



Emonitor Online Getting Results Guide



Allen-Bradley

by ROCKWELL AUTOMATION

User Manual

Original Instructions

Important User Information

Read this document and the documents listed in the additional resources section about installation, configuration, and operation of this equipment before you install, configure, operate, or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of all applicable codes, laws, and standards.

Activities including installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be carried out by suitably trained personnel in accordance with applicable code of practice.

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Throughout this manual, when necessary, we use notes to make you aware of safety considerations.



WARNING: Identifies information about practices or circumstances that can cause an explosion in a hazardous environment, which may lead to personal injury or death, property damage, or economic loss.



ATTENTION: Identifies information about practices or circumstances that can lead to personal injury or death, property damage, or economic loss. Attentions help you identify a hazard, avoid a hazard, and recognize the consequence.

IMPORTANT Identifies information that is critical for successful application and understanding of the product.

These labels may also be on or inside the equipment to provide specific precautions.



SHOCK HAZARD: Labels may be on or inside the equipment, for example, a drive or motor, to alert people that dangerous voltage may be present.



BURN HAZARD: Labels may be on or inside the equipment, for example, a drive or motor, to alert people that surfaces may reach dangerous temperatures.



ARC FLASH HAZARD: Labels may be on or inside the equipment, for example, a motor control center, to alert people to potential Arc Flash. Arc Flash will cause severe injury or death. Wear proper Personal Protective Equipment (PPE). Follow ALL Regulatory requirements for safe work practices and for Personal Protective Equipment (PPE).

The following icon may appear in the text of this document.



Identifies information that is useful and can help to make a process easier to do or easier to understand.

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About This Publication

This user manual provides information on how to start using your Emonitor® Online system. This manual gives a general overview of the Emonitor Online functions and helps you configure the online data collection. This manual does not cover the selection or installation of online data collection hardware or networks.

For complete information on all Emonitor features, tasks, and interface elements, see publication [EMONTR-UM002](#) and the online help within the software (from the Help menu, press F1). See publication [EMONTR-GRO01](#) to familiarize yourself with and begin using Emonitor.

Use this manual if you use Emonitor Online to collect data from online systems. You must be familiar with:

- Microsoft Windows® operating systems
- Personal computers
- Predictive maintenance principles
- The hardware in your online system (Enwatch® units, XM® modules, Logix family of controllers)
- Computer and device networks (Ethernet, DeviceNet®, ControlNet®)

Use the feedback form that is packaged with your software to report errors and/or request information to be added in future editions of this manual.

Download Firmware, AOP, EDS, and Other Files

Download firmware, associated files (such as AOP, EDS, and DTM), and access product release notes from the Product Compatibility and Download Center at rok.auto/pcdc.

Summary of Changes

This publication contains the following new or updated information. This list includes substantive updates only and is not intended to reflect all changes.

Topic	Page
Updated Emonitor Online	9
Updated About Emonitor	9
Updated Step 5 - Import the Data Into the Database	17
Updated Step 7 - Configure EmonitorScheduler to Import Data	23
Updated Step 8 - Configure EmonitorScheduler to Import Data	30
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Additional Resources

These documents contain additional information concerning related products from Rockwell Automation. You can view or download publications at rok.auto/literature.

Resource	Description
Emonitor 4.1 User's Guide User Manual, publication EMONTR-UM002	Provides guidance on how to use the Emonitor software.
Getting Results Guide, publication EMONTR-GR001	Provides guidance on how to get started using your Emonitor system.
EtherNet/IP Network Devices User Manual, ENET-UM006	Describes how to configure and use EtherNet/IP™ devices to communicate on the EtherNet/IP network.
Ethernet Reference Manual, ENET-RM002	Describes basic Ethernet concepts, infrastructure components, and infrastructure features.
System Security Design Guidelines Reference Manual, SECURE-RM001	Provides guidance on how to conduct security assessments, implement Rockwell Automation products in a secure system, harden the control system, manage user access, and dispose of equipment.
UL Standards Listing for Industrial Control Products, publication CMPNTS-SR002	Assists original equipment manufacturers (OEMs) with construction of panels, to help ensure that they conform to the requirements of Underwriters Laboratories.
American Standards, Configurations, and Ratings: Introduction to Motor Circuit Design, publication IC-AT001	Provides an overview of American motor circuit design based on methods that are outlined in the NEC.
Industrial Components Preventive Maintenance, Enclosures, and Contact Ratings Specifications, publication IC-TD002	Provides a quick reference tool for Allen-Bradley industrial automation controls and assemblies.
Safety Guidelines for the Application, Installation, and Maintenance of Solid-state Control, publication SGI-1.1	Designed to harmonize with NEMA Standards Publication No. ICS 1.1-1987 and provides general guidelines for the application, installation, and maintenance of solid-state control in the form of individual devices or packaged assemblies incorporating solid-state components.
Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1	Provides general guidelines for installing a Rockwell Automation industrial system.
Product Certifications website, rok.auto/certifications .	Provides declarations of conformity, certificates, and other certification details.
EtherNet/IP Network Devices User Manual, ENET-UM006	Describes how to configure and use EtherNet/IP devices to communicate on the EtherNet/IP network.

Introduction

Emonitor Online

Emonitor[®] Online is a set of Windows[®] programs that provide complete data management for predictive maintenance services for online systems. Emonitor Online collects data from one or more instruments that continuously monitor your machinery and processes. The data is stored in the Emonitor database, which allows you to use the powerful Emonitor analysis tools to examine the data.

The system automatically collects data from permanently mounted transducers so workers do not regularly enter hazardous or uncomfortable places. In addition, the system collects data as often as desired (every minute if necessary). The Emonitor Online System can also import data from external OPC sources and make data available to other OPC clients.

Currently Emonitor Online can collect data from many different sources.

- Dynamix™ 1444 Online Dynamic Measurement modules
- Enwatch[®]
- Allen-Bradley[®] XM[®] modules and the XM Dynamic Measurement module (1440-DYN02-01RJ)
- OPC servers
- Allen-Bradley Logix family of controllers

About Emonitor

This manual describes the main features of the Emonitor software relating to online data collection.

- Database setup
- Scheduling, loading, and unloading lists and data from data collectors
- Overall and narrowband (spectrum) alarms, displaying the results with alarms in plots and reports
- OPC Server and Client modules
- XM/DYN Online Data for importing data from XM modules
- Anomaly frequency modeling
- Bearing fault frequency database
- Fault frequency identification (in plots and reports)
- Fault frequency downloading to portable data collectors
- Alarm screening and Intelligent Advisory capability
- Asset Health module with email and Emonitor gateways
- Intelligent Advisory Decision module
- Work tracking capability

You can use Emonitor and the Emonitor Online features to perform the following:

- Configure the database to model your machinery and processes and to hold the data you collect from the online instruments. You can use templates that contain information about different types of machinery to configure your database quickly.
- Manually or automatically map data from the instruments to measurement definitions in the Emonitor database.

- Use the Online Data Management Console to manage data collection from permanently mounted instruments (Enwatch units, Logix controllers, and XM modules), and to collect and serve OPC data.
- Use all Emonitor data monitoring and analysis features, including alarms, reports, plots, calculated measurements, frequency items, rule sets, and intelligent advisories. See publication [EMONTR-UM002](#) and the online help for more information.
- Use the EmonitorEEM Utility to manage data collection from Dynamix 1444 Online Dynamic Measurement modules.

System Overview

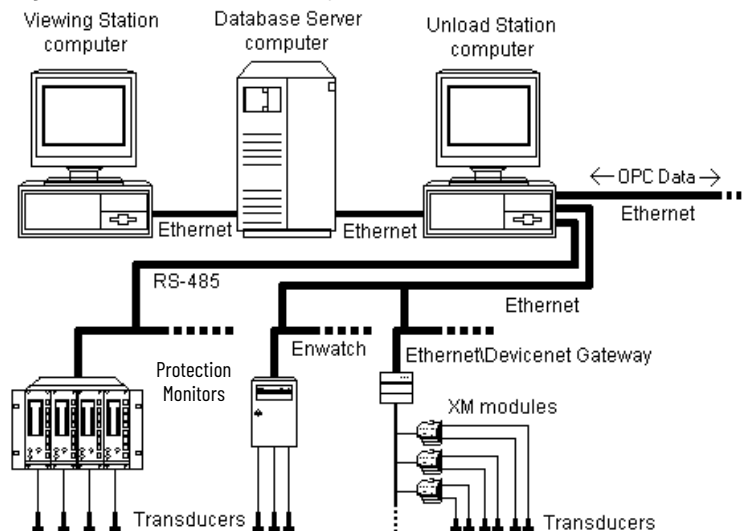
A typical medium size installation has permanently mounted transducers at the desired locations that collect vibration, temperature, voltage, or other types of data. You connect the transducers to XM modules, Enwatch units, or Logix family of controllers. These instruments acquire, process, and buffer data from the transducers.

An unload station computer that connects to the instruments, collects this data at specified intervals. The unload station computer stores this data on disk in unload files, and then imports the unload files into the database on the database server computer.

View and analyze data at the viewing station computer. Periodically, the viewing station computer updates its screen with new data from the database. You can display plots and alarms, create lists and reports, and manage the database.

[Figure 1](#) shows some hardware components of a basic Emonitor Online system. Your system can be smaller, or much larger. A single-user system can have the database and all programs running on one computer. More often, there are one or more viewing station computers, a separate database server computer, and one or more unload station computers.

Figure 1 - Basic Emonitor Online System



Get Started with Emonitor Online

Emonitor Online

Emonitor® online makes it easy to build, collect, and store predictive maintenance data from online instruments. This manual describes the elements of the Emonitor Online interface, and covers the basic Emonitor Online functions of database configuration, online instrument connections, mapping online data to the Emonitor database, and data collection management.

Online data collection and analysis tasks are divided between Emonitor and the Online Data Management Console (ODMC).



The ODMC does not provide tools for data collection from the Dynamix™ 1444 online modules. The Emonitor EEM utility provides this capability, see [EmonitorEEM Utility on page 43](#).

- Use Emonitor to configure your database, and perform all data analysis and reporting.
- Use the Online Data Management Console to configure and control data collection from online instruments and OPC servers. Also use the ODMC to configure and control the Emonitor OPC server to provide data to other systems.

Starting Emonitor and the ODMC

After you install Emonitor according to the installation guide, to start Emonitor, select the Start menu and navigate to Programs > Rockwell Software > Emonitor.

The Online Data Management Console (ODMC) controls the Emonitor Online features. To start the ODMC, use the Windows® search function to locate the Online Data Management Console.

Log In

Log in to Emonitor

If Emonitor is configured to require login, the program displays the Log In dialog. Enter your user name and password.



You use your own user name for login. Select File > Log In after Emonitor starts.

Log In to the Online Data Management Console

The ODMC requires that you use an administrator-level user name and password set in Emonitor to log in. Log in credentials can be the same as the ones you use to log in to Emonitor. For more information on user names and passwords, see publication [EMONTR-UM002](#) and online help.

