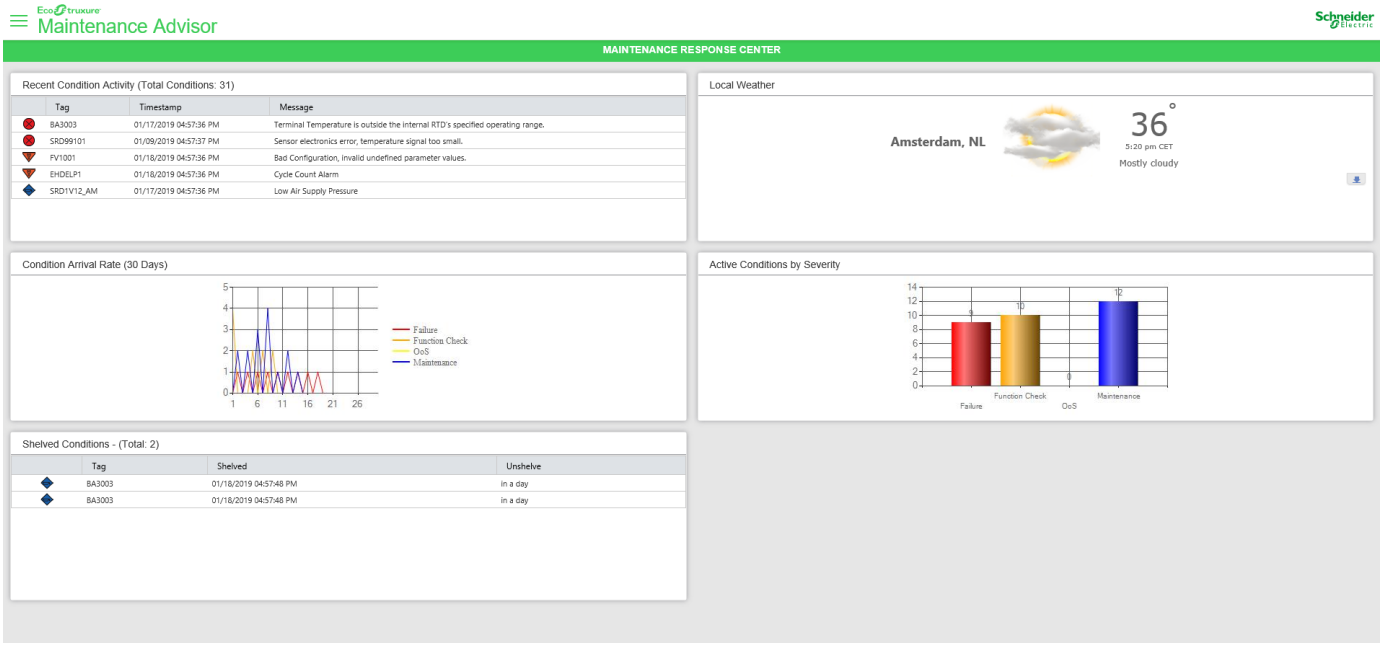
Maintenance Advisor

PSS 41S-6MainAdv

Product Specification

September 2023



https://www.se.com

Legal Information

Important Safety Instructions

Read these instructions carefully and look at the equipment to become familiar with it before trying to install, operate, service, or maintain it. The following safety messages might appear throughout this manual or on the equipment to warn of potential hazards or to call attention to information that clarifies or simplifies a procedure.

The addition of this symbol to a “Danger” or “Warning” safety message indicates that an electrical hazard exists that results in personal injury if the instructions are not followed.

This safety alert symbol that lets you know about potential personal injury hazards. Obey all safety messages with this symbol to avoid possible injury or death.

⚠DANGER

DANGER indicates a hazardous situation which, if not avoided, **will result in** death or serious injury.

Failure to follow these instructions will result in death or serious injury.

⚠WARNING

WARNING indicates a hazardous situation that, if not avoided, **could result in** death or serious injury.

Failure to follow these instructions can result in death, serious injury, or equipment damage.

⚠CAUTION

CAUTION indicates a hazardous situation that, if not avoided, **could result in** minor or moderate injury.

Failure to follow these instructions can result in injury or equipment damage.

NOTICE

NOTICE is used to address practices not related to physical injury.

Failure to follow these instructions can result in equipment damage.

Please Note

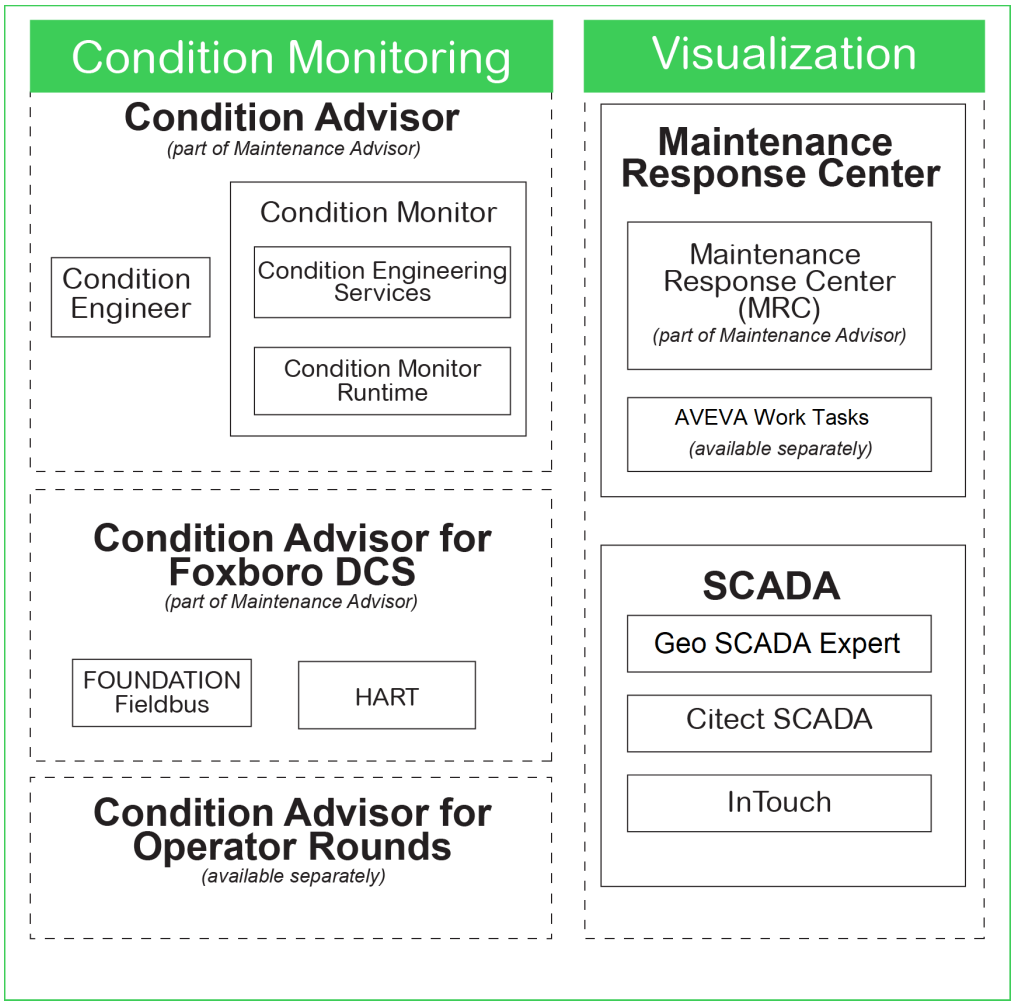
Electrical equipment should only be installed, operated, serviced, and maintained by qualified personnel. No responsibility is assumed by Schneider Electric for any consequences arising out of the use of this material.

A qualified person is one who has skills and knowledge related to the construction, installation, and operation of electrical equipment and has received safety training to recognize and avoid the hazards involved.

Overview

EcoStruxure™ Maintenance Advisor is an IIoT (Industrial Internet of Things) platform for predictive maintenance and decision support, providing detailed, real-time views of field device health, as well as event analysis, reporting functions, and work-order integration.

Figure 1 - EcoStruxure Maintenance Advisor



Maintenance Advisor is the smart choice for improving operational profitability. It provides these functional layers to help you proactively address your maintenance needs:

- **Maintenance Response Center (MRC)**

  As your maintenance “command center”, the MRC provides a single unified workspace for plant-wide asset information. Asset health information is displayed in real-time, presenting alerts in an intuitive format that also includes recommended corrective action.

  The MRC runs in web browsers on workstations and mobile devices for quick and easy access anywhere in the plant.

- **Condition Advisors**

  Condition Advisors detect emerging abnormal conditions in the assets being monitored. These Condition Advisors are available:

  - *Condition Advisor:* Enables condition monitoring of OPC-DA compliant assets, such as intelligent electronic devices, motor starters, and drives. It is part of Maintenance Advisor.
  - *Foxboro™ DCS Condition Advisor:* Enables condition monitoring of FOUNDATION Fieldbus and HART process instruments. It is part of Maintenance Advisor.
  - *Condition Advisor for Operator Rounds*: An optional feature that integrates with IntelaTrac Mobile Operator Rounds. It enables condition monitoring of “stranded’ or non-instrumented assets, such as pumps, furnaces, and motors. It is available separately.

- **Work Order Management System**

  This optional feature is based on AVEVA™ Work Tasks workflow software. It provides maintenance personnel with the tools to create work order requests, assign maintenance tasks, and monitor work orders from creation to completion.

Maintenance Response Center

The Maintenance Response Center (MRC) provides a single unified workspace for plant-wide assets, acting as a “command center” for maintenance. It provides real-time asset health information with recommended corrective action to help your maintenance team make timely, well-informed decisions.

Features

The MRC provides timely alerts for undesirable conditions, helping your team to proactively respond to emerging problems before they become major issues. These features can help you maximize operational efficiency.

Asset Condition Monitoring

The MRC provides early insight into emerging abnormal asset conditions in real time and helps drive a proactive maintenance approach that can maximize operational efficiency.

Recommended Corrective Actions

The MRC presents alerts in an intuitive, easy-to-understand format that also includes recommended corrective actions.

