GE VERNOVA

Asset Performance Management
On-Premises APM
V5.2.2.0.0

Rounds Pro

Contents

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Chapter
1

Overview

Topics:

Overview of the Rounds Pro Module

In industrial sectors with plant-based organizations, enterprise assets and equipment are monitored by operators at regular intervals at multiple points to ensure health and safety. Rounds Pro module provides enhanced features to monitor the health of the assets in a plant and detect technical problems and failures with ease, thus improving the performance of assets in the plant. Using the Rounds Pro application, operators in a plant can perform inspections proactively by identifying issues and initiating preventive or remedial actions. Rounds Pro serves as a data connect between the assets in a plant and the APM database, which helps to drive preventive and predictive maintenance of the plant.

Using the Rounds Pro module and the Rounds Pro application, installed on hand-held devices, the operator can perform the day-to-day management of tasks through routes, steps, built-in reporting, and data collection. The module helps to identify irregularities in the assets based on the data collected and enables the operators to take corrective actions.

Access the Rounds Pro Manager Page

Before You Begin

You can access the **Rounds Pro Manager** module from the **Applications** menu under the **Health** section only if you are a member of the MI Rounds-Pro Admin Security Role.

You can perform various tasks on this page based on the privileges granted to the Security Groups associated to the MI Rounds-Pro Admin Security Role.

Procedure

In the **Applications** menu, navigate to the **HEALTH** section, and then select **Rounds Pro Manager**.
The **Rounds Pro Manager** page appears, displaying the following tabs:

- **Route Masters**: Displays a list of available routes in the database with a brief description and the status of the routes.
- **Open Instances**: Displays the list of open route instances that have been created from the Route Masters.
- **Instance History**: Displays history of route instances that have been checked in or completed.
- **Steps**: Displays a list of steps that are used to monitor assets for specific Measurement Locations.

The **Rounds Pro Manager** page displays an **Open Dashboard** link. Select the **Open Dashboard** link to access the **Dashboard** page.

Note:

- If APM is deployed on an on-prem environment, and you select the **Open Dashboard** link, the on-prem dashboard is displayed.
- If APM is deployed on a unified environment, and you select the **Open Dashboard** link, the IBI dashboard is displayed.

Based on data collected and entered in the mobile application, the **Dashboard** page displays the following graph and charts:

- COMPLIANCE OVERVIEW: This chart displays the percentage of routes that are due in the next 30 days, due in the next week, due today, and overdue.
- YEAR TO DATE COMPLIANCE: This chart displays the number of route instances that are completed from the beginning of the year till date.
- NON-COMPLIANT ROUTES: This graph displays the number of route instances that are non-compliant for different route masters. When you select a route master, the graph provides the details about the assignment of each route instance.

Access the Rounds Designer Page

Procedure

1. Access the Rounds Pro Overview page.
2. Select **Open Designer**.
   The **Rounds Designer** page appears, displaying the asset and measurement location hierarchy, the route and step details of an asset, and the option to create a route.

   You can use the Asset Hierarchy to browse the parent-level assets, the child-level assets, and the measurement locations.

   Example:
   - Parent-level Asset (MRD-AA-NA-Alex Airlines)
   - Child-level Asset (MRD-AAA-NA-A320-NDB)
   - Measurement location (Temperature)

Rounds Pro Workflow

This workflow provides the basic, high-level steps for using Rounds Pro. The steps in this workflow do not necessarily reference every possible procedure.

1. In Rounds Pro, select an asset and create a Step.
2. Create the Picklists, health indicators, and conditions for the Step.
3. Create a Route by adding Steps. Save the Route to the Route Masters.
4. Create a Route Instance using the web application.
5. **Access the Open Instances** in **My Routes** using the Rounds Pro Mobile app. For more information, see the section *Access My Routes on Rounds Pro mobile app* in Rounds Pro Mobile App documentation.
6. **Execute the route** using the Rounds Pro Mobile app. For more information, see the section *Access the Step Details on Rounds Pro mobile app* in Rounds Pro Mobile App documentation.

Chapter
2

Workflows

Topics:

Rounds Designer Workflow

Manage Routes Workflow

This workflow describes how the Rounds Designer manages the routes workflow. Rounds steps represent the monitoring, inspection, and routine maintenance activities. You can create Routes for assets. Routes consist of a series of steps that represent recurring monitoring, inspection, and routine maintenance activities. These activities need to be completed on one or more assets.
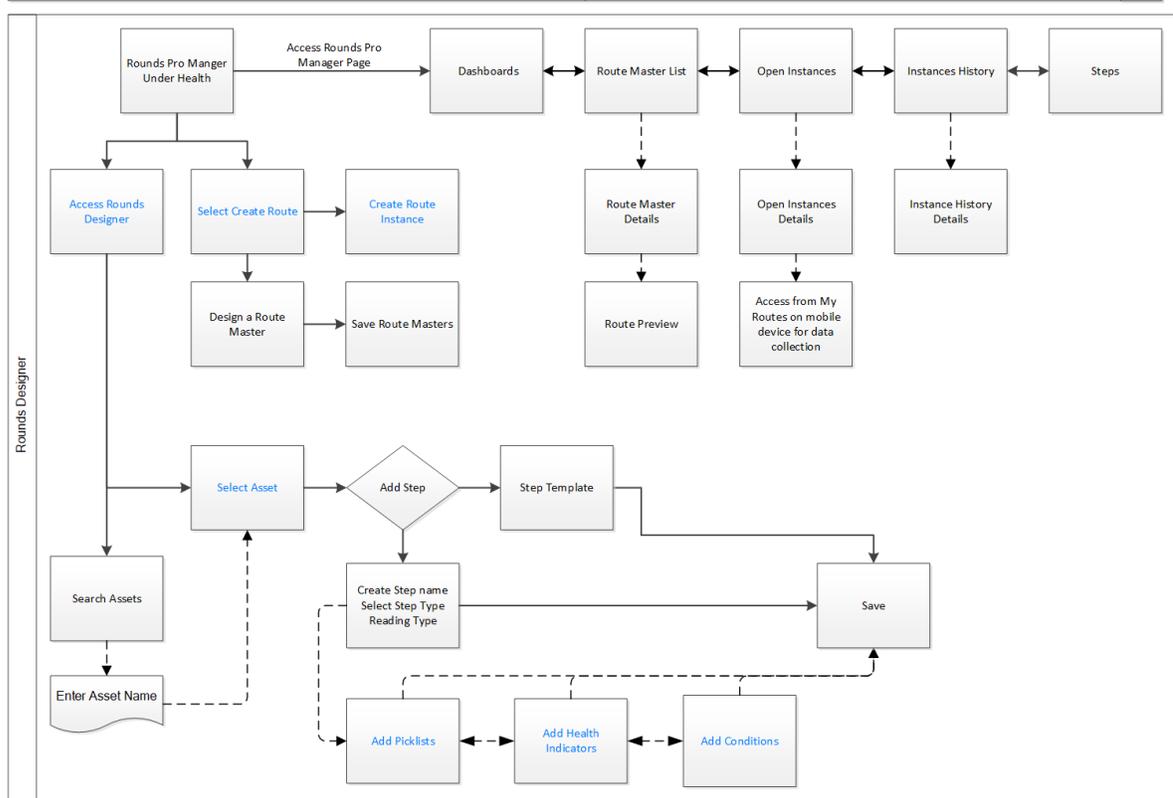
Access the Rounds Designer

Persona: Rounds Designer

The **Rounds Designer** page displays the asset and measurement location hierarchy, the route and step details of an asset, and the option to create a route. As a Rounds Designer, you can access the **Rounds Designer** page to create the Steps and Routes to monitor the health of assets.

Create a Route

Persona: Rounds Designer

Steps are organized into data collection sequence in a form of a route containing checks for one or more assets. As a Rounds Designer, after searching the asset tree, you can add the steps into the Route Order column. A route can contain multiple steps for a single asset and

even be duplicated within the same route and across multiple routes. After adding the route you can name and save the route in the Route Master list. For more information on creating Routes, refer Create a Route.

Create a Route Instance

Persona: Rounds Designer

To use Routes to monitor assets for their health, you must have a copy of the Route from the Route Masters. As a Rounds Designer, you can create an instance of a Route from the Route Masters and save it to appear in the **Open Instances** page. The Route instances that appear in the Open Instances page can be accessed in the Rounds Pro Mobile application by the Rounds Operator to collect data.

Select an Asset

Persona: Rounds Designer

As a Rounds Designer, select the assets that you want to monitor.

Add Steps

Persona: Rounds Designer

Steps are used to monitor assets for specific Measurement Locations. They provide you the means to record readings for an asset. For each Step that you want to include in a route, you must add a Measurement Location to the route. As a Rounds Designer, you can create Steps that are required to manage the health of an asset.

Add a Picklist

Persona: Rounds Designer

When you want to enter a reading value for a Step on a device, you can enter the exact value (for numeric fields only) or select a value from a list (for both numeric and character fields). You can select a value from a list, only if you configure that picklist in **Rounds Designer** using the **Picklist Management** page. As a Rounds Designer, you can create picklists needed for recording data for assets.

You can reuse picklists and the picklist values in all the steps that are created later. You can use the values to set up alerts that will be displayed if a certain reading value is recorded.

In addition, when you define a condition for picklist values on a Route, the picklist values are used to specify which reading value should trigger conditional Steps to appear to the mobile device user.

Add Health Indicators

Persona: Rounds Designer

If you want the Rounds Operator to receive alerts on a device when the recorded reading values meet certain criteria, as a Rounds Designer you can define the criteria and the health indicators for limits in a Step. You can configure limits and health indicators for either numeric or Picklist reading types only. You cannot configure for character type readings.

Add a Condition

Persona: Rounds Designer

When a Rounds Operator is executing the steps along a route, if the reading value that is taken for a Step indicates further investigation is needed, as a Rounds Designer you may want the operator to see additional Steps on the device and record reading values for those additional steps. To accomplish this, you can add conditions to the Steps on the route. A condition allows you to add logic to the route to specify that when a particular reading value is recorded for a Step, additional Steps must be displayed to the device user.

Access Rounds Pro Mobile Application for Data Collection

Persona: Rounds Operator

Log in to the Rounds Pro Mobile application to collect data for a route. Route instances that appear in the **Open Instances** page of the Rounds Designer, can be accessed in the **My Routes** list of the Rounds Pro Mobile application. As a Rounds Operator, you can select the route and record the data for the steps in the Route for an asset.

Access the Rounds Pro Manager

Persona: Rounds Designer

As a Rounds Designer you can create routes and route instances, steps and more. You can access the **Rounds Pro Manager** page to view the Route Masters, route instances, Instance history, open instances, and steps that you created using the Rounds Designer. You can view graphs and charts based on data collected and entered in the Rounds Pro mobile application. You can generate reports for various operations and maintenance data. For more information see Access the Rounds Pro Manager Page.

Rounds Data Collection Workflow

Manage Rounds Data Collection Workflow

This workflow describes how the Rounds Operator collects Rounds data. Rounds Operators complete operator, lubrication, maintenance or similar checks as defined in the Asset Strategy along a Route. Data is captured using a mobile device and uploaded to APM where it can be used in Health Indicators, Policies, and so on. The Rounds Operator will also initiate required maintenance via Performance Recommendations.
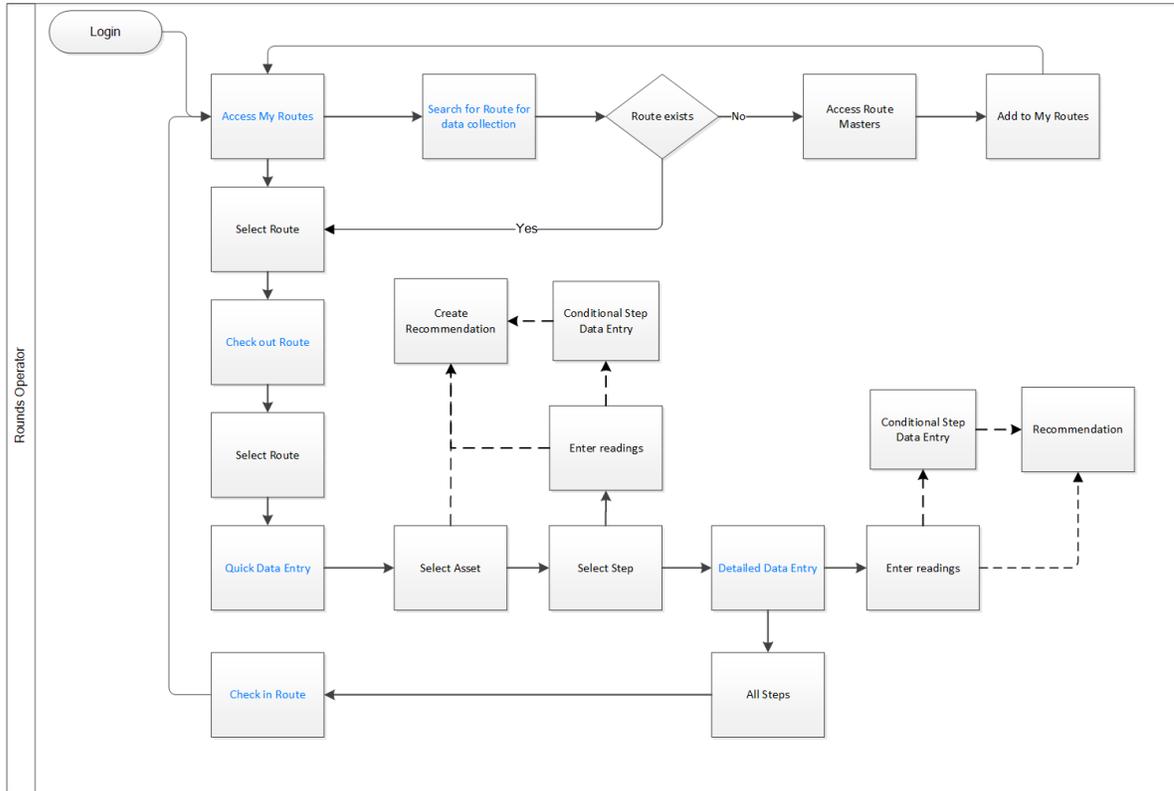
Select My Routes on Rounds Pro mobile app

Persona: Rounds Operator

As a Rounds Operator, access My Routes and select the specific route for which you want to collect data. The Route intances that have been created by the Rounds Designer in the web application appear in the My Routes section of the Rounds Pro mobile app. You can search for a specific Route in My Routes. If the Route is not available, you can access the Route Masters and add the specific Route to My Routes.

Check Out a Route

Persona: Rounds Operator

As a Rounds Operator, you can select a specific Route from My Routes for which you want to record data. To enter readings for the steps in the Route, you can check out the Route.

Enter Data in the Quick Data Entry Screen

Persona: Rounds Operator

As a Rounds Operator, you can select a Step and enter readings for the Step on the quick data entry screen that appears and then check in the Route. If a conditional step exists for the step, you can enter reading for the conditional step. If you want to provide any performance recommendations, you can use the Recommendations tab to provide the details.

Enter Data in the Detailed Data Entry Screen

Persona: Rounds Operator

As a Rounds Operator, you can select the asset and the step to access the step details screen. You can enter the reading in the detailed data entry screen and then check in the Route. If a conditional step exists for the step, you can enter reading for the conditional step. If you want to provide any performance recommendations, you can use the Recommendations tab to provide the details.

Check In a Route

Persons: Rounds Operator

As a Rounds Operator, after collecting and recording readings for the steps in the Route you can check in the Route to the database. The route that is checked in appears in the **My Routes** section again with the readings that were recorded. You can check in a route that is still in progress. The partially collected route information is uploaded to the APM server and the route continues to appear in the **Open Instances** page of the web application or **My Routes** section on the Rounds Pro mobile app and can be checked out again. You can check in a Route after you have completed collecting the route information. The completed route is uploaded to the APM server and does not appear in the **My Routes** section on the Rounds Pro mobile app.

Chapter
3

Step Templates

Topics:

About a Step Template

Step Templates enable you to easily add multiple steps for an asset. Step Templates store the template details. You can view or create a Step Template using ＋ from the asset hierarchy in the **Rounds Designer** page. The Steps are then mapped back to the Step Template. When the template is edited, the mapped steps and limits also get updated.

Access a Step Template

Procedure

1. Access the Rounds Designer page and select **Step Templates**.
   The list of available step templates appears in the **Step Templates** section.
2. In the list, select the step template whose details you want to view.

   You can also type the name of the step template in the **Search** box.

   Details of the selected Step Template appear in the **Details** section.

   Note: As needed, modify the values in the available fields , and then select 💾.

Create a Step Template

Procedure

1. Access the Rounds Designer page and select **Step Templates**.
   The list of available step templates appears in the **Step Templates** section.

2. Select ＋ .
   The **New Step Template** workspace appears.

3. As needed, enter the values in the available fields.

4. Select 💾.
   The Step Template is created and appears highlighted in blue color in the **Step Templates** section.

Copy a Step Template

Before You Begin

- Make sure you understand how to Access a Step Template on page 11.
- You must provide a unique name when you copy an existing template.

Procedure

1. Access the Rounds Designer Page on page 3 and select **Step Templates**.
   The list of available step templates appears in the **Step Templates** section.
2. Select the step template that you want to copy.

You can also type the name of the step template in the **Search** box.

3. Select ⧉.
   The **Copy Template** window appears.
4. In the **Template Name** text box, enter a name for the new template.
5. Select 💾.

Results

The copy of the selected step template is created and appears highlighted in blue color in the **Step Templates** section.

Update Steps with Changes from the Source Template

Procedure

1.
2. In the **Details** section, as needed, modify the values in the available fields, and then select 💾.
   The **Save Changes to Template and Steps** page appears, displaying the changes made to the template.

   Note: The **CHANGES** section displays the following values:

   - **CHANGE STEP NAME**: This field displays the field name whose value has changed. If the values have changed for more than one field, the field names appear in the ascending order.
   - **OLD VALUE**: This field displays the previous value of the field whose value has changed.
   - **NEW VALUE**: This field displays the modified value of the field whose value has changed.
3. If you want to apply the changes to selected steps linked to the specific template:

   a. Under **SAVE CHANGES TO**, select **Steps**.
      The **SELECT STEPS TO APPLY CHANGES TO** section for the selected template appears, displaying a list of the steps that are based on the template.
   b. In the first column, select the rows for the steps that you want to update with the changes from the source template.

      Tip: You can select the check box in the column heading to select all the rows.

      Note:

      - You can add or remove a column for a step using the **Column Chooser** box. However, you cannot remove the **STEP NAME**, **ISSUES**, and **ASSETS** columns as these fields are required fields.
      - The list of steps is sorted by the **STEP NAME** field in the ascending order initially. However, you can sort the list by the **STEP NAME**, **ISSUES**, or **ASSETS** fields later.
      - If a step has an integrity issue with the template change, that step row is disabled, and you cannot select that row.
      - The **ISSUES** column displays the count of the issues and the details of each issue when you hover over each issue.
      - The default pagination is 100. Other options are 50, 100, 200, and 500.
   c. Select **Save**.

The template changes are applied to the selected steps only.

-or-

If you want to apply the changes to all the steps linked to the specific template:

a. Under **SAVE CHANGES**, select **Template**.
b. Select **Save**.
   The changes are saved to the template and applied to all the steps linked to the specific template.

   Note: If you select **Cancel**, the changes are not saved to the template.

Note:
- When there are many steps associated with a template, the steps are processed in batches.
- The **Jobs Queue (x)** drop-down list box appears in the **Details** page, displaying the percentage completion of each job. *x* indicates the number of jobs that are under process.
- When you select the **View Log** link, a log file appears, displaying the error messages for the steps, if there are any.
- The **Jobs Queue (x)** drop-down list box is visible throughout your session unless you close the tab.

4. Select ✕ to close the window.
   The **Step Templates** page displays the updated values for the steps to which the changes were applied.

Results

The steps are updated with the changes applied to their source templates.

Delete a Step Template

Procedure

1. [Access the Rounds Designer Page](#) and select **Step Templates**.
   The list of available step templates appears in the **Step Templates** section.
2. Select the step template that you want to delete.

   You can also type the name of the step in the **Search** box.

3. Select 🗑.
   The **Delete** window appears, displaying the following options:
   - **Template And Disassociate Steps**: Allows to delete the template only. The steps associated to the template are unlinked from the template but not deleted from the database. The steps still appear under the asset to which they are assigned.
   - **Template And Associated Steps**: Allows to delete the template and the associated steps. The steps do not appear under the asset to which they were assigned and are removed form the database.
4. Select the required option and then select **Delete**.
   The selected step template is deleted.

Results

Based on the delete option selected, the steps associated to the template are unlinked and remain under the asset or the steps are deleted completely from the database.

Chapter
4

Steps

Topics:

About a Step

Steps are used to monitor assets for a specific condition. Rounds Pro has two types of steps:

- Measurement Locations
- Lubrication Requirements

They provide you the means to record readings for an asset. For each condition that you want to monitor/record in a route, you must add a step to the route. You can create a Step using the **Rounds Designer** page based on the Steps that are required to manage the health of an asset.

Note: Site functionality is not fully supported within Rounds Pro. Steps inherit the site for the Asset or FLOC that they are created under. If you do not have access to the assets due to a site access restriction, then any instances that you create from the web or from the mobile application will not contain those steps that exist under the specific assets. If you have a broader site access and create the instance, the steps will be part of the instance and all users will be able to see and update those steps in the Rounds Pro mobile app.

Access a Step

Procedure

1. Access the Rounds Designer page.
2. In the Asset Hierarchy, select the asset for which you want to view the steps.

    - To navigate to a child-level asset, expand the parent-level asset hierarchy.
    - To navigate to a step, under the selected Asset, select step.

    You can also type the name of the asset in the **Search** box.

    The datasheet for the selected step appears, displaying the step details in the workspace.

    Note: As needed, modify the values in the available fields, and then select 🖫.

    Tip:

    - ⬚S: This icon corresponding to a step in the Asset hierarchy indicates that the step is associated with a Strategy action. To link a Strategy action to a Strategy step, and for the link to function correctly, you must be assigned to the **MI Strategy User** role along with the **MI Rounds-Pro Admin** role.
    - ⬚☰: This icon corresponding to a step in the Asset hierarchy indicates that the step is associated with a Step Template.
    - ⬚: This icon corresponding to a step in the Asset hierarchy indicates that the step is a Measurement Location.
    - ⬚: This icon corresponding to a step in the Asset hierarchy indicates that the step is a Lubrication Requirement.

Create a Step

Procedure

1. Access the Rounds Designer page.
2. In the **Assets** hierarchy, select the asset for which you want to create and add a step.

   You can also type the name of the asset in the **Search** box.
   The datasheet for the selected step appears.

