GE VERNOVA

Asset Performance Management

On-Premises APM

V5.2.2.0.0

Workflow Solutions

Contents

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Chapter 1

Overview

Topics:

Overview of the Workflow Solutions

Workflow Solutions Content enables GE Vernova Services to deliver tailored configurations of APM that are aligned to a customer's work processes. New families, fields, family policies, system tables and codes, permissions, security groups and roles, policies, and catalog content that enable tailored configurations to accelerate adoption of APM have been added.

Workflow Solutions Content is designed to be used only after configuration by GE Vernova Services. Therefore, this documentation provides only high-level information to allow you to identify the Content. If you engage GE Vernova Services to configure the Content, documentation of the fully configured solution will be provided as a deliverable of the service engagement.

For more information on Workflow Solutions, contact your GE Vernova account manager.

Important: Workflow Solutions Content is designed to be used only after configuration by GE Vernova. If you attempt to use or modify the Content without assistance from GE Vernova, this may adversely affect other APM features and functions, and is not supported.

Chapter 2

Action Tracking Workflow

Topics:

Overview of the Action Tracking Workflow

The Action Tracking workflow captures and documents actions. This process begins with creating an action and ends when the action is assigned and closed. Actions may originate from various sources, such as workflows for anomaly tracking, equipment health, and failure elimination, or from users observing conditions during operator rounds.

The Action Tracking process is designed to add value to an organization by systematically identifying, tracking, and documenting issues that cause value loss or pose significant risks. Benefits include:

- Improving asset strategies
- Building a knowledge base of solutions for the organization

To monitor the efficiency and effectiveness of this process, create a record for each instance of the Action Tracking process and track it to closure.

Access Action Tracking Workflow Dashboard

Before You Begin

Ensure that:

- APM version must be V5.0.0.0 or above (Postgres & SQL database).
- Asset Hierarchy should be implemented.

Procedure

1. In the **Applications** menu, navigate to the **TOOLS** section.
2. Select **Catalog**.
3. Select **Home → Public → Action Tracking Workflow → Dashboards** folder.
   The corresponding Catalog items appear in the grid within the workspace for the selected folder.
4. Select the **Action Tracking Workflow** catalog item.
   The **Action Tracking Main** Dashboard is displayed will the following widgets:
   - **Heat Map - Overdue Age vs Recomm Priority**: Displays the Count of Actions in an Overdue Age Range and Recommendation Priority Category
   - **Action Tracking Main**: Displays the main Action Tracking widget that shows User based Action Data
   - **Actions per Type for the Last Year**: Displays the Count of Actions created in the last one year till the present date divided by Action Type & State
   - **Actions Completed by Quarter**: Displays the quarterly Count of Actions completed in a given quarter in the last one year till present date divided by Action Type & Quarter
   - **Overdue Actions**: Displays the Count of Actions that are overdue i.e., crossed the Target Completion Date
   - **Usage Over Time** : Displays the Quarterly Count of Actions created in a given Quarter in the last one year starting from present date bifurcated by Quarter

Heat Map Widget

The Heat Map widget displays recommendations by overdue age and priority category, with:

- X-axis priorities: Low, Medium, High, Undefined (NULL)
- Y-axis overdue days: 0-30, 30-60, 60-90, 90-120, Above 120

Note: The graph starts with Undefined/NULL and moves towards High priority, shown in red.

When you select a cell within the Heat Map you will be directed to a detailed query view. This view corresponds to the count of recommendations within the selected cell, filtered by the specified overdue age range and priority category. Additionally, selecting a hyperlink in the Recommendation ID column navigates you to either a custom or default datasheet of the recommendation, contingent on the action or recommendation type.

Actions per Type for the Last Year

The **Actions per Type for the Last Year** widget provide you with insights into the distribution of recommendations over the past year. It features a bar chart that illustrates the count of recommendations created during this period, categorized by action type and state. Each bar in the chart is segmented to reflect various states of recommendations, such as Accepted, Approved, Completed, In Progress, Pending, Pending Approval, Proposed, and State Undefined for NULL states.

This widget provides you with a comprehensive overview of the status and categorization of recommendations, enhancing your understanding and decision-making process.

This widget allows you to interact with the data visually and analytically. By selecting a segment or stack within the bar chart, you can view a detailed query of individual action records that match the count, action type, and state you specified. Additionally, by clicking on the hyperlinks in the **Recommendation ID** column, you can access a custom or default datasheet of the recommendation, tailored to the specific type of action or recommendation.

Action Tracking Main

The **Action Tracking Main** widget is designed to help you monitor actions and recommendations related to specific users and assets. This widget displays a list of actions and recommendations that have been created by, reviewed by, or assigned to a particular user. Additionally, it focuses on actions linked to a specific asset within a defined time period, all of which are configurable through the Dashboard filter.

This widget provides you with detailed insights into each action or recommendation, thereby enhancing your ability to track and manage these elements effectively.

By selecting the hyperlinks in the **Action Type** column, you can access either a custom or default datasheet of the recommendation, depending on the action or recommendation type.

Actions Completed by Quarter

The **Actions Completed by Quarter** widget is designed to offer insights into the volume of actions and recommendations completed over the past year. This widget presents the data in

a structured format, displaying the count of completed actions and recommendations, categorized by action type and quarter.

The widget's interactive features allow you to explore the data in detail. By selecting a count value in the Count column, you can view a detailed query of individual action records that correspond to the selected count. Additionally, selecting a hyperlink in the **Recommendation ID** column provides access to either a custom or default datasheet of the recommendation, based on the specific type of action or recommendation.

Overdue Actions

The **Overdue Actions** widget helps you monitor actions and recommendations that have exceeded their target completion dates. This widget displays the count of overdue actions and recommendations, which are associated with a specific asset and time period, as determined by the Dashboard filter settings. The count is further categorized by the state of the action or recommendation, including Accepted, Approved, Completed, In Progress, Pending, Pending Approval, Proposed, and State Undefined for NULL states.

You can select any count value in the Totals column to view a detailed query of individual action records. These records correspond to the selected count and are created within the specified time range and linked to the specified asset.

Additionally, clicking on a hyperlink in the **Action Type** column allows you to access either a custom or default datasheet of the recommendation, tailored to the specific type of action or recommendation.

Usage Over Time

This **Usage Over Time** widget is designed to provide a comprehensive view of the quarterly trends in the creation of actions and recommendations over the past year. This widget visually represents the data in a graph format, segmented by quarter, allowing you to easily identify patterns and trends.

You can select any data point on the graph to access a detailed query of the actions or recommendations associated with that quarter. This interaction provides further insights into the specifics of each entry. Additionally, clicking on a hyperlink in the **Recommendation ID** column directs you to either a custom or default datasheet of the recommendation, depending on the action or recommendation type.

This enhances your understanding of the recommendations and supports effective decision-making and analysis.

Chapter 3

Equipment Health Workflow

Topics:

About Equipment Workflow

The Equipment Health Workflow Content includes families, fields, family policies, system tables and codes, permissions, security groups and roles, policies, and catalog content that supplements the Asset Health Management and Rounds features of APM.

Table 1: Steps in Equipment Workflow

S.No	Step Name
1	Access EHW Equipment Health Configuration Workflow Dashboard on page 8
2	Step 1: Identify Equipment to Monitor
3	Step 2.1 Rounds Configuration
4	Step 2.2 Tag Configuration
5	Step 2.3 Predictive Diagnostic Configuration
6	Step 3: Consolidate Data with Policy
7	Access Equipment Health Tracking Workflow
8	Step 4: Execute Health Algorithm
9	Step 5: Evaluate Health vs. Criteria

Access EHW Equipment Health Configuration Workflow Dashboard

Procedure

1. In the **Applications** menu, navigate to the **TOOLS** section.
2. Select **Catalog**.
   The **Catalog** page appears.
3. Select **Home** → **Public** → **Workflows** → **Equipment Health Tracking Workflow** → **Dashboards** folder.
   The corresponding Catalog items appear in the grid within the workspace for the selected folder.
4. Select **EHW Equipment Health Configuration Workflow** catalog item.
   The Dashboard is displayed will the following widgets:
   - **Asset Health Index**: Displays the Index number for all assets in the plant.
   - **Workflow Steps**: Displays the list of steps to be performed in sequence.
   - **Asset Health Overview**: Displays various parameters around the health of all the assets.

