



Getting Started



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Chapter 1

Overview

Topics:

- [What is GE Digital APM?](#)

What is GE Digital APM?

Production facilities often face problems related to recurring equipment failures, including:

- Unplanned downtime.
- The inability to maintain planned production rates.
- High costs of fixing problems that result from equipment failures.
- Threats to employee and environmental safety.

Data related to equipment failures and the impact that they have on a facility can be recorded using a data collection tool. Collecting failure data alone, however, cannot prevent the same problems from occurring in the future. What production facilities need is a tool that will analyze the failure data to help decrease the number of equipment failures, which will in turn increase profit margins.

The GE Digital APM system fulfills this need.

You can use GE Digital APM tools to analyze and process data that is collected in and transferred from an external system (e.g., SAP). After the data exists in GE Digital APM, it can be analyzed to determine the state of your equipment and the reliability, trends, potential risks, and probability of failures associated with that equipment. Based on the gathered data and associated analyses, you can map out the impact of projected changes and then make recommendations and suggest strategies for future equipment maintenance.

Chapter 2

Access

Topics:

- [Access APM via a Web Browser](#)
- [About Navigating GE Digital APM via the Asset Hierarchy](#)
- [Navigate GE Digital APM](#)

Access APM via a Web Browser

About This Task

Procedure

1. Depending on the type of user, go to the following URLs via a Web browser:
 - If your user account is manually created: `http://<GEDigitalAPMServerAddress>/meridium/index.html?isadmin`
 - If you want to sign in to an SSO-enabled environment: `https://<GEDigitalAPMServerAddress>/meridium/index.html`
 - If you want to sign in to a non SSO-enabled environment, if your account is not created manually, and if you want to be authenticated via an active directory: `http://<GEDigitalAPMServerAddress>/meridium/index.html`

where, <GEDigitalAPMServerAddress> is the address of the GE Digital APM Application Server to which you want to connect.

Examples:

- `http://myserver.mycompany.com/meridium/index.html`
- `http://myserver/meridium/index.html`
- `http://172.16.254.1/meridium/index.html`

Note: If your system uses Data Guardian from Koingo Software and you use the Google Chrome browser, you may have to use the browser in Incognito mode to successfully access GE Digital APM.

The login page appears.

2. In the **Username** box, enter your GE Digital APM User ID.
3. In the **Password** box, enter your password. Passwords are case sensitive.
4. In the list that appears, select the data source to which you want to log in.
5. Select **Sign-in**.

You are connected to the GE Digital APM database, and the GE Digital APM default dashboard page appears.

Note: When logging in to GE Digital APM, a notification may appear, asking if you want to allow your machine to be used for additional local storage. This local storage is used to store log in information and preferences. Allowing this local storage is optional.

About Navigating GE Digital APM via the Asset Hierarchy

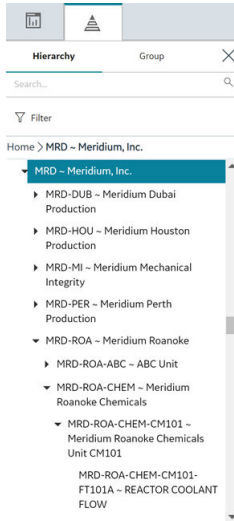
GE Digital APM is built on the premise, within your company, there are multiple functional locations that can be organized in a hierarchy to represent the fact that some locations belong to other locations. These relationships create the Asset Hierarchy.

Navigating the Asset Hierarchy



The Asset Hierarchy allows you to browse your assets from the top-level functional location.

- Company (MRD ~ Meridium, Inc.)
- Sites (MRD-ROA ~ Meridium Roanoke)
- Areas (MRD-ROA-REFN ~ Meridium Roanoke Chemicals)
- Units (MRD-ROA-CHEM-CM101 ~ Meridium Roanoke Chemicals Unit CM101)
- Functional Locations (MRD-ROA-CHEM-CM101-FT101A ~ REACTOR COOLANT FLOW)

- Equipment (G0022-065 ~ 00000000001034757 ~ PUMP)



Tip:

- To navigate to a parent-level or child-level equipment or functional location of an asset that is selected in the hierarchy, select the corresponding breadcrumb link in the breadcrumb path.
- To expand or collapse the Asset Hierarchy panel, select  or , respectively.
- To resize the Asset Hierarchy panel, drag the border of the panel to the required width.

Note:

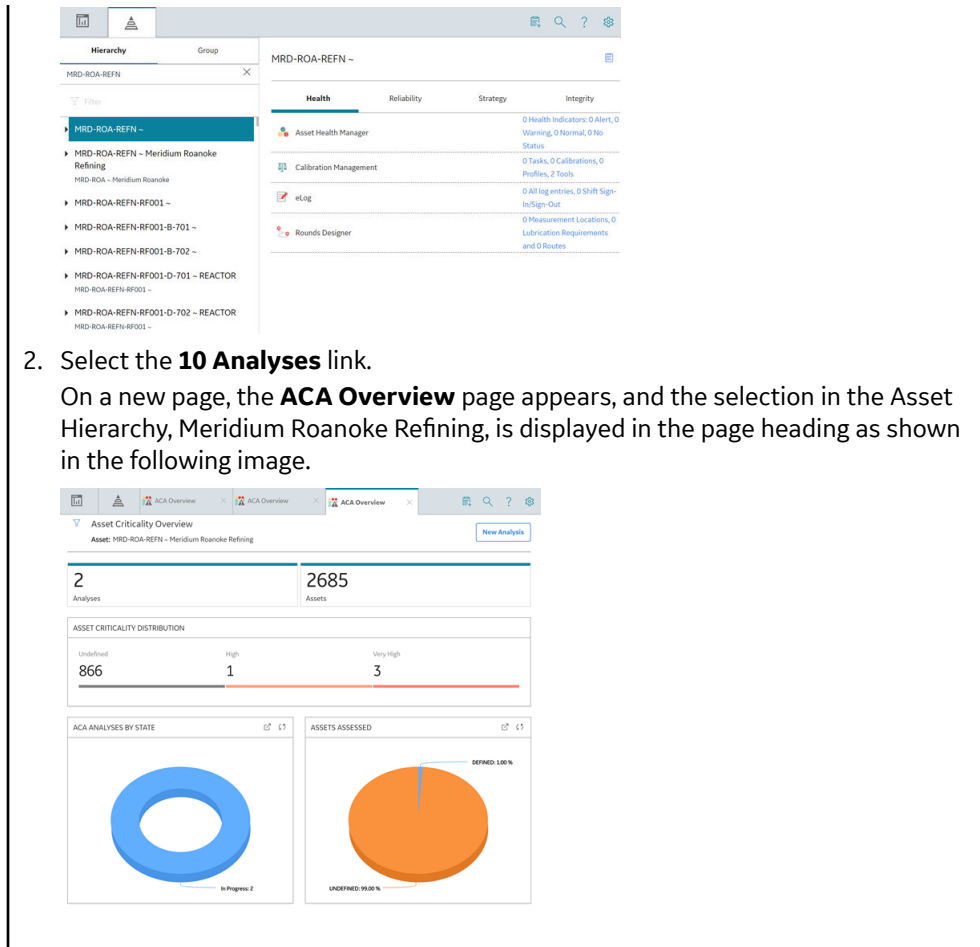
- As a standard practice, we assume that your equipment is installed in locations that exist on the lowest level of your location hierarchy.
- The Asset Hierarchy displays:
 - A maximum of 500 top-level records in the hierarchy.
 - A maximum of 500 child equipment or functional locations for a parent functional location.

The <Asset Name> Page

As you navigate through the Asset Hierarchy, at each level, information about the Risk, Strategy, and Performance of that level is displayed on the <Asset Name> page. The <Asset Name> page provides a snapshot of all the data in GE Digital APM related to the asset selected in the Asset Hierarchy. For each Risk, Strategy, and Performance item, there is a hyperlink displaying the number and type of analysis performed against that asset. The hyperlinks, once selected, open the analyses or inspections on a new page while maintaining the selection in the Asset Hierarchy.

Example: View An Asset Criticality Analysis from an Asset in the Asset Hierarchy.

1. In the Asset Hierarchy, navigate to **Meridium Roanoke Refining**. Meridium Roanoke Refining is selected in the Asset Hierarchy, and the **Meridium Roanoke Refining** page is displayed, and the **Risk** tab is selected. From this page, you can view the Risk snapshot (e.g. there are 11 ACAs, 8 FMEAs, 12 RCMs, etc.) against the asset, as shown in the following image.



2. Select the **10 Analyses** link.





On a new page, the **ACA Overview** page appears, and the selection in the Asset Hierarchy, Meridium Roanoke Refining, is displayed in the page heading as shown in the following image.




Navigate GE Digital APM

All pages in GE Digital APM are framed by the left navigation menu and the top navigation bar.

The left navigation menu, which appears on the left side of the screen, serves as an access point for each GE Digital APM module and tool.

The top navigation bar provides access to the following commonly used GE Digital APM features.

| Option | Description |
|---|---|
|  | Provides access to the main dashboard. Note: You can configure any General Dashboard or Metrics and Scorecards data to appear on the main dashboard page. |
|  | Provides access to the asset hierarchy and asset grouping functionality. |
|  | Displays a menu from which you can select a family to create a new record. |
|  | Displays the search menu, from which you can search GE Digital APM for records and other items (e.g., Catalog items). |

| Option | Description |
|---|---|
|  | Provides access to the GE Digital APM Help system. |
|  | <p>Displays a menu on which you can select or clear the Disable Network Connection and Compact View check boxes.</p> <p>When selected, the Disable Network Connection check box forces GE Digital APM to behave as if your device is offline. This is useful if your network connectivity is intermittent.</p> <p>Note: If you are using a small screen device, select  to access the Disable Network Connection check box.</p> <p>The Compact View selection persists between user sessions, and can be modified at any time. When selected, this option renders compact layout for the following features of GE Digital APM:</p> <ul style="list-style-type: none"> • Result Grid • Datasheet • Left or Collapsible pane • Custom forms and tables |

Chapter 3

Mobile Application

Topics:

- [About the GE Digital APM Mobile Application](#)
- [Mobile Application Supported Operating Systems](#)
- [Install the GE Digital APM Mobile Application on an iOS Device](#)
- [Install the GE Digital APM Mobile Application on an Android Device](#)
- [Install the GE Digital APM Mobile Application on a Windows Device](#)
- [Access GE Digital APM via the Mobile Application](#)
- [Access the GE Digital APM Mobile Application Using Single Sign-On \(SSO\)](#)

About the GE Digital APM Mobile Application

GE Digital APM provides a mobile app that can be installed on iOS, Android, and Windows devices.