Single Unified Workspace

The MRC provides a single unified workspace for easy access to the most up-to-date status of plant-wide asset conditions. The MRC provides actionable early insight with clear, concise alerts and recommendations. Asset health information also indicates status, context, impact (ISA 108), and criticality (NAMUR 107).

Mobility Enabled

The MRC runs in web browsers on workstations or mobile devices for quick and easy access anywhere in the plant. For more information on how to access the MRC, see System Requirements, page 26.

Asset Condition History

Diagnostic information and activities are captured for the operational life of the asset. You can view an asset’s condition history and analyze that information, enabling you to proactively detect failures and address them. These proactive steps can help reduce plant downtime and maintenance shutdown time.

User Groups and Roles

The MRC allows plant supervisors to create and manage user groups and roles. Using the built-in workflow functionality, you can assign conditions, areas, and permissions to the correct maintenance engineer or technician for remedial action. This streamlines the maintenance process and help reduce unnecessary paperwork.

Figure 2 - Role Management Area

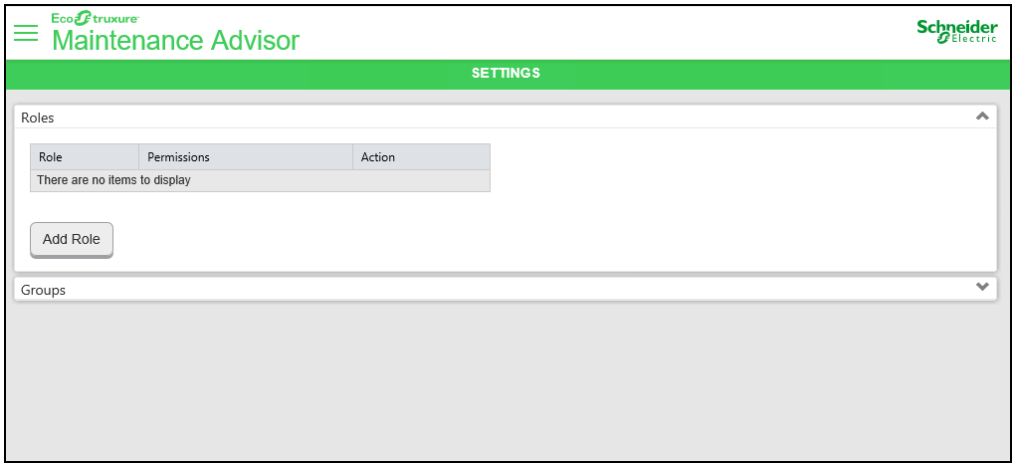


Figure 3 - Adding a Role

Optional Workflow Management

The MRC allows plant supervisors to create work order requests directly from an active condition, using the built-in workflow functionality. The MRC uses AVEVA Work Tasks workflow software, which enables business users to design and deploy BPM workflow applications. A workflow process has been designed in AVEVA Work Tasks to automate the MRC Work Order process. The default AVEVA Work Tasks workflow installed out of the box can be customized to suit your needs. For more information, see www.aveva.com.

The maintenance planner can assign the work to a technician. All work that the technician performs is recorded and kept together with the asset, so it is available for reference.

Figure 4 - Supervisor View of Work Order Tasks in Inbox

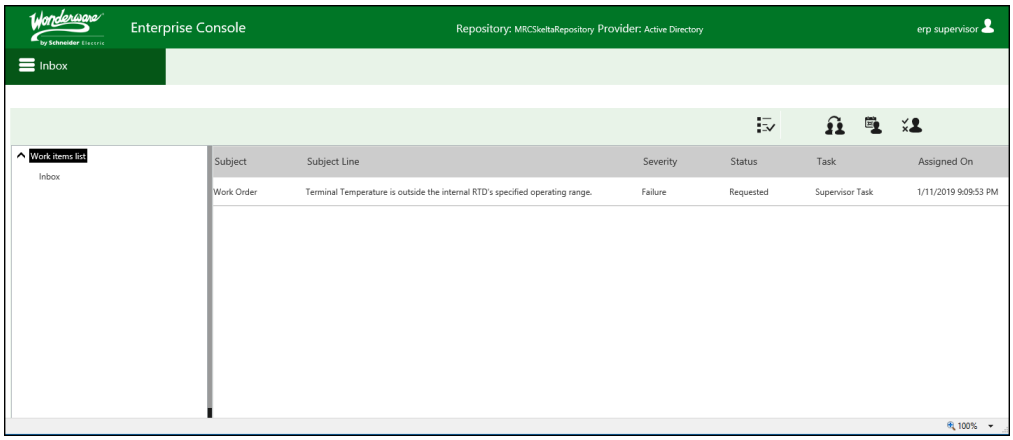
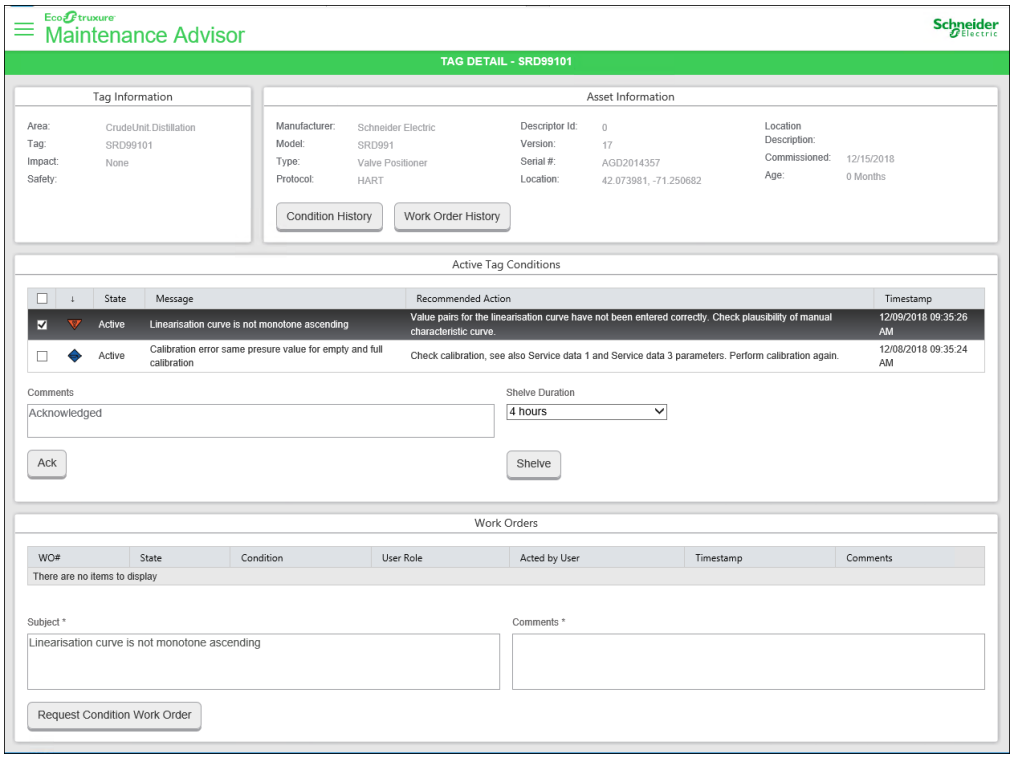
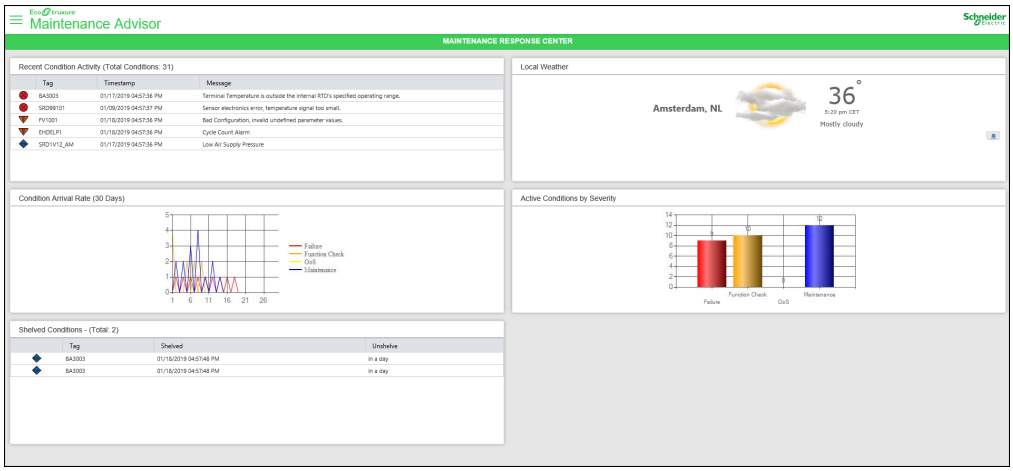


Figure 5 - Active Condition Work Order Request



MRC Dashboard

The dashboard serves as the home page for the MRC application and provides an overview of the MRC features and functions. Dashboard gadgets are automatically refreshed every five minutes.

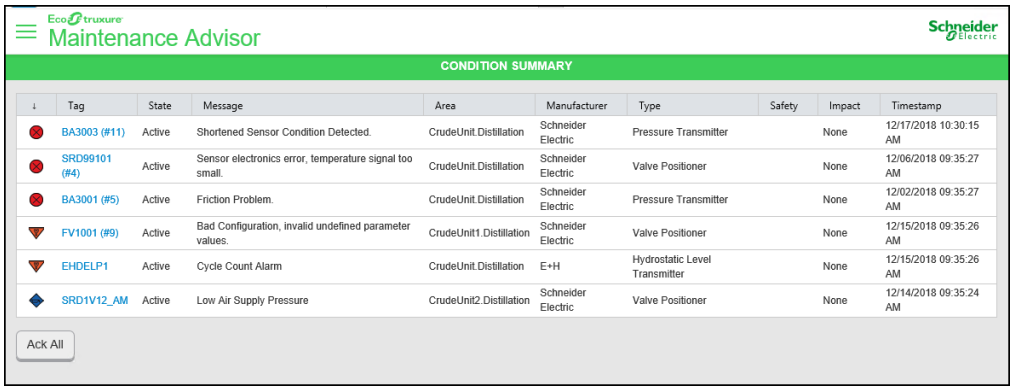


Condition Summary

Several screens within the MRC application provide full context of plant assets as well as the conditions that affect or have affected them. For example, the Condition Summary page displays the most recent highest-severity active condition, but it also contains features for viewing more asset and condition details. This information can provide additional context for decision-making on prioritizing maintenance tasks. The Condition Summary is automatically refreshed every five minutes.