Step 1: Identify Equipment to Monitor

Procedure

1. Access EHW Equipment Health Configuration Workflow Dashboard.
2. In the **WORKFLOW STEPS** section, select **Step 1: Identify Equipment to Monitor**.
   A new tab opens, displaying the **Assets with no Health Status**.
3. In the **ACTION** Column, select the **Update Health WF Status**.
   Record Manager of the asset opens.

4. In the **Health WF Status** drop-down list, select **To Be Monitored**.
5. Select  and then select  .
6. Select the tab displaying the **Assets with no Health Status**, and then select  .
   The Asset selected to be monitored is not shown on the list.

Next Steps

Rounds Configuration

Step 2.1: Rounds Configuration

Procedure

1. Access EHW Equipment Health Configuration Workflow Dashboard.
2. In the **WORKFLOW STEPS** section, select **Step 2.1: Rounds Configuration**.
   A new tab opens, displaying the **Assets to be Monitored**.
3. Search for the Asset selected to be monitored in **Step 1: Identify Equipment to Monitor**.
4. In the **ACTION 1** Column, select the **Review Existing MLs**.
5. Review the existing MLs then select  and then select  .
6. In the **ACTION 2** Column, select the **Create New MLs**.
7. Enter the details as needed select  and then select  .

Step 2.2: Tags Configuration

Procedure

1. Access EHW Equipment Health Configuration Workflow Dashboard.
2. In the **WORKFLOW STEPS** section, select **Step 2.2: Tags Configuration**.
   A new tab opens, displaying the **Assets to be Monitored**.
3. Search for the Asset selected to be monitored in **Step 1: Identify Equipment to Monitor**.
4. In the **ACTION 1** Column, select the **Review Existing Tags**.
5. Review the existing Tags then select  and then select  .
6. In the **ACTION 2** Column, select the **Create New Tags**.
7. Enter the details as needed select  and then select  .

Step 2.3: Predictive Diagnostic Configuration

Procedure

1. Access EHW Equipment Health Configuration Workflow Dashboard.
2. In the **WORKFLOW STEPS** section, select **Step 2.3: Predictive Diagnostic Configuration**.
   A new tab opens, displaying the **Assets to be Monitored**.
3. Search for the Asset selected to be monitored in **Step 1: Identify Equipment to Monitor**.
4. In the **ACTION 1** Column, select the **Link SmartSignal Asset**.
5. Enter the details as needed select  and then select  .
6. In the **ACTION 2** Column, select the **Update Health WF Status**.
7. Select under **ACTION 2** Column for the asset.
8. In **Health WF Status** drop-down list box , select **Ready for Monitoring**.

9. Select and then select .
10. Select the tab displaying the **Assets to be Monitored**, select .
    The Asset that is marked as ready for monitoring is not shown on the list.

Step 3: Consolidate Data with Policy

Procedure

1. Access EHW Equipment Health Configuration Workflow Dashboard.
2. In the **WORKFLOW STEPS** section, select **Step 3: Consolidate Data with Policy**.
   A new tab opens, displaying the **Assets Ready for Monitoring**.
3. Search for the Asset selected to be monitored in **Step 1: Identify Equipment to Monitor**.
4. In the **ACTION 1** Column, select the **Execute Tag Reading Policy**.
   The **Queued Successfully** window appears.
5. Select **OK** and then close all the policy tabs.
6. In the **ACTION 2** Column, select the **Execute Main Health Policy**.
   The **Queued Successfully** window appears.
7. Select **OK** and then close all the policy tabs.
8. In the **ACTION 3** Column, select the **Update Health WF Status**.
9. In **Health WF Status** drop-down list box, select **Being Monitored**.
10. Select and select .

Equipment Health Tracking Workflow

Procedure

1. Access EHW Equipment Health Configuration Workflow Dashboard.
2. In the **WORKFLOW STEPS** section, select **Equipment Health Tracking Workflow**.
   A new tab opens, displaying the following widgets:
   - **Asset Health Index**: Displays the Index number for all assets in the plant.
   - **Workflow Steps**: Displays the list of steps EHW to be performed in sequence.
   - **Asset Health Overview**: Displays various parameters around the health of all the assets.

Next Steps

Execute Health Algorithm

Step 4: Execute Health Algorithm

Procedure

1. Access Equipment Health Tracking Workflow.
2. In the **WORKFLOW STEPS** section, select **Step 4: Execute Health Algorithm**.
   A new tab opens, displaying the following widgets:
   - Individual Tag Value Reading
   - Individual Asset Health Index Calculation
3. In the **ACTION** Column of **Individual Tag Value Reading**, select the **Read this Tag**.
   The **Queued Successfully** window appears.

4. Select **OK** and then close all the policy tabs.
5. In the **ACTION** Column of **Individual Asset Health Index Calculation**, select the **Calculate Asset Health Index**.
   The **Queued Successfully** window appears
6. Select **OK** and then close all the policy tabs.

Step 5: Evaluate Health vs. Criteria

Procedure

1. Access Equipment Health Tracking Workflow.
2. In the **WORKFLOW STEPS** section, select **Step 5: Evaluate Health vs. Criteria**.
   A new tab opens, displaying the following widgets:
   - Asset Health Index-AHI
   - Health Index Breakdown
   - Assets Being Monitored
3. In **Assets Being Monitored**, under **ACTION 1** Column, select the **Read this Tag**.
4. Enter the details as needed select and then select .
5. In the **ACTION 2** Column, select the **Update Health WF Status**.
6. In **Health WF Status** drop-down list box, select **Being Monitored**.
7. Select and select .
8. Select the tab displaying the **Assets to be Monitored**, select .
   The Asset that is marked as ready for monitoring is not shown on the list.

Chapter 4

Failure Elimination Workflow

Topics:

Failure Elimination Workflow Overview

Failure Elimination Workflow (FEW) process is a step-by-step methodology that includes the following steps:

S.No	Step Name	Description
1	Identify bad actors and trigger a Root Cause Analysis (RCA).	Identify the bad actors and then initiate an RCA to eliminate the root cause.
2	Assign an owner.	Assign an owner to the RCA who will work on the RCA. If, however, you want to hold on the RCA up to a certain date, you can de-escalate it.
3	Perform RCA.	Perform the RCA by identifying corrective and preventive actions (CAPA), their execution and evaluation of the effectiveness in eliminating the cause. You can use the existing RCA templates to create a Logic Tree.
4	Execute actions.	Implement the actions identified in the Recommendations to avoid future occurrence of the failure.
5	Evaluate actions.	After you implement the Recommendations, track the RCA using a Tracking Item, which allows you to define the threshold cost and count. You can also use the quarterly CM count and cost trends to understand the impact of the actions. If the actual cost and count for tracked assets exceed the threshold values, an email is sent to the RCA Owner, stating that the failure criteria is breached.
6	Mark the RCA complete.	If the RCA does not breach for a year, an email is sent to the RCA Owner. Using your discretion, you can continue to monitor the RCA or mark the RCA complete, and then mark the FE Workflow status complete. Even after the FE Workflow is marked, complete you can reopen it until the RCA is marked complete.

Access the Failure Elimination Dashboard Page

Procedure

1. In the **Applications** menu, navigate to the **TOOLS** section.
2. Select **Catalog**.
3. Select **Home** > **Public** > **Workflows** > **Failure Elimination Workflow** > **Dashboards**.
   The corresponding Catalog items appear in the workspace for the selected folder.
4. Select **FEW Failure Elimination Dashboard**.
   The **Failure Elimination Dashboard** page appears.