This app offers certain APM functionality designed specifically for use offline and includes the following modules:

- Inspection Management and Inspection Field Data Collection
- Mobile Proof Testing
- Rounds Data Collection
- SIS Management

Mobile Application Supported Operating Systems

Supported Operating Systems

Important:

- Any management policy applied to mobile devices must be set up to allow the required permissions for the GE Digital APM mobile application. If restrictions are placed on iOS, Windows, or Android devices by a global policy or mobile device management system, device storage, scanning, photography, location services, and other functionality may be disabled.
- If you are using a Windows device, ensure that Windows App Store access is enabled.
- Ensure that the application is distributed to all relevant devices.

The following table lists the operating systems and corresponding versions that the GE Digital APM mobile application supports.

| Operating System | Version(s) Supported |
|------------------|----------------------|
| iOS | 11, 12, and 13 |
| Android | 5, 6, 7, 8, and 9 |
| Windows | Windows 10 (64 bit) |

Note: The method used to access Reference Documents in the GE Digital APM mobile application will vary depending on your device platform. For example, on Windows and Android devices, the first time you access Reference Documents, you will be prompted to select the application in which you want to open a file, and this selection will then become the default. Apple iOS will always prompt you to select an application. On all platforms, you will also be prompted when the platform for your device does not recognize the file type that it is attempting to download.

Install the GE Digital APM Mobile Application on an iOS Device

GE Digital provides an iOS application, but there are specific steps that you must perform to install the GE Digital APM mobile application on iOS devices.

Before You Begin

An Apple developer's license must be purchased.

Procedure

1. Access the application package file at C:\Program Files\Meridium\ApplicationServer\distribution\GEDigitalAPM.ipa.

Note: This is the default location of the application package file. The exact location at which you can obtain the application package file may differ based on your initial installation of GE Digital APM.

2. Sign the application using the production certificate, private key, application identifier, and distribution provisioning profile created through <https://developer.apple.com/programs/enterprise/>. The GE Digital APM Mobile Application is installed on the iOS Device.
3. **Optional:** If your organization does not use mobile device management, complete the following steps to distribute the application within your organization:

- a) In Notepad or a similar text editor, copy and paste the following text:

```
<?xml version="1.0" encoding="UTF - 8"?>
<!DOCTYPE plist PUBLIC " -//Apple//DTD PLIST 1.0//EN" "http://
www.apple.com/DTDs/PropertyList-1.0.dtd">
<plist version="1.0">
<dict>
  <key>items</key>
  <array>
    <dict>
      <key>assets</key>
      <array>
        <dict>
          <key>kind</key>
          <string>software-package</string>
          <key>url</key>
          <string>https://<your_server_url>/
GEDigitalAPM.ipa</string>
        </dict>
      </array>
      <key>metadata</key>
      <dict>
        <key>bundle-identifier</key>
        <string><your_application_identifier></string>
        <key>kind</key>
        <string>software</string>
        <key>title</key>
        <string>GEDigitalAPM</string>
      </dict>
    </dict>
  </array>
</dict>
</plist>
```

- b) Replace <your_server_url> with the URL of your server.
- c) Replace <your_application_identifier> with an identifier for your application.
- d) Save the file as GEDigitalAPM.plist, and then close the file.
The .plist file is created. When you configure a distribution page for your application, link to this file.
- e) In the web page from which you want to distribute the application within your organization, add an anchor tag with an href pointing to the installation file, as shown in the following example:
`Install GE Digital APM`

You can use the link you configured to distribute the application within your organization.

Install the GE Digital APM Mobile Application on an Android Device

GE Digital provides an Android application, but there are specific steps that you must perform to install the GE Digital APM mobile application on Android devices.

Procedure

1. Access the application package file at `C:\Program Files\Meridium\ApplicationServer\distribution\GEDigitalAPM.apk`.

Note: This is the default location of the application package file. The exact location at which you can obtain the application package file may differ based on your initial installation of GE Digital APM.

2. **Optional:** If your organization does not use mobile device management, in the web page from which you want to distribute the application within your organization, add an anchor tag with an href pointing to the installation file, as shown in the following example:

```
<a href="my.company.com/GEDigitalAPM.apk">Install GE Digital APM</a>
```

You can use the link you configured to distribute the application within your organization.

Install the GE Digital APM Mobile Application on a Windows Device

Procedure

1. Access the application package file at `C:\Program Files\Meridium\ApplicationServer\distribution\GEDigitalAPM.zip`.

Note: This is the default location of the application package file. The exact location at which you can obtain the application package file may differ based on your initial installation of GE Digital APM.

2. Access the application package file at `C:\Program Files\Meridium\ApplicationServer\distribution\GEDigitalAPM.zip`.

Note: This is the default location of the application package file. The exact location at which you can obtain the application package file may differ based on your initial installation of GE Digital APM.

3. On the device on which you want to install the GE Digital APM mobile application, extract the content of the application package file to a local folder.
4. In the folder into which you extracted the application package file content, right-click **Install.bat**, and then select **Run as an Administrator**.

Note: If you are using a touch-screen device, press and hold **Install.bat**, and then select **Run as an Administrator**.

