Workflow Solutions

GE VERNOVA

Contents

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Chapter
1

Overview

Topics:

- Overview of the Workflow Solutions

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

Equipment Health Workflow

Topics:

- About Equipment Workflow

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 4
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

3

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

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.

Step 3: Perform RCA

Before You Begin

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

Before You Begin

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

Before You Begin

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

4

Production Tracking Workflow

Topics:

About Production Tracking Workflow

The Production Tracking Workflow Content includes permissions, security groups and roles, and catalog content that supplements the Production Loss Analysis features of APM.

Security Groups and Roles

The following table details the Security Groups, and Roles in the Production Tracking Workflow:

Groups	PTW Editor	PTW User	PTW Viewer
Security Groups	Yes	Yes	Yes
Roles	Yes	Yes	Yes

Catalog

All catalog items from the following folders and subfolders are included in the Production Tracking Workflow content.

- Baseline\Workflows\Production Tracking Workflow
- Public\Workflows\Production Tracking Workflow

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.
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.
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

Access AHI Details View Dashboard

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

Procedure

1.
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

Access Test Data Management

Procedure

1.
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.
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

AHMA 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 27
2	Import Metadata
3	One Time Configuration
4	Upload Master Template on page 21
5	Access Template Application on page 21

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 16.
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 16.
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 16.
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

Reference

Topics:

- General Reference

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
Template Create Entity	MI_ACC_TEMP_CREA_ENTI

Family	Family ID
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
Has Field data	MIR_ACC_HAS_FIEL_DATA

Family	Family ID
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.