Step 1: Identify Bad Actors and Trigger RCA

About This Task

This topic describes how to identify the bad actors and then initiate an RCA to eliminate the cause.

Procedure

1. Access the **Failure Elimination Dashboard** page.
2. In the **FAILURE ELIMINATION WORKFLOW STEPS** section, select **Step 1: Identify Bad Actors and Trigger RCA**.
3. Identify the bad actors using the sections available in the page.
4. For each asset identified as a bad actor, in the **INITIATE RCA** section, in the **INITIATE RCA - ALL ASSETS** select **Click Here**.
   The **FEW Initiate** datasheet appears.
5. Select the **Trigger Flag** check box, and then select  .
   RCA is initiated for the asset, and the asset no longer appears in the **INITIATE RCA** section.

Next Steps

Step 2: Assign Owner on page 14.

Step 2: Assign Owner

Before You Begin

Identify bad actors and trigger an RCA.

About This Task

After you initiate an RCA, as a Reliability Analyst, you can assign an owner, who will then work on the RCA. If, however, you want to hold on the RCA for a certain period, you can de-escalate it.

Procedure

1. Access the **Failure Elimination Dashboard** page.
2. In the **FAILURE ELIMINATION WORKFLOW STEPS** section, select **Step 2: Assign RCA Owner**.
3. If you want to assign an RCA owner:
   a) In the **MANAGE WORKFLOW BACKLOG** section, for the asset for which you want to assign an owner, in the **ASSIGN OWNER** column, select **Click Here**.
   The **FEW Assign Owner** datasheet appears. The **RCA Owner** box contains a list of all the users in the RCA Facilitator team.
   b) In the **RCA Owner** box, select the owner.
   c) Enter a value in the **Description Note for RCA Owner** box, and then select  .
   The owner is assigned to the RCA. The status of the RCA changes to In Progress, and an email is sent to the RCA owner, providing the details and a link to the RCA.

   Note: If you have not logged in to APM, when you select the link in the email notification, the default dashboard appears. To access the RCA, in the **Applications** menu, select **Reliability** > **Root Cause Analysis** > **My Analysis**.
4. If you want to de-escalate an RCA:
   a) In the **MANAGE WORKFLOW BACKLOG** section, for the asset for which you want to de-escalate the RCA, in the **DE-ESCALATE** column, select **Click Here**.
   The **FEW De-Escalate** datasheet appears. The **Workflow Status** box is populated with the value **De-Escalate**.

b) In the **Next Review Date** box, enter the date up to which you want to hold on the RCA, and then select  .
The RCA is de-escalated, and it is moved to the **LIST OF FE RECORDS DE-ESCALATED** section.

Next Steps

Step 3: Perform RCA on page 15

Step 3: Perform RCA

Before You Begin

Step 2: Assign Owner on page 14

About This Task

You can perform an RCA by using the information of the associated asset such as Asset Strategies, Smart Signal Alerts, Rounds and Work History data. All sections are configured in such way to display data of the selected asset for a selected period of time.

Procedure

1. Access the **Failure Elimination Dashboard** page.
2. In the **FAILURE ELIMINATION WORKFLOW STEPS** section, select **Step 3: Perform RCA**.
   The **Perform RCA** page appears, displaying a list of RCAs that are created.
3. In the **ALL RCA HISTORY** section, select the RCA that you want to perform.
   The **Analysis Summary** page appears, displaying the RCA information.
4. Perform the RCA by completing each step, as indicated in the left pane. For more information, refer to About Root Cause Analysis.

   If you create a Recommendation, the status of the RCA changes to Execute.

Next Steps

Step 4: Execute Actions on page 15

Step 4: Execute Actions

Before You Begin

Step 3: Perform RCA on page 15

About This Task

Based on RCA findings, you can provide Recommendations (that is, Actions) to avoid future occurrence of any failure.

Procedure

1. Access the **Failure Elimination Dashboard** page.
2. In the **FAILURE ELIMINATION WORKFLOW STEPS** section, select **Step 4: Execute Actions**.

The **Execute Actions** page appears, displaying a list of RCAs that are created, along with a list of Recommendations to be implemented.

3. Select the Recommendation that you want to implement.
4. Enter values in the available fields, and then select  .

Next Steps

Step 5: Evaluate Actions on page 16.

Step 5: Evaluate Actions

Before You Begin

Step 4: Execute Actions on page 15

About This Task

After you implement the Recommendations, track the RCA using a Tracking Item, which allows you to define the threshold cost and count. You can also use the quarterly CM count and cost trends to understand the impact of the actions.

If the actual cost and count for tracked assets exceed the threshold values, an email is sent to the RCA Owner, stating that the failure criteria is breached.

Procedure

1. Access the **Failure Elimination Dashboard** page.
2. In the **FAILURE ELIMINATION WORKFLOW STEPS** section, select **Step 5: Evaluate Actions**.
   The **Evaluate Actions** page appears, displaying a list of RCAs that are in progress.
3. In the **TRACK RCA** section, for the RCA that you want to evaluate, select the **Track RCA** link in the **ACTION** column.
   The **Analysis Summary** page appears, displaying the **Track** section.
4. Select  .
   The **Add/Edit Tracking Item** window appears.
5. Enter values in the available fields, and then select  .
   The Tracking Item is created. The status of the RCA is changed to Evaluate.

Next Steps

If the RCA does not breach for a year, an email is sent to the RCA Owner. Using your discretion, you can continue to monitor the RCA or mark the RCA complete, and then mark the FE Workflow status complete. Even after the FE Workflow is marked complete, you can reopen it until the RCA is marked complete.

Chapter 5

Asset Health and Maintenance Assessment

Topics:

About Asset Health & Maintenance Assessment Workflow

Asset Health & Maintenance Assessment (AHMA) uses cutting-edge technology to continuously monitor your equipment and facilities. By analyzing real-time data, we can spot potential issues before they become problems, allowing you to take action quickly and efficiently.

Key benefits:

- Proactive maintenance planning
- Reduced unexpected breakdowns
- Improved asset reliability and availability
- Intelligent health assessments
- Easy-to-understand performance indicators

With AHMA, you'll have the insights you need to make informed decisions about your assets' care and maintenance. Let us help you optimize your operations and protect your investments.

AHMA relies on Health Indicators to classify an asset's status into three categories: normal, warning, or alert, based on its health assessment. APM Policies are provided to calculate health indicators for assets by processing both raw and processed information.

AHMA Policy is structured to accommodate multiple input sources:

- Field Data
- Rounds
- Time Series

Access AHMA Overview Dashboard

Before You Begin

- APM version must be 5.1.1 or above.
- Asset Hierarchy should be implemented.

Procedure

1. In the **Applications** menu, navigate to the **TOOLS** section.
2. Select **Catalog**.
   The **Catalog** page appears.
3. Select **Home** → **Public** → **Accelerators** → **Health** → **Dashboards** folder.
   The corresponding Catalog items appear in the grid within the workspace for the selected folder.
4. Select **ACC_Lets Start** catalog item.
   The Dashboard is displayed with the following widgets:
   - **Task-1 Configuration and Implementation**: Displays the list of actions to be performed in sequence.
   - **Task-2 Test Data Management**: Displays the action to be performed.
   - **Task-3 Data Deletion Management**: Displays the action to be performed.

AHMA Configuration

Procedure

1. Access AHMA Overview Dashboard on page 18.
2. In **Task-1 Configuration and Implementation**, select **T-1.1 One Time Configuration**. For next steps, refer to AHMA Deployment Guide.
3. In **Task-1 Configuration and Implementation**, select **T-1.2 Upload Master Template**. For next steps, refer to AHMA Deployment Guide.
4. In **Task-1 Configuration and Implementation**, select **T-1.3 Template Application**. For next steps, refer to AHMA Deployment Guide.
   AHMA workflow is now configured.