The GE Digital APM mobile application is installed on the Windows device for all current and future Windows user accounts.

5. **Optional:** To cancel future installations or uninstall the GE Digital APM mobile application, in the folder into which you extracted the application package file content, right-click **Uninstall.bat**, and then select **Run as an Administrator**.

Note: If you are using a touch-screen device, press and hold **Uninstall.bat**, and then select **Run as an Administrator**.

The GE Digital APM mobile application is uninstalled for the Windows user account that is currently logged in, and installations for future Windows user accounts are canceled.

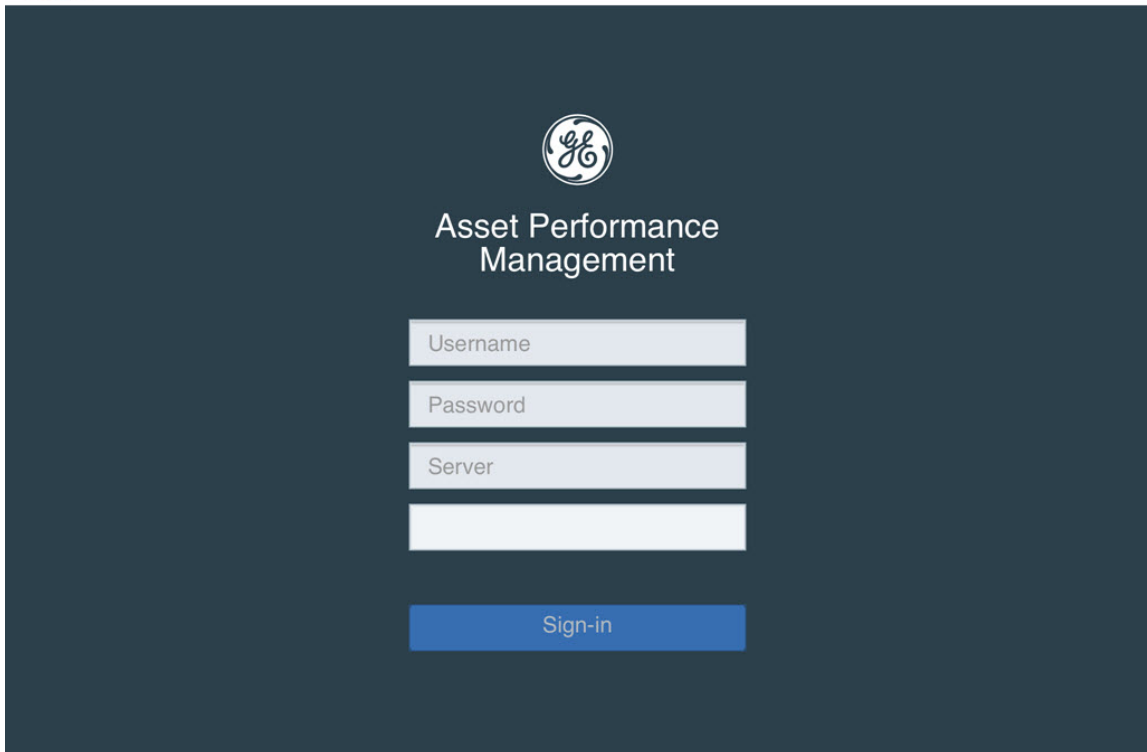
Access GE Digital APM via the Mobile Application

Procedure

1. On a mobile device, select the GE Digital APM icon to launch the application.

The login page appears.

Log-In



2. In the **Server** box, enter the name or URL of the GE Digital APM Server to which you want to connect.

Important:

If your GE Digital APM Server is configured to use a secure connection, you must enter the full server URL or IP Address in one of the following formats:

- `https://<GEDigitalAPMServer.CustomerDomain>`
- or-
- `https://<IP address>`

Examples:

- `https://myserver.mycompany.com`
- `https://172.16.254.1`

A list of data sources configured for the server appears.

3. Select the data source to which you want to log in.
4. In the **Username** box, enter your GE Digital APM User ID.

5. In the **Password** box, enter your password. Passwords are case sensitive.
6. Select **Login**.

You are connected to the GE Digital APM database, and the GE Digital APM default dashboard page appears.

Note: When logging in to GE Digital APM, a notification may appear, asking if you want to allow your machine to be used for additional local storage. This local storage is used to store log in information and preferences. Allowing this local storage is optional.

Access the GE Digital APM Mobile Application Using Single Sign-On (SSO)

This topic describes how to access the GE Digital APM mobile application using SSO.

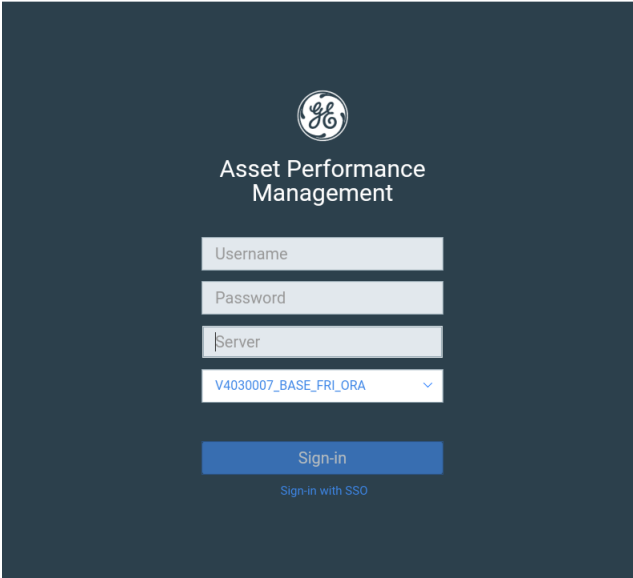
Before You Begin

- [Ensure that SSO is configured for GE Digital APM.](#)

