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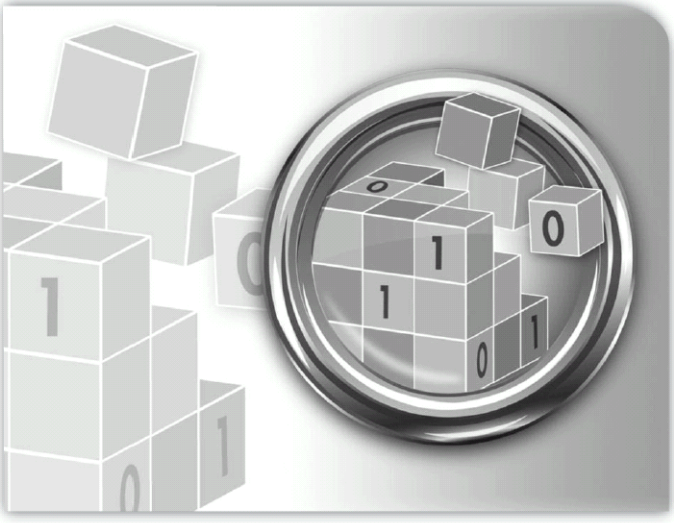
Data Management

FactoryTalk® Historian ME



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QUICK START GUIDE

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Rockwell Automation

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FactoryTalk Historian Machine Edition Overview

FactoryTalk® Historian Machine Edition (ME) provides a completely contained system for data storage and data collection. The FactoryTalk Historian ME Module is inserted into a chassis with one or more ControlLogix® controllers. The FactoryTalk Historian ME Module collects data across the backplane from the ControlLogix controllers in the local chassis and stores it in a local archive. System and data information can be viewed through the FactoryTalk Historian ME web pages and standard Historian clients.

The Factory Talk Historian ME Module can be integrated with the following Rockwell Automation applications:

FactoryTalk VantagePoint: By integrating FactoryTalk Historian ME with FactoryTalk VantagePoint and FactoryTalk VantagePoint EMI, you can view your process data from the FactoryTalk Historian ME in VantagePointExcel reports, dashboards, and portals, and integrate the FactoryTalk Historian ME data into the VantagePoint model. This allows you to correlate the data with various other data sources.

FactoryTalk Historian ProcessBook: By integrating FactoryTalk Historian ME with FactoryTalk Historian ProcessBook, you can view your process data from FactoryTalk Historian ME as well as in FactoryTalk Historian ProcessBook. This allows you to visualize the data in trends and other graphical components.

FactoryTalk Historian DataLink: By integrating FactoryTalk Historian ME with the Excel add-in FactoryTalk Historian DataLink, you can develop Excel reports based on the data in FactoryTalk Historian ME.

FactoryTalk Services Platform: By integrating FactoryTalk Historian ME with FactoryTalk Security, all users and groups can be maintained from a central location.

Note: FactoryTalk Historian ME can be integrated with FactoryTalk Services Platform CPR9 SR2. If you are using FactoryTalk Services Platform CPR9 SR1, you must upgrade to FactoryTalk Services Platform CPR9 SR2 by installing the FactoryTalk Services Platform CPR9 SR2 provided on the FactoryTalk Historian ME Client Tools CD that was shipped with your FactoryTalk Historian ME Module. You must use the

custom install and select the web services (for details, refer to the FactoryTalk Services Platform release notes. You must also have Internet Integration Services (IIS) installed on the FactoryTalk Directory computer.

FactoryTalk Historian SE: By integrating FactoryTalk Historian ME with FactoryTalk Historian SE, you can transfer the data logged by FactoryTalk Historian ME to FactoryTalk Historian SE for long term storage and analysis.

PI Server: By integrating FactoryTalk Historian ME with a PI server, you can transfer the data logged by FactoryTalk Historian ME to a PI server for long term storage and analysis. FactoryTalk Historian ME supports Open PI Server versions 3.4.375.80 and 3.4.380.36.

Note: FactoryTalk Historian ME can be integrated with FactoryTalk Historian SE 2.1 and above or a PI server. If you choose to install FactoryTalk Historian SE 2.1 or higher, a patch must be installed on the FactoryTalk Historian SE systems in your network that will be used with FactoryTalk Historian ME. See page 11 for more information.

FactoryTalk View SE: You can use the FactoryTalk View SE Trending object to trend data logged in FactoryTalk Historian ME.

This document describes:

- "FactoryTalk Historian ME System Requirements"
- "Client Tools Software (CD)"
- "Setting up Your ControlLogix Environment"
- "Installing the FactoryTalk Historian ME Module"
- "Installing FactoryTalk Historian ME Components"
- "Installing the FactoryTalk Historian SE Patch"
- "Logging into FactoryTalk Historian ME"
- "Setting Time in FactoryTalk Historian ME"
- "Naming the FactoryTalk Historian ME Module"
- "Collecting Data"
- "Viewing Data"
- "Transferring Data"

FactoryTalk Historian ME System Requirements

Before installing FactoryTalk Historian ME, determine your platform requirements and configuration environment. The following information offers some guidelines as you begin planning.

System Requirements

The hardware and software requirements for FactoryTalk Historian ME depend on the demands an application places on the system. The greater the demand, the more powerful a system must be to support this demand. For large or complex applications, use computers with faster CPUs and more RAM. In addition to this, there should always be sufficient disk space to provide virtual memory that is at least twice the size of the physical RAM.

Software Requirements

- Windows Vista SP1 or Windows XP SP2 or SP3
- Microsoft Excel 2003 or newer for FactoryTalk Historian DataLink

Note: Windows Vista is only supported for the FactoryTalk Historian ME web browser and FactoryTalk Historian ME VantagePoint. It is not supported for DataLink and ProcessBook.

- Windows Server 2003 SP2
- Microsoft Internet Explorer (IE) 6.0, 7.0, or 8.0 (in compatibility mode). There are no specific requirements for IE 7.0. For IE 6.0, the requirements are as follows:
  - *Windows XP SP2*

    If the \windows\system32\mshtml.dll file has a version that is less than or equal to 6.0.2900.2180 or a date that is before or equal to 08/03/2004, apply this patch: KB974455 (10/12/09) http://www.microsoft.com/downloads/details.aspx?displaylang=en&FamilyID=8101625d-ee93-46e5-aec2-3bdbf2d86472.