Access AHI Overview Dashboard

Procedure

1. Access AHMA Overview Dashboard on page 18.
2. Select **T-1.4 Overview Dashboard** from **Task-1 Configuration and Implementation**.
   The AHI Overview Dashboard is displayed. For more information on the widgets of the dashboard, refer to AHI Overview Dashboard on page 46.

Access AHI Details View Dashboard

AHI Details View dashboard displays details of the asset that is being investigated on AHMA Overview Dashboard.

Procedure

1. Access AHI Overview Dashboard on page 19
2. In **Health Indicator Overview**, select the AHI number for the asset.
   AHI Details View dashboard is displayed. For more information on the widgets of the dashboard, refer to AHI Details View Dashboard on page 47.

Access Test Data Management

Procedure

1. Access AHMA Overview Dashboard on page 18.
2. Select **T-2.1 Test data Management** from **Task-2 Test Data Management**.
   The Test data Creation Dashboard is displayed with the following widgets:
   - **T-2.1.1 Create test case reading and Validation**: Displays the list of Assets, Asset details, Entity Status and Actions to be performed.
   - **T-2.1.2 Test case Implementation Status and Test Data deletion**:
3. In **T-2.1.1 Create test case reading and Validation**:

a) Select **Create Test Case data** under the **ACTION** column against the Asset you want to perform actions.
Template Test Case datasheet opens in Record Manager.
b) Enter **Test Data Date**, and Select **Save**.
c) Select **Test Data Creation** tab.
d) Select **Validation** under the **ACTION 1** column against the Asset you selected in step 3.
Validation Testing dashboad appears.
e) Verify if the reading are upto date.

4. In **T-2.1.2 Test case Implementation Status and Test Data deletion**:
   a) Verify that **Status** column is marked as **Reading Created**.
   b) Verify that **Deleted** column is marked as **No**.
   c) Verify that latest reading is updated by selecting **View Data** under **Remark 1** column.
   d) Select **Execute Instance** under the **ACTION** column.
   The policy is queued for execution.

Access Data Deletion Management

Procedure

1. Access AHMA Overview Dashboard on page 18.
2. Select **T-3.1 Delete Template and Family Data** from **Task-3 Data Deletion Management**.
   The Delete Template and Family Data Dashboard is displayed with the following widgets:
   - **T-3.1.2 Delete User template Data**: Displays the list of templates, that can be deleted.
   - **T-3.1.1 Delete Master Template Data**: Displays the list of master templates, that can be deleted.
   - **T-3.1.3 Delete Family data**: Displays the list of Asset Templates, that can be deleted.
3. In **T-3.1.2 Delete User template Data**:
   a) Select **Delete** under the **ACTION** column.
   Delete Template datasheet opens in Record Manager.
   b) Select  .
   The **Delete** field is updated as Yes in the widget.
4. In **T-3.1.1 Delete Master Template Data**:
   a) Select **Delete Master template** under the **ACTION** column.
   Delete Template datasheet opens in Record Manager.
   b) Select  .
   The **Delete** field is updated as Yes in the widget.
5. In **T-3.1.3 Delete Family data**:
   a) Select **Delete** under the **ACTION** column.
   Delete Data datasheet opens in Record Manager.
   b) Select  .
   The **Delete** field is updated as Yes in the widget.

Chapter 6

Asset Health and Maintenance Assessment Deployment

Topics:

Deploy AHMA for the First Time

The following table outlines the steps that you must complete to deploy and configure AHMA workflow for the first time.

These tasks may be completed by multiple people in your organization. We recommend, however, that the tasks be completed in the order in which they are listed. All steps are required.

Table 2:

Step	Task
1	Assign Security Users to one or more of the AHMA Security Groups on page 44
2	Import Metadata
3	One Time Configuration
4	Upload Master Template on page 23
5	Access Template Application on page 24

AHMA Import Metadata

Before You Begin

Procedure

1. From **Accelerator library**, download **AHMA_Asset_Neutral_Package_xxxxxxxx** folder.
2. Extract files from **AHMA_Asset_Neutral_Package_xxxxxxxx** folder.
3. Import all the policies and activate the one starting **MI_ACC**.
4. Upload the following dataloaders:
   - AHMA_RoundsPro_Picklist_xxxxxxxx of type Rounds Pro Picklist Dataloader
   - AHMA_Rounds Allowable Values_xxxxxxxx of type Rounds Allowable Values
   - Alert_Case_mapping_Onprem_xxxxxxxx
5. Access the following dashboards and set asset as Home.
   - ACC_Health_AHI_Detail_View
   - ACC_Health_CI
   - ACC_Health_Config

Access One Time Configuration Dashboard

Procedure

1. Access AHMA Overview Dashboard on page 18.
2. Select **T-1.1 One Time Configuration** from **Task-1 Configuration and Implementation**. The **ACC_Configuration** Dashboard is displayed with the following widgets:

- T-1.1.1 Confidence Index ,Asset maintenance Index setting (limits & Recommendation)
- T-1.1.2 Recommnedation Priority Mapping
- T-1.1.3 Managing Trigger Police instance and Scheduling

3. In **T-1.1.1 Confidence Index ,Asset maintenance Index setting (limits & Recommendation)**, → **Set up - Confidence ,Asset maintenance Index setting**, Select **Updated** under the **Remark** column.
   ACC Configurations appears in the **Record Explorer**, update the values as needed and select  .

   Note: Select **Auto Recommendation** checkbox to generate recommendations via policy execution.
4. In **T-1.1.2 Recommendation Priority Mapping** → **Set up - Critical Priority Mapping**, Select **Updated** under the **Remark** column.
   Rec priority Mapping appears in the **Record Explorer**.
5. In Rec Priority Mapping, update the values as needed.
6. Select  .
   Critical Priority Mappings are saved.
7. For **T-1.1.2 Recommendation Priority Mapping** → **Set up - Urgent Priority Mapping**, repeat steps 4-6.
   Urgent Priority Mappings are saved.
8. For **T-1.1.2 Recommendation Priority Mapping** → **Set up - Non Urgent Priority Mapping**, repeat steps 4-6.
   Non Urgent Priority Mappings are saved.
9. In **T-1.1.3 Managing Trigger Police instance and Scheduling** → **Create Policy Instance & Scheduling for Policy triggering**, Select **Instance Created** under the **Remark** column.
   Policy **MI_ACC_Health Policy trigger** will appear.
10. Create a policy instance, **MI_ACC_Health Policy trigger** and activate it.
11. Schedule the policy as required.
12. Select **Save**.
    The policy is saved.
13. with Authentication Type as APM.
14. , and open **MI_ACC_Create System Codes** policy.
15. Update the API Node with the API Node Credentials created in Step 10.

Upload Master Template

About This Task

Procedure

1. Access AHMA Overview Dashboard on page 18.
2. Select **T-1.2 Upload Master Template** from **Task-1 Configuration and Implementation**.
   The **Dataloaders** page appears.
3. Upload the Master Template.

Access Template Application

Procedure

1. Access AHMA Overview Dashboard on page 18.
2. Select **T-1.3 Template Application** from **Task-1 Configuration and Implementation**.
   The **Template** Dashboard appears with the following widgets:
   - T-1.3.1 Create User template from Master Template
   - T-1.3.2 Update USER Template, approve and Apply to Asset
   - T-1.3.3 Implementation Status
3. In **T-1.3.1 Create User template from Master Template**, select **Create User Template** under the **Action 1** column for the master template that you want to create user template.
   The respective datasheet appears in the **Record Explorer**, update the values as needed and select  .
4. In **T-1.3.2 Update USER Template, approve and Apply to Asset**, select **View** under the **Action-A** column for the master template that you want to apply.
   The **Mapping dashboard-View Only** appears with the following widgets:
   - Hi Tree template detail
   - Hi tree
   - Input
5. In **T-1.3.2 Update USER Template, approve and Apply to Asset**, Select **Apply Template** under the **Action-B** column for the master template that you want to apply.
   The **Select Asset** dashboard appears, displaying the complete list of Assets.
6. In **Select Asset** dashboard, select **Apply Template** under the **Action** column for the asset that you want to apply.
   The respective datasheet appears in the **Record Explorer**, select  .
7. In **T-1.3.3 Implementation Status**, Select **Overview** under the **Remark** column for the required asset.
   The **AHI Overview** dashboard appears.