Log Off

- You can log off Emonitor without exiting the program. Select File > Log Off.
- Select the Log Out button to log off from the ODMC.

Set Up the Database

Before you can use Emonitor to view and analyze data from online instruments, you must first configure your machinery in the Emonitor database. You can do this configuration in two ways, depending on the type of online instrument.

- You can manually configure the machines, locations, and measurement definitions in the database in Emonitor. This setup is necessary when you collect data from Enwatch® units, and OPC servers. See [Quick Start - Configure Emonitor Online on page 13](#), publications [EMONTR-GR001](#) and [EMONTR-UM002](#), and the Emonitor online help.
- You can automatically create the measurement definitions at a pre-defined location in the database. This feature is an option when you collect data from XM® modules and the Logix family of controllers. You can also manually configure the database for data from these instruments. If you automatically create the measurement definitions, you must manually edit the collection specifications and other information.

Set Up Data Collection

These steps are described in [Quick Start - Configure Emonitor Online on page 13](#).

Data Sources

Next, configure one or more data sources. A data source is one of the data collection or data server programs the Online Data Management Console controls. These sources include Enwatch® Online Data, XM/DYN Online Data, and the Emonitor OPC client, and the Emonitor OPC server.

Data Source Configurations

A data source includes a data source configuration that controls how and when data is collected from the online instruments. The data source configuration also controls how data is mapped to measurement definitions in the Emonitor database. For data from XM® modules and the Logix family of controllers, you can use the Auto Map feature to create the measurement definitions automatically in the Emonitor database.

Collect Data

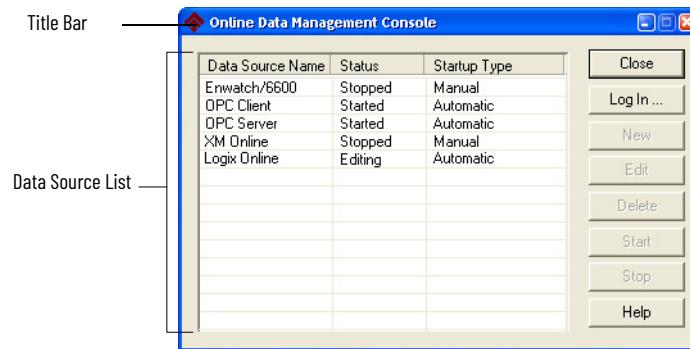
After you configure your data sources, use the Online Data Management Console to start and stop data collection from online instruments. You can choose to start data collection manually, or you can have the ODMC automatically start data collection when Windows® starts. Finally, you configure the EmonitorScheduler to watch for unload files that contain the collected data. After the system starts to collect data, the EmonitorScheduler imports the data into the database.

Analyze Data

You can use the data analysis tools in Emonitor to view your data. These include many different types of plots and reports. See publications [EMONTR-GR001](#) and [EMONTR-UM002](#), and the Emonitor online help.

The Online Data Management Console

The Online Data Management Console has one window.



- Title bar - The title bar shows the name of the software (Online Data Management Console).
- Data source list - This area displays the data sources that you create in the ODMC. The Data Source List includes the data source name, the status (Editing, Started or Stopped), and the startup type (Manual or Automatic).

Quick Start - Configure Emonitor Online

This section explains how to perform these operations with Emonitor Online:

- Configure the Emonitor database for online data
- Create data sources in the Online Data Management Console
- Create data source configurations to control online data collection for each data source
- Start and stop online data collection
- Import online data into the Emonitor database

To use the quick start steps, select a function, then perform the quick start steps for that function. Detailed information on how to use the Online Data Management Console to create and manage data sources is available in the online help for the Online Data Management Console (press F1 in the Online Data Management Console).

Step 1 - Configure the Database for the Online System

Before Emonitor Online can store data from an online system, there must be measurement definitions in the Emonitor database to store the data. For most data sources in the Emonitor Online System, you must manually create the measurement definitions in the Emonitor program to configure the database.

- In general, configure one location for each permanently mounted transducer, and one measurement definition for each type of measurement collected from that transducer.
- For the Emonitor OPC Client, configure one measurement definition for each OPC item or tag.



You can also create measurement definitions with Emonitor by auto-mapping XM measurements directly to existing locations in the Emonitor database (see [Step 7 - Map Data to the Emonitor Database on page 29](#)). You can also use auto mapping with measurements from the Logix family of controllers (see [Step 7 - Map Data to the Emonitor Database on page 29](#)).

You must perform the following quick start steps in the Emonitor software before you can export data to the Emonitor database. These steps include configuring the machine hierarchy (the plant, train, and machine in the database) and a location for each transducer and measurement definition for each measurement.

For more information on how to install and use Emonitor, see [Additional Resources on page 8](#).

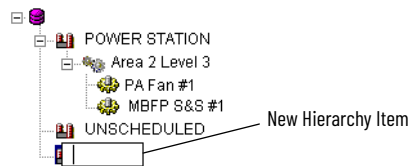
Start the Emonitor Software

To start the Emonitor program, select the Start button, then select Programs > Rockwell Software > Emonitor > Emonitor.

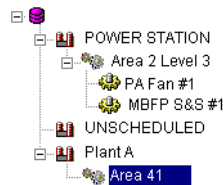
Create the Machine Hierarchy

The Emonitor program supports up to six hierarchy levels. Our example uses three levels: Plant, train, and machine. To create a plant, train, and machine in Emonitor, complete [step 1...step 7](#). If the machine hierarchy for the exported measurement data exists in the database, skip to the next step.

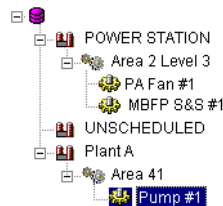
1. To open the Database window in Emonitor, select Window > Database and select the Database Setup view in the Select View dialog. The view shows the Hierarchy pane on the left and the Location pane on the right. You can select in a pane, then press F1 for a description of the pane.
2. To add a plant, select the disk icon in the Hierarchy pane, and press the Insert key. The cursor appears in a box next to a new hierarchy item at the bottom of the Hierarchy tree.



3. Type in the name of your new plant. For example, type Plant A, and press Enter.
4. Press Insert again to add a hierarchy item. Type in the name of your new train. For example, type Area 41, and press Enter.
5. To move the new train under the plant, press Ctrl+Right Arrow.



6. Press Insert again to add a machine under the new train, and type in the name of your new machine. For a motor-pump combination, type Pump #1, and press Enter.
7. To move the new machine under the new train, press Ctrl+Right Arrow. You have configured the hierarchy for your new machine.



For more information about hierarchy levels, see [Additional Resources on page 8](#).

Create locations

Each location in the Emonitor database corresponds to a transducer attached to an online instrument. After you create a location in Emonitor, you can create measurement definitions that correspond to individual measurements (overall, speed, spectrum) from the online instrument.

To create a location:

1. Open the Database window if it is not open. Select Window > Database and then select the Database Setup view in the Select View dialog. The view shows the Hierarchy pane on the left and the Location pane on the right.
2. Select the desired machine in the Hierarchy pane. To expand the hierarchy level so you can view the machine, select the + signs.
3. In the Location pane, several columns describe the measurement. Double-click in the Location ID column and type the ID (for example, Mtr-OB-Horiz).
4. Press Tab, or double-click in the Position column. Type 1 for the first transducer position. Notice that other fields have default values in them, and the gray arrow in the first column indicates the active location.
5. Press Tab, or double-click in the Direction column, and select Horizontal for the transducer direction.
6. Press Tab, or double-click in the Category column, and select Standard Machine for the category.
7. Press Tab, or double-click in the RPM column, and type the running speed of the machine. For this example, you can type 1800.
8. Press Tab, or double-click in the Description column. You can leave this area blank or enter a brief description for the location.



In most cases, add one location for data from each transducer. For more information about locations, see the online help for the Emonitor program.

Create measurement definitions

In the Emonitor program, create one or more measurement definitions at each location.



A measurement definition corresponds to an online instrument measurement (overall, speed, spectrum). The measurement definition data type and units must match the data type and units for the measurement. For some data sources, the measurement type and the signal detection (in the collection specification) must also match the actual measurement. For more information, see the Mapping Rules topic in the online help for the data source.

A measurement definition describes how Emonitor collects and stores the data in the database. The measurement definition specifies the type of measurement, the units, various details about how to store the data, which measurement filter to apply, and so forth.

The following [step 1...step 9](#) configure the first magnitude measurement definition for a motor-pump combination running at 1800 CPM with anti-friction bearings. You can configure multiple measurement definitions for a location, one type of measurement from that transducer.

1. Select Window > Database. Select the Measurement view. If you already have the Database window open, select View > Measurement.
2. Select the desired machine in the Hierarchy pane. To expand the plant or train so you can view the machine, select the + signs.
3. Select the desired location in the Location pane.
4. Double-click in the Data Type column in the Measurement Definition pane and select the data type. The data type must match the data type for the actual measurement. For more information, see the Mapping Rules topic in the online help for the data source.

5. Press Tab, or double-click in the Units column, and select the measurement units. Remember, the units must match the units for the actual measurement.
6. Press Tab, or double-click in the Collection column, and choose the collection specification for the measurement definition. For some data sources, the parameters in the collection specification and signal detection must match the parameters for the actual measurement. The other options are not required to map the measurement to the Emonitor measurement definition.



You can right-click the collection specification and select Edit to see the details of the collection specification.

7. Press Tab, or double-click in the Filter column, and select the measurement filter. The filter must match that used for the actual measurement; however, this filter is not required to map the measurement to the Emonitor measurement definition.
8. Double-click in the Storage column, then select the storage specification. For example, Always/SO26 saves the last 26 samples of data from this measurement on any condition (alarm or not). You can use the storage specification to control the amount of data in the database. See [Understanding Emonitor Storage Specifications on page 18](#)



You can right-click the storage specification and select Edit to see the details of the collection specification.

9. When you are done configuring measurement definitions, you can close Emonitor, or leave it running when you return to Emonitor.

For more information about measurement definitions, see [Additional Resources on page 8](#).

Step 2 - Start the Online Data Management Console

All Emonitor Online components are managed through the Emonitor Online Data Management Console.

1. To start the Online Data Management Console, select the Windows Start button, and then select Programs > Rockwell Software > Emonitor > Online > Online Data Management Console.
2. Select Log In and enter an Administrator-level Emonitor user name and password (defined in Emonitor). You must log in if you want to add, edit, delete, start, or stop a data source in the Online Data Management Console. A data source is an Emonitor Online component that acquires data from either permanently mounted transducers or from an OPC server. You also use the Online Data Management Console to manage the Emonitor OPC Server.

Step 3 - Add and Configure a Data Source

1. In the Online Data Management Console, select New to add a data source. Select the type and enter a name for the data source, and then select OK.
2. Select the data source that you created, and select Edit to edit the data source configuration. The data source configuration controls how data is collected and written to unload data files. Each data source is described later in this Getting Results Guide:
 - XM and XM DYN modules, see [XM/DYN Online Data on page 27](#)
 - OPC data, see [Emonitor OPC Client on page 33](#)
 - OPC server, see [Emonitor OPC Server on page 39](#)

Step 4 - Start and Stop Data Collection

In the Online Data Management Console, select the data source, and then select Start or Stop to start or stop the data source. You can also automatically start a data source by setting the Startup Type to Automatic. The ODMC automatically restarts the data source when the computer reboots



The Emonitor OPC Server cannot be set to automatically started; instead, you must manually start the Emonitor OPC Server.