After the patch has been applied, the \windows\system32\mshtml.dll file will have a version of 6.0.2900.3627 and a date of 09/24/2009.

- *Windows XP SP3*

  If the \windows\system32\mshtml.dll file has a version that is less than 6.0.2900.5512 or a date that is before 04/14/2008, apply this patch: KB974455 (10/12/09) http://www.microsoft.com/downloads/details.aspx?displaylang=en&FamilyID=8101625d-ee93-46e5-aec2-3bdbf2d86472.

  After the patch has been applied, the \windows\system32\mshtml.dll file will have a version of 6.0.2900.5880 and a date 09/24/2009.

- *Windows Server 2003 SP2*

  The minimum supported version is 6.0.3790.3959.

  If the IE 6.0 version is less than the minimum supported version, apply the following patch: KB974455 SP2 (10/12/09) http://www.microsoft.com/downloads/details.aspx?displaylang=en&FamilyID=8101625d-ee93-46e5-aec2-3bdbf2d86472.

- If you want to view any of the installation videos included on the Client Tools CD, you must have Adobe Flash Player installed on your system.

Internet Options

The location of your Internet Options settings may very according to which operating system you are using. However, in general, you should:

- Disable any popup blocks to view online help.
- Select the Local Intranet icon (generally located under Security settings), and click [Sites] to use the default setting, “Automatically detect internet network”.
- Use the default Security level for this zone. In general, the settings should remain at the default level and the setting should not be changed. Use the medium-low default setting.

- Enable the following settings
  - Binary and script behaviors
  - Run ActiveX controls and plug-ins
  - Script ActiveX controls marked safe for scripting
- If you are using Internet Explorer 8.0 in compatibility mode, you must enable the security setting for *Include local directory path when uploading files to a server*.

Hardware Requirements

ControlLogix Chassis Requirements

- 1756-HIST1G Module or 1756-HIST2G Module
- ControlLogix 55xx (1756-Lxx) version 13 or higher
- RSLogix 5000
- ENBT/EN2T Module
- Chassis

Client Computer Requirements

- Power supply
- Intel Pentium III, 600MHz, 512MB RAM (minimum) or Intel Celeron, 3 GHz or higher, (recommended), 1GB of RAM or more
- Mouse or compatible pointing device

Client Tools Software (CD)

Your FactoryTalk Historian ME module package includes a client tools software CD that contains the following components:

- Acrobat Reader
- FactoryTalk Historian ME Management CRP9 SR2 (Admin Console)
- FactoryTalk Services Platform CPR9
- Getting Started Videos
- FactoryTalk Historian ME RSLogix 5000 Module Profile (AOP)
- FactoryTalk Historian ME Rule Editor

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- RSLinx Classic
- RSLogix 5000 Clock Update Tool
- User Documentation

Setting up Your ControlLogix Environment

Perform the following steps to set up your ControlLogix environment before installing FactoryTalk Historian ME.

1. Set up the ControlLogix chassis.
2. Insert the ControlLogix controller(s) into the chassis.
3. Power on the system.
4. Configure the ControlLogix device(s).

Refer to your ControlLogix Chassis and ControlLogix Controller documentation for more detailed information.

Installing the FactoryTalk Historian ME Module

FactoryTalk Historian ME has two part numbers:

- 1756-HIST1G
- 1756-HIST2G

The 1G or 2G in the part number indicates how much data storage is associated with the FactoryTalk Historian ME Module.

Unpack the FactoryTalk Historian ME Module and insert it into the chassis.

Refer to your FactoryTalk Historian ME Installation Instructions for more detailed information.

Installing FactoryTalk Historian ME Components

If you plan to use FactoryTalk Historian ME Client Tools, such as the FactoryTalk Historian ME Rule Editor, FactoryTalk Directory, and/or FactoryTalk Security, then these components must be installed before you continue. If you do not plan to use FactoryTalk Historian Client Tools, then skip to "Logging into FactoryTalk Historian ME" on page 11.

After you have selected the platform that best suits your needs and have installed the FactoryTalk Historian ME Module into the chassis, you must determine the configuration environment for the FactoryTalk Historian ME components. These components, or FactoryTalk Historian Client Tools, can be found on the CD that was shipped with the FactoryTalk Historian ME Module.

Insert the CD into your computer's CD drive. If autoplay is turned on, the FactoryTalk Historian ME installation screen will automatically launch and display the FactoryTalk Historian ME installation options. If the screen does not automatically launch, click Start > Run and type D:\setup, where D is the letter of your CD drive.

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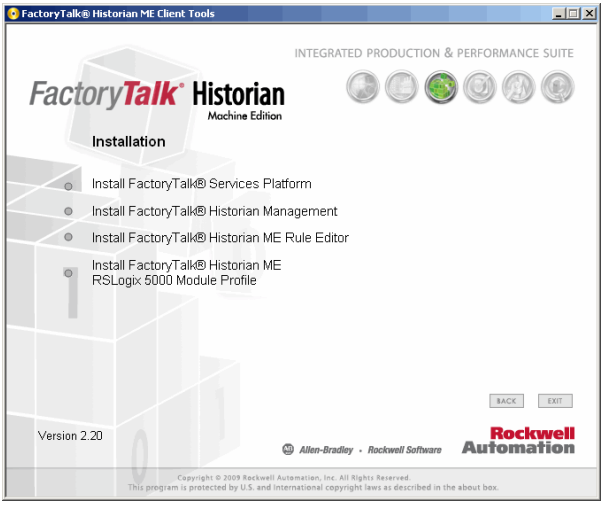
To access the FactoryTalk Historian ME Client Tools, click *Install ME Client Tools* from the main menu. This takes you to the Installation menu. This menu allows you to perform the following tasks:

- "Installing FactoryTalk Services Platform"
- "Installing FactoryTalk Historian ME Management"
- "Installing FactoryTalk Historian ME Rule Editor"
- "Installing FactoryTalk Historian ME RSLogix 5000 Module Profile (AOP)"



In addition to these FactoryTalk Historian ME components, the FactoryTalk Historian ME online documentation, release notes, user documentation, and Getting Started videos are also available on the CD.