From the Condition Summary page, you can:

- Navigate to the Condition Detail dialog, where you can choose to shelve a condition and set its shelve duration time
- View the number of active conditions for each tag, without drilling down any further into a device's Tag Detail page
- Determine Safety: If this is a safety-related device
- Determine Impact: The criticality level of the device defined by the ISA 108 standard



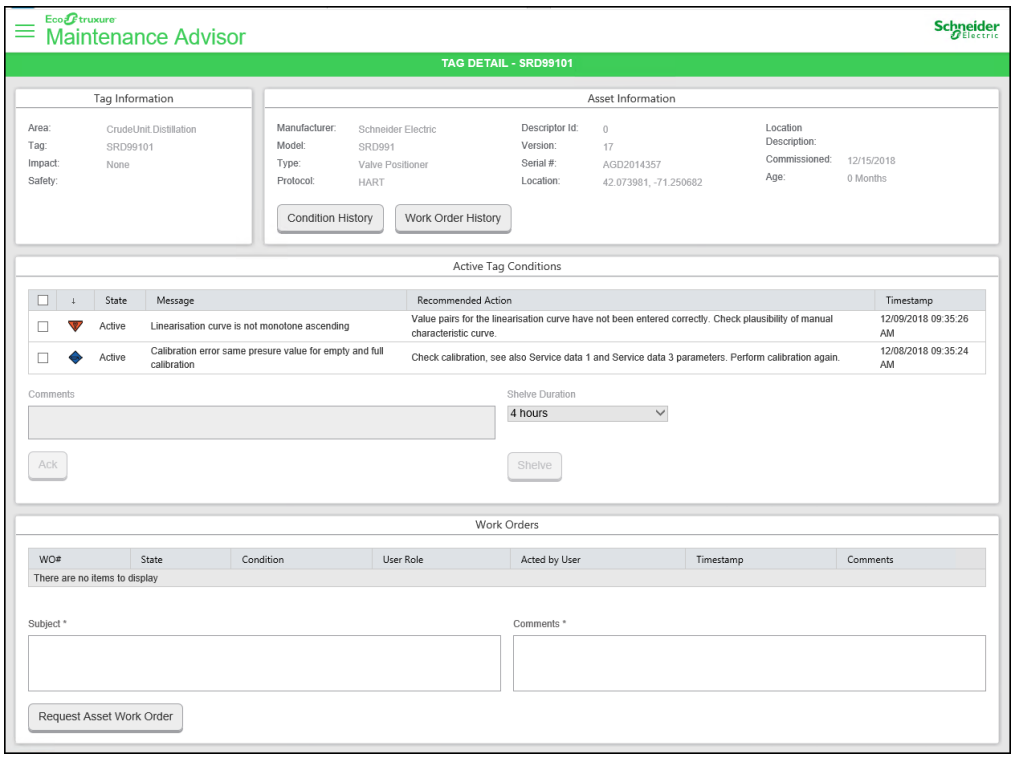
Tag Detail

From the Condition Summary page, you can access the Tag Detail page, one of many pages that displays asset information, such as the manufacturer, type, protocol, and model.

Below the Asset Information, a grid displays the Active Tag Conditions for the asset.

Below the Active Tag Conditions, a Work Order grid displays the latest state of open work orders.

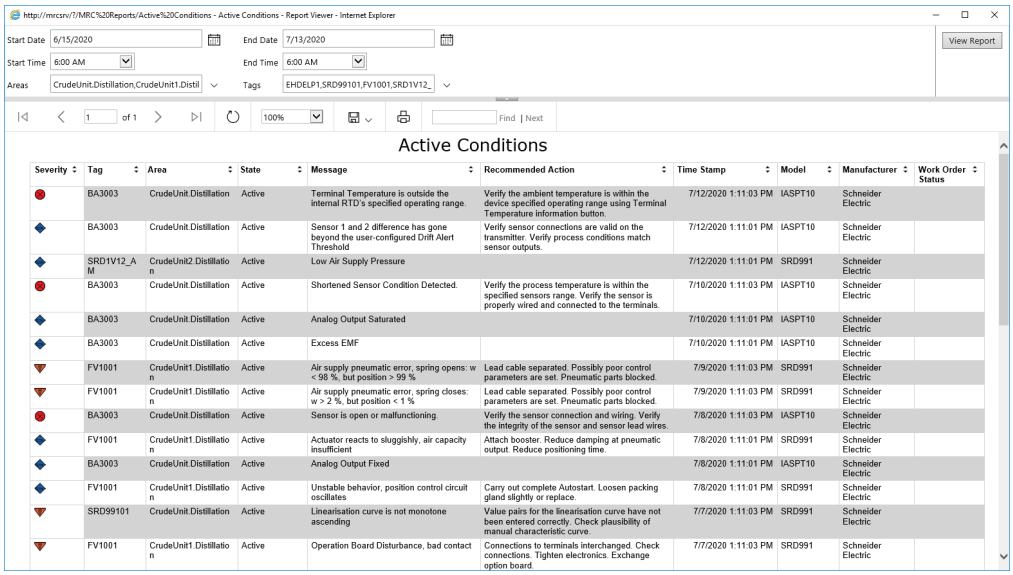
You can gain further insight by accessing a log of conditions associated with the asset in the Asset Condition History section. The history provides you with information that helps in evaluating the state and performance of an asset over time.



Condition Reports

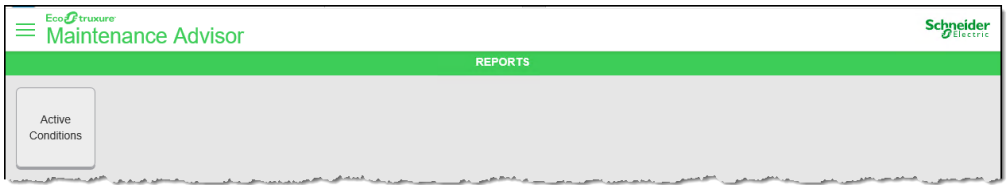
The MRC uses SQL Server Reporting Services (SSRS), allowing you to generate customized condition reports. The MRC's reporting feature not only provides you with a glimpse of what is currently happening with your assets, but it also allows you to run an inquiry on the asset condition history. Viewing the history provides you with more background knowledge and a broader view of the conditions, which can help you in making maintenance-related decisions.

Figure 6 - SSRS Page



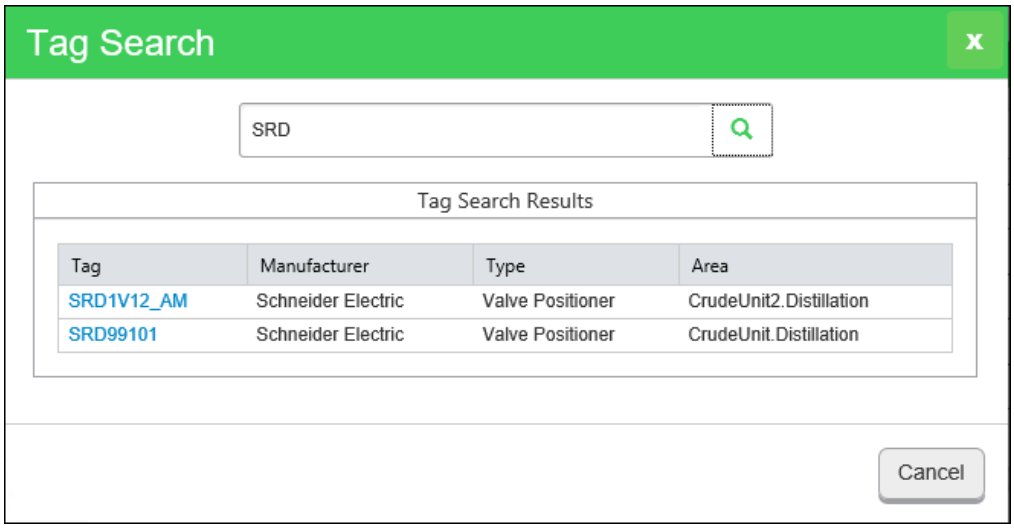
Severity	Tag	Area	State	Message	Recommended Action	Time Stamp	Model	Manufacturer	Work Order Status
	BA3003	CrudeUnit.Distillation	Active	Terminal Temperature is outside the internal RTD's specified operating range.	Verify the ambient temperature is within the device specified operating range using Terminal Temperature information button.	7/12/2020 1:11:03 PM	IASPT10	Schneider Electric	
	BA3003	CrudeUnit.Distillation	Active	Sensor 1 and 2 difference has gone beyond the user-configured Drift Alert Threshold	Verify sensor connections are valid on the transmitter. Verify process conditions match sensor outputs.	7/12/2020 1:11:01 PM	IASPT10	Schneider Electric	
	SRD1V12_AM	CrudeUnit2.Distillation	Active	Low Air Supply Pressure		7/12/2020 1:11:01 PM	SRD991	Schneider Electric	
	BA3003	CrudeUnit.Distillation	Active	Shortened Sensor Condition Detected.	Verify the process temperature is within the specified sensors range. Verify the sensor is properly wired and connected to the terminals.	7/10/2020 1:11:03 PM	IASPT10	Schneider Electric	
	BA3003	CrudeUnit.Distillation	Active	Analog Output Saturated		7/10/2020 1:11:01 PM	IASPT10	Schneider Electric	
	BA3003	CrudeUnit.Distillation	Active	Excess EMF		7/10/2020 1:11:01 PM	IASPT10	Schneider Electric	
	FV1001	CrudeUnit1.Distillation	Active	Air supply pneumatic error, spring opens: w < 98 %, but position > 99 %	Lead cable separated. Possibly poor control parameters are set. Pneumatic parts blocked.	7/9/2020 1:11:03 PM	SRD991	Schneider Electric	
	FV1001	CrudeUnit1.Distillation	Active	Air supply pneumatic error, spring closes: w > 2 %, but position < 1 %	Lead cable separated. Possibly poor control parameters are set. Pneumatic parts blocked.	7/9/2020 1:11:03 PM	SRD991	Schneider Electric	
	BA3003	CrudeUnit.Distillation	Active	Sensor is open or malfunctioning.	Verify the sensor connection and wiring. Verify the integrity of the sensor and sensor lead wires.	7/8/2020 1:11:03 PM	IASPT10	Schneider Electric	
	FV1001	CrudeUnit1.Distillation	Active	Actuator reacts to sluggishly, air capacity insufficient	Attach booster. Reduce damping at pneumatic output. Reduce positioning time.	7/8/2020 1:11:01 PM	SRD991	Schneider Electric	
	BA3003	CrudeUnit.Distillation	Active	Analog Output Fixed		7/8/2020 1:11:01 PM	IASPT10	Schneider Electric	
	FV1001	CrudeUnit1.Distillation	Active	Unstable behavior, position control circuit oscillates	Carry out complete Autostart. Loosen packing gland slightly or replace.	7/8/2020 1:11:01 PM	SRD991	Schneider Electric	
	SRD99101	CrudeUnit.Distillation	Active	Linearisation curve is not monotone ascending	Value pairs for the linearisation curve have not been entered correctly. Check plausibility of manual characteristic curve.	7/7/2020 1:11:03 PM	SRD991	Schneider Electric	
	FV1001	CrudeUnit1.Distillation	Active	Operation Board Disturbance, bad contact	Connections to terminals interchanged. Check connections. Tighten electronics. Exchange option board.	7/7/2020 1:11:03 PM	SRD991	Schneider Electric	

