Location or Equipment records when only a subset of the related Work History records were loaded with the EAM Adapters to GE Digital APM. This issue has been resolved. Now, Work History records are correctly updated and relationships are maintained. (ID: TFS353288)

Asset Criticality Analysis

- To enhance usability, if you modify the ACA All query, the numbers displayed in the tabs in the **ACA Overview** page now reflect the results of the modified query. (ID: TFS352665)
- Previously, when linking Equipment or Functional Location records to an ACA System, the selected Equipment or Functional Location records were erroneously added to a different ACA System than the ACA System that was selected. This issue has been resolved. (ID: TFS352189)

Asset Strategy Implementation

- To enhance usability, if you modify the ASI Overview Filter Query, the numbers displayed in the tabs in the **ASI Overview** page now reflect the results of the modified query. (ID: TFS352665)
- The SAP import feature for ASI has been enhanced to allow for customization. When importing items from an external SAP system, you can now modify the import process to include custom fields or to execute custom logic. (ID: TFS302117)

Asset Strategy Management

- To enhance usability, if you modify the ASM – Filter Query, the numbers displayed in the tabs in the **ASM Overview** page now reflect the results of the modified query. (ID: TFS352665)

Failure Modes and Effects Analysis (FMEA)

- To enhance usability, if you modify the FMEA Overview Filter Query, the numbers displayed in the tabs in the **FMEA Overview** page now reflect the results of the modified query. (ID: TFS352665)

Life Cycle Cost Analysis

- To enhance usability, if you modify the LCC Page Filter query, the numbers displayed in the tabs in the **LCC Overview** page now reflect the results of the modified query. (ID: TFS352666)

Reliability Analytics

- Previously, when you extrapolated a plot in Reliability Growth with an extrapolate date or time set before the analysis end date or time, the page did not respond until it was refreshed. This issue has been resolved. (ID: TFS353267)
- To enhance usability, if you modify the RASPageFilter query, the numbers displayed in the tabs in the **RA Overview** page now reflect the results of the modified query. (ID: TFS352666)

Reliability Centered Maintenance (RCM)

- To enhance usability, if you modify the RCM Overview Filter Query, the numbers displayed in the tabs in the **RCM Overview** page now reflect the results of the modified query. (ID: TFS352665)

Root Cause Analysis (RCA)

- To enhance usability, if you modify either of the following queries, the numbers displayed in the tabs in the **RCA Overview** page now reflect the results of the modified query:
 - TileQueryInProgress
 - TileQueryTemplate(ID: TFS352666)

Release Notes - V4.3.0.2.9

Asset Criticality Analysis

- Previously, if a member of the MI APM Viewer Security Role accessed an existing ACA Analysis, an error occurred. This issue has been resolved. (ID: TFS356743)

Asset Strategy Implementation

- Using the **Asset Strategy Implementation Preferences** workspace in the **Asset Strategy Implementation Admin** page, you can now configure the Import from SAP feature to utilize custom SAP Function Modules for Maintenance Plans, Maintenance Items, Tasks Lists, and Notifications. (ID: TFS356129)

Root Cause Analysis

- Only RCA Team Members and members of the MI PROACT Administrator Security Group are now allowed to modify RCA Analyses that are In Progress and to create Failure Events for analyses. (ID: TFS356964)

Tools

Reports

- Previously, when using GE Digital APM in Google Chrome 65.0.3325.181, if you attempted to open an SSRS report that contained spaces in its name or catalog path, the report did not open. This issue has been resolved. (ID: TFS353934)

Release Notes - V4.3.0.2.10

Asset Strategy Implementation

- Using the **Work Management Item Definitions** workspace in the **Asset Strategy Implementation Admin** page, you can now configure the Import from SAP feature to return specific fields in the form of columnar data in:
 - The **SAP Item(s)** section of the Asset Strategy Builder (SAP Work Management).
 - The subsequent import of the Asset Strategy Builder (SAP Work Management).

(ID: TFS361435)

Release Notes - V4.3.0.2.11

APM Connect

EAM Adapters

- A performance improvement has been made to enable large Work History jobs to run more efficiently. (ID: TFS361246)

Risk Matrix

- Previously, in the **Financial** tab of a Risk Matrix, if the cell corresponding to either the Maintenance Cost or the Production Loss field was empty and you selected that empty cell, the value in the Consequence field was improperly modified. This issue has been resolved. (ID: TFS363011)

Security Manager

Lightweight Directory Access Protocol (LDAP)

- Previously, during LDAP synchronization, the Security role was not synchronized for some Security Users even though the role existed in GE Digital APM. This issue has been resolved. (ID: TFS338786)

Release Notes - V4.3.0.2.12

Asset Strategy Implementation

- When using the Import Task List from SAP feature, ASI now employs the Task List Function Module defined in the **Asset Strategy Implementation Preferences** workspace. Additionally, when importing a Task List from custom SAP Function Modules, ASI now uses the Task List WMI Definition Configuration Mappings that are defined in the **Work Management Item Definitions** workspace of the **Asset Strategy Implementation Admin** page. (ID: TFS366193)
- You can now link a single task list in SAP to multiple maintenance items from the **ASI Package** page by selecting the Add button (+), and then selecting **Task List from SAP**. (ID: TFS366192)
- You can now import a General Task List from the root of the WMI tree in the **ASI Package** page. Previously, you could only import a General Task List from the context of an existing maintenance item. (ID: TFS366190)

Metrics and Reports

SQL Server Reporting Services (SSRS)

- Previously, if the time zone of the operating system that runs the Report Designer was set to a Russian time zone, and when you attempted to open a report from the Catalog folder of the Report Designer, an error occurred. This issue has been resolved. (ID: TFS365800)

Operations

Process Data Integration

- Previously, you could not run the Process Data Integration (PDI) service using HTTP Secure (HTTPS). This issue has been resolved. Now, you can run the PDI service using HTTPS along with the HyperText Transfer Protocol (HTTP). To enable this capability, you must copy MeridiumAppSettings.xml to your PDI server and modify the value of key baseUrl to use the https mime type. (ID: TFS366248)

Security Manager

Lightweight Directory Access Protocol (LDAP)

- Previously, during an LDAP synchronization, if the letter case of the user ID of a Security User stored in the GE Digital APM database did not match the letter case of the user ID of the same Security User in Microsoft Active Directory, an error occurred. This issue has been resolved. (ID: TFS365907)

Release Notes - V4.3.0.2.13

Asset Strategy Implementation

- Previously, in both the Equipment and Functional Location Task List workflows, no asterisk appeared as the default Maintenance Strategy value. This issue has been resolved. (ID: TFS371005)
- To enable customization, in the **Asset Strategy Implementation Admin** page, in the **Asset Strategy Implementation Preferences** workspace, the following new preferences have been added to enable custom function modules in SAP:
 - Maintenance Plan Detail Function Module
 - Maintenance Item Detail Function Module
 - Task List Detail Function Module
 - Notification Detail Function Module(ID: TFS368299)

Inspection Management

- Previously, if you used a tablet with low-resolution to access Inspection Management, pages other than the **Inspection Management Overview** did not load. This issue has been resolved. You can now use a low-resolution tablet to view and download offline inspections in Inspection Management for use in Inspection Field Data Collection. (ID: TFS370513)

Release Notes - V4.3.0.3.0

The following release notes are available for GE Digital APM V4.3.0.3.0:

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

You can also view the APM Connect release notes.

Enhancements - V4.3.0.3.0

The following enhancements have been made in V4.3.0.3.0.

Application Settings

Rounds Designer

- A new section, **Rounds Default Settings**, has been added to the **Rounds Designer** page in Application Settings. You can use this section to specify whether the Asset ID or the Entity ID is displayed in the workspace for a Route in Rounds Designer and Rounds Data Collection. (ID: TFS317862)

Calibration Management

- If you upgrade from GE Digital APM V4.2.0.0.0 or later, the Calibration Strategy and Device Type fields in a Calibration Profile that had been created before the upgrade are now disabled and populated automatically. In addition, a new field, **Is Upgraded**, is added to the Calibration Profile family, which indicates whether the Calibration Profile was created in a previous version (i.e., before the upgrade). (ID: TFS343956)

Data Loaders

- APM Connect now provides an automatic data loader job that scans a directory for worksheets that it uses to load data. (ID: TFS336143)

Foundation

Family Management

- The **Hide Field** parameter has been added to the **Behavior** section of the **New Field** window or the window that appears when you select a field to edit, which allows you to show or hide the field in a datasheet. (ID: TFS341255)

Record Manager

- To improve data security when you upload a reference document, the file format of the reference document is now restricted to the following types:
 - Microsoft PowerPoint (.ppt, pptx, .pptm, .pps, .ppsx, or .ppsm)
 - Microsoft Word (.doc, .docx, or .docm)

- Microsoft Excel (.xls, .xlsb, .xlsm, .xlsx, or .xlw)
- Text files (.txt, .rtf, or .odt)
- Adobe Portable Document Format (.pdf)
- Images (.jpg, .jpeg, .jpe, .gif, .png, .tif, .vsd, .vss, .vst, .vdx, .vsx, or .bmp)


(ID: TFS331836)

LDAP

- The **Enable Notification When LDAP Job Fails** check box has been added to the **LDAP Manager** page. If the check box is selected and a scheduled LDAP job fails, an email notification will be sent to the selected users or groups. (ID: TFS251780)

Inspection Management

- Using the Inspection Management (IM) Assets and the Inspection Management (IM) Functional Location Data Loaders, you can no longer *update* the value in the Reoccurring field in an Inspection Task. This change is to match the behavior of the Reoccurring field on the Inspection Task datasheet. (ID: TFS341132)
- The Inspection Management (IM) Assets and the Inspection Management (IM) Functional Location Data Loaders have been enhanced. In addition to creating and updating Full Inspections and General Inspections, you can now create or update other types of baseline inspections and custom inspections.

 **Note:** You cannot create or update Checklist Findings using the Data Loaders.

Also, if you have created a custom sub-inspection family, you can now create or update records of that family. To facilitate this enhancement, the following changes have been made to the data loader workbooks:

- The Full_Inspection and General_Inspection worksheets have been replaced with the Inspections worksheet.
- A new worksheet, Custom_Sub_Inspection, has been added.

(IDs: TFS339422, TFS327810)

- In the Inspection Management (IM) Assets and the Inspection Management (IM) Functional Location Data Loaders, a new worksheet, (Picklist), has been added. This worksheet contains a list of valid values that you can enter in each column (as applicable) on the remaining worksheets. (ID: TFS339192)
- On the **Inspection Management Overview** page, in the **Inspection Assets** section,

the list now includes assets that are linked to *all* Inspections or Inspection Tasks at the selected hierarchy level or below. In addition, the count of Inspection Assets that appears on the **Inspection Assets** tab now includes the total number of assets that meet the aforementioned criteria. To facilitate this enhancement, in the catalog folder \\Public\Meridium\Modules\Inspection\Overview Queries:

- The following query has been modified: All Inspection Assets for Unit
- The following query has been added: All Inspection Assets with Inspection Or Task for Unit

(TS ID: 335267)

- On the Asset Hierarchy page, in the **Integrity** section:
 - The count of Inspection Assets now includes the total number of assets that are linked to *all* Inspections or Inspection Tasks at the selected hierarchy level or below.
 - The count of Inspections now includes the total number of Inspections in *all* states at the selected hierarchy level or below.

To facilitate this enhancement, in the catalog folder \\Public\Meridium\Modules\Inspection\Overview Queries:

- The following query has been modified: All Inspection Assets for Unit
- The following queries have been added:
 - All Inspection Assets with Inspection Or Task for Unit
 - All Inspections for Unit and Below

(ID: TFS335267)

- The GE Digital APM documentation for Inspection Management now includes information on how to configure GE Digital APM to create Task Revision records automatically when you create or update a task. (ID: TFS342564)

Production Loss Analysis (PLA)

- You can now set the frequency of a time-based plan template. To facilitate this enhancement, the Template Frequency field has been added to the Production Plan family. (ID: TFS317107)
- The implementation of Production Data Integration, to automatically create Production Data from OPC tags for Production Profiles, has been enhanced to use the PLA Service policy in Policy Designer. This new policy replaces the PLAService.exe. (ID: TFS322038)
- When you create a Production Event, in the Start Date field in the Production

Event datasheet, by default, the date will be set to the current date and the time will be set to 00:00:00. (ID: TFS318376)

- In the **Production Plan Builder** window for sequential plans, the **Sequencing** column is now *view only*, and products are sequenced based on the values entered in the **End Time** column. This enhancement allows you to only enter one value (i.e., an end date) to set the sequence. (ID: TFS308457)

Reliability Analytics

- When labels are shown on one of the following graphs in Reliability Analytics, data-points are now displayed with two decimal places:
 - Probability Plot and CDF Plot in Probability Distribution
 - Probability Plot, Rate Plot, CDF Plot, and PM Optimization Plot in Reliability Distribution
 - MTB <Measurement> Trend graph and <Measurement> Rate Trend graph in Reliability Growth

(ID: TFS341935)

- The Preventative Maintenance (PM) Optimization graph now appears in the Reliability Distribution Analysis report. (ID: TFS332237)
- In a Spares Analysis, in the **Failure Distribution** workspace, failure distributions from analyses that are associated with Spare Applications now contain links in the **Distribution Name** column, from which you can access the associated analysis. (ID: TFS327971)

Risk Based Inspection (RBI)

RBI 581

- The results of an RBI 581 Risk Analysis, which previously appeared on the **RBI Date**, **With Plan**, and **Without Plan** sections on the datasheet, now appear in a single section. To facilitate this enhancement, the **RBI Date**, **With Plan**, and **Without Plan** sections have been replaced with the **Risk Results** section.

The **Risk Results** section also displays the following information:

- SHE consequence of failure and risk category calculated for the RBI Date, Without Plan, and With Plan categories
- Governing Brittle Fracture Damage Factor With Plan

- Governing HTHA Damage Factor With Plan
- Governing Mechanical Fatigue Damage Factor With Plan

To facilitate this enhancement, fields have been added to the RBI 581 Risk Analysis family to store the aforementioned information. In addition, fields to store the financial consequence of failure and risk category information have been added to the RBI 581 Risk Analysis family. They do not, however, appear on the datasheet.

The following fields, which previously appeared in the **With Plan** section on the datasheet, now appear in a new section **Risk Analysis**:


- Target Inspection Date
- Inspection Will Mitigate
- Risk Summary ID
- Risk Summary Description

(ID: TFS342865)

Root Cause Analysis

- RCA Analyses that are In Progress can now be modified only by RCA Team Members and members of the MI PROACT Administrator Security Group. (ID: TFS341833)
- A new tab, **Linked Events**, has been added to the **Analysis Summary** workspace to allow RCA Analyses to be linked to Production Events other than the Event shown in the Event Diagram. When an Asset is linked to an analysis, a Production Event with the same Causing Asset is automatically added to the **Linked Events** section. To facilitate this enhancement, the **Team Charter** tab has been removed and the Charter field has been added to the Definition datasheet. (IDs: TFS335549, TFS340059)

Rounds Data Collection

- You can now select an image in the workspace for a checkpoint to display that image in full screen. (ID: TFS341049)
- You can now filter routes on a small screen device. To facilitate this enhancement, the Filter button () now appears at the top of the **RDC Overview page** on a small screen device. (ID: TFS338113)


Rounds Designer

- You can now create a query that links a checkpoint to its related checkpoint template. To facilitate this enhancement, a new field, Content Guid Char, has been added to the Checkpoint Template, Measurement Location Template, and Lubrication Requirement Template families. (ID: TFS343037)
- In Rounds Designer, you can now select an image to display in the workspace for a checkpoint in Rounds Data Collection. To facilitate this enhancement, a new field, Related Ref Doc Image Key, has been added to the following families:
 - Lubrication Requirement
 - Measurement Location


 **Note:** The image must be a compressed file type (e.g., .png or .jpg), and the size of the image must be less than 100 KB.

(IDs: TFS341048, TFS341047, TFS340636)

- ML Description and LR Description are now required fields in the datasheets for checkpoints and checkpoint templates.

 **Note:** If you have existing checkpoint templates in which the ML Description or LR Description fields are blank, you must enter descriptions in those fields in order to create checkpoints from those templates.

(ID: TFS338400)


- You can now reset or delete all checkpoint schedules on a Route simultaneously. To facilitate this enhancement, when you select the Options button () on a Route, the **Reset Checkpoint Schedules** button now appears. (ID: TFS332387)

Thickness Monitoring

- You can now modify multiple TMLs simultaneously by selecting **Edit in Bulk** in the **TMLs** section. To assist in modifying TMLs in bulk, a new datasheet, TML Bulk Edit, has been added to the Thickness Measurement Location family. (ID: TFS342459)
- On the **TM Dataloggers** page, in the **Send To** section, you can now add columns to the grid by selecting fields from the following families:
 - Asset
 - TML Group
 - Thickness Measurement Location
 - TML Corrosion Analysis

In addition, in the **Send To** and **Receive From** sections, you can:

- View the units of measure of a measurement. To facilitate this enhancement, a new column, **Unit of Measure**, has been added to the grids.
- Search for a record.
- Filter the search results.
- Filter the mappings based on the selected datalogger.
- Change the order of the columns.

 **Note:** You cannot, however, save the order of the columns after you change it.

- Sort the TMLs based on values in any of the columns.
- Navigate through the TMLs using the Pagination feature.

(ID: TFS341862)

- You can now add fields from either the TML Corrosion Analysis family or the Thickness Monitoring Location family to the grid on the **TMLs** section of the **Analysis Overview** page using the new **Choose Columns** window. You can also use the **Choose Columns** window to add or remove optional fields from the TML grid. (ID: TFS330471)

Tools

General Dashboards

- You can now configure a URL that can be used to access a dashboard that is filtered to specific parameters. (ID: TFS334020)

Graphs

- On the **Graphs** page, the **Name** column has been renamed the **View Graph** column and now includes hyperlinks, which allow you to view the graphs in a read-only format. (ID: TFS334074)
- You can now configure a URL that can be used to access a graph that is filtered to specific parameters. (ID: TFS334020)

Queries

- On the **Query** page, the **Name** column has been renamed the **View Query** column and now includes hyperlinks, which allow you to view the queries in a read-only format. (ID: TFS334018)
- You can now configure a URL that can be used to access a query that is filtered to specific parameters. (ID: TFS334020)

Resolved Issues - V4.3.0.3.0

The following issues existed in one or more previous releases and have been resolved in V4.3.0.3.0.

Asset Criticality Analysis

- Previously, if a member of the MI APM Viewer Security Role accessed an existing ACA Analysis, an error occurred. This issue has been resolved. (ID: TFS341544)

Asset Health Manager

- Previously, when viewing the **Risk** section of the **Health Summary** page, if you closed the **Health Summary** page, an error message appeared. This issue has been resolved. (ID: TFS334524)
- Previously, events did not appear on the trend chart. This issue has been resolved. Now, events are displayed on the trend chart based on the selected date range, types, and severities. To facilitate this fix, the trend chart now displays a maximum of 500 events. (ID: TFS338479)

Asset Strategy Implementation

- Previously, you were incorrectly able to manage records within Record Manager for some ASI families. Now, the **Family Managed by Product Module** check box is selected by default to prevent modification to those ASI families. This setting has been applied to the following families:
 - Implementation Package
 - Maintenance Plan
 - Maintenance Item
 - Task List
 - Operation
 - Maintenance Package
 - PRT
 - PRT Template
 - Object List Item
 - Material
 - Notification

Now, when you access these records in Record Manager:

- For the Implementation Package family, you will be redirected from Record Manager to ASI.
- For all other families, the data within Record Manager will appear as read-only.

(ID: TFS340214)

- Previously, if you modified an action in ASM that had been sent to ASI, duplicate entries of that action appeared in the **Actions** section of the **ASI Overview** page. This caused the **ASI Overview** page and the **ASM Overview** page to display different numbers of actions. This issue has been resolved. (ID: TFS338238)

Calibration Management

- Previously, in a Calibration Template, Discrete record, if the value in the Temperature Element Type field was *None*, then you could not link an asset to the associated Calibration Profile. This issue occurred in the following scenarios:
 - You upgraded from GE Digital APM V4.2.0.0.0 or later to V4.3.0.2.0.
 - The template was created before the upgrade.
 - The template was a profile template.