Installing FactoryTalk Services Platform

This option installs FactoryTalk Services Platform (FTSP) CPR9 (Service Release 2). FTSP is an underlying architecture and set of common services that Rockwell Automation products build upon. FTSP must be installed on the computer that hosts the FactoryTalk Directory Server and all computers that are part of the FactoryTalk directory, including the FactoryTalk Historian SE and all clients. FTSP is also required if you plan to use FactoryTalk Security. However, it is optional if you plan to use native security.

The following components and services are installed as part of the platform:

- **FactoryTalk Directory** organizes project information from multiple FactoryTalk products across multiple computers on a network. It allows products to share a common address book, which finds and provides access to plant-floor resources, such

as data tags and graphic displays. FactoryTalk Historian ME supports a **network directory** only.

- **FactoryTalk Security** can be used to secure your FactoryTalk network after installing FTSP SR2. Select the "custom" option to install the FTSP Web Services component. Microsoft's Internet Information Server (IIS) must be installed and configured before you install FTSP. Please refer to the FactoryTalk Security System Configuration Guide for more information about IIS. This must be installed on the computer that hosts the FactoryTalk Directory Server and on the secondary server configured for the FactoryTalk Historian SE module. Please refer to the FTSP online help for more information.

Installing FactoryTalk Historian ME Management

The Management option installs the **FactoryTalk Administration Console** add-on. It provides a method of configuring, managing, and securing applications.

Installing FactoryTalk Historian ME Rule Editor

The Rule Editor allows you to create and edit user-defined rules for the point discovery process. The selections you make in the dialog box are automatically written to this file. The data points matching these rules are found and added to the FactoryTalk Historian ME module. You can upload the Rule File to the FactoryTalk Historian ME Module using the FactoryTalk Historian ME Upload Manager feature.

See *Using the FactoryTalk Historian ME Rule Editor* in the *FactoryTalk Historian ME User's Guide* for more information.

Installing FactoryTalk Historian ME RSLogix 5000 Module Profile (AOP)

The RSLogix 5000 Add-on Profile (AOP) enables integration between a ControlLogix controller and the FactoryTalk Historian ME module. Please refer to*RSLogix 5000 Add-on Profile* in the

FactoryTalk Historian ME User's Guide for information on installing the FactoryTalk Historian AOP component.

Installing the FactoryTalk Historian SE Patch

FactoryTalk Historian ME can be integrated with FactoryTalk Historian SE 2.1 or 2.2 after you have installed the FactoryTalk Historian SE patch. Once installed, FactoryTalk Historian ME can work with FactoryTalk Historian SE to collect, store, analyze, and visualize data using reporting tools such as time-series trends, bar charts, pie charts, pareto, and tabular trends.

The FactoryTalk Historian SE patch must be installed on the FTDirectory and any other computer that will be administering the FactoryTalk Historian ME module through the FactoryTalk Administrative Console. The patch is not necessary for machines with FactoryTalk Historian SE 2.2.

You can download the FactoryTalk Historian SE patch from http://www.support. rockwellautomation.com, KnowledgeBase answer ID 63530.

Logging into FactoryTalk Historian ME

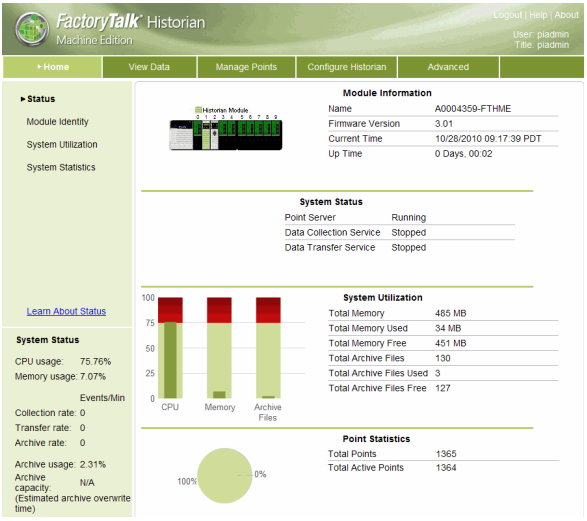
Access the FactoryTalk Historian ME module through Microsoft Internet Explorer.

1. Start Internet Explorer.
2. Enter the IP address of the FactoryTalk Historian ME Module in the *Address* field. The IP address scrolls across the LED display on the front panel of the FactoryTalk Historian ME Module.

3. Click [Go] to the right of the *Address* field, or click [Enter].

This opens the login page.

4. Enter the default user name “piadmin” and leave the password field blank.
5. Click [Login]. The FactoryTalk Historian ME home page appears.



After logging in, it is highly recommended that you change the password for the default “piadmin” user. See the *FactoryTalk Historian ME User’s Guide* or *online help* for more information.

If you are using FactoryTalk Security in your network environment, see the FactoryTalk Historian ME User’s Guide for information on setting up FactoryTalk Security before continuing.

To prevent unauthorized access, click Logout before closing the browser. If you just close the browser without clicking Logout, then another user can access FactoryTalk Historian ME if the cookie has not expired. The credential times out after twenty minutes of inactivity. Do not have multiple users accessing FactoryTalk Historian ME from the same client computer.

Setting Time in FactoryTalk Historian ME

It is very important that all components are set to a synchronized time. Depending on your environment, you may need to synchronize the following components:

- FactoryTalk Historian SE or PI server computer
- FactoryTalk Historian client computers
- FactoryTalk Historian ME modules
- Logix controller

Before you begin collecting data with FactoryTalk Historian ME, it is important that you set the correct time. Follow these steps to set the time in FactoryTalk Historian ME.