3. Select ➕ .
   A workspace appears.
4. Select **Create New Measurement Step**, to create Measurement Locations.
5. Select **Create New Lubrication Step**, to create Lubrication Requirements.
6. As needed, enter values in the available fields.

   Note: If you provide the same name to a step as of an existing step under the same asset, an error message appears, and the 🖫 button gets disabled.
7. Select 🖫 .
   The Step is created and appears under the asset.

Results

The newly added step is saved to the APM database. You can include the Step in multiple routes and can also add conditions to the Step if needed.

For more information, refer to the Create a Step Condition section of the documentation for instructions on how to create a condition for a Step.

Copy a Step

Procedure

1. Access the Rounds Designer Page on page 3 and select **Assets**.
   The list of available steps appears in the **Assets** section.
2. Select the step that you want to copy.

   You can also type the name of the Asset in the **Search** box.

3. Select 📄 .
   The **Copy Step** window appears.
4. In the **Step Name** field, enter a name for the new step.

   Note: You must provide a unique name when you copy an existing step.
5. Select **Save**.

Results

A copy of the selected step is created and appears highlighted in blue color in the **Assets** section.

Note:

- You can copy only a standard step. You cannot copy a step that is associated with a template or a strategy.
- When you copy a conditional step, the details available in the **INFORMATION** and the **LIMITS** sections are copied. The copy of the step does not include the details available in the **CONDITIONAL STEPS** section.

Create a Step From Template

Procedure

1. Access the Rounds Designer page.
2. In the **Assets** hierarchy, select the asset for which you want to create a step from a template.

   You can also type the name of the asset in the **Search** box.

3. Select $+$.
   The following options appear:

   - Create New Measurement Step
   - Create New Lubrication Step
   - Create Measurement Step From Template

4. Select **Create Step From Template**.
   The **Select Template(s)** window appears.
5. Select the required template.

   You can also type the name of the template in the **Search** box.
6. Select **Apply**.
   The Step is created and appears under the asset.

Unlink a Step from a Template

Procedure

1. Access the Rounds Designer Page on page 3 and select **Assets**.
   The list of available steps appears in the **Assets** section.
2. Select the step that you want to unlink from a step template.

   You can also type the name of the Asset in the **Search** box.

3. Select .

   Note: The is enabled only if the selected step is associated to a step template.

   A confirmation window appears indicating that the step will be disassociated from the parent template. You are prompted to confirm if you want to continue with the task.
4. Select **Ok**.
   The step is unliked from the related template and changes to a standard step. The step icon changes from to .

Results
The unliked step is no longer associated with the step template, however it remains associated to the asset to which it was assigned and remains in the database.

Access Steps Page on Rounds Pro Manager

Procedure

1. Access the Rounds Pro Manager page.
2. Select **Steps**.
   A page appears, displaying information about the steps that are generated using the Rounds Designer page.

   Note: Select a step from the **STEP NAME** column to view the details of the step on the designer page.

Results

You can use the **Steps** page to access the steps that are generated using the Rounds Designer page. You can sort and filter steps columns to narrow the results. You can sort the data in the columns in an ascending or descending order or filter based on specific filter criteria. You can also show or hide columns in the page.

Delete a Step

Procedure

1. Access the Rounds Designer Page on page 3 and select **Assets**.
   The list of available steps appears in the **Assets** section.
2. Select the step that you want to delete.

   You can also type the name of the Asset in the **Search** box.

3. Select 🗑.

   Note: The 🗑 is not enabled and you cannot delete the step, if the selected step is associated to a step strategy or if the step is a conditional step.

   A confirmation window appears indicating that the step will be removed from the parent asset and from any connected routes. You are prompted to confirm if you want to continue with the task.
4. Select **Ok**.
   The selected step is deleted.

Results

The deleted step no longer appears under the asset and the **Is Deleted?** field on the Step Family is set to TRUE.

Delete Step on Rounds Pro Manager

Procedure

1. Access the Steps page on Rounds Pro Manager.

2. In the **Steps** section, select the check boxes corresponding to the steps listed in the **STEP NAME** column, which you want to delete.
3. Select **Actions** and then from the drop-down list select **Delete**.
   A confirmation window appears, asking you to confirm if you want to delete the selected step.
4. Select **Delete**.
   The selected step is deleted.

Results

The selected step is deleted from the Steps page of the Rounds Pro Manager. However, the step is retained in the APM database, I.e, the **Is Deleted?** field on the Step Family is set to TRUE.

Chapter
5

Schedules

Topics:

- [About Rounds Pro Schedule](#)
- [Route Instance Examples Based on a Schedule](#)
- [Access a Rounds Pro Schedule](#)
- [Create a Rounds Pro Schedule](#)
- [Modify a Rounds Pro Schedule](#)
- [Delete a Rounds Pro Schedule](#)

About Rounds Pro Schedule

Rounds Pro Schedules are schedule objects that are maintained in the Rounds Pro Schedule Family. These schedules once created can be linked to Measurement Steps.

Advantages of using a schedule:

- You can organize your schedules and later associate them with Measurement Steps.
- You can use the same schedule in multiple steps. All these steps will then follow the same schedule. You can thus track all these steps easily.
- If you update a schedule, the changes are applied to all the steps that use the schedule.

Route Instance Examples Based on a Schedule

This topic provides information on how Route Instances are created with few examples of scheduling.

Table 1: Examples

S.No	Route Master Schedule Status	Step Schedules (This example route has 5 steps)	Expected Result
1	Defined for everyday for 8 AM	Not Defined for any of the five steps.	A Route Instance is created every day at 8AM with all the five steps.
2	Defined once every 12 hours starting at 6 AM **Note:** Steps are usually scheduled at lower frequency than that for Route Master.	• Step 1: Not Defined • Step 2: Defined once every 24 hours starting at 6 AM • Step 3: Defined for every Monday, stating at 6 AM • Step 4: Defined for every Tuesday, stating at 6 PM • Step 5: Defined for every 12 Hours, stating at 5 AM	<table><tr><td>**Instance Created at**</td><td>**Steps Included**</td></tr><tr><td>6AM on Sunday</td><td>Step 1, Step 2, and Step 5</td></tr><tr><td>6PM on Sunday</td><td>Step 1 and Step 5</td></tr><tr><td>6AM on Monday</td><td>Step 1, Step 2, Step 3, and Step 5</td></tr><tr><td>6PM on Tuesday</td><td>Step 1, Step 4, and Step 5</td></tr></table>
3	Not Defined	Defined for everyday at 8 AM for all the steps.	This is a Invalid Scenario.

Access a Rounds Pro Schedule

Procedure

1. Access the Rounds Designer Page on page 3.
2. Select **Manage** > **Schedules**.
   The **Schedule Management** page appears, displaying a list of schedules.

Create a Rounds Pro Schedule

About This Task

You can create a schedule to use it in Measurement steps.

Procedure

1. Access the Rounds Designer Page on page 3.
2. Select **Manage** > **Schedules**.
   The **Schedule Management** page appears, displaying a list of schedules.
3. Select ＋ .
   The **Create Schedule** window appears.
4. In the **SCHEDULE NAME** box, enter a unique name for the schedule. The name can contain up to 50 characters.
5. Set a time zone, start date, and frequency for the schedule.
6. Select **Save**.
   The schedule is created.

Modify a Rounds Pro Schedule

About This Task

When you modify a schedule, the changes will apply to all the steps that use the schedule.

Procedure

1. Access the Rounds Designer Page on page 3.
2. Select **Manage** > **Schedules**.
   The **Schedule Management** page appears, displaying a list of schedules.
3. Select the schedule that you want to modify.
4. As needed, modify values in the available fields.
5. Select **Save**.
   The schedule is modified.

Delete a Rounds Pro Schedule

Before You Begin

If the schedule that you want to delete is used in a step, remove the schedule from the step. You can delete a schedule only if it is not used in a step.

Procedure

1. Access the Rounds Designer Page on page 3.
2. Select **Manage** > **Schedules**.
   The **Schedule Management** page appears, displaying a list of schedules.

3. Select the row containing the schedule that you want to delete, and then select 🗑.
A message appears, asking you to confirm that you want to delete the schedule.
4. Select **Yes**.
The schedule is deleted.

Chapter
6

Picklists

Topics:

About a Picklist

When you want to enter a reading value or an action value for a Step on a device, you can enter the exact value (for numeric fields only) or select a value from a list (for both numeric and character fields). You can select a value from a list, only if you configure that picklist in Rounds Designer using the **Picklist Management** page.

You can reuse picklists and the picklist values in all the steps that are created later. You can use the values to set up alerts that will be displayed if a certain reading value or action value is identified.

In addition, when you define a condition for picklist values on a Route, the picklist values are used to specify which reading value or action value should trigger conditional Steps to appear to the mobile device user.

When you create a route instance, the action values that are added to the steps in the route are independent. Any modifications made to the action values in the **Picklist Management** page, will not impact the action values in the route instance.

Access a Picklist

Procedure

1. Access the Rounds Designer page.
2. Select the **Manage** tab, and then select **Manage Picklists**.

   The **Picklist Management** page appears in a new tab, displaying the **Readings** and **Actions** tabs. By default, the **Readings** tab is selected and the **Readings** section appears in the page.

Results

The **Readings** and **Actions** tabs include a count of the number of tables in each section. The counts are updated as the tables are added or deleted. Each Picklist consists of a group of values that you can select when you enter records in the Steps. You can expand or collapse a Picklist header to view or hide the Picklist values. You can show or hide selected columns in the Picklist. You can sort and filter the data in the columns in the Picklist.

Create a Readings Picklist

Procedure

1. Access the **Picklist Management** page.
   The **Readings** section appears by default.

2. Select $+$.
   The **Add Picklist** window appears.

3. In the **PICKLIST NAME** box, enter a unique name for the picklist.

   The name can contain up to 50 characters.

   Note: If the picklist name is already used in either **Readings** or **Actions** section, an error message appears indicating that a picklist table with this name already exists.

4. In the **PICKLIST TYPE** drop-down list box, select the type of data to which this picklist applies: **Character** or **Numeric**.
5. Select **Save**.

   Note: You can modify the picklist name after creating it.

   Select **Save changes** to save the update or **Discard changes** to cancel it, before saving.

   The new Picklist is added to the **Readings** section.

Results

The Picklist names appear in the **PICKLIST** drop-down list box in the **Step Details** page.

Note: New Picklists may take some time to appear in the relevant drop-down list boxes in the **Step Details** page.

Create Readings Picklist Values

Procedure

1. Create a Readings Picklist on page 26.
2. Expand the picklist, and then select **Add a row**.
3. In the **VALUE** column, enter the picklist value as needed.

   Note:
   - Select **Discard changes** to remove the row added before saving the picklist value.
   - The value can contain up to 50 characters.
   - The **# OF STEPS USED IN** field displays the total number of steps that are available under **Assets** and **Step Templates** for a selected step.
4. Select **Save changes**.
   A value is specified for the picklist.

Results

The specified values appear in the **PICKLIST VALUES** drop-down list box in the **Step Details** page where the relevant picklist is selected in the Picklist field.

Note: New picklists and picklist values may take some time to appear in the relevant drop-down list boxes in the **Step Details** page.

Create an Actions Picklist

Procedure

1. Access the **Picklist Management** section.
   The **Readings** section appears by default.

2. Select the **Actions** section and then select $+$.

   The **Add Picklist** window appears.
3. In the **PICKLIST NAME** box, enter a unique name for the picklist.
   The name can contain up to 50 characters.

Note: If the picklist name is already used in either **Readings** or **Actions** section, an error message appears indicating that a picklist table with this name already exists.

Note: The Actions picklist allows values only with character type.

4. Select **Save**.

Note: You can modify the picklist name after creating it.

Select **Save changes** to save the update or **Discard changes** to cancel it.

The new Picklist is added to the **Actions** section.

Results

The Picklist names appear in the **ACTION** drop-down list on the **Step Details** page.

Note: New Picklists may take some time to appear in the relevant drop-down lists on the **Step Details** page.

Create Actions Picklist Values

Procedure

1. Create an Actions Picklist on page 27.
2. Expand the picklist, select ⋮ , and then select **Add a row**.
3. In the **VALUE** column, enter the picklist value as needed.

   Note:

   - Select ⋮ , and then select **Discard changes** to remove the row added before saving the picklist value.
   - The value can contain up to 50 characters.

4. Select ⋮ , and then select **Save changes**.
   A value is specified for the picklist.

Results

The specified values appear in the **ACTION VALUES** drop-down list on the **Step Details** page where the relevant picklist is selected in the Picklist field.

Note: New picklists and picklist values may take some time to appear in the relevant drop-down lists on the **Step Details** page.

Delete a Picklist

Before You Begin

To delete a picklist, the values of that picklist must not be associated actively to any steps.

Procedure

1. Access the **Picklist Management** page.
   The **Readings** section appears by default.
2. As needed, select the **Readings** section or the **Actions** section.

3. In the row containing the picklist that you want to delete, select the check box, and then select 🗑.

The selected picklist is removed from the list. The values associated with the picklist are also deleted. A confirmation message appears.

Filter Data in a Picklist Column

Procedure

1. Access the Picklist Management page.
   The **Readings** section appears by default.
2. As needed, select the **Readings** section or the **Actions** section.
3. Expand the picklist, for which you want to filter the data.
4. Select 👓 .
5. Enter a few characters in the **Filter** text box below the column header.

   For example, to find all entries with a specific value, enter the value in the **Filter** text box for the **VALUE** column.

   Note: You can use multiple filters on different picklist columns to further narrow the results.

   The data in the column is filtered, showing all entries with that specific value.

Results

You can also filter the picklist columns in the **Picklist Management** page at section level.

Hide a Column in a Picklist

Procedure

1. Access the Picklist Management page.
   The **Readings** section appears by default.
2. As needed, select the **Readings** section or the **Actions** section.
3. Select ⚙, and clear the check box of the column that you want to hide.

   Note: You cannot hide the **PICKLIST NAME** column.

   The selected column is hidden.

   Note: To show a column, select the check box of the column.

Show a Column in a Picklist

Procedure

1. Access the Picklist Management page.
   The **Readings** section appears by default.
2. As needed, select the **Readings** section or the **Actions** section.

3. Select ⚙, and select the check box of the column that you want to view.
    The selected column appears.

    Note: To hide a column, clear the check box of the selected column.

Sort Data in a Picklist Column

Procedure

1. Access the Picklist Management page.
    The **Readings** section appears by default.
2. As needed, select the **Readings** section or the **Actions** section.
3. Expand the Picklist, for which you want to sort the data.
4. Select a column header, such as **VALUE**.
    The data in the column is sorted in a specific order (ascending or descending).
5. Select the column header again to reverse the sort order.
    The data in the column is sorted in the reverse order.

Results

You can also sort the Picklist columns in the **Readings** section or the **Actions** section in an ascending or descending order to narrow the results.

Note: Sort criteria is not affected by filtering. For example, if you sort the routes by the **VALUE** column and then filter by **LAST EDITED BY**, the sort order remains unchanged.

Chapter
7

Limits

Topics:

- About a Limit
- Access a Health Indicator
- Create a Health Indicator
- Delete a Health Indicator

About a Limit

If you want to receive alerts on a device when you record reading values that meet certain criteria, you can define the criteria in the **Limits** section of the Step **Details** page. You can configure limits and health indicators for either numeric or Picklist reading types only. You cannot configure for character type readings.

For character reading type, a message appears indicating that limits are not available for character reading type.

For Picklist reading type, you can add Limits for the available Picklist values only.

A Limit defines:

- The Limit values for the readings recorded for a Step.
- Limit colors.
- Health indicators to indicate the upper and lower threshold levels.
- A message to be displayed in Rounds Pro mobile application when you enter the readings.

Note: A message can be a warning or an alert. For more details, refer to .

The limits, health indicators, and display messages for alerts or health indicators appear on the following pages:

- **Route Steps** and the Step **Details** screens on Rounds Pro mobile application when the readings are entered for a Step.
- The Route Instances Details pages accessed from the **Open Instances** and **Instance History** pages in the web application, which reflect the last reading collected and saved to the server using Rounds Pro mobile application.

Access a Health Indicator

Procedure

1. Access the Rounds Designer page.
2. Access a Step on page 16 of a route instance, for which you want to access a Limit.
3. In the **Step Details** page, expand the **LIMITS** section, and select the **Genertae Health Indicators** button.

   The health indicators that are available appear in the list.

Create a Health Indicator

Procedure

1. In the Rounds Designer page, Access a Step on page 16 of a route instance, in which you want to create a health indicator.
2. Select the **Generate Health Indicators** button.
   For character reading type, no fields are displayed. A message appears indicating that readings will be tracked as a history only Health Indicator.

   Note:

- You can select the Generate Health Indicators option in both the cases: Create New Step and Create Step from Template.
- Health Indicator Name is same as that of Step Name and Health Indicator Description is same as that of Step Description. Hence, when you update the step, the health indicator details are also updated.
- Health indicators are also generated based on the selected Picklist Type. If you select the Picklist Type as Numeric, a numeric health indicator is generated, and if you select the Picklist Type as Character, a character health indicator is generated.
- When you delete a step that has the associated health indicator, the health indicator details also get deleted with the step details.
- In the **LIMITS** section, when you change the option from **Generate Health Indicators** to **None**, the health indicators details get deleted.

3. As needed, enter values in the available fields.

4. Select 🖫.
The health indicator is saved to the APM database.

Delete a Health Indicator

Procedure

1. Access the Rounds Designer page.
2. Access a Step on page 16 of a route instance, for which you want to access a Limit.
3. In the **Step Details** page, expand the **LIMITS** section, and select **None**.

   Note: When health indicators exist, the **Generate Health Indicators** option is selected.

   The **Dropping Limits Confirmation** window appears, asking you to confirm if you want to delete the Limit values.

   Note: If the step is not assigned with any Limit values to generate Health Indicators, the confirmation window does not appear.
4. Select **Continue**.

   The health indicators details are deleted.

Results

The health indicator details under the Limit section are deleted from the APM database.

Chapter
8

Conditions

Topics:

About a Step Condition

When a device user is executing the steps along a route, and if the reading value that is taken for a Step indicates that further investigation is needed, you may want the device user to see additional Steps on the device and record reading values for those additional steps. To accomplish this, you can add conditions to the Steps on the route. A condition allows you to add logic to the route to specify that when a particular reading value is recorded for a Step, additional Steps must be displayed to the device user.

A condition defines:

- The Primary Step whose reading value should activate a subsequent Step.
- The particular reading value or the reading value within a specified range recorded for the Primary Step, which should activate another Step.
- The conditional operator that determines if the reading value recorded for the primary Step meets the condition.
- The subsequent Step or Steps that should be activated by that reading value.

A single Step condition can be linked as a successor to only one Primary Step. A Step, however, can be linked to multiple successor Step conditions. Similarly, a Step condition can be linked to multiple successor Steps.

Note: If you add a nested Conditional Step to a Step that is already specified as a Conditional Step on a Primary Step, then the nested Conditional Step will not be available when the Primary Step is included on a Route.

Access a Step Condition

Procedure

1. In the Rounds Designer page, Access a Step on page 16 of a route instance, for which you want to access a Step condition.
2. In the **Step Details** page, expand the **CONDITIONAL STEPS** section.
   The conditions that are available for the Step appear in the list.

Create a Step Condition

Procedure

1. In the Rounds Designer page, Access a Step on page 16 of a route instance, in which you want to create a step condition.

   Note: Ensure that the primary step is saved before you add a conditional step.

2. In the **CONDITIONAL STEPS** section of the workspace that appears, select ＋ **Add Conditional Steps**.
   A row appears, displaying the Primary Step name and the option to set the condition to activate the next step. You can also add a conditional step from an asset that is different from the parent asset. Select ⛬ to view assets that belong to the same site as the Primary Step Name, as well as all global assets. Note that you cannot select an Asset Group.

Note: If no conditions exist, then **Conditional Steps have not been created** message appears in the section.

3. As needed, enter values in the available fields.

   Note:

   - You can only add the Steps that exist under the asset where the Primary Step exists.

   - To add more Conditional Steps, select ➕ **Add Conditional Steps**. Additional rows appear displaying the step name and the option to set the conditions for the subsequent steps to be performed. You can add up to 50 conditional Steps to a single Primary Step.

4. Select 💾.
   The Step condition is saved to the APM database.

Results

The Conditional Steps are displayed below the Primary Step. A Conditional Step uses the value of a predecessor Step to determine the task that needs to be performed after that Step.

In the APM database, a condition is represented by:

- One Step that identifies the Primary Step.
- One operator that determines if the values entered for the Primary Step meets the condition set.
- One Step condition that identifies the specific reading value.
- One or multiple Steps that identify the subsequent Steps.

Delete a Step Condition

Procedure

1. In the Rounds Designer page, Access a Step on page 16 of a route instance, from which you want to remove a Step condition.

2. In the **CONDITIONAL STEPS** section of the workspace that appears, select the Conditional Step, which you want to delete, and then select 🗑.

   A confirmation dialog box appears, indicating that if you delete the selected Conditional Step other dependent Conditional Steps will also be deleted. The message prompts you to confirm if you want to proceed to delete the selected Conditional Step.

3. Select **Yes**.
   The selected Conditional Step is deleted from the section.

4. Select 💾.

Results

The Conditional Step is removed from the APM database. Any other conditions that were dependent on the deleted Conditional Step are also removed from the database.

Chapter

9

Reference Documents

Topics:

About a Reference Document

A reference document is a file such as a Word document or an image that contains supplementary information that users need to view when they are working.

In the case of Rounds Pro, a reference document contains supplementary information about an asset that you might want device users to see when you enter the reading value for that asset.

For example, if you take several readings on the same piece of equipment, you may want to access an image dictating the exact locations at which the readings must be taken.

You can link new or existing Reference Document records to Step records via the **Reference Documents** section of the datasheet for the Step record.

Note: You can access all associated reference documents for a Step record only when you are connected to a network.

The following file types are supported for reference documents:

- bmp
- doc
- docm
- docx
- gif
- jpe
- jpeg
- jpg
- log
- odt
- pdf
- png
- pps
- ppsm
- ppsx
- ppt
- pptm
- pptx
- rft
- tif
- tiff
- txt
- vdx
- visio
- vsd
- vss
- vst
- vsx
- xls
- xlsb

- xlsm
- xlsx
- xlw
- zip

The device on which you want to display the reference document must contain the necessary software application for displaying the reference document type. Documents such as PDF or images will open in the application as a viewer. However, if a reference document is a Microsoft Word document, the device must have a word processing program, such as Mobile Word to view the reference document on the device.

In addition, if you create a reference document to display an image in the workspace for a Step on a Route, the image must be a compressed file type, for example, .png or .jpg.