Procedure

1. Start the GE Digital APM application.
The GE Digital APM login page appears.

Log-In



Asset Performance Management

Username

Password

Server

V4030007_BASE_FRI_ORA

Sign-in

Sign-in with SSO

2. In the **Server** box, enter the name or URL of the GE Digital APM server to which you want to connect.

Important: If your GE Digital APM server is configured to use a secure connection, you must enter the URL or IP address of the server in one of the following formats:

- <GEDigitalAPMServer.CustomerDomain> (for example, myserver.mycompany.com)
- <IP address> (for example, 172.16.254.1)

A list of data sources configured for the server appears.

3. In the drop-down list box, select the data source that you want to access.
4. Select **Sign-in with SSO**.

The SSO login page appears that is based on the IDP that is selected while configuring SSO.

5. Specify your SSO credentials, and then log in to access GE Digital APM.

You are connected to GE Digital APM, and the default dashboard page appears.

Chapter 4

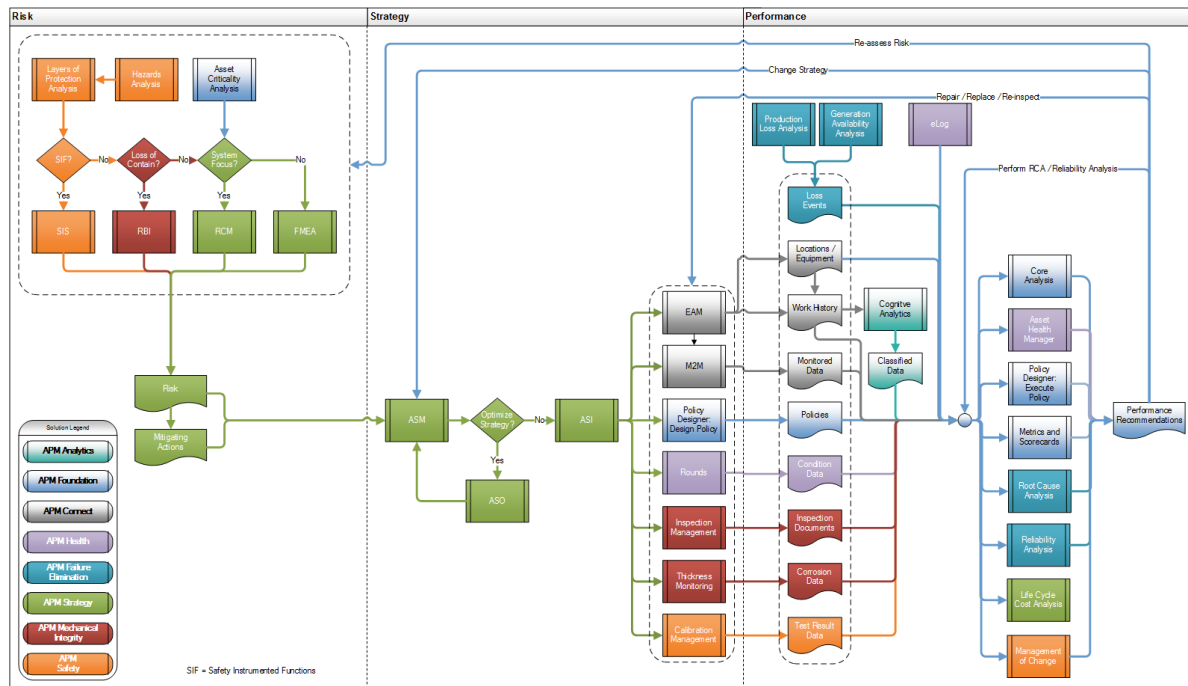
APM Product Workflows

Topics:

- [GE Digital APM Product Workflow](#)
- [Module-Level Workflows](#)
- [Interpreting the Workflow Diagrams](#)
- [APM Analytics Personas](#)
- [APM Connect Personas](#)
- [APM Failure Elimination Personas](#)
- [APM Foundation Personas](#)
- [APM Mechanical Integrity Personas](#)
- [APM Health Personas](#)
- [APM Safety Personas](#)
- [APM Strategy Personas](#)

GE Digital APM Product Workflow

The following diagram outlines the integration between the different modules that make up GE Digital APM.



Module-Level Workflows

Each solution within GE Digital APM consists of multiple modules, each of which is composed of one or more workflows that describe the various capabilities of the module. You can find details about each of these product workflows in the respective module user help.

Tip: Refer to the GE Digital APM Product Workflow for a visualization of how these modules interact within GE Digital APM.