This issue has been resolved. (ID: TFS345165)

- Previously, when you attempted to link a single asset to multiple Profile Templates, and then created multiple Calibration Tasks for all the Profile Templates, only one Calibration Task was created and linked to the last Profile Template. This issue has been resolved. Now, in this scenario, all the Calibration Tasks will be created and linked to each Profile Template. (ID: TFS340381)
- Previously, when sending data to the Beamex CMX calibration software, the value in the Equipment ID field in the Equipment family was being used to populate the value in the DEVICEID field in the equipment and work order XML in the Beamex CMX calibration software. Due to this, if the character length of the value in the DEVICEID field exceeded 65 characters, you could not send data to the Beamex CMX calibration software. This issue has been resolved. Now, the values in the Equipment ID and Equipment Technical Number fields in the Equipment family are used to create the value in the DEVICEID field. (ID: TFS340380)
- Previously, on the Analog Calibration Template datasheet, if the value in the Calibration Type field was *Fluke 74x*, the Primary Input Range Units and Primary Output Range Units fields were populated with unsupported units of measure (UOMs). Due to this, if you selected an unsupported UOM, you could not send data to the Fluke calibrator. This issue has been resolved. Now, the Primary Input

Range Units and Primary Output Range Units fields are populated with the supported UOMs. (ID: TFS335945)

Configuration Manager

- Previously, when you selected the Equipment with Characteristic datasheet for an Equipment record, if you did not have View privileges for the Technical Characteristics family, an error occurred and you could not select another datasheet. This issue has been resolved. To facilitate this fix, the Everyone Security Group now has View privileges for the Technical Characteristics family. (ID: TFS340039)
- Previously, if you deleted a site in GE Digital APM when there were exactly two sites, orphaned records were designated as Global records, but you could not access the option to view Global records. This issue has now been resolved. Now, in this scenario, you can access records that were automatically designated as Global records. (ID: TFS335811)
- Previously, in an Oracle database, when you selected the **Export Untranslated Metadata** button in the **Custom Metadata** section of the **Manage Translations** page, an error message appeared and the untranslated strings were not exported. This issue has been resolved. (ID: TFS327093)
- Previously, after you entered a second value in a required, multi-value field, the message *This field is required* appeared below the field and you could not save the record. If you removed this value or entered a third value, the message no longer appeared. This issue has been resolved. Now, this message only appears below required fields when they are blank. (ID: TFS342121)

Failure Modes and Effects Analysis

- Previously, in the **Recommendations** pane, when you filtered recommendations based on the Equipment ID, the filter did not always return results. This issue has been resolved. (ID: TFS341045)

Foundation

Same Sign-On

- Previously, when you logged into GE Digital APM using Same Sign-On service, an error message appeared. This issue has been resolved. (ID: TFS343976)

Record Manager

- Previously, when you used Conditional Alerts to send automatic Conditional Alerts via email, the column headings displayed the field ID instead of the field caption in the email. This issue has been resolved. (ID: TFS271649)

Risk Matrix

- Previously, you could not control the precision of financial values that appeared on either the **Financial** node of the Risk Matrix or in the risk summary that appears in various modules. Also, financial values were not displayed according to your culture setting. This issue has been resolved. Now, you can control the precision of financial values and those values are displayed according to your culture setting. (ID: TFS331944)

Rules Editor

- Previously, the GE Digital APM documentation did not include the requirement to install the Microsoft Visual Studio 2015 Shell to use the Rules Editor. This issue has been resolved. (ID: TFS341801)


GAA


- Previously, when you attempted to import data using the Generation Availability Analysis (GAA) GADS Amplification Codes Data Loader, which contained the ROW_ID column, the data did not load. This issue has been resolved. To facilitate this fix, the ROW_ID column has been removed from the Generation Availability Analysis (GAA) GADS Amplification Codes Data Loader. (ID: TFS339021)

Hazards Analysis


- Previously, in the **Hazards Worksheet** section, in the **Consequences** and **Safe-guards** subsections, the unmitigated and mitigated risk rank values did not appear if the values in the Default and Use Maximum Risk Rank fields in the Risk Matrix were *True*. This issue has been resolved. (ID: TFS339249)

Inspection Management

- Previously, if you accessed a locked Inspection, and then selected the **Inspection Confidence Evaluation** tab, an error message appeared. This issue has been resolved. (ID: TFS342417)
- Previously, if you selected the **Create-recommendation** button () on the upper-

right corner of the **Inspection Management Overview** page to access a Full Inspection or General Inspection report and you did not have an active NR13 license, an error occurred. This issue has been resolved. Now, the **Create-recommendation button** is only enabled if you have an active NR13 license. If you do not have an active NR13 license, you should select the **Options** button () in the report workspace and use the print option to access the reports. (ID: TFS342359)

Life Cycle Cost Analysis

- Previously, if you deleted an Operating Cost and then attempted to add another, the Add Operating Cost button () became unresponsive. This issue has been resolved. (ID: TFS345051)
- Previously, when you selected the **Add Team Member** button after entering field values in the **Team Members** section, the page did not respond and the new team member was not added. This issue has been resolved. (ID: TFS344496)
- Previously, when you added a new team member to an LCC Analysis, the scroll bar was not available in the **Team Members** section and you were required to use the Tab key to navigate through the datasheet. This issue has been resolved. (ID: TFS344479)

Metrics and Scorecards

- Previously, when you searched for *KPI Measurement* records and selected a record in the global search results, an error message appeared. This issue has been resolved. (ID: TFS339331)

Operations Manager

Connections

- Previously, the Process Data Integration (PDI) service did not transfer readings to the GE Digital APM database if an issue existed with an OPC Tag. When the PDI service encountered tags with missing or incorrect attributes, readings from other tags would not be synchronized. This issue has been resolved. Now, an entry will be written to the log file and tag readings will continue to synchronize when the PDI service encounters a tag with missing or incorrect attributes. (ID: TFS336845)

Risk Matrix

- Previously, if you were using a Risk Matrix with one or more defined Protection Levels for a risk category, the protection level slider on that Risk Matrix displayed ten defined Protection Levels regardless of your configuration. As a result, all analyses using that Risk Matrix included a protection level slider with ten incorrectly defined Protection Levels. This issue has been resolved. Now, only the Protection Levels that you have defined appear in the protection level slider of that Risk Matrix. (ID: TFS337353)

Scheduling

- Previously, scheduled jobs did not execute at the scheduled times. This issue has been resolved. (ID: TFS340623)

Production Loss Analysis (PLA)

- Previously, for a Production Loss Analysis, when you removed a Production Event associated with a Production Loss via the **Production Events** workspace, the Production Event was unlinked from the associated Production Loss and deleted from the database. This issue has been resolved. Now, when you remove a Production Event via the **Production Events** workspace, the Production Event is unlinked from the Production Loss without being deleted. (ID: TFS344269)

Policies

Family Policies and Policy Designer

- Previously, in the **Properties** window for a Case node, when you deleted an If Case, all boxes in the **Else** output section were removed as well. This issue has been resolved. (ID: TFS345143)

Family Policies

- Previously, the **Execution History** pane did not display more than 100 execution summaries. This issue has been resolved. You can now view all execution summaries for a family policy via the **Execution History** pane. To facilitate this fix, the **Execution History** pane loads 50 execution summaries at a time, and you can navigate to additional summaries using a drop-down list box. (ID: TFS338190)

Policy Designer

- Previously, when you used a User node to trigger automatic policy executions, the policy executed inconsistently; sometimes it executed multiple times for a single

record change, and other times it did not execute at all. This issue has been resolved. (ID: TFS338369)


Reliability Analytics

- Previously, when you attempted to save a Reliability Recommendation in a global analysis for an Equipment and Functional Location that were not global, an error occurred. This issue has been resolved. (ID: TFS344849)
- Previously, when you updated an existing Mitigated Risk in a System Reliability Analysis Scenario, the **<Risk>/Mitigated Risks** grid was not updated. This issue has been resolved. (ID: TFS342555)
- Previously, datapoints were displayed with an unlimited number of decimal places when you selected the Show Labels button () 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 the Show Labels button () is selected, datapoints are displayed with two to four decimal places, depending on the type of plot.

(ID: TFS342476)

- Previously, when you added a new Risk to a System Reliability Analysis Scenario, the value in the Last Failure Date field was not saved. This issue has been resolved. (ID: TFS342109)
- 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. (ID: TFS340363)
- Previously, if you created a new Reliability Growth Analysis with a query containing a GROUP BY statement and you selected the **Show Totals** check box, an error may have occurred. This issue has been resolved. (ID: TFS340024)
- Previously, you could not save an advanced search that included a condition with a numeric value. This issue has been resolved. (ID: TFS339110)

- Previously, in a System Reliability Scenario Diagram, when you selected the Full Screen button (), the diagram did not fully expand to fill the full screen. This issue has been resolved. (ID: TFS334423)

Reliability Centered Maintenance

- Previously, in the **Recommendations** pane, when you filtered recommendations based on the Equipment ID, the filter did not always return results. This issue has been resolved. (ID: TFS341045)

Risk Based Inspection (RBI 580 and RBI 581)


RBI 580

- Previously, the Asset Risk report did not include the units of measure for the following fields:
 - Corrosion Rate
 - Estimated Half Life
 - Periodicity

This issue has been resolved. (ID: TFS338478)

- Previously, when you recalculated an RBI Criticality Analysis after changing the Estimated Minimum Thickness value on a Criticality Int. Corr. Deg. Mech. Eval., the Estimated Minimum Thickness value was not updated on the corresponding Criticality Ext. Corr. Deg. Mech. Eval. record. This issue has been resolved. (ID: TFS336507)

RBI 581

- Previously, even if generating Recommendations for an analysis in Created state was enabled, in the upper-right corner of the **Analysis Summary** workspace, if you selected the More Options button (), the **Generate Recommendations** option did not appear. This issue has been resolved. (ID: TFS342683)
- Previously, in an RBI 581 Consequence Evaluation, the values in the Environmental Clean-up Costs and Total Financial Consequence fields were calculated incorrectly for storage tank components. This issue has been resolved. To facilitate this fix, the AST Shell Rupture Product Leak R Script has been modified. (ID: TFS341051)

- Previously, in an RBI 581 Risk Analysis, if you selected the **Stress Override** check box, the following issues existed:
 - If you modified the value in the Stress Lookup Table field, then the value that you had entered in the Flow Stress field was replaced with 0.
 - If you did not select a value in the Stress Lookup Table field, then the analysis calculation failed. A validation message appeared, indicating that the Stress Lookup Table field must contain a value.

These issues have been resolved. Now, if you select the **Stress Override** check box:

- The value that you enter in the Flow Stress field is retained even after you modify the value in the Stress Lookup Table field.
- The analysis is calculated successfully even if the Stress Lookup Table field does not contain a value.

(ID: TFS340137)

Root Cause Analysis

- Previously, when you attempted to save an RCA Recommendation in a global analysis for an Equipment and Functional Location that were not global, an error occurred. This issue has been resolved. (ID: TFS344849)
- Previously, when you exported a Logic Tree diagram using the Google Chrome browser, an error occurred and the Logic Tree was not exported correctly. This issue has been resolved. (ID: TFS342496)
- Previously, when you added a Risk to a System Reliability Analysis Scenario, the Last Failure Date field value was not saved. This issue has been resolved. (ID: TFS342109)
- Previously, in the Logic Tree diagram, when you added multiple Failure Modes to a Failure Event or multiple Hypothesis nodes to a Failure Mode, the nodes overlapped one another and you could not view each node individually. This issue has been resolved. Now, each new node is visible when initially added. (ID: TFS340509)
- Previously, when you saved an RCA analysis as a template or copied an analysis, the entire Event Diagram from the original RCA was not retained. This issue has been resolved. (ID: TFS336241)
- Previously, when using Microsoft Edge, the **Preserve Records** workspace was not displayed completely and the **Date Completed** box was partially obscured. This

issue has been resolved. (ID: TFS335179)

- Previously, when you accessed an RCA report, the report opened in the same window. This issue has been resolved. Now, an RCA report opens in a new tab. (ID: TFS288619)

Rounds Data Collection

- Previously, when you entered a value of 0 in a reading, if you did not also enter or select an action or a comment, the reading was not saved. This issue has been resolved. (ID: TFS344679)
- Previously, if you entered a reading longer than 50 characters, the reading was not saved, and no error message appeared. This issue has been resolved. (ID: TFS344615)
- Previously, when you entered a reading in the workspace for an asset, the reading did not save to the device immediately. This could result in loss of data. This issue has been resolved. Now, readings are saved immediately to the device when you select an area outside of the box (e.g., when you select another box). (ID: TFS344610)
- Previously, if you selected **Mark Done** on a Route before all readings were saved to the server, the Route History record remained incomplete, and the readings were not uploaded to the server. This issue has been resolved. Now, when you select **Mark Done**, any readings not yet stored on the server are automatically saved to the server before the Route is marked done. (ID: TFS342298)
- Previously, when you created a standalone recommendation, nothing appeared in the **Created By** column for the recommendation in the **Recommendations** section of the **Rounds Data Collection Overview** page. This issue has been resolved. Now, a user name appears in the **Created By** column for all recommendations. (ID: TFS322520)
- Previously, on iPad devices, when you attempted to open an image file in the **Reference Documents** section of the workspace for a Route, you could not open the file without first saving it to your device. This issue has been resolved. (ID: TFS180909)

Rounds Designer

- Previously, if you used the Rounds Allowable Values Data Loader to load an allowable value that contained spaces before or after the value, these spaces were not automatically removed. As a result, readings that used that allowable value were not saved as expected. This issue has been resolved. Now, in this scenario, the data loader automatically removes the spaces before and after the allowable value. (ID: TFS343155)
- Previously, when you deleted an Allowable Values category by selecting the Delete button (🗑️) in the **Allowable Values** section of the **RD Overview** page, you could not determine if the Allowable Values category was successfully deleted. This issue has been resolved. Now, when you select the Delete button (🗑️), a busy indicator appears until the Allowable Values category has been deleted. (ID: TFS341427)
- Previously, when the Rounds upgrade utility encountered schedules that included an end date, the schedules did not upgrade and an error occurred. This issue has been resolved. (ID: TFS244018)

Security Manager

- Previously, when you used custom mappings, the LDAP synchronization process did not update the mapped fields. This issue has been resolved. (ID: TFS341888)

Thickness Monitoring

- Previously, on the **TM Dataloggers** page, in the **Send To** and **Receive From** sections, the following issues existed:
 - If you created or deleted a Datalogger Mapping, the list of mappings in the grid was not updated.
 - If the field values in a column were blank, the column did not appear in the grid.

These issues have been resolved.

(ID: TFS341862)

- Previously, when using the Thickness Measurement workbook to create or update records via the Thickness Monitoring Equipment data loader or the Thickness Monitoring Functional Location data loader, the Measurement Taken By field in the Thickness Measurements family was set to the first user in the worksheet, even if there were multiple users listed in the worksheet. This issue has been resolved. (ID: TFS341500)

- Previously, when using the Thickness Measurement workbook to update records via the Thickness Monitoring Equipment data loader or the Thickness Monitoring Functional Location data loader, records in the TML, TML Group, or TML Corrosion Analysis families were not updated. This issue has been resolved. (ID: TFS340942)
- Previously, when you changed the status of a Thickness Measurement Location (TML) and then viewed the saved record, only your first name was displayed in the Status Changed By field. This issue has been resolved. Now, first and last names are displayed. (ID: TFS334402)
- Previously, if the value in the Controlling Corrosion Rate field in an Asset Corrosion Analysis was less than zero, when you attempted to renew a TML, an error occurred. This issue has been resolved. (ID: TFS334322)
- Previously, when you modified the TML ID of a Thickness Measurement Location (TML) belonging to a TML Group, it was possible to use the TML ID of an existing TML within the group, which resulted in the TML ID no longer being unique. This issue has been resolved. Now, an error message appears if you modify a TML ID to that of an existing TML ID in the same group. (ID: TFS331948)
- Previously, the Last Measurement Date field appeared on the Asset Corrosion Analysis datasheet. This issue has been resolved. The MI_ASSET_CA_LAST_MEASU_DATE column has been removed from the MI_ASSET_CA (Asset Corrosion Analysis) datasheet and the Last Measurement Date field caption has been updated to indicate that the field is deprecated. (ID: TFS332982)
- Previously, when calculating an Asset Corrosion Analysis, the value in the Asset Calculated Remaining Life field incorrectly used the most conservative value from the Remaining Life field of the TML Corrosion Analysis instead of the average value. This issue has been resolved. (IDs: TFS255048, TFS254634)

Tools

Graphs

- Previously, when you changed the date range on a stock graph by entering new dates in the **To** and **From** boxes, the graph was not updated with the new date range. This issue has been resolved. (ID: TFS338404)
- Previously, when you paused the mouse pointer on a stock graph, the formatted value displayed was incorrect and did not match the plotted value. This issue has

been resolved. (ID: TFS335210)

- Previously, the format of dates displayed on stock graphs was mm/dd/yyyy regardless of the format appropriate to the culture setting of the user. This issue has been resolved. (ID: TFS334064)

Queries

- Previously, leaving a query prompt blank did not return all records. This issue has been resolved. Now, when you leave the prompt blank, it is populated with the wildcard character % and all records are returned. (ID: TFS342351)
- Previously, when you selected a query hyperlink containing the special character +, the hyperlink did not work as expected. This issue has been resolved. (ID: TFS335263)

Reports

- Previously, you could not run a report that was saved in a folder containing @ in its name. This issue has been resolved. (ID: TFS332158)


Obsolete Features - V4.3.0.3.0

The following items are no longer used in GE Digital APM.

Generation Availability Analysis (GAA)

- The ROW_ID column has been removed from the Generation Availability Analysis (GAA) GADS Amplification Codes Data Loader. This change has been made to facilitate a fix for importing data from the Generation Availability Analysis (GAA) GADS Amplification Codes Data Loader. (ID: TFS339021)

Production Loss Analysis (PLA)

- The ability to delete a Production Event associated with a Production Loss from the **Production Events** workspace in a Production Plan has been removed. You can now only unlink a Production Event via the Production Loss using the Unlink Production Event button (). (ID: TFS344269)
- The PLAService.exe, which was used by Process Data Integration to automatically create Production Data from OPC tags for Production Profiles, has been deprecated. The PLAService.exe has been replaced with the PLA Service policy. (ID: TFS322038)

Thickness Monitoring

- The Measurement Status Changed By and the Status Changed Date fields have been removed from the Measurement datasheet. This change has been made to enhance usability and avoid redundancy. (ID: TFS341548)

Deferred Features - V4.3.0.3.0

The following features are not available in GE Digital APM V4.3.0.3.0, but are planned for a future release.

Asset Criticality Analysis (ACA)

- Promoting analyses to and from ACA. (ID: TFS160858)

Asset Health Manager (AHM)

- 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. (IDs: TFS91046, TFS86625, TFS86430)
- The display of health indicator statuses in Asset Hierarchy. (ID: TFS86796)

Asset Strategy Implementation (ASI)

- Creating implementation roles and filtering the WMI tree by each role. (ID: TFS243573)
- Using a link to manage the object list records that are linked to maintenance item records represented by the selected node. (ID: TFS238443)
- The option to exclude child items when copying Work Management Items. (ID: TFS147790)
- Managing asset and action assignments when executing copy/paste operations. (ID: TFS144110)
- 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. (ID: TFS117765)

Asset Strategy Management (ASM)


- Migrating strategies between databases.

Asset Strategy Optimization (ASO)

- Optimizing Actions. (ID: TFS112125)

Calibration Management

- Automated Calibration using Beamex and Meriam documenting process calibrators.

 **Note:** Automated calibration using Beamex documenting process calibrators, Beamex MC5 and Beamex MC6, is supported using Beamex Business Bridge (B3) Version 1 (1.2.0) software for Beamex CMX Calibration software.

(IDs: TFS61319, TFS61334)

Configuration Manager

- Global number and date format. (ID: TFS160148)
- Global Preferences- Background Colors. (ID: TFS65297)

Generation Availability Analysis (GAA)

- 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

(ID: TFS229627)

- 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
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

(IDs: TFS234410, TFS234310)

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

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

- The following Security Groups in GAA:
 - MI Generation Management Forecast
 - MI Generation Management Nameplate
 - MI Generation Management Security

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

GE Analytics

- KPIs for GE Analytics. (ID: TFS162791)

Metrics and Scorecards

- Export/Import of KPI Schedules (ID: TFS173886)
- Selecting columns to include in a Scorecard. (ID: TFS70641)
- GM (Generation Management) cube is deferred from V4.0.0.0. Any previously deployed GM (Generation Management) cube, which worked in V3.6 and earlier releases, will continue to work in V4.0.0.0 after upgrading the product. You will be able to use the existing GM cube and the support will continue. (ID: TFS160446)

Operations Manager

Systems and Tags

- Viewing trends for multiple OPC Tags simultaneously (i.e., the Process Data Viewer feature in V3). (ID: TFS62299)

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

- Promoting RCM and FMEA analyses directly to templates. (ID: TFS160858)

Reliability Analytics

- Action optimization in System Reliability Analysis.

Risk Based Inspection

- Creating a bulk What-If analysis. (ID: TFS73475)

Root Cause Analysis (RCA)

- Emailing capability to notify and track changes in an Asset in an RCA. (ID: TFS175610)
- Sending email notifications for alerts configured in RCA for Hypothesis Verifications. (ID: TFS175610)

- Standard APM State Management functionality in RCA. (ID: TFS63432)

Rounds

- Selecting multiple nodes in the **Route** pane in Route Management. (ID: TFS173671)
- Ad hoc inspection of a single asset. (ID: TFS160740)
- Offline access to the five most recent Recommendations in Rounds. (ID: TFS153853)
- Support for Bluetooth-connected barcode scanners. (ID: TFS124935)
- Unlinking a Measurement Location from a Measurement Location Template. (ID: TFS61751)
- Accessing a list of recent Routes. (ID: TFS61638)

Thickness Monitoring

- Corroded Area Measurements. (ID: TFS101752)
- Dataset integration with dataloggers. (ID: TFS83553)
- Exporting data to Excel via the TM Dataloggers interface.