Chapter 7

Data Quality Workflow

Topics:

About the Data Quality Workflow

The Data Quality workflow contains dashboards and widgets that provide information on the data completeness in Equipment, Functional Location, and Work History records. Using this information, you can identify the missing data.

In addition, you can also evaluate the hierarchy distribution across various sites. You can also access the APM Connect EAM jobs and Data Loader jobs.

The Data Quality main dashboard contains the following widgets:

- **OVERVIEW**: Contains the number of Sites, Process Units, Equipment, Functional Locations, and Work Histories.

  Note: Process Units are Functional Location records for which the **Is a Unit** check box is selected.
- **COUNT OF ORPHAN EQUIPMENT**: Contains the total number of Equipment records that do not have a parent. You can select the link to access the list of Equipment.
- **WORK HISTORY TOTAL COST**: Contains the cost of each category in the Work History records (excluding cancelled ones).
- **ORPHAN WORK HISTORY**: Contains the total number of work histories that are not linked to an Equipment or a Functional Location. You can select the link to access the list of work histories.
- **COUNT OF GLOBAL EQUIPMENT AND FLOC**: Contains the number of Equipment and Functional Locations that are not linked to a Site. You can select each link to access the list of Equipment or Functional Locations.
- **DASHBOARD HYPERLINKS**: Contains links to the other dashboards in the Data Quality workflow:
  - The Equipment Data Completeness dashboard
  - The Functional Location Data Completeness dashboard
  - The Work History Data Completeness dashboard
  - The Hierarchy Evaluation dashboard
  - APM Connect EAM Jobs
  - APM Connect Data Loaders

For each widget, you can select the **Open in New Tab** ( ) button to open the **Results** workspace, which provides the results-only view of the corresponding query on a new page. In this workspace, select the **Open in Query Editor** ( ) button to access the full, modifiable view of the query on a new page. To export the query to a file, use the **Export to a File** ( ) button.

Access the Data Quality Main Dashboard

Before You Begin

Ensure that the asset context in APM is set to Home. To do so, in the top navigation bar, select , and then select **Home** in the **Hierarchy** pane.

Procedure

1. In the **Applications** menu, navigate to the **TOOLS** section.
2. Select **Catalog**.
3. Select **Home** > **Public** > **Data Quality Dashboard** > **Dashboards**.
   The corresponding Catalog items appear in the workspace for the selected folder.
4. Select **Data Quality Main Dashboard**.
   The **Data Quality Main Dashboard** page appears, displaying the widgets.

About the Equipment Data Completeness Dashboard

The Equipment Data Completeness dashboard contains the following widgets:

- **EQUIPMENT DATA COMPLETENESS**: Contains a heatmap graph that plots the percentage completeness of Equipment data (such as Equipment ID and Manufacturer) in Equipment records based on the site, criticality, and Asset Hierarchy. You can select a cell to access the list of records in the category.
- **EQUIPMENT DATA TOTAL FOR ALL SITES**: Contains a bar graph that plots the percentage completion of each type of Equipment data for all the sites. For example, if the Manufacturer bar shows 60%, it indicates that only 60% of the Equipment records in all the sites contain the Manufacturer data.
- **EQUIPMENT COMPLETENESS**: Contains the count and percentage of completion of each type of Equipment data for each site and criticality. If you select a percentage, the list of Equipment records for which the corresponding data is not available appears.
- **EAM EQUIPMENT TAXONOMY NOT LOADED INTO APM TAXONOMY**: Contains the count of Equipment records for which the Taxonomy Type (that is, APM Taxonomy) and/or Object Type (that is, EAM Taxonomy) is blank. If you select the link in the **COUNT** column, the list of Equipment records for which the data is missing appears.

Note: The percentage values are rounded off. Therefore, there can be a difference in the count value with respect to the percentage. This difference can be bigger with bigger numbers.

About the Functional Location Data Completeness Dashboard

The Functional Location Data Completeness dashboard contains the following widgets:

- **FUNCTIONAL LOCATION DATA COMPLETENESS**: Contains a heatmap graph that plots the percentage completeness of Functional Location data (such as Criticality ID and Maintenance Plant) in Functional Location records based on the site, criticality, and Asset Hierarchy. You can select a cell to access the list of records in the category.
- **FUNCTIONAL LOCATION DATA TOTAL FOR ALL SITES**: Contains a bar graph that plots the percentage completion of each type of Functional Location data for all the sites. For example, if the Criticality bar shows 60%, it indicates that only 60% of the Functional Location records in all the sites contain the Criticality data.
- **FUNCTIONAL LOCATION COMPLETENESS**: Contains the count and percentage of completion of each type of Functional Location data for each site and criticality. If you select a percentage, the list of Functional Location records for which the corresponding data is not available appears.
- **EAM FUNCTIONAL LOCATION TAXONOMY NOT LOADED INTO APM TAXONOMY**: Contains the count of Functional Location records for which the Taxonomy Type (that is,

APM Taxonomy) and/or Object Type (that is, EAM Taxonomy) is blank. If you select the link in the **COUNT** column, the list of Functional Location records for which the data is missing appears.

Note: The percentage values are rounded off. Therefore, there can be a difference in the count value with respect to the percentage. This difference can be bigger with bigger numbers.

About The Work History Data Completeness Dashboard

The Work History Data Completeness dashboard contains the following widgets:

- **WORK HISTORY DATA**: Contains a heatmap graph that plots the percentage completeness of Work History data (such as Event Type and Priority) in Work History records based on the site and Asset Hierarchy. You can select a cell to access the list of records in the category.
- **WORK HISTORY DATES - SUMMARY**: Contains a bar graph that plots the percentage completion of the Event Start Date, Maintenance Start Date, and Maintenance Completion Date. For example, if the Event Start Date bar shows 60%, it indicates that only 60% of the Work History records in all the sites contain the Event Start Date.
- **WORK HISTORY COMPLETENESS**: Contains the count and percentage of completion of Work History data (such as Maintenance Cost and Priority). If you select a percentage, the list of Work History records for which the corresponding data is not available appears.
- **WORK HISTORY TOTAL COST**: Contains the total cost of each category in the Work History records for the selected site (for example, Actual Labor Cost and Actual Material Cost).

Note: The percentage values are rounded off. Therefore, there can be a difference in the count value with respect to the percentage. This difference can be bigger with bigger numbers.

About the Hierarchy Evaluation Dashboard

The Hierarchy Evaluation dashboard contains the following widgets:

- **Distribution of Hierarchy (graph)**: Contains a bar graph that plots the distribution of percentage of Equipment, Work History records, and Work History cost per hierarchy level for each site.
- **Distribution of Hierarchy (table)**: Contains a list of the distribution of the count and percentage of Equipment, Work History records, and Work History cost per hierarchy level for each site.

Note: The percentage values are rounded off. Therefore, there can be a difference in the count value with respect to the percentage. This difference can be bigger with bigger numbers.

About APM Connect EAM Jobs

When you select **APM Connect EAM Jobs**, the Job Monitoring Dashboard appears, displaying the EAM jobs that are in progress, successful, failed, and cancelled.

About APM Connect Data Loaders

When you select **APM Connect Data Loaders**, the Data Loaders page appears, displaying the Data Loader jobs, along with their status and other details.

Chapter 8

Daily O and M Coordination Dashboard

Topics:

About the Daily O and M Coordination Dashboard

The Daily O and M Coordination Dashboard contains widgets that provide an overview of the processes involved in reviewing essential information required to set the work order priorities. This dashboard facilitates decision-making by displaying data sources relevant to this process, including direct links to work orders, work order reports, asset health status, and shift reports.

Access the Daily O and M Coordination Dashboard

Before You Begin

Ensure that the asset context in APM is set to Home. To do so, in the top navigation bar, select  , and then select **Home** in the **Hierarchy** pane.