1. Click on *Advanced* in the top navigation bar.
2. Click on *Time Management* in the left-hand navigation bar.

   The *Module's Current Time* field displays the FactoryTalk Historian ME Module's current time when you opened the page. To update the time, click [Refresh] on your browser's toolbar.

The FactoryTalk Historian ME Module's current time cannot be edited in the Module's Current Time field. To edit the FactoryTalk Historian ME Module's current time, select the Manual Set option and enter a date and time in the data field. When you click [Save], the Module's Current time field is updated.

3. Select one of the following time settings:

Time Source	Description
Controller Time	Click the radio button next to *Controller Time* and select a controller from the drop-down menu.
NTP Server	Click the radio button next to *NTP Server* and enter the IP address or host name of the NTP Server. If you choose this option, FactoryTalk Historian ME will periodically check the NTP Server to synchronize the time setting.

Time Source	Description
FactoryTalk Historian SE/PI Server	Click the radio button next to *Historian SE/PI Server* to synchronize the FactoryTalk Historian ME Module time with the FactoryTalk Historian SE or PI Server time. The FactoryTalk Historian server must be configured as an NTP server for this to work.
Manual Set	Click the radio button next to *Manual Set* to set the date and time of the FactoryTalk Historian ME Module manually. By default, the current date and time of the browser client is displayed in the data field. *Note: Manual Set does not synchronize with another time source*.

4. Set the time zone by choosing a region and city from the drop-down menu.
5. Click [Save] to set the entered time data.

Note: You will see a dialog to notify you that the module will be rebooted automatically. Click [OK].

Naming the FactoryTalk Historian ME Module

The default module name is prepended to the FactoryTalk Historian ME module serial number. This guarantees a unique name. This is especially important when performing data transfer to a FactoryTalk Historian SE or PI server. The FactoryTalk Historian ME module name is prepended to the FactoryTalk Historian ME tag name to create the FactoryTalk Historian SE or PI server tag name. This provides uniqueness and context to the tag. The module name is also used as the DNS host name of the module and should be unique on the network.

1. Click on *Advanced* in the top navigation bar.

2. Click on *System Settings* in the left-hand navigation bar.
3. Enter a name in the *Module Name* field. The name should be descriptive enough to make it easily identifiable. This is especially useful when transferring data to a FactoryTalk Historian SE or PI server. The module name is limited by the following:
   - Maximum of 64 alpha numeric characters in the name.
   - No special characters (e.g., !, @, #, $, %, ^, &, *) are allowed.
   - Must be unique in relation to other FactoryTalk Historian ME Modules on the same network.
4. After entering a new FactoryTalk Historian ME Module name, click [Save]. A dialog appears asking you to confirm that you want to change the module name. If you are sure, click [OK]. After the name change takes effect, an informational message appears at the top of the screen informing you that the module's name has been changed and that you must now stop and restart data transfer.

Collecting Data

FactoryTalk Historian ME is integrated with the FactoryTalk suite of products and ControlLogix devices. The integration with ControlLogix hardware and software provides easy and secure access to resources (data, status, and configuration) within the ControlLogix processors.

Before the FactoryTalk Historian ME module can collect data from the ControlLogix processors, points must first be created in the FactoryTalk Historian ME module. The *Add Points Wizard* allows you to create points in FactoryTalk Historian ME corresponding to tags in the ControlLogix processors. It displays the results of this search in a table contained within the *Create Points* page.

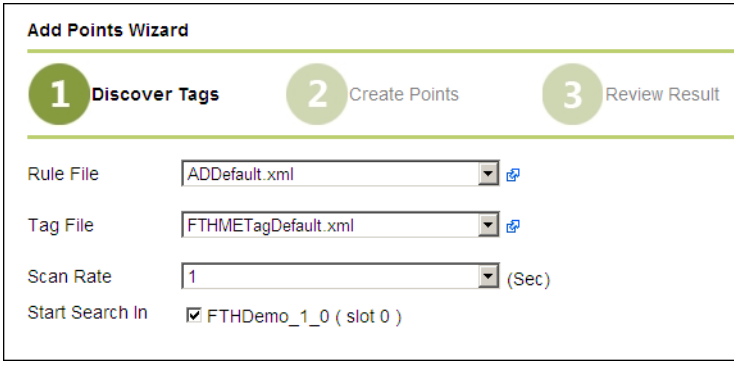
Manage Points with the Add Points Wizard

The *Add Points Wizard* guides you through the process of discovering tags in ControlLogix processors and using these tags to

create corresponding points in FactoryTalk Historian ME. There are three main steps involved in the *Add Points Wizard* process:

Main Steps	Description
1. Discover Tags	In this step you set the parameters for discovering tags.
2. Create Points	In this step you decide which tags you want to use to create points.
3. Review Results	In this step you review the number of points created, the number of points not created, and the total number of points in FactoryTalk Historian ME.

To open the *Add Points Wizard*, click on **Manage Points** in the top navigation bar. The *Add Points Wizard* opens automatically.



Discover Tags

The *Add Points Wizard* feature searches the ControlLogix processors for tag information.

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Follow these steps to set the search parameters for the *Add Points Wizard* and begin searching for tags.

1. Select a Rule File.

   This file determines which points will be discovered by the *Add Points Wizard*. You can view the Rule File by clicking the icon to the right of the *Rule File* data field. Rule Files are managed through the Discovery Rule Editor (one of several optional tools available on the Client Tools CD that was shipped with your FactoryTalk Historian ME Module). Use the Discovery Rule Editor to create and edit Rule Files that you can upload to the module. See *Discovery Rule Editor* in the *FactoryTalk Historian ME User's Guide* for more information.

2. Select a Tag File.

   This file determines the attributes of the points to be created. You can view the tag attributes by clicking the icon to the right of the file name. Tag attribute files are managed through the Rule Editor. Use the Rule Editor to create and edit tag attribute files. See *Discovery Rule Editor* in the *FactoryTalk Historian ME User's Guide* for more information.

Note: If you are using the custom Tag file, select Default so that the scan rate is pulled from the Tag file and is not overwritten by this setting.