Tools

Graphs

- Exporting to a PDF and printing graphs. (ID: TFS81015)

Release Notes - V4.3.0.3.1

Root Cause Analysis (RCA)

- Previously, when you modified a Logic Tree, if you selected the **Auto Arrange** check box and then added a Failure Mode node, an error message appeared when you saved the datasheet entries in the **Properties** window. This issue has been resolved. (ID: TFS346638)
- Previously, when you accessed a Logic Tree, an error occurred if the RCA Analysis contained a null value in the Tree Layout field. This issue has been resolved. (ID: TFS346365)

State Management

- Previously, when no roles were assigned to the initial state and the **Require a specific user to be assigned to a state** check box was selected, the user name in the **Assignee** box for the initial state was replaced with the value Not Assigned. This issue has been resolved. Now, the creator of the record utilizing State Management is added to the initial state as the assignee. (ID: TFS348276)

Release Notes - V4.3.0.3.2

Asset Health Manager


- Previously, for a Health Indicator, when you refreshed any of the following workspaces, the count of records in the **Reading History** workspace was incorrect:
 - **Configuration**
 - **Reading History**
 - **Trend Chart**

Due to this, the chart in the **Trend Chart** workspace appeared incorrectly. This issue has been resolved. (ID: TFS349673)

- Previously, for a Health Indicator, in certain scenarios, the chart in the **Trend Chart** workspace appeared incorrectly. This issue has been resolved. (ID: TFS349673)

Calibration Management

- Previously, if a Calibration Task contained one of the following values in the Task State field, then you could not link the Calibration Task to an Equipment or Calibration Template:
 - Proposed
 - Scheduled with change
 - Scheduled without change


 **Note:** This issue occurred if the values in the Task State field were not in upper case.

This issue has been resolved. (ID: TFS350233)

- Previously, when you attempted to send a Calibration Task to a calibrator, an error occurred. This issue occurred only if the associated asset was linked to another Calibration Task whose value in the Template ID field was blank. This issue has been resolved. (ID: TFS349317)
- Previously, if you attempted to link a Calibration Template, Analog record to an asset, an error occurred. This issue occurred only if the Calibration Template, Analog record was linked to a Calibration Profile, and contained the value None in the Temperature Element Type field. (ID: TFS349268)
- Previously, if using a GE Druck documenting process calibrator, you could select

the value *None* in the Temperature Element Type field in a Calibration Template, Discrete record. This issue has been resolved. Now, in this scenario, a message appears, stating that *None* is not a valid value. (ID: TFS348487)

- Previously, if using a Fluke documenting process calibrator, if you selected the value *None* in the Temperature Element Type field in a Calibration Template, Analog record, a message appeared, stating that it was not a valid value. This issue has been resolved. (ID: TFS348487)
- Previously, if you attempted to receive data using a Fluke documenting process calibrator, an error occurred. This issue has been resolved. To facilitate this fix, the following query has been modified: `\\Public\Meridium\Modules\Calibration Management\Queries\Instrument Data Query` (ID: TFS348389)
- Previously, if you attempted to delete a Calibration, Functional Test record, an error occurred. In addition, if you attempted to delete a Calibration, Analog record, although the record was deleted from the database, an error message appeared, and the record still appeared in the **Calibration Events** section. These issues have been resolved. (ID: TFS348037)
- Previously, when you attempted to use CalibDeviceMappingsUpgradeUtility.exe to upgrade your Calibration Device Mappings, an error occurred. This issue has been resolved. (ID: TFS347668)
- 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: TFS347462)
- 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: TFS347461)

- Previously, on the **Calibration Management Overview** page, the record count on the tabs did not appear. This issue has been resolved. (ID TFS347460)

- 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 data-sheet 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: TFS347459)
- 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: TFS347458)

Failure Modes and Effects Analysis (FMEA)

- Previously, when you accessed an asset, the list of Failure Modes could take an excessively long time to appear. This issue has been resolved. (ID: TFS348310)

Operations Manager

Asset Hierarchy Configuration

- Previously, when you selected the **Rebuild** button in the **Asset Hierarchy Configuration** page, the Asset Hierarchy was rebuilt as expected, but, unexpectedly, the search index was also deleted and rebuilt in a process that could take several hours. This issue has been resolved. Now, selecting the **Rebuild** button in the **Asset Hierarchy Configuration** page will not rebuild the search index. (ID: TFS349983)
- Previously, if a query included the State field and you executed, in the result grid, a search for a value in the State field, the search returned no results even when results should have been returned. This issue has been resolved. (ID: TFS349729)
- You can now schedule an Asset Hierarchy rebuild to occur on a one-time or recurring basis. By default, the Asset Hierarchy rebuild occurs in response to the creation of new assets that should be included in the Asset Hierarchy. (ID: TFS347427)

Queries

- Previously, joins against non-family tables did not appear correctly in the **Design** workspaces of queries and produced invalid query results. This issue has been resolved. (ID: TFS347342)
- Previously, when you exported query results as an Excel file, an error occurred

when you tried to open the file. This issue has been resolved. (ID: TFS347323)

Record Manager

- Previously, when you were on a slow network, you could close the **Add Reference Document** window while the reference document was being uploaded. This issue has been resolved. Now, the **Close** button is disabled and you cannot close the window while the reference document is being uploaded. (ID: TFS349572)

Reliability Analytics

- Previously, when a user without a Production Loss Analysis license selected the **Reliability** tab in the Asset Hierarchy, the hyperlinks did not appear. This issue has been resolved. (ID: TFS349113)
- Previously, when a user without a Production Loss Analysis license selected the **Production Analysis** tab, an error occurred and the **Production Analysis** list did not appear. This issue has been resolved. (ID: TFS349113)

Root Cause Analysis

- Previously, when you created an RCA Recommendation Alert and assigned it to someone that is not a team member of the analysis, the alert was not sent. This issue has been resolved (ID: TFS350146)
- Previously, when you created an RCA Recommendation Alert, the alert was not sent. This issue has been resolved. (ID: TFS349977)
- Full State Management capability is now available for Root Causes Analyses. The following states have been added: Not Started, In Progress, On Hold, Deferred, and Completed. (ID: TFS61730)

Rounds Designer


- You can now create a query that links a checkpoint to the template group that was used to create it. To facilitate this enhancement, a new field, Template Group Key, has been added to the Checkpoint, Measurement Location, and Lubrication Requirement families. (ID: TFS347740)

Search

- Previously, in global search, symbols such as hyphens included in search strings were disregarded (e.g., a search for *P-6* would not return a record whose name was *P-656*). This issue has been resolved. (ID: TFS348621)


Release Notes - V4.3.0.3.3


Asset Health Manager

- Previously, for a Health Indicator, when you modified the date range using the Filter button (, and then selected the **Apply** button, the data in the **Reading History** and **Trend Chart** workspaces was not updated. This issue has been resolved. (ID: TFS351450)
- Previously, for a Health Indicator with a large amount of reading data, the chart in the **Trend Chart** workspace appeared incorrectly. This issue has been resolved. (ID: TFS351053)

Policies

Family Policies and Policy Designer

- To enhance usability of the policy model for mathematical operations, a new calculation node, Math (, has been added.

 **Note:** Refer to KBA #[6100](#) for more information.

(ID: TFS351209)

- Previously, for a Rule node in a policy model, if you selected a Rule Class for a Rule Path on the **Properties** window and saved the policy, the selected Rule Class was not saved. This issue has been resolved. (ID: TFS349656)

Release Notes - V4.3.0.3.4

Asset Criticality Analysis

- Previously, selecting the **Analyses** or **My Analyses** tab on the **ACA Overview** page caused an error to occur. This issue has been resolved. (ID: TFS352357)

Rounds

Rounds Data Collection

- Previously, when you entered a reading for a checkpoint with successor conditions, the successor checkpoints of those conditions did not appear in the expected order. This issue has been resolved. (ID: TFS352201)

Rounds Designer

- Previously, when you added a condition to a Route as a successor of a numeric checkpoint with numeric allowable values defined, the allowable values did not appear in the **Select Value** box in the workspace for the condition. This issue has been resolved. (ID: TFS352244)

Release Notes - V4.3.0.3.5

Inspection Management

- Previously, if you updated an inspection with a Completion Date that was earlier than the Last Date of the inspection task, the Last Date was not updated. This issue has been resolved. Now, the Last Date is updated with the most recent Completion Date of an inspection that has the **Inspection Task Complete** check box selected. (ID: TFS354525)

Rounds

Rounds Designer

- Previously, when you added a large checkpoint template group to multiple assets on a Route, the action timed out before the template group was completely added, and the Route was not updated as expected. This issue has been resolved. Now, in this scenario, performance is significantly improved, and a progress bar appears indicating the number of assets to which the template or template group is being applied. (IDs: TFS354694, TFS354693)
- Previously, in the **Template** section, if you selected a Lubrication Requirement Template and then selected **Update Existing Checkpoints**, an error occurred, and you could not update existing checkpoints to reflect changes made in a source Lubrication Requirement Template. This issue has been resolved. (ID: TFS352692)
- Previously, when you updated Measurement Locations belonging to an ML Template and your Culture setting was defined as anything other than Invariant, an error occurred. This issue has been resolved. (ID: TFS354691)

Thickness Monitoring

- Previously, in the **TMLs** section in the **Analysis Overview** workspace, if a numeric field contained a value of zero, that field appeared to be blank. This issue has been resolved. (ID: TFS355474)

Tools

Reports

- Previously, when using GE Digital APM in Google Chrome 65.0.3325.181, if you attempted to open an SSRS report that contained spaces in its name or catalog

path, the report did not open. This issue has been resolved. (ID: TFS353932)

Release Notes - V4.3.0.3.6

Inspection Management

- Previously, if you used a tablet with low-resolution to access Inspection Management, pages other than the **Inspection Management Overview** did not load. This issue has been resolved. You can now use a low-resolution tablet to view and download offline inspections in Inspection Management for use in Inspection Field Data Collection. (ID: TFS354909)

Operations Manager

Strategy Macros

- Previously, the **Strategy Macros** option was available in the **Operations Manager** page only if the Developers license was activated. This issue has been resolved. Now, even if the Developers license is inactive, the **Strategy Macros** option is available in the **Operations Manager** page and you can schedule an existing macro. However, you cannot add or delete a macro. (ID: TFS355703)

Rounds

Rounds Data Collection

- Level 1 alerts for readings are now displayed in black text with a yellow warning icon (⚠). (ID: TFS356612)
- Previously, when you created a recommendation for a checkpoint, the Source ML or LR Description field was not automatically populated with the value that was stored in the ML or LR Description field for the checkpoint. This issue has been resolved. (ID: TFS355702)

Security Manager

- Previously, during LDAP synchronization, user records were not synchronized if either of the following conditions existed:
 - In Active Directory, the LastName field for the user was blank.
 - In Active Directory, the value in the LastName field or FirstName field was a single character matching a character in the Password field. In this scenario, the following error message appeared: *password must not contain first-name, lastname, or userId.*

This issue has been resolved. Now, user records with these conditions are synchronized as expected. In Active Directory, if the LastName field for a user is blank, it will be populated with *LastName* in the GE Digital APM Security User record during synchronization. (ID: TFS356254)

Tools

Data Loaders

- Previously, using the Role data loader, when you attempted to assign a Security User to a role, which had users assigned to it, an error occurred. This issue has been resolved. (ID: TFS356252)
 - The Rounds Route and Rounds Template data loader workbooks now support checkpoint conditions. To facilitate this enhancement, the following updates have been made to these workbooks:
 - New Checkpoint Condition worksheets have been added to the Rounds Route and Rounds Template data loader workbooks.
 - New fields have been added to the following worksheet:
 - The Checkpoint Template Sequence worksheet in the Rounds Template workbook
 - The Measurement Location worksheet in the Rounds Route workbook
- (IDs: TFS355475, TFS355287)

Graphs

- Previously, after upgrading from a version prior to GE Digital APM V4.3.0.0.0 to a version V4.3.0.0.0 or later, if graph axes were modified and saved, the modifications were not retained. This issue has been resolved. Now, saved modifications to graph axes are retained as expected. (ID: TFS353500)

Release Notes - V4.3.0.3.7

Rounds

Rounds Data Collection

- The performance when loading the **Rounds Data Collection Overview** page and when loading Routes in Rounds Data Collection has been improved. (ID: TFS364188)
- Previously, when you marked a Route done offline, the **Mark Done** button was still enabled when you reconnected online. This issue has been resolved. (ID: TFS363207)
- Previously, when you disconnected an Android tablet from WiFi, Routes were intermittently marked done. This issue has been resolved. (ID: TFS362512)

Release Notes - V4.3.0.3.8

AMS Analytics

- Previously, in the **AMS Asset Data Sources** workspace of the **Connections** page, if you attempted to delete an AMS Asset Data Source, and then scheduled a Strategy Macros run to delete any remaining AMS Assets or Alerts, no assets or alerts were deleted. This issue has been resolved. (ID: TFS365486)

Inspection Management

- Previously, when you deleted an Inspection, Inspection Task, or Work Pack, a message appeared indicating that the record was successfully deleted. However, the busy indicator remained on the page. Also, the record did not appear to have been deleted until you refreshed the page. These issues have been resolved. (ID: TFS365488)

Metrics and Reports

SQL Server Reporting Services (SSRS)

- Previously, if the time zone of the operating system that runs the Report Designer was set to a Russian time zone, and when you attempted to open a report from the Catalog folder of the Report Designer, an error occurred. This issue has been resolved. (ID: TFS365799)

Rounds

- Previously, when you synchronized a route, cached route data was not cleared from the offline cache. Due to this, even if a Checkpoint was not due, it was listed in the **Overdue Items** or **Due Items** section in the **RDC Overview** page. This issue has been resolved. (ID: TFS365937)
- Previously, if synchronizing readings to the GE Digital APM database failed, you could not recover the data. This issue has been resolved. You can now recover the data using the Rounds Readings Data Loader. For more information, refer to KBA 6331. (ID: TFS365834)
- Previously, when you cleared Route data from local storage, only your route subscription data was cleared. This issue has been resolved. (ID: TFS365449)

- Previously, using the Rounds Templates data loader workbook, if you did not define a Checkpoint Condition for a Measurement Location Template, no relationship was created between the Measurement Location Template and its associated Template Group after you imported data. This issue has been resolved. (ID: TFS365330)
- Previously, when you accessed a recommendation in Rounds Data Collection using a computer, the value in the **Creation Date** box appeared in UTC instead of your local time zone. This issue has been resolved. (ID: TFS360882)
- Previously, in the **Rounds Data Collection Overview** page, no **Due On or After** value appeared in the **Due Items** section. This issue has been resolved. (ID: DE82812)

Tools

Queries

- Previously, if you ran a derivative query containing subselect expressions from the Catalog, an error occurred. This issue has been resolved. (ID: TFS364544)

Release Notes - V4.3.0.4.0

The following release notes are available for GE Digital APM V4.3.0.4.0:

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

You can also view the APM Connect release notes.

New Features - V4.3.0.4.0

The following new features are available in V4.3.0.4.0.

Application Settings

Reliability Analytics

- Using Reliability Application Settings, you can now configure Reliability reports to use your own logo and title. (ID: TFS346264)

Inspection Management

- The Taxonomy Configurations feature is now available.
This feature allows an Inspection administrator to create Taxonomy Configurations that define the available collection of Checklist Templates and/or Inspection Families that are available for an asset from a given taxonomy. (ID: TFS337314)
- The Checklist Configuration Templates feature is now available.
This feature allows an Inspection administrator to configure custom Checklist Templates that include user-defined checklist categories and items. (ID: TFS336625)

Enhancements - V4.3.0.4.0

The following enhancements have been made in V4.3.0.4.0.

Application Settings

Root Cause Analysis

- In RCA application settings, you can now enable mappings to automatically update the value in the Recommendation Status field when the Recommendation state is modified. (ID: TFS349797)

Asset Criticality Analysis

- To enhance usability, if you modified the ACA All query, the numbers displayed in the tabs in the **ACA Overview** page now reflect the results of the modified query. (ID: TFS348579)

Asset Strategy Implementation

- To enhance usability, if you modify the ASI Overview Filter Query, the numbers displayed in the tabs in the **ASI Overview** page now reflect the results of the modified query. (ID: TFS348579)
- In the **Manage Actions** section in ASI, you can now add multiple actions from different Asset Strategies to an ASI package at the same time. (ID: TFS348542)
- To enhance usability, the **Interval** and the **Interval Units** columns have been added to the grid on the **Manage Actions** section of the **ASI Package** page. (ID: TFS347810)
- When using the Apply Updates feature in ASM or ASI to update ASM Action intervals to the corresponding Maintenance Plan intervals in ASI, the following values are now updated automatically.

Plan type	Value update by Maintenance Plan interval
Single Cycle Plans	Cycle for the corresponding Maintenance Plan
Multiple Counter Plans	Cycle for the corresponding time-based Maintenance Plan

Strategy Plans	Cycle for the corresponding Maintenance Package
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(ID: TFS347029)

- The SAP import feature for ASI has been enhanced to allow for customization. When importing items from an external SAP system, you can now modify the import process to include custom fields or to execute custom logic. (ID: TFS302117)

Asset Strategy Management

- To enhance usability, while applying or approving a template in ASM, the percentage of completion now appears at the top of the page. (IDs: TFS351506, TFS227555)
- To enhance usability, if you modify the ASM – Filter Query, the numbers displayed in the tabs in the **ASM Overview** page now reflect the results of the modified query. (ID: TFS348579)
- To enhance usability, the **Interval** and the **Interval Units** columns have been added to the grid on the **Implement Actions** page. (ID: TFS347810)
- When sending an EAM Work Request for an Action or group of Actions in ASM, a link corresponding to the associated EAM Work Request now appears in the **Implementation** column of the grid in the **Implement Actions** section of the **Strategy Details** page. (ID: TFS347761)
- When viewing an analysis in Asset Strategy Management (ASM), you can now navigate to the **Life Cycle Cost Analysis Overview** page to view any existing LCC Analyses associated with the Asset Strategy. (ID: TFS345682)
- When viewing an asset strategy in Asset Strategy Management (ASM), you can now navigate to the **Reliability Analytics Overview** page to view existing Reliability Analyses associated with the asset for the strategy. (ID: TFS345680)
- To enhance usability when using mass state management in a System or Unit strategy, the percentage of completion now appears in the **Review Strategy** workspace of the **Strategy Details** page. (ID: TFS274188)

Calibration Management

- For Calibration Events (i.e., Calibration records) that were created in a version earlier than V4.2.0.0, if the **Calibration Closed** check box was selected, then, when you upgrade to V4.3.0.4.0, the state of the Calibration is modified to Approved. (ID: TFS351201)
- In the **Calibration Management** page, in the **Calibration Profiles** section, the **Type** column now displays the value in the Device Type field in each Calibration Profile. In addition, when you access a Calibration Profile, in the **Linked Assets** section, the **Type** column now displays the value in the Object Type field in each Equipment record. (ID: TFS351198)
- After receiving data from a calibrator, if creating a Calibration Event fails, the error message now specifies the reason for failure. (ID: TFS343848)

Configuration Manager

Data Permissions

- You can now access the Data Permissions feature from the **Configuration Manager** page instead of the **Security Manager** page. (ID: TFS353742)

Failure Modes and Effects Analysis (FMEA)

- To enhance usability, if you modified the FMEA Overview Filter Query, the numbers displayed in the tabs in the **FMEA Overview** page now reflect the results of the modified query. (ID: TFS348579)

Generation Availability Analysis (GAA)

- To identify the type of GAA Company, a new field, GAA Type, has been added to the GAA Company family. (ID: TFS353337)

Inspection Management

- The performance when loading the **Inspection Management Overview** page has been improved. (ID: TFS353289)

- The performance of the Inspection Management (IM) Assets and the Inspection Management (IM) Functional Location Data Loaders has been improved. (ID: TFS348827)
- You can now access inspections with the *Pending Approval* status in the **Open Inspections** section in the **Inspection Management Overview** page. (ID: TFS345341)
- You can now create an Inspection with a system-generated value in the Inspection Reference field using the Inspection Management (IM) Assets and Inspection Management (IM) Functional Location Data Loaders. To facilitate this enhancement, a new column, **Use System Generated ID**, has been added to the Inspections worksheet in the data loader workbooks. (ID: TFS344201)

Life Cycle Cost Analysis

- To enhance usability, if you modify the LCC Page Filter query, the numbers displayed in the tabs in the **LCC Overview** page now reflect the results of the modified query. (ID: TFS348689)
- Reliability Recommendations can now be created and associated with an LCC Primary Element or Secondary Element. (ID: TFS252021)

Operations

Risk Matrix

- The following System Code Tables have been added to the Risk Matrix feature and can be accessed from the **Risk Matrix Admin** page:
 - MI_RISK_CATEGORY_DESC
 - MI_RISK_CONSEQUENCE_DESC
 - MI_RISK_MATRIX_AXIS
 - MI_RISK_MATRIX_SORT_ORDER
 - MI_RISK_PROBABILITY_DESC
 - MI_RISK_PROTECTION_LEVEL_DESC(ID: TFS347758)

Policies

Family Policies and Policy Designer

- To enhance usability of the policy model for mathematical operations, a new calculation node, Math (*fix*), has been added. (ID: TFS350766)

Policy Designer

- To indicate the status of a module workflow policy on the **Policy Designer Overview** page, the **Active** column, which contains a check box, has been added to the table in the **Module Workflow Policies** section. A selected check box indicates that the status is active; a cleared check box indicates that the status is not active.