Procedure

1. In the **Applications** menu, navigate to the **TOOLS** section.
2. Select **Catalog**.
3. Select **Home** > **Public** > **Daily O and M Coordination Dashboard** > **Dashboards**.
   The corresponding Catalog items appear in the workspace for the selected folder.
4. Select **Daily O&M Coordination Dashboard**.
   The **Daily O&M Coordination Dashboard** page appears, displaying the widgets.

About the Daily O&M Coordination Dashboard

The Daily O&M Coordination dashboard displays widgets, each representing the result of a query, either directly on the dashboard or as graphs. For each widget, you can select the **Open in New Tab** () button to open the **Results** workspace, which provides the results-only view of the corresponding query on a new page. In this workspace, select the **Open in Query Editor** () button to access the full, modifiable view of the query on a new page. To export the query to a file, use the **Export to a File** () button.

- **Heat Map - Asset Count by Criticality and Health Indicator Status**: Displays the asset count based on the criticality and health status of AHI Level Health Indicators associated with each asset. You can select a cell to access a query providing additional details about the asset and linked health indicators. You can navigate to the Health Summary page for the asset or view AHI Details using the first and last links.
- **New Work Orders - Last 72 Hours**: Displays new work orders created in the last 72 hours.
- **Open Work Request Notifications- No Work Order**: Display the list of work request notifications.
- **Overdue Work Orders**: Display the list of overdue work orders.
- **Todays schedule - WO to be closed in next 24 Hrs**: Displays work orders associated to selected asset to be closed in the next 24 hours.
- **Weekly schedule - WO to be closed in next 7 days**: Display the list of work orders to be closed in the next 7 days.
- **Rounds Deviation**: Display the list of checkpoints for assets.

- **Analytics Driven Alert List - (Last 72 Hours)**: Displays the list of alerts created by Analytics in the last 72 hours.
- **Health Indicator Related Score Change List - Last 72 Hrs**: Displays the health indicator related score change list in last 72 hours.
- **SHORTCUTS**: Contains links to the other APM modules and dashboards:
    - Asset Criticality Analysis
    - Asset Strategy Management
    - Asset Health Manager
    - Rounds Module
    - eLog
    - Create New Recommended Action
    - Data Quality Dashboard
    - Equipment Health Monitoring Workflow

Chapter 9

System Health Tracking Workflow

Topics:

Access System Health Configuration Workflow Dashboard

Procedure

1. In the **Applications** menu, navigate to the **TOOLS** section.
2. Select **Catalog**.
   The **Catalog** page appears.
3. Select **Home** → **Public** → **Workflows** → **System Health Tracking Workflow** → **Dashboards** folder.
   The corresponding Catalog items appear in the grid within the workspace for the selected folder.
4. Select **System Health Tracking Configuration Workflow** catalog item.
   The Dashboard is displayed will the following widgets:
   - **System Health Index**: Displays System Health Index for the list of assets.
   - **Workflow Steps (Asset Hierarchy)**: Displays the list of steps to be performed in sequence.
   - **System Group Health Index**: Displays System Group Health Index for the list of assets.
   - **Workflow Steps (Assets Group)**: Displays the list of steps to be performed in sequence.

Access System Health Index

Procedure

1. Access the **System Health Configuration Dashboard**.
2. In the **System Health Index** widget, select **Health Index** number of the the required asset.
   The **System Assets Health** dashboard is displayed with the following widgets:
   - SYSTEM HEALTH INDEX ANALYSIS (SHI)
   - SYSTEM ASSETS HEAT-MAP
   - SYSTEM ASSETS ANALYSIS

Access Workflow Steps (Asset Hierarchy)

Procedure

1. Access the **System Health Configuration Dashboard**.
2. In the **Workflow Steps (Asset Hierarchy)** widget, the following links are displayed.
   - Step 1: Identify System from Hierarchy to Monitor
   - Step 2: Consolidate System Data with Policy
   - Step 3: System Health Monitoring Workflow
   - Step 4: Execute Health Algorithms

Identify System from Hierarchy to Monitor

Procedure

1. Access Workflow Steps (Asset Hierarchy) on page 34.
2. Select **Step 1: Identify System from Hierarchy to Monitor**.
   Identify System From Hierarchy To Monitor dashboard is displayed with **Systems Lead Asset From Hierarchy** widget displaying the list of systems.
3. In the **Action 1** Column, select **Update System Health WF Status** for the required system..
   Record Manager of the SHW Status opens.
4. Set **System Health Workflow Status** field to **Being Monitored**.
5. Select and then select .
   The Record is saved.
6. In **Identify System From Hierarchy To Monitor** dashboard, select .
   Verify that **System Status** column value has been updated to **Being Monitored** for the system selected in step 3.

Consolidate System Data with Policy

Procedure

1. Access Workflow Steps (Asset Hierarchy) on page 34.
2. Select **Step 2: Consolidate System Data with Policy**.
   Consolidate System Data with Policy dashboard is displayed with following widgets:
   - Systems Ready for Monitoring - Last 14 Days
   - Systems Ready for Monitoring
3. In the **Action 1** Column, select **Execute System Health Policy** for the required system.
   The policy is queued successfully.

System Health Monitoring Workflow

Procedure

1. Access Workflow Steps (Asset Hierarchy) on page 34.
2. Select **Step 3: System Health Monitoring Workflow**.
   System Health Monitoring Workflow dashboard is displayed with following widgets:
   - System Health Index Analysis (SHI)
   - System Health Index
   - System Asset Analysis
   - Systems Being Monitored - Last 14 Days
3. In the **System Asset Analysis**, select **Create Recommendation** for the required system.
   Record Manager of the General Recommendation opens.
4. Enter the required values.
5. Select .

Recommendation is created for the system.

6. In the **Action 2** Column, select **Update System Health WF Status** for the required system.
   Record Manager of the SHW Status opens.
7. Enter the required details, select  and then select  .
   The Record is saved.

Execute Health Algorithms

Procedure

1. Access Workflow Steps (Asset Hierarchy) on page 34.
2. Select **Step 4: Execute Health Algorithms**.
   Execute Health Algorithms dashboard is displayed with following widgets:
   - Individual Asset Health Index Calculation
   - Individual System Health Index Calculation
   - Individual Tag Value Reading
   - Bulk Execution
3. In the **Individual Asset Health Index Calculation**, select **Calculate Asset Health Index** for the required asset.
   Policy is queued successfully.
4. In the **Individual System Health Index Calculation**, select **Calculate System Health Index** for the required system.
   Policy is queued successfully.
5. In the **Individual Tag Value Reading**, select **Read this Tag** for the required system.
   Policy is queued successfully.
6. In the **Bulk Execution**, select the required execution.
   Policy is queued successfully.

Access System Group Health Index

Procedure

1. Access the **System Health Configuration Dashboard**.
2. In the **System Group Health Index** widget, select **Health Index** number of the the required system group.
   The **System Assets Health** dashboard is displayed with the following widgets:
   - SYSTEM HEALTH INDEX ANALYSIS (SHI)
   - SYSTEM ASSETS HEAT-MAP
   - SYSTEM ASSETS ANALYSIS

Access Workflow Steps (Assets Group)

Procedure

1. Access the **System Health Configuration Dashboard**.
2. In the **Workflow Steps (Assets Group)** widget, the following links are displayed.

- Step 0: Create/Modify Asset Group
- Step 1: Identify System From Group To Monitor
- Step 2: Consolidate System Data with Policy
- Step 3: System Health Monitoring Workflow
- Step 4: Execute Health Algorithms

Create/Modify Asset Group

Procedure

1. Access Workflow Steps (Assets Group) on page 36.
2. Select **Step 0: Create/Modify Asset Group**.
   Create or Modify Asset Group dashboard is displayed with following widgets:
   - Create New Asset Group
   - Create or Modify Group for System
3. In the **Create New Asset Group**, select **Create New Asset Group**.
   Asset tab opens where you can create new Asset Group.
4. In the **Create or Modify Group for System**, select **Review Asset Group** for the required group.
   Asset tab opens where you can update Asset Group.