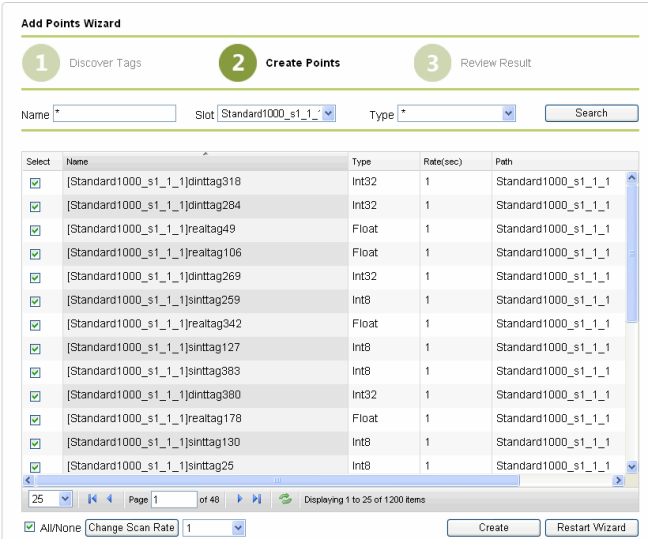
3. Set the Scan Rate.

   This is the rate (in seconds) at which the data will be collected. See *Scan Class* in the *FactoryTalk Historian ME User's Guide* for more information.

4. Choose which processors to search. To include a ControlLogix processor in the tag search, click the checkbox next to its name.

   Under *Start Search In*, all online ControlLogix processors are displayed. FactoryTalk Historian ME supports data collection from a maximum of four ControlLogix processors.

5. Click [Show Tags] to search for tags in the selected processor(s).



Note: If a large amount of data is being transferred from the Controller to the module when the module is going through an initial bootup, please wait about five to ten minutes before trying to access the FactoryTalk Historian ME web interface.

Create Points

After the *Add Points Wizard* searches the ControlLogix processors and successfully retrieves the matching tags based on the criteria set in the *Discover Tags* operation, you can then use the generated tags to create the corresponding points in FactoryTalk Historian ME.

The Search Results table contains the following information.

Column Name	Column Description
Select	This column displays checkboxes that allow you to select or clear tags. Click the *All/None* checkbox below the table to select or clear all tags.

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Column Name	Column Description
Name	This column displays the name of the tag found in the ControlLogix Controller. The tag name is a combination of the ControlLogix project name added as the prefix to the controller tag name.
Type	This column displays the ControlLogix datatypes for the tags. See *Datatypes* in the *FactoryTalk Historian ME User's Guide* for more information.
Rate (sec)	This column displays the current scan rate in seconds for each tag. To change the scan rate, click the *Select* checkbox next to the tag(s). The *Change Scan Rate* button at the bottom of the page becomes active. Choose a new scan rate from the drop-down menu located next to the *Change Scan Rate* button. All selected tags will change to the new scan rate.
Path	This column displays the path to each tag in the device. The path is a combination of the ControlLogix Project name and its slot location (CIP path).

Note: You can create a maximum of 2500 data points per FactoryTalk Historian ME Module. If you exceed 2500 data points, the Create button will automatically become deactivated. The Create button will automatically become reactivated when the point count is less than 2500 data points.

Follow these steps to create points in FactoryTalk Historian ME:

1. Select the tags from which you want to create points.

   Select the tags you want to create by checking the box next to the tag name. To select all tags in the list, Check the *All/None* checkbox.

2. Click [Create].

Review Results

After point creation is complete, the *Review Results* page opens. The information here allows you to quickly see the success (or failure) of the *Create Points* operation.

The *Review Results* page displays the following information:

Result	Result Description
Number of Points Created	This is the number of points created based on the points selected in the *Create Points* operation. Only points that do not yet exist are created.
Number of Points Not Created	This is the number of selected points that were not created in the *Create Points* operation. Either the points already exist in the archive and do not need to be created, or an error occurred in FactoryTalk Historian ME. See the *System Log* for error details. (Click on *Advanced* in the top navigation bar. The System Log page is displayed. Use default settings or enter time parameters in the data fields and click [Search].)
Total Number of Points in Module	This is the total number of points in the FactoryTalk Historian ME Module, including the newly created points.
Data Collection Status	This is the status of the Data Collection process. If Data Collection is running, then *Running* will appear next to [Stop Data Collection]. If data collection is stopped, then *Stopped* will appear next to [Start Data Collection].

Starting and Stopping Data Collection

You must have administrator privileges to start or stop data collection in the FactoryTalk Historian ME module. To start the Data Collection interface, perform the following steps:

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1. Click *Configure Historian* in the top navigation pane. The Data Collection page opens.
2. Click [Start]. Data collection begins.

To stop the Data Collection interface, perform the following steps:

1. Click *Configure Historian* in the top navigation pane. The Data Collection page opens.
2. Click [Stop]. Data collection stops.

Viewing Data

The *View Data* page allows you to view data trends, archive data, and current data collected by FactoryTalk Historian ME. These features are located under *View Data* in the top navigation bar.

Current Data

Click on *Current Data* in the left-hand navigation bar to view the name, value, timestamp, and type of data being collected by FactoryTalk Historian ME.

Use the following parameters to search or export data:

Property Name	Property Description
Point Name	Enter a point name or use an asterisk (*) to search data with all point names.
Point Source	Enter a point source or use an asterisk (*) to search data with all point sources.
Point Type	Select a point type from the drop-down menu or use an asterisk (*) to search data with all point types.
Scan Rate	Select a scan rate from the drop-down menu or use an asterisk (*) to search data with all scan rates.

Property Name	Property Description
Archiving	Select *On* or *Off* from the drop-down menu or use an asterisk (*) to search data with archiving set to *On* and *Off*.
Scan	Select *On* or *Off* from the drop-down menu or use an asterisk (*) to search data with scan set to *On* and *Off*.

Click [Search]. The search results are displayed with the name, value, timestamp, and type of data being collected listed in table format.

Click [Export] to export the current data.

Archive Data

Click *Archive Data* in the left-hand navigation bar to view the name, value, timestamp, and type of archived data stored in FactoryTalk Historian ME.