You can filter and sort the policies in the table based on the **Active** column.

(ID: TFS351328)

Production Loss Analysis (PLA)

- For a Production Event, in the **Search** window that appears when you attempt to add or remove a value from the **Work History Link** box, the **OK** button is now disabled until you add or remove a value. Additionally, to improve clarity, the number of values that will appear in the **Work History Link** box is now indicated on the **Search** window. (ID: TFS350932)
- To improve clarity, in the **Production Summary** workspace, the y-axis of the Production Summary Plot is now labeled **Production %**, instead of **Production Amount**. (ID: TFS350908)
- When you create a Production Profile, a warning message now appears, asking you to add a margin value because it is required to calculate production losses. Additionally, the Margins datasheet appears so that you can add the margin value. (ID: TFS350222)
- For a quantity-based or time-based plan, when you attempt to remove an entry from the **Plan Details** workspace using the **Remove Last Row** button, a warning message now appears. Additionally, after you remove the entry from the **Plan Details** workspace, the corresponding entry is removed from the **Production Data** workspace. (ID: TFS349543)

- In the **Production Data** workspace, the Production Loss grid has been redesigned to improve usability. To facilitate this enhancement:
 - The Production Loss datasheet has been added to the Production Loss family to facilitate the creation of Production Losses.
 - The following fields have been added to the Production Loss family:
 - **Production Data Entity Key:** Stores the entity key of the Production Data for which the Production Loss is added.
 - **Production Event Entity Key:** Stores the entity key of the Production Event to which the Production Loss is linked.
 - The **Add Loss** button and the **Delete Loss** button have been removed from the Production Loss grid and replaced with the Add button (+) and the Delete button (🗑️) respectively.
 - The following buttons have been added to the Production Loss grid:
 - **Edit** button (✎): You can use this button to modify a Production Loss.
 - **Search** button (🔍): You can use this button to search for a Production Loss based on the specified filter.

(ID: TFS347162)

- The Production Loss Analysis (PLA) Data Loader has been enhanced to improve the performance of the data load operation. To facilitate this enhancement, the Production Loss Analysis (PLA) Data Loader is replaced with the following data loaders:

Data Loader	Records Loaded
Production Loss Analysis (PLA) 1-Admin	<ul style="list-style-type: none"> • Production Unit • Production Event Code • Production Profile • Profile Margin
Production Loss Analysis (PLA) 2-Event	<ul style="list-style-type: none"> • Production Event
Production Loss Analysis (PLA) 3-Plan	<ul style="list-style-type: none"> • Production Plan • Production Data • Production Loss

(ID: TFS347100)

- The Event ID field of a Production Event now appears as a text box on the **Add New Production Event** datasheet and in the **Production Events** workspace, and it is populated with a value in the following format: Event-<unique ID>. This field was

previously populated with the date and time when the Production Event was created. (ID: TFS312123)

- When you create a Production Loss, in the **Production Event** drop-down list box, the Production Events are now sorted chronologically in descending order based on Start Date. (ID: TFS274911)

Recommendation Management

- To enhance performance in module-specific recommendation datasheets, you can now access the **Select Users** window from the following fields in the Recommendations family:
 - Author Name
 - Assigned To Name
 - Final Approver Name
 - Reviewer Name

The **Select User** window allows you to select a user from a list of Human Resource records.

(ID: TFS348723)

Reliability Analytics

- In Production Analysis, the Confidence Level display values are no longer rounded. (ID: TFS353416)
- To enhance usability, if you modify the RAPageFilter query, the numbers displayed in the tabs in the **RA Overview** page now reflect the results of the modified query. (ID: TFS348689)
- To avoid performance issues, when you attempt to execute an Automation Rule with more than 100 analyses, a warning message now appears stating your database may stop responding if the rule is executed. (ID: TFS341062)
- A new specific confirmation message stating "Automation Rule has been executed" now appears when you execute an Automation Rule. (ID: TFS327447)

Reliability Centered Maintenance (RCM)

- To enhance usability, if you modify the RCM Overview Filter Query, the numbers displayed in the tabs in the **RCM Overview** page now reflect the results of the modified query. (ID: TFS348579)

Risk Based Inspection

RBI 580 and RBI 581

- The performance when loading the **Risk Based Inspection Overview** page has been improved. (ID: TFS353289)
- To enhance usability, the Calculate button (📊) no longer appears on the **Risk Based Inspection Overview** page. Now, the Calculate button (📊) appears above the grid in the **Assets** section. (ID: TFS348697)
- To enhance usability, the following fields have been added to the **Recommendations** pane when accessed from the Risk Based Inspection (RBI) module:
 - Damage Mechanism
 - Non-Recurring?
 - Target Completion Date
 - Task Type(ID: TFS346643)
- In some of the PV Stress records that contain the value SA/AS 1548, SB-187, SB-308, or SB-211 in the Material Specification field, values in the Minimum Yield Strength field have been added based on ASME 2010 standards. (ID: TFS345628)
- In Oracle databases, when you attempt to calculate multiple analyses, if the calculation time exceeds the allowed timeout limit, there is now an error message that specifies the reason. (ID: TFS345520)
- For an RBI Analysis, when determining values for Long Term Avg. Corr. Rate and Short Term Avg. Corr. Rate, if the corrosion rate in a TML Corrosion Analysis is negative, then, to calculate the values in these fields, the value in the Minimum Corrosion Rate field in the TML Corrosion Analysis Settings is now used instead of the negative value. In RBI 580, Minimum Corrosion Rate is used in a related Criticality Int. Corr. Deg. Mech. Eval. In RBI 581, Minimum Corrosion Rate is used in Thinning and Lining Evaluations. (ID: TFS343791)

RBI 580

- After you generate and consolidate RBI Recommendations for an asset, the validation message that appears now includes the following information:
 - The number of recommendations that have been consolidated (i.e., recommendations in the Consolidated state)
 - The number of recommendations that have been created after consolidating (i.e., recommendations in the Proposed state)

For example, if two recommendations have been created by consolidating four recommendations, then the validation message includes the following text: 2 consolidated recommendations have been created from 4 recommendations based on Task Type and Degradation Mechanism.

(ID: TFS346653)

- The **Risk Based Inspection Overview** page now contains the **RBI RISK MATRIX BY RBI COMPONENT** graph, which plots the total number of components based on their consequence of failure and probability of failure values. If you select a cell in the graph, a new page appears, displaying the list of components, along with their equipment details, inspection priority, risk category, consequence of failure, and probability of failure.


To facilitate this enhancement:

- A new graph, RBI Risk Matrix, has been added to the following Catalog folder: Public\Meridium\Modules\Risk Based Inspection\Overview Graphs.
- Two new queries, RBI Risk Matrix Query and RiskMatrix, have been added to the following Catalog folder: Public\Meridium\Modules\Mechanical Integrity\Queries\Dashboard Queries.

(ID: TFS345450)

RBI 581

- The performance of the RBI 581 Risk Analysis calculation has been improved. To facilitate this enhancement, the policies and R Scripts that were previously used to calculate damage factor and consequence of failure are no longer used.

 **Note:** The policies and R Scripts used to calculate thinning supplements and cracking susceptibility for damage mechanisms that belong to RBI 581 Thinning and Lining Evaluation, RBI 581 Cracking Damage Evaluation, and RBI 581 External Cracking Damage Evaluation are still used.

(ID: TFS346991)

Root Cause Analysis

- The error message that you define in the Rules Editor now appears when you attempt to link an asset with an RCA. (ID: TFS353731)
- You can now restrict analysis access based on team membership via Application Settings. Only RCA Principal Analysts can modify the analysis restrictions in the **Analysis Summary** workspace. (IDs: TFS350794, TFS350761)
- You can now use reference documents to add images to the Comprehensive Analysis Report. (ID: TFS350412)
- Full State Management capability is now available for Root Causes Analyses. The following states have been added: Not Started, In Progress, On Hold, Deferred, and Completed. (ID: TFS348778)
- To enhance usability, if you modify either of the following queries, the numbers displayed in the tabs in the **RCA Overview** page now reflect the results of the modified query:
 - TileQueryInProgress
 - TileQueryTemplate(ID: TFS348689)
- You can now create your own Hypothesis state and assign it an image. The new state will appear as an option in the **State** list in the **Properties** pane for a Hypothesis, and in the **Hypothesis States** (💡) menu in the Logic Tree diagram for a Hypothesis. (ID: TFS345311)
- When creating an Event Diagram, you can now build the diagram in any order, and the arrows now point in the direction that you specify. (ID: TFS254315)

Rounds

Rounds Data Collection

- The fields in the **Lubrication Requirement Summary** section for a Lubrication Requirement are now rearranged to enhance usability. (ID: TFS352490)
- The default sync interval for a device is now 20 minutes. (ID: TFS344878)

Rounds Designer

- You can now create a query that links a checkpoint to the template group that was used to create it. To facilitate this enhancement, a new field, Template Group Key, has been added to the Checkpoint, Measurement Location, and Lubrication Requirement families. (ID: TFS346156)
- For the Rounds feature area, you can now more easily configure URLs to display as hyperlinks in the query results. To facilitate this enhancement, in the **URL Builder** window, the following options are now available in the **Select URL Type** section when you select **Rounds** in the **Select URL Feature Area** section:
 - Open route in data collection
 - Open route in designer
 - Open existing template group in designer
 - Open existing checkpoints by template(ID: TFS241247)

Security Manager

- The MI ASM Analyst security group has been added to the MI Foundation Power role. (ID: TFS350699)

Tools

Data Loaders

- The Rounds Route and Rounds Template data loader workbooks now support checkpoint conditions. To facilitate this enhancement, the following updates have been made to these workbooks:
 - New Checkpoint Condition worksheets have been added to the Rounds Route and Rounds Template data loader workbooks.
 - New fields have been added to the following worksheets:
 - The Checkpoint Template Sequence worksheet in the Rounds Template workbook
 - The Measurement Location worksheet in the Rounds Route workbook(ID: TFS349035)

Resolved Issues - V4.3.0.4.0

The following issues existed in one or more previous releases and have been resolved in V4.3.0.4.0.

Application Settings

Asset Health Manager

- Previously, if you did not have an Operator Rounds license, you did not have access to the Checkpoint or Measurement Location families, and when you accessed the **Health Indicator Source Management** page, health indicators for Measurement Locations did not load as expected. This issue has been resolved. Now, the license policy is updated to include the Checkpoint family for all license types. (ID: TFS345925)

Rounds Designer

- Previously, when you attempted to modify the default device settings for all devices, if your database did not contain a Security Group named Super Users, an error occurred, and you were unable to modify settings for all devices. This issue has been resolved. (ID: TFS347078)

Asset Criticality Analysis

- Previously, when linking Equipment or Functional Location records to an ACA System, the selected Equipment or Functional Location records were erroneously added to a different ACA System than the ACA System that was selected. This issue has been resolved. (ID: TFS353573)

Asset Health Manager

- Previously, for a Health Indicator, when you refreshed any of the following workspaces, the count of records in the **Reading History** workspace was incorrect:
 - **Configuration**
 - **Reading History**
 - **Trend Chart**

As a result, the chart in the **Trend Chart** workspace appeared incorrectly. This issue has been resolved. (ID: TFS348033)

- Previously, for a Health Indicator, in certain scenarios, the chart in the **Trend Chart** workspace appeared incorrectly. This issue has been resolved. (ID: TFS348033)
- Previously, for a Health Indicator, when you modified the date range using the Filter button (🔍), and then selected the **Apply** button, the data in the **Reading History** and **Trend Chart** workspaces was not updated. This issue has been resolved. (ID: TFS347746)
- Previously, when a Health Indicator did not contain a reading for the specified date range, a message did not appear in the **Trend Chart** workspace to indicate that there was no data. This issue has been resolved. (ID: TFS347746)
- Previously, on the **Health Summary** page, in the **Events** section, all the events associated with the selected asset did not appear in the grid. As a result, the number on the **Events** tab was incorrect. This issue has been resolved. (ID: TFS347544)

Asset Strategy Implementation

- Previously, in the **Maintenance Plans** workspace of the **ASI Overview** page, the **ID** column did not contain hyperlinks to the implemented SAP systems. This issue has been resolved. (ID: TFS353153)
- Previously, if you configured the rules for a field that used the ValueHelperDialog and then compiled the database, an error occurred. This issue has been resolved. (ID: TFS349680)
- Previously, when you attempted to update the cycle of a Multiple Counter plan that had been imported from SAP, an error occurred indicating that the cycle contained invalid Time Units. This issue has been resolved. (ID: TFS347899)
- Previously, if you did not have the SAP Work Management license and attempted to search for an SAP record in ASI, an error occurred. This issue has been resolved. The SAP Work Management license is no longer required to search for SAP records in ASI. (ID: TFS338141)

Asset Strategy Management

- Previously, when using the ASM Data Loader, when you imported data with an invalid Field ID, the data import job succeeded; however, the data loaded for the

Field ID was invalid, and no warning message appeared in the error log. This issue has been resolved. Now, if the data import job encounters an invalid Field ID, a warning is recorded in the error log. (ID: TFS351418)

- Previously, if you applied updates for an ASM Action that was linked to an Asset Strategy Implementation Work Management Item (ASI WMI), the state configuration of the associated ASI WMI package was not updated. This issue has been resolved. Now, if you apply updates for an ASM Action that is linked to an ASI WMI, the state configuration of the associated package updates as expected. (ID: TFS347623)
- Previously, with an active Asset Strategy Management license, you were unable to access the **Action Task Mapping** workspace from the **ASM Admin** page unless you also had active Calibration and Inspection licenses. This issue has been resolved. (ID: TFS346583)
- Previously, if you opened an Asset Strategy and navigated away from that Asset Strategy before the page finished loading, an error occurred. This issue has been resolved. (ID: TFS335976)

Asset Strategy Optimization

- Previously, if you accessed the **Risks** or the **Actions** workspace for an Analysis Summary, the icons in the **Status** column did not render properly. This issue has been resolved. (ID: TFS352691)

Calibration Management

- Previously, when you unlinked a Calibration Task from a Calibration Template, the Calibration Task was also erroneously unlinked from the Equipment. This issue has been resolved. (ID: TFS353304)
- Previously, in a Calibration Template, Analog record used in a GE Druck calibrator, if the value in the Temperature Element Type was NI100 (672), PT100 (385), or PT50 (385), the RTD Wiring Configuration field was not enabled. This issue has been resolved. (ID: TFS351275)
- Previously, in a Calibration Profile, when you attempted to link a Calibration Task to an Equipment record, an error occurred. This issue has been resolved. (ID: TFS350385)

- Previously, if you attempted to link a Calibration Template, Analog record to an asset, an error occurred. This issue occurred only if the Calibration Template, Analog record was linked to a Calibration Profile, and contained the value None in the Temperature Element Type field. (ID: TFS350326)
- Previously, when you attempted to send a Calibration Task to a calibrator, an error occurred. This issue occurred only if the associated asset was linked to another Calibration Task whose value in the Template ID field was blank. This issue has been resolved. (ID: TFS350325)
- Previously, on the **Calibration Management Overview** page, in the **Calibration Profiles** section, the count of linked assets in the **Linked Assets Count** column was incorrect. Instead of the total number of only the Equipment records linked to the associated Calibration Templates, the total number of the Equipment, Functional Location, and other asset records linked to the Calibration Templates appeared. This issue has been resolved. To facilitate this fix, the following query has been modified: `\Public\Meridium\Modules\Calibration Management\Queries\Applied Profiles Count` (ID: TFS350107)
- Previously, in the **Linked Assets** section in a Calibration Profile, the count of the linked assets was incorrect. This issue has been resolved. To facilitate this fix, the following query has been modified: `\Public\Meridium\Modules\Calibration Management\Queries\Calibration Profile Linked Asset Query` (ID: TFS350107)
- Previously, in the **Calibration Management Overview** page, in the **Calibration Profiles** section, duplicate records appeared in the grid. This issue occurred only if each Calibration Template in the Calibration Profile was in a different state. This issue has been resolved. To facilitate this fix, in the **Calibration Profiles** section, the **State** column has been removed from the grid. (ID: TFS350106)
- Previously, the MI Foundation User Security Role was assigned the MI Calibration Administrator and MI Calibration User Security Groups. As a result, a user who was assigned the MI Foundation User Security Role could use Calibration Management. This issue has been resolved. Now, the MI Foundation User Security Role is not assigned the MI Calibration Administrator or the MI Calibration User Security Group. (ID: TFS349848)
- Previously, in a Calibration Template, Analog record that contained the value Temperature in the Output Type field, if you selected the value None in the Temperature Element Type field, an error occurred when you attempted to save the record. This issue has been resolved. (ID: TFS349380)

- Previously, if you attempted to link a Calibration Template, Analog record to an asset, an error occurred. This issue occurred only if the Calibration Template, Analog record was linked to a Calibration Profile, and contained the value None in the Temperature Element Type field. This issue has been resolved. (ID: TFS349265)
- Previously, you could delete a Calibration Strategy that was used in a Calibration Profile, Calibration Template, or a Calibration Event. This issue has been resolved. (ID: TFS348517)
- Previously, for a profile template linked to an asset, if you selected **Restore Template Defaults** on the **Edit Default from Template** window, an error occurred. This issue occurred only if the Calibration Profile was not associated with a master template. This issue has been resolved. Now, the **Restore Template Defaults** button appears only if the Calibration Profile is associated with a master template. (ID: TFS348136)
- Previously, if you attempted to delete a Calibration, Functional Test record, an error occurred. Additionally, if you attempted to delete a Calibration, Analog record, although the record was deleted from the database, an error message appeared, and the record still appeared in the **Calibration Events** section. These issues have been resolved. (ID: TFS346874)

Failure Modes and Effects Analysis (FMEA)

- Previously, when you imported data with an invalid Field ID, the data import job succeeded; however, the data loaded for the Field ID was invalid, and no warning message appeared in the error log. This issue has been resolved. Now, if the data import job encounters an invalid Field ID, a warning is recorded in the error log. (ID: TFS351418)
- Previously, when using the **Template Builder** window to create a FMEA Template with a non-English culture setting, an error occurred. This issue has been resolved. (ID: TFS350038)
- Previously, when using the Failure Modes and Effects Analysis (FMEA) Asset Templates Data Loader to import FMEA template data, the associated ID fields for the asset and its child records were not generated. This issue has been resolved. Now, when importing records using the FMEA data loader, all ID fields are automatically populated as expected. (ID: TFS346982).
- Previously, when you accessed an asset, the list of Failure Modes could take a long

time to appear. This issue has been resolved. (ID: TFS346581)

- Previously, when you promoted to ASM an FMEA Analysis that was created from a template in the Apply Template Builder and assigned to a specific site, an error occurred. This issue has been resolved. Now, all FMEA Analyses that were created from templates and assigned to specific sites are promoted to ASM as expected. (ID: TS345206)

Foundation

- Previously, when you attempted to log in to GE Digital APM while you were offline, your account would not get locked although the number of failed attempts exceeded the limit specified in the **Password Policies** page. This issue has been resolved. Now, based on the password policy, if the number of failed attempts exceed the limit, your account will be locked. (ID: TFS345306)

Export

- Previously, when you attempted to export a security group that was associated with a family for which the license was inactive, an error occurred. This issue has been resolved (ID: TFS346578)
- Previously, when you exported a security group or role, the data permissions that were applied to the security group or role were not exported. This issue has been resolved (ID: TFS342428)


Family Management

- Previously, although the license for a module was activated, the associated parent families were not appearing in the **Family Management** page, and when you attempted to access a child family, an error occurred. These issues have been resolved. (ID: TFS353926)

Record Manager

- Previously, execution of the strategy rule for Conditional Alerts could fetch expired user data, causing an error to occur. This issue has been resolved. (ID: TFS352137)
- Previously, selecting the **Send Web Query** check box for a Conditional Alert resulted in an error, and, even if the check box was cleared, each email sent using the

Conditional Alert included a link to the query. This issue has been resolved. Now, emails sent using a Conditional Alert will include a link to the query only if the **Send Web Query** check box for the Conditional Alert is selected. (ID: TFS352129)

- Previously, when you used the Variable Distribution list to add recipients to a Conditional Alert, the email was not sent. This issue has been resolved. (ID: TFS352124)
- Previously, if only the Allow for Unlinking datasheet-level permissions option was enabled in the **Create New Master Form** window, the **Unlink** option was available when you selected the Options button () in Record Manager. This issue has been resolved. Now, the **Unlink** option will appear only if the Allow For Deletion and Allow For Unlinking options are enabled in the **Create New Master Form** window. (ID: TFS349546)