Figure 7 - Reports Portal



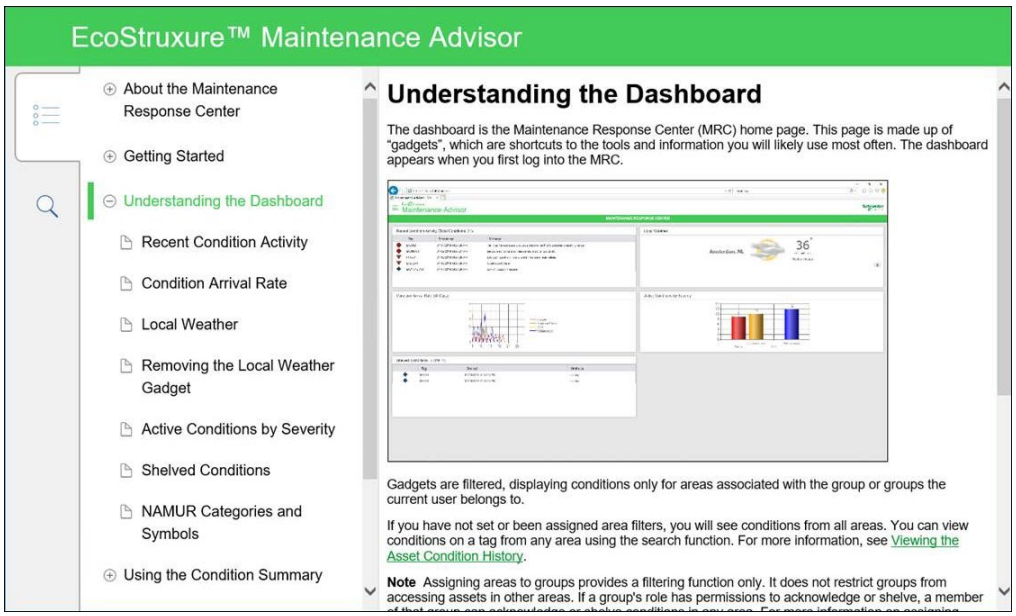
Tag Search

Tag Search helps to find all information about a specific tag in the MRC system. Click the Magnifying Glass icon, type three characters of the tag name, and a list with all possible tags appears, up to a maximum of 15 search results.



Web Help

Context-sensitive Web Help is available from every screen.



MRC Engineering

Once installed, the MRC requires only user group and role configuration. No system engineering is required because the MRC self-learns about the asset environment as devices are commissioned into the system and as each device begins to deliver conditions.

Devices are configured to report conditions to the MRC using condition advisor applications. Condition Advisor configuration allows you to customize which of the device's conditions you want to monitor and to specify the severity of the conditions.

Use the EcoStruxure™ Foxboro™ DCS Field Device Expert (FDE) in the EcoStruxure™ Foxboro DCS Control Editors v6.2 (or later) with Condition Advisor for Foxboro DCS to configure conditions for HART and FOUNDATION Fieldbus devices on the Foxboro DCS. Condition configuration is done at the template level only and includes automatic linking to compound block parameters.

Use Condition Advisor to configure conditions based on parameters from OPC DA servers.

Table 1 - NAMUR NE 107 Symbols

Category	Description	NAMUR NE 107 Symbol
Maintenance Required	Output signal is valid, but the wear reserve is nearly exhausted or a function will soon be restricted due to operational conditions (deposit build-up, for example).	
Out of Specification	The device is operating outside its specified range or an internal diagnostic indicates deviations from measured or set values due to internal problems.	
Function Check	Output signal is temporarily invalid.	
Failure	Output signal is invalid due to malfunction in the field device or its peripherals.	

Foxboro DCS Condition Advisor

Integrated into Foxboro DCS Field Device Expert, Foxboro DCS Condition Advisor enables you to set up condition monitoring for FOUNDATION Fieldbus and HART devices.

Using the Condition tab, you can easily select conditions based on information from the device description file, and, optionally, add recommended actions. You can also add NAMUR 107 symbols for each condition. It is a simple-click configuration, and because it is done at the template level, it is immediately available for all device instances created from this template. Configuration is done only for the template – all devices automatically inherit the conditions. When assigned to an area, if a condition occurs, the devices automatically send the information to the MRC.

During commissioning of a device in Field Device Expert (using the Prepare Device Wizard), device details are sent to the MRC. Details include information about the manufacturer, device type, and the serial number or unique identifier.

Figure 8 - Selecting Conditions in the Parameter Select Dialog Box

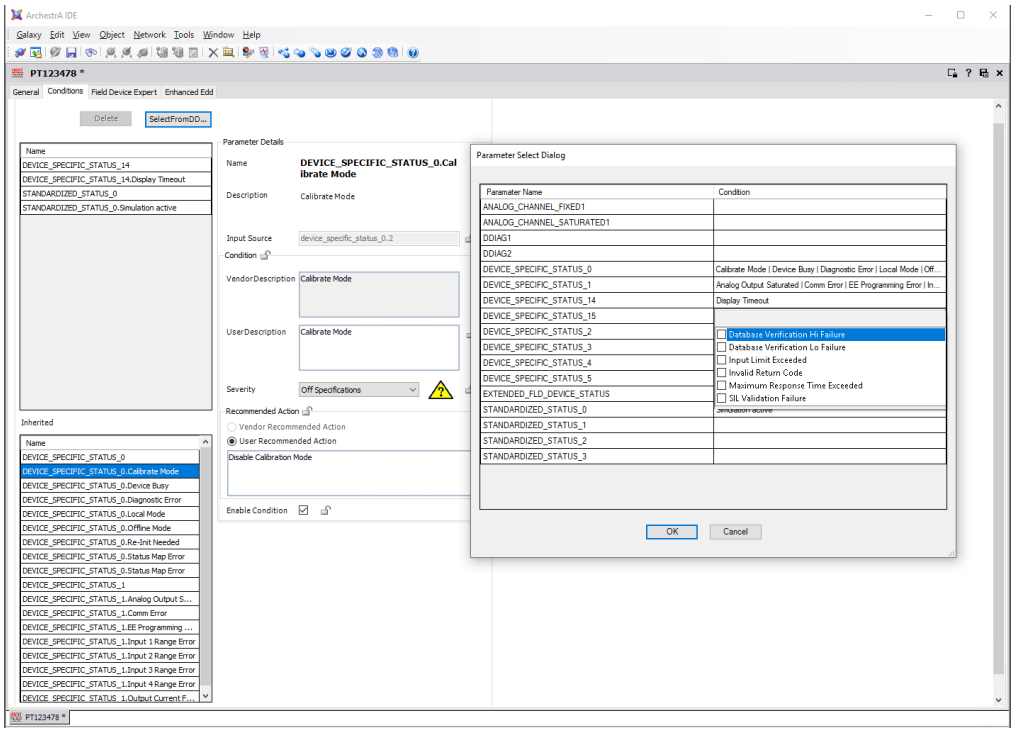
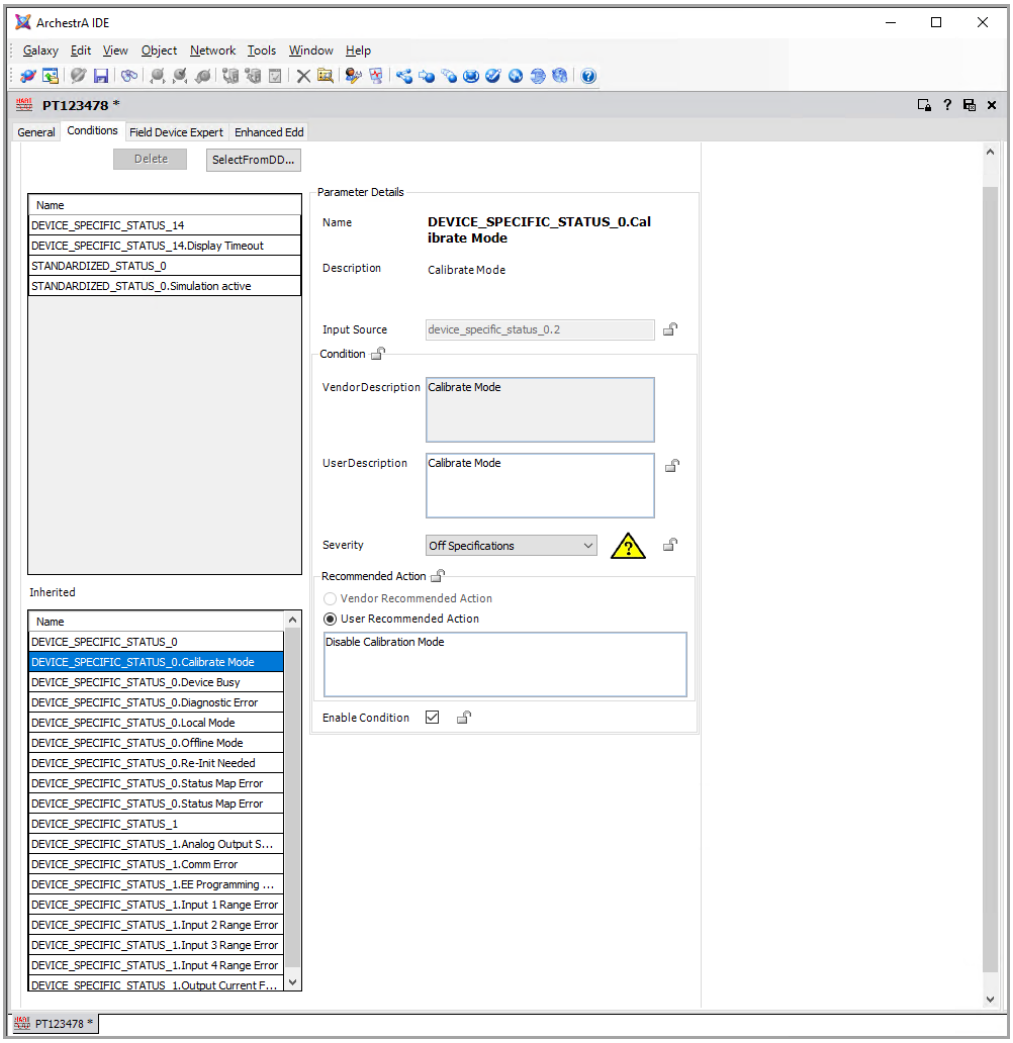