APM Analytics

| Module | Workflows |
|---------------------|---|
| Cognitive Analytics | Manage Classifiers Manage Cognitions |

APM Connect

| Module | Workflows |
|--------------|---------------------|
| Data Loaders | General Data Import |

| | |
|---------------------------------|---|
| EAM Extraction and Notification | Asset Management Event Management Notification Creation |
| EAM Work Management | Task and Confirmation Generation Work Order Generation |
| M2M Integration | Integrate with M2M Data Source |

APM Failure Elimination

| Module | Workflows |
|----------------------------------|---|
| Generation Availability Analysis | GAA Administration GAA Event Management GAA Performance GAA Reporting |
| Production Loss Analysis | Production Loss Analysis |
| Reliability Analytics | Automation Rule Production Analysis Reliability and Probability Distribution Reliability Growth Analysis Spares Analysis System Reliability Analysis |
| Root Cause Analysis | Root Cause Analysis |

APM Foundation

| Module | Workflows |
|----------------------------|--|
| Asset Criticality Analysis | Perform Asset Criticality Analysis |
| Core Analysis | Asset Event Analysis Graph Analysis Query Analysis Report Analysis Geospatial Analysis |
| Metrics and Scorecards | Manage SSAS Cubes Manage Metric Views Manage KPIs Manage Scorecards |

| | |
|-----------------------------|---|
| Performance Recommendations | Manage Performance Recommendations Execute Recommendations |
| Policy Designer | Design Policy Execute Policy |

APM Mechanical Integrity

| Module | Workflows |
|-----------------------|---|
| Inspection Management | Inspection Planning Inspection Assessment |
| Risk Based Inspection | Define Components Perform RBI Analysis Recommendation Management Recommendation Implementation |
| Thickness Monitoring | TM Planning Thickness Assessment |

APM Health

| Module | Workflows |
|----------------------|---|
| AMS Analytics | AMS Analytics |
| Asset Health Manager | Assess Asset Health Manage Health Indicators Manage Health Indicator Sources |
| eLog | eLog |
| GE Analytics | GE Analytics |
| Rounds | Manage Rounds Routes Manage Rounds Templates Collect Rounds Data Monitor Rounds Compliance |

APM Safety

| Module | Workflows |
|--------------------------------------|--|
| Calibration Management | Calibration Planning Calibration Administration Calibration Assessment Calibration Assessment CMX |
| Hazards Analysis | HAZOP Analysis What If Analysis |
| Layers of Protection Analysis (LOPA) | LOPA Workflow |
| Management of Change (MOC) | MoC Administration MoC Change Project |
| SIS Management | SIL Assessment LOPA SIL Verification SIL Validation Trip Reporting Custom Device SRS |

APM Strategy








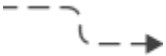

| Module | Workflows |
|---|-----------------------------|
| Reliability Centered Maintenance (RCM) | RCM and FMEA |
| Failure Modes and Effects Analysis (FMEA) | RCM and FMEA |
| Asset Strategy Management (ASM) | Asset Strategy Management |
| Asset Strategy Optimization (ASO) | Asset Strategy Optimization |
| Asset Strategy Implementation (ASI) | ASI for SAP |
| Life Cycle Cost Analysis (LCC) | Life Cycle Cost Analysis |

Interpreting the Workflow Diagrams

The Product Workflow section of the GE Digital APM documentation is designed to illustrate the basic functions of GE Digital APM.

In each diagram, blue text in a shape indicates that a description is provided for that step in the workflow.

The following table summarizes the conventions used to represent the various activities in each workflow process.

| Shape | Description |
|---|--|
|  | The starting or ending point of a workflow. |
|  | Another workflow within GE Digital APM. |
|  | Another workflow outside of GE Digital APM. |
|  | A user action or an automated process. |
|  | A data output, such as a document or record. |
|  | A decision. |
|  | The primary process flow. |
|  | An item referenced by part of the process flow. |
|  | A reference number that accompanies some shapes in the workflow diagrams. These numbers are for identification purposes only and do not indicate the order of the workflows. |

APM Analytics Personas

The workflows for this solution are completed by the following user personas.

| Persona | Description | Applicable GE Digital APM Roles | Notes |
|---------|--|--|-------|
| Analyst | The Analyst is responsible for prioritizing the areas where efforts should be directed to drive improvements that directly affect productivity and profitability. The Analyst monitors and evaluates historical and condition data. Based on evaluation, the Analyst will make recommendations to take action on current conditions or propose changes to existing strategies. | MI Analytics Power MI Analytics Administrator | None |

APM Connect Personas

The workflows for this solution are completed by the following user personas.

Data Loader Personas

| Persona | Description | Applicable GE Digital APM Roles | Notes |
|------------|---|---|--|
| Analyst | <p>The Analyst is responsible for prioritizing the areas where efforts should be directed to drive improvements that directly affect productivity and profitability. The Analyst monitors and evaluates historical and condition data. Based on evaluation, the Analyst will make recommendations to take action on current conditions or propose changes to existing strategies.</p> | <p>MI Data Loader User MI Foundation Power MI Strategy Power</p> | <p>The Data Loader Analyst is responsible for the data that is imported via the data loaders from the external source. Analysts have the authorization and responsibility to assure that the data is collected, cleansed, and loaded completely and correctly. Traits of the Analyst:</p> <ul style="list-style-type: none"> • Manipulates data • Applies standard processes and methodologies for analysis • Is a high-level GE Digital APM User |
| Technician | <p>The Technician is responsible for executing and documenting inspection activities to maintain both asset integrity and compliance with the overall inspection program.</p> <p>The Technician does the following:</p> <ul style="list-style-type: none"> • Performs inspections, calibrations, or proof tests. • Records results. • Initiates recommendations. | <p>MI Data Loader User MI Foundation Power MI Mechanical Integrity Power MI Strategy User</p> | <p>Depending on the module into which you are loading data, the Data Loader Technician can be responsible for numerous GE Digital APM modules including: FMEA, RCM, Inspection Management, or Thickness Monitoring.</p> |