Identify System From Group To Monitor

Procedure

1. Access Workflow Steps (Assets Group) on page 36.
2. Select **Step 1: Identify System From Group To Monitor**.
   Identify System From Group To Monitor dashboard is displayed with **Select System From Group To Monitor** widget displaying the list of systems.
3. In the **Action 1** Column, select **Update Asset Group Status** for the required system..
   Record Manager of the SHW Status opens.
4. Set **SHW Status** field to **To Be Monitored**.
5. Select and then select .
   The Record is saved.
6. In **Identify System From Group To Monitor** dashboard, select .
   Verify that **Group Status** column value has been updated to **To Be Monitored** for the group selected in step 3.
7. In the **Action 2** Column, select **Create Group Health Index** for the required system.
   Policy is queued for execution.

Consolidate System Data with Policy

Procedure

1. Access Workflow Steps (Assets Group) on page 36.
2. Select **Step 2: Consolidate System Data with Policy**.

Consolidate System Data with Policy dashboard is displayed with following widgets:

- Systems Ready for Monitoring - Last 14 Days
- Systems Ready for Monitoring

3. In the **Action 1** Column, select **Execute System Health Policy** for the required system.
The policy is queued successfully.

System Health Monitoring Workflow

Procedure

1. Access Workflow Steps (Assets Group) on page 36.
2. Select **Step 3: System Health Monitoring Workflow**.
System Health Monitoring Workflow dashboard is displayed with following widgets:
   - System Health Index Analysis (SHI)
   - System Health Index
   - System Asset Analysis
   - Systems Being Monitored - Last 14 Days
3. In the **System Asset Analysis**, select **Create Recommendation** for the required system.
Record Manager of the General Recommendation opens.
4. Enter the required values.
5. Select .
Recommendation is created for the system.
6. In the **Action 2** Column, select **Update System Health WF Status** for the required system.
Record Manager of the SHW Status opens.
7. Enter the required details, select and then select .
The Record is saved.

Execute Health Algorithms

Procedure

1. Access Workflow Steps (Assets Group) on page 36.
2. Select **Step 4: Execute Health Algorithms**.
Execute Health Algorithms dashboard is displayed with following widgets:
   - Individual Asset Health Index Calculation
   - Individual System Health Index Calculation
   - Individual Tag Value Reading
   - Bulk Execution
3. In the **Individual Asset Health Index Calculation**, select **Calculate Asset Health Index** for the required asset.
Policy is queued successfully.
4. In the **Individual System Health Index Calculation**, select **Calculate System Health Index** for the required system.
Policy is queued successfully.
5. In the **Individual Tag Value Reading**, select **Read this Tag** for the required system.
Policy is queued successfully.

6. In the **Bulk Execution**, select the required execution.
   Policy is queued successfully.

Chapter 10

Reference

Topics:

General Reference

Data Configuration

The following sub-sections are included in the **Data Configuration** section:

- Entity Families
- Relationship Families
- Relationship Definitions
- Fields
- Datasheets
- Family Policies
- System Codes and Tables

These sub-sections enable you to tailor the APM configuration to align with your work processes.

Entity Families

Family	Family ID
Time Series Tag	MI_TSTAG
Time Series Tag Values	MI_TSTAGVAL
Workflow Configuration	MI_WRKFLW_CONFIG
Asset Criticality Mapping	MI_ASSE_CRIT_MAPP
P to M Asset Mapping	MI_PTOMAMAP
Health Template Library	MI_ACC_HEAL_TEMP_LIBR
Hi Tree template	MI_ACC_HI_TREE_TEMP
Input template	MI_ACC_INPU_TEMP
Master Hi Tree template	MI_ACC_MAST_HI_TREE_TEMP
Master Input template	MI_ACC_MAST_INPU_TEMP
Asset HI	MI_ACC_ASSE_HI
Asset HI Value	MI_ACC_ASSE_HI_VALU
Grid Measurement Location	MI_GRID_ML
Grid Reading	MI_GRID_RDNG
Health Template Manager	MI_ACC_HEAL_TEMP_MANG
ACC Configurations	MI_ACC_CONFIG_LIMITS
Rec Priority Mapping	Mi_ACC_REC_PRIO_MAPP
Template Test Case	MI_ACC_TEMP_TEST_CASE
Template Implementation	MI_ACC_TEMP_IMPL

Family	Family ID
Template Create Entity	MI_ACC_TEMP_CREA_ENTI
Template Create Relationship	MI_ACC_TEMP_CREA_RELA
Template Create Instance	MI_ACC_TEMP_CREA_INST
Template Update Score	MI_ACC_TEMP_UPDA_SCOR
Health Policy Execution	MI_ACC_HEA_POLI_EXEC
Delete data	MI_ACC_DELE_DATA
ACC TS TAG	MI_ACC_TS_TAG
ACC TS Tag Score	MI_ACC_TS_TAG_SCOR
ACC TS Tag Score Value	MI_ACC_TS_TAG_SCOR_VALU
Health Template	MI_ACC_HEAL_TEMP
Alerts	MI_ACC_ALER_HI
ACC Alert Disposition Mapping	MI_ACC_ALER_DISP_MAPP
ACC Alert State Mapping	MI_ACC_ALER_STAT_MAPP
ACC Alerts	MI_ACC_ALER
ACC Asset Mapping	MI_ACC_ASSE_MAPP
ACC Asset Mapping Update Date	MI_ACC_ASSE_MAPP_UPDA_DATE
ACC Case Likelihood Mapping	MI_ACC_CASE_LIKE_MAPP
ACC Case Status Mapping	MI_ACC_CASE_STAT_MAPP
ACC Case Urgency or Impact Mapping	MI_ACC_URGE_MAPP
ACC Cases	MI_ACC_CASE
ACC MS	MI_ACC_MS
ACC Replace MS	MI_ACC_REPL_MS

Relationship Families

Family	Family ID
Has Time Series Tag	MI_HAS_TS_TAG
Has Time Series Value	MI_HAS_TS_VALUES
Has Workflow Config Details	MIR_HS_WRKFLW_CONFIG_DTLS
Has Grid Measurement Location	MIR_HS_GRID_MEASLOC
Has Grid Readings	MIR_HS_GRID_RDNG
Has Asset HI	MIR_ACC_HAS_ASSE_HI
Has Asset HI Value	MIR_ACC_HAS_ASSE_HI_VALU

Family	Family ID
Has Field data	MIR_ACC_HAS_FIEL_DATA
Has ML	MIR_ACC_HAS_ML
Has ACC TS TAG	MIR_ACC_TS_TAG
Has ACC TS Tag Score	MIR_ACC_TS_TAG_SCOR
Has ACC TS Tag Score Value	MIR_ACC_TS_TAG_SCOR_VALU
ACC MS Has MS	MIR_ACC_MS_HAS_MS
Has ACC MS	MIR_ACC_HAS_ACC_MS
Has ACC Alert HI	MIR_ACC_HAS_ACC_ALER_HI
Has ACC Alerts	MIR_ACC_HAS_ACC_ALER
Has ACC Asset Mapping Update	MIR_ACC_HAS_ASSE_MAPP
Has ACC Cases	MIR_ACC_HAS_ACC_CASE
Alerts has Cases	MIR_ACC_ALER_HAS_CASE

Relationship Definitions

Relationship ID	Predecessor Family	Successor Family	Cardinality
MI_HAS_TS_TAG	Equipment	Time Series Tag	Many to Many
MI_HAS_TS_TAG	Functional Location	Time Series Tag	Many to Many
MI_HAS_TS_VALUES	Time Series Tag	Time Series Tag Values	One to Many
MIR_HS_WRKFLW_CONFIG_DTLS	Workflow Configuration	Workflow Configuration Details	One to Many