Use the parameters described in “Current Data” to search archived data. Click [Search]. The search results are displayed with the name, value, timestamp, and type of archived data listed in table format.

To view archived data for a specified time period:

1. Highlight a row in the generated *Archive Data* table.
2. Enter a start time and end time to view a specified time period for the selected archived data.
3. Click [View].

The value and timestamp of the specified archived data is displayed.

Once you have viewed the archived data for a specified time period, you can export that data. To do so:

1. Highlight the point you want to export, set the start and end times, click [View], and then click [Export].
2. In the dialog that appears, select a location for your data on your client computer.

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3. Either accept the default file name or enter a name of your choice. The default file name is the name of the point whose data is being exported, with *_ArchiveInfo.csv* appended to the end. If you change the file name, you must retain .csv as the file extension.
4. Accept the default values for the following fields and click [Save].
   - Save as type: The default type is HTML File.
   - Language: The default language is Unicode.

You can only export one row of data at a time.

Trends

Trends can be used to view data graphically for selected points over a specified time period.

Click on *Trends* in the left-hand navigation bar to search and select points for a trend chart.

Use the parameters described in "Current Data" to search for points. Click [Search]. The search results are displayed with the name, value, timestamp, and type of data listed in table format.

To create a trend of points for a specified time period:

1. In the generated *Points* table, check the *Select* box for each point you want to include in the trend chart.
2. In the *Trend Chart* portion of the window, enter a start time and end time to specify a time period for the selected points.

Note: If you want to enable auto refresh, you must set the end time to "".*

3. Check the *Show Points* box to display the selected points in the trend chart. The points will show as small circles attached to the end points of colored vertical bars. Each bar corresponds with a data point contained in a list below the trend chart.
4. Click the *Show Vertical Bar* box to display a moveable vertical bar that you can click on and drag across the trend chart to capture values for a specified time period.
5. Click on the green arrow to create a trend for the selected points within the specified time period.

6. Click the red square to stop the trend. The [Reset] button becomes active. Click [Reset] to reset the trend.

Transferring Data

The Data Transfer subsystem works with the Data Storage and Data Collection subsystems to transfer historical data to a FactoryTalk Historian SE or PI server. The Data Transfer subsystem can only transfer data to one FactoryTalk Historian SE or PI server.

Before you set up data transfer in the FactoryTalk Historian ME module, you must connect the FactoryTalk Historian ME module to the FactoryTalk Historian SE or PI server through the System Management Tools (SMT) and configure trusts within the FactoryTalk Historian SE or PI server. For FactoryTalk Historian SE, you must also assign FactoryTalk Activation licenses to support the FTMS point source.

Adding Trusts to Your FactoryTalk Historian SE or PI Server

In order to successfully transfer data between FactoryTalk Historian ME and a FactoryTalk Historian SE or PI server, you must create two trusts on the FactoryTalk Historian SE or PI server: *datatransfer* and *webs*. First, depending on whether you will be using FactoryTalk Historian SE or PI server as your data transfer server, login to the FactoryTalk Historian SE or PI System Management tools (SMT) application and set up two trust connections in the FactoryTalk Historian SE server or PI server:

- *datatransfer* trust
- *webs* trust

Then go to the module web interface and test the module connection to the FactoryTalk Historian SE or PI server. Depending on what type of data transfer server you are configuring, perform the steps in either “Application Trusts (FactoryTalk Historian SE)” on page 26 or “Application Trusts (PI Server)” on page 31.

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Assigning FT Activation Licenses to Support the FTMS Point Source (FactoryTalk Historian SE)

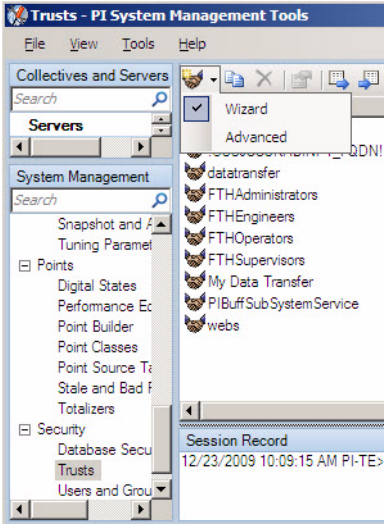
Before adding trusts to FactoryTalk Historian SE, you must assign activation licenses to support the FTMS point source in order to successfully transfer data between FactoryTalk Historian ME and FactoryTalk Historian SE. Activation licenses are assigned for FactoryTalk Historian SE in the FactoryTalk Administration Console (on the Client Tools CD shipped with your FactoryTalk Historian ME module).

Application Trusts (FactoryTalk Historian SE)

To successfully transfer data between FactoryTalk Historian ME and FactoryTalk Historian SE, you must create two application trusts on the FactoryTalk Historian SE server: *webs* and *datatransfer*. To do so, perform the following steps:

1. Launch the FactoryTalk Historian SE SMT application. From the Windows Start menu run Programs > Rockwell Software > FactoryTalk Historian SE > System Management Tools.
2. After SMT launches, go to the left-side System Management pane and click [+] next to the [Security] item.
3. From the list of Security plug-ins, click the *Trusts* option.
4. From the Trust menu bar in the main window, select the drop-down menu on the [New] option. The Wizard option is checked by default.
5. The *Add Trust Wizard* window is launched. The Trust Wizard will ask for various pieces of information to create a trust on

the FactoryTalk Historian SE module that is currently connected.