EAM Personas

| Persona | Description | Applicable GE Digital APM Roles | Notes |
|------------------------------|--|---|---|
| System Administrator | The System Administrator is responsible for installing and implementing GE Digital APM. The System Administrator maintains backups of the GE Digital APM system and ensures that the data flowing to and from GE Digital APM is safe, secure, and performing well. | MI Data Loader Admin MI Foundation Admin | In addition to the applicable roles the System Administrator needs access to the following Security Groups: MI SAP Interface Administrator |
| Solution Administrator (EAM) | The Solution Administrator (EAM) may or may not have access to APM but is responsible for managing and maintaining master data in their EAM system solution. | N/A | None |
| GE Digital APM | The GE Digital APM persona represents automated processes performed by the GE Digital APM system. | N/A | In the EAM Workflow the GE Digital APM persona represents an automated process performed by APM Connect based on context files and triggers. |
| Analyst (EAM) | The Analyst is responsible for prioritizing the areas where efforts should be directed to drive improvements that directly affect productivity and profitability. The Analyst monitors and evaluates historical and condition data. Based on evaluation, the Analyst will make recommendations to take action on current conditions or propose changes to existing strategies. | N/A | The EAM Analyst may or may not have access to GE Digital APM but is responsible for planning and scheduling work in the EAM system. |

| | | | |
|------------|--|--|--|
| Analyst | The Analyst is responsible for prioritizing the areas where efforts should be directed to drive improvements that directly affect productivity and profitability. The Analyst monitors and evaluates historical and condition data. Based on evaluation, the Analyst will make recommendations to take action on current conditions or propose changes to existing strategies. | MI Data Loader User MI Foundation User MI Strategy Power | In addition to the applicable roles the Analyst needs access to the following Security Groups: MI SAP Interface User. |
| Technician | The Technician is responsible for executing and documenting inspection activities to maintain both asset integrity and compliance with the overall inspection program. The Technician does the following: <ul style="list-style-type: none"> • Performs inspections, calibrations, or proof tests. • Records results. • Initiates recommendations. | MI Data Loader User MI Foundation User MI Mechanical Integrity Power MI Strategy User | In addition to the applicable roles the Technician needs access to the following Security Groups: MI SAP Interface User and MI Configuration Role. |

M2M Personas

| Persona | Description | Applicable GE Digital APM Roles | Notes |
|------------------------|--|--|---|
| Solution Administrator | The Solution Administrator is responsible for managing advanced features of a GE Digital APM solution. Some examples are managing health indicators, managing M2M interfaces, and managing SSAS cubes. | MI Health Power MI Foundation Power MI Data Loader Admin | In addition to the applicable roles the Solution Administrator needs access to the following Security Groups: MI AMS Suite Administrator and MI Configuration Role. |

APM Failure Elimination Personas

The workflows for this solution are completed by the following user personas.

| Persona | Description | Applicable GE Digital APM Roles | Notes |
|------------------------|--|--|-------|
| Analyst | The Analyst is responsible for prioritizing the areas where efforts should be directed to drive improvements that directly affect productivity and profitability. The Analyst monitors and evaluates historical and condition data. Based on evaluation, the Analyst will make recommendations to take action on current conditions or propose changes to existing strategies. | MI FE Power User MI FE User MI Foundation User | None |
| Operator | The Operator is responsible for day-to-day operation of one or more GAA Units. The operator enters events that affect power generation in a GAA Unit. | MI Foundation User MI FE User | None |
| Solution Administrator | The Solution Administrator is responsible for managing advanced features of a GE Digital APM solution. Some examples are managing health indicators, managing M2M interfaces, and managing SSAS cubes. | MI FE Admin MI Foundation User | None |
| Supervisor | The Supervisor has line authority over subordinates. The responsibilities of the Supervisor include asset integrity and program compliance as determined by company standards, the approval of recommendation proposals, and the review and approval of asset strategies. | MI Foundation User MI FE User | None |

APM Foundation Personas

The workflows for this solution are completed by the following user personas.

| Persona | Description | Applicable GE Digital APM Roles | Notes |
|------------------------|--|--|--|
| Analyst | The Analyst is responsible for prioritizing the areas where efforts should be directed to drive improvements that directly affect productivity and profitability. The Analyst monitors and evaluates historical and condition data. Based on evaluation, the Analyst will make recommendations to take action on current conditions or propose changes to existing strategies. | MI Foundation User MI Health Power | Any GE Digital APM Security User can perform core analysis on entities for which permission to access has been granted. In Metrics and Scorecards, the Analyst designs and manages Metric Views, KPIs and Scorecards and has privileges to schedule KPIs or publish the results to the other users. |
| GE Digital APM | The GE Digital APM persona represents automated processes performed by the GE Digital APM system. | MI Foundation User | None |
| Solution Administrator | The Solution Administrator is responsible for managing advanced features of a GE Digital APM solution. Some examples are managing health indicators, managing M2M interfaces, and managing SSAS cubes. | MI Foundation Admin MI Health Power | In Metrics and Scorecards, the Solution Administrator sets the connection to SQL Server Analysis Services (SSAS), registers cubes to GE Digital APM, and manages cube access privileges. |

| | | | |
|------------|--|---------------------|------|
| Supervisor | The Supervisor has line authority over subordinates. The responsibilities of the Supervisor include asset integrity and program compliance as determined by company standards, the approval of recommendation proposals, and the review and approval of asset strategies. | MI Foundation Admin | None |
| Technician | The Technician is responsible for executing and documenting inspection activities to maintain both asset integrity and compliance with the overall inspection program. The Technician does the following: <ul style="list-style-type: none"> • Performs inspections, calibrations, or proof tests. • Records results. • Initiates recommendations. | MI Foundation Admin | None |