Figure 9 - Condition Details

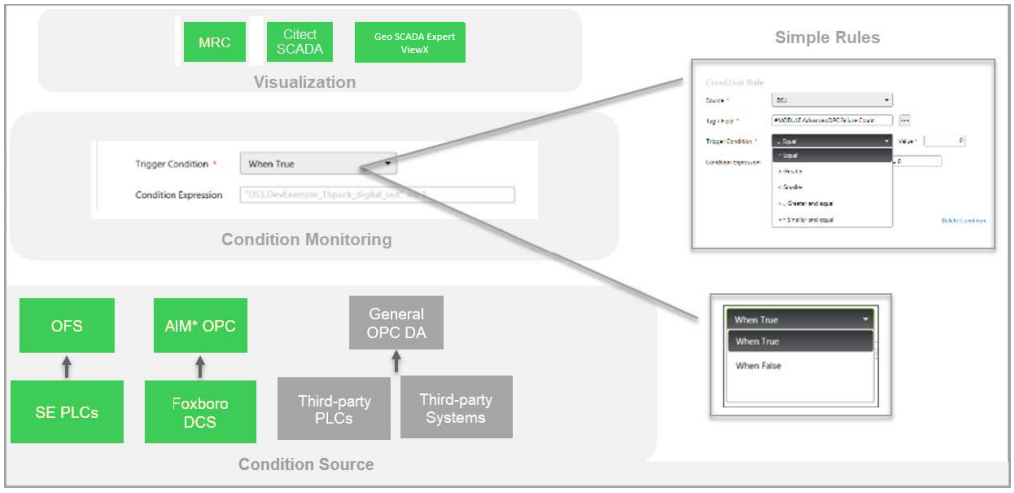


Condition Advisor

Condition Advisor enables platform-neutral condition monitoring. It enables you to configure and monitor asset conditions based on signals from any OPC DA server.

Signals can include diagnostics from electronic assets such as controllers, drives and instruments, or from process variables. Process variables are compared to limits to detect conditions in assets related to those signals. Detected conditions are transformed into human-readable, actionable form and delivered to the MRC and, optionally, to Citect SCADA and Geo SCADA Expert ViewX as alarms.

Figure 10 - How Condition Advisor Works



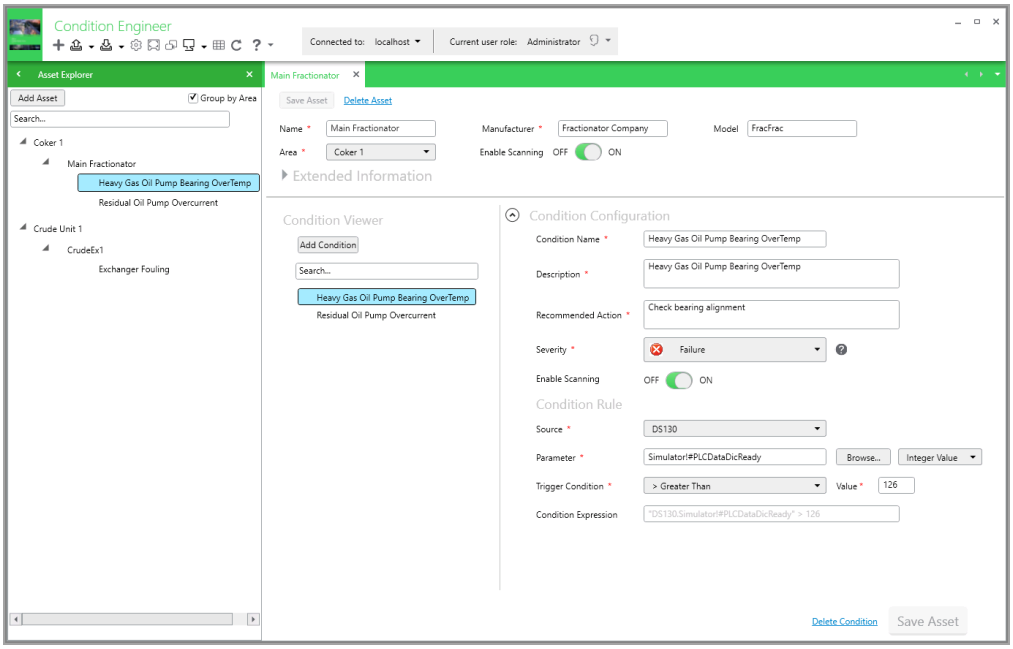
Condition Advisor is made up of Condition Engineer and Condition Monitor.

Condition Engineer

Condition Engineer is a standalone configuration tool running on Windows for configuring assets and their related conditions, and for configuring the condition monitoring services and data sources. Any time you need to add, delete, and edit configurations, use Condition Engineer.

Condition Engineer is a highly efficient tool. You can create an asset and its associated conditions in seconds. You can rapidly duplicate asset types by copying and pasting assets and conditions.

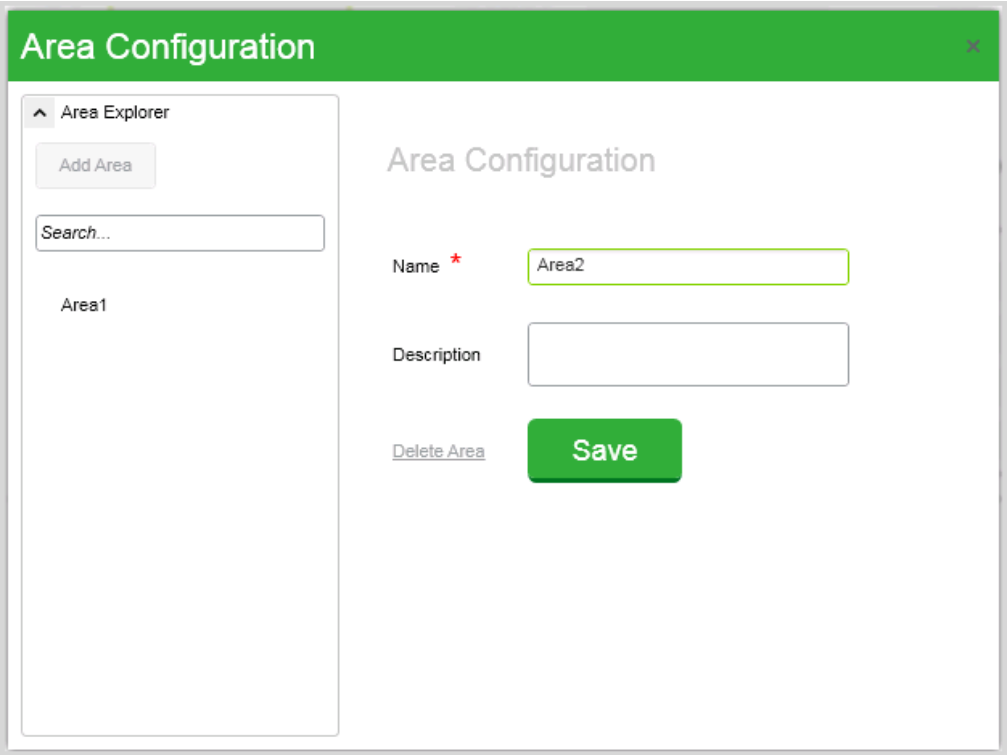
Condition Engineer is needed only while configuring the condition monitoring system. After the configuration is compete, you can shut down Condition Engineer. If Condition Engineer is on a computer that is separate from the Condition Monitor computer (a laptop, for example), you can remove the Condition Engineer computer from the system after completing the configuration.



Configuring Areas

Areas allow you to associate conditions from specific assets with an area. Areas can be typical plant areas or can be more broadly defined as “areas of interest”. You can subscribe to conditions from one or more areas.

Having users associated with areas helps limit the information delivered to users – they receive only the information that is relevant to them.