Note: It is recommended to use small size files to ensure that the total route size does not exceed the size that allows you to download the route quickly.

Access a Reference Document Linked to a Step

Procedure

1. In the Rounds Designer page, Access a Step on page 16, for which you want to view a reference document.
2. Select the **Reference Document** tab.
   The **Reference Document** section appears displaying the list of documents and URLs linked to the step and the information about other attributes of the reference documents.

Add a Reference Document to a Step

Procedure

1. In the Rounds Designer page, Access a Step on page 16, for which you want to add a reference document.
2. Select the **Reference Document** tab.
3. In the **Reference Documents** section that appears, select **Add**.
4. In the **Add Reference Document** window that appears, select one of the following:

   - **File**: Select this option to attach a DOC, PDF, an image, or a text file.
   - **Hyperlink**: Select this option to add a URL.

5. As needed, enter values in the available fields and select **Add**.
   The document or the URL is added to the list of reference documents linked to the step.

6. Select 💾.
   The reference documents are saved to the APM database.

   Note: After the file is saved successfully to the APM database, the file type, size, added by, and date fields are populated in the **Reference Documents** section.

Results

For a single step, you can save reference documents up to a maximum size of 15 MB in total. After the Route Instance record that includes the step is downloaded to the mobile device, the device user will be able to view the reference document.

Sort Data in a Reference Document List

Procedure

1. In the Rounds Designer page, Access a Step on page 16 of a route instance, from which you want to sort the data in the Reference Document list.
2. Select the **Reference Documents** tab.
3. In the **Reference Documents** section that appears, select a column header, such as **TYPE**. The data in the column is sorted in a specific order (ascending or descending).
4. Select the column header again to reverse the sort order.
   The data in the column is sorted in the reverse order.

Results

You can sort the reference document columns in the **Reference Documents** section in an ascending or descending order to narrow the results.

Delete a Reference Document Linked to a Step

Procedure

1. In the Rounds Designer page, Access a Step on page 16 of a route instance, from which you want to remove a reference document.
2. Select the **Reference Document** tab.
3. In the **Reference Documents** section that appears, select the check box next to the reference document that you want to delete, and then select **Delete**.

   The **Reference Document Delete Confirmation** dialog box appears, prompting you to confirm if you want to proceed to delete the selected reference document.
4. Select **Continue**.
   After the action is completed successfully, the selected reference document is deleted from the list.
5. Select .

Results

The reference document is removed from the APM database.

Add Additional Instructions to a Step

Procedure

1. In the Rounds Designer page, Access a Step, for which you want to add additional instructions.
2. Select the **Reference Document** tab.
3. In the **ADDITIONAL INSTRUCTIONS** section, add the required instructions for the operator to follow for the step.

   Note:

- If needed, select **Select Image** to attach an image to the step. You can attach only one image to a step. The image size should be less than 0.5 MB. You can attach images of the types .jpg, .jpeg, .png, and .gif only.
- You can enter only the additional instructions or attach an image, or provide both.

4. Select 💾.

   The additional instructions and attached image are saved to the APM database.

Results

For a single step, you can save additional instructions with a maximum of 500 characters and a single image. After you download the Route Instance record that includes the step to the mobile device, you can view the additional instructions and the attached image.

Chapter

10

Routes

Topics:

About Route Masters

The **Route Masters** is a master copy of all the routes that are created in the APM module.

The **Route Masters** section displays the available routes in a list with information about other attributes such as the location, step count, route size, the person to whom the route is assigned to, the route state, and more.

Using the **Route Masters** section, you can search in the database, for the routes that you want to view, filter the routes, or sort the routes. You can also select the columns that you want to view in the route masters section or drag and rearrange the order of the columns. You can create new routes, sequence the routes, assign routes to users and team, schedule routes, or create new instances of existing routes.

Access the Route Masters

Procedure

1. Access the Rounds Pro Manager page.
2. Select the **Route Masters** tab.
   The route masters section appears displaying information about the routes available in the route masters.

About a Route

Routes consist of a series of steps that represent recurring monitoring, inspection, and routine maintenance activities. These activities need to be completed on one or more assets. A route can contain multiple steps for a single asset and even be duplicated within the same route and across multiple routes. After a route is created with the associated assets and steps, you can preview the route details in the **Route Preview** section.

Access a Route

Procedure

1. Access the Route Masters on page 43 and then from the **ROUTE NAME** column, select the route that you want to view.
   A page appears, displaying the **Select Steps**, **Sequence Route** , and **Plan Route** sections.

   Note:
   - As needed, you can modify the steps of the route. The **Information** section details cannot be modified.
   - To create new route, refer Create a Route on page 44.
   - To edit and update a current route, you can access the route on the Route master details.
2. In the **Select Steps** section, select the asset and the steps to add to the route, and then select $+$.

To navigate to a child-level asset, expand the parent-level asset hierarchy.

Alternatively, in the **Search** box, type the asset name.

The selected assets and steps appear in the **Sequence Route** section. The check box corresponding to the node of the selected asset and steps that are included in a route is coloured blue.

Note: After the **Sequence Route** section is populated with the assets and steps, the check boxes in the **Select Steps** section are cleared of selection automatically.

3. In the **Sequence Route** section, select ✕ corresponding to the steps or assets that you want to remove from the route.

   Note:

   - You can reorder the sequence of assets or steps assigned to a route in the **Sequence Route** section.
   - You can expand or collapse the assets to view or hide the assigned steps by selecting **Expand All** or **Collapse All** in the **Sequence Route** section. When the assets are collapsed, the total count of the steps associated with an asset is displayed in the asset row.

4. In the **Schedule** section, as needed, enter values in the available fields.

5. Select **Save**.
   The modified route is saved to the database.

   Note:

   - The **Save** button is enabled only when any changes are made to the route.
   - Route Instances that are in progress remain as they were created with the updated readings checked in.
   - You cannot save a route as a route instance if there are no steps added in the **Sequence Route** section.

Results

You can access a route and view the route details.

Create a Route

Procedure

1. Access the Rounds Pro Manager page or Access the Rounds Designer page, and then select **Create Route**.
   The **Route Creation** page appears, displaying the sections where you can select steps, sequence routes, and plan routes.

2. In the **SELECT STEPS** section, select the asset and the steps to add to the route, and then select ✚ .

   To navigate to a child-level asset, expand the parent-level asset hierarchy.

   Alternatively, in the **Search** box, type the asset name.

   The selected assets and steps appear in the **SEQUENCE ROUTE** section.

3. In the **SEQUENCE ROUTE** section, select ✕ corresponding to the steps or assets that you want to remove from the route.

If you select additional assets or steps from the **Select Steps** section and then select ✛ , the selected items get added after the existing items in the **SEQUENCE ROUTE** section.

Note:

- You can reorder the sequence of assets or steps assigned to a route in the **SEQUENCE ROUTE** section using the Drag-and-Drop method.
- You can expand or collapse the assets to view or hide the assigned steps by selecting **Expand All** or **Collapse All** in the **SEQUENCE ROUTE** section. When the assets are collapsed, the total count of the steps associated with an asset is displayed in the asset row.

4. In the **PLAN ROUTE** section, the **Route Master** option is selected by default. Enter values in the available fields.
5. Select **Create**.
   The route is created and appears in the **Route Masters** list.

Results

The route with the steps can be carried out for recurring monitoring, inspection, and routine maintenance activities for one or more assets.

Note: You cannot save a route as a route instance if there are no steps added in the **SEQUENCE ROUTE** section.

Create a Route on Rounds Pro Manager

Procedure

1. Access the Steps page on Rounds Pro Manager.
2. In the **Steps** section, select the check boxes corresponding to the steps listed in the **STEP NAME** column, for which you want to create a route.
3. Select **Actions** and then from the drop-down list select **Create Route**.
   The **Route Creation** page appears displaying the selected steps in the **SEQUENCE ROUTE** section.

   Note:

   - To add more items, select additional assets or steps from the **SELECT STEPS** section and then select ✛ . The selected items get added after the existing items in the **SEQUENCE ROUTE** section.

   - In the **SEQUENCE ROUTE** section, select ✕ corresponding to the steps or assets that you want to remove from the route.

4. In the **PLAN ROUTE** section, enter values in the available fields.

   Note: The **Route Master** option is selected by default.
5. Select **Create**.
   The route is created and appears in the **Route Masters** list.

Results

The route with the steps can be carried out for recurring monitoring, inspection, and routine maintenance activities for one or more assets.

Access a Route Preview

Procedure

1. [Access the Route Masters](#) on page 43 and then from the **ROUTE NAME** column, select the route for which you want to access the preview.
   The Route name page appears displaying two tabs: **Route** and **Route Preview**.
2. Select **Route Preview**.
   The **Route Preview** section appears displaying [information](#) about the selected route.

   Note: The total count of the Assets, Main Steps, Conditional Steps, and References associated with the route is displayed.

Results

You can access a route preview and view the route details.

Note:

- You cannot enter or edit any readings in the **Route Preview**.
- The **Route Preview** tab will not be enabled if the route does not have any associated steps.

Assign a Route to a Team Member

About This Task

You must assign a Route to appropriate members or teams for the Route to be available to those users in Rounds Pro mobile app.

Note:

- To assign a Route to users or teams, you must be a member of the MI Operator Rounds Administrator or MI Lubrication Management Administrator Security Group, a member of a Security Role that includes one of these groups (that is, MI Health Admin), or a Super User.
- Routes can only be assigned to users or teams with access to Rounds Pro mobile app.
- To enhance usability for data collectors, assign to users or teams only Routes that are relevant to those users or teams. In other words, it is not recommended to assign all Routes to all users or teams.
- For the mobile devices with Windows operating systems, the Download Queries are used to assign users. By default, all Routes are available to all users.

  Note: Team assignments are not available on Windows Mobile Devices.

Procedure

1. [Access the Route Masters](#) on page 43 and then from the **ROUTE NAME** column, select the route that you want to assign.
   A page appears, displaying the **SELECT STEPS**, **SEQUENCE ROUTE**, and **PLAN ROUTE** sections.
2. In the **PLAN ROUTE** section, in the **ASSIGN TO** text box enter the name of the person or the team who would be responsible for ensuring the Route is completed.

You can enter the characters to search for the names. After you select the field, the names of the users and teams appear in the list. After you start entering the characters, the search results appear in a drop-down list. At a given time, a maximum of 50 names appear in the drop-down list. When you scroll down to the last name in the list the next 50 names get added to the drop-down.

Selecting the name displays the name as a chip in the box. You can add only one name at a time to the box. After four rows of names appear in the box, you can scroll down to move to the next row that is added when you select additional names.

Note: The name that is added in the box does not appear in the drop-down list during the next search.

3. **Optional:** If you want to remove a Route assignment from a user or team, select ✕ in the chip with the name appearing in the box.

   The user or team that you selected is removed from the box.
4. When you have finished assigning users or teams to the Route, select **Save** to save the Route changes to the database.
   The summary of the users or teams assigned appear in the **ASSIGNED TO** column in the **Route Masters**.

Create a Job Schedule for a Route

Procedure

1. and then from the **ROUTE NAME** column, select the route for which you want to create a job schedule.
   A page appears, displaying the **SELECT STEPS**, **SEQUENCE ROUTE**, and **PLAN ROUTE** sections.
2. In the **PLAN ROUTE** section, in the **BASIS OF OCCURENCE** text box, from the drop-down list, select **Schedule**.
   The **SCHEDULE SUMMARY** box with the option to create schedule appears.
3. Select **Create Schedule**.
   The **Edit Schedule** window appears.
4. As needed, enter values in the available fields.
5. Select **Apply Schedule**.

   The schedule information appears in the **SCHEDULE SUMMARY** window.

   Note:

   - Select 🖉 to modify the schedule details from the Edit Schedule window. After saving the changes, the modified summary appears.

   - Select 🗑 to delete the scheduled job. The schedule summary is removed from the box.
6. Select **Save** to save the route changes to the database.
   The route instances are generated for the route based on the schedule created.

Activate a Route

Before You Begin

- Create and assign a route to users or teams.
- Create a schedule for the route.

Procedure

1. Access the Route Masters on page 43 and then from the **ROUTE NAME** column, select the route that you want to activate.
   A page appears, displaying the **SELECT STEPS**, **SEQUENCE ROUTE**, and **PLAN ROUTE** sections.
2. In the **PLAN ROUTE** section, enable **ACTIVATE ROUTE**.
3. Select **Save**.
   The route is now activated and is enabled to generate route instances at the scheduled time.

   Note:

   - The **Save** button is enabled only when any changes are made to the route.
   - You cannot activate a route if :
     - There are no steps added in the **SEQUENCE ROUTE** section.
     - If the route is not assigned to any users or teams.
     - If a schedule is not created for the route.

Results

You must activate a Route to enable it to generate route instances as per the job schedule created for the Route.

Specify a Schedule For Compliance Tracking

Before You Begin

- Create and assign a route to users or teams.
- Create a schedule for the route.
- Activate the schedule.

Procedure

1. Access the Route Masters on page 43 and then from the **ROUTE NAME** column, select the route for which you want to create a compliance schedule.
   A page appears, displaying the **SELECT STEPS**, **SEQUENCE ROUTE**, and **PLAN ROUTE** sections.
2. In the **PLAN ROUTE** section, in the **Schedule** workspace, enable **COMPLIANCE TRACKING**.

   For more information on the available fields and descriptions, see Plan Route Records on page 98.

3. In the **COMPLIANCE HORIZON** box, enter a number for the frequency at which the route must be completed.
4. In the **COMPLIANCE HORIZON INTERVAL** box, specify the time unit, such as day, week, or year within which the route must be completed.
5. Select **Save**.

Results

You must create a compliance schedule to track the readings on the Route Instances for compliance. The compliance tracking is enabled, and the route is tracked for completion within the due date. For example, if you enter 1 in the **Compliance Horizon** field and select week for the **Compliance Horizon Interval** drop-down list, whenever an instance is created on this route master, it needs to be completed withing 1 week of creation. The dates in the **DUE DATE** and the **NEXT DUE DATE** columns in the **Route Masters**, **Open Instances**, and **Instance History** pages appear based on the compliance tracking results.

Reorder Assets within a Route

Before You Begin

The asset rows must be collapsed to enable the drag option to reorder the assets.

Procedure

1. Access the Route Masters and then from the **ROUTE NAME** column, select the route for which you want to reorder the assets.
   A page appears, displaying the **SELECT STEPS**, **SEQUENCE ROUTE**, and **PLAN ROUTE** sections.
2. In the **SEQUENCE ROUTE** section, select ⋮⋮ in the asset header whose order you want to change.
3. Drag the selected item to the required position within the list of assigned assets, and then drop it.

   While moving an asset to a new position, a blue border line with a blue background appears around the asset.

   The sequence of the asset is reordered.

   Note:
   - You cannot move assets to a position in between the steps of other assets.
   - Press Shift + Left-click using the mouse button to select all the steps within the asset and move the selected steps to the required position in between the steps of other assets.

Results

The sequence of the asset assigned to a route is reordered.

Reorder Steps within a Route

Procedure

1. Access the Route Masters and then from the **ROUTE NAME** column, select the route for which you want to reorder the steps.
   A page appears, displaying the **SELECT STEPS**, **SEQUENCE ROUTE**, and **PLAN ROUTE** sections.
2. In the **SEQUENCE ROUTE** section, select ⋮⋮ in the step row associated with an asset whose order you want to change.
3. Drag the selected item to the required location within the list of assigned assets or steps, and then drop it.

   When the step is dragged and positioned at a new location, a blue background appears behind the dragged item where the step can be dropped.

   The step is reordered.

Results

The sequence of the steps assigned to a route is reordered.

Note: When moving a step to a new location, it will carry the asset name with that step. A new asset header will be displayed if the asset of the selected step is different from the adjacent steps.

Export Route Masters to .CSV Format

Procedure

1. Access the Route Masters.
2. In the **Actions** drop-down list, select **Download to .csv**.

   Note: To export selected routes, select the check boxes corresponding to the routes listed in the **ROUTE NAME** column, which you want to export.

   The .CSV file is saved to the local computer.
3. Select the file, and then select **Open**.
4. Save the Excel file.

Results

The .CSV file contains all the routes or only the routes that were selected for export and are available on the current page. The file displays only the columns that are visible on the page.

Delete a Route

Procedure

1. Access the Route Masters on page 43 and then from the **ROUTE NAME** column, select the route that you want to delete.

A page appears, displaying the Route details and options to modify the route.

2. In the upper-right corner of the page, select 🗑.
   A confirmation dialog box appears, asking you to confirm if you want to delete the Route.
3. Select **CONTINUE**.
   The selected route is removed from the **Route Masters** list.

   Note:
   - The steps associated with the deleted route do not get deleted. The route container that contained the assets and their order, along with related data such as assignments, descriptions, schedules, and other route specific fields is only deleted.
   - Readings that were recorded earlier for steps from past data collection continue to remain under the steps.
   - Deleting a route does not delete the generated instances.

Chapter

11

Route Instances

Topics:

Access a Route Instance

Procedure

1. Access the Rounds Pro Manager page.
2. Select the **Open Instances** tab.
   A page appears, displaying information about the route instances that are generated from the route masters.

Results

You can use the **Open Instances** page to access the route instances that are generated from the Route Masters. You can sort and filter routes columns in the **Open Instances** page to narrow the results. You can sort the data in the columns in an ascending or descending order or filter based on specific filter criteria. You can also show or hide columns in the page.

Access a Route Instance History

Procedure

1. Access the Rounds Pro Manager page.
2. Select the **Instance History** tab.
   A page appears, displaying information about the route instances that have been checked in or marked as finished from the **Open Instances** page.

Results

You can use the **Instance History** page to access the history of the route instances that have been checked in or marked as finished from the **Open Instances** page. You can sort and filter routes columns in the **Instance History** page to narrow the results. You can sort the data in the columns in an ascending or descending order or filter based on specific filter criteria. You can also show or hide columns in the page.

Note: When a route is in progress, the instance will not be moved to Instance History. However, if the route is marked as finished, then the route will be removed from Open Instances and added to Instance History.

Access Route Instance Details

Procedure

1. Access the **Open Instances** or the **Instance History** page.
2. From the **ROUTE NAME** column, select the route for which you want to view the details.
   A page appears, displaying information about the route instance details.

   Note:
   - The route details page displays if the details are for an open instance or an instance history. For the open instance details, the **Generated On**, **Checked Out By**, and the **Progress** details are displayed. For the instance history details, the **Completed On**, **Checked In By**, and **Completed Steps** details are displayed.

- You can view or hide multiple columns in the route details page on Rounds Pro mobile app using the **Column Chooser** box.

Results

You can access the Route Instance details for open instances and instances that are completed or checked in to the database.

Create a Route Instance

Procedure

1. Access the Rounds Pro Manager page.
2. Select the **Route Masters** tab.
3. In the **Route Masters** section, select the check boxes corresponding to the routes listed in the **ROUTE NAME** column, for which you want to create an instance, and then select **Create Instance**.

   Note: You can select only the routes that have at least one step and which have been assigned to users or teams. If a route does not have steps or is not assigned to anyone, then the check box corresponding to that route is disabled. When you hover over the check box a message appears indicating that to select a route, the route must have steps and must be assigned to users.

   A success message with the number of new instances generated appears after the route instances are generated successfully.

Results

The route instance is created and appears in the **Open Instances** section.

Delete a Route Instance on Rounds Pro Manager

Procedure

1. Access the Open Instances page on Rounds Pro Manager.
2. In the **Open Instances** section, select the check box corresponding to the route instance listed in the **ROUTE INSTANCE NAME** column, which you want to delete.
3. Select **Actions**, and then from the drop-down list select **Delete Instance**.
   A confirmation window appears, asking you to confirm if you want to delete the selected route instance.

   Note:
   - The confirmation window indicates the number of route instances being deleted and the name of the operator who has checked out the route instance with the route name assigned to them.
   - Before deleting a route instance, you can review the status of the route instance in the **CHECKED OUT BY** column. After a route instance is deleted, any readings already collected, will be removed.
4. Select **Delete**.
   The selected route instance is deleted.

Results

The selected route instance is deleted from the **Open Instances** page of the Rounds Pro Manager. The route instance is removed from the APM database.

Print a Route Instance on Rounds Pro Manager

Procedure

1. Access the Open Instances page on Rounds Pro Manager.
2. In the **Open Instances** section, select the check box corresponding to the route instance listed in the **ROUTE INSTANCE NAME** column, which you want to print.

   Note: At a time, you can select only one route instance to print.
3. Select **Actions**, and then from the drop-down list select **Print Instance**.
   A window appears indicating that a PDF will generate in the background.
4. Select **Okay**.
   A page appears, displaying information about the route instance details in a PDF format.

Results

The selected route instance details are displayed in the PDF format with the Route Name in the header and footer. You can print the **ROUTE OVERVIEW** page as a hard copy to record the readings manually.

Filter a Route Instance List

Procedure

1. Access the **Open Instances** or the **Instance History** page.
2. Select 👓.
3. Type a few characters in the **Filter** text box below the column header.

   For example, to find all entries with location of Roanoke, type Roa in the **Filter** text box for the **LOCATION** column, and then press **Enter**.

   The data in the column is filtered, showing all entries with location Roanoke.

Results

You can filter routes columns in the **Open Instances** or the **Instance History** page to narrow the results.

Sort Data in a Column in Route Instances

Procedure

1. Access the **Open Instances** or the **Instance History** page.
2. Select a column header, such as **LOCATION**.
   The data in the column is sorted in a specific order (ascending or descending).
3. Select the column header again to reverse the sort order.
   The data in the columns is sorted in the reverse order.

Results

You can sort routes columns in the **Open Instances** or the **Instance History** page to narrow the results. You can sort the data in the columns in an ascending or descending order.

Note: Sort criteria is not affected by filtering. For example, if you sort the routes by the **LOCATION** column and then filter by **STEP COUNT**, the sort order remains unchanged.

Show Routes Columns in Route Instances

Procedure

1. Access the **Open Instances** or the **Instance History** page.
2. From the **Column Chooser** box, select the column that you want to view.
   The selected column appears.

Hide Routes Columns in Route Instances

Procedure

1. Access the **Open Instances** or the **Instance History** page.
2. From the **Column Chooser** box, clear the check box next to the column name that you want to hide.
   The selected column is hidden.

   Note: You cannot hide the **OPEN INSTANCE NAME** or the **ROUTE INSTANCE NAME** column.

Create Ad-hoc Route Instance

Procedure

1. Access the Rounds Pro Manager page or Access the Rounds Designer page, and then select **Create Route**.
   The **Route Creation** page appears, displaying the sections where you can select steps, sequence routes, and plan routes.
2. In the **SELECT STEPS** section, select the asset and the steps to add to the route instance, and then select ＋ .