Step 5 - Import the Data Into the Database

The EmonitorScheduler imports the data from the unload data files into the Emonitor database. You create Scheduler profiles to control how often data is imported from the unload files. The EmonitorScheduler service is disabled by default. To launch (run) scheduled tasks and import data, you must enable the EmonitorScheduler service. The Online Data Management Console does not control the EmonitorScheduler service; the EmonitorScheduler service runs as a Windows service.

To start the EmonitorScheduler service:



You must have Administrator privileges to start the EmonitorScheduler service.

1. Select Start > Control Panel > Administrative Tools > Services.
2. Select Services (local) in the left side of the Services window.
3. Select EmonitorScheduler in the right side of the Services window.
4. The EmonitorScheduler Startup Type must be Automatic. If it is Manual or Disabled, right-click on EmonitorScheduler and select Properties. In the Properties dialog box, set Startup Type to Automatic, and then select OK.
5. The EmonitorScheduler Status must be Started. If it is Stopped, right-click on EmonitorScheduler and select Start.



We strongly recommend that you leave the Startup Type for the EmonitorScheduler as Automatic in the Services console. This setting starts the EmonitorScheduler service automatically when Windows starts.

To create the Scheduler profile

1. Start the EmonitorScheduler. Select Start > Programs > Rockwell Software > Emonitor > Utilities > Scheduler.
2. Select Add to create a Scheduler Profile.
3. Select or enter the information for each dialog box, and then select Next to go to the next dialog box. Press F1 or select Help for information about the fields in each of the dialog boxes.



Each Scheduler profile must have a unique name because Scheduler profiles are global to the Emonitor Online system. Disabling a Scheduler profile on one Unload Station disables it on all Unload Stations. Scheduler profiles are stored in the Emonitor database, not on the Unload Station computer.

After you complete [step 1...step 3](#) to create the Scheduler profile, you do not need to do anything else. You can close the Scheduler. The EmonitorScheduler service runs in the background and automatically lunches each Scheduler profile at the correct time. If you want Scheduler to start using the new profile immediately, you must stop and then restart the EmonitorScheduler service.

You can find more information on how to configure Scheduler profiles in the EmonitorScheduler help. Start the Scheduler, and then select Help > Contents and Index.

Step 6 - View and Analyze Data in Emonitor

After the EmonitorScheduler has imported the data into the Emonitor database, you can use the Emonitor data analysis features to view and analyze your data. These features are described in publications [EMONTR-GRO01](#) and [EMONTR-UM002](#), and the Emonitor online help.

Understanding Emonitor Storage Specifications

Since online systems can gather large amounts of data in relatively short time periods, data management is especially important. For example, you cannot control how often an individual measurement is exported from an XM module, but you can control how much data is stored.

For example, a spectrum measurement takes up much more space in the Emonitor database than an overall vibration measurement. You might want to save the overall vibration measurement every 30 minutes, but save a spectrum measurement from the same XM module only once every 4 hours. You might also want to keep the overall measurements for 3 months, but keep only the most recent 10 days of spectrum measurements.

You manage data by creating separate storage specifications for the different types of measurements. The storage specification controls how often data is stored, and how long that data is kept in the database. You can also configure running averages with the storage specification.

Suppose that you export data from the XM module every 30 minutes. You can configure the following two storage specifications:

- The first storage specification gathers data at frequent intervals and stores it for a longer period (the overall measurement in the previous example).
- The second storage specification gathers data at less frequent intervals and stores it for a shorter period (the spectrum measurement in the previous example).

The storage specification controls the storage, but not the collection interval from the instruments. You control the collection interval in Emonitor when you create the data source configuration.



The collection interval that you set in Emonitor must be shorter than the storage interval you set in the Emonitor program. If the collection interval is longer than the storage interval, the system stores the same data repeatedly.

1. To start the Emonitor program, select the Windows Start button, then select Programs > Rockwell Software > Emonitor > Emonitor.
2. Select Setup > Storage in the Emonitor program.
3. Select New in the Define Storage Specification dialog.
4. Select the parameters for the storage specification in the New Storage Specification dialog.

To use the new storage specification, double-click in the Storage column of the measurement definition pane and select the new storage specification.

For more information on the role of storage specifications in an Emonitor Online system, refer to the online help for the Online Data Management Console.

Enwatch Online Data

Introduction

The purpose of the Enwatch® Online Data Setup is to gather data from transducers that connect to Enwatch units and store the data in the Emonitor® database. This process includes mapping each transducer to a specific location in the Emonitor database, and each measurement to a specific measurement definition in the database. This chapter explains the steps to configure the Enwatch Online data source.

1. Use Emonitor to create a machine, a location and one or more measurement definitions for each transducer in the Emonitor database. See publications [EMONTR-GRO01](#) and [EMONTR-UM002](#), and the online help for more information.
2. Use the Online Data Management Console to start and manage the Enwatch Online Data Setup program.
3. Use the Enwatch Online Data Setup to store the hardware settings of each Enwatch instrument in the database.
4. Use the Enwatch Online Data Setup to identify the location in the database for the data from the transducer (map the data from each transducer to a corresponding measurement definition in the database).

In a multi-computer system, the Emonitor program runs on the viewing station computer. The Enwatch Online Data Setup usually runs on the viewing station computer, but can also run on the unload station computer.

How Enwatch Online Data Works with Emonitor

Enwatch units are Ethernet devices. You use Enwatch Online Data (which runs on a Microsoft® Windows®-based computer) to configure and monitor Enwatch units.

You also use Enwatch Online Data to map measurements from the instruments to measurement definitions in the Emonitor database. At defined intervals, Enwatch Online Data exports the mapped measurements from the instruments to unload files. The unload files are stored on the computer that hosts Enwatch Online Data. The EmonitorScheduler service then imports the measurements from the unload files into the Emonitor database. For more information on Emonitor Online systems, see [Emonitor Online on page 9](#).

Enwatch Online Data can only be started from the Emonitor Online Data Management Console. Both programs are installed with Emonitor. Detailed instructions for configuring an Emonitor Online System are available in the online help. Select Start > Programs > Rockwell Software > Emonitor > Online > Online Data Management Console, and then press F1.

Required Information

The required items for Enwatch Online Data are:

- You must know the Emonitor database connection information, including user name, and password for that database connection. These settings vary according to the database server that you use.
- You must know the location of the Enwatch units on your network.
- There must be measurement definitions in the Emonitor database to store the data. For more information on how to add measurement definitions to the Emonitor database, see [Set Up the Database on page 12](#).

Enwatch Online Data Main Window

The Enwatch Online Data software has one main program window.















Explore Enwatch Online Data

The following sections discuss navigation through the Enwatch Online Data software:

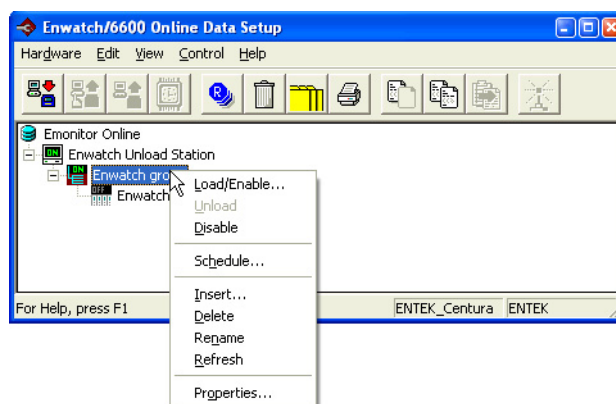
- Title bar - The title bar shows the name of the software (Enwatch Online Data Setup). It also contains the name of the current window in the workspace if that window is maximized.
- Menu bar - You can open any menu by holding the Alt key and pressing the underlined letter in the menu name. For example, press Alt-v to display the View menu. You can also highlight a command and press F1 for more information.
- Toolbar - The Enwatch Online Data toolbar contains the toolbar buttons. Each button is a shortcut to a feature, which is also available from the menus.



The following table lists the toolbar buttons and provides you with a brief description of the function of the button and its corresponding menu bar selection.

Button	Description
	Load the measurements to the currently selected instruments and start acquiring/unloading data.
	Unload data from one channel of the selected instrument.
	Unload data from the selected instruments.
	Synchronize the clocks for the selected Unload Station or the Online System Root to the internal clock of the computer.
	Refresh the screen with the latest information on the instrument status.
	Delete the currently selected item.
	Display the properties dialog for the selected item.
	Print a report that contains information about the selected item.
	Cut the selected item to the Clipboard.
	Copy the selected item to the Clipboard.
	Paste an item or items from the Clipboard into the Enwatch Online Data Setup window below the selected item.
	Copy the configuration of one monitor to other monitors of the same type.

- Instrument hierarchy - This area displays the Enwatch instrument hierarchy.
- Right-click shortcut menus - To open a shortcut menu with tasks specific to the current selection, simply right-click the selection.



- Status bar - The status bar appears at the bottom of the Enwatch Online Data window. It displays a brief, context-sensitive help message. It also displays the database name. You can hide and show the status bar with View > Status Bar.

Quick Start - Configure Enwatch Online Data

Perform the following tasks to configure Enwatch Online Data to export data.

- Configure the Emonitor database to store data from the online instruments.
- Create a data source for Enwatch Online Data.

- Select the Emonitor database.
- Configure the Enwatch module hardware for data collection. Configure the instruments and map each measurement to a measurement definition in the Emonitor database.
- Configure the EmonitorScheduler to import data.
- Start data collection.

To use the quick start steps, select a task and then perform the quick start steps for that task. For detailed information on tasks or on how to use specific dialog boxes in Enwatch Online Data, refer to the online help.

Step 1 - Configure the Emonitor Database

You must create measurement definitions in the Emonitor database to store the data from the Enwatch monitors. See [Set Up the Database on page 12](#) for the steps to configure the database.

Step 2 - Start the Online Data Management Console

1. To start the Online Data Management Console, select the Windows Start button, and then select Programs > Rockwell Software > Emonitor > Online > Online Data Management Console.
2. Select Log In and enter an Administrator-level Emonitor user name and password (defined in Emonitor).

Step 3 - Add and Configure the Data Source

You can create only one Enwatch data source on each Unload Station.

1. In the Online Data Management Console, select New to add a data source. Select the Enwatch Online Data type, enter a name for the data source, and then select OK.
2. Select the data source that you created, and select Edit to edit the data source configuration. This action starts the Enwatch Online Data Setup program.

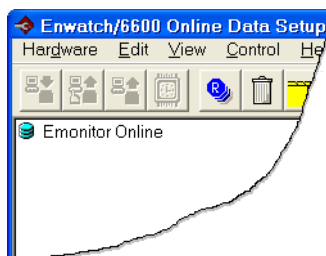
Step 4 - Select the Emonitor Database

1. In the Enwatch Online Data Setup program, select Hardware > Change Database.
2. Enter the database information. To display the help topic for the dialog, press F1.