6. Select your FactoryTalk Historian SE module from the drop-down menu in the PI server field.

   You must create a trust for Data Transfer (*datatransfer)* and a trust for web applications (*webs*). This procedure describes

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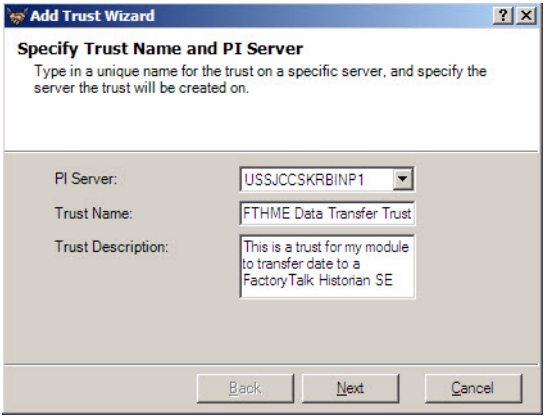
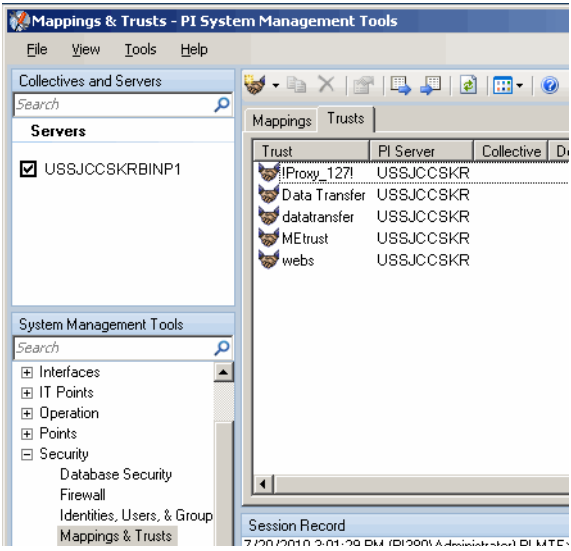
creating a Data Transfer trust first. Use this procedure to create a web application trust after you create the Data Transfer trust.



7. Enter a name for the *datatransfer* trust in the Trust Name field. Click [Next]. The trust description is optional.
8. Select *PI-API application* for the trust type. Click [Next].
9. Enter *datatransfer* for the application name in the Application Name field.
10. Specify client connection information such as the network path, IP address, and NetMask for the *datatransfer* trust. Click [Next].
11. Select a PI user from the drop-down menu.

12. Click [Finish]. The trust displays in the list of trusts as shown in the following image.



13. Repeat steps 3-12 to create a *webs* trust. Replace *datatransfer* with *webs* and add the appropriate information.

14. Select File > Exit from the drop-down menu to exit the SMT application.

If you are configuring Data Transfer in the FactoryTalk Historian ME web interface next, you must ensure that your FactoryTalk Historian SE is configured for Data Transfer. For example, the FactoryTalk Activation licenses that support the FTMS point source should be installed for the FactoryTalk Historian SE server within the FactoryTalk Administration Console. The FactoryTalk Historian SE patch enables the FTMS point source support.

See "Installing FactoryTalk View SE Patch" in the FactoryTalk Historian ME 2.2 User Guide for more information about the patch that enables FTMS point source support.

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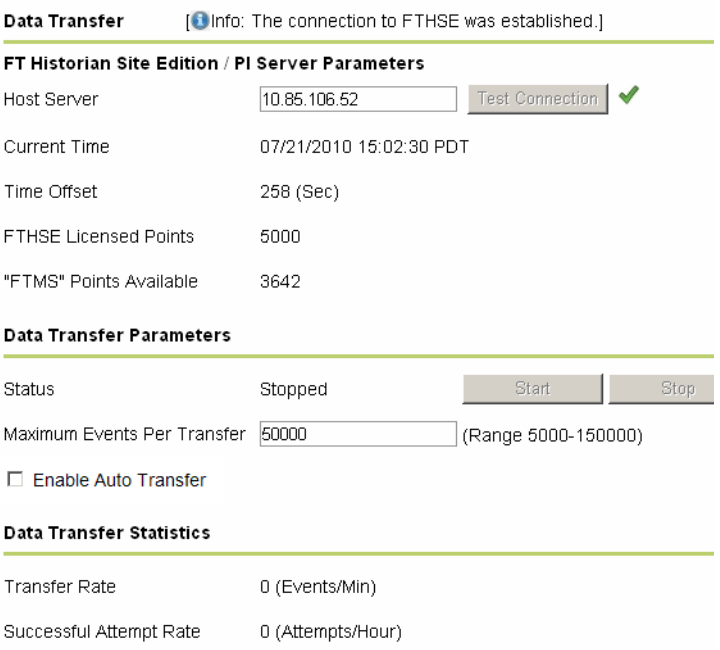
Open the FactoryTalk Historian ME web interface in your browser. Click **Configure Historian** and go to the *Data Transfer* page.



To test the module's connection to the FactoryTalk Historian SE server where the web applications and data transfer trusts you just created reside, perform the following steps.

1. Go to the FT Historian SE/PI Server Parameters section.
2. Enter the host name or IP address of your FactoryTalk Historian SE server in the Host Server field.

If you use a host name, be sure that your network administrator has already set up the relationship between the host name and the IP address in the DNS server.

3. Click [Test Connection].

An informational message that states that the connection to SE was established displays at the top of the page if the connection is successful. In addition, a green checkmark displays next to the [Test Connection] button. This indicates that the module can establish a connection to your FactoryTalk Historian SE server. If this checkmark and message do not appear, check your work and try again.

4. Click [Save].

You have completed the trust configuration process.

Application Trusts (PI Server)

To successfully transfer data between FactoryTalk Historian ME and the PI server, you must create two application trusts on the PI server: *webs* and *datatransfer*. To do so, perform the following steps:

1. Launch the OSIsoft SMT application from where you installed it. Navigate to System Management Tools.
2. After SMT launches, go to the *Collectives and Servers* pane and click the checkbox next to the PI server you want to create a trust for.
3. Under the *System Management* pane, click [+] next to *Security* and then select *Mappings and Trusts*.
4. In the *Trusts* tab in the main window, select the drop-down menu on the *New* option. The Wizard option is checked by default.

The *Add Trust Wizard* window is launched. The Trust Wizard creates a trust on the PI server that is currently selected.