   To navigate to a child-level asset, expand the parent-level asset hierarchy.

   You can also type the name of the asset in the **Search** box.

   The selected assets and steps appear in the **SEQUENCE ROUTE** section.

3. In the **SEQUENCE ROUTE** section, select ✕ corresponding to the steps or assets that you want to remove from the route instance.

   If you select additional assets or steps from the **SELECT STEPS** section and then select ＋ , the selected items get added after the existing items in the **SEQUENCE ROUTE** section.

4. In the **PLAN ROUTE** section, the **Route Master** option is selected by default. Select the **Route Instance** option and enter values in the available fields.

5. Select **Create**.
   The ad-hoc route instance is created and appears in the **Open Instances** list.

Chapter

12

Data Loaders

Topics:

About the Rounds Pro Data Loaders

You can use the Rounds Pro Data Loaders to import content into the Rounds Pro module in bulk.

The Rounds Pro Data Loaders are used to create records in the following families and relevant relationships between them:

- Rounds Pro Picklist Values Data Loader
- Rounds Pro Step Template Data Loader
- Rounds Pro Step Readings Data Loader
- Rounds Pro Route Masters Data Loader
    - Create Route
    - Create Step
    - Human Resource
    - Teams

About the Rounds Data Loaders Requirements

This documentation assumes that your organization has completed the deployment of the Rounds Pro module. The Rounds Pro Data Loaders should be used only after the Rounds Pro module has been implemented.

About the Rounds Pro Data Loaders General Loading Strategy

This section describes any prerequisites to loading the data and the order in which the data will be loaded.

Data Import

When importing data using the Rounds Pro Data Loaders:

- The batch records is limited .xls spreadsheet file.
- You must use the data loader workbook while considering the rules described in Workbook Layout and Use.
- When importing huge number of records using the Rounds Pro Data Loader, you can split the records in the spreadsheet into batches and assign a batch ID for each batch. Records within a spreadsheet of a batch should be coded with the same Batch ID. Each list of batch records should be loaded using an individual spreadsheet. Using the batch ID, you can import the records to the Data Loaders.
- Below are the recommendations of the number of records per batch that can be loaded into Data Loaders using the Batch IDs:
    - **Picklists:** 1000 records per batch (Same for both Reading and Action types)
    - **Step Templates:** 1000 records per batch
    - **Steps:** 1000 records per batch
    - **Conditions:** 1000 records per batch

- ◦ **Routes:** 10 Routes (Not more than 1500 steps per route, no more than 5 user or team assignments per route)
- ◦ **Step Readings:** 1000 records per batch

Note: Small batches are less efficient compared to larger batches. There is overhead with each batch that can be reduced by reducing the number of batches.

Schedule and Date Fields

- The Rounds Pro Data Loaders require that Schedule values are expressed using the JSON format used in the APM database. Valid schedule expressions may be easily generated via the schedule setting feature on a schedule field in a Route or Checkpoint Task record in Record Manager, and then copying the resulting text value to the worksheet.
- The Route Data Loaders use a non-standard date format. Data should be formatted as yyyy-mm-dd hh-mm-ss (for example, 2015-05-23 17-45-34).
- All date values are assumed to be in UTC. The time zone of the user loading the data is not relevant.

About the Rounds Pro Data Loader Workbooks Layout and Use

Overview of Rounds Data Loader Workbooks

This section provides a high-level overview and explanation of how the data loader workbooks are constructed.

To import data using the Rounds Data Loaders, APM provides separate data loader workbooks for:

- **Rounds Pro Picklist Values**
- **Rounds Pro Steps**
- **Rounds Pro Step Template**
- **Rounds Pro Step Conditionals**
- **Rounds Pro Route Masters**
- **Rounds Pro Step Readings**

The workbooks support the baseline Rounds Pro functionality in APM. The workbooks must be used to perform the data load.

Each data loader workbook contains one worksheet for each node that will be populated in the data model.

Each worksheet in these data loader workbooks contain field values that must be mapped to the appropriate APM family or field combination. The individual sections in this document specify the source and target fields and relationships required between predecessors and successor.

The list of fields tabulated is not exhaustive.

Data Loader Batch Fields

The Rounds Pro Data Loaders workbooks include columns of data that are used to identify batches of related records. These values are not imported to a field in the APM database. Generally, these will be the first few columns in each worksheet. They each use a prefix that

identifies the relevant record type being imported, whereas columns that will be imported have IDs that match the field IDs in APM, which generally use the prefix MI_.

Rounds Pro Picklist Values Data Loader Workbook

When importing data using the Rounds Pro Picklist Values Data Loader, the data loader will create one Picklist Value record for each row of the worksheet. If the import worksheet specifies a Picklist Value that is an exact match for an existing record, the record is not imported. Since the unique identification of an Picklist Value record includes all its fields, it is not possible to update existing Picklist Value records using the data loader.

Note: Picklist Values records do not support Site Filtering.

On the worksheet, you will specify the picklist values that will be used in Step Templates and Steps.

Field Caption	Field ID	Data Type (Length)	Comments
Picklist Batch ID	RTE_PICK_PCKLST_ID	Character (50)	This field is required for identification during the data load process and must be unique. The value in this field is not imported to APM.
Picklist ID	MI_RTE_PICK_PCKLST_ID_C	Character (50)	This field is required and must be unique.
Value	SYCD_ID	Character (50)	This field is required.
Description	SYCD_DESC_TX	Character (255)	Provide a brief description.
Sequence	SYCD_SEQ_NBR	Numeric	This field is required and must be unique within Picklist Values.

Rounds Pro Step Template Data Loader Workbook

When importing data using the Rounds Pro Step Template Data Loader, the data loader will create one Step Template record for each row in the data loader workbook. If the import worksheet specifies a Template ID value that matches the Template ID of an existing Step Template record, the existing record will be updated. If the worksheet specifies values for Category or Picklist Value that do not already exist in the database for the specified type (numeric or character) of Step Reading the record will not be imported.

The Step Templates will be loaded into APM, and will be filtered based on the designated site name in the Site Reference Name field.

Table 2: Step Template Worksheet

Field Caption	Field ID	Data Type (Length)	Comments
Template Batch ID	RTE_PICK_PCKLST_ID	Character (50)	This field is required for identification during the data load process. It should match the ID of the Template Batch to which the Step Template will be linked. Use <Dummy ID> if you want to import standalone records not linked to a Template Batch. The value in this field is not imported to APM.
Template ID	MI_RTE_PICK_PCKLST_ID_C	Character (50)	This field is required and must be unique. The value in this field is not imported to APM.
Step Type	MI_STP_TMP_STEP_TYPE_C	Character (50)	This field is required.
Reading Type	MI_ML_STP_TMP_READING_TYPE_C	Character (50)	This field is required. The valid values are: • Character • Numeric
Reading Picklist	MI_ML_STP_TMP_RDNG_PCKLST_C	Numeric	This field is required if selected as the Reading Type.
Reading Picklist Value	MI_ML_STP_TMP_RDNG_VALS_C	Character (50)	This field is required if Reading Picklist is selected.
Action Picklist	MI_ML_STP_TMP_ACTN_PCKLST_C	Character (50)	This field is required if it is selected.
Action Picklist value	MI_ML_STP_TMP_ACTN_VALS_C	Character (50)	This field is required if Action Picklist is selected.
Site Reference Name	MI_SITE_NAME	Character (50)	This field is required and must match an existing Site name. **Note:** If you want to set the site reference to be a Global Site Reference, enter the constant '*Global*' in the MI_SITE_NAME column on the spreadsheet.

Field Caption	Field ID	Data Type (Length)	Comments
Description	MI_STP_TMP_DESC_C	Character (255)	Please provide a brief description.
Locked	MI_STP_TMP_IS_LOCK_L	Boolean	The default value for this field is False.
Status	MI_STP_TMP_STAT_C	Character (50)	The default value for this field is Active.
Is Shutdown Required	MI_STP_TMP_REQ_EQUIP_SHUT_L	Logical	The default value for this field is False.
Unit of Measure	MI_STP_TMP_UOM_C	Character (50)	The field must be a valid value in the global Unit of Measure list. This field is disabled if the Reading Type field is Character.
Frequency	MI_STP_TMP_FREQ_C		<need information>
Lower Level 1 Value	MI_ML_STP_TMP_LO_LVL1_ALRT_VAL	Character (50)	Must use one of the Picklist Values specified for the Step Reading. This field is disabled if the Reading Type field is Numeric.
Lower Level 1 Message	MI_ML_STP_TMP_LO_LVL1_MSG_C	Character (50)	None
Lower Level 2 Value	MI_ML_STP_TMP_LO_LVL2_ALRT_VAL	Character (50)	Must use one of the Picklist Values specified for the Step Reading. This field is disabled if the Reading Type field is Numeric.
Lower Level 2 Message	MI_ML_STP_TMP_LO_LVL2_MSG_C	Character (50)	None
Lower Level 3 Value	MI_ML_STP_TMP_LO_LVL3_ALRT_VAL	Character (50)	Must use one of the Picklist Values specified for the Step Reading. This field is disabled if the Reading Type field is Numeric.
Lower Level 3 Message	MI_ML_STP_TMP_LO_LVL3_MSG_C	Character (50)	None
Upper Level 1 Value	MI_ML_STP_TMP_UP_LVL1_ALRT_VAL	Character (50)	Must use one of the Picklist Values specified for the Step Reading. This field is disabled if the Reading Type field is Numeric.

Field Caption	Field ID	Data Type (Length)	Comments
Upper Level 1 Message	MI_ML_STP_TMP_UP_LVL1_MSG_C	Character (50)	None
Upper Level 2 Value	MI_ML_STP_TMP_UP_LVL2_ALRT_VAL	Character (50)	Must use one of the Picklist Values specified for the Step Reading. This field is disabled if the Reading Type field is Numeric.
Upper Level 2 Message	MI_ML_STP_TMP_UP_LVL2_MSG_C	Character (50)	None
Upper Level 3 Value	MI_ML_STP_TMP_UP_LVL3_ALRT_VAL	Character (50)	Must use one of the Picklist Values specified for the Step Reading. This field is disabled if the Reading Type field is Numeric.
Upper Level 3 Message	MI_ML_STP_TMP_UP_LVL3_MSG_C	Character (50)	None

Rounds Pro Step Conditionals Data Loader Workbook

When importing data using the Rounds Pro Step Conditionals Data Loader, the data loader will create one Step Conditional record for each row in the data loader workbook. If the import worksheet specifies a Template ID value that matches the Template ID of an existing Step Conditional record, the existing record will be updated.

Step Conditionals Worksheet (MI_STP)

Field Caption	Field ID	Data Type (Length)	Comments
Conditional Step Batch ID	ROUNDS_STP_COND_BATCH_ID	Character (50)	This field is required for identification during the data load process and must be unique. The value in this field is not imported to APM.
Step ID	MI_STP_ID_C	Character (50)	A unique ID to identify a step.
Related Asset ID	ROUNDS_STP_REL_ASSET_ID	Character (50)	If this value matches an existing Asset ID, the Conditional Step will be linked to this asset.
Related Asset Family ID	ROUNDS_STP_REL_ASSET_FAMILYID	Character (50)	If this value matches an existing Asset Family ID, the Conditional Step will be linked to this asset.

Field Caption	Field ID	Data Type (Length)	Comments
Step Name	MI_STP_COND_STP_NAME	Character (50)	The name of the Primary step. This field is required and must match an existing Step name.
Operator	MI_STP_COND_OPERATOR	Character (50)	This field specifies the operators that determine if the reading value entered for the primary Step meet the condition specified
Conditions Field Value	MI_STP_COND_FLD_VAL	Character (50)	
Conditional Step Name	MI_STP_COND_STP_NAME_COND	Character (50)	The name of the Conditional step.
Conditional Step Index	MI_STP_COND_STP_INDEX	Numeric (50)	
Immediate Parent Step	MI_STP_COND_STP_PARENT	Character (50)	This field contains the name of the current step in the route to which you want to add conditional steps.

Rounds Pro Routes Data Loader Workbook

When importing data using the Rounds Pro Routes Data Loader, you can

- Create Route Master
- Assign or unassign a Security User to the route

When importing data using the Rounds Pro Routes Data Loader, this data loader will create records as follows:

- **Route Master**: The Route Master data loader does the following:
  - Creates a Route Master record or a route template.
  - Associates or links existing steps created in the step dataloader or in the step designer.
  - Assigns the route to a user.
  - Assigns the route to a team.
  - Validates that the users, teams and steps exist already when trying to link these items together.

  Note: Update a Route Master or delete a Route Master functionality is not available.

  The Route Master is created, associated to all the steps included and is assigned to all individuals and/or teams included.

  The Route Master will be loaded into APM, and will be filtered based on the designated site name in the Site Reference Name field.

  Note: If you want to set the site reference, to be a Global Site Reference, enter the constant '*Global*' in the MI_SITE_NAME column on the spreadsheet.
- **Steps**: The data loader generates one step record for the existing steps in each row in the Step worksheet. Using this Step data loader, the steps are associated to the required route. The data loader creates one step record for each row in the Step worksheet. Step must exist before including it in the Step data loader.

The Next Date, Non-compliance Date, and the Non-compliance Next Check Date fields on the Step record will be populated automatically by existing rules based on the value in the Schedule column. If the Schedule is invalid, the record will not be created.

- **Human Resource**:
A relationship is created between the Route and the Human Resource record. Therefore, the Human Resource records must already exist before the data loader is used.
- **Teams**:
A relationship is created between the Route and the teams records. Therefore, the Teams records must already exist before the data loader is used.

Route Master Worksheet (MI_RTE_MST)

Field Caption	Field ID	Data Type (Length)	Comments
Route Batch ID	RTE_MST_BATCH_ID	Character (50)	This field is required for identification during the data load process and must be unique. The value in this field is not imported to APM.
Route ID	MI_RTE_MST_ID_C	Character (50)	This field is required and must be unique. • When you use the data loader to create Route, Measurement Locations and Checkpoint Task records. • When you use the data loader to create Route, Measurement Locations and Checkpoint Task records and assign the security users to Routes. **Note:** This field is not required and may not be populated on this worksheet when you only assign or un-assign the security users to Routes.
Route Description	MI_RTE_MST_DESC_C	Character (255)	A description of the route.
Schedule	MI_RTE_MST_SCHED_C	Character (50)	This option generates the route instances from an associated route.
EAM Job Key	MI_RTE_MST_EAM_JOB_KEY_C	Character (50)	This field is used to link a Route Master to a given EAM Job identifier.

Field Caption	Field ID	Data Type (Length)	Comments
Status	MI_RTE_MST_STATUS_F	Character (50)	This field indicates if the route has been added to the **My Routes** list.
Is Schedule Active	MI_RTE_MST_SCHEDULE_ISACTIVE	Logical	This field indicates if the Route Schedule is active. A schedule can be created for a route in the Plan Routes section, after you select the schedule option.
Next Due Date	MI_RTE_MST_NEXT_DUE_DT	Numeric (50)	The date when the next instance of the route will be generated if the route master corresponding to the instance has an active schedule.
Frequency	MI_RTE_MST_FREQ_N	Numeric (50)	This field displays a number for the duration at which a route schedule recurs.
Frequency Interval	MI_RTE_MST_FREQ_INTVAL_C	Character (50)	The time unit to measure the duration at which the route schedule recurs.
Floc Equipment Reference Number	MI_RTE_MST_FLOC_EQUI_REF_NUM_C	Character (50)	This field contains a unique alphanumeric number.
Floc Equipment Status	MI_RTE_MST_FLOC_EQUI_STS_C	Character (50)	This field displays the equipment status, Out of Service, Online, or Available.
Route Master Compliance Tracking Flag	MI_RTE_MST_CMPLNC_ISACTIVE	Button	Enable the button to activate compliance tracking for a schedule on a route.
Route Master Compliance Horizontal Interval	MI_RTE_MST_CMPLNC_HRZN_INTRVL	Character (50)	This field contains the time units to measure the frequency based on which the route instance must be completed.
Route Master Compliance Horizon Unit	MI_RTE_MST_CMPLNC_HRZN_UNIT	Numeric(50)	A number to specify the frequency in time units, such as days, weeks, and so on, based on which the route instance must be completed.
Basis For Occurrence	MI_RTE_MST_BASIS_FOR_OCCUR_C	Character (50)	You can select EAM or Schedule.

Steps Worksheet (MI_STP)

Field Caption	Field ID	Data Type (Length)	Comments
Route Batch ID	RTE_MST_BATCH_ID	Character (50)	This field is required for identification during the data load process and must be unique. The value in this field is not imported to APM.
Route ID	MI_RTE_MST_ID_C	Character (50)	This field is required and must be unique. • When you use the data loader to create Route, Measurement Locations and Checkpoint Task records. • When you use the data loader to create Route, Measurement Locations and Checkpoint Task records and assign the security users to Routes. **Note:** This field is not required and may not be populated on this worksheet when you only assign or un-assign the security users to Routes.
Related Asset ID	MI_STP_REL_ASSET_ID_C	Character (50)	If this value matches an existing Equipment ID (for Equipment) or Functional Location (for Functional Locations) the Checkpoint will be linked to this asset.
Step ID	MI_STP_ID_C	Character (50)	A unique ID to identify a step.
Step Type	MI_STP_STEP_TYPE_C	Character (50)	The type of the step, whether a strategy step, template step, or a normal step. This is a required field.
Step Sequence Number	MI_STP_SEQ_NUM	Character (50)	A unique number to identify the step sequence.

Human Resource Worksheet (MI Human Resource)

Field Caption	Field ID	Data Type (Length)	Comments
Route Batch ID	RTE_MST_BATCH_ID	Character (50)	This field is required for identification during the data load process and must be unique. The value in this field is not imported to APM.
Route ID	MI_RTE_MST_ID_C	Character (50)	This field is required and must be unique. • When you use the data loader to create Route, Measurement Locations and Checkpoint Task records. • When you use the data loader to create Route, Measurement Locations and Checkpoint Task records and assign the security users to Routes. **Note:** This field is not required and may not be populated on this worksheet when you only assign or un-assign the security users to Routes.
First Name	MI_HR_FIRST_NAME_CHR	Character (50)	The first name of the human resource personnel.
Last Name	MI_HR_LAST_NAME_CHR	Character (50)	The last name of the human resource personnel.

Teams Worksheet (MI_TEAMS)

Field Caption	Field ID	Data Type (Length)	Comments
Route Batch ID	RTE_MST_BATCH_ID	Character (50)	This field is required for identification during the data load process and must be unique. The value in this field is not imported to APM.
Route ID	MI_RTE_MST_ID_C	Character (50)	This field is required and must be unique. • When you use the data loader to create Route, Measurement Locations and Checkpoint Task records. • When you use the data loader to create Route, Measurement Locations and Checkpoint Task records and assign the security users to Routes. **Note:** This field is not required and may not be populated on this worksheet when you only assign or un-assign the security users to Routes.
Team Name	MI_TEAMS_TEAM_NAME_CHR	Character (50)	A unique ID to identify a team.

Rounds Pro Step Reading Data Loader Workbook

The Rounds Pro Step Readings Data Loader is used to import Step Readings data into APM. The Data Loader has been created as an additional way to get the readings data from different sources into APM.

Note: You cannot upload Readings for a Route Instance that is closed or checked out by another user.

The Step Reading Worksheet (MI_STP_RDNG)

The following table provides information about the various columns in the Rounds Pro Step Readings Data Loader.

Field Caption	Field ID	Data Type (Length)	Comments
Reading Batch ID	STEP_READING_BATCH_ID	Character (50)	Enter a batch number, which is used to identify the batch. A value is required and must be unique. Data related to all the rows that contain the same batch number is imported in a single batch. However, the value in this field is not imported into APM. **Important:** The maximum number of Readings supported per batch is 1000. You can upload more than 1000 records in the same Data Loader file, but provide a different batch ID for every 1000 records. If you are loading Step Readings for an existing Route Instance, provide the same batch ID for all the Step Readings in the Route Instance.
Step Name	MI_STP_ID_C	Character (50)	Identifies a step. A value is required and must be unique.
Asset ID	ROUNDS_STP_REL_ASSET_ID	Character (50)	Identifies the Asset ID associated with the step. The value in this field, combined with the value in the Step Name field, is used to uniquely identify a step under which the Step Reading is added. A value is required and must match the value in the Related Asset ID (MI_STP_REL_ASSET_ID_C) field in the Measurement Step family.
Reading Value Character	MI_STP_RDNG_RDNG_VAL_CHR_C	Character (2000)	Identifies the Character Reading value. **Note:** If the Step Reading Type is Picklist: Single Select and the Picklist Type is Character any value entered in the Reading Value Numeric field is ignored.
Reading Value Numeric	MI_STP_RDNG_RDNG_VAL_NUM_N	Numeric	Identifies the Numeric Reading value. **Note:** If the Step Reading Type is Picklist: Single Select and the Picklist Type is Numeric any value entered in the Reading Value Character field is ignored.
Reading Taken Date	MI_STP_RDNG_RDNG_TKN_DT_D	DateTme	Identifies the date and time at which the Reading was taken. A value is required. Enter a value in the following format: yyyy-MM-dd HH:mm:ss. Depending on the time zone of the user who uploads the Data Loader workbook, the value in this field is converted into the UTC format. **Note:** The user ID of the user who uploads the Data Loader workbok is stored in the Reading Taken By field.

Field Caption	Field ID	Data Type (Length)	Comments
Comment	MI_STP_RDNG_CMMNTS_C	Character (255)	None
Action Taken	MI_STP_RDNG_ACTN_TKN_C	Character (100)	Enter a value that matches one of the values in the **Actions** section of the **Picklist Management** page.
Route Instance Name	MI_RTE_INST_NAME_C	Character (200)	Enter the name of an existing Route Instance in which you want to create the Step Reading. Leave this field blank if you don't want to associate this reading to any instance.

About the Rounds Pro Data Loaders Load Verification

After each worksheet is loaded:

- Review the data loader log to identify any errors or warnings
- Update the data loader workbook to correct any errors, and then re-import
- Repeat until the import of each record is error free

Note: It is recommended that a query is executed in APM on the relevant family to ensure that records have been created and populated as expected. Imported records should also be spot checked in the **Rounds Pro Manager** and the **Rounds Designer** to verify that the expected relationships have been created.

To perform the load verification of the loaded data loaders, log in to the Rounds Pro as a Rounds Pro Administrator user.

In the **Applications** menu, select **Health**, and then select **Rounds Pro Manager**. The **Rounds Pro Manager** page appears. From the **Rounds Pro Manager** page, access the **Rounds Designer** and the Route details page to verify the data loaded using the data loaders.