Step 5 - Configure Enwatch Instruments

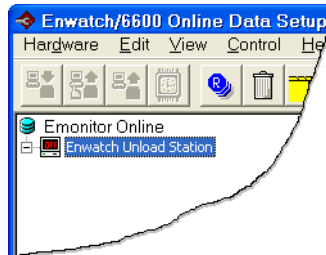
Use the Enwatch Online Data Setup program to configure both the hardware and the data collection. Also map data from Enwatch Online data to measurement definitions in the Emonitor database. See [step 1...step 12](#) to add an Enwatch unit. At any point, you can press F1 to get more information from the online help for a command, dialog box, or window.

1. To add an instrument, select the desired level in the hierarchy.



2. Select Edit > Insert. The Insert Unload Station wizard appears.

3. Select the correct Unload Station from the list in the Insert Unload Station dialog. To configure an Enwatch unit, select Enwatch Unload Station. Select Next to continue.
4. To enter the Computer name, either by type in the exact name or select Browse to find it. To obtain the Computer name, you can go to the computer that acts as the Unload Station, right-click on My Computer, then select the Computer Name tab. You can enter a name in the Computer description field, which is for label information only. Select Finish to complete the task. The hierarchy now shows a new Enwatch Unload Station.



5. Next, insert Enwatch units under the newly created Unload Station. Select the Unload Station and select Edit > Insert. The Insert Enwatch Hardware wizard begins.
6. To insert one Enwatch unit, select Insert an Instrument in the Insert Enwatch Hardware dialog and then select Next to continue.
7. Select the type of Enwatch unit from the list. For this example, choose a 16 channel Enwatch. Select Next to continue.
8. Use the Enwatch setup dialog to configure each field for your Enwatch unit. Select Help for help on the fields.
9. To configure each channel of the Enwatch unit, select the Channel tab.
10. To display the Location Browser, double-click in the Machine or Location column. Then, use the + icons to expand the hierarchy and select the correct location in the Location Browser. These locations correspond to locations in your Emonitor database. If you have not already configured the locations, go to Emonitor to do so (see [Set Up the Database on page 12](#)). To close the Location Browser, select OK when you are finished.
11. The Channel column shows the machine and location you recently selected. To complete all 16 channels, repeat [step 1...step 11](#). Select Next to continue, and select Finish when you are done.
12. Close the Enwatch Online Data Setup program.

Step 6 - Schedule Data Collection

You can schedule data collection for an unload station, instrument group, for instrument.

To set the data collection schedule for an unload station or group:

1. Select the unload station or group.
2. Select Control > Schedule.
3. Choose the start date and frequency for data collection.

To set the data collection schedule for an instrument:

1. Select the Enwatch units.
2. Select Hardware > Properties.
3. Adjust the start date and the frequency on the Schedule tab.

Step 7 - Configure EmonitorScheduler to Import Data

The following quick start steps apply to the EmonitorScheduler software. Enwatch Online Data exports data into unload files. EmonitorScheduler then imports the unload files into the Emonitor database.



The EmonitorScheduler service must be running to import data into the Emonitor database from Emonitor.

The Scheduler has two parts:

- The EmonitorScheduler service that runs in the background and launches (executes) the scheduled events (profiles). The EmonitorScheduler service must be running to execute scheduled events.
- The EmonitorScheduler program that allows you to create and edit profiles. This program does not have to be running for the EmonitorScheduler service to execute scheduled events.

Normally, the EmonitorScheduler service is installed when you install Emonitor, but it is disabled by default. If the service is disabled, or you have stopped it, you must restart the service if you want it to execute scheduled events and start automatically when you start Windows. The start and stop of the EmonitorScheduler program has no effect on the EmonitorScheduler service.

To start the EmonitorScheduler service:



You must have Administrator privileges to start the EmonitorScheduler service.

1. Select Start > Control Panel > Administrative Tools > Services.
2. Select Services (local) in the left side of the Services window.
3. Select EmonitorScheduler in the right side of the Services window.
4. The EmonitorScheduler Startup Type must be Automatic. If it is Manual or Disabled, right-click on EmonitorScheduler and select Properties. In the Properties dialog box, set Startup Type to Automatic, and then select OK.
5. The EmonitorScheduler Status must be Started. If it is Stopped, right-click on EmonitorScheduler and select Start.



We strongly recommend that you leave the Startup Type for the EmonitorScheduler as Automatic in the Services console. This setting starts the EmonitorScheduler service automatically when Windows starts.

To create the Scheduler profile:

1. Start the EmonitorScheduler. Select Start > Programs > Rockwell Software > Emonitor > Utilities > Scheduler.
2. Select Add to create a Scheduler Profile.
3. Select or enter the information for each dialog box, and then select Next to go to the next dialog box. Press F1 or select Help for information about the fields in each of the dialog boxes.



Each Scheduler profile must have a unique name because Scheduler profiles are global to the Emonitor Online system. If you disable a Scheduler profile on one Unload Station, the Scheduler profile is disabled on all Unload Stations. Scheduler profiles are stored in the Emonitor database, not on the Unload Station computer.

The following examples use the default program directory. If you have changed the default program directory, substitute the Emonitor program directory path into the parameters. The EmonitorScheduler uses the DataFileDir and DataFiles path in the Source section of the odonline.edi file on the Unload Station computer to define the directory.

- Executable file:
C:\Program Files (x86)\Rockwell Software\Emonitor\didaemon.exe
- Command line:
C:\Program Files (x86)\Rockwell Software\Emonitor\odonline.edi

After you complete these steps to create the Scheduler profile, you do not need to do anything else. You can close the Scheduler. The EmonitorScheduler service runs in the background and

automatically lunches each Scheduler profile at the correct time. If you want Scheduler to start using the new profile immediately, you must stop and then restart theEmonitorScheduler service.

You can find more information on the oonline.edi file and how to Scheduler profiles in the EmonitorScheduler help. Start the EmonitorScheduler, and then select Help > Contents and Index.

Step 8 - Start Data Collection



The EmonitorScheduler service must be running to import data into the Emonitor database from Emonitor.

Notes:

XM/DYN Online Data

Introduction

The purpose of the XM[®]/DYN Online Data is to gather data from transducers that connect to Allen-Bradley[®] XM modules and store the data in the Emonitor[®] database. This process includes mapping each transducer to a specific location in the Emonitor database, and each measurement to a specific measurement definition in the database. This chapter explains the steps to configure the XM/DYN Online Data data source.

1. Select the XM network configuration file. This file contains the configuration parameters for a network of XM modules, and defines which XM modules are available for data export. The file includes configuration information for the Ethernet network, the DeviceNet[®] network, the ControlNet[®] network, and the XM modules on the network. If there are no XM network configuration files, you must create one by configuring the networks and XM modules.
2. Configure networks and XM modules. Use the Enterprise Online Configuration Utility to create the XM network configuration file. Also use the Enterprise Online Configuration Utility program to configure XM modules, and to view data from XM modules.
3. Select the Emonitor database. XM/DYN Online Data exports data from XM modules to unload files, which then import into the selected Emonitor database.

Configure the Emonitor database. Before you can export data to a specific Emonitor database, you must configure that database to receive the data by creating a measurement definition for each XM module measurement you want to export.



You can also create measurement definitions in Emonitor by auto-mapping XM measurements directly to locations in the Emonitor database. This action adds one measurement definition for each measurement under the selected location.

4. After you configure the database, map each XM module measurement that you want to export to a specific measurement definition in the Emonitor database.
5. Configure the EmonitorScheduler to import data into the database. Emonitor exports XM module data to unload files. The EmonitorScheduler is responsible for importing the unload files from the Unload Station computer into the Emonitor database.
6. You can start and stop data collection from XM modules either manually or automatically when Windows[®] starts.

XM/DYN Online Data Main Window

The XM/DYN Online Data software has one main window:

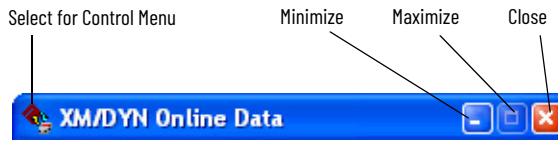
The screenshot shows the XM/DYN Online Data main window with the following components and callouts:

- EOL Configuration:** Contains an icon for the Enterprise Online Configuration Utility. Callout: "Start the Enterprise Online Configuration Utility to configure XM modules and networks".
- Emonitor Mapping:** Contains an icon for mapping measurements. Callout: "Map XM module measurements to the measurement definitions in the Emonitor database".
- Change Database:** Contains an icon for selecting a database. Callout: "Select the Emonitor database to receive the exported XM data".
- Data Source:** Fields for "Name:" (containing "XM/DYN") and "Startup Type:" (containing "Manual"). Callout: "Current data source name and startup type from the Online Data Management Console".
- Log >>:** Button to show/hide the message log. Callout: "Show/hide the message log".
- Assign XM Profile:** Button to select the XM network configuration file. Callout: "Select the XM network configuration file".
- Exit:** Button to exit the software and return to the Online Data Management Console. Callout: "Exit XM/DYN Online Data and return to the Online Data Management Console".
- Status Bar:** Shows the current XM network configuration file path: "C:\Program Files\Rockwell Software\Emonitor\Test.DCF". Callout: "The status bar shows the name of the current XM network configuration file".

Exploring XM/DYN Online Data

This section discusses navigation through the XM/DYN Online Data software:

- Title bar – The title bar shows the program icon, the name of the software (XM/DYN Online Data), and the Minimize, Maximize, and Close buttons.



To see the Control Menu, select the program icon on the title bar. The following items appear on the Control Menu:

Item	Description
Restore	Disabled
Move	Choose Move when you want to reposition the window on the desktop by using the arrow keys on the keyboard or the mouse.
Size	Disabled
Minimize	Choose Minimize when you want to shrink the window to a button on the Windows Taskbar. This action performs the same function as if you selected the Minimize button on the title bar.
Maximize	Disabled
Close	Choose Close when you want to exit the XM/DYN Online Data program. This action performs the same function as if you selected the Close button on the title bar.
About	Choose About XM/DYN Online Data to display product name, version, and copyright information.
Release Notes	Choose Release Notes to display the release notes for this version of the software.

- Status bar – The status bar displays the name and path to the selected XM network configuration file. The XM network configuration file defines the XM modules and networks that connect the XM modules to XM/DYN Online Data.

Quick Start - Configure XM/DYN Online Data

Perform the following tasks when configuring XM/DYN Online Data to export data.

- Configure the Emonitor database to store data from the online instruments.
- Create a data source for XM/DYN Online Data.
- Select or create the XM network configuration file.
- Select the Emonitor database.
- Configure the XM modules and view data from the XM modules.
- Map each measurement to a measurement definition in the Emonitor database.
- Configure the EmonitorScheduler to import data.
- Start data collection.