Security Manager

- Previously, after synchronizing user records from Microsoft Active Directory, although you had cleared the **Enable Password Change** check box in the **LDAP Manager** page, the users whose passwords would expire within 30 days were prompted to change their passwords. This issue has been resolved. Now, if you clear the **Enable Password Change** check box, the users whose passwords would expire in 30 days will not be prompted to change their passwords after synchronization. (ID: TFS347875)
- Previously, in versions 4.3.0.1.0 or later, the **Roles** tab was unavailable in the **Security Groups** page. This issue has been resolved. (ID: TFS340710)

Search

- Previously, if the value in the Query Location field of a Conditional Alert ended in a backslash (\), you could not access the Conditional Alert. This issue has been resolved. (ID: TFS346921)
- Previously, if you attempted to access a Functional Location record via global search, an Object expected error may have occurred. This issue has been resolved. (ID: TFS346897)
- Previously, in global search, special characters such as hyphens included in search strings were disregarded (for example, a search for *P-6* would not return a record whose name was *P-656*). This issue has been resolved. (ID: TFS346191)

Sites

- Previously, if a data source had two or less than two sites, the site selector was unavailable. This issue has been resolved. (ID: TFS335811)

Generation Availability Analysis (GAA)

- Previously, for a GAA Unit associated with a Maintenance Outage (MO) event, in the **Breakdown of Period Hours** section, the MO period was included in the **Planned Outage** slice instead of the **Unplanned Outage** slice of the doughnut chart. This issue has been resolved. (ID: TFS351385)
- Previously, if you created Performance records for all events and events that were not outside management control (OMC), in the **Unit Summary** workspace, in the **Frequency of Event types** graph, events that were not OMC were considered twice. This issue has been resolved. Now, events in only the Performance record for *all* events are considered in the graph. (ID: TFS348744)

Hazards Analysis

- Previously, for a newly-created Hazards Analysis Safeguard, the IPL Checklist record was not created. As a result, the corresponding fields in the **IPL Checklist** section of the datasheet did not appear. This issue has been resolved. (ID: TFS353620)
- Previously, after you unlinked an asset from a Hazards Analysis System/Node, the count of assets on the **Linked Assets** tab was not updated. This issue occurred only for a HAZOP Analysis. This issue has been resolved. (ID: TFS348489)
- Previously, you could unlink an asset from a Hazards Analysis regardless of its state. This issue has been resolved. Now, you can unlink an asset only if the Hazards Analysis is in the Planning state. (ID: TFS348282)

Inspection Field Data Collection

- Previously, a user whose culture setting was Chinese could not download an off-line inspection. This issue has been resolved. (ID: TFS346633)

Inspection Management

- Previously, if you updated an inspection with a Completion Date that was earlier than the Last Date of the inspection task, the Last Date was not updated. This issue has been resolved. Now, the Last Date is updated with the most recent Completion Date of an inspection that has the **Inspection Task Complete** check box selected. (ID: TFS354976)
- Previously, if you modified a Checklist Finding record and then navigated away from the page, your changes were not saved. This issue has been resolved. Now, if you modify a Checklist Finding record and attempt to navigate away from the page before saving, a confirmation message appears, prompting you to save. (ID: TFS350663)
- Previously, if you had a Human Resource record without a Security User record, then the following fields were not populated on their respective datasheets:
 - On the Pressure Test Inspection datasheet:
 - Witnessed By - Shell Side
 - Witnessed By - Tube Side
 - On the Inspection datasheet:
 - Inspection Report Owner
 - Reviewers Name

This issue has been resolved. Now, a Human Resource record without a corresponding Security User record is displayed in the following format: <Last Name>, <First Name> ~. (ID: TFS349807)

- Previously, for a Team Member record associated with an inspection, the value in the Full Name field was not populated with the associated Human Resource record. This issue has been resolved. Now, in the Team Member record, the Full Name field displays the Human Resource record in the following format: <Last Name>, <First Name> ~ <User ID>. If the Human Resource record does not have an associated User ID record, the Full Name field is populated with a value in the following format: <Last Name>, <First Name> ~. (ID: TFS349794)
- Previously, while modifying an Inspection Task using the Inspection Management (IM) Assets or the Inspection Management (IM) Functional Location Data Loader, even if you entered the *same* value as the previous one in the Reoccurring column, an error message appeared. This issue has been resolved. Now, the error message appears only if you enter a *different* value in the Reoccurring column. (ID: TFS348599)
- Previously, if the value in the Desired Interval field in an Inspection Task was 0, you could not update the value even if the value in the Override Interval field was True. This issue occurred only if you attempted to update the Inspection Task

using the Inspection Management (IM) Assets or the Inspection Management (IM) Functional Location Data Loader. This issue has been resolved. (ID: TFS348522)

- Previously, you could not add a Reference Document to an archived Inspection using the Inspection Management (IM) Assets or the Inspection Management (IM) Functional Location Data Loader. This issue has been resolved. Now, in this scenario, although you cannot update the Inspection, you can add a Reference Document. (ID: TFS342304)
- Previously, when you deleted an Inspection, Inspection Task, or Work Pack, a message appeared indicating that the record was successfully deleted. However, the busy indicator remained on the page. Also, the record did not appear to have been deleted until you refreshed the page. These issues have been resolved. (ID: TFS337652)
- Previously, in a checklist inspection, Checklist Findings were not sorted. This issue has been resolved. Now, Checklist Findings are sorted based on their sequence in the System Code Table for their respective checklist family. (ID: TFS214338)

Life Cycle Cost Analysis

- Previously, when you navigated from the MI Human Resource datasheet to another human resource datasheet while adding a new team member, the **Add Team Member** button disappeared. If you returned to the previous datasheet, the button remained absent. This issue has been resolved. (ID: TFS345264)

Operations

Risk Matrix

- Previously, if the **Hide Probability and Consequence Name** check box was selected for a Risk Matrix record, all rows other than the first row of that Risk Matrix were hidden, and the row and column headers remained on the Risk Matrix. This issue has been resolved. Now, in this scenario, all rows of the Risk Matrix appear, and the Consequence and Probability names are hidden from the column and row headers as expected. (ID: TFS346089)

Policies

Family Policies and Policy Designer

- Previously, when you attempted to delete a Case node or an Is Null node from a policy, an error occurred, and the node was not deleted as expected. This issue has been resolved. (ID: TFS354504)
- Previously, on the **Properties** window of a Text node, when you added more than 9 indexes, the additional Index numbers did not appear in a numeric order. This issue has been resolved. (ID: TFS352248)
- Previously, for a Data Frame type of Constant node to which a value was passed from another node, in the **Edit Data Frame** window, when you attempted to map that value to a column whose data type was Decimal, an error occurred. This issue occurred when the data type of the mapped value was undetermined. This issue has been resolved. (ID: TFS351455)
- Previously, for a Collection Filter node in a policy model, if you selected any of the following operators for Timestamp on the **Properties** window, and then validated or executed the policy, a validation error occurred:
 - >
 - >=
 - <
 - <=

This issue has been resolved. (ID: TFS349996)

- Previously, for a policy model where an R Script node was connected to a Data Frame type of Constant node, when you copied the two nodes, along with the connection, and pasted them to the model canvas, the input value for the pasted R Script node appeared blank in the **Properties** window. This issue has been resolved. (ID: TFS343648)
- Previously, for a policy model, when you attempted to map an output value whose data type was undetermined (for example, a value from a Case node) to a node that enforced data type checking (for example, an Add node), the policy could not be activated. This issue has been resolved. (ID: TFS342485)
- Previously, on the **Properties** window of a Text node, when you added more than 11 indexes, the additional Index numbers appeared as {2}. As a result, the output of the Text node was incorrect. This issue has been resolved. (ID: DE63168)

Policy Designer

- Previously, Policy Designer displayed only the first 1,000 Instances in the **Instances**, **Execution**, and **Validation** panes, and when you searched for Instances that were not already displayed, the search did not return the correct results. This issue may have resulted in errors when you saved new Instances, where the new Instance ID was identical to an existing Instance that was not currently displayed in Policy Designer. This issue has been resolved. Now, up to 10,000 instances can be displayed in Policy Designer. As a result, you may encounter longer load times for policies with a large number of Instances. (ID: TFS354793)
- Previously, in V4.3.0.3.07, in the **Policy Designer Overview** page, in the **Active Policies** and **Inactive Policies** sections, references to other records in the **Execution Result Summary** column did not appear as links. This issue has been resolved. (ID: TFS352646)
- Previously, for a policy model that included a primary record and an Input node, in the **Instances** section, when you accessed the **Search** window of the Input node, no records appeared. This issue occurred when a relationship was not defined between the family used in the primary record and that used in the Input node. This issue has been resolved. (ID: TFS352234)
- Previously, if you modified the time zone of a Policy from Coordinated Universal Time (UTC) to any other value, and then executed an Email Contact node that contained a timestamp value in the **Message** section, the timestamp in the email message did not reflect the new time zone. This issue has been resolved. (ID: TFS350432)
- Previously, prior to an upgrade, if your database contained a scheduled policy with an invalid time for the most recent Last Date or Next Date, an error occurred, and the upgrade did not continue as expected. This issue has been resolved. Now, when you upgrade your database, the Policy Upgrade Utility clears the value from the Last Date or Next Date field where invalid times were encountered so that you can manually update the execution schedules in Policy Designer as needed. (ID: TFS349531)
- Previously, in the **Security** section, when you added a duplicate User or Security Group in the grid, an error message did not appear, asking you to remove the duplicate entry. This issue has been resolved. (ID: TFS348227)
- Previously, if an erroneous policy configuration resulted in input values for a node being derived from nonexistent output fields of a predecessor node, the **Policy Designer** page did not load after the policy was saved. This issue has been

resolved. Now, in this scenario, when you access the policy, the **Policy Designer** page loads as expected. (ID: TFS346260)

R Scripts

- Previously, if you accessed the **R Scripts** page via the Catalog folder, and then modified any of the following Catalog Item Properties of an R script in the grid, the R script editor and the **Parameters** pane of the R script appeared blank:
 - Catalog
 - Description
 - Name

This issue has been resolved. (ID: TFS348806)

Production Loss Analysis (PLA)

- Previously, in the **PLA Overview** page, in the **TOP 10 BAD ACTORS** graph, the total cost of losses was plotted incorrectly. This issue has been resolved. To facilitate this fix, the following query has been modified: Public\Meridium\Modules\PLA\Queries\Top10BadActors (ID: TFS355530)
- Previously, when creating a manual Production Plan, if you attempted to add a row using the **Insert Row Above** or the **Insert Row Below** option, an error occurred. This issue occurred only if values in the Related Product Name and Alternate Product Name fields in the associated Production Profile were different. This issue has been resolved. (ID: TFS353883)
- Previously, in the **Codes** workspace or in the **Production Event Code** box on the Production Event datasheet, when you scrolled down the list of child Production Event Codes, duplicate values appeared in the list. This issue has been resolved. (ID: TFS350316)
- Previously, if a Production Event Code that was linked to a Production Event was deleted, then the deleted code still appeared in:
 - The **Event Code** column in the **Production Events** section on the **PLA Overview** page.
 - The **Production Event Code** box on the **Production Events** datasheet.
 - The **Production Event Code** column in the **Production Events** workspace.

This issue has been resolved. Now, in this scenario, a blank value appears. (ID: TFS348792)

- Previously, if an Impact Code that was linked to a Production Loss was deleted, then the deleted code still appeared in:
 - The **Impact Code** box on the Production Loss datasheet.
 - The **Impact Code** column in the Production Loss grid in the **Production Data** workspace.

This issue has been resolved. Now, in this scenario, a blank value appears. (ID: TFS348791)

- Previously, if an OEE Code that was linked to a Production Loss was deleted, then the deleted code still appeared in:
 - The **OEE Code** box on the Production Loss datasheet.
 - The **OEE Code** column in the Production Loss grid in the **Production Data** workspace.

This issue has been resolved. Now, in this scenario, a blank value appears. (ID: TFS348790)

Recommendation Management

- Previously, when using GE Digital APM with an Oracle database, if you performed a search in the **Recommendations** pane, an error occurred. This issue has been resolved. (ID: TFS354990)
- Previously, if you used the search feature to find a record within the **Recommendations** pane, and then attempted to select the check box next to one of the search results, the check box could not be selected. This issue has been resolved. (ID: TFS348658)
- Previously, when assigning an asset to a General Recommendation, the site key of the asset was not inherited by the General Recommendation record. This has been resolved. (ID: TFS347725)
- Previously, when you searched Performance Recommendations, a maximum of 1,000 records appeared on the **Recommendation Management** page, even when there were more than 1,000 records. This issue has been resolved. Now, all records appear when more than 1,000 Performance Recommendations are returned. (ID: TFS346703)

- Previously, if a Security User belonged to only the MI Recommendation Management Security Group, the **Asset Health** button in the left navigation menu was disabled and the user could not access recommendations. This issue has been resolved. (ID: TFS346582)

Reliability Analytics

- Previously, if you saved a Production Analysis with an invalid value in the Analysis Name field, an error message appeared and the analysis name was saved as *New Analysis*. This issue has been resolved. (ID: TFS354388)
- Previously, in Probability Distribution, Production Analysis, Reliability Distribution, and Reliability Growth, when you selected **View Data** after merging two or more analyses, an error occurred. This issue has been resolved. (ID: TFS353984)
- Previously, when you entered a negative value in the **Random Variable** box on the **Specify the Random Variable** window and selected **OK**, an error occurred. This issue has been resolved. (ID: TFS353421)
- Previously, if you renamed a Production Analysis without entering a value in the Analysis Name field, no error message appeared and the analysis was saved. This issue has been resolved. Now, in this scenario, a warning message appears and the analysis is not saved. (ID: TFS352560)
- Previously, if you saved a Probability Distribution with an invalid value in the Analysis Name field, an error message appeared and the analysis name was saved as *New Analysis*. This issue has been resolved. (ID: TFS352559)
- Previously, when you created a new Automation Rule based on a Reliability Distribution, an error occurred. This issue has been resolved. (ID: TFS351839)
- Previously, in System Reliability, when you created a new scenario and accessed the diagram, the default nodes did not appear in the **Palette** section. This issue has been resolved. (ID: TFS351818)
- Previously, when you selected multiple **Ignore** check boxes in the **Reliability Distribution Data Editor** window, only the last check box selection was saved. This issue has been resolved. (ID: TFS351721)

- Previously, if you saved a Reliability Growth Analysis without entering a value in the Analysis Name field, no error message appeared and the analysis name was set to *New Analysis*. This issue has been resolved. Now, if the Analysis Name field is blank when you attempt to save a Reliability Growth Analysis, a warning message appears and the analysis is not saved. (ID: TFS351600)
- Previously, when you accessed a localized version of Reliability Distribution, the Probability Plot was not properly localized for different cultures and an error occurred. This issue has been resolved. (ID: TFS351483)
- Previously, when a member of the MI Reliability Administrator Security Group selected the **Automation Rules** tab on the **RA Overview** page, an error occurred. This issue has been resolved. (ID: TFS350871)
- Previously, in System Reliability, if you selected < on the new risk datasheet, the list of actions associated with the selected scenario appeared, rather than the expected list of mitigating risks. This issue has been resolved. (ID: TFS350735)
- Previously, in System Reliability, if you selected < on the new action datasheet, the list of risks associated with the selected scenario appeared, rather than the expected list of mitigating risks. This issue has been resolved. (ID: TFS350735)
- Previously, in the **Actions** section of a System Scenario, when you navigated away from the **System Reliability Analysis** page and then returned, the **Action Type** list appeared blank. This issue has been resolved. (ID: TFS349679)
- Previously, when you extrapolated a plot in Reliability Growth with an extrapolate date or time set before the analysis end date or time, the page did not respond until it was refreshed. This issue has been resolved. (ID: TFS348548)
- Previously, when you added an Action to a System Reliability Analysis, the value in the Action Type list selection appeared as No Name if the option was not a baseline System Code. This issue has been resolved. (ID: TFS346974)
- Previously, when a user without a Production Loss Analysis license selected the **Production Analysis** tab, an error occurred and the **Production Analysis** list did not appear. This issue has been resolved. (ID: TFS345627)

Reliability Centered Maintenance

- Previously, the RCM Analysis Data Loader Template that appeared in the **APM Strategy** grid of the **Data Loader Templates** workspace did not include the template enhancements made to the RCM Analysis Data Loader Template in an earlier version of GE Digital APM. This issue has been resolved. Now, the **APM Strategy** grid in the **Data Loader Templates** workspace reflects the most up-to-date version of the RCM Analysis Data Loader Template. (ID: TFS351481)
- Previously, when you promoted to ASM an RCM Analysis that was created from a template in the Apply Template Builder and assigned to a specific site, an error occurred. This issue has been resolved. (ID: TS345206)
- Previously, when using the RCM Data Loader, when you imported data with an invalid Field ID, the data import job succeeded; however, the data loaded for the Field ID was invalid, and no warning message appeared in the error log. This issue has been resolved. Now, if the data import job encounters an invalid Field ID, a warning is recorded in the error log. (ID: TFS351418)
- Previously, when using the **Template Builder** window to create an RCM Template with a non-English culture setting, an error occurred. This issue has been resolved. (ID: TFS350038)

Risk Based Inspection (RBI 580 and RBI 581)

- Previously, if the Equipment ID field in an analysis was blank, you could not calculate the analysis. This issue has been resolved. To facilitate this fix, the Equipment ID field has been added to the following datasheets:
 - RBI Criticality Analysis
 - RBI PRD Criticality Analysis
 - RBI Pipeline Analysis
 - RBI 581 Risk Analysis

In addition, the **Equipment** box has been removed from the RBI 581 Risk Analysis datasheet.

(ID: TFS348552)

- Previously, if the value in the Flow Stress field was 0, the validation message did not specify the reason. This issue has been resolved. Now, in this scenario, the validation message suggests that you verify if values in the Minimum Tensile Strength and Minimum Yield Strength fields are correct. (ID: TFS345620)

RBI 580

- Previously, the values in the Operating Pressure – Shell, Operating Temperature – Shell, and Process Fluid fields in a Criticality RBI Component – Exchanger Bundle were not copied to their respective Operating Pressure, Operating Temperature, and Representative Fluid fields in the associated RBI Criticality Analysis. This issue has been resolved. To facilitate this fix, mappings for the aforementioned fields have been added to the following query: RBI-CNAFC Query MI_CCRBICEB. When you upgrade to V4.3.0.4.0, the Data Mapping Group record that satisfies the following conditions, along with its child records, will be reverted to baseline:
 - The value in the Source Family field is Criticality RBI Component - Exchanger Bundle.
 - The value in the Target Family field is RBI Criticality Analysis.

(IDs: TFS347032, TFS335351)

- Previously, after consolidating RBI Recommendations, in some scenarios, a few fields in the new proposed Recommendation were blank. This issue has been resolved. Now, in these scenarios, the fields are populated with values in the corresponding fields in the source recommendation with the most conservative interval (i.e., the recommendation with the least value in the Interval field among all the source recommendations that have been consolidated). (ID: TFS346654)
- Previously, on the **Risk Based Inspection Overview** page, while generating RBI Recommendations for analyses associated with all the assets, if you attempted to consolidate the RBI Recommendations, they were not consolidated. This issue has been resolved. (ID: TFS346378)
- Previously, when you applied an RBI Criticality Analysis, the values in the following fields in the associated Criticality Int. Corr. Deg. Mech. Eval. were copied to the corresponding fields in the Criticality Int. Corr. Deg. Mech. Eval. of the new analysis:
 - Long Term Avg. Corr. Rate
 - Short Term Avg. Corr. Rate
 - Controlling Corrosion Rate

This issue occurred only if the value in the Source of Calculated Corrosion Rates field in the target RBI Component was *Manual Entry*. This issue has been resolved. Now, in this scenario, the aforementioned fields will be blank, and you can enter a value manually.

(ID: TFS215396)

RBI 581

- Previously, if you modified the value in a field that was used to calculate the value in the Inventory Component Mass field in an RBI 581 Consequence Evaluation

record, then the value in the Inventory Component Mass field was not updated even after you calculated the analysis. This issue has been resolved. (ID: TFS350655)

- Previously, if the DensityLiq field in the RepresentativeFluids record for a fluid was blank or contained the value 0, there was no validation message. This issue has been resolved. Now, in this scenario, a validation message appears when you attempt to calculate an analysis performed on the fluid. (ID: TFS347855)
- Previously, if the value in the Minimum Tensile Strength or the Minimum Yield Strength field in a PV Stress or a Piping Stress record was 0, then the value in the Flow Stress field was not calculated. Instead, the Flow Stress field was populated with the value 0. This issue has been resolved. In addition, if the value in the Flow Stress field is 0, a validation message appears, asking you to verify if values in the Minimum Tensile Strength and Minimum Yield Strength fields are correct. (ID: TFS345620)
- Previously, in an RBI 581 Consequence Evaluation, if you cleared the **Use Calculated Inventory** check box, the Inventory Component Mass field was updated with a null value. This issue has been resolved. (ID: TFS345618)
- Previously, when you applied an RBI 581 Risk Analysis, the values in the following fields in the associated RBI 581 Thinning and Lining Evaluation were copied to the corresponding fields in the RBI 581 Thinning and Lining Evaluation of the new analysis:
 - Long Term Avg Corr Rate
 - Short Term Avg Corr Rate
 - Controlling Corrosion Rate

This issue occurred only if the value in the Source of Calculated Corrosion Rates field in the target RBI Component was *Manual Entry*. This issue has been resolved. Now, in this scenario, the aforementioned fields will be blank, and you can enter a value manually.