Note: The data loaders will load new data records only. Any changes to the records that are loaded can be made through the Rounds Pro Manager only.

Data Loader Load Verification for Rounds Designer

Access the Picklist Management page and verify that the loaded data using Data loader appears as expected with all the records imported and that the values can be edited or new values added to the both Action and Reading Picklist type. Also verify that you can create new character (and numeric, if applicable) Picklists.

Access the Step Template page and verify that the loaded Step Templates list appear as expected and the Step template records displays all the details and can be edited as required.

Verify that the Health Indicator are created for the given levels as expected.

Access a Step and verify that the loaded Steps list appear as expected in the asset hierarchy.

Select a Step to view the step details and verify that the Step records displays all the imported values and can be edited as required.

Access a Step that was imported, and verify that the Health Indicators record is linked to the Step as expected.

Access a Step Condition and verify that all the data is loaded from the data loader for that conditional step.

Data Loader Load Verification for Route Masters

Access the Route Masters page.

Verify that the loaded **Route Masters** page appears as expected with all the data for the Routes, associated steps and is assigned to all individuals and/or teams included in the Data Loader.

In the **Route Masters** page, select a rout from the **ROUTE NAME** column, verify the following list for the selected route:

- The existing assigned assets and steps appear as expected.
- The existing steps created in the step data loader or in the step designer can be assigned to the route.
- The assigned Assets and Steps can be reordered.
- The asset details appearing as imported.
- The Route name and route description appear as imported.
- The route schedules have been populated.
- The route has been to a user or team.
- The Basic for Occurrence (EAM and Schedule) details are loaded as expected with all the required data.
- The Route Preview details are appearing as expected with the loaded data.
- It can be assigned to a new User or Team or remove the assigned team or user.

Verify that the updated changes in the routes are appearing as expected in the **Route Masters** page.

Chapter

13

Compliance Tracking

Topics:

- [About Compliance Tracking](#)

About Compliance Tracking

The Compliance Tracking feature enables you to monitor and analyze your data collection processes, providing insights into both completed and missed readings. This helps identify readings that were supposed to be taken but were not, as well as those that were taken but not within the scheduled timeframe. The insights derived from this data can be used to detect process inefficiencies and improve operational compliance.

To facilitate compliance tracking, a new APM family, **Compliance Track**, has been introduced. Each time a route instance is created, the system updates the **Compliance Track** family automatically by inserting an entry for each possible step reading in the corresponding route instance. These entries contain critical data fields such as **Due Date** and **Non-Compliance Date** for each step involved in the route.

Once the route is checked in, the system updates the **Compliance Track** family with additional fields like **Completed Date** and whether a step is excluded due to conditional settings (**Is Conditional Step Excluded**). For example, if a step is a conditional step (a child step under a condition) and the condition is not met, the system will not prompt the operator to collect a reading for that step. In such cases, the **Is Conditional Step Excluded** flag is set to True, allowing for the generation of accurate and precise reports.

The **Compliance Track** family integrates with other Rounds Pro families, such as **Step**, **Step Reading**, and **Route Instance**. This interconnected structure facilitates the generation of reports, providing insights into the substantial data collected by operators. These reports can be sliced at various levels—such as by route or asset—enabling more effective process optimization.

Chapter

14

Lubricants

Topics:

About Lubricants

Before creating a Lubrication Steps or Lubrication Steps Template, you must enter lubrication information used by your company in the form of Lubrication Component, Lubrication Method, Lubricant, or Lubricant Manufacturer records.

You can also create Lubrication Management Recommendations for users to select after collecting data at Checkpoints.

Create Lubrication Components, Methods, Manufacturers, and Lubricants

About This Task

Values from Lubrication Component, Lubrication Method, Lubricant, and, indirectly, Lubricant Manufacturer records are used to populate lists that appear on the Lubrication Steps and Lubrication Steps Template datasheets.

Therefore, before you create a Lubrication Steps or Lubrication Steps Template record, you must create one or more records in each of these families to identify the various lubrication information used by your company.

Procedure

1. On the top navigation bar, select ⊞.

   A menu appears.
2. In the menu, in the search bar, enter one of the following family names:
   - Lubrication Component
   - Lubrication Method
   - Lubricant Manufacturer
   - Lubricant
3. Select the family in the list of search results.

   A blank datasheet appears.
4. As needed, enter values in the available fields for the family:
   - Lubrication Component
   - Lubrication Method
   - Lubricant Manufacturer

     Note: At least one Lubricant Manufacturer record must be created before you can create a Lubricant record.
   - Lubricant

   Note: If needed, select the site to which you want to assign the record, or designate the record as a Global record.

   Tip: For more information, refer to the Site Filtering section of the documentation.
5. Select 💾.

   A new record is created.

6. Repeat these steps until you have created records for each lubrication component, method, manufacturer, and lubricant used by your company.

Create a Lubrication Management Recommendation Record

Procedure

1. On the top navigation bar, select .
2. In the menu, in the search bar, enter `Lubrication Management Recommendation`, and then select the record from the list.
   The datasheet for the Lubrication Management Recommendation record appears.
3. As required, enter values In the available fields to create the Lubrication Management Recommendation record.
4. Select .
   A new Lubrication Management Recommendation record is created.

Chapter

15

Reference

Topics:

General Reference

User Settings on Rounds Pro Mobile App

The table describes the available list of options for the user in the **User Settings** page of Rounds Pro mobile app.

Option Name	Option Type	Description
Remember personal settings on this device	Button	If the option is enabled, all column settings, username, and any other preferences is saved for the login user. If the option is disabled, the preferences are configured to default settings. The user profile image is removed and set to default image.
Ask to check out routes with or without images	Button	If the option is enabled, a window appears when you check-out routes that have existing images. You can choose to download the route with or without images. If the option is disabled, existing images are downloaded by default for each route that is checked out.
Check-in routes that are less than 100% complete as In-Progress	Button	A window appears on check-in for routes that are less than 100% complete. You can choose to check-in the route as finished or in-progress. If the option is enabled, the default selection is **Check-in as In-Progress**. If the option is disabled, the default selection is **Check-in as Finished**.
Retain Instance History on Device	Button	If the option is enabled, Route Instances that have been marked Finished will be saved on the mobile device for 30 days and will be deleted automatically from the **My Routes** list after the expiration date. **Note:** The Checked In status and Date of Expiry of the Route Instance appear in the **ACTION** column of the **My Routes** page. If the option is disabled, Route Instances that have been marked finished are removed automatically from the **My Routes** list.

Rounds Pro Data Model

Rounds Pro leverages the fundamental APM entity and relationship family infrastructure for storing data in the APM database. The data that is stored in the APM database can be transferred to a mobile device, where you can record readings and create recommendations. Those readings and recommendations can then be transferred and stored in the APM database. When you are working with records in Rounds Pro, it is helpful to visualize the data model illustration. In the following illustration: The shaded boxes represent entity families. The arrows represent relationship families. You can determine the direction of each relationship from the direction of the arrow head. Black arrows and boxes represent entity

families, relationship families, and associated relationship definitions that are configured in the baseline database and do not require customizing for baseline functionality to work.
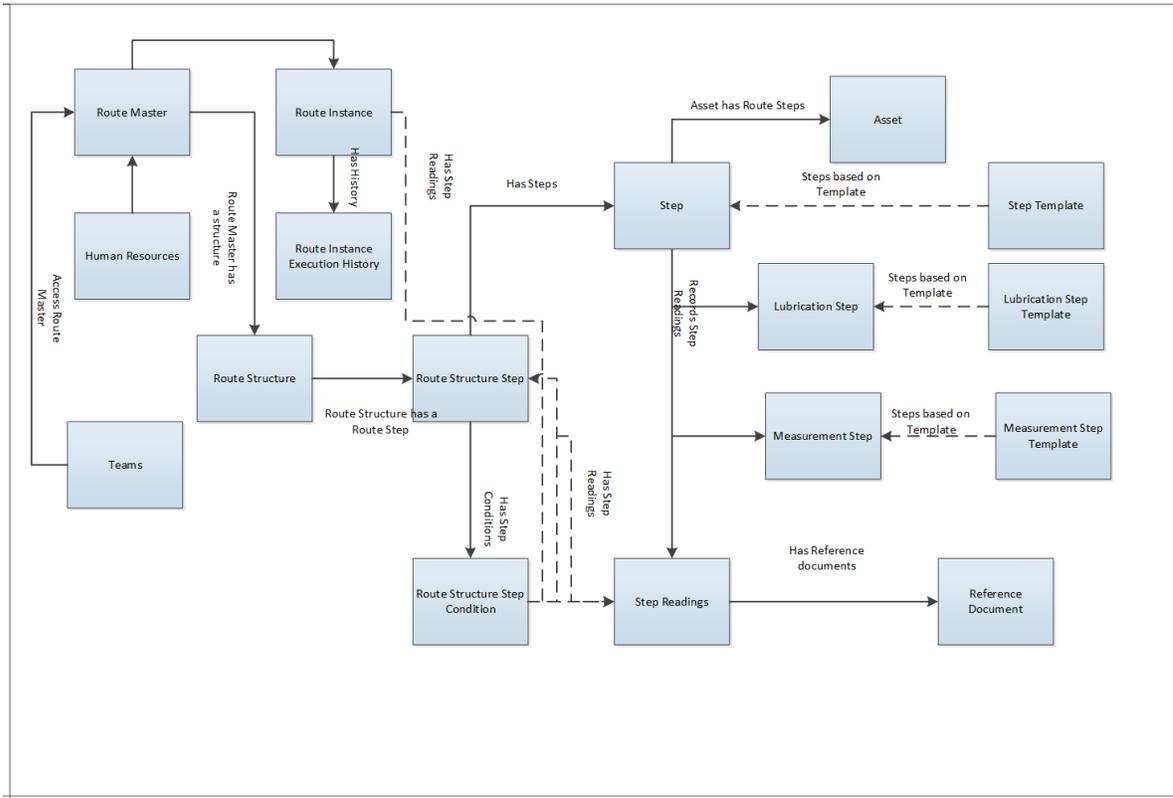
Rounds Pro Security Groups

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.

Role	Security Groups
MI Rounds-Pro Admin	• MI Rounds-Pro Administrator • MI Security Role
MI Rounds-Pro User	• MI Rounds-Pro Mobile User • MI Security Role

Note:

- Users can be member of Security Groups or Security Roles.
- Security Groups can be associated with Security Roles.
- You can configure View, Update, Insert, and Delete permissions on families for groups and users.

- Users who should be able to run Rounds Pro queries to view the Rounds Pro data after it has been uploaded from a tablet or a mobile device will need a combination of the privileges listed in the following table, depending on the families included in the queries they want to run.

The following table lists the default privileges that members of each group have to the Rounds Pro entity and relationship families.

Family	Rounds Pro Administrator	Rounds Pro Mobile User
Action	View, Update, Insert, Delete	View, Update, Insert, Delete
Asset Has Steps	View, Update, Insert, Delete	View
Condition Has Structure Step	View, Update, Insert, Delete	View
Equipment	View, Update, Insert, Delete	View
Functional Location	View, Update, Insert, Delete	View
Has Reference Documents	View, Update, Insert, Delete	View, Update, Insert, Delete
Has Route Instance Execution History	View, Update, Insert, Delete	View, Update, Insert, Delete
Has Route Structure	View, Update, Insert, Delete	View
Has Route Structure Step Condition	View, Update, Insert, Delete	View
Has Step Reading	View, Update, Insert, Delete	View, Update, Insert, Delete
Has Structure Steps	View, Update, Insert, Delete	View
Lubrication Step	View, Update, Insert, Delete	View
Measurement Step	View, Update, Insert, Delete	View
Operator Rounds Recommendation	View, Update, Insert, Delete	View, Update, Insert, Delete
Reference Document	View, Update, Insert, Delete	View, Update, Insert, Delete
Route Instance	View, Update, Insert, Delete	View, Update, Insert
Route Instance Execution History	View, Update, Insert, Delete	View, Update, Insert, Delete
Route Master	View, Update, Insert, Delete	View
Route Master Has Assignees	View, Update, Insert, Delete	View
Route Picklist	View, Update, Insert, Delete	View
Route Structure	View, Update, Insert, Delete	View
Route Structure Step	View, Update, Insert, Delete	View
Route Structure Step Condition	View, Update, Insert, Delete	View
Step	View, Update, Insert, Delete	View
Step Has Additional Instruction	View, Update, Insert, Delete	View
Step Has Reference Documents	View, Update, Insert, Delete	View, Update, Insert, Delete
Step Has Source	View, Update, Insert, Delete	View, Update, Insert, Delete

Family	Rounds Pro Administrator	Rounds Pro Mobile User
Step Reading	View, Update, Insert, Delete	View, Update, Insert, Delete
Step Template	View, Update, Insert, Delete	View
Structure Step Is A Step	View, Update, Insert, Delete	View

Rounds Pro URLs

There is one URL route associated with Rounds Pro: rounds pro. The following table describes the various paths that build on the route, and the elements that you can specify for each.

Rounds Pro

Element	Description	Notes
app/roundspro/#/	Displays the **Rounds Pro Manager** page	N/A
app/roundspro/#/route-instance-open	Displays the Routes **Open Instances** page.	N/A
roundspro/#/route-instance-history	Displays the Routes **Instance History** page.	N/A
app/roundspro/#/rounds-steps	Displays the **Steps** page.	N/A
app/roundspro/#/rounds-designer	Displays the **Rounds Designer** page	N/A
app/roundspro/#/create-route-master	Displays the **Route Creation** page	N/A
app/roundspro/#/picklist-management	Dispalys the **Picklist Management** page	N/A
app/roundspro/#/dashboard? path={path to dashboard}	Displays the **Rounds Compliance View** of Dashboard	The app/roundspro/#/dashboard? path={path to dashboard} URL lets you construct a hyperlink that will open the **Rounds Compliance View**. The URL accepts one parameter, RouteInstanceKey, which accepts the numeric entity key of the desired Route Instance for which you want to view the compliance on the dashboard. Example: app/roundspro/#/route-instance-open;rte=dashboard/ 64263659100

Element	Description	Notes
app/roundspro/#/edit-route-master/ <RouteInstanceKey>/<RouteName>	Dispalys the selected Route details page	The app/roundspro/#/edit-route-master URL lets you construct a hyperlink that will open the page where you can edit the selected route master. The URL accepts two parameters, RouteMasterKey, which accepts the numeric entity key of the desired Route Master, and the RouteName which accepts the numeric entity key of the route name. The RouteKey and RouteName parameters are required. Example: app/roundspro/#/edit-route-master/64263757710/First %20Route%20JTN
app/roundspro/#/route-instance-details/<RouteInstanceKey>	Displays the Route Instance details page	The app/roundspro/#/route-instance-details URL lets you construct a hyperlink that will open the Route Instance details page. The URL accepts one parameter, RouteInstanceKey, which accepts the numeric entity key of the desired Route Instance. The RouteInstanceKey parameter is required. Example: app/roundspro/#/route-instance-details/ 64263758240

Element	Description	Notes
app/roundspro/#/rounds-designer/ <AssetKey>/<StepKey>	Displays the step details page	The app/roundspro/#/rounds-designer URL lets you construct a hyperlink that will open the Step details page. The URL accepts two parameters, AssetKey, which accepts the numeric entity key of the desired Asset, and the StepKey which accepts the numeric entity key of the Step. The AssetKey and StepKey parameters are required. Example: app/roundspro/#/rounds-designer/ 64263289050/64263757705
app/roundspro/#/rounds-designer/ template/<StepTemplateKey>	Displays the step template details page	The app/roundspro/#/rounds-designer/template URL lets you construct a hyperlink that will open the Step Template details page. The URL accepts one parameter, StepTemplateKey, which accepts the numeric entity key of the desired Step Template. The StepTemplateKey parameter is required. Example: app/roundspro/#/ rounds-designer/template/ 64263720938

Rounds Pro System Code Tables

The following System Code Tables are used by Rounds Pro:

Table ID	Table Description	Function
FLOC_EQUIPMENT_STATUS	Possible value: • OOS - Out of service • ONL - Online • AVL - Available	Used to populate values displayed in the Floc Equipment Status field when creating or modifying a Route in the **Create Route** page.
MI_PRIORITY	Possible value: • 1 (Urgent (Maximo)) • 2 (High (Maximo)) • 3 (Medium (Maximo)) • 4 (Low (Maximo)) • VERY HIGH (Very high) • MEDIUM (Medium) • LOW (Low) • HIGH (High) • 5 (Critical (SAP))	Used to populate the Priority list in Steps and Step Template records.
MI_TIME_UNITS	Possible values: • Minutes (Minutes) • Hours (Hours) • Days (Days) • Weeks (Weeks) • Months (Months) • Years (Years)	Used to configure the time units values for various fields. The COMPLIANCE HORIZON and COMPLIANCE HORIZON INTERVAL fields in the Plan Routes section are supported by this system code to configure additional values.

About Site Filtering

Site filtering in Rounds Pro is achieved by specifying a value for the **Site Reference Key** for a record. A user must have privileges for the specified site to be able to access the records for the site. Users can be assigned to multiple sites and can access global data, and the data for each of the sites to which they are assigned in the **Route History**, **Route Masters**, **Steps** and **Open Instance** tabs in **Rounds Pro Manager**.

Note: By default, **Site** is the second column in the grids in the **Route Masters**, **Steps**, **Open Instance**, and **Instance History** tabs.

Site filtering behaviour is applied to all areas where data is handled in Rounds Pro including Data Loaders, Asset Hierarchy, Global Search, and Queries.

Users can view the site for the following records, in the areas shown in the wireframes:

Users can view the site for the following records as shown below:

- **Steps**: The site value is displayed in the header of a step record, as shown in the following image:

  Note:
  - The site label is displayed after the user saves the newly created step.
  - A step created from a template inherits the site from the asset.
  - The site value for a record that has no value in the site reference field is set to **Global**.
- **Open and Historical Instances**: The site is displayed in the header of the open instance or historical instance record, as shown in the following image:
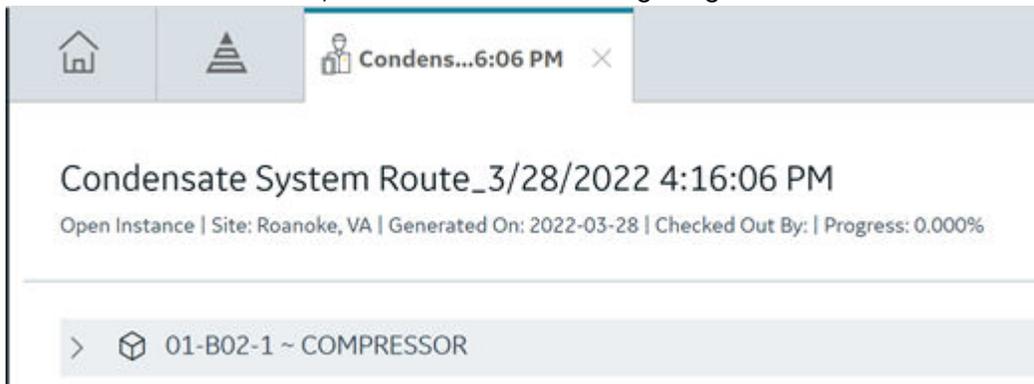
  Users can search and sort the values in the **Open Instances and Instance History** data grid by site using the 👓 icon.

  Note: Open Instances and Instance History records that have no value assigned to the site reference field are displayed as **Global** in the **Site** column.

Site Inheritance for Steps

A step record inherits the site value from the Equipment or Functional Location to which it is linked. The readings taken on a step, inherit site value from the step's site value.

Note: All site values that are left blank are set to **Global** and you can search and sort these values in the **Steps** grid using the 👓 icon.

You can sort and search values in the **Site** column available in the **Steps** tab.

Site Inheritance for Recommendations

When you create a recommendation from a step in the Rounds Pro mobile application, the site value of the step is assigned to the recommendation record.

When you create a stand-alone recommendation (not tied to an asset) in the Rounds Pro mobile application, the site value of the Route Master is assigned to the recommendation record.

Site Selection During Route Creation

In the **Route Creation** page, a user can select the site value through a drop-down list, which initially displays the default site value for the user and consists of all the sites that the user is assigned to.

The Asset Hierarchy in the **Select Steps** pane is filtered as per the selected site. When you add a new step from a site, the Site drop-down list is disabled because a route can only have steps from only one site. It is re-enabled when you remove all the steps.

Note: Assets that have no site assigned to them are considered **Global** assets and are always shown in the Asset Hierarchy. These steps can be assigned to any route, in addition to steps from only one other site. If a route master is assigned steps from only the **Global** site, the route master's site value is set to **Global**. However, if the route master is assigned additional steps from another site (not Global), the corresponding site value is set for that route master.

The site name for a Route Instance, Open Instance, or Historical Instance is inherited from the Route Master's site.

Users and Teams assigned to the site of the Route Master appear in the **Assign to** drop-down list.

Note: If you set the Assign to field user value before adding a step, the Route Master's site and user's site can be different. In that case, an error message appears indicating that the user does not belong to the site of the Route Master.

Users can search and sort the values in the **Route Master Data** grid by site, using the icon.

Note: Route Masters that have no value assigned to the site reference field are displayed as **Global** in the **Site** column.

Family Field Descriptions

Step Template Details Records

Step Template Details records store details about Step Templates that are used to create multiple steps. This topic provides a list and description of the fields that exist for the Step Template Details family. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

Field	Data Type	Description	Behavior and Usage
ACTION PICKLIST	Character	The action categories that you can select to perform on a step.	This field contains the categories defined in **Actions** section of the **Picklist Management** page. For every Reading Type, corresponding values are defined for the Action Picklist.
ACTION VALUES	Character	The values defined for the selected action category.	This field contains the values defined for the action category in the **Actions** section of the **Picklist Management** page. Selecting the value displays the value as a chip in the box. You can add only one name at a time to the box. You can add a maximum of 15 chips for a step. The corresponding drop-down list of Action Values matches the order of the chips in the Action Values field.
ASSIGNED ASSETS	Character	The names of the assets to which the template will be applied.	This is a read-only field, which allows you to search, filter, and select multiple assets to which you want to apply the template. **Note:** • You cannot delete an asset in the box. • The assets appear alphabetically.
DISPLAY MESSAGE	Character	A message providing information on the limit value or the health indicator.	Enter a display message associated with the limit or the health indicator in the **Generate Health Indicators** section. The message can contain up to 50 characters. You can see this message when you enter the readings for the step using Rounds Pro Mobile application.