To use the quick start steps, select a task and then perform the quick start steps for that task. For detailed information on tasks or how to use specific dialog boxes in XM/DYN Online Data, refer to the online help.

Step 1 - Configure the Emonitor Database

You must create measurement definitions in the Emonitor database to store the data from the XM modules. See [Set Up the Database on page 12](#) for the steps to configure the database.



You can also create measurement definitions in Emonitor by auto-mapping XM measurements directly to existing locations in the Emonitor database. Emonitor automatically adds the measurement definitions under the selected location. See [Step 7 - Map Data to the Emonitor Database on page 29](#).

Step 2 - Start the Online Data Management Console

1. To start the Online Data Management Console, use the Windows search function to navigate to the Online Data Management Console.

2. Select Log In and enter an Administrator-level Emonitor user name and password (defined in Emonitor).

Step 3 - Add and Configure the Data Source

1. In the Online Data Management Console, select New to add a data source. Select the XM/DYN Online Data type, enter a name for the data source, and then select OK.
2. Select the data source that you created, and select Edit to edit the data source configuration. This action starts the XM/DYN Online Data program.

Step 4 - Select the Emonitor Database

The following quick start steps apply to the Change Database function in XM/DYN Online Data.



The first time that you run XM/DYN Online Data, it can display the Emonitor DB Setup dialog box so you can select the database. After you select a database, XM/DYN Online Data starts with the same database that was selected when you closed the program.

1. Select the Change Database button on the XM/DYN Online Data window.
2. Enter the database information. To display the help topic for the dialog box, press F1.

Step 5 - Select the XM Network Configuration File

The following steps apply to the Assign XM Profile function in XM/DYN Online Data. If you have not created an XM network configuration file that describes your XM modules and networks, skip this step.



The first time that you run XM/DYN Online Data, it prompts you for the name of the new XM network configuration file. After you select an XM network configuration file, XM/DYN Online Data starts with the same file that was selected when you closed the program.

1. Select the Assign XM Profile button on the XM/DYN Online Data window.
2. Select the XM network configuration file.

Step 7 - Map Data to the Emonitor Database

The following quick start steps apply to the Emonitor Mapping function of XM/DYN Online Data. Once you have created the measurement definitions in the Emonitor database, you are ready to map data from the XM modules to the Emonitor database.

XM/DYN Online Data only checks for matching data type and units when mapping to Emonitor measurement definitions. See the online help for more information on how XM/DYN Online Data maps data to Emonitor measurement definitions.



You can also create measurement definitions in the database with XM/DYN Online Data by auto-mapping XM measurements directly to existing locations in the Emonitor database. XM/DYN Online Data automatically adds the measurement definitions under the selected location.

1. Select the Emonitor Mapping button on the main XM/DYN Online Data window. This action starts the XM Data Export Wizard that guides you through the steps. These steps include setting the schedule for data collection to import into Emonitor. For more information, press F1 or select Help to display the help topic for the current dialog.
2. After you have mapped data from the XM module to the Emonitor database, close XM/DYN Online Data to return to the Online Data Management Console.

Step 8 - Configure EmonitorScheduler to Import Data

The following quick start steps apply to the EmonitorScheduler software. XM/DYN Online Data exports data into unload files. EmonitorScheduler then imports the unload files into the Emonitor database.



The EmonitorScheduler service must be running to import data into the Emonitor database from Emonitor.

The Scheduler has two parts:

- The EmonitorScheduler service that runs in the background and launches (executes) the scheduled events (profiles). The EmonitorScheduler service must be running to execute scheduled events.
- The Scheduler that allows you to create and edit profiles. This program does not have to be running for the EmonitorScheduler service to execute scheduled events.

Normally, the EmonitorScheduler service installs when you install Emonitor, but it is disabled by default. If the service is disabled, or you have stopped it, you must restart the service if you want it to execute scheduled events and start automatically when you start Windows. The start and stop of the Scheduler has no effect on the EmonitorScheduler service.

To start the EmonitorScheduler service:



You must have Administrator privileges to start the EmonitorScheduler service.

1. Select Start > Control Panel > Administrative Tools > Services.
2. Select Services (local) in the left side of the Services window.
3. Select EmonitorScheduler in the right side of the Services window.
4. The EmonitorScheduler Startup Type must be Automatic. If it is Manual or Disabled, right-click on EmonitorScheduler and select Properties. In the Properties dialog box, set Startup Type to Automatic, and then select OK.
5. The EmonitorScheduler Status must be Started. If it is Stopped, right-click on EmonitorScheduler and select Start.



We strongly recommend that you leave the Startup Type for the EmonitorScheduler as Automatic in the Services console. This action starts the EmonitorScheduler service automatically when Windows starts.

To create the Scheduler profile:

1. Start the EmonitorScheduler. Select Start > Programs > Rockwell Software > Emonitor > Utilities > Scheduler.
2. Select Add to create a Scheduler Profile.
3. Select or enter the information for each dialog box, and then select Next to go to the next dialog box. Press F1 or select Help for information about the fields in each of the dialog boxes.



Each Scheduler profile must have a unique name because Scheduler profiles are global to the Emonitor Online system. If you disable a Scheduler profile on one Unload Station, the Scheduler profile is disabled on all Unload Stations. Scheduler profiles are stored in the Emonitor database, not on the Unload Station computer.

The following examples use the default program directory. If you have changed the default program directory, substitute the Emonitor program directory path into the parameters. The EmonitorScheduler uses the DataFileDir and DataFiles path in the Source section of the odonline.edi file on the Unload Station computer to define the directory.

- Executable file: C:\Program Files (x86)\Rockwell Software\Emonitor\didaemon.exe
- Command line: C:\Program Files (x86)\Rockwell Software\Emonitor\odonline.edi

After you complete these steps to create the Scheduler profile, you can close the Scheduler. The EmonitorScheduler service runs in the background and automatically lunches each Scheduler profile at the correct time. If you want Scheduler to start using the new profile immediately, you must stop and then restart the EmonitorScheduler service.

You can find more information on the `odonline.edi` file and how to configure Scheduler profiles in the EmonitorScheduler help. Start the EmonitorScheduler, and then select Help > Contents and Index.

Step 9 - Start Data Collection

In the Online Data Management Console, select the XM/DYN Online Data data source, and then select Start to start data collection. Select Stop to stop the data source. You can also automatically start a data source by setting the Startup Type to Automatic. The ODMC automatically restarts the data source when Windows starts.



The EmonitorScheduler service must be running to import data into the Emonitor database from Emonitor.

Notes:

Emonitor OPC Client

Introduction

The purpose of the Emonitor® OPC Client is to simplify the task of data importation that originates from any OPC server into an Emonitor database. Emonitor OPC Client saves the data to unload files that are imported into an Emonitor database on a scheduled basis by the EmonitorScheduler. The Emonitor OPC Client can run on any computer that connects through a network to the computer with the Emonitor database.

Emonitor OPC Client conforms to the OLE for Process Control (OPC) 2.04 Data Access standards. OPC is based on Microsoft® OLE technology and provides an industry standard mechanism to communicate and exchange data between clients and servers. A server is a producer of data in the exchange. An example is the RSLinx® OPC Server. A client is a consumer of data in the exchange. Examples include SCADA/HMI software and the Emonitor OPC Client. The OPC Foundation - a coalition of industrial/manufacturing companies of which Rockwell Automation, Inc. is a member - defines and manages the OPC standards.

This chapter explains the steps to configure the Emonitor OPC Client data source. This process includes mapping each OPC item to a specific measurement definition in the database.

1. Use Emonitor to create a machine, a location and one or more measurement definitions for each transducer in the Emonitor database. See [Quick Start - Configure the Emonitor OPC Client on page 35](#). For more information, see publications [EMONTR-GRO01](#) and [EMONTR-UM002](#), and the online help for more information.
2. Use the Online Data Management Console to start and manage the Emonitor OPC Client.
3. Use the Emonitor OPC Client to create a data source configuration. This configuration is a set of parameters that controls how to connect to the Emonitor database and the OPC server, what data to map from the server to the Emonitor database, and how often to save the data.
4. You can optionally monitor data in the Emonitor OPC Client.

In a multi-computer system, the Emonitor OPC Client usually runs on the Viewing Station computer, but can also be run on the Unload Station computer.

How the Emonitor OPC Client Works with Emonitor

You use the Emonitor OPC Client to map measurements from OPC servers to measurement definitions in the Emonitor database. At defined intervals, the Emonitor OPC Client exports the mapped measurements from the OPC servers to unload the files. The unload files are stored on the computer that hosts the Emonitor OPC Client. The EmonitorScheduler service then imports the measurements from the unload files into the Emonitor database. For more information on Emonitor Online systems, see [Emonitor Online on page 9](#).

The Emonitor OPC Client can only be started from the Emonitor Online Data Management Console. Both programs are installed with Emonitor. Detailed instructions for configuring an Emonitor Online System are available in the online help. Select Start > Programs > Rockwell Software > Emonitor > Online > Online Data Management Console, and then press F1.

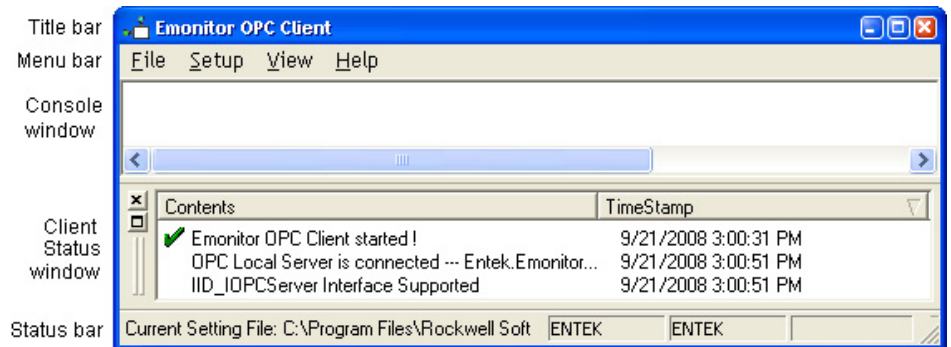
Required Information

The required items for the Emonitor OPC Client are:

- You must know the Emonitor database connection information, including user name, and password for that database connection. These settings vary according to the database server that you are using.
- You must know the OPC server name and type.
- There must be magnitude or numeric measurement definitions in the Emonitor database to store the data. For more information on how to add measurement definitions to the Emonitor database, see [Set Up the Database on page 12](#).

Emonitor OPC Client Main Window

The Emonitor OPC Client has one main program window.

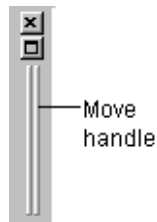


Exploring the Emonitor OPC Client

The following sections discuss navigation through the Emonitor OPC Client:

- Title bar - The title bar shows the name of the software (Emonitor OPC Client). It also contains the name of the current window in the workspace if that window is maximized.
- Menu bar - You can open any menu by holding the Alt key and pressing the underlined letter in the menu name. For example, press Alt-v to display the View menu. You can also highlight a command and press F1 for more information.
- Console window - The Console window is the main part of the Emonitor OPC Client. It displays the current values of the OPC items when a check mark appears next to View > Item Data.
- Client Status window - The Client Status window displays events that have occurred in Emonitor OPC Client. It is included for diagnostic purposes. You can hide and show the Client Status window with View > Client Status. Hiding the Client Status window increases the size of the Console window.