(ID: TFS215396)

Root Cause Analysis

- Previously, when you linked an asset to an RCA, the Last Update By field was erroneously populated with the MIJOB SEUS KEY. This issue has been resolved. (ID: TFS351898)
- Previously, when you created an RCA from a Production Event with no start date,

and error occurred. This issue has been resolved. (ID: TFS351258)

- Previously, when a user without edit permissions for an RCA Recommendation attempted to modify the recommendation in Recommendation Management, an error message appeared and the page did not respond. This issue has been resolved. (ID: TFS349894)
- Previously, when you created an RCA Recommendation Alert and assigned it to someone who was not a team member of the analysis, the alert was not sent. This issue has been resolved. (ID: TFS349882)
- Previously, an MI FE User who was not an RCA Team Member for a specific RCA Analysis could update the analysis. This issue has been resolved. (ID: TFS347563)
- Previously, when you created an RCA Recommendation Alert, the alert was not sent because the assignee email address was not found in the human resource table rules. This issue has been resolved. (ID: TFS347343)
- Previously, when you sent a link to an RCA via email, the link did not contain the full domain name. This issue has been resolved. (ID: TFS346651)
- Previously, when you accessed a Logic Tree, an error occurred if a node in the diagram did not contain a value in the Label field. This issue has been resolved. (ID: TFS346365)
- Previously, an MI FE User who was not an RCA Team Member for a specific RCA Analysis could create a Failure Event for that analysis. This issue has been resolved. (ID: TFS345509)
- Previously, when you imported nodes from one Root Cause Analysis to the Logic Tree in another Root Cause Analysis, Auto Arrange was not applied. This issue has been resolved. (ID: TFS345174)
- Previously, when you exported a Logic Tree using a browser with a popup blocker enabled, an unhelpful error message appeared. This issue has been resolved and the message now indicates that the popup blocker is enabled. (ID: TFS343632)

Rounds

- Previously, when you attempted to install Operator Rounds on a Windows Mobile Device, the installation did not work as expected. This issue has been resolved. (ID: TFS354564)
- Previously, if you were logged in to GE Digital APM as a Calibration Admin and you attempted to delete a reference document, an error occurred, and you were unable to delete the reference document. This issue has been resolved. (ID: TFS351255)

Rounds Data Collection

- Previously, when you created a recommendation for a checkpoint, the **Source ML or LR Description** box was not populated automatically with the value stored in the ML or LR Description field in the checkpoint record for which the recommendation was created. This issue has been resolved. (ID: TFS355476)
- Previously, when you accessed the **Recommendations** section, the value in the **Created On** column did not appear in the format appropriate to your Culture setting. This issue has been resolved. (ID: TFS354360)
- Previously, when you filtered a Route by one or more filters that were not applicable to any checkpoints on the Route, error messages appeared, and filtering did not work as expected. This issue has been resolved. (ID: TFS353831)
- Previously, when you entered a reading for a checkpoint with successor conditions, the successor checkpoints of those conditions did not appear in the expected order. This issue has been resolved. (ID: TFS352245)
- Previously, if anything other than **Home** was selected in the Asset Hierarchy, no recommendations appeared in the **Recommendation** pane. This issue has been resolved. Now, the **Recommendation** pane functions as expected regardless of the selection in the Asset Hierarchy. (ID: TFS351507)
- Previously, if your database contained a very large number of readings, when you attempted to download routes to the Windows APM Mobile Framework, the synchronization process failed. This issue has been resolved. (ID: TFS341628)

Rounds Designer

- Previously, there was no way to view more than 100 checkpoint records for any checkpoint template on the **Update Existing Checkpoints** page. This issue has been resolved. Now, on this page, a drop-down list box appears, allowing you to view checkpoint records in increments of 100. (ID: TFS355369)
- Previously, in the **Template** section, if you selected a Lubrication Requirement Template and then selected **Update Existing Checkpoints**, an error occurred, and you could not update existing checkpoints to reflect changes made in a source Lubrication Requirement Template. This issue has been resolved. (ID: TFS352414)
- Previously, when you had a large number of checkpoints in a noncompliant state, noncompliant readings were not created. This issue has been resolved. (ID: TFS352125)
- Previously, when you added a large checkpoint template group to multiple assets on a Route, the action timed out before the template group was completely added, and the Route was not updated as expected. This issue has been resolved. Now, in this scenario, performance is significantly improved, and a progress bar appears, indicating the number of assets to which the template or template group is being applied. (IDs: TFS351657, TFS350738, TFS349892)
- Previously, when you added multiple existing checkpoints to a Route simultaneously, if the first checkpoint you selected in the **Existing ML/LR** window had a description but a subsequent checkpoint you selected did not have a description, an error occurred, and, after closing the Route, when you attempted to access the Route again, the Route did not load as expected. This issue has been resolved. (ID: TFS351331)
- Previously, when you added multiple existing checkpoints to a Route simultaneously, if you closed the Route before all checkpoints were successfully added, when you attempted to access the Route again, the Route did not load as expected. This issue has been resolved. Now, when you add multiple existing checkpoints, a progress bar appears, preventing you from closing the Route until the checkpoints are added. (ID: TFS351327)
- Previously, when you added a condition to a Route as a successor of a numeric checkpoint with numeric allowable values defined, the allowable values did not appear in the **Select Value** box in the workspace for the condition. This issue has been resolved. (ID: TFS349599)
- Previously, when you updated Measurement Locations belonging to an ML Template and your Culture setting was defined as anything other than Invariant, an

error occurred. This issue has been resolved. (ID: TFS348540)

SIS Management

- Previously, in a Protective Instrument Loop Sensor, if you modified values in any of the following fields, then the values in the Base SFF and SFF fields were not updated automatically:
 - Sensor
 - Connection
 - Interface A
 - Interface B

Similarly, in a Protective Instrument Loop Final Element, if you modified values in the Final Element, Interface Module, or any other related fields, then values in the Base SFF and SFF fields were not updated automatically. This issue has been resolved. (ID: TFS345275)

Thickness Monitoring

- Previously, in the **TMLs** section in the **Analysis Overview** workspace, if a numeric field contained a value of zero, that field appeared to be blank. This issue has been resolved. (ID: TFS355464)
- Previously, when you performed a bulk analysis on assets in the **Thickness Monitoring Overview** page, selections did not clear after navigating away from the page. When you performed another bulk analysis, although no check boxes appeared to be selected, the previously selected assets were analyzed. This issue has been resolved. Now, all selections clear when you navigate away from the **Thickness Monitoring Overview** page. (ID: TFS355271)
- Previously, in a Thickness Monitoring (TM) Equipment or Thickness Monitoring (TM) Functional Location Data Loader, even if you entered an invalid value in the Measurement Date column on the Measurements worksheet, the Measurement record was created after you loaded data. And, the Measurement Date field was populated with the date on which the Measurement record was created. This issue has been resolved. Now, in this scenario, the Measurement record is not created. (ID: TFS347513)
- Previously, when you used a Thickness Monitoring (TM) Equipment or Thickness Monitoring (TM) Functional Location Data Loader to update measurements in a different time zone than the time zone in which the original measurements were created, new measurement records were created, and the existing measurements

were not updated. This issue has been resolved. (ID: TFS345242)

Tools

Advanced Search

- Previously, if you selected the same family in the **Family** and **Linked To** boxes, an advanced search returned no results even if results should have been returned. This issue has been resolved. (ID: TFS350742)

Data Loaders

- Previously, when you used the Rounds Route data loader workbook to create a Route, in the Measurement Location worksheet, if you entered a value in the Template field but did not enter a value in the Template Group Key field, the checkpoint was not created. This issue has been resolved. (ID: TFS353864)
- Previously, when you used the Rounds Route data loader workbook to create a Route, checkpoints were not linked to assets as expected. This issue has been resolved. (ID: TFS353571)

Maps

- Previously, when you attempted to close the location details on a map, the window did not close. This issue has been resolved. (ID: TFS337811)

Queries

- Previously, when you sent a Conditional Alert email, the web query link was unresponsive. This issue has been resolved. The server parameter for the MI_ProcessConditionalAlerts rule has been corrected. (ID: TFS352126)
- Previously, for a query that contained one or more compound join conditions, if you attempted to modify a compound join condition via the **Design** workspace, you were unable to modify the join, and the query was corrupted and could not be run. This issue has been resolved. Now, if a previously existing query contains one or more compound join conditions, you can access and run the query as expected *unless* you first access the **Design** workspace for the query. If you access the **Design** workspace for such a query before running the query, the query will be executed based only on the information in the **SQL** workspace, and will ignore any modifications normally applied by selections made in the **Design** workspace. If the

query is executed in this way, columns whose **Display** check boxes are cleared appear in the query results, and hyperlinks do not appear in the query results. Also, now, if you create a query that contains one or more compound join conditions, you cannot access the **Design** workspace for that query. (ID: TFS347790)

- Previously, when you exported query results as an Excel file:
 - If your query was not formatted, date and time values in the exported file were incorrect and no longer in the time zone associated with your Security User account.
 - If you selected the **Formatted** check box in the **Design** workspace for the query, decimal marks were represented by decimal points in the exported file, regardless of your culture setting.
 - An error may have occurred when you attempted to open the file.

These issues have been resolved. (ID: TFS346707)

- Previously, if a query contained logical OR criteria, then, in the **Design** workspace for the query, the information displayed when hovering over any expression in the column displayed the value stored in the first line of the criteria rather than the appropriate hyperlink value. This issue has been resolved. (ID: TFS346706)
- Previously, if you created a query containing a date prompt and you selected a default value for the date prompt, when the query was run, the default date did not appear in the prompt. This issue has been resolved. (ID: TFS346704)
- Previously, when you exported query results as an Excel file, in some scenarios, an error occurred when you attempted to open the file. This issue has been resolved. (ID: TFS346579)
- Previously, if you exported query results as a .csv file, only 1000 results appeared in the exported file even if the query results should have contained more than 1000 records. This issue has been resolved. (ID: TFS346359)
- Previously, joins against non-family tables did not appear correctly in the **Design** workspaces of queries and produced invalid query results. This issue has been resolved. (ID: TFS346192)
- Previously, the results of a formatted query containing two instances of the same column displayed the Unit of Measurement (UOM) associated with the Security User in the first instance of the column, but displayed the unconverted UOM in the second instance of the column. This issue has been resolved. Now, in this scenario, the results display the (UOM) associated with the Security User in both

columns. (ID: TFS333690)

Restored Features - V4.3.0.4.0

The following V3.x features were deferred from previous V4.x releases, but are now available in V4.3.0.4.0.



Calibration Management

- If receiving data from a calibrator fails, the error message now specifies the reason for failure. (ID: TFS343848)

Obsolete Features - V4.3.0.4.0

The following items are no longer used in GE Digital APM.

Asset Strategy Management

- To simplify the process of applying templates in ASM, you can no longer manually add controlled strategies in the **Controlled Strategies** workspace of the **Strategy Details** page. Now, all the steps required to apply a template are performed via the **Apply Template** window. Also, on the **Controlled Strategies** workspace, the Delete button () has been replaced with the Unlink button (). (ID: TFS351505)

Calibration Management

- On the **Calibration Management Overview** page, in the **Calibration Profiles** section, the **State** column has been removed. (ID: TFS350106)
- The following fields in the Calibration Setup Defaults family have been removed from the datasheet because they are no longer used:
 - Default Analog Strategy
 - Default Discrete Strategy(ID: TFS347138)

Configuration Manager

Sites

- You can no longer delete sites. (ID: TFS346154)

Generation Availability Analysis (GAA)

- The **Contributing Incidents Count** column has been removed from the **Revision History** page of a Primary Event. Additionally, the **Count of Contributing Events** box has been removed from the Primary Event datasheet. (ID: TFS353109)

Production Loss Analysis (PLA)

- The Production Loss Analysis (PLA) Data Loader has been deprecated. To load data, you can now use the following enhanced data loaders, which are introduced

in V4.3.0.4.0:

- Production Loss Analysis (PLA) 1-Admin
- Production Loss Analysis (PLA) 2-Event
- Production Loss Analysis (PLA) 3-Plan

(ID: TFS347100)

Risk Based Inspection (RBI 580 and RBI 581)

RBI 581

- In the RBI 581 Risk Analysis datasheet, the **Equipment** box has been replaced with the **Equipment ID** box. (ID: TFS348552)
- To improve performance while calculating an RBI 581 Risk Analysis, the policies and R Scripts that were previously used to calculate damage factor and consequence of failure are no longer used. (ID: TFS346991)

Deferred Features - V4.3.0.4.0

The following features are not available in GE Digital APM V4.3.0.4.0, but are planned for a future release.

Asset Criticality Analysis (ACA)

- Promoting ACA Systems to RCM, FMEA, and ASM. (ID: TFS177103)

Asset Health Manager (AHM)

- 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 (ASI)

- Creating implementation roles and filtering the WMI tree by each role. (TS ID: 243573)
- Using a link to manage the object list records that are linked to maintenance item records represented by the selected node. (TS ID: 238443)
- The option to exclude child items when copying Work Management Items. (TS ID: 147790)
- Managing asset and action assignments when executing copy/paste operations. (TS ID: 144110)
- 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)

Asset Strategy Management (ASM)


- Migrating strategies between databases.

Asset Strategy Optimization (ASO)

- Optimizing Actions. (TS ID: 112125)

Calibration Management

- Automated Calibration using Beamex and Meriam documenting process calibrators.

 **Note:** Automated calibration using Beamex documenting process calibrators, Beamex MC5 and Beamex MC6, is supported using Beamex Business Bridge (B3) Version 1 (1.2.0) software for Beamex CMX Calibration software.

(TS IDs: 61319, 61334)

Configuration Manager

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

Generation Availability Analysis (GAA)

- 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)

- 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
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 IDs: 234410, 234310)

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

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

- The following Security Groups in GAA:
 - MI Generation Management Forecast
 - MI Generation Management Nameplate
 - MI Generation Management Security

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

GE Analytics

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

Metrics and Scorecards

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

Operations Manager

Systems and Tags

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

Reliability Analytics

- Action optimization in System Reliability Analysis.

Risk Based Inspection

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

Root Cause Analysis (RCA)

- 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)
- Standard APM State Management functionality in RCA. (TS ID: 63432)

Rounds

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

Thickness Monitoring

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

Tools

Graphs

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

Release Notes - V4.3.0.4.1

Rounds

Rounds Data Collection

- Previously, when you synced a route, cached route data was not cleared from the offline cache, and some offline checkpoint data became inconsistent. This issue has been resolved. (ID: TFS360866)
- Previously, when you accessed a recommendation in Rounds Data Collection via a desktop or laptop, the creation date was displayed in UTC instead of your local time zone. This issue has been resolved. (ID: TFS360864)
- Previously, when you cleared route data from local storage, only your route subscription data was cleared. This issue has been resolved. (ID: TFS360835)

Release Notes - V4.3.0.4.2

Risk Based Inspection

RBI 580

- Previously, if you were using an Oracle database, the values in the following fields were sometimes set incorrectly:
 - DF field for Internal Corrosion DME
 - Corrosion Factor field for External Corrosion DME
- This issue has been resolved. (ID: TFS365411)

Release Notes - V4.3.0.4.3

APM Connect

EAM Adapters

- A performance improvement has been made to enable large Work History jobs to run more efficiently. (ID: TFS365824)

Metrics and Scorecards

- Previously, if the time zone of the operating system that runs the Report Designer was set to a Russian time zone, and when you attempted to open a report from the Catalog folder of the Report Designer, an error occurred. This issue has been resolved. (ID: TFS365798)

Production Loss Analysis

- Previously, in the **Production Data** workspace, when you attempted to add a loss to a Production Data record, an error occurred. This issue has been resolved. (ID: TFS364949)

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 appears after you select **Save**, and you can no longer select it more than once. (ID: TFS365823)
- Previously, if creating an Operator Rounds Recommendation in offline mode failed, multiple Operator Rounds Recommendation In Error records were created after you synchronized the Route. This issue has been resolved. Now, only one Operator Rounds Recommendation In Error record is created. (ID: TFS365454)

Tools

Queries

- Previously, in the **Design** workspace, in the **Conditions** section, when you attempted to access the **Expression Builder** window for an empty **Field** cell, an incorrect message appeared. This issue has been resolved. (ID: TFS365935)
- Queries containing the following types of criteria can now be modified via the **Design** workspace:
 - Compound join criteria
 - Cartesian join criteria
 - Expression join criteria
 - sub SELECT
 - Union(ID: TFS365391)
- The BETWEEN operator is now supported for use with date fields and numeric fields, and it is a selectable option in the **Advanced** section of the **Expression Builder** window in the **Design** workspace. (ID: TFS365391)
- Previously, if you ran a derivative query containing subselect expressions from the Catalog, an error occurred. This issue has been resolved. (ID: TFS365391)

Release Notes - V4.3.0.4.4

Process Data Integration (PDI)

- Previously, when you attempted to start the PDI service on the PDI server, an error occurred. This issue has been resolved. (ID: TFS366414)
- Previously, you were unable to search for content in the product help. This issue has been resolved. (ID: TFS365822)
- Previously, PDI would fail and issue COM errors when starting. This issue has been resolved. Now, the COM error is logged as an informational message and PDI processing runs normally. (ID: TFS364684)

Release Notes - V4.3.0.5.0

The following release notes are available for GE Digital APM V4.3.0.5.0:

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

You can also view the APM Connect release notes.

New Features - V4.3.0.5.0

The following new features are available in V4.3.0.5.0.

Life Cycle Cost Analysis

- Using LCC Analyses, you can manage a fleet of assets by varying the costs and projected end-of-life dates for individual elements by varying their usage rates throughout the analysis period. Fleet Management also provides an understanding of the cost of ownership relative to the usage rate and productive output. (ID: TFS356534, TFS348015, TFS348014)

Policies

Family Policies and Policy Designer

- The Policy Instance Data Loader has been introduced in V4.3.0.5.0. You can use this feature to add or update policy instances for a policy. (ID: TFS354502)

Risk Based Inspection

- The RBI Bulk Evergreening feature is now available.

RBI Bulk Evergreening is the process of duplicating active analyses in bulk based on the associated process units or functional location. The evergreened analyses use the latest risk completed data available to create up-to-date analyses for the process unit or functional location. You can uniquely identify and group the duplicated analyses using an Evergreening Batch ID. Once analyses are duplicated, you can:

- View duplicated analyses
- Bulk calculate analyses
- Bulk delete analyses
- Finalize risk
- View active analyses

(ID: TFS358725)

RBI 580

- You can now duplicate a What-If Analysis regardless of its state. (ID:TFS356092)

RBI 581

- The Evaluation of All Risk Targets feature is now available.
When you enable the Evaluation of All Risk Targets feature and calculate an RBI 581 analysis, the Safety Health and Environmental (SHE) Risk, the Financial Risk, and the Damage Factor targets are evaluated to determine a new value in the Target Inspection Date field. The Target Inspection Date field is then used to determine the value in the Driving Risk Target field, and the value for the Driving Risk Target field is set to the risk target that has the most conservative Target Inspection Date value. (ID: TFS359829)
- You can now generate an RBI 581 Asset Risk report for a piece of equipment. This report contains the RBI 581 risk details of all the components in that piece of equipment. (ID: TFS359076)

Enhancements - V4.3.0.5.0

The following enhancements have been made in V4.3.0.5.0.

Action Management

- A new module, Action Management, has replaced the existing Recommendation Management module. The Action Management module incorporates both Approved Actions and Recommended Actions into one interface while maintaining the functional equivalence of the Recommendation Management module. The following changes have been implemented:
 - The Recommendation Management module has been renamed to Action Management.
 - The Action Management module is now located in the **Strategy** menu of the module navigation menu.
 - Performance Recommendations have been renamed Recommended Actions.
 - Strategic Recommendations have been renamed Approved Actions.
 - The **Recommendations** pane has been renamed the **Recommended Actions** pane. In the **Recommended Actions** pane, you can:
 - Access Recommended Actions.
 - Add Recommended Actions.
 - Search Recommended Actions.
 - Filter Recommended Actions.
 - View associated Recommendation records.
 - View, add, and update Recommended Actions in the bulk data form.
 - Navigate to the **Recommended Actions** section of the **Action Management** page.
 - The **Action Management** page has replaced the **Recommendation Management** page. This page has two sections, **Approved Actions** and **Recommended Actions**.
 - In the **Approved Actions** section, using either a single Action record or in bulk, you can:
 - Access Approved Actions.
 - Search Approved Actions.
 - Apply updates to Approved Actions.
 - Implement Approved Actions.
 - Unlink implemented Approved Actions.
 - Send Approved Actions to an ASI package.

- In the **Recommended Actions** section, using either a single recommendation record or in bulk, you can:
 - Access Recommended Actions.
 - Add Recommended Actions.
 - Search Recommended Actions.
 - View linked Recommendation records.
 - Unlink Recommendation records.
 - Delete Recommended Actions.
 - Manage the State Assignments of Recommended Actions.