Field	Data Type	Description	Behavior and Usage
HEALTH INDICATOR TYPE (Numeric reading type)	Character	Displays the following indicators with the appropriate color code: • Alert (Red) • Warning (Yellow) • Normal (Green)	The appropriate indicators appear against each limit based on the upper and lower threshold levels: • Upper Level 3 or Lower Level 3: Indicates a severe upper or lower threshold for readings. When a user enters a reading at this level while collecting data, an **Alert** health indicator appears. • Upper Level 2 or Lower Level 2: Indicates an upper or lower threshold for readings. When a user enters a reading at this level while collecting data, a **Alert** health indicator appears. • Upper Level 1 or Lower Level 1: Indicates an upper or lower threshold for readings. When a user enters a reading at this level while collecting data, a **Warning** health indicator appears. • The readings between Upper Level 1 and Lower Level 1 are in the normal range.
HEALTH INDICATOR TYPE(Picklist reading type)	Character	Displays the following indicators with the appropriate color code: • Alert (Red) • Warning (Yellow)	The appropriate indicators appear against each limit based on the upper and lower threshold levels: • Upper Level 3 or Lower Level 3: Indicates a severe upper or lower threshold for readings. When a user enters a reading at this level while collecting data, an **Alert** health indicator appears. • Upper Level 2 or Lower Level 2: Indicates an upper or lower threshold for readings. When a user enters a reading at this level while collecting data, a **Alert** health indicator appears. • Upper Level 1 or Lower Level 1: Indicates an upper or lower threshold for readings. When a user enters a reading at this level while collecting data, a **Warning** health indicator appears.
READING PICKLIST	Character	The reading types that you can select from the categories available.	This field contains the values defined in the **Readings** section of the **Picklist Management** page.

Field	Data Type	Description	Behavior and Usage
READING TYPE	Character/ Numeric	The type of data that users can enter when creating a reading linked to the Step.	This field contains the following values: • Picklist: Single Select • Text Entry: Character • Text Entry: Numeric This is a required field.
READING VALUES	Character/ Numeric	The values defined for the selected reading category.	This field contains the values defined for the action category in the **Readings** section of the **Picklist Management** page. Selecting the value displays the value as a chip in the box. You can add only one name at a time to the box. You can add a maximum of 15 chips for a step. **Note:** Click ✕ in the chip to delete a value appearing in the box.
STEP DESCRIPTION	Character	A description of the Step.	In this box, you can enter a description of the action users will be completing when they enter readings for this step. For example, Pump Check, Vibration Check, or Temperature Check. The description can contain up to 100 characters.
STEP TYPE	Character	The category to which the Step belongs.	By default, this field has the value **Measurement Location**. This is a required field.
TEMPLATE NAME	Character	The name of the Step Template.	You can enter a unique alphanumeric name that you want to assign to the Step Template. The template name can contain up to 50 characters. This is a required field.

Step Details Records

Step Details records store details about Steps that are included in a route. This topic provides a list and description of the fields that exist for the Step Details family. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

Field	Data Type	Description	Behavior and Usage
ACTION PICKLIST	Character	The action categories that you can select to perform on a step.	This field contains the categories defined in **Actions** section of the **Picklist Management** page.
ACTION VALUES	Character	The values defined for the selected action category.	This field contains the values defined for the action category in the **Actions** section of the **Picklist Management** page.

Field	Data Type	Description	Behavior and Usage
ALLOW PHOTOS	Radio Button	This option allows you to enable **Photos** section in the **Step details** page of Rounds Pro mobile application to add images.	You can select one of the following options: • Yes: The **Photos** section is enabled in the **Step details** page of Rounds Pro mobile application. You can capture or attach images to the step as a photo evidence. • No: The **Photos** section is not enabled.
ASSET	Character	Displays Asset which is selected from the Asset Hierarchy.	You can add a conditional step from an asset that is different from the parent asset.
CONDITIONS	Character/Numeric	This field stores the value of the Step condition.	Select or enter the reading value to set the condition. This condition combined with the value in the **OPERATOR** box, will activate the conditional step to appear. If the Step type is picklist, the picklist values for that step appear in the drop-down list. If the Step type is numeric, then you can enter a number only. If the Step type is character, then you can enter a character string.
CONDITIONAL STEP	Character	This field displays the step that must be performed if the condition set for the primary Step is met.	Select a Step that exists under the asset where the primary step exists or type to search for the step that must be activated if the reading values meet the condition set.
DISPLAY MESSAGE	Character	A message providing information on the limit value or the health indicator.	Enter a display message associated with the limit or the health indicator in the **Limits Only** or **Generate Health Indicators** section. The message can contain up to 50 characters. You can see this message when you enter the readings for the step using Mobile Rounds.
GENERATE HEALTH INDICATORS	Radio button	This option allows you to create health indicators based on the threshold level for readings.	Select this option to create health indicators based on the threshold level for readings.

Field	Data Type	Description	Behavior and Usage
HEALTH INDICATOR TYPE (Numeric reading type)	Character	Displays the following indicators with the appropriate color code: • Alert (Red) • Warning (Yellow) • Normal (Green)	The appropriate indicators appear against each limit based on the upper and lower threshold levels: • Upper Level 3 or Lower Level 3: Indicates a severe upper or lower threshold for readings. When a user enters a reading at this level while collecting data, an **Alert** health indicator appears. • Upper Level 2 or Lower Level 2: Indicates an upper or lower threshold for readings. When a user enters a reading at this level while collecting data, a **Alert** health indicator appears. • Upper Level 1 or Lower Level 1: Indicates an upper or lower threshold for readings. When a user enters a reading at this level while collecting data, a **Warning** health indicator appears. • The readings between Upper Level 1 and Lower Level 1 are in the normal range.
HEALTH INDICATOR TYPE(Picklist reading type)	Character	Displays the following indicators with the approriate color code: • Alert (Red) • Warning (Yellow)	The appropriate indicators appear against each limit based on the upper and lower threshold levels: • Upper Level 3 or Lower Level 3: Indicates a severe upper or lower threshold for readings. When a user enters a reading at this level while collecting data, an **Alert** health indicator appears. • Upper Level 2 or Lower Level 2: Indicates an upper or lower threshold for readings. When a user enters a reading at this level while collecting data, a **Alert** health indicator appears. • Upper Level 1 or Lower Level 1: Indicates an upper or lower threshold for readings. When a user enters a reading at this level while collecting data, a **Warning** health indicator appears.
Jobs Queue (x)	Drop-down List Box	Displays the status of each job.	When you update a Step or a Step Template, the **Jobs Queue (x)** shows the status of each Step and Step Template.

Field	Data Type	Description	Behavior and Usage
LIMIT	Character/Numeric	The threshold value for the readings entered for the Step in Rounds Pro mobile app.	Based on the value selected for READING TYPE you can enter the following readings: • Character: The Limit rows do not appear in the LIMITS section. You cannot enter limits. • Numeric: Numbers (decimal, negative or positive). • Picklist: Select from the picklist values available for the step. After you select a value, it is not available for selection again. If you delete a value in the Picklist, the limit associated to that value is also deleted.
LIMIT COLOR	Character	The color and the name of the color associated with the limit value.	Select the Limit color from the drop-down list to be associated with the limit value.
None	Radio Button	This option allows you to delete the Limits values, if any generated for the health indicators.	Select this option to delete Limits values when the READING TYPE is Numeric or Picklist: Single Select.
Open Strategy	Link	Displays a link associated with a Strategy Step.	This link appears in the **Details** workspace only when you select a Strategy Step in the Assets hierarchy. You can select this link to navigate to the **Strategy Details** page.
Open Template	Link	Displays a link associated with a Step Template	This link appears in the **Details** workspace only when you select a step associated to a template in the Assets hierarchy. You can select this link to navigate to the **Step Template Details** page.
OPERATOR	Character	This field specifies the operators that determine if the reading value entered for the primary Step meet the condition specified.	Select the required operator from the drop-down list. The values available in this drop-down list are dependent on the value in the PRIMARY STEP NAME: • If the Step type is Character, **Is** and **Is Not** appear in the list. CHARACTER type steps that are not linked to picklists do not have conditionals. • If the Step type is Numeric, standard numeric operators appear in the list. • If the Step type is Picklist, the values that are added to the picklist appear in the list.
PRIMARY STEP NAME	Character	The name of the step in a route, to which you want to add conditional steps.	The field contains the name of the current step in the route to which you want to add conditional steps. **Note:** Subsequent conditional steps that are added are displayed as STEP NAME.

Field	Data Type	Description	Behavior and Usage
READING PICKLIST	Character	The data that is displayed if value for READING TYPE is Picklist.	This field contains the values defined in the value set.
READING TYPE	Character/Numeric	The type of data that users can enter when creating a reading linked to the Step.	This field contains the following values: • Picklist: Single Select • Text Entry: Character • Text Entry: Numeric
READING VALUES	Character/Numeric	The values defined for the selected reading category.	This field contains the values defined for the action category in the **Readings** section of the **Picklist Management** page. Click **Save** to save the changes. If the chip is in use in the current step, then the chip is greyed out and cannot be deleted. If the chip is in use in a limit or a conditional in any other step linked to the parent asset, then the deletion does not happen. When multiple chips are selected for deletion and you click **Save**, in case there are conflicts for deleting any of the chips, the **Save Conflicts** window appears. The window displays information about the chips that were not deleted and their relationships to other steps. The step details page is refreshed with the changes.
Schedule	Character	The schedule using which you want to take readings for the Measurement Step.	You can set a schedule, modify, or remove a schedule from the step.
STEP DESCRIPTION	Character	A description of the Step.	In this box, you can enter a description of the action users will be completing when they enter readings for this step. For example, Pump Check, Vibration Check, or Temperature Check.
STEP NAME	Character	The name of the Step.	You can enter a unique alphanumeric name that you want to assign to the Step. This is a required field.
STEP TYPE	Character	The category to which the Step belongs.	By default, this field has the value **Measurement Location**. This is a required field.
STRATEGY INTERVAL	Character	Frequency at which the Step must be carried out.	This field contains the following values: • Hourly • Weekly • Monthly

Field	Data Type	Description	Behavior and Usage
STRATEGY INTERVAL	Numeric	Displays the frequency at which the Step is carried out.	This field appears in the **Details** workspace when you open a Step that is linked to Strategy. This is a read-only field. **Note:** This field is available only if the Step is a Strategy Step. The subscript s in the Step icon ⌐s indicates that the Step is a Strategy Step.
STRATEGY INTERVAL UNITS	Character	Displays the frequency measurement unit at which the Step is carried out.	This field is read-only that contains the following values: • Days • Weeks • Months **Note:** This field is available only if the Step is a Strategy Step. The subscript s in the Step icon ⌐s indicates that the Step is a Strategy Step.
UNIT OF MEASUREMENT	Character	The unit of measure that users can specify when entering a numeric reading value for the Step.	You can select a value from the list. The values are populated from the System code table – UOME. This field is disabled if the STEP TYPE field contains the value Character.

Reference Documents Records

Reference Documents records store details about reference documents that are linked to a step included in a route. This topic provides a list and description of the fields that exist for the Reference Documents family. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

Field	Data Type	Description	Behavior and Usage
ADDED BY	Character	This field stores the name of the individual who added the reference document.	None
ADDED DATE	Numeric	This field stores the date on which the user added the reference document.	None

Field	Data Type	Description	Behavior and Usage
ADDITIONAL INSTRUCTIONS	Character	This field stores the additional instructions that is provided to follow while performing a step.	You can enter additional instructions that need to be followed by the operators while performing the step. The text can contain containing a maximum of 500 characters. The additional instructions appear in the step details page of the Rounds Pro mobile application.
FILE	Character	This field allows you to attach a file to link to the step.	This field appears in the **Add Reference Document** window when you select the **FILE** option. Select ooo to browse and select a file, to link to the step as a reference document. You can link the following file types: • .pdf • .bmp • .txt • .jpg • .jpeg • .png
HYPERLINK	Character	This field allows you to enter the URL of the hyperlink to reference in the step.	This field appears in the **Add Reference Document** window when you select the **HYPERLINK** option. Add the URL of the hyperlink that you want to reference in the step.
NAME	Character	This field stores the name of the reference document.	The name entered in the **REFERENCE DOCUMENT NAME** field when you add a document or a hyperlink to the step.
PHOTO	Image	Displays small image of the photo attached to the step.	You can attach a maximum of one photo to the step to provide more information related the step.
TOTAL KB	Numeric	This field stores the size of the attached document.	None

Field	Data Type	Description	Behavior and Usage
REFERENCE DOCUMENT NAME	Character	This field allows you to enter the name of the reference document.	Enter a name for the reference document or hyperlink that you want to add to the step.
TYPE	Character	This field stores the type of the reference document linked to the step.	One of the following values is displayed based on the document type: • .pdf • .doc • Image • Hyperlink

Plan Route Records

Plan Route records store details about how the route is scheduled to be performed and completed for the assets. This topic provides a list and description of the fields that exist for the Plan Routes family. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

Field	Data Type	Description	Behavior and Usage
ACTIVATE ROUTE	Button	Create or update a route instance as per the defined schedule.	Enable the button to create a route instance at the scheduled time. If the button is disabled, then route instances are not generated based on the defined schedule. Disable the button to delete the schedule defined to create the route instances. **Note:** You can enable or disable this button only if a schedule is defined.
Adjust for Daylight Saving Time	Character	Adjust the schedule for Daylight Saving Time (DST).	For schedules that are set to recur every certain number of hours or minutes after the specified Start time, for time zones that use Daylight Saving Time (DST), you can specify whether you want the schedule to adjust for DST automatically. Select the check box to adjust the schedule for daylight savings so that the Route will be due at the same time of day whether or not DST is in effect. If you do not select this option, the Route will be due at the actual time as per the increment defined, whether or not DST is in effect.
APPLY SCHEDULE	Character	Create or modify a job schedule that is defined for the route.	Select the button to create or modify the job schedule as per the time and date defined in the **Edit Schedule** window. The details of the schedule appear in the **SCHEDULE SUMMARY** box.

Field	Data Type	Description	Behavior and Usage
ASSIGN TO	Character	Name of the person or team responsible for ensuring the route is completed.	Enter the name of the person or the team who would be responsible for ensuring the Route is completed.
			You can enter the characters to search for the names. After you select the field, the names of the users and teams appear in the list. After you start entering the characters, the search results appear in a drop-down list. At a given time, a maximum of 50 names appear in the drop-down list. When you scroll down to the last name in the list the next 50 names get added to the drop-down. Selecting the name displays the name as a chip in the box. You can add only one name at a time to the box. After four rows of names appear in the box, you can scroll down to move to the next row that is added when you select additional names. The name that is added in the box does not appear in the drop-down list during the next search.
			Note: Select ✕ in the chip to delete a name appearing in the box.
			This field is applicable for both the Route Master and Route Instance. The summary of the users or teams assigned appear in the **ASSIGNED TO** column in the **Route Masters** page.
			Select **Save**, to save the changes to the database.

Field	Data Type	Description	Behavior and Usage
BASIS FOR OCCURRENCE	Character	The source of occurrence of the route.	This field contains the following values: • EAM: Select this option if the basis of occurrence is EAM. • Schedule: Select this option to enable scheduling a job to create route instances.
COMPLIANCE HORIZON	Numeric	The frequency based on which the route must be completed.	Enter the number to specify the frequency in time units, such as days, weeks, and so on, based on which the route instance must be completed. **Note:** The time units values are supported by the MI_TIME_UNITS table, which you can configure with the additional values as needed.
COMPLIANCE HORIZON INTERVAL	Character	Interval within which the route instance must be completed.	This field contains the time units to measure the frequency based on which the route instance must be completed. The values can include the following: • Days • Weeks • Years **Note:** The time units values are supported by the MI_TIME_UNITS table, which you can configure with the additional values as needed.

Field	Data Type	Description	Behavior and Usage
COMPLIANCE TRACKING	Button	Track a job scheduled on a route for compliance.	Enable the button to activate compliance tracking for a schedule on a route. If the button is disabled, then the compliance is not tracked for a defined schedule. You can enable this button only if : • A schedule is defined for a Route. • The schedule is activated to generate route instances. • Compliance Horizon and Compliance Horizon Interval values are entered. Whenever an instance is created on a route master, the instance must be completed within the defined compliance interval. For example, if you enter 1 in the **Compliance Horizon** field and select week in the **Compliance Horizon Interval** drop-down list, whenever an instance is created on this route master, it needs to be completed withing 1 week of creation. If compliance is turned off, the instances that are created before disabling the compliance are still tracked for compliance and the due date in the **Open Instances** page appears in red if the next due date is past the compliance date.

Field	Data Type	Description	Behavior and Usage
EAM REFERENCE NUMBER	Numeric	Number associated with the route.	This field is enabled if you have selected **EAM** in the **BASIS FOR OCCURRENCE** field. This is a unique number. You can manually populate this number.
EDIT SCHEDULE	Character	The schedule by which you want to take readings for this Route.	When you select **Schedule** in the drop-down list, the **Edit Schedule** option appears. Select **Edit Schedule**. The **Edit Schedule** window appears which allows you to define the schedule to generate route instances from an associated route.
END	Character	The date or time until when the schedule is active and allows generation of route instances.	This field contains the following values: • Time & Date • After • Never The end date is the last date when a route instance can be generated from the defined schedule. After this date, the schedule does not trigger the creation of route instances. For example, if the Start time is January 1, 2021 and the end time is December 31, 2021, this means that for the schedule that gets executed daily at 8:00 A.M, instances are generated only during the year 2021. **Note:** The start and end dates determine the period during which the route instances can be created, and not when they can be executed.

Field	Data Type	Description	Behavior and Usage
EVERY	Character	The frequency at which the route schedule recurs.	You can select the duration from the following values: • Minutes • Hours • Days • Weeks • Months • Years By default, the frequency is set to minutes. The route is scheduled to recur at the selected duration and at the defined frequency from the Start time.
FLOC EQUIP REF	Character	The number associated with the equipment.	This is a unique alphanumeric number. You can enter this number based on the functional location of the equipment.
FLOC EQUIP STATUS	Character	Indicates the status of the equipment.	You can select the equipment status from the following values: • Out of Service: Select this option if the equipment is not working properly. • Online: Select this option if the equipment is being used for the production. • Available: Select this option if the equipment is available in the stock and you can use it whenever needed. **Note:** This field is supported by the FLOC_EQUIPMENT_STATUS table, which you can configure with the additional values as needed.

Field	Data Type	Description	Behavior and Usage
FREQUENCY	Numeric	The duration at which a route schedule recurs.	You can enter a number for the duration at which a route schedule recurs. **Note:** • The value should be greater than or equal to one. • You must provide values in both the fields, **Frequency** and **Frequency Interval**, if needed.
FREQUENCY INTERVAL	Character	The time unit to measure the duration at which the route schedule recurs.	You can select the time unit from the following values: • Minutes • Hours • Days • Weeks • Months • Years **Note:** You must provide values in both the fields, **Frequency** and **Frequency Interval**, if needed.
ROUTE DESCRIPTION	Character	A description of the route.	In this box, you can enter a description of the action which users will be completing when they enter readings for the Steps included in the route. For example, Pump Check, Vibration Check, or Temperature Check.
ROUTE FREQUENCY	Character	Frequency at which the route must be carried out.	This field contains the following values: • Hourly • Weekly • Monthly

Field	Data Type	Description	Behavior and Usage
ROUTE INSTANCE	Button	Creates a Route Instance with the selected list of assets and steps.	Select this button to create a Route Instance with the selected list of steps and assets. The created route instance appears in the **Open Instances** page.
ROUTE INSTANCE DESCRIPTION	Character	A description of the route instance.	In this box, you can enter a description of the instance which users will be completing when they enter readings for the Steps included in the ad-hoc route instance.
ROUTE INSTANCE NAME	Character	The name of the route instance.	You can enter a unique alphanumeric name that you want to assign to the route instance. This is a required field.
ROUTE MASTER	Button	Creates a Route with the selected list of assets and steps.	Select this button to create a Route with the selected list of steps and assets. The created route appears in the **Route Masters** page.
ROUTE NAME	Character	The name of the route.	You can enter a unique alphanumeric name that you want to assign to the route. This is a required field.
SCHEDULE SUMMARY	Character	Summary of the job schedule created to generate route instances from a route.	The details that are entered and saved in the **Edit Schedule** window appear in the form of a summary. Select 🖉 to modify the schedule details from the **Edit Schedule** window. After saving the changes, the modified summary appears. Select 🗑 to delete the scheduled job. The schedule summary is removed from the box.

Field	Data Type	Description	Behavior and Usage
START	Date	The date or time when the schedule becomes active and allows generation of route instances.	The Start date is the date when the schedule becomes active. The Start date is the date when the schedule becomes active and route instance can be generated from the defined schedule. This date, along with the end date, if defined, creates a period when the schedule definition is active for the route master and allows the creation of route instances. For example, if the Start time is January 1, 2021 and the end time is December 31, 2021, this means that for the schedule that gets executed daily at 8:00 A.M, instances are generated only during the year 2021. **Note:** The start and end dates determine the period during which the route instances can be created, and not when they can be executed.
TIMEZONE	Character	The timezone in which the route schedule is activated when it is due.	The schedules that you define include a specific time zone. The Route will become due at the specified time in that time zone, irrespective of the time zone of the logged in user. For example, if you set a Route to be due at 8:00 A.M. every day in Eastern Standard Time, the Route would be due at 5:00 A.M. every day in Pacific Standard Time.

Route Preview Records

Route Preview records store details about the list of assets and associated steps included in a route. This topic provides a list and description of the fields that exist for the Route Preview

Records family. The information in the table reflects the baseline state and behaviour of these fields. This list is not comprehensive.

Field	Data Type	Description	Behavior and Usage
ADDITIONAL INSTRUCTIONS	Character	Displays the additional instructions included for the step with text, and small images of the photos attached, if any.	This section does not appear if the step does not include additional instructions or an attached image.
ASSET NAME	Character	Name of the asset included in the route.	The asset name is displayed with the name of the parent asset, and Asset ID in the grey box. You can expand or collapse each Asset row to view or hide the list of steps assigned to the route.
CONDITIONALS	Character	Displays the condition to be met for the conditional step to be activated and the number of conditional steps included within the primary step.	If the current reading value recorded for the primary step meets the condition specified, then the term CONDITIONAL STEP appears in red along with the condition specified for the conditional step to be activated. Expand Conditionals to view the conditional steps included for a step.
MAIN STEPS	Character	List of the steps assigned under each asset.	Displays the list of steps associated with the asset. For example, Pump Check, Vibration Check, or Temperature Check. Select the step for which you want to view the attached list of reference documents, conditional steps, and additional instructions, if any.
REFERENCE DOCUMENTS	Character	Displays the reference documents that are linked to a step included in a route.	Select the hyperlinks to access the attached documents.