You can drag the Client Status window to another location in the Console window by selecting the move handle.



- Status bar - The status bar appears at the bottom of the Emonitor OPC Client window. It displays a brief, context-sensitive help message. It also displays the database name, and the name of the current data source configuration. You can hide and show the status bar with View > Status Bar.

Quick Start - Configure the Emonitor OPC Client

You perform the following tasks when configuring the Emonitor OPC Client to export data:

- Configure the Emonitor database to store data from the online instruments
- Create a data source for Emonitor OPC Client
- Select the Emonitor database
- Configure Emonitor OPC Client to collect data from an OPC server. This step includes mapping each OPC item to a measurement definition in the Emonitor database.
- Configure the EmonitorScheduler to import data
- Start data collection

To use the quick start steps, select a task and then perform the quick start steps for that task. For detailed information on tasks or how to use specific dialog boxes in the Emonitor OPC Client, refer to the online help.

Step 1 - Configure the Emonitor Database

You must create measurement definitions in the Emonitor database to store the data from the OPC server. See [Set Up the Database on page 12](#) for the steps to configure the database.



The only valid data types in Emonitor that work with the Emonitor OPC Client are Numeric and Magnitude (without phase).

Step 2 - Start the Online Data Management Console

1. To start the Online Data Management Console, select the Windows® Start button, and then select Programs > Rockwell Software > Emonitor > Online > Online Data Management Console.
2. Select Log In and enter an Administrator-level Emonitor user name and password (defined in Emonitor).

Step 3 - Add and Configure the Data Source

1. In the Online Data Management Console, select New to add a data source. Select the OPC Client type, enter a name for the data source, and then select OK.
2. Select the data source that you created, and select Edit to edit the data source configuration. This action starts the Emonitor OPC Client.

Step 4 - Select the Emonitor Database

1. In the Emonitor OPC Client, select File > New to create a data source configuration, or select File > Load to open an existing configuration.
2. If you open an existing configuration, select Setup > Settings. If you create a configuration, this dialog box appears automatically.
3. In the Setup dialog box, on the Database Setup tab, enter the database information. To display the help topic for the dialog, press F1.

Step 5 - Select and Map Data from the OPC Server

1. On the OPC Parameter tab of the Setup dialog box, select the OPC server.
2. On the Data Map tab of the Setup dialog box, select the OPC items and map them to measurement definitions in the Emonitor database. The only valid data types in Emonitor that work with the Emonitor OPC Client are Numeric and Magnitude (without phase).
3. On the Options tab of the Setup dialog box, choose the options for data collection, including the schedule for regular data collection.

Step 6 - Configure EmonitorScheduler to Import Data

The following quick start steps apply to the EmonitorScheduler software. Emonitor OPC Client exports data into unload files. EmonitorScheduler then imports the unload files into the Emonitor database.



The EmonitorScheduler service must be running to import data into the Emonitor database from Emonitor.

The Scheduler has two parts:

- The EmonitorScheduler service that runs in the background and launches (executes) the scheduled events (profiles). The EmonitorScheduler service must be running to execute scheduled events.
- The Scheduler that allows you to create and edit profiles. This program does not have to be running for the EmonitorScheduler service to execute scheduled events.

Normally, the EmonitorScheduler service is installed when you install Emonitor, but it is disabled by default. If the service is disabled, or you have stopped it, you must restart the service if you want it to execute scheduled events and start automatically when you start Windows. The start and stop of the Scheduler has no effect on the EmonitorScheduler service.

To start the EmonitorScheduler service, you must have Administrator privileges.

1. Select Start > Control Panel > Administrative Tools > Services.
2. Select Services (local) in the left side of the Services window.
3. Select SchedulrSvc in the right side of the Services window.
4. The SchedulrSvc Startup Type must be Automatic. If it is Manual or Disabled, right-click on SchedulrSvc and select Properties. In the Properties dialog box, set Startup Type to Automatic, and then select OK.
5. The SchedulrSvc Status must be Started. If it is Stopped, right-click on SchedulrSvc and select Start. We strongly recommend that you leave the Startup Type for the SchedulrSvc as Automatic in the Services console. This action starts the EmonitorScheduler service automatically when Windows starts.

To create the Scheduler profile:

1. Start the EmonitorScheduler. Select Start > Programs > Rockwell Software > Emonitor > Utilities > Scheduler.
2. Select Add to create a Scheduler Profile.
3. Select or enter the information for each dialog box, and then select Next to go to the next dialog box. Press F1 or select Help for information about the fields in each of the dialog boxes.



Each Scheduler profile must have a unique name because Scheduler profiles are global to the Emonitor Online system. If you disable a Scheduler profile on one Unload Station, the Scheduler profile is disabled on all Unload Stations. Scheduler profiles are stored in the Emonitor database, not on the Unload Station computer.

The following examples use the default program directory. If you have changed the default program directory, substitute the Emonitor program directory path into the parameters. The EmonitorScheduler uses the DataFileDir and DataFiles path in the Source section of the odonline.edi file on the Unload Station computer to define the directory.

- Executable file: C:\Program Files (x86)\Rockwell Software\Emonitor\didaemon.exe
- Command line: C:\Program Files (x86)\Rockwell Software\Emonitor\odonline.edi

After you complete these steps to create the Scheduler profile, you do not need to do anything else. You can close the Scheduler. The EmonitorScheduler service runs in the background and automatically lunches each Scheduler profile at the correct time. If you want Scheduler to start using the new profile immediately, you must stop and then restart the EmonitorScheduler service.

You can find more information on the `odonline.edi` file and how to configure Scheduler profiles in the EmonitorScheduler help. Start the EmonitorScheduler, and then select Help > Contents and Index.

Step 7 - Start Data Collection

In the Online Data Management Console, select the OPC Client data source, and then select Start to start data collection. Select Stop to stop the data source. You can also automatically start a data source by setting the Startup Type to Automatic. The ODMC automatically restarts the data source when Windows starts.



The EmonitorScheduler service must be running to import data into the Emonitor database from Emonitor.

The Emonitor OPC Client appears as an icon in the system tray on the right side of the taskbar.



Emonitor OPC Client icon
in the system tray

- To restore the Emonitor OPC Client, double-click the icon, or right-click the icon and select Restore. You can then use the File > Preview Data command to view the data transfer messages.
- To minimize the Emonitor OPC Client to a system tray icon, select File > Exit, or select the Close button in the upper right corner of the window.
- To stop the Emonitor OPC Client, select the OPC Client data source in the Online Data Management Console and select Stop.



When you restore the OPC Client from the system tray icon, the title bar includes the words Diagnostic View. This signal indicates that the OPC Client is running in the background and acquiring data.

You can have multiple instances of the Emonitor OPC Client running on one computer simultaneously. This function allows you to connect to multiple OPC sources.

Step 8 - Monitoring the Emonitor OPC Client

You can view the status of communications between the Emonitor OPC Client and the OPC server. This information can be useful for problem diagnostics. You can monitor the following events and data.

- Client events
- OPC item data
- Server status
- Status of group parameters

While Editing a Data Source Configuration

1. If you are editing a data source configuration in the OPC Client, select File > Preview Data. The OPC Client connects to the OPC server, but does not import any data.
2. Display the Client Status window with View > Client Status. A check mark appears next to the command when the window is visible.
3. To view, and in some cases modify, the communications between the OPC server and the Emonitor OPC Client, use the commands on the View menu.

While the OPC Client is Running

1. Right-click the OPC Client icon in the System Tray and select Restore.
2. To view, and in some cases modify, the communications between the OPC server and the Emonitor OPC Client, use the commands on the View menu. You can also use the Server Status and Group Status commands on the right-click menu for the Emonitor OPC Client icon.

Emonitor OPC Server

Introduction

The purpose of the Emonitor® OPC Server is to enable an OPC-based client application to access values stored in an Emonitor database. These values include the archive data from the magnitude and numeric measurement definitions. The Emonitor OPC Server can run on any computer that connects through a network to the computer with the Emonitor OPC Server database.

Emonitor OPC Server conforms to the OLE for Process Control (OPC) 2.04 Data Access standards. OPC is based on Microsoft® OLE technology and provides an industry standard mechanism to communicate and exchange data between clients and servers. A server is a producer of data in the exchange. An example is the Emonitor OPC Server. A client is a consumer of data in the exchange. Examples include SCADA/HMI software and the Emonitor OPC Client. The OPC Foundation - a coalition of industrial/manufacturing companies of which Rockwell Automation, Inc. is a member - defines and manages the OPC standards.

This chapter leads you through the steps to configure the Emonitor OPC Server.

1. Use the Online Data Management Console to start and manage the Emonitor OPC Server.
2. Use the Emonitor OPC Server to create a data source configuration. This configuration is a set of parameters that controls how to connect to the Emonitor database, what data to make available, and how often to refresh the data.
3. You can optionally preview data in the Emonitor OPC Server.

In a multi-computer system, the Emonitor OPC Server usually runs on the Viewing Station computer, but can also be run on the Unload Station computer.

How the Emonitor OPC Server Works with Emonitor

You use the Emonitor OPC Server to make data from the Emonitor database available to other OPC clients. This data can be collected as part of a walk-around predictive maintenance system, or collected by an Emonitor Online system. For more information on Emonitor Online systems, see [Emonitor Online on page 9](#).

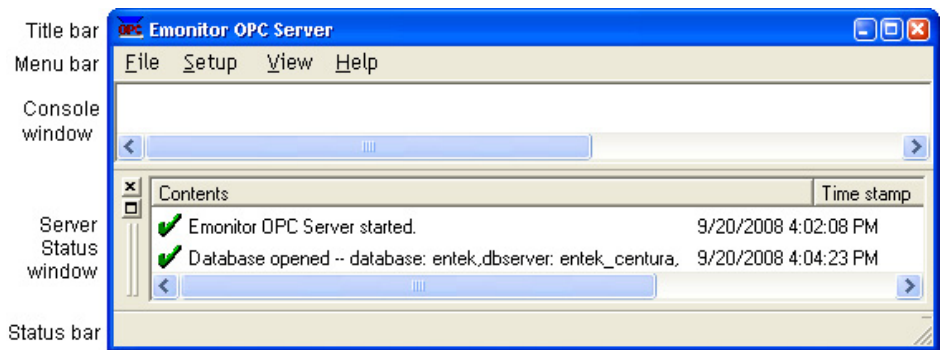
The Emonitor OPC Server can only be started from the Emonitor Online Data Management Console. Both programs are installed with Emonitor. Detailed instructions for configuring an Emonitor Online System are available in the online help. Select Start > Programs > Rockwell Software > Emonitor > Online > Online Data Management Console, and then press F1.