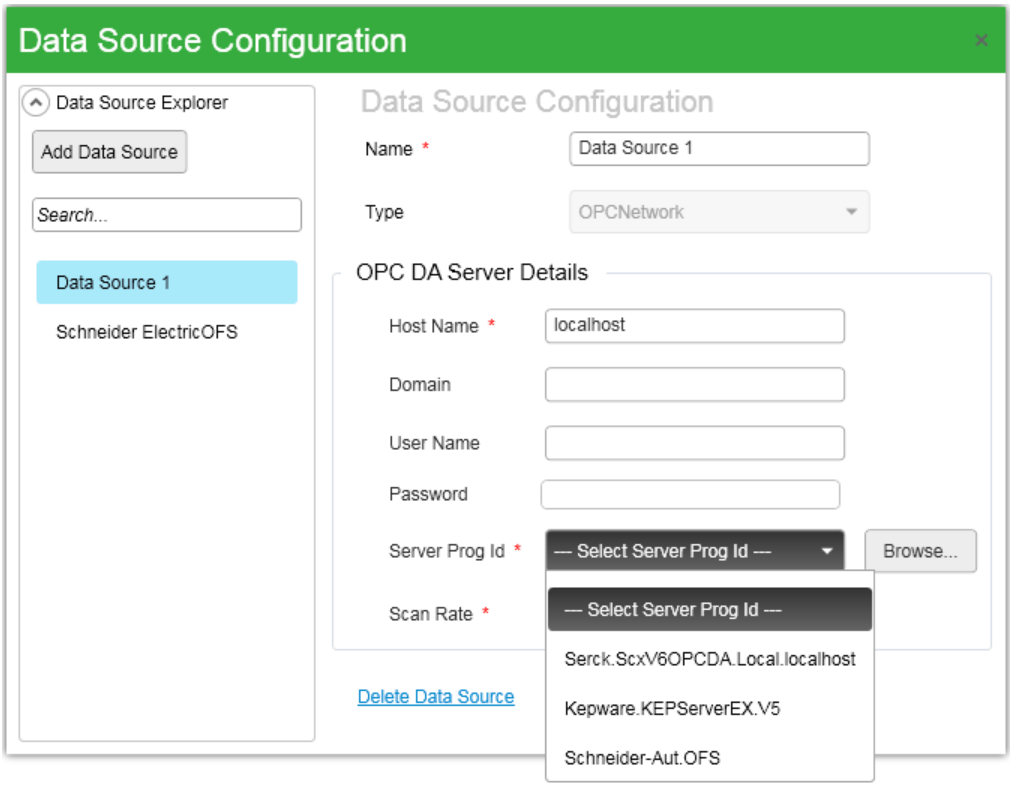


Configuring Data Sources

Conditions are configured based on parameters provided via one or more OPC DA servers. Each OPC DA server is called a data source.

Data source connections are configured in Condition Engineer. Any number of data sources can be configured and conditions can gather data from any of them.

Different conditions under the same asset can use different data sources.



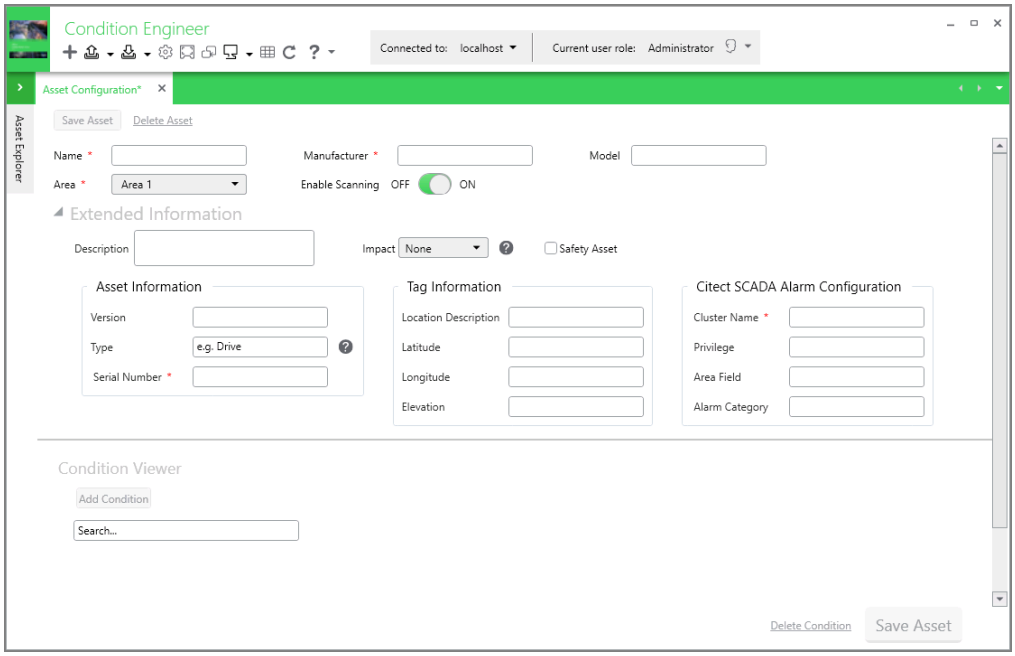
Configuring Assets

Assets are any named thing you want to associate with one or more conditions. An asset can be anything from a transmitter to a pump, as well as a compressor and a motor. Conditions are delivered to the MRC under the asset name you configure.

Assets are configured with descriptive information, including the asset manufacturer, model, and asset version. You can also provide location information, such as GPS coordinates and a location description. All asset information is made available in the MRC.

Condition Engineer's Export and Import Asset Definitions and Bulk Generate Assets features help maximize your engineering time and efficiency.

- **Export and Import Asset Definition**: Allows you to reuse asset definitions across Condition Engineer projects, including projects distributed across installations. You can create an "asset library" for your organization, to store asset definitions. Having a library of asset definitions provides a way to quickly generate identical assets with minimal effort.
- **Bulk Generate Assets**: Allows you to "bulk generate" assets that share similar condition configurations by exporting one or more assets to an XML file, editing the assets, then importing them back into your project. A fully configured asset serves as a 'source' to create identical assets.
- You can use any XML editor to edit the assets. However, a Microsoft Excel utility is installed with Condition Advisor and provides an easy-to-use format for working with the XML data.

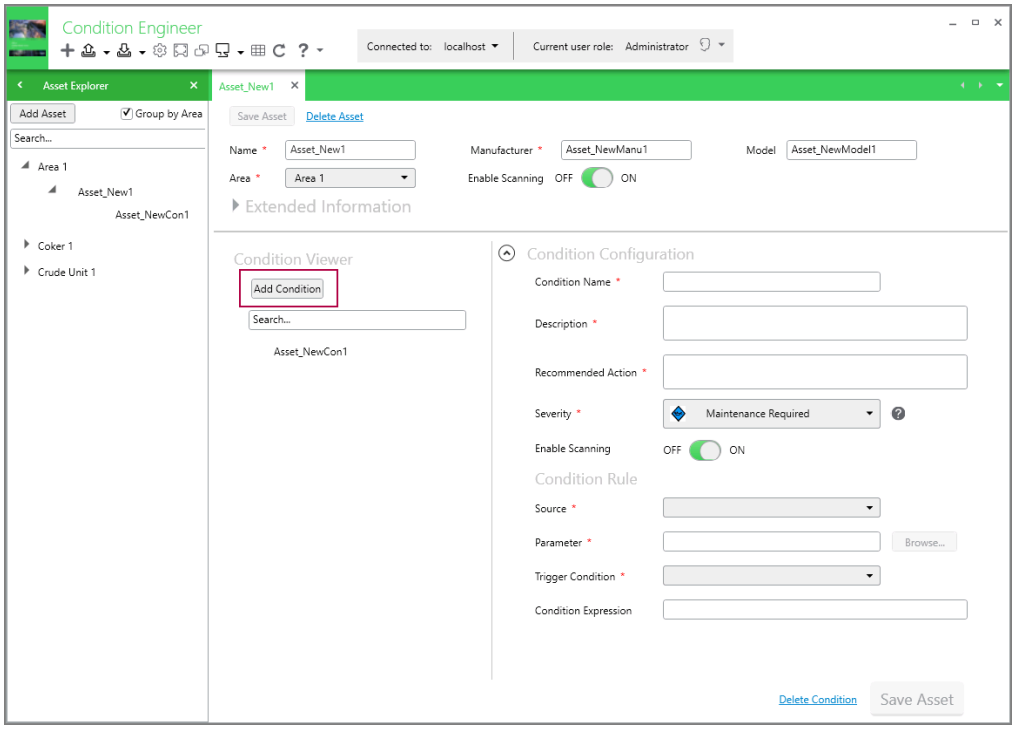


Configuring Conditions

A condition is a maintenance alarm that contains asset and condition-specific information. Conditions contain human-readable text that describe the condition and recommended actions to take when a condition occurs. Conditions also contain NAMUR 107 classification, as well as time, and other information.

Conditions can be configured in seconds. Browse any of the data sources for the parameter that will be evaluated to detect a condition, create the condition expression that will be evaluated when the parameter value changes, then fill in a few additional settings.

Once saved, Condition Monitor automatically begins to monitor for the condition.



Condition Monitor

Condition Monitor is the runtime component of Condition Advisor.

Condition Monitor:

- Includes the database where the Condition Engineer configuration information is stored
- Is the runtime engine that creates conditions as appropriate based on the values of system parameters
- Delivers conditions to the MRC and, optionally, to Citect SCADA and Geo SCADA Expert ViewX as alarms
- Manages condition states, updating all condition clients as states change as well as helps ensure delivery of all condition transitions if the connection to one or more clients is temporarily lost

  When a configured condition is saved, Condition Monitor immediately starts to “scan” for conditions. It waits for changes to OPC parameters, then evaluates condition expressions associated with the updated parameter. If the expression evaluates to TRUE, a condition is generated and distributed to one or more condition destinations. If the condition returns to normal (condition expression evaluates to FALSE after a condition is generated), the condition state is updated in all condition destinations.

Condition Monitor also manages acknowledgements to conditions that arrive from any of the condition destinations, and keeps the acknowledgement state of all condition destinations synchronized.

Condition Monitor runs on Windows computers. It operates independently of Condition Engineer after the system configuration is complete.