Route Masters Records

Route masters records store details about routes available in the route masters. This topic provides a list and description of the fields that exist for the Route Masters family. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

Field	Data Type	Description	Behavior and Usage
ACTION	Drop-down menu	Displays the options to perform specific actions from the Route Masters page.	The drop-down list displays the following options: • Download to .csv
ASSIGNED TO	Character	Summary of the users and teams to which the route is assigned.	This field displays a summary of the users and teams to which the route is assigned. Click the summary link to view a detailed list of the individuals or the teams in alphabetical order. **Note:** You cannot sort or filter data in this column.
BASIS FOR OCCURRENCE	Character	The source of occurrence of the route.	This field contains the following values: • EAM: The value is EAM if **EAM** is selected in the **Plan Routes** section after you create a schedule. • Schedule: The value is Schedule if **Schedule** is selected in the **Plan Routes** section after you create a schedule. **Note:** This value appears by default. **Note:** This column does not appear by default. To select this column, use the **Column Chooser** box in the **Route Masters** page.
DUE DATE	Numeric	The earliest due date among all the next due dates specified for all the instances	This field displays the earliest date that is calculated using the compliance setup duration and the instance creation date. The date appears only when the **Compliance Tracking** button is enabled in the **Plan Routes** section after you create a schedule. For example, if you enter 1 in the **Compliance Horizon** box, select **Week** from the **Compliance Horizon Interval** drop-down list, and create an instance every week for two months, then the due date is calculated by adding the creation date of the instance to 1 week. Similarly, the due date is calculated for all the instances and the earliest date is displayed here. The due date (which is the compliance date) appears in red if the instance has not met compliance by that date. **Note:** You cannot sort or filter data in this column.
EAM REFERENCE NUMBER	Character	The Number associated with the route.	This field is enabled if you have selected **EAM** in the **BASIS FOR OCCURRENCE** field. This is a unique number. You can manually populate this number. **Note:** This column does not appear by default. To select this column, use the **Column Chooser** box in the **Route Masters** page.

Field	Data Type	Description	Behavior and Usage
ENTITY KEY	Numeric	A unique number associated with the route.	This key is generated automatically when you create a route. **Note:** This column does not appear by default. To select this column, use the **Column Chooser** box in the **Route Masters** page.
FLOC EQUIP REF	Character	Number associated with the equipment.	This is a unique alphanumeric number. **Note:** This column does not appear by default. To select this column, use the **Column Chooser** box in the **Route Masters** page.
FLOC EQUIP STATUS	Character	Indicates the status of the equipment	This field displays one of the following values: • Out of Service: The value is Out of Service if the equipment is not working properly. • Online: The value is Online if the equipment is being used for the production • Available: The value is Available if the equipment is available in the stock and you can use it whenever needed. **Note:** • This field is supported by the FLOC_EQUIPMENT_STATUS table, which you can configure with the additional values as needed. • This column does not appear by default. To select this column, use the **Column Chooser** box in the **Route Masters** page.
FREQUENCY	Numeric	The duration at which a route schedule recurs.	This field displays a number for the duration at which a route schedule recurs. **Note:** • The value should be greater than or equal to one. • This column does not appear by default. To select this column, use the **Column Chooser** box in the **Route Masters** page.
FREQUENCY INTERVAL	Character	The time unit to measure the duration at which the route schedule recurs.	This field displays one of the following values: • Minutes • Hours • Days • Weeks • Months • Years **Note:** This column does not appear by default. To select this column, use the **Column Chooser** box in the **Route Masters** page.

Field	Data Type	Description	Behavior and Usage
IS ACTIVE?	Character	Indicates if the Route is active after the job schedule was created.	This field displays one of the following values: • Yes: The value is Yes if the **Activate Route** button is enabled in the **Plan Routes** section after you create a schedule. • No: The value is No if the **Activate Route** button is disabled in the **Plan Routes** section after you create a schedule.
LAST DATE	Numeric	The last date by when the route must be completed.	The date by when the latest instance was completed and checked-in on the route master.
LOCATION	Character	The physical location where the routes need to be performed.	This field displays the physical location of the plant with the assets where the routes need to be performed.
NEXT DATE	Numeric	The date when you must complete the route next based on the route schedule.	If the route does not have a schedule set, then the next date is the earliest date among all the next due date values specified for all the instances of the route master. After the scheduled job is created and a Route Instance is added, the next due date must be calculated to reflect in the Route Master. The column appears by default. However, the value appears in the column only if a schedule is created for the route and the value in the **IS ACTIVE** field is Yes.
ROUTE NAME	Character	The name of the route.	This is the name assigned when the route is created.
ROUTE SIZE	Numeric	Total size of the route including all the steps and attached reference documents.	**Note:** This information does not appear on a small screen device.
STEP COUNT	Numeric	Number of primary steps associated with the route.	This field displays a count of the primary steps that are added to the route. The count does not include the conditional steps.

Route Instance Records on Web Application

Route instance records on the **Open Instances** page and **Instance History** pages store details about the routes included for an asset. This topic provides a list and description of the fields that exist for the Route Instance Records family. The information in the table reflects the baseline state and behaviour of these fields. This list is not comprehensive.

Field	Data Type	Description	Behavior and Usage
Is Ad-hoc	Boolean	Indicates if the route instance that is created is a Adhoc instance or not.	This field is set to True in the following instances: • When an ad-hoc instance is created from Route Master window. • When an instance is created by the operator on the field. • When an ad-hoc instance is created from Route Master grid. This field is set to False when the Route instance is created from a schedule.
ASSIGNED TO	Character	Name of the person or team responsible for ensuring the route is completed.	This field displays the name of the person or the team who would be responsible for ensuring the route is completed.
CHECKED IN BY	Character	Name of the individual who has checked in the route instance.	None
CHECKED IN DTTM	Character	Date and time when the route instance was checked in.	None
CHECKED OUT BY	Character	Name of the individual who has checked out the route instance.	This field displays the name of the individual who has checked out the route instance.
CHECKED OUT DTTM	Character	Date and time when the route instance was checked out.	None
CREATED BY	Character	The user who has created the route.	None
CREATED DTTM	Character	Date and time when the route instance was created.	None

Field	Data Type	Description	Behavior and Usage
DUE DATE	Character	Date by when the route must be completed.	If the route master has an active schedule with compliance turned on, and Compliance Horizon and Compliance Horizon Interval are defined, then whenever an instance is created on this route master, the instance must be completed within the defined compliance interval.
			The date appears in red indicating non-compliance if:
			• The route instance has one or more steps that did not get completed by recording a reading, comment, or an action.
			• The route instance was not checked in as finished prior to the compliance horizon date.
			If compliance tracking is turned off, the instances that are created before disabling compliance tracking are still tracked for complaince. The due date (which is the compliance date) appears in red if the instance has not met compliance by that date.
LAST UPDATED BY	Character	Name of the individual who last updated the route instance.	None
LAST UPDT DTTM	Character	Date and time when the route instance was last updated.	None
LOCATION	Character	The physical location where the routes need to be performed.	This field displays the physical location of the plant with the assets where the routes need to be performed.

Field	Data Type	Description	Behavior and Usage
NEXT DUE DATE	Numeric	The date when the next instance of the route will be generated if the route master corresponding to the instance has an active schedule.	If the route does not have a schedule set, then the due date is the earliest date among all the next due date values specified for all the steps in the route. After the scheduled job is created and a Route Instance is generated, the next due date is calculated and reflects on the route master. If the Route Master does not have an active schedule, then no value is displayed in this field. The column does not appear by default. **Note:** You can select this column using the **Column Chooser** box in the **Open Instances** page, to see when the next route instance gets created. If compliance tracking is enabled, and the next due date exceeds the date by when the next instance must be generated, then the date appears in red.
ROUTE INSTANCE NAME	Character	Names of all route instances that have been generated from the routes in the route masters.	This field displays the name of the route that was assigned when the route was created.
ROUTE INSTANCE SIZE	Numeric	Size of the route.	This field displays the total size of the route including all the steps and attached reference documents.

Field	Data Type	Description	Behavior and Usage
STEPS COMPLETED	Numeric	The number of steps in the route that have been completed.	This field displays the number of steps completed out of the total number of steps assigned to the various assets included in the Route.
WO NUMBER	Alphanumeric	The work order number assigned to the route.	This field displays the alphanumeric work order number for the route. **Note:** You can specify a value for this field in the **Open Instances** page using the datasheet. In the **Instance History** page, this field cannot be edited.

Route Instance Details Records

Route Instance Details records store information about the steps that are included in a route instance. The Route Instance Details records appear when you expand the Routes on the Open Instances or Instance History pages on the web application. This topic provides a list and description of the fields that exist for the Route Instance Details family. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

Field	Data Type	Description	Behavior and Usage
ACTION TAKEN	Character	The action values defined for the action category added to the step.	Displays the action picklist reading value recorded for a step in the Rounds Pro mobile app.
HAS HI	Character	Indicates if the step has a health indicator.	Displays one of the following values: • **Yes** - if the step has a Health Indicator. • **No** - if the step is not having a Health Indicator.
IS CONDITIONAL	Character	Indicates if the step is a conditional step.	Displays the value **Yes** if the step in the route will be triggered by a condition being met. Displays the value **No** if the step is not triggered due to any condition.
LAST DATE	Numeric	The last date by when the step must be completed.	None

Field	Data Type	Description	Behavior and Usage
READING	• Numeric • Character	The following parameters appear: • The last reading that was recorded for the step. • Message indicating if the step is conditional. • Health indicator Type.	The readings appear based on the last reading that was collected using Rounds Pro mobile application and saved to the server. Alerts appear based on the limits and health indicators configured in the Rounds Designer for the Step. The minimum indicators configured are: • Alert (Red) • Warning (Yellow) • Normal (Green)
RECOMMENDATION	Character	The recommendation added for the steps.	None
STEP NAME	Character	The name of the Step.	The name assigned when the step was created.
STEP TYPE	Character	The category to which the step belongs.	By default, this field has the value **Measurement Location**.

Steps Page Records

Step records on the **Steps** page store details about Steps that are generated using the Rounds Designer. This topic provides a list and description of the fields that exist for the Step family. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

Field	Data Type	Description	Behavior and Usage
ASSET	Character	The name of the asset associated with the step.	This field displays the name of the asset to which the step is associated.
HAS HI	Character	Indicates if the step has a health indicator.	Displays one of the following values: • **Yes** - if the step has a Health Indicator. • **No** - if the step is not having a Health Indicator.

Field	Data Type	Description	Behavior and Usage
HAS SCHEDULE	Character	Displays if a step has a scheduled date.	Displays one of the following values: • **Yes** - if the step has a next date schedule. • **No** - if the step is not having a schedule.
INTERVAL	Character	Displays the frequency at which the Step is carried out.	None
INTERVAL UNITS	Character	Displays the frequency measurement unit at which the Step is carried out.	This field is read-only and contains the following values: • Days • Weeks • Months
LAST DATE	Numeric	The last date by when the step must be completed.	None
LAST READING	Character	The last reading that was recorded for the step.	The readings appear based on the last reading that was collected using the Rounds Pro mobile application and saved to the server.
NEXT DATE	Numeric	The date when you must complete the step next based on the route schedule.	None
PHOTO EVIDENCE	Image	Displays a thumbnail image and a number to indicate the number of photos that are attached to the steps.	When you attach photos to a step in the step details page of the Rounds Pro mobile application, this field displays the indication of the presence and number of photos attached to the step. You can select the thumbnail to enlarge the image or download the image to the local database.
ROUTE	Character	The name of the route.	The name assigned when the route was created.

Field	Data Type	Description	Behavior and Usage
STEP NAME	Character	The name of the Step.	The name assigned when the step was created.
STEP TYPE	Character	The category to which the step belongs.	By default, this field has the value **Measurement Location**.

Route Masters Records on Rounds Pro mobile app

Route Masters records on Rounds Pro mobile app store details about routes available in the Route Masters. This topic provides a list and description of the fields that exist for the Route Masters family for Rounds Pro mobile app. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

Field	Data Type	Description	Behavior and Usage
DUE DATE	Numeric	The earliest due date among all the next due dates specified for all the instances	This field displays the earliest date that is calculated using the compliance setup duration and the instance creation date. For example, if you enter 1 in the **Compliance Horizon** field, select **week** from the **Compliance Horizon Interval** drop-down list, and you create an instance every week for two months, then the due date is calculated by adding the creation date of the instance to 1 week. Similarly, the due date is calculated for all the instances and the earliest date is displayed here. The due date (which is the compliance date) appears in red if the instance has not met compliance by that date. This field displays the date only when the **Compliance Tracking** button is enabled in the **Plan Routes** section of Rounds Designer after you create a schedule. Else, the next due date is displayed, which is the date when the next instance gets created if a schedule is available.
EAM REFERENCE NUMBER	Character	Number associated with the route.	This field is enabled if you have selected **EAM** in the **BASIS FOR OCCURRENCE** field. This is a unique number. You can manually populate this number. **Note:** This column does not appear by default. To select this column, use the **Column Chooser** box in the **Route Masters** page.
FLOC EQUIPMENT REF NUMBER	Character	Number associated with the equipment.	This is a unique alphanumeric number. **Note:** This column does not appear by default. To select this column, use the **Column Chooser** box in the **Route Masters** page.

Field	Data Type	Description	Behavior and Usage
FLOC EQUIPMENT STATUS	Character	Indicates the status of the equipment	This field displays one of the following values: • Out of Service: The value is Out of Service if the equipment is not working properly. • Online: The value is Online if the equipment is being used for the production • Available: The value is Available if the equipment is available in the stock and you can use it whenever needed. **Note:** • This field is supported by the FLOC_EQUIPMENT_STATUS table, which you can configure with the additional values as needed. • This column does not appear by default. To select this column, use the **Column Chooser** box in the **Route Masters** page.
FREQUENCY	Numeric	The duration at which a route schedule recurs.	This field displays a number for the duration at which a route schedule recurs. **Note:** • The value should be greater than or equal to one. • This column does not appear by default. To select this column, use the **Column Chooser** box in the **Route Masters** page.
FREQUENCY INTERVAL	Character	The time unit to measure the duration at which the route schedule recurs.	This field displays one of the following values: • Minutes • Hours • Days • Weeks • Months • Years **Note:** This column does not appear by default. To select this column, use the **Column Chooser** box in the **Route Masters** page.
LAST DONE DATE	Numeric	The last date by when the route must be completed.	The date by when the latest instance was completed and checked-in on the route master. **Note:** This field does not appear on a small screen device by default. However, you can view this field after you check-in the route instance using the **My Routes** tab on the device.
NEXT DUE DATE	Numeric	The date when you must complete the route next based on the route schedule.	If the route does not have a schedule set, then the due date is the earliest date among all the next due date values specified for all the steps in the route. After the scheduled job is created and a Route Instance is added, the next due date must be calculated to reflect on the route master.

Field	Data Type	Description	Behavior and Usage
ROUTE NAME	Character	The name of the route.	This is the name assigned when the route is created.
ROUTE SIZE	Numeric	Total size of the route including all the steps and attached reference documents.	**Note:** This information does not appear on a small screen device.
STATUS	Character	Indicates if you have added the route to the **My Routes** list.	You can add the route to the list if it has not been added.
STEP COUNT	Numeric	Number of steps assigned with the route.	None

Route Instance Records on Rounds Pro mobile app

Route instance records on Rounds Pro mobile app store details about the routes included for an asset . This topic provides a list and description of the fields that exist for the Route Instance Records family. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

Field	Data Type	Description	Behavior and Usage
ACTION	Character	Indicates the action you can take on the route instance.	This field contains the following values: • Check Out: Route instance is new or is not checked out by you. • Check In: Route instance is checked out to you. • Offline: Route instance that is checked out by you and appears when the network is unavailable. • \<Individual name\>: Name of the user who has checked out the route instance. • Sync: The Route is checked out but not downloaded to the device. The Route is downloaded successfully to one device, and when you try to access the Route from another mobile device, the Action field displays a **Sync** option and an **Out of Sync** indication. Select **Sync** to download the route to the new mobile device. • Deleted by Admin: The route is deleted from the APM server. Select **Remove from Device** to remove the route instance from the mobile device.

Field	Data Type	Description	Behavior and Usage
DUE DATE	Numeric	Date by when the route must be completed.	If the route master has an active schedule with compliance turned on, and Compliance Horizon and Compliance Horizon Interval are defined, whenever an instance is created on this route master, it needs to be completed within the defined interval. The due date (which is the compliance date) appears in red if the instance has not met compliance by that date.
			If compliance is turned off, the instances that are created before disabling the compliance, are still tracked for compliance and the due date (which is the compliance date) appears in red if the instance has not met compliance by that date.
			If compliance is turned on, the due date is displayed. Else, the next due date is displayed, which is the date when the next instance gets created if a schedule is available.
LAST DATE	Numeric	The last date by when the route must be completed.	The date by when the latest instance was completed and checked-in on the route master.
			Note: This field does not appear on a small screen device by default. However, you can view this field after you check-in the route instance using the **My Routes** tab on the device.

Field	Data Type	Description	Behavior and Usage
NEXT DUE DATE	Numeric	The date when you must complete the route next based on the route schedule.	If the route does not have a schedule set, then the due date is the earliest date among all the next due date values specified for all the instances. After the scheduled job is created and a Route Instance is added, the next due date must be calculated to reflect on the route master. This column does not appear by default. To select this column, use the **Column Chooser** box in the **Open Instances** page. If compliance tracking is enabled, and the next due date exceeds the date by which the next instance must be generated, then the date appears in red.
PROGRESS	Numeric	Percentage of completion of the steps in the route instance.	This value indicates the progress of the route completion based on the number of steps completed out of the total steps assigned to the route.
ROUTE NAME	Character	Names of all route instances that are assigned to you or the team to which you belong.	The name assigned to the route in the Rounds Designer appears in the field.
ROUTE SIZE	Alphanumeric	Size of the route.	This field displays the total size of the route including all the steps and attached reference documents. **Note:** This information does not appear on a small screen device.

Field	Data Type	Description	Behavior and Usage
STEP COUNT	Numeric	Number of steps assigned with the route.	This field displays the total number of steps assigned to various assets included in the route.
WO NUMBER	Alphanumeric	The work order number assigned to the route.	In this box, you can enter the alphanumeric work order number for the route, only if the route is checked out to you. If the route is not checked out to you or is checked out to another individual, this field is not enabled to edit. **Note:** This information does not appear on a small screen device.

Route Instance Details Records on Rounds Pro mobile app

Route Instance Details records on Rounds Pro mobile app app store information about the route instances assigned to you or your team and included for an asset. This topic provides a list and description of the fields that exist for the Route Instance Details records family. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

Field	Data Type	Description	Behavior and Usage
ASSET NAME	Character	Name of the asset included in the route instance.	The asset name title displays the name of the parent asset, Asset ID, and the text indication of the number of steps in progress out of the total steps linked to the asset, for example 1 of 8 Steps.
CONDITIONAL STEPS	Character	Displays the condition to be met for the conditional step to be activated.	If the current reading value recorded for the primary step meets the condition specified then the term CONDITIONAL STEPS appears in red along with the condition specified for the conditional step to be activated.

Field	Data Type	Description	Behavior and Usage
HEALTH INDICATOR MESSAGES	Character	Displays the health indicator messages.	When you enter one of the defined limit values, health indicator messages appear based on the health indicator messages configured in the Rounds Designer for the Step.
HEALTH INDICATOR TYPE	Character	Displays health indicators with the appropriate color code.	When you enter one of the defined limit values, an alert appears based on the limits and health indicators configured in the Rounds Designer for the Step. The minimum indicators configured are: • Alert (Red) • Warning (Yellow) • Normal (Green) More indicators can appear based on the configuration.

Field	Data Type	Description	Behavior and Usage
LAST READING	• Numeric • Character	The following parameters appear: • The last reading that was recorded for the step. • Message indicating if the step is conditional. • Health indicator. • Health indicator messages.	You can enter the current readings for the step based on data type assigned to the field: • For a numeric step, you can enter numbers and decimal. • For a character step, you can enter a character string. • For a picklist, you can select the values assigned to the picklist that appear in the drop-down list. **Note:** You can clear the selected value and assign another value from the drop-down list before you check in the changes. The value that you enter is recorded for a step as the reading value and saved to the mobile database. After you check in the changes, the values are saved to the server and cleared from the field. **Note:** You cannot enter data that is not appropriate for the data type specified for the field.
ROUTE NAME	Character	Name of route whose instance is open.	The route instance title displays the name of the route instance that is accessed from the **My Routes** page. The name assigned to the route in the **Create Route** page in Rounds Pro appears in this field.
STEP NAME	Character	Name of step	The name assigned to the step in the Rounds Designer appears in the field.

Recommendation Records on Rounds Pro mobile app

Recommendation records on Rounds Pro mobile app store information about the recommendation linked to an asset step. This topic provides a list and description of the fields that exist for the Recommendation Details records family. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

Field	Data Type	Description	Behavior and Usage
Check In	Button	Allows you to check in the Route.	None
Create Stand Alone	Option	Allows you to create a standalone recommendation.	A standalone recommendation is not linked to the step or an asset.
CREATED BY	Character	The name of the Security User who was logged on to Rounds Pro mobile app when the recommendation was created.	This is the name of the person proposing the recommendation.
HEADLINE	Character	Displays a brief summary of the recommendation subject.	The text that appeared in the Headline cell when the Recommendation was saved on the mobile device.
PHOTOS	Image	Displays an indication of the presence of photos attached to the recommendation and the number of photos attached.	You can access the photos for the route that you access. Photos are downloaded to the device if the route is in progress.
TIMESTAMP	Date	The date and time on which the recommendation was created.	None

Recommendation Details Records on Rounds Pro mobile app

Recommendation records on Rounds Pro mobile app store information about the recommendation linked to an asset step. This topic provides a list and description of the fields that exist for the Recommendation Details records family. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

Field	Data Type	Description	Behavior and Usage
Add Picture	Image	Allows you to take a picture using your mobile device camera and attach the photo to the recommendation. For a device without a camera support, you can select the photos from the local database.	None
ASSET ID	Numeric	The ID of the Asset for which the recommendation is being made.	This is unique for a particular equipment. This field is auto-populated.
CREATE WORK REQUEST?	Radio buttons or Slider	Enables a work request.	You can select one of the following options: • Yes: This option is selected by default. All the other Work request details are enabled. The work request is sent to the connected EAM system after the recommendation is saved to the APM database. • No: Work request details are not enabled.
DESCRIPTION	Character	Details of the recommendation.	You can type in the description in the text box.
HEADLINE	Character	A brief summary of the recommendation subject.	None
PHOTOS	Image	Displays small images of the of the photos attached to the recommendation and the number of photos attached.	None
PRIORITY	Picklist	The priority of recommendation for implementation.	You can select a priority level from the picklist.