APM Mechanical Integrity Personas

The workflows for this solution are completed by the following user personas.

| Persona | Description | Applicable GE Digital APM Roles | Notes |
|---------|--|--|-------|
| Analyst | The Analyst is responsible for prioritizing the areas where efforts should be directed to drive improvements that directly affect productivity and profitability. The Analyst monitors and evaluates historical and condition data. Based on evaluation, the Analyst will make recommendations to take action on current conditions or propose changes to existing strategies. | MI Mechanical Integrity Power MI Mechanical Integrity Admin | None |

| | | | |
|------------|--|--|------|
| Supervisor | The Supervisor has line authority over subordinates. The responsibilities of the Supervisor include asset integrity and program compliance as determined by company standards, the approval of recommendation proposals, and the review and approval of asset strategies. | MI Mechanical Integrity Power MI Mechanical Integrity Admin | None |
| Technician | The Technician is responsible for executing and documenting inspection activities to maintain both asset integrity and compliance with the overall inspection program. The Technician does the following: <ul style="list-style-type: none"> • Performs inspections, calibrations, or proof tests. • Records results. • Initiates recommendations. | MI Mechanical Integrity Power MI Mechanical Integrity Admin | None |

APM Health Personas

The workflows for this solution are completed by the following user personas.

| Persona | Description | Applicable GE Digital APM Roles | Notes |
|------------------------|--|--|-------|
| Analyst | The Analyst is responsible for prioritizing the areas where efforts should be directed to drive improvements that directly affect productivity and profitability. The Analyst monitors and evaluates historical and condition data. Based on evaluation, the Analyst will make recommendations to take action on current conditions or propose changes to existing strategies. | MI Health User MI Health Power MI Health Admin MI Strategy User MI Strategy Power MI Strategy Admin | None |
| GE Digital APM | The GE Digital APM persona represents automated processes performed by the GE Digital APM system. | None | None |
| Solution Administrator | The Solution Administrator is responsible for managing advanced features of a GE Digital APM solution. Some examples are managing health indicators, managing M2M interfaces, and managing SSAS cubes. | MI Health Admin | None |
| Technician | The Technician is responsible for executing and documenting inspection activities to maintain both asset integrity and compliance with the overall inspection program. The Technician does the following: <ul style="list-style-type: none"> • Performs inspections, calibrations, or proof tests. • Records results. • Initiates recommendations. | MI Health User | None |

APM Safety Personas

The workflows for this solution are completed by the following user personas.

| Persona | Description | Applicable GE Digital APM Roles | Notes |
|------------------------|---|------------------------------------|---|
| Analyst | The Analyst is responsible for prioritizing the areas where efforts should be directed to drive improvements that directly affect productivity and profitability. The Analyst monitors and evaluates historical and condition data. Based on evaluation, the Analyst will make recommendations to take action on current conditions or propose changes to existing strategies. | MI Safety Admin MI Safety Power | <ul style="list-style-type: none"> Responsible for setting up the standards, creating templates, approving recommendations, assigning tasks, and reviewing the calibration or proof test results Responsible for performing SIL assessment, SIL verification, and SIL validation. Responsible for creating Change Projects, adding Checklists to the projects, managing Exceptions and Tasks, and finalizing the Change Project. |
| Solution Administrator | The Solution Administrator is responsible for creating the Exceptions, Questions, and Checklists that can be used in the Change Project. | MI Safety Admin | None |
| Technician | <p>The Technician is responsible for executing and documenting inspection activities to maintain both asset integrity and compliance with the overall inspection program.</p> <p>The Technician does the following:</p> <ul style="list-style-type: none"> Performs inspections, calibrations, or proof tests. Records results. Initiates recommendations. | MI Safety User | Responsible for performing calibrations or proof tests based on the tasks that are assigned. |

APM Strategy Personas

The workflows for this solution are completed by the following user personas.

| Persona | Description | Applicable GE Digital APM Roles | Notes |
|------------|---|--|-------|
| Analyst | <p>The Analyst is responsible for prioritizing the areas where efforts should be directed to drive improvements that directly affect productivity and profitability. The Analyst monitors and evaluates historical and condition data. Based on evaluation, the Analyst will make recommendations to take action on current conditions or propose changes to existing strategies.</p> | <p>Strategy User Strategy Power Strategy Admin</p> | None |
| Supervisor | <p>The Supervisor has line authority over subordinates. The responsibilities of the Supervisor include asset integrity and program compliance as determined by company standards, the approval of recommendation proposals, and the review and approval of asset strategies.</p> | <p>Strategy User Strategy Power</p> | None |