(IDs: TFS358893, TFS358541, TFS358273, TFS357007, TFS357005, TFS357004, TFS357001, TFS356999)

- To enhance usability when scrolling and to enable consistent saving, datasheet headings for records accessed from the **Recommended Actions** pane now remain visible in the page when scrolling. (ID: TFS355835)

Asset Criticality Analysis

- To enhance usability when scrolling and to enable consistent saving, datasheet headings for records accessed from Asset Criticality Analysis now remain visible in the page when scrolling. (ID: TFS355834)

Asset Health Manager

- The time filter in the **Asset Health Overview** page has been removed to prevent Health Indicators outside the filter parameters from disappearing. (ID: TFS355602)
- To prevent a negative impact on performance, event mappings no longer accept long text fields. Custom event mappings with long text fields that were created in previous versions are still included, but should be modified if performance is negatively impacted. (ID: TFS113351)

Asset Strategy Implementation

- To enhance usability when scrolling and to enable consistent saving, datasheet headings for records accessed from Asset Strategy Implementation now remain visible in the page when scrolling. (ID: TFS355836)

- To enhance usability when navigating ASI, a search option has been added to the pane containing the WMI hierarchy. Additionally, records in the WMI hierarchy are now sorted by display name. (ID: TFS353365)

Asset Strategy Management

- To enhance usability when scrolling and to enable consistent saving, datasheet headings for records accessed from Asset Strategy Management now remain visible in the page when scrolling. (ID: TFS355833)

Calibration Management

- Using the Calibration Data Loader, you can now create the following records:
 - Calibration, Multi-Component Analyzer
 - Calibration, Single Component Analyzer
 - Calibration Template Detail, Analyzer
 - Calibration Template, Multi-Component Analyzer
 - Calibration Template, Single Component Analyzer
 - Standard Gas Component
 - Standard Gas Cylinder

In addition, the data loader workbook now contains the (Picklist) worksheet, which provides a list of valid values that you can enter in columns in the rest of the worksheets.

(IDs: TFS356918, TFS356917, TFS355908, TFS354219, TFS354218, TFS354167, TFS352730)

- To enhance usability, in a Calibration Results, Analog record, you can now enter the exact value of the error limits in engineering units. To facilitate this enhancement, the following changes have been implemented:
 - Max Error Limit is automatically calculated based on the Engineering Units Error Limit.
 - When you access calibration results, As Found and As Left values now appear in engineering units only if the value in the Error Assessment field in the Calibration record is Engineering Units.
 - New fields, Error Assessment, Eng. Unit AF Error, and Eng. Unit AL Error have been added to the Calibration Results, Analog family.
 - A new field, Engineering Units Error Limit, has been added to the Calibration Template, Analog family.

(ID: TFS354158)

Failure Modes and Effects Analysis (FMEA)

- To enhance performance, the obsolete query previously used to preload associated data when accessing FMEA analyses has been removed. (ID: TFS358340)
- To enhance usability when scrolling and to enable consistent saving, datasheet headings for Failure Modes and Effects Analysis now remain visible in the page when scrolling. (ID: TFS355394)
- Performance when navigating the FMEA hierarchy has been significantly improved. (IDs: TFS355327, TFS355326, TFS355325, TFS355324, TFS355323, TFS355322)

Foundation

Dashboards

- Dashboard pie graph labels are now populated by values in system code tables and family state machines. (IDs: TFS310844, TFS310892)

GE Digital APM Database

- SQL Server 2016 is now supported. (ID: DE81128)
- The Enterprise Edition and Standard Edition of Oracle Server 12.2 are now supported. (ID: TFS360878)

GE Digital APM Servers

- Windows Server 2016 Version 1607 is now supported. (ID: DE81128)
- To increase security, a license for V4.3.0.5.0 featuring advanced encryption has been added. This license must be installed during upgrade, and enables foundation-level GE Digital APM features. (ID: TFS362541)

Family Management

- Using field behaviors, you can now filter a field value in a datasheet based on another field value. To facilitate this enhancement, the Valid Value field behavior now supports APM Query with parameters. (ID: TFS357520)

Inspection Management

- For an Inspection Event, you can now link an RBI Component to an Inspection Confidence Evaluation record. To facilitate this enhancement, the following fields have been added to the Inspection Confidence Evaluation family:

- RBI Component
- Filter DM

(ID: TFS356928)

- The **Underlying Inspection Tasks** and **Underlying Recommendations** sections in the **Inspection Management Overview** page have been enhanced to filter by date range. You can now define a date filter in these sections. (ID: TFS356920)
- To enhance usability, preference settings for configuring date filters in the **Underlying Recommendations** and **Underlying Inspections Tasks** sections have been added to the **Overview Configuration** workspace. (ID:TFS356443)
- You can now view queries used in the **Inspection Management Overview** page via the **Queries** section of the **Overview Configuration** workspace. (ID: TFS356443)
- You can now create an inspection event by modifying the URL of an inspection task or asset. (ID: TFS346311)
- You can now modify Inspection Confidence Evaluation records even after the final inspection lock has been set on the related Inspection record. A user with the Risk Analyst resource role can now lock the Inspection Confidence Evaluation records by changing the status to Reviewed in the **Inspection Confidence Evaluation** section.

To facilitate this change, the following changes have been made:

- A new resource role, Risk Analyst has been created.
- A new setting has been added in the **Application Configurations** section of the **Inspection Configuration** workspace to enable or disable the lock option.
- A new field, Inspection Confidence Evaluation Reviewed, has been added to the Inspection family.

(ID: TFS342108)

- You can now view the images that are added as reference images in the Full Inspection report and General Inspection report. To facilitate this enhancement, a new section, **Reference Images**, has been added to the Full Inspection report and General Inspection report. (ID: TFS104521)

Life Cycle Cost Analysis

- The Analysis Type field now appears in the **LCC Analysis** list in the **LCC Overview** page. (ID: TFS357496)
- The **Equivalent Unit Cost** and **Remaining Planned Life** charts are now included in the **Summary** section of the **Analysis Summary** page. (ID: TFS348016)

Operations

Risk Matrix

- To enhance usability, the following columns have been added to the **Risk Matrix** page:
 - **Site Reference:** Indicates the site to which a Risk Matrix is assigned. If the Risk Matrix is assigned to multiple sites, all sites appear in the row as comma-separated values.
 - **Default:** Indicates, via check box selection, if the Risk Matrix is the default Risk Matrix for your organization. This check box is populated based on the status of the **Default** check box in the corresponding Risk Matrix Layout data-sheet.

(ID: TFS348322)

Policies

Family Policies and Policy Designer

- In the Create Relationship node, you can now specify the Collection output from an action node that creates a collection of records (such as the Create Entity node) to use the newly created records as either predecessors or successors of a relationship. (ID: TFS357592)
- Performance when executing a policy that contains multiple instances of the following nodes that reference the same catalog item has been significantly

improved:

- Query
- R Script


To facilitate this enhancement, the catalog items that are used multiple times in the policy are loaded only once. (IDs: TFS355832, TFS354682, TFS354676)

- You can now use a policy to pass values from one policy to another policy. To facilitate this enhancement, a new node, Sub Policy, has been added to the **Actions** section of the toolbar in the **Design** workspace for a policy. (ID: TFS354670)
- The Create Entity node now supports creating multiple records at a time. To facilitate this enhancement, the following sections have been added to the **Properties** window for the Create Entity node: **Auto-map field values?** and **Field values collection**. (ID: TFS355410)
- Performance when loading a policy that contains multiple instances of the following nodes referring to the same family or catalog item has been improved:
 - Entity
 - Query
 - R Script

To facilitate this enhancement, the data that is used multiple times in the policy is loaded only once. (IDs: TFS354674, TFS354673, TFS354672)


Production Loss Analysis (PLA)

- For a Production Data record, if the sum of actual production and reconciled loss is more than the planned production, an amber color-coded symbol (✓) appears next to the Unaccounted Loss value in the **Production Data** workspace. (ID: TFS359030)
- The Over Accounted Loss value, which indicates the additional reconciled Production Losses when the Unaccounted Loss is 0, now appears in the **Production Data** workspace for Production Losses. (ID: TFS357791)
- When you create a Production Event via the **Production Data** workspace, the **Source Production Unit** box in the Production Event datasheet is now automatically populated with the Production Unit for which the Production Plan is created.

 **Note:** You can, however, modify the value in the **Source Production Unit** box.

(ID: TFS351988)


- To improve usability, in the **Production Data** workspace, when you attempt to reconcile losses for a Production Data record that does not contain a value in the **Actual** column, a warning message now appears, indicating that you cannot reconcile losses when no actual production data has been provided. (ID: TFS351976)
- You can now access a list of all Production Losses related to a Production Plan. To facilitate this enhancement, in the **Plan Details** and **Production Data** pages, the **Production Losses** tab has been added to the left pane. Using the **Production Losses** workspace, you can delete multiple Production Losses at once. (ID: TFS349659)
- For a given Product, you can now copy the reconciled losses from one Production Data record to another or within the same Production Data record. If the date range of the Production Event associated with the reconciled loss that you are copying does not include the date range of the Production Data record to which you want to copy the reconciled loss, the Production Event field in the Production Loss is blank. You can, however, manually enter a value in this field. (ID: TFS344208)
- To improve usability, when you create a Production Loss, the **Loss Amount** box in the **Create New Loss** window is now automatically populated with the Unaccounted Loss value of the Production Data record.

 **Note:** You can, however, modify the value in the **Loss Amount** box.

(ID: TFS344207)

- You can now choose to automatically populate the Maximum Sustained Hourly Rate (MSHR) field in a Production Profile. To facilitate this enhancement, the **MSHR Calculation Settings** section, which contains the **MSHR Auto Calculate** check box, has been added to the **Settings** window.

The Maximum Sustained Hourly Rate (MSHR) field will be automatically populated only if you select the **MSHR Auto Calculate** check box.

 **Note:** You can, however, modify the value in the Maximum Sustained Hourly Rate (MSHR) field.

(ID: TFS318138)

Reliability Analytics

- In a Spares Analysis, when you modify a failure distribution added from a Reliability Growth Analysis or Reliability Distribution Analysis, a message appears, warning you that the **View Analysis** and **Refresh Distribution** buttons will be disabled and the failure distribution will be removed from the Reliability Growth Analysis or Reliability Distribution Analysis. (ID: TFS357513)

Reliability Centered Maintenance (RCM)

- To enhance performance, the obsolete query previously used to preload associated data when accessing RCM analyses has been removed. (ID: TFS358340)
- To enhance usability when scrolling and to enable consistent saving, datasheet headings for Reliability Centered Maintenance now remain visible in the page when scrolling. (ID: TFS355394)
- Performance when navigating the RCM hierarchy has been significantly improved. (IDs: TFS355327, TFS355326, TFS355325, TFS355324, TFS355323, TFS355322)

Risk Based Inspection

RBI 580 and RBI 581

- When you change the state of multiple analyses at once via the **RBI Overview** page, you can change the state only from Created to Risk Completed. The **Finalize Analysis Risk** window displays only the analyses that are calculated and are in Created state. To facilitate this change, the following RBI queries have been modified:
 - Review Analyses by Asset 580
 - Review Analyses by Asset 581
 - Review Analysis by Corrosion Loop 580
 - Review Analysis by Corrosion Loop 581(ID: TFS362352)
- The **No Recommendations** section of the **Risk Based Inspection Overview** page has been modified to include assets which have both:

- No recommendations.
- At least one component with a Risk Completed analysis.

(ID: TFS359101)

- When you link an Inspection Confidence Evaluation to an RBI Degradation Mechanism Evaluation and an RBI Component, the Inspection History records for a Degradation Mechanism are filtered based on the RBI Component. Additionally, a new column, Inspection Document Status has been added to the **Inspection History** section to display the current status of the parent Inspection record. (ID: TFS356928)
- You can now change the state of an analysis to Risk Completed only if the analysis is calculated. (ID: TFS356900)
- The Flammable Consequence Category field in an RBI Criticality Analysis, which previously contained the value N/A for inert and reactive leaking fluids, is now populated with a value based on the Leak Rate Category. (ID: TFS353957)
- You can now generate recommendations in bulk for a specified level of the Asset Hierarchy from the **No Recommendations** section of the **Risk Based Inspection Overview** page. You can also use the Schedule Log to view the progress and logs of generated recommendations. (ID: TFS350844)

RBI 580

- RBI 580 reports have been renamed as follows:

Old Name	New Name
Asset Risk Report	RBI 580 Asset Risk Report
Asset Summary Report	RBI 580 Asset Summary Report

(ID: TFS359076)

- You can now override the minimum thickness of a component regardless of the degradation mechanism. To facilitate this change, all the fields related to minimum thickness have been moved from the RBI Degradation Mechanisms family to the RBI Criticality Analysis family.

When you upgrade GE Digital APM to the current version, if the **Override Minimum Required Thickness** check box is selected, all the existing data related to

minimum thickness is copied from the RBI Degradation Mechanism records to the RBI Criticality Analysis records. (ID: TFS358949)

- RBI Analysis results for a Heat Exchanger - Bundle component have been enhanced to display the product leak consequence category for every calculated analysis. To facilitate this enhancement, the following fields have been made mandatory:

Field Name	Family
Inspection Interval	Criticality Consequence Evaluation
Flammable Leak Type (if the leaking fluid is flammable)	Criticality Consequence Evaluation
Toxic Leak Type (if the leaking fluid is toxic)	Criticality Consequence Evaluation
Product Unit Value	Criticality Consequence Evaluation
Tube Operating Press Channel	RBI Criticality Analysis

(ID: TFS356929)

RBI 581

- When you duplicate a What-If Analysis, in the newly created analysis, the value in the Event Type field is not copied from the original What-If Analysis. Therefore, the newly created analysis is an RBI 581 Risk Analysis, and not a What-If Analysis. (ID: TFS356092)

Root Cause Analysis

- When you send a summary of findings or Recommendation Alerts via email, the email address is now configurable using the **Email Setting** workspace in RCA application settings. (ID: TFS353125)
- The RCA Analysis ID is now retained when you create Preserve Records, Tracking Items, and Verifications. (ID: TFS352781)
- In the Root Cause Analysis application settings, you can now configure an email to be sent when an RCA analysis state has been modified to Published or

Unpublished. (ID: TFS344206)

- In the Event Diagram and Logic Tree Diagram, the **Properties** window can now be expanded and moved around the diagram, and the position of the Node Properties icon (🔗) has been moved to the heading of the **Manage Diagram** section. (ID: TFS323818)

Rounds

Rounds Data Collection

- In the **Route Map** pane, a spinner now appears when you select **Mark Done** to indicate the action is processing. (ID: TFS362027)
- Level 1 alerts for readings are now displayed in black text with a yellow warning icon (⚠️). (ID: TFS353707)
- The performance when loading the **Rounds Data Collection Overview** page and when loading Routes in Rounds Data Collection has been improved. (ID: TFS352604)

Rounds Designer

- You can now delete a Route that has one or more users assigned to it. (ID: TFS356664)
- To enhance data integrity, a new field, Sequence, has been added to the Route family. (ID: TFS356657)

Thickness Monitoring

- To enhance usability, the color-coding and **TML ID** columns in the **TML Grid** now remain visible in the page when scrolling. This enhancement appears in the following:
 - The **TMLs** section of the **Analysis Overview** page
 - The **Exclude TMLs** workspace
 - The **Organize TMLs** workspace
 - The **Quick View** workspace

- The **Relocate TMLs** workspace
- The **Renew TMLs** workspace

(ID: TFS355745)

Tools

Graphs

- A new bar graph type, Color Scale Graph, has been added to enable you to view changes over time using the color scale. (ID: TFS356973)

Queries

- Queries containing the following types of criteria can now be modified via the **Design** workspace:
 - Compound join criteria
 - Cartesian join criteria
 - Expression join criteria
 - sub SELECT
 - Union
- The BETWEEN operator is now supported for use with date fields and numeric fields, and it is a selectable option in the **Advanced** section of the **Expression Builder** window in the **Design** workspace. (ID: TFS337976)

(ID: TFS356238)

SQL Server Report Services

- APM Report Designer is now compatible with SQL Server version 2016 and Microsoft SQL Server Data Tools (SSDT) version 2015. (ID: TFS345621)

Resolved Issues - V4.3.0.5.0

The following issues existed in one or more previous releases and have been resolved in V4.3.0.5.0:

APM Connect

EAM Adapters

- A performance improvement has been made to enable large Work History jobs to run more efficiently. (ID: TFS361246)

Asset Criticality Analysis

- Previously, members of the ACA Owner and the ACA Administrator Security Groups could not delete an ACA System. This issue has been resolved. (ID: TFS358509)
- Previously, in the **Asset Criticality Analysis** page, the counts of analyses presented in the **My Analyses** and **Analysis** tabs did not accurately reflect the number of analyses in those respective sections. This issue has been resolved. (ID: TFS357935)
- Previously, if you unlinked, via a module other than ACA, an asset that was contained within an ACA System and then accessed that system via the ACA module, the unlinked asset still appeared in the **Overview** section for that ACA System. This issue has been resolved. (ID: TFS353826)

Asset Health Manager

- Previously, when you accessed the **Health Overview** page for an asset with many indicators, the Normal and No Status indicator counts did not match those on the **Health Summary** page for the same asset. This issue has been resolved. (ID: TFS359171)

Asset Strategy Implementation

- Previously, when importing an SAP Notification for a Functional Location, GE Digital APM could not locate the associated asset, and the related Asset Strategy was not created. This issue has been resolved. (ID: TFS353477)
- Previously, when importing Notification details from SAP, GE Digital APM did not

display the Functional Location Label, if defined. This issue has been resolved. Now, GE Digital APM displays the Functional Location Label correctly. (ID: TFS358717)

Asset Strategy Management

- Previously, when a member of the MI Strategy Power Security Role attempted to send an EAM notification from the **Implement Actions** section of the **Strategy Details** page, the following error message appeared: *You do not have insert privileges on the MIR_HSWKRQST family*. This issue has been resolved. Now, a member of the MI Strategy Power Security Role can send EAM notifications as expected. (ID: TFS364703)
- Previously, when approving an Asset Strategy, the Basis for Last Revision field was not properly populated in the Strategy Revision record and did not appear in the **Revisions** workspace. This issue has been resolved. (ID: TFS355393)
- Previously, in the **Risk Analysis** section of the **Strategy Details** page, if you made modifications that resulted in deleted Actions, the resulting count of Actions failed to update in the **Risks and Actions** workspace. This issue has been resolved. (ID: TFS355124)

Calibration Management

- Previously, if you attempted to save a Calibration Result, Discrete record without entering a value in the **Reset AF** box, although a message appeared indicating that the As Found Reset Point field must contain a value, the page became unresponsive. This issue has been resolved. (ID: TFS361760)
- Previously, in the **Calibration Admin Preferences** page, in the **Mappings** workspace, when you tried to add a new Calibration Mapping Field by selecting a device field that was already used in another mapping, the device field did not appear in the **Select Calibrator Field** box. The issue has been resolved. Now, you can map same device field to multiple GE Digital APM fields. (ID: TFS356734)
- Previously, when you changed the value in the Calibration Strategy field in a Calibration Profile and saved, and then attempted to access a template in the same profile, an error occurred. This issue has been resolved. (ID: TFS356222)
- Previously, when you attempted to create a Calibration Template, Discrete record, an error occurred. This issue occurred only if:

- The value in the Error Assessment field was Engineering Units.
- The value in the Engineering Units Error Limit field was more than 10 percent of the input range.

Even if you modified the input range values or the error limit such that the error limit was less than 10 percent of the input range, the issue occurred. This issue has been resolved.