Field	Data Type	Description	Behavior and Usage
RECOMMENDATION ID	Character	A value that identifies the recommendation record.	This is a unique ID and is generated by the system.
STEP DESCRIPTION	Character	For recommendations, other than standalone recommendations created on a mobile device, this field is populated automatically with the value that is stored in the Step Description field of the Step for which the recommendation was created.	You cannot enter any values in this field. This field is auto-populated.

Step Details Records on Rounds Pro mobile app

Step Details records on Rounds Pro mobile app store information about the step assigned to a route instance. This topic provides a list and description of the fields that exist for the Step Details records family. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

Field	Data Type	Description	Behavior and Usage
ACTION	Character	The action values defined for the action category added to the step.	This field contains the values defined for the action category in the **Actions** section of the **Picklist Management** page in the Rounds Designer. **Note:** The Action picklist is available only if the related step has an Action Picklist and Action Values defined. You can select one value from the picklist. The value that you select is recorded for a step as the reading value and saved to the mobile database. After you check in the changes, the values are saved to the APM server and cleared from the field. The value that is checked in appears in the **ACTION TAKEN** column for the selected step in the **Open Instances** and **Instance history** page of the Web application.
ADDITIONAL INSTRUCTIONS	Character	This field displays additional instructions that are provided in the **ADDITIONAL INSTRUCTIONS** section of the **Reference Documents** page in the Rounds Designer. Below the **ADDITIONAL INSTRUCTIONS** section, a small image of the photo attached to the step appears.	This is a read-only field. You can view the additional instructions that are provided and need to be followed while performing the step. You can scroll down to access the photo attached to the step, if any. **Note:** When you check out a route instance, and if a step associated with the route instance has Additional Instructions and image attached, then you can access these details even when your mobile device is offline.
ATTACHMENTS	Image, PDF, Doc	Displays a list of reference documents attached to the step.	You can access the attached documents when the mobile device is online.

Field	Data Type	Description	Behavior and Usage
COMMENTS	Character	You can enter comments to add additional information about the step.	You can enter up to 1000 characters.
CONDITIONAL STEPS	Character	Displays the condition met that has activated the conditional step.	If the current reading value recorded for the primary step meets the condition specified then the term CONDITIONAL STEPS appears in red along with the condition specified for the conditional step to be activated in the step title.
HEALTH INDICATOR MESSAGES	Character	Displays the health indicator messages.	When you enter one of the defined limit values, health indicator messages appear based on the health indicator messages configured in the Rounds Designer for the Step.
HEALTH INDICATOR TYPE	Character	Displays health indicators with the appropriate color code.	When you enter one of the defined limit values, an alert appears based on the limits and health indicators configured in the Rounds Designer for the Step. The minimum indicators configured are: • Alert (Red) • Warning (Yellow) • Normal (Green) More indicators can appear based on the configuration.
PHOTOS	Image	Displays small images of the photos attached to the step.	Select the image thumbnail to access the photos attached to the step of a route.

Field	Data Type	Description	Behavior and Usage
READING	• Numeric • Character	The following parameters appear: • The last reading that was recorded for the step. • Message indicating if the step is conditional. • Health indicator. • Health indicator messages.	You can enter the readings for the step based on data type assigned to the field: • For a numeric step, you can enter numbers and decimal. • For a character step, you can enter a character string. • For a picklist, you can select the values assigned to the picklist that appear in the drop-down list. **Note:** You can clear the selected value and assign another value from the drop-down list before you check in the changes. The value that you enter is recorded for a step as the reading value and saved to the mobile database. After you check in the changes, the values are saved to the APM server and cleared from the field. **Note:** You cannot enter data that is not appropriate for the data type specified for the field.
READINGS HISTORY	Character	Displays the trend chart based on the values recorded for the Step.	The trend chart changes based on the edited or cleared readings.
RECOMMENDATIONS	Text	Displays the recommendation title and an option to create a recommendation.	Select ╋ to create a recommendation.

Field	Data Type	Description	Behavior and Usage
SCAN ID	Character	Indicates the SCAN ID associated with the step.	For a barcode or QR code, enter the scan code. For an NFC tag, enter the serial number without colons. For example, if the serial number is 96:DB:46:AA, enter 96DB46AA. When you scan the code, if there is a single match in the checked-out route instances, the **Step Details** page appears, and the step is unlocked. However, if there are multiple matches, you can choose the step that you want to unlock, or you can unlock all the steps.
SCAN TO UNLOCK	Boolean	Indicates whether, a step should be locked until the device scans the associated Scan code (Barcode, QR code etc.).	When you switch the toggle on, the Scan ID would be a required field and you must scan the barcode associated with the step to record a reading. By default, the toggle switch is Off. **Note:** This functionality is not available.
STEP NAME	Character	Name of step and the step title.	The step title displays the name of the parent asset for the step, the Asset ID, and the text indication of the relative step position under the asset, for example Step 2 of 8. The name assigned to the step in the Rounds Designer appears in the field.

Compliance Track Family

The **Compliance Track** family integrates with other Rounds Pro families, such as **Step**, **Step Reading**, and **Route Instance**.

Field	Data Type	Description	Behavior and Usage
Due Date	Date	Due date for the step reading	Due date is the date when the reading is due based on the schedule defined. For example, if the Schedule is set as "Every day at 8AM", due date is Today 8AM. If the Step has its own schedule, this field is populated based on the schedule defined at the step level. If the Step doesn't have its own schedule, this field is populated based on the schedule defined at the Route Master level. **Note:** If the schedule is defined both at the route Master level as well as at the Step level, this fields is populated based on the schedule at Step level. This field is populated at the time of instance creation.
Non-Compliance Date	Date	Non-Compliance date for the step reading	Non-Compliance date is the date when the reading is considered as non-compliant based on the schedule defined. For example, if the Schedule is set as "Every day at 8AM", Non-compliance date is Tomorrow 8AM. If the Step has its own schedule, this field is populated based on the schedule defined at the step level. If the Step doesn't have its own schedule, this field is populated based on the schedule defined at the Route Master level. **Note:** If the schedule is defined both at the route Master level as well as at the Step level, this fields is populated based on the schedule at Step level. This field is populated at the time of instance creation.
Completed Date	Date	Date when the reading is completed	This is the reading taken date by the operator on the field. This field is populated after the instance is checked in. If the reading is not taken, this field would be null.
Is Conditional Step Excluded	Boolean	Boolean field to track if the Conditional step is excluded.	This field is set to true if the step is a conditional step and the parent step is not executed or is not required. In all other cases this field is set to false. This field helps you understand which fields are skipped legitimately.

Field	Data Type	Description	Behavior and Usage
FK_MI_RTE_INST_0_G	Character	Holds the entity key of the Route Instance	Useful in reporting. Helps in identifying the instance of the Step Reading.
FK_MI_RTE_STRCT_STP_0_G	Character	Holds the entity key of the Route structure step	Useful in reporting and is required to support the sharable nature of the steps.
FK_MI_STP_0_G	Character	Holds the entity key of the step.	Useful in reporting. Identify the Step to which the step reading belongs to.
FK_MI_STP_RDNG_0_G	Character	Holds the entity key of the step Reading.	Useful in reporting.
FK_MI_RTE_STRCT_STP_1_G	Character	Holds the Immediate parent Structure step entity Key	This will be blank for all parent Steps, for all the child steps it will hold the immediate parent Structure step entity Key.
FK_MI_RTE_STR_STP_COND_0_G	Character	Holds the entity key of the Route Structure Step condition.	For reporting this will help determine if steps under the same condition are executed.

Lubricant Records

This topic provides an alphabetical list and description of the fields that exist for the Lubricant family. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

Lubricant records serve as a means for organizing all the lubricants that are used by your company. When you create a Lubricant record, the values that you enter in these fields will be used to populate the corresponding lists on the Lubrication Requirement datasheet, where you can select the necessary values from a list.

This family is enabled for site filtering, which means that records in this family can be assigned to a specific site and will only be accessible to users who are assigned to the same site and have the appropriate license and family privileges. For more information, refer to the Sites section of the documentation.

Field	Data Type	Description	Behavior and Usage
Description	Character	Description of the lubricant	You can enter a value in this field.
Flash Point	Numeric	Flash point of the lubricant	You can enter a value in this field.

Field	Data Type	Description	Behavior and Usage
Flash Point UOM	Character	The unit of measurement of the Flash point of the lubricant	On the datasheet, this field appears as a list that is populated by the MI_LUBRICANT_REFERENC ES system code table. **Note:**
ISO Grade	Character	Viscosity grading of the lubricant	You can enter a value in this field.
Lubricant	Character	The name of the lubricant	You can enter a value in this field.
Lubricant Type	Character	The type of lubricant	On the datasheet, this field appears as a list that is populated by the MI_LUBR_TYPE system code table.
Manufacturer	Numeric	The manufacturer of the lubricant	On the datasheet, this field appears as a list that is populated with the values stored in the Manufacturer Name field in existing Lubricant Manufacturer records. This field displays the Manufacturer Name, but stores the Entity Key of the corresponding Lubricant Manufacturer record. If you are creating multiple Lubricant records, you may select the same or different manufacturers for each.
Manufacturer's Part Number	Character	Manufacturer part number of the lubricant	You can enter a value in this field.
Material Number	Character	Material number of the Lubricant (for example, the material number used in your EAM system)	You can enter a value in this field.
Notes	Character	Any notes necessary for the lubricant	You can enter a value in this field.
Storage Location	Character	Location where the lubricant is stored	You can enter a value in this field.

Field	Data Type	Description	Behavior and Usage
Trade Name	Character	Brand name of the lubricant	You can enter a value in this field.
Viscosity Rating	Character	Viscosity index of the lubricant	You can enter a value in this field.

Lubricant Manufacturer Records

Lubricant Manufacturer records store details about the manufacturer of a lubricant. This topic provides an alphabetical list and description of the fields that exist for the Lubricant Manufacturer family. The information in the table reflects the baseline state and behavior of these fields.

This family is enabled for site filtering, which means that records in this family can be assigned to a specific site and will only be accessible to users who are assigned to the same site and have the appropriate license and family privileges. For more information, refer to the Sites section of the documentation.

Field	Data Type	Description	Behavior and Usage
Manufacturer ID	Character	The ID that you want to use to identify a lubricant manufacturer	This field is required and must be unique.
Manufacturer Name	Character	The name of a lubricant manufacturer	This field is required and must be unique. This field is used to populate the list in the Manufacturer field of Lubricant records.
Manufacturer Description	Character	A description of the lubricant manufacturer	This field is optional.

Lubrication Component Records

Lubrication Component records store information about lubrication components and provide values for drop-down lists used in the Lubrication Steps and Lubrication Step Template families. This topic provides an alphabetical list and description of the fields that exist for the Lubrication Component family and appear on the Lubrication Component datasheet. The information in the table reflects the baseline state and behavior of these fields.

This family is enabled for site filtering, which means that records in this family can be assigned to a specific site and will only be accessible to users who are assigned to the same site and have the appropriate license and family privileges. For more information, refer to the Sites section of the documentation.

Field	Data Type	Description	Behavior and Usage
Component Sub Type	Character	The sub type of a lubrication component type	The values in this field populate the **Component Sub-Type** lists on Lubrication Step and Lubrication Step Template datasheets.
Component Type	Character	The type of lubrication component	Organizes records in the Lubrication Component family into distinct groups. The values in this field populate the **Component** lists on Lubrication Steps and Lubrication Step Template datasheets.
Description	Character	The description of the lubrication component type or sub type	If there is a value in the corresponding Component Sub Type field, then the value in this field is a description of the Component Sub Type. However, if the corresponding Component Sub Type field is empty, then the value in this field is a description of the Component Type.
ID	Character	A unique value that identifies the lubrication component	This field is required and must be unique.

Lubrication Management Recommendation Record

This topic provides an alphabetical list and description of the fields that exist for the Lubrication Management Recommendations. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

This family is enabled for site filtering, which means that records in this family can be assigned to a specific site and will only be accessible to users who are assigned to the same site and have the appropriate license and family privileges. For more information, refer to the Sites section of the documentation.

Field	Data Type	Description	Behavior and Usage
Asset ID	Numeric	The ID of the Asset for which the recommendation is being made	This is Unique for a particular equipment.
Assigned To Name	Text	Name of the person responsible for ensuring the recommendation is implemented	Enter the name of the person to whom would be responsible for ensuring the recommendation is implemented.
Author Name	Text	Name of the person proposing the recommendation	You can enter the name of the user to which the recommendation is associated.
Create Work Request?	Check box	Enables a work request	All the other Work request details are enabled after the check box is selected.
Final Approver Name	Text	Name of the individual ultimately responsible for approving the recommendation and the associated expenditure	You can pick a user from the list as an approver.
Recommendation Basis	Text	The background as to why the recommendation is being made	You can type in the description in the text box.
Recommendation Description	Text	Details of the recommendation	You can type in the description in the text box.
Recommendation Headline	Text	A brief summary of the recommendation subject	Disabled after the author has set the author lock.
Recommendation ID	Text	The unique ID for the Recommendation	This is unique.
Recommendation Priority	Picklist	The priority of recommendation for implementation	Enter the value from the list that best represents the priority of recommendation for implementation. • High • Medium • Low
Required Equipment Status	Character	The operating state the Equipment or Functional Location needs to be in, in order to implement the recommendation	None

Field	Data Type	Description	Behavior and Usage
Reviewer Name	Text	Name of the individual responsible for reviewing and endorsing the recommendation	You can pick a user as a reviewer from the list.
Target Completion Date	Date	Date by which the recommendation is intended to be implemented	User to select a date from the calendar.
Technical Number	Numeric	Number associated with the equipment and recommendation request	This number is unique.
Work Request Equipment	Character	The work request associated with Equipment	This is populated automatically.
Work Request Functional Location	Character	The work request associated with the Functional Location record	This is populated automatically.
Work Request Reference	Numeric	The ID of the work request that may be associated with the recommendation	This is populated automatically.

Lubrication Step Records

Lubrication Step records store details about Lubrication Step on a Route Master. This topic provides an alphabetical list and description of the fields that exist for the Lubrication Step family. The information in the table reflects the baseline state and behavior of these fields. This list is not comprehensive.

This family is enabled for site filtering, which means that records in this family can be assigned to a specific site and will only be accessible to users who are assigned to the same site and have the appropriate license and family privileges. For more information, refer to the Sites section of the documentation.

Field	Data Type	Description	Behavior and Usage
ALLOW PHOTOS	Radio Button	This option allows you to enable **Photos** section in the **Step details** page of Rounds Pro mobile application to add images.	You can select one of the following options: • Yes: The **Photos** section is enabled in the **Step details** page of Rounds Pro mobile application. You can capture or attach images to the step as a photo evidence. • No: The Photos section is not enabled.
ASSET	Character	Displays Asset which is selected from the Asset Hierarchy.	You can add a conditional step from an asset that is different from the parent asset.

Field	Data Type	Description	Behavior and Usage
Capacity	Number	A number representing the amount of lubricant that the component will hold	You can enter a value in this field.
Capacity Unit of Measure	Character	A value representing the UOM associated with the value in the Capacity field	On the datasheet, this field appears as list that is populated by the MI_LM_REFERENCES system code table.
Component Sub Type	Character	The subtype of a lubrication component type	On the datasheet, this field appears as a list labeled **Component Subtype** and is populated with the values stored in the Component Sub Type field in the existing . This list is filtered by the value that you select in the **Component** list.
Component Type	Character	The type of lubrication component	On the datasheet, this field appears as a list labeled **Component** and is populated with the values stored in the Component Type field in the existing .
Description	Character	A description of the Lubrication Step	In this box, you can enter a description of the action users will be completing when they enter readings for this step. For example, Pump Check, Vibration Check, or Temperature Check. NOTE: This field is not shown on the Rounds Pro mobile app
Name	Character	The name of the Step.	You can enter a unique alphanumeric name that you want to assign to the Step. This is a required field.
Requires Equipment Shutdown	Boolean	Indicates whether the equipment requires shutdown	On the datasheet, this field appears as a check box, which is cleared by default.
Scan to Unlock	Radio Button	This option allows you to enable **Scan to Unlock** Functionality for this step on the rounds Pro mobile device.	You can select one of the following options: • Yes: The **Scan to Unlock** is enabled for the Lubrication step on the Rounds Pro mobile application. The Step would be locked untill unless you scan the scan code mentioned in the Scan ID field. **Note:** Scan ID field would be enabled. • No: Scan to unlock is not enabled.

Field	Data Type	Description	Behavior and Usage
Scan ID	Character	The ID of the code (Barcode, QR Code, NFC Tag ID) that identifies the Checkpoint	For a barcode or QR code, enter the scan code. For an NFC tag, enter the serial number without colons. For example, if the serial number is 96:DB:46:AA, enter 96DB46AA. When you scan the code on Rounds Pro mobile, if there is a single match in the checked-out route instances, the **Step Details** page appears, and the step is unlocked. However, if there are multiple matches, you can choose the step that you want to unlock, or you can unlock all the steps. **Note:** This field is required if Scan to unlock is enabled.
LR Type	Character	The type of data that you can enter when creating a Reading linked to the Lubrication Step.	On the datasheet, this field appears as a list that is populated by the MI_LM_LUBR_REQ_TYPE system code table.
Lubricant	Character	The lubricant that is required for this Step	On the datasheet, this field appears as a list labeled **Lubricant** and is populated with the values stored in the Lubricant field in the existing . This list is filtered by the values that you select in the **Lubricant Manufacturer** and **Lubricant Type** lists.
Lubricant Manufacturer	Character	The company that manufactures the lubricant that operators should use when completing this Checkpoint	On the datasheet, this field appears as a list labeled **Lubricant Manufacturer** and is populated with the values stored in the Lubricant Manufacturer field in the existing . This list is filtered by the values that you select in the **Lubricant** list. If you have not yet selected a lubricant, the list is filtered based on the possible lubricants that you could select.
Lubricant Type	Character	The type of Lubricant	On the datasheet, this field appears as a list that is populated by the MI_LUBR_TYPE system code table.
Method Sub Type	Character	The subtype of a lubrication method type	On the datasheet, this field appears as a list labeled **Method Sub Type** and is populated with the values stored in the Sub Type field in the existing Lubrication Method records. This list is filtered by the values that you select in the **Lubricant** and **Method Type** lists.

Field	Data Type	Description	Behavior and Usage
Method Type	Character	The method by which the lubricant must be applied	On the datasheet, this field appears as a list labeled **Method Type** and is populated with the values stored in the Type field in the existing Lubrication Method records. This list is filtered by the value that you select in the **Lubricant** list.
Number of Points	Character	The number of points on the component that requires lubrication	You can enter the number of points that require lubrication. For example, if the component is an axle, you might enter 2 in this field.
Priority	Character	A value representing the priority associated with the lubrication requirement	On the datasheet, this field appears as a list that is populated by the MI_LUBR_PRIORITY system code table.
Unit of Measure	Character	The unit of measure that you can specify when entering a numeric reading value	On the datasheet, this field appears as a list that is populated by the MI_LM_REFERENCES system code table . This field is disabled if the value in the LR Type field is Check Off. **Note:** Rounds Pro does not use the Units of Measure Conversions feature. The system code table UOME is the only source for populating drop-down list values within UOM fields. The UOM field for a Lubrication Requirement contains a subset of values from the UOME system code table based on specific reference values from the MI_LM_REFERENCES system code table.

Catalog Items

Catalog Items

The information in this section of the documentation is intended to serve as a quick reference to details that are provided elsewhere in the specific Rounds Pro instructions.

The subfolders contain items that are intended to be used by APM users, either before or after data has been transferred from a device to APM.

Note: Even though other catalog items may exist in these folders or other folders related to Rounds Pro, only the catalog items that are used in the current version of APM are documented.

Dashboards Folder

The following table lists the dashboards that are stored in the Catalog location `\\Public \Meridium\Modules\Rounds Pro\Dashboards`. The table lists the dashboards by name. The dashboard name and caption are the same.

Dashboard Name	Behavior and Usage
Rounds Compliance View	Displays the information related to Rounds Pro through various widgets and graphs.
Graphs Subfolder	
Compliance Overview	Displays the route compliance summary.
Non Compliant Routes	Displays the number of route instances that are non-compliant for different route masters.
NonCompliantRoutesByTeamAndUser	Displays the details about the assignment of non-compliant route instances.
Year To Date Compliance	Displays the number of route instances that are compliant and the number of route instances that are non-compliant from the beginning of the year till date.

Graphs Folder

The following table lists the graphs that are stored in the Catalog location `\\Public \Meridium\Modules\Rounds Pro\Graphs`. The table lists the graphs by name. The graph name and caption are the same.

Item Name	Item Type	Behavior and Usage
Compliance Overview	Graph	Displays the percentage of routes that are due in the next 30 days, due in the next week, due today, and overdue.
Non Compliant Routes	Graph	Displays the number of route instances that are non-compliant for different route masters.
NonCompliantRoutesByTeamAndUser	Graph	Displays the details about the assignment of non-compliant route instances.
Year To Date Compliance	Graph	Displays the number of route instances that are compliant and the number of route instances that are non-compliant from the beginning of the year till date.

Operator Rounds Pro Queries Folder

The following table lists the queries that are stored in the Catalog location `\\Public \Meridium\Modules\Rounds Pro\Queries`. The queries are listed by name in the table. The query name and caption are the same unless otherwise noted.

Query	Behavior and Usage
ComplianceQueryOverNext30Days	Returns the list of routes that are due in next 30 days.
Non Compliant Routes	Returns the number of route instances that are non-compliant for different route masters.
NonCompliantRoutesByTeamAndUser	Returns the details about the assignment of non-compliant route instances.
YearToDateCompliance	This query returns the number of route instances that are compliant and the number of route instances that are non-compliant from the beginning of the year till date.

Chapter

16

Deployment and Upgrade

Topics:

Deployment

Deployment

Refer to the deployment information here [Deploy Rounds Pro for the First Time](#).

Upgrade

Upgrade

Refer to the upgrade information here: Upgrade Rounds Pro.

Chapter

17

Troubleshooting

Topics:

- [Troubleshooting Scenarios](#)

Troubleshooting Scenarios

Troubleshooting Scenarios

The following topics can help you troubleshoot issues that you may have with the Rounds Pro module:

-

Rounds Pro InProgress Job Error

Description

When checking in a Route, the **Check In As** window does not respond for a long time. The server logs may show the following errors:

- The InProgress job has not been updated
- Error processing readings for the Route instance

Cause

The Rounds Service is not in the **Running** state.

Solution

Procedure

1. Log in to the APM server.
2. Verify that the Rounds Service is in the **Running** state. If the Rounds Service is not running, do one of the following:

   a) Start the Rounds Service manually, or
   b) Reboot the server
      The Rounds Service will start as part of boot up.