Required Information

The requirement for the Emonitor OPC Server is:

- You must know the Emonitor database connection information, including user name, and password for that database connection. These settings vary according to the database server that you are using.

Emonitor OPC Server Main Window

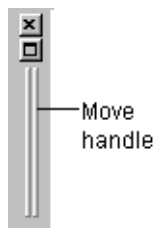


Exploring the Emonitor OPC Server

The Emonitor OPC Server window consists of the following parts:

- Title bar - The title bar contains the name of the program.
- Menu bar - The menu bar contains the menu commands. You can highlight a command and press F1 for more information. You can also highlight a command and press F1 for more information.
- Console window - The Console window is the main part of Emonitor OPC Server. It displays the current values of the OPC items when a check mark appears next to View > View Data
- Server Status window - The Server Status window displays events that have occurred in Emonitor OPC Server. It is included for diagnostic purposes. You can hide and show the Server Status window with View > Server Status. Hiding the Server Status window increases the size of the Console window.

You can drag the Server Status window to another location in the Console window by selecting the move handle.



- Status bar - The status bar appears at the bottom of the Emonitor OPC Server window. It displays a brief, context-sensitive help message. It also displays the database name and the name of the current data source configuration. You can hide and show the status bar with View > Status Bar.

Quick Start - Configure the Emonitor OPC Server

You perform the following tasks when configuring the Emonitor OPC Server to serve OPC data:

- Create a data source for Emonitor OPC Server
- Select the Emonitor database
- Configure Emonitor OPC Server to serve data from the Emonitor database.
- Start serving data

To use the quick start steps, select a task and then perform the quick start steps for that task. For detailed information on tasks or on how to use specific dialog boxes in the Emonitor OPC Server, refer to the online help.

Step 1 - Start the Online Data Management Console

1. To start the Online Data Management Console, select the Windows® Start button, and then select Programs > Rockwell Software > Emonitor > Online > Online Data Management Console.

2. Select Log In and enter an Administrator-level Emonitor user name and password (defined in Emonitor).

Step 2 - Add and Configure the Data Source

1. In the Online Data Management Console, select New to add a data source. Select the OPC Server type, enter a name for the data source, and then select OK.
2. Select the data source that you created, and select Edit to edit the data source configuration. This action starts the Emonitor OPC Server.

Step 3 - Select the Emonitor Database

1. In the Emonitor OPC Server, select File > New to create a data source configuration, or select File > Load to open an existing configuration.
2. If you open an existing configuration, select Setup > Settings. If you create a configuration, this dialog box appears automatically.
3. In the Setup dialog box, on the Database Setup tab, enter the database information. To display the help topic for the dialog, press F1.
4. To display the help topic for the dialog, press F1.

Step 4 - Select Data from the Emonitor Database

1. On the OPC Item tab of the Setup dialog box, select the measurement definitions from the Emonitor database that you want to make available to OPC clients.
2. Edit the OPC item name. By default, the OPC item name is created from the measurement definitions name and a unique ID number.
3. On the Options tab of the Setup dialog box, choose the options to refresh data.

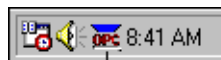
Step 5 - Start Data Service

In the Online Data Management Console, select the Emonitor OPC Server data source, and then select Start to start serving data. Select Stop to stop the data service.



Unlike the other data sources in an Emonitor Online system, the Emonitor OPC Server cannot be started automatically. The Emonitor OPC Server also shuts down if you log out of Windows, and does not automatically restart when you restart Windows.

The Emonitor OPC Server appears as an icon in the system tray on the right side of the taskbar.



Emonitor OPC Server icon
in the system tray

- To restore the Emonitor OPC Server, double-click the icon, or right-click the icon and select Restore. After the data service is started, the word Running appears in the lower right corner of the OPC Server program. When the OPC Server is visible and running, the following icon appears in the lower right corner of the program.



- To minimize the Emonitor OPC Server to a system tray icon, select File > Exit, or select the Close button in the upper right corner of the window.
- To stop the Emonitor OPC Server, select the OPC Server data source in the Online Data Management Console and select Stop.



When you restore the OPC Server from the system tray icon, the title bar includes the words Diagnostic View. This signal indicates that the OPC Server is running in the background.

You can have only one instance of the Emonitor OPC Server running on a computer at a time.

Step 6 - Monitoring the Emonitor OPC Server

You can view the status of communications between Emonitor OPC Server and the OPC client. This information can be useful for problem diagnostics. You can monitor the following events and data.

- Server events
- OPC item data

Editing a Data Source Configuration

1. If you are editing a data source configuration in the OPC Server, select File > Preview Data. The OPC Server connects to the Emonitor database, but does not serve any data.
2. Display the Server Status window with View > Server Status. A check mark appears next to the command when the window is visible.
3. To view the data, select View > View Data.

While the OPC Server is Running

1. Right-click the OPC Server icon in the System Tray and select Restore.
2. To view the communication status, use the commands on the View menu.

EmonitorEEM Utility

Introduction

The EmonitorEEM utility lets you import data from Dynamix™ 1444 online monitors into the Emonitor® database for trending and analysis. You can import data on either a scheduled interval or based on a triggered condition by monitoring a Boolean controller tag via OPC. This import configuration is known as an Extraction. EmonitorEEM lets you define many extractions to support many Dynamix 1444 modules.

The EmonitorEEM utility relies on the EmonitorDDM service to communicate with the Dynamix 1444 modules via RSLinx® Classic.



The EmonitorDDM service is disabled on a default Emonitor installation. To use the EmonitorEEM utility, you must first enable and start the EmonitorDDM service.

Create Data Extraction in EmonitorEEM

When you create an Extraction, you are able to obtain data on either a Scheduled or Triggered basis.

With the Scheduled method, you can obtain data from either the Live Data buffers or the Demand Data buffers on Dynamix 1444 modules. Live Data Extraction uses the specific measurement configuration defined in the Dynamix 1444 Logix Add-on Profile (AOP). Demand Data Extraction enables you to use the EmonitorEEM Extraction Wizard to specify various measurement parameters on-demand.

With the Triggered method, you can use a defined tag in Logix to act as a trigger that signals the EmonitorDDM service to collect data. This method allows you to use Logix to determine the specific conditions when data is collected. For example, you can set data to collect only when the machine is in a run state, or runs a specific process or material.

Launch EmonitorEEM

1. Confirm that the EmonitorDDM service is enabled and running.
2. From the Windows® Start menu, navigate to Rockwell Software® > EmonitorEEM (or use the Windows Search function to search EmonitorEEM).
3. When EmonitorEEM first opens, it displays any currently configured Extractions. To Stop/Start or create extractions:
 - a. Select Log In.
 - b. Sign in with any Emonitor admin-user credentials. Default Emonitor admin-user credentials are:
Username: admin
Password: password
Emonitor user credentials are managed from within the main Emonitor application. To protect your Emonitor configurations, we recommend that you change the default admin/user credentials.
4. To open the Extraction Wizard, select New.
5. Specify the desired Collection Method:
 - Scheduled intervals (see [Scheduled Data Collection on page 44](#))
 - Triggered conditions (see [Triggered Data Collection on page 47](#))

Scheduled Data Collection

When you select the Scheduled collection method, you must choose to either collect data from the Live Data or Demand Data buffer.

To select the Live Data Extraction:

1. Select one or more Dynamix 1444 modules from which to acquire.
2. Select the Dynamix 1444 channels and measurements that you want to collect.
3. Map the selected Dynamix 1444 measurements to Emonitor measurements.
4. Set an Unload Interval (minutes, hours, or days).
5. To begin data collection, save and start the Extraction.

To select the Demand Data Extraction:

1. Select one or more Dynamix 1444 modules from which to acquire.
2. Specify the desired measurement parameters for each channel.
3. Map the selected Dynamix 1444 measurements to Emonitor measurements (the Demand Data buffer only provides Spectrum and Time-Waveform data).
4. Set an Unload Interval (minutes, hours, or days).
5. To begin data collection, save and start the Extraction.

The EmonitorScheduler service must be enabled and started, and a data import profile must be configured in the Scheduler to process the unload files (.ulf) that the EmonitorDDM service produces.

Live Data Extraction

1. With the Collection Method set to Scheduled and the Dynamix 1444 Buffer set to Live Data Extraction, either Select new devices in the next screen (default), or Start with existing devices.
2. Select Next.
3. The Select Devices dialog shows the RSLinx Classic RSWho tree that displays the currently defined Communications Drivers. Navigate to your Dynamix 1444 modules and add one or more to the device list. To add modules, either double-click the modules one at a time, or single-click each selection and then Add Device.



If you are unable to browse to your Dynamix 1444 modules, you must add the appropriate driver from the RSLinx application-mode interface.



To proceed with your Live Data Extraction, your Dynamix 1444 modules must be online with RSLinx Classic.

- You can optionally remove previously selected modules from the device list by selecting the Remove Device button.
 - To provide an easy-reference name to each module (instead of the default IP address), use the Rename Device button. This option writes an entry to an XML file that the EmonitorRTA utility shares, so modules with easy-reference names are also selected there if they are renamed during the EmonitorEEM configuration.
4. Select Next.
 5. In the leftmost column of the Map Devices dialog, select the Modules, Channels, or Measurements you wish to collect data from.

Selecting a parent-level object auto-selects all child objects beneath that parent object.

6. In the center column, select the appropriate Machine, Location, or Measurement object from the hierarchy tree where you want the Dynamix 1444 data to be mapped.

-
- IMPORTANT**
- When you use the Auto Map option, only specify a Machine-level Emonitor object to map to; the Auto Map auto-creates the Location and Measurement objects for you.
 - When you use the Map option, you can only select and map one measurement at a time; you must first manually create a compatible measurement in Emonitor for that purpose.
-



To refresh the Emonitor hierarchy list, right-click in the middle pane and select Reload Database. This action is helpful if you add new Emonitor hierarchy objects after the Extraction Wizard - Map Devices dialog opened.

7. Select either:
 - Map (if the measurements exist in the Emonitor hierarchy)
 - Auto Map (to create the location and/or measurements automatically under the selected hierarchy item)

The resulting mapped items show in the far right-hand column. Repeat the mapping procedure as necessary.

8. Select Next.
9. From the Phase Settings dialog, you can optionally select whether to store Phase data on a channel-by-channel basis.



Phase data requires an additional Dynamix 1444 module configuration.

10. Select Next.
11. In the resulting Extraction Info dialog, set the desired Extraction Interval.

-
- IMPORTANT**
- Use caution when you set the Extraction Interval, as short intervals can quickly overwhelm a vibration database, which results in severe performance degradation or system crashes. Common Extraction Intervals are: 1 Day, 12 hours, 6 hours, 1 hour (minimum 15 minutes). When online data collection is populating a vibration database, always properly configure Emonitor measurement Storage Limits and the necessary automated processes to enforce them. See publication [EMONTR-UM002](#) for additional information.
-

12. Select Save Extraction and assign a name. Use a descriptive name for each Extraction that you create, as this name also shows in the EmonitorEEM Extraction list.
13. Select Save to create your Extraction. If the name you provide is already in use, you are prompt to overwrite an existing extraction.
14. Select Finish to return to the main EmonitorEEM interface.
15. To begin data collection with this Extraction, confirm that it is selected in the Extraction list, then select Start.