Condition Advisor for Operator Rounds

In older refineries, most motors, transformers, drives, starters, and other electrical assets – which often represent 40% to 60% of the customer asset base – are ‘stranded’ or non-instrumented, making data collection a manual process and making it all but impossible to perform advanced trending or analysis to optimize performance.

Condition Advisor for Operator Rounds provides a way to monitor stranded assets by sharing the data manually collected through IntelaTrac with the MRC. Having this data available in the MRC helps customers meet business objectives of increased availability and utilization even for stranded assets, which can help minimize downtime (both planned and unplanned) and maximize productivity.

Condition Advisor for Operator Rounds adds integration objects to the IntelaTrac interface to enable condition and asset data from IntelaTrac to be reported to and displayed in the MRC. As part of configuration, you can schedule when to import and synchronize data with the MRC. The data is imported according to the schedule, and active conditions that are integrated with the MRC server are displayed in the MRC along with asset data and contextual information.

Condition Advisor for Operator Rounds installs these components:

Condition Provider Plug-in	A plug-in that is deployed on the IntelaTrac server. On installing this plug-in, the Server Integration Configs menu appears in the IntelaTrac Management Center (IMC) Toolbox. It enables users to configure the MRC as the alarm destination and to provide data for the MRC properties that are not available in the IMC. This plug-in resides on the IntelaTrac server machine. This is not a stand-alone component, but part of the data transformation service. This component acts as a client to the Condition Reporting Service. It processes the tasks configured in IntelaTrac to be sent to the MRC and sends those to the Condition Reporting Service.
Custom Action Plug-in	A plug-in that is deployed on the IntelaTrac client systems. On installing this plug-in, the MRC Custom Action object appears under Actions in the IMC Toolbox. You can add the MRC Custom Action to a condition while designing a procedure. This enables users to view contextual information along with the condition in the MRC.
Condition Reporting Service	A Windows service that uses the MRC Asset and Condition service to manage data between the IntelaTrac Database Service and the MRC. This service is a “bridge” between IntelaTrac and the MRC. This service transforms and delivers the asset and conditions details from IntelaTrac to the MRC. You can install the Condition Reporting Service on the same computer as the Condition Provider Plug-in (for instance, on the IntelaTrac server computer), or you can create a distributed environment by installing the Condition Reporting Service on a different computer. For installation scenarios and procedures, see the *Condition Advisor for Operator Rounds Installation Guide* (B0750TA).

In addition to these components, Condition Advisor for Operator Rounds provides the Asset Metadata Utility, which is a Microsoft® Excel™ spreadsheet for editing asset metadata in bulk. You can export asset metadata from IntelaTrac, edit the data in bulk in the utility, then import it back into IntelaTrac.

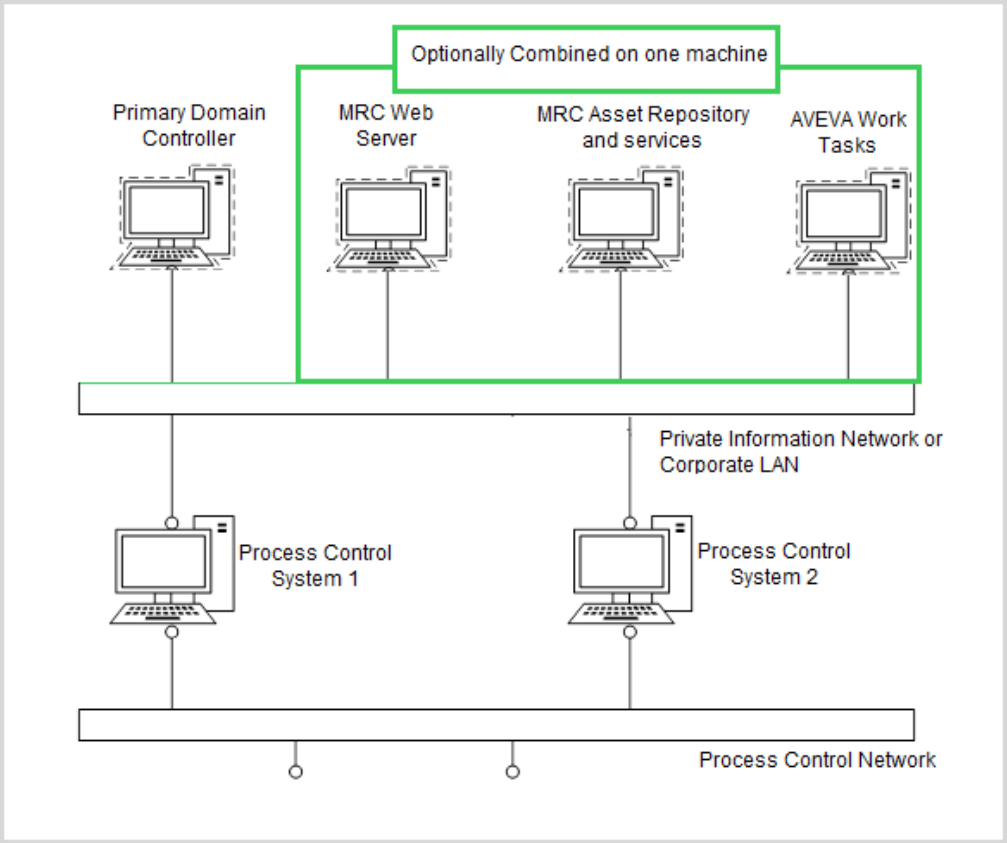
System Architecture

MRC & Foxboro DCS

The process control systems that source condition and asset information to MRC must be one of the following:

- Members of the same domain as the MRC
- Members of a different, but trusted domain of the MRC
- Members of no domain (i.e., in a workgroup)
- Standard deployment of the MRC requires two Windows Server 2016 64-bit systems. One system running Internet Information Services (IIS) will host the MRC web application, and a second with SQL Server 2019 installed will be used for the Asset Repository and Windows Communication Foundation (WCF) service hosting. See System Requirements, page 26 to learn about the system requirements for each computer.

Figure 11 - Standard MRC Deployment Configuration



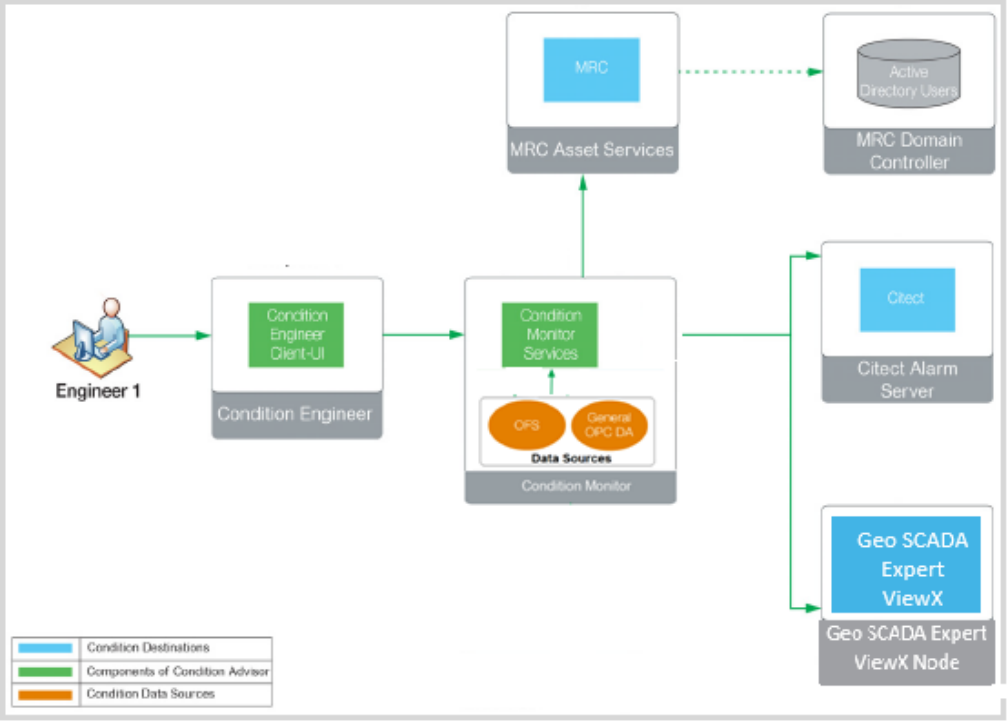
Condition Advisor

This example shows a Condition Advisor setup that is simply an extension of the MRC architecture.

While the domain controller must reside on its own computer, all other components except Citect SCADA and Geo SCADA Expert ViewX can reside on the same computer or on any combination of computers.

Because Condition Engineer is used only for configuration, a common practice is to install it on a computer that also performs other plant functions.

Figure 12 - Example Condition Advisor Setup

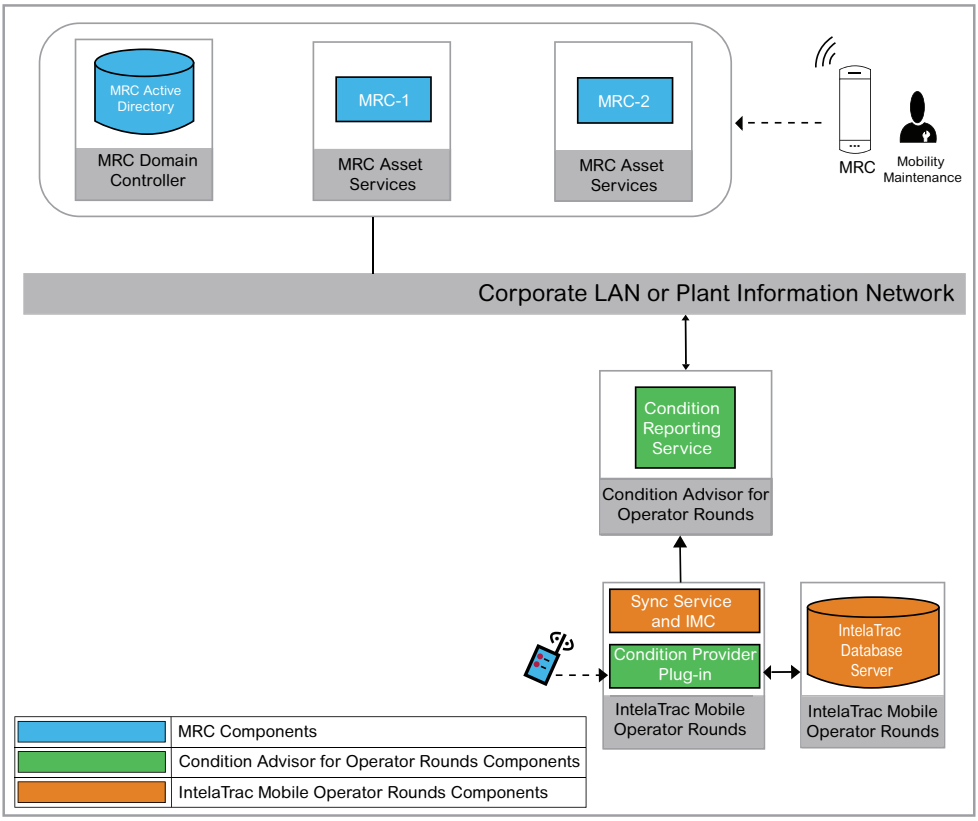


Condition Advisor for Operator Rounds

The distributed nature of IntelaTrac and the MRC enable many deployment possibilities for Condition Advisor for Operator Rounds. For example, you can set up a system with multiple instances of Condition Advisor for Operator Rounds connected to one MRC. You can also set up a system to have one Condition Advisor for Operator Rounds application deliver to multiple MRC applications.