Fields

Family	Family ID	Additional Field	Additional Field ID
Functional Location	MI_FNCLOC00	EHW Status	MI_FNCLOC00_EHW_STATUS_C
Equipment	MI_EQUIP000	EHW Status	MI_EQUIP000_EHW_STATUS_C
Measurement Location	MI_MEAS_LOC	EHW Weight	MI_MEAS_LOC_EHW_WGHT_N
Health Indicator	MI_HLTH_IND	EHW Weight	MI_HLTH_IND_TYPE_C
Health Indicator	MI_HLTH_IND	Type	MI_HLTH_IND_EHW_WGHT_N

Datasheets

Family	Datasheet Name	Datasheet Caption	Datasheet ID
Equipment	Health Workflow Status (Equipment)	EHW Status	EHW_STATUS
Functional Location	Health Workflow Status (Functional Location)	EHW Status	EHW_STATUS
Measurement Location	Update ML Weight	EWH ML Weight	EHW_WEIGHT
P to M Asset Mapping	P to M Asset Mapping	EHW P to M Asset Mapping	EHW_P_M_MAPPING
Time Series Tag	Time Series Tag	EHW TimeSeries Tag	EWH_TS_TAG
Workflow Configuration	Workflow Module Config	EHW Workflow Configuration	EHW_CONFIG
Asset Criticality Mapping	Asset Criticality Mapping	EHW Asset Criticality Mapping	EHW_ASSET_CRIT_MAPP
Measurement Step	EHW Measurement Step	EHW Measurement Step	EHW_MEAS_STP
EHW Workflow Module Config	EHW Workflow Module Config	EHW Workflow Module Config	EHW_CONFIG

System Codes and Tables

System Table Description	System Table ID
Health Workflow Status	MI_EHW_STATUS
Time Series Tag Type	MI_TSTAG_TYPE
Time Series Tag Operation	MI_TSTAG_OPERATION
Health Indicator Type	MI_HEALTH_IND_TYPE
Tag Source	MI_EHW_TAG_SOURCE

AHMA Security Groups

The following table lists the baseline Security Groups available for users within this module, as well as the baseline Roles to which those Security Groups are assigned.

Important: Assigning a Security User to a Role grants that user the privileges associated with all of the Security Groups that are assigned to that Role. To avoid granting a Security User unintended privileges, before assigning a Security User to a Role, be sure to review all of the privileges associated with the Security Groups assigned to that Role. Also, be aware that additional Roles, as well as Security Groups assigned to existing Roles, can be added via Security Manager.

Security Group	Roles
Accelerator Viewer	MI APM Viewer EHW Viewer
Accelerator User	MI APM Viewer MI Foundation User EHW User MI Data Loader User MI Policy Viewer
MI Policy User	MI APM Viewer Administrator EHW Editor

Security Groups and Roles

The following table details the Security Groups, and Roles in the Equipment Health Workflow:

Groups	EHW Editor	EHW User	EHW Viewer
Security Groups	Yes	Yes	Yes
Roles	Yes	Yes	Yes

Module Workflow Policies

The following are the workflow policies available for the Equipment Health Workflow:

- EHW Calculate Asset AHI (Main) - Segment 001
- EHW Calculate Asset AHI (Main) - Segment 002
- EHW Calculate Asset AHI (Main) - Segment 003
- EHW Calculate Asset AHI (Main) - Segment 004
- EHW Calculate Asset AHI (Main) - Segment 005
- EHW Calculate Asset AHI (Main) - Segment 006
- EHW Calculate Asset AHI (Main) - Segment 007
- EHW Calculate Asset AHI (Main) - Segment 008
- EHW Calculate Asset AHI (Main) - Segment 009
- EHW Calculate Asset AHI (Main) - Segment 010
- EHW Create-Update
- EHW Alert Level for HI
- EHW Read Tag list - PTS
- EHW FLOC After Update Sub Policy
- EHW Equipment After Update Sub Policy
- EHW Create-Delete Asset and Tag Policy Instances - OTC
- EHW Read Tag list - OTC
- EHW Calculate Rounds CP1 and CP2
- EHW Calculate TS CP1 and CP2
- EHW Calculate PM CP1 and CP2

- EHW Calculate CM CP1 and CP2
- EHW Calculate REC CP1 and CP2
- EHW Calculate PD CP1 and CP2
- EHW Create Time Series Value
- EHW TimeSeries After Insert Sub Policy
- EHW Calculate CP1 Score Impact
- EHW Create-Delete Asset and Tag Policy Instances
- EHW Read Time Series Values (Main) - Segment 1
- EHW Read Time Series Values (Main) - Segment 2
- EHW Read Time Series Values (Main) - Segment 3
- EHW Read Time Series Values (Main) - Segment 4
- EHW Read Time Series Values (Main) - Segment 5
- EHW Read Time Series Values (Main) - Segment 6
- EHW Read Time Series Values (Main) - Segment 7
- EHW Read Time Series Values (Main) - Segment 8
- EHW Read Time Series Values (Main) - Segment 9
- EHW Read Time Series Values (Main) - Segment 10
- EHW Calculate Rounds Pro CP1 and CP2
- EHW CP2 Description by CP1 Category Description
- EHW Read Time Series Values (Main) OTC - Segment 1
- EHW Read Time Series Values (Main) OTC - Segment 2
- EHW Read Time Series Values (Main) OTC - Segment 3
- EHW Read Time Series Values (Main) OTC - Segment 4
- EHW Read Time Series Values (Main) OTC - Segment 5
- EHW Read Time Series Values (Main) OTC - Segment 6
- EHW Read Time Series Values (Main) OTC - Segment 7
- EHW Read Time Series Values (Main) OTC - Segment 8
- EHW Read Time Series Values (Main) OTC - Segment 9
- EHW Read Time Series Values (Main) OTC - Segment 10
- EHW Process Workflow Configuration
- EHW Process Workflow Configuration for RoundsPro

Catalog

All catalog items from the following folders and subfolders are included in the Equipment Health Workflow content.

- Baseline\Workflows\Equipment Health Tracking Workflow
- Public\Workflows\Equipment Health Tracking Workflow

Asset Health and Maintenance Assessment Workflow Dashboards

AHI Overview Dashboard

AHI Overview dashboard displays the following widgets:

- **Asset Count**: Displays a trend, **Asset Count-AHI Vs Alerts** and is color coded based on the severity of the alerts. You can click on the Asset Count-AHI numbers to view more details.

- **Asset Health Overview (Top 30 Bad Actors)**: Displays the summary of asset health. You can click on the number to view AHI Details View dashboard.
- **Asset Risk Index VS Asset Criticality Index**: Displays a trend, Asset Risk Index (ARI) Vs Asset Criticality Index (ACI) for the assets.
- **Asset Health Index VS Asset Criticality Index**: Displays a trend, Asset Health Index (AHI) Vs Asset Criticality Index (ACI) for the assets.
- **Asset Health Index VS Estimate Remaining Life**: Displays a trend, Asset Health Index (AHI) Vs Estimate Remaining Life (ERL) for the assets.
- **Health Indicator Overview**: Displays the list of recommendations generated and their status. You can click on the AHI number to view AHI Details View dashboard.

AHI Details View Dashboard

AHI Details View dashboard displays the following widgets:

- **Health Indicator KPIs**: Displays the summary of asset health of the asset along with a trend. You can click on the Asset ID to view **Config** dashboard and you can click on trend icon to view the **ACC_Heath_GR_HI_Trending**.
- **Health Tree Diagram**: Displays the AHI score and AHI CI level wise. You can click on AHI score or the AHI CI to view the respective trends.
- **Anomaly Management**: Displays assets with score less than 100.
- **Data Management**: Displays the list of assets highlighting its score, input type and details on recommendation.
- **AMI Recommendations**: Displays all open recommendation, both created manually and via the policy execution under the **Anomaly Management**.
- **AMI Recommendation Counts**: Displays a trend, No. of Recommendations Vs the Criticality of the Recommendation.