Demand Data Extraction

1. With the Collection Method set to Scheduled and the Dynamix 1444 Buffer set to Demand Data Extraction, either Select new devices in the next screen (default), or Start with existing devices.
2. Select Next.
3. The Select Devices dialog shows the RSLinx Classic RSWho tree, which displays the currently defined Communications Drivers. Navigate to your Dynamix 1444 modules and

add one or more to the device list. To add modules, either double-click the modules one at a time, or single-click each selection and then Add Device.



If you are unable to browse to your Dynamix 1444 modules, you must add the appropriate driver from the RSLinx application-mode interface.



To proceed with your Live Data Extraction, your Dynamix 1444 modules must be online with RSLinx Classic.

- To remove previously selected modules from the device list, select the Remove Device button.
- To rename the modules, select Rename Device. We recommend you provide an easy-reference name to each module instead of the default IP address. This action writes an entry to an XML file that the EmonitorRTA utility shares. If you rename modules during the EmonitorEEM configuration, the new name is also selected in the XML file.

4. Select Next.

5. In the Demand Acquisition Settings dialog, the default setting collects both Waveform and FFT data for each channel. Optionally, you can change the setting and only select specific measurements and channels.

To simplify channel configuration, set the specific measurements and parameters for one channel, then use the far right-hand column to copy that channel configuration to the other channels.

6. Select Next.

7. In the leftmost column of the Map Devices dialog, select the Modules, Channels, or Measurements from which you wish to collect.



When you select a parent-level object, all child objects auto-select beneath that parent object.



Demand Data only provides Spectrum and Waveform measurement options.

8. In the center column, select the appropriate Machine, Location, or Measurement object from the hierarchy tree where you want the Dynamix 1444 data to be mapped.

IMPORTANT

- When you use the Auto Map option, only specify a Machine-level Emonitor object to map to; the Auto Map auto-creates the Location and Measurement objects for you.
 - When you use the Map option, you can only select and map one measurement at a time; you must first manually create a compatible measurement in Emonitor for that purpose.
-



To refresh the Emonitor hierarchy list, right-click in the middle pane and select Reload Database. This action is useful when you add new Emonitor hierarchy objects after the Extraction Wizard - Map Devices dialog opens.

9. Select either:

- Map (if the measurements exist in the Emonitor hierarchy)
- Auto Map (to create the location and/or measurements automatically under the selected hierarchy item)

The resulting mapped items show in the far right-hand column. Repeat the mapping procedure as necessary.

10. Select Next.

11. From the Phase Settings dialog, you can optionally select whether to store Phase data on a channel-by-channel basis.



Phase data requires an additional Dynamix 1444 module configuration.

12. Select Next.

- In the resulting Extraction Info dialog, set the desired Extraction Interval.

IMPORTANT Use caution when setting the Extraction Interval, as short intervals can quickly overwhelm a vibration database, which results in severe performance degradation or system crashes. Common Extraction Intervals: 1 Day, 12 hours, 6 hours, 1 hour (minimum 15 minutes). When online data collection is populating a vibration database, always properly configure Emonitor measurement Storage Limits and the necessary automated processes to enforce them. See [Understanding Emonitor Storage Specifications on page 18](#) for additional information.

- Select Save Extraction and assign a name. Use a descriptive name for each Extraction that you create, as this name shows in the EmonitorEEM Extraction list.
- To create your Extraction, select Save. If the name that you provide has already in use, you are prompt to overwrite an existing extraction.
- To return to the main EmonitorEEM interface, select Finish.
- To begin data collection with this Extraction, select the Extraction in the Extraction list, then select Start.

Triggered Data Collection

To select the Triggered collection method:

- Specify a local or remote RSLinx Classic OPC server and one or more trigger tags, which act as signals for the EmonitorDDM service to begin data collection.
- Select one or more Dynamix 1444 modules from which to acquire data.
- Select the Dynamix 1444 channels and measurements that you want to collect.
- Map the selected Dynamix 1444 measurements to Emonitor measurements.
- Create one or more triggers and assign one or more corresponding tags to these triggers.
- Select whether to collect data on a scheduled interval, or only one collection when the trigger condition is True.
- Save and start the Extraction to begin data collection.

The EmonitorScheduler service must be enabled and started, and a data import profile must be configured in the Scheduler to process the unload files (.ulf) that the EmonitorDDM service produces.

- Sign in to the EmonitorEEM utility.
- To open the Extraction Wizard, select New.
- Select Triggered as the Collection Method option. The Demand Data Extraction is now unselectable, as the Triggered collection can only access the Live Data buffer.
- In the Use Devices From section at the bottom of the screen, choose Select new devices in the next screen (default), or Start with existing devices.
- Select Next.
- In the OPC Parameter Settings dialog:
 - Enter the Computer Name for the RSLinx OPC Server where your Trigger Tags are served. This field is optional when the RSLinx OPC Server runs on the local workstation.
 - In the Server Name field, use the Select button to designate the Remote RSLinx OPC Server, if appropriate.

IMPORTANT If you use a Remote RSLinx OPC Server, confirm that the Windows User account you use on the EmonitorEEM workstation has a valid matching Windows Local User account or Domain account on the Remote RSLinx OPC Server. If this configuration is not done, the EmonitorDDM service is unable to monitor remote OPC Trigger Tags successfully and additional Windows and DCOM configuration is necessary.

- c. For OPC Topic, use the Select button that corresponds to the appropriate OPC Topic where you find your Trigger Tags. If this selection list is blank, your OPC Server is not running and/or requires additional configuration to enable topic browsing.
- d. For the ACD file, select Browse to navigate to the Logix ACD project file with the defined Trigger Tag instructions. The Logix Designer application Tag Import process immediately imports the compatible Boolean tags from the ACD file for subsequent assignment later in the Triggered Extraction configuration. A Tags Imported successfully message displays when the process is complete.
- e. Select OK to acknowledge the message and continue.

IMPORTANT You must have the Logix Designer application locally installed for the Tag Import procedure to run successfully. Logix Designer does not require FT Activation for this function to complete successfully. The Logix Designer version must match the ACD file version for the Tag import process to properly execute.



The ACD file that you select to import tags from cannot be an open project in the Logix Designer application during the Tag Import. If the project is open, the Tag Import process shows an error message and fails to complete.

7. Select Next.
8. The Select Devices dialog shows the RSLinx Classic RSWho tree, which displays the currently defined Communications Drivers. Navigate to your Dynamix 1444 modules and add one or more to the device list. To add modules, either double-click the modules one at a time, or single-click each selection and then Add Device.



If you are unable to browse to your Dynamix 1444 modules, you must add the appropriate driver from the RSLinx application-mode interface.



To proceed with your Live Data Extraction, your Dynamix 1444 modules must be online with RSLinx Classic.

- You can optionally remove previously selected modules from the device list by selecting the Remove Device button.
- To provide an easy-reference name to each module (instead of the default IP address), use the Rename Device button. This option writes an entry to an XML file that the EmonitorRTA utility shares, so modules with easy-reference names are also selected there if they are renamed during the EmonitorEEM configuration.

9. Select Next.
10. In the leftmost column of the Map Devices dialog, select the Modules, Channels, or Measurements you wish to collect data from.
Selecting a parent-level object auto-selects all child objects beneath that parent object.
11. In the center column, select the appropriate Machine, Location, or Measurement object from the hierarchy tree where you want the Dynamix 1444 data to be mapped.

IMPORTANT

- When you use the Auto Map option, only specify a Machine-level Emonitor object to map to; the Auto Map auto-creates the Location and Measurement objects for you.
- When you use the Map option, you can only select and map one measurement at a time; you must first manually create a compatible measurement in Emonitor for that purpose.



To refresh the Emonitor hierarchy list, right-click in the middle pane and select Reload Database. This action is helpful if you add new Emonitor hierarchy objects after the Extraction Wizard - Map Devices dialog opened.

12. Select either:
 - Map (if the measurements exist in the Emonitor hierarchy)
 - Auto Map (to create the location and/or measurements automatically under the selected hierarchy item)

The resulting mapped items show in the far right-hand column. Repeat the mapping procedure as necessary.
13. Select Next.
14. In the Trigger Setting dialog, enter a trigger name in the Name field.
15. To browse for the tag that you wish to use, select the ellipsis button (...) to the right of the Tag field. The Trigger Tag Browser displays only Boolean tags to help keep the tag list short.
16. To confirm your tag selection, select OK.
17. For the Condition setting, select and set Trigger Collection Interval while the tag is True at the desired interval, or select Trigger Single Collection while the tag is True if you want one measurement sample for each True state condition.

For Trigger Single Collection, one sample is collected each time the associated trigger tag changes states from False to True.
18. To add your trigger configuration to the available triggers list, select the Create button.
19. To add additional triggers, repeat [step 14...step 18](#).
20. Select Next.
21. In the resulting Bind Mapped items to Trigger dialog, select a defined Trigger from the left-hand Triggers list.
22. Select Add (enlarge the Extraction Wizard window to see the Add button near the bottom of the dialog box) to open the Mapped Item Browser selection box.
23. The Mapped Item Browser displays a list of all currently mapped measurements from [step 10...step 12](#). Use Select All to bind the selected trigger to all available mapped measurements, or use the Shift or Ctrl keys to select specific measurements as needed.
24. To confirm your selections, select OK.
25. Repeat [step 21...step 24](#) as required for additional triggers.
26. Select Next.
27. From the Phase Settings dialog, you can optionally select whether to store Phase data on a channel-by-channel basis.



Phase data requires an additional Dynamix 1444 module configuration.

28. Select Next.
29. Select Save Extraction and assign a name. Use a descriptive name for each Extraction that you create, as this name shows in the EmonitorEEM Extraction list.
30. To create your Extraction, select Save. If the name that you provide has already in use, you are prompted to overwrite an existing extraction.
31. To return to the main EmonitorEEM interface, select Finish.
32. To begin data collection with this Extraction, select the Extraction in the Extraction list, then select Start.

When you begin an Extraction that is configured to monitor a remote RSLinx OPC Server, you must provide valid user credentials for the remote server before the start operation can complete for that Extraction.

Manual/Automatic Startup

By default, all new Extractions have a Manual startup type; if the EmonitorEEM workstation restarts, you must manually restart the Extractions again from the EmonitorEEM interface.

You can optionally set an Extraction to use Automatic startup type; if the EmonitorEEM workstation restarts, the EmonitorDDM service automatically attempts to reinitiate data collection with that Extraction.

IMPORTANT The Automatic startup type is not compatible with Extractions that are configured to monitor trigger tags on a remote RSLinx OPC Server; you must manually restart these Extractions after a workstation restart.

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Technical Support Center	Find help with how-to videos, FAQs, chat, user forums, Knowledgebase, and product notification updates.	rok.auto/support
Local Technical Support Phone Numbers	Locate the telephone number for your country.	rok.auto/phonesupport
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