This example shows one Condition Advisor for Operator Rounds application connected to two MRC applications.

Figure 13 - Example Condition Advisor for Operator Rounds Setup



System Requirements

This table lists the operating system and hardware platform (physical or virtualized) system requirements for each system role required to run the Maintenance Advisor application.

Role	Recommended Operating System	Hardware Requirements
Active Directory Server	Windows Server 2016 64-bit	2GB RAM C drive with 100GB minimum hard disk space
Internet Information Server	Windows Server 2016 64-bit	4GB RAM C drive with 100GB minimum hard disk space
SQL Server 2019 Standard Edition	Windows Server 2016 64-bit	8GB RAM minimum, 16GB recommended C drive with 100GB minimum hard disk space D drive with 100GB minimum hard disk space
AVEVA Work Tasks	Windows Server 2016 64-bit	8GB RAM minimum, 16GB recommended C drive with 100GB minimum hard disk space D drive with 100GB minimum hard disk space
Condition Advisor: Condition Engineer	Workstation-class hardware with Windows 10 64-bit operating systems with the latest Microsoft updates.	Dual core processor 8GB RAM 100GB minimum hard disk space
Condition Advisor: Condition Monitor More than 50,000 conditions	Server-class hardware with Windows Server 2016 64-bit operating systems with the latest Microsoft updates.	Quad core processor 16GB RAM C drive with 100GB minimum hard disk space
Condition Advisor: Condition Monitor Up to 50,000 conditions	Workstation-class hardware with Windows 10 64-bit operating systems latest Microsoft updates.	Dual core processor 8GB RAM 100GB minimum hard disk space
Condition Advisor for Operator Rounds: Condition Provider plug-in	Server-class hardware with Windows Server 2016 64-bit, Standard or Data Center Edition operating systems with the latest updates. See the IntelaTrac Mobile Operator Rounds server requirements.	8GB RAM

Role	Recommended Operating System	Hardware Requirements
Condition Advisor for Operator Rounds: Custom Action plug-in	Workstation class hardware with Windows 10 64-bit operating systems with the latest Microsoft updates. See the IntelaTrac Mobile Operator Rounds desktop client requirements.	Multi-core processor with minimum 1GHz speed 4GB RAM minimum, 8GB recommended 250MB minimum free hard disk space
Condition Advisor for Operator Rounds: Condition reporting service	Server-class hardware Windows Server 2016 64-bit operating systems with the latest updates.	Multi core processor 8GB RAM minimum 20GB minimum free hard disk space

You can install the Internet Information Server, SQL Server 2019 Standard Edition, and AVEVA Work Tasks on one computer. This can be a virtualized computer as well, or virtualized computer if installed on different computers.

To run the MRC web application in a desktop or mobile device web browser, use one of the browsers listed here.

Table 2 - Browser Requirements for the Maintenance Response Center

Device	Browser
Desktop	Internet Explorer 11
Windows with Windows 10	Internet Explorer 11
IPad	Safari
Android tablets	Google Chrome

You can integrate the MRC with any process control system. It is designed to run on Foxboro DCS Process Automation Systems with HART FBM support, FOUNDATION Fieldbus FBM support, and Foxboro DCS Control Software v6.2 or later.

Licensing

The OneLicensing platform allows you to manage the licenses for your Maintenance Advisor software products. You will select these types of licenses:

- Media Kit License
- Tag License
- Component License (optional)

Media Kit Licenses

First, choose your software media kit.

License Type	Part Number	Description
Maintenance Advisor Media Kit with SQL Standard	FX-MASQLSTD-K	This kit includes: • Maintenance Response Center (includes Microsoft SQL Server 2019 Standard) • Foxboro DCS Condition Advisor • EcoStruxure Condition Advisor • Wonderware Skelta BPM 2017
Maintenance Advisor Media Kit with SQL Express and Workflow	FX-MASQLEXP-K	This kit includes: • Maintenance Response Center (includes Microsoft SQL Server 2019 Express with Advanced Services) • Foxboro DCS Condition Advisor • EcoStruxure Condition Advisor • Wonderware Skelta BPM 2017

Tag Licenses

Maintenance Advisor OneLicensing offers permanent licenses, subscription licenses, and a trial license. Licensing is based on the number of tags assigned to assets at your site. A tag is a name assigned to an asset. When you assign a tag to an asset, you can receive commissioning and reporting messages for that asset. An asset can be associated with one tag at a time. You can purchase any number of these licenses.

For more information on available licenses, contact your local sales representative.

Base Licenses

Start using Maintenance Advisor with these base licenses:

License Type	Part Number	Maximum Number of Tags
Maintenance Advisor 250	FX-MA250-A (Permanent) FX-MA250-T (1-year Subscription)	250
Maintenance Advisor 1000	FX-MA1000-A (Permanent) FX-MA1000-T (1-year Subscription)	1000
Maintenance Advisor 2500	FX-MA2500-A (Permanent) FX-MA2500-T (1-year Subscription)	2500
Maintenance Advisor 5000	FX-MA5000-A (Permanent) FX-MA5000-T (1-year Subscription)	5000
Maintenance Advisor 25000	FX-MA25000-A (Permanent) FX-MA25000-T (1-year Subscription)	25000
Maintenance Advisor Unlimited	FX-MAUNLIMITED-A (Permanent) FX-MAUNLIMITED-T (1-year Subscription)	Unlimited

Update Licenses

If you are updating to a newer version of Maintenance Advisor, you can purchase these licenses:

License Type	Part Number	Maximum Number of Tags
Update to Maintenance Advisor 250	FX-MA250-U	250
Update to Maintenance Advisor 1000	FX-MA1000-U	1000
Update to Maintenance Advisor 2500	FX-MA2500-U	2500
Update to Maintenance Advisor 5000	FX-MA5000-U	5000
Update to Maintenance Advisor 25000	FX-MA25000-U	25000
Update to Maintenance Advisor Unlimited	FX-MAUNLIMITED-U	Unlimited

Add-on Licenses

If you reach the maximum number of tags on your base or update license, you can purchase licensing for additional tags. For example, if you have Maintenance Advisor 250 and purchase Maintenance Advisor add 250, you would have licensing for up to 500 tags.

License Type	Part Number	Additional Tags
Maintenance Advisor add 250	FX-MAADD250-A (Permanent) FX-MAADD250-T (1-year Subscription)	250
Maintenance Advisor add 1000	FX-MAADD1000-A (Permanent) FX-MAADD1000-T (1-year Subscription)	1000
Update to Maintenance Advisor add 250	FX-MAADD250-U	250
Update to Maintenance Advisor add 1000	FX-MAADD1000-U	1000

Trial License

A trial license lets you try Maintenance Advisor for up to six months and can be activated only once. You have access to all features, and it works for unlimited tags.

License Type	Part Number	Maximum Number of Tags
Maintenance Advisor LTFU	FX-MATLTFU-A (6-month Subscription)	Unlimited

Optional Component Licensing

License Type	Part Number	Description
AVEVA Work Tasks with Maintenance Advisor	FX-MAWF5-A	AVEVA Work Tasks integrated with Maintenance Advisor
AVEVA Mobile Operator with Maintenance Advisor	FX-MAS250B01-A	AVEVA Mobile Operator integrated with Maintenance Advisor, which includes all AVEVA Mobile Operator software components, such as mobile, desktop, server, and web reports, that help facilitate procedure execution
AVEVA Mobile Operator Customer FIRST Support (Premium)	FX-MA10-7006-CF	Customer FIRST provides technical support for the respective license and allows you to upgrade the software license to a newer version
Condition Advisor for Operator Rounds	FX-MA003DJ-K	See Condition Advisor for Operator Rounds, page 24

Contacting License Support

To purchase Maintenance Advisor licenses, contact your local Schneider Electric sales representative. If you have questions about licensing, contact your software registration center at https://www.se.com/ww/sites/corporate/en/support/software-licensing/contact-us.

Related Documents

Document Number	Description
B0750CU	*Condition Advisor Installation Guide*
B0750CS	*Condition Advisor User's Guide*
B0750SU	*Condition Advisor Release Notes*
B0750TA	*Condition Advisor for Operator Rounds Installation Guide*
B0750TB	*Condition Advisor for Operator Rounds User's Guide*
B0750TC	*Condition Advisor for Operator Rounds Release Notes*
B0750CR	*Foxboro DCS Condition Advisor Installation Guide*
B0750CP	*Maintenance Response Center Installation Guide*
B0750CQ	*Maintenance Response Center User's Guide*
B0750SN	*Maintenance Response Center Release Notes*

WARNING: This product can expose you to chemicals including lead and lead compounds, which are known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.p65warnings.ca.gov/.

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As standards, specifications, and design change from time to time, please ask for confirmation of the information given in this publication.

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