(ID: TFS355718)

- Previously, while upgrading to V4.3.0.4.0, when the CalibrationDataModelUpgradeUtility was run for upgrading an Oracle database, an error occurred. This issue has been resolved. (ID: TFS354982)

Configuration Manager

Family Management

- Previously, in the Datasheet Builder, for a Functional Location datasheet, the CMMS System field was duplicated. This issue has been resolved. (ID: TFS345650)

Foundation

- Previously, when you accessed the GE Digital APM application using the HTTPS protocol, the secure flag was not set to True in the cookie. This issue has been resolved. (ID: TFS354470)

Record Manager

- Previously, when you opened two or more offline forms of the same type, and, in a form, if a field had a value that disabled other fields, the corresponding fields in the other form were also disabled. This issue has been resolved. (ID: TFS364184)
- Previously, if a record of a family was linked to a record of another family through a relationship definition, you could not link the same record through another relationship definition. This issue has been resolved. Now, you can link a record of a family to a record of another family through all available relationship definitions. (ID: TFS348547)

Generation Availability Analysis (GAA)

- Previously, the Performance Regulatory Report that you generated for the two types of Performance records (that is, All Events and Excluding OMC) for the same month contained entries for both All Events and Excluding OMC Performance records instead of only All Events Performance records. This issue has been resolved. (ID: TFS355319)

Inspection Management

- Previously, if you used a tablet with low-resolution to access Inspection Management, pages other than the **Inspection Management Overview** did not load. This issue has been resolved. You can now use a low-resolution tablet to view and download offline inspections in Inspection Management for use in Inspection Field Data Collection. (ID: TFS355297)

Management of Change

- Previously, if you logged in to GE Digital APM using any of the following culture settings and accessed the **MoC Admin** page, the workspace did not appear:
 - French
 - German
 - Portuguese
 - Russian
 - Spanish

This issue has been resolved. (ID: TFS356051)

Operations

Process Data Integration

- Previously, you could not run the Process Data Integration (PDI) service using HTTP Secure (HTTPS). This issue has been resolved. Now, you can run the PDI service using HTTPS along with the HyperText Transfer Protocol (HTTP). To enable this capability, you must copy MeridiumAppSettings.xml to your PDI server and edit the value of key baseUrl to use the https mime type. (ID: TFS361717)
- Previously, a tag containing bad data prevented the system from synchronizing tags. This issue has been resolved. Now, tags with bad data are skipped and the remaining tags are synchronized. (ID: TFS353671)

Risk Matrix

- Previously, when viewing the **Financial** tab of a Risk Matrix, the value in the **Probability** row did not populate properly if the Probability field in the associated Risk Rank datasheet was configured as an unrestricted text field. This issue has been resolved. (ID: TFS353929)
- Previously, in the **Financial** tab of a Risk Matrix, if the cell corresponding to either the Maintenance Cost or the Production Loss field was empty and you selected that empty cell, the value in the Consequence field was improperly modified. This issue has been resolved. (ID: TFS334653)

Policies

Family Policies and Policy Designer

- Previously, if you configured the output of any node as an input variable name for a Math node, messages appeared in the notification bar indicating that the mathematical expression was invalid and, in some cases, that duplicate variable names were detected, even though you could successfully validate the Policy. This prevented the policy from being activated. Now, in this scenario, a warning appears in the notification bar, with detailed information explaining the requirement to validate the Policy to confirm that the expression and input variable names are correct. (ID: TFS365032)
- Previously, for a Family Policy associated with the After Insert trigger, when you configured an Edit Entity node to update the record represented by the Current Entity node, the record was not updated. This issue has been resolved. (ID: TFS360786)
- Previously, if the name of any input variable to the Math node contained spaces or characters other than alphanumeric characters, no message appeared in the notification bar; however, validation and execution of the Policy failed. This issue has been resolved. Now, in this scenario, an error message appears in the notification bar. (ID: TFS358488)
- Previously, if you specified multiple entity key values for the Edit Entity, Delete Entity, or Delete Relationship nodes and separated each value with a comma, validation of the Policy failed. This issue has been resolved. (ID: TFS355114)

Policy Designer

- Previously, in the **Policy Designer Overview** page, in the **Active Policies** and **Inactive Policies** sections, execution summaries of Policies did not appear in the

Execution Result Summary column. This issue has been resolved. (ID: TFS357582)

- Previously, in the **Assets** page, in the **Strategy** section, the number of Policies associated with an asset did not appear. This issue has been resolved. (ID: TFS356752)
- Previously, when you specified the primary record to be represented by the primary node of a policy instance, other records linked to the primary record were not always available in the drop-down list boxes for assigning to the remaining nodes in the policy model. This issue has been resolved. (ID: TFS355459)

Production Loss Analysis

- Previously, in the **Production Profile** section, when you selected the Add button (+), the Production Profile datasheet appeared in the **Margins** subsection instead of the **Definitions** subsection. This issue has been resolved. (ID: TFS350902)

Reliability Analytics

- Previously, in Reliability Growth Analysis, when you merged two segments on a plot, the **Segment Actions** window did not respond until the merge was complete. This issue has been resolved, and a progress indicator now appears. (ID: TFS357506)
- Previously, when you updated a Failure Distribution within a Spares Application, the **Edit Analysis** and **Refresh Distribution** buttons were disabled. This issue has been resolved. (ID: TFS355890)
- Previously, when you compared two Reliability Growth Analyses using the Comparison Plot and selected the Show Data button (≡), an error occurred. This issue has been resolved. (ID: TFS355715)
- Previously, when you ran an analysis simulation in System Reliability Analysis and selected the Cancel button (X) before the simulation was complete, the simulation would not consistently cancel. This issue has been resolved. (ID: TFS291920)

Risk Based Inspection

RBI 580 and RBI 581

- Previously, if the Source of Calculated Corrosion Rate field in an RBI Component contained the value ASSET or COMPONENT, you could update values in the Long Term Avg. Corr. Rate and Short Term Avg. Corr. Rate fields using the Risk Based Inspection (RBI) 580 or Risk Based Inspection (RBI) 581 data loaders. This issue has been resolved. (ID: TFS359078)
- Previously, some field values in Piping Stress records were invalid. This issue has been resolved. (ID: TFS357828)

RBI 580

- Previously, the **Inspection Updates** section only displayed analyses that were Risk Completed. This issue has been resolved. Now, all relevant analyses that are in the Active state appear. (ID: TFS362525)
- Previously, the **TM Updates** section only displayed analyses that were Risk Completed. This issue has been resolved. Now, all relevant analyses that are in the Active state appear. (ID: TFS362525)
- Previously, when you calculated an RBI Criticality Analysis on a Heat Exchanger – Bundle component, the value in the Tube Fluid Type Shell field was not updated based on the representative fluid on the shell side. So, the consequence categories were calculated incorrectly. This issue has been resolved. (ID: TFS354288)

Reliability Centered Maintenance

- Previously, when viewing an RCM analysis with more than 25 functions, only the first 25 functions appeared in the left pane of the **Analysis Details** page. This issue has been resolved. Now, when viewing an analysis with more than 25 functions, all functions appear in the left pane of the **Analysis Details** page. (ID: TFS360132)

Root Cause Analysis

- Previously, when you accessed a Logic Tree, an error occurred if the RCA Analysis contained a null value in the Tree Layout field. This issue has been resolved. (ID: TFS348402)

Rounds

Rounds Designer and Rounds Data Collection

- Previously, if you upgraded your database from any version prior to V4.3.0.2.0 and your database contained checkpoints without descriptions, errors occurred, and your Routes did not function as expected. This issue has been resolved. Now, in this scenario, the upgrade script automatically populates the Description field for any checkpoints without descriptions with the following text: `No description provided.` (ID: TFS353570)

Rounds Data Collection

- Previously, on a Route with a schedule defined, when the Route schedule was not due, but the checkpoint schedule for one checkpoint on the Route was due, any other checkpoints on the Route that did not have defined checkpoint schedules also appeared to be due as well. This issue has been resolved. Now, in this scenario, only checkpoints that are due appear on the Route Map pane. (ID: TFS364814)
- Previously, when you cleared route data from local storage, only your route subscription data was cleared. This issue has been resolved. (ID: TFS362816)
- Previously, when you synced a route, cached route data was not cleared from the offline cache, and some offline checkpoint data became inconsistent. This issue has been resolved. (ID: TFS362815)
- Previously, if you had a Route History record without an expected number of readings, an error occurred. This issue has been resolved, and the readings will no longer appear in the **Route Completion** graph if there is not a specified expected number of readings. (ID: TFS358793)
- Previously, when you modified the MLs from MLT query to include route information, the Update Existing Checkpoints functionality did not return any results. This issue has been resolved. (ID: TFS358554)
- Previously, on a Windows Mobile Device, if your Culture setting was defined as anything other than English, when you marked a Route done, the Route History record was not updated. This issue has been resolved. (ID: TFS357607)
- Previously, when you entered a reading for the last Measurement Location for an asset using the Only Incomplete Checkpoints filter, an error occurred. This issue has been resolved. (ID: TFS357561)

- Previously, on a Windows Mobile Device, Routes were not downloaded to the device when expected. This issue has been resolved. (ID: TFS357330)
- Previously, on a Windows Mobile Device, all checkpoint due dates appeared in UTC rather than the local time for the device. This issue has been resolved. (ID: TFS357329)
- Previously, when you accessed a recommendation in Rounds Data Collection via a desktop or laptop, the creation date was displayed in UTC instead of your local time zone. This issue has been resolved. (ID: TFS355713)
- Previously, when you tried to access a route from the **Overdue** list or **Due** list using an Apple iPhone in offline mode, an error occurred, and you could not access the route. This issue has been resolved. (ID: TFS355641)
- Previously, when you turned Wi-Fi off using an Android tablet, Android small screen device, or Apple iPhone, the download indicator would continually spin and you could not access a route. This issue has been resolved. (ID: TFS355578)
- Previously, when you selected the **Only Incomplete Checkpoints** filter option and then entered a reading for the last checkpoint in the **Route Map** pane, an error occurred, and you were unable to mark the Route done. This issue has been resolved. (ID: TFS355370)
- 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: TFS348492)

Rounds Designer

- Previously, when you reordered checkpoints in a route using the **Asset Group Number** box, the checkpoint order was not preserved. This issue has been resolved. (ID: TFS357964)
- Previously, if you removed from a Route a checkpoint that was a predecessor of one or more conditions and successor checkpoints and then attempted to add the checkpoint you removed to a Route, the checkpoint was not added, and the Route was corrupted. This issue has been resolved. (ID: TFS356930)

- Previously, in the **Routes** section of the **Rounds Designer Overview** page, if you selected multiple Routes and then selected the **Assign** button to assign one or more team members to the selected Routes, an error occurred, and the selected team members were only assigned to the first selected Route. This issue has been resolved. Now, when you select multiple Routes, the **Assign** button is disabled. (ID: TFS355537)
- Previously, if you entered a value of the data type Character in the Route Batch ID, Parent ML Batch ID, or Parent ML ID field and then attempted to load data using the Rounds Data Loader, an error occurred, and the Measurement Location was saved in the database but not saved to the Route. This issue has been resolved. (ID: TFS354529)
- Previously, when you added a checkpoint template to a Route, in the **Asset Selection** and **ML/LR Template Selection** sections of the **Add New Checkpoints** window, if you quickly selected the search button (🔍) multiple times, duplicate records appeared, and you were unable to add them to the Route successfully. This issue has been resolved. (ID: TFS353735)

Rounds Data Loaders

- Previously, when you used the Rounds Templates data loader workbook, if you did not define any conditions for the template, no relationship was created between the Measurement Location Template and its associated Template Group. This issue has been resolved. (ID: TFS364445)

Schedule Logs

- Previously, for a Security User, a Schedule Log file did not contain records of the scheduled tasks. This issue has been resolved. (ID: TFS355692)

Security Manager

Lightweight Directory Access Protocol (LDAP)

- Previously, during LDAP synchronization, user records were not synchronized if either of the following conditions existed:
 - In Active Directory, the LastName field for the user was blank.
 - In Active Directory, the value in the LastName field or FirstName field was a single character matching a character in the Password field. In this scenario, the following error message appeared: *password must not contain first-name, lastname, or userid.*

This issue has been resolved. Now, user records with these conditions are synchronized as expected. In Active Directory, if the LastName field for a user is blank, it will be populated with *LastName* in the GE Digital APM Security User record during synchronization. (ID: TFS359421)

State Management

- Previously, if both the **Initial state** and **Require a specific user to be assigned to a state** check boxes were selected and when no roles were assigned, the user name in the Assignee box for the initial state was replaced with the value Not Assigned. This issue has been resolved. Now, the user who created the record using the State Management is added as the assignee for the initial state. (ID: TFS348400)

Tools

Metrics and Scorecards

- Previously, for a KPI with sub-indicator KPIs, if the parent KPI existed as a sub-indicator KPI, and you then attempted to update or schedule measures for the KPI, the application stopped responding. This issue has been resolved. (ID: TFS359019)

Obsolete Features - V4.3.0.5.0

The following items are no longer used in GE Digital APM.

Calibration Management

- In the Calibration Data Loader excel workbook, the following columns have been removed.
 - Is Master Template
 - Calibration Task ID

This is because after you import data, the corresponding fields are automatically populated.

(ID: TFS358454)

Foundation

Family Management

- The Boolean and Binary fields, which appeared when creating a Record ID using the Manage ID Template, have been removed from the **Select a field to add to template** box of the **Manage ID Template** window because they provided no value in this context. (ID: TFS355753)

Generation Availability Analysis (GAA)

- The Generation Management license is no longer available. To use the Generation Availability Analysis (GAA) module, you must use the Generation Availability Analysis (GAA) license. (ID: TFS357700)

Risk Based Inspection

RBI 580 and RBI 581

- In the **Inspection Confidence Evaluation** section, the **Scope** column has been removed from the Inspection Confidence Evaluation records list. (ID: TFS356928)

RBI 580

The following fields have been removed from the RBI Degradation Mechanisms family:

- Override Minimum Required Thickness
- Minimum Required Thickness
- Structural Minimum Thickness
- Minimum Thickness – Pressure

(ID: TFS358949)

Deferred Features - V4.3.0.5.0


The following features are not available in GE Digital APM V4.3.0.5.0, but are planned for a future release.

Asset Health Manager (AHM)

- Asset Hierarchy sorting and filtering based on health indicator status. (TS ID: 86430)

Calibration Management

- Automated Calibration using Beamex and Meriam documenting process calibrators.

 **Note:** Automated calibration using Beamex documenting process calibrators, Beamex MC5 and Beamex MC6, is supported using Beamex Business Bridge (B3) Version 1 (1.2.0) software for Beamex CMX Calibration software.

(TS IDs: 61319, 61334)

Configuration Manager

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

Generation Availability Analysis (GAA)

- 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

Datasheet	Fields
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)

- 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 IDs: 234410, 234310)

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

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

- The following Security Groups in GAA:
 - MI Generation Management Forecast
 - MI Generation Management Nameplate
 - MI Generation Management Security

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

GE Analytics

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

Metrics and Scorecards

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

Operations Manager

Systems and Tags

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

Reliability Analytics

- Action optimization in System Reliability Analysis.

Risk Based Inspection

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

Rounds

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

Thickness Monitoring

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

Tools

Graphs

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

Release Notes - V4.3.0.5.1

Foundation

- Upgrading to GE Digital APM V4.3.0.5.1 prevents potential login issues that could occur in V4.3.0.5.0. (ID: TFS366225)

Release Notes - V4.3.0.5.2

Failure Modes and Effects Analysis

- Previously, when you executed the Failure Modes and Effects Analysis (FMEA) Data Loader, some records did not receive the site key, and after promoting the analysis to Asset Strategy Management (ASM), an error occurred. This issue has been resolved. Now, you can execute the FMEA Data Loader and promote the analysis to ASM as expected. (ID: TFS366936)

Process Data Integration (PDI)

- Previously, PDI would fail and issue COM errors when starting. This issue has been resolved. Now, the COM error is logged as an informational message and PDI processing runs normally. (ID: TFS366416)
- Previously, when you attempted to start the PDI service on the PDI server, an error occurred. This issue has been resolved. (ID: TFS366415)

Reliability Centered Maintenance

- Previously, when you executed the Reliability Centered Maintenance (RCM) Data Loader, some records did not receive the site key, and after promoting the analysis to Asset Strategy Management (ASM), an error occurred. This issue has been resolved. Now, you can execute the RCM Data Loader and promote the analysis to ASM as expected. (ID: TFS366936)

Root Cause Analysis (RCA)

- Previously, the error messages that appeared for the RCA families did not identify the nature of the error. This issue has been resolved. (ID: TFS367366)

Rounds

- Previously, in the **Rounds Data Collection Overview** page, no **Due On or After** value appeared in the **Due Items** section. This issue has been resolved. (ID: TFS367785, DE82812)

Release Notes - V4.3.0.5.3

Inspection Management

- Previously, in the Inspection Management module, if you used a family (parent or child) other than the baseline Functional Location family to denote a functional location, the **Asset Overview** page appeared as if the functional location were an asset. This issue has been resolved. Now, the **Inspection Management Overview** page appears as expected. (ID: TFS367810)
- Previously, in the **Asset Hierarchy** page, if you used a family (parent or child) other than the baseline Functional Location family to denote a functional location, in the **Integrity** section, an incorrect hyperlink appeared, behaving as if the functional location were an asset. Also, the number of linked records in the Asset Hierarchy page was incorrect. This issue has been resolved. (ID: TFS367810)

Risk Based Inspection

RBI 580 and RBI 581

- Previously, in the Risk Based Inspection module, if you used a family (parent or child) other than the baseline Functional Location family to denote a functional location, the **Asset Summary** page appeared as if the functional location were an asset. This issue has been resolved. Now, the **Risk Based Inspection Overview** page appears as expected. (ID: TFS367810)
- Previously, in the **Asset Hierarchy** page, if you used a family (parent or child) other than the baseline Functional Location family to denote a functional location, in the **Integrity** section, an incorrect hyperlink appeared, behaving as if the functional location were an asset. Also, the number of linked records in the Asset Hierarchy page was incorrect. This issue has been resolved. (ID: TFS367810)

Root Cause Analysis

- To improve usability, when you add the field RCA Analysis ID to the following families, the field is now automatically populated with the value in the Analysis Name field in the corresponding RCA Analysis record:
 - RCA Event
 - RCA Failure Mode
 - RCA Hypothesis
 - RCA Sequence Node

Additionally, when you add the field RCA Analysis Key to the following families, the field is now automatically populated with the entity key of the corresponding RCA Analysis record:

- RCA Event
- RCA Failure Mode
- RCA Hypothesis
- RCA Preserve Item
- RCA Sequence Node
- RCA Tracking Item
- RCA Verification

(ID: TFS370160)

- Previously, if you created a custom error message for RCA Analysis Relationship in the relationship definition for the RCA Analysis family, if you attempted to create a relationship between an RCA Analysis record and record in another RCA family, the custom error message did not appear. This issue has been resolved. (ID: TFS370159)

Thickness Monitoring

- Previously, in the Thickness Monitoring module, if you used a family (parent or child) other than the baseline Functional Location family to denote a functional location, the **Analysis Overview** page appeared as if the functional location were an asset. This issue has been resolved. Now, the **Thickness Monitoring Overview** page appears as expected. (ID: TFS367810)
- Previously, in the **Asset Hierarchy** page, if you used a family (parent or child) other than the baseline Functional Location family to denote a functional location, in the **Integrity** section, an incorrect hyperlink appeared, behaving as if the functional location were an asset. Also, the number of linked records in the Asset Hierarchy page was incorrect. This issue has been resolved. (ID: TFS367810)

Release Notes - V4.3.0.5.4

Asset Strategy Implementation

- Previously, when you performed an import from SAP, the data was created by a System User rather than the user who initiated the import. This has been resolved. (ID: TFS371359)

Inspection Management

You can now generate and download multiple Inspection Reports at a time.

- To facilitate this enhancement, following changes are made:
 - A new option, **Bulk Print Report**, is added in the **Underlying Open Inspections** section to print multiple inspection reports.
 - A new option, **View Bulk Printing Status**, is added in the **Inspection Management Overview** page to view the status of the print job. On selecting this option, the **Downloads** page appears, displaying the status of all the print jobs.
- To use this feature, you must configure the following fields that are added in the **SQL Server Reporting Services** page:
 - **Bulk Report Storage Path:** To configure a path that is constructed with the Universal Naming Convention (UNC) standards where the exported reports are stored.
 - **Bulk Report Storage User Name:** To configure a user name that is required to access the machine in which the exported reports are stored.
 - **Bulk Report Storage User Password:** To configure a password for the corresponding user name that is required to access the machine in which the exported reports are stored.
 - **Bulk Report Storage Threshold (Days):** To configure the number of days after which the .zip file for the exported reports is automatically deleted from the location where it is stored.

For more information about this feature, refer to the KBA 6456.

(IDs: TFS369198, TFS369079)

Operations

Risk Matrix

- Previously, if a validation error while you were assessing risk, the Risk Matrix dialog would close, and no validation error appeared. This issue has been resolved. Now, if a validation error occurs, the Risk Matrix dialog remains open. (ID: TFS371360)
- Previously, in the **Financial** tab of the Risk Matrix, in the **Probability** field, if you entered a decimal-delimited value, an error occurred. This issue has been resolved. (ID: TFS370707)

Root Cause Analysis

- Previously, when viewing an RCA Analysis, if you selected an Event Diagram, the Decision node was not available in the **Palette** section, and no other nodes could be dragged from the **Palette** section. This issue has been resolved. Now, if you access an Event Diagram from an existing RCA Analysis, all nodes appear and can be dragged from the **Palette** section as expected. (ID: TFS371280)

Rules Library

- Previously, if you attempted to create a Rules Library rule project, an error occurred. This issue has been resolved. (ID: TFS370512)

Release Notes - V4.3.0.5.5

APM Connect

Data Loaders

- Previously, when a request from a data loader job running in the database timed out, the job status incorrectly displayed as Dataloader Enqueued. This issue has been resolved. Now, the job status correctly displays as Errors. (ID: TFS371897)

Failure Modes and Effects Analysis

- Previously, in the **Analysis Details** page, if you modified the Decision Logic of a Failure Effect, the changes were not saved. This issue has been resolved. (ID: TFS371924)

Reliability Centered Maintenance

- Previously, if you tried to promote an RCM Analysis with multiple assets which contained recommendations, only the recommendations in the first asset were promoted. (ID: TFS372228)
- Previously, in the **Analysis Details** page, if you modified the Decision Logic of a Failure Effect, the changes were not saved. This issue has been resolved. (ID: TFS371924)

Security Manager

Lightweight Directory Access Protocol (LDAP)

- Previously, during LDAP synchronization, some Security Users were not assigned to a Security Role even though the role existed in GE Digital APM. This issue has been resolved. (ID: DE372205)