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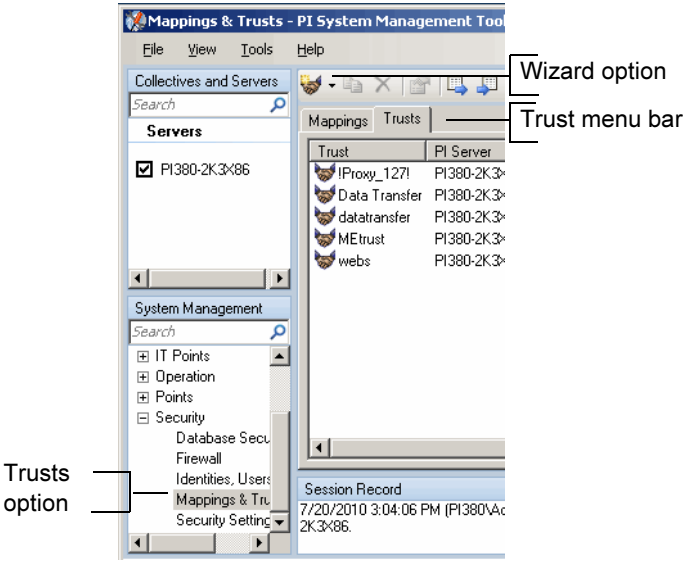
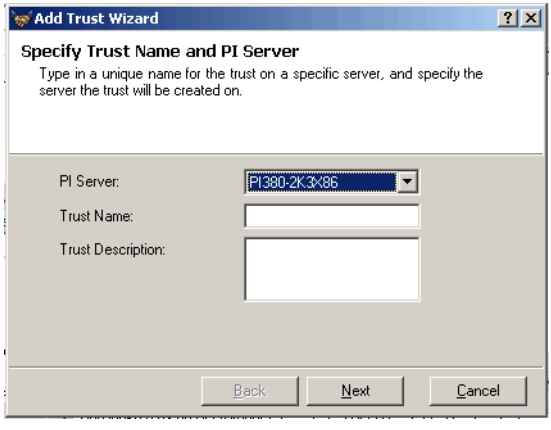
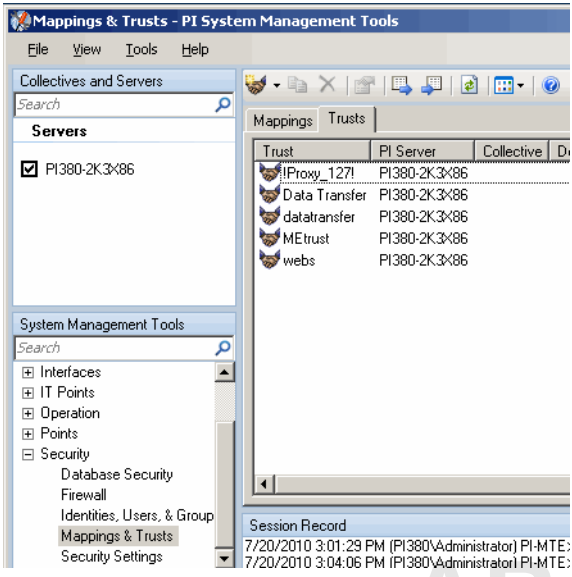


5. Select your PI server from the drop-down menu in the PI Server field.



6. Enter a name for the *datatransfer* trust in the *Trust Name:* field. Click [Next].
7. The trust description is optional.
8. Select *PI-API application* for the trust type. Click [Next].
9. Enter *datatransfer* for the application name in the *Application Name* field.
10. Specify client connection information such as the network path, IP address, and NetMask for the data transfer trust. Click [Next].
11. Select a PI user from the drop-down menu.
12. Click [Finish]. The trust displays in the list of trusts as shown in the following image.



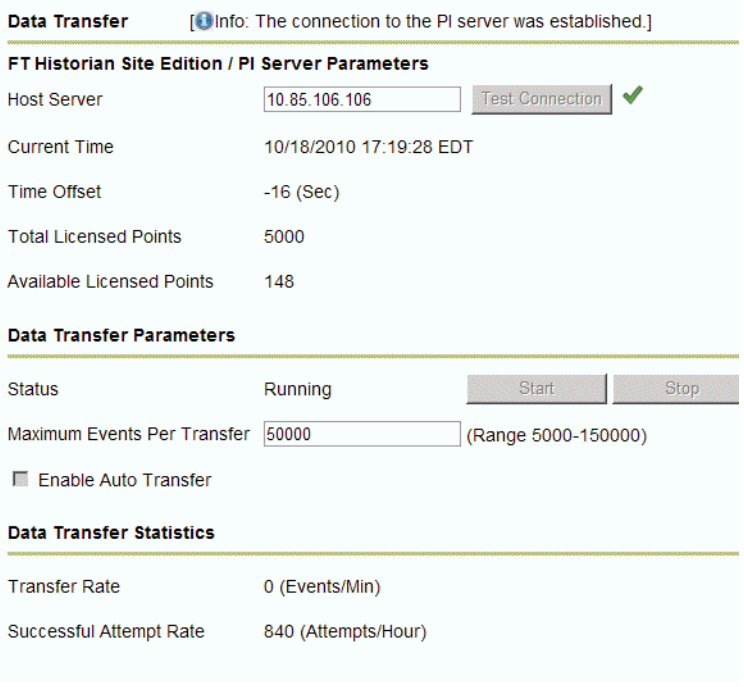
13. Repeat steps 3-12 to create a *webs* trust. Replace *datatransfer* with *webs* and add the appropriate information.

14. Select File > Exit from the drop-down menu to exit the SMT application. You have completed the trust configuration process.

ENSURE THAT PI SERVER IS CONFIGURED FOR DATA TRANSFER

If you are configuring Data Transfer in the FactoryTalk Historian ME web interface next, you must ensure that your PI Server is configured for Data Transfer.

Open the FactoryTalk Historian ME web interface in your browser. Click **Configure Historian** and go to the *Data Transfer* page.



1. Under the *FT Historian Site Edition/PI Server Parameters* section, enter the host name or IP address of your PI server in the Host Server field.

If you use a host name, be sure that your network administrator has already set up the relationship between the host name and the IP address in the DNS server.

2. Click [Test Connection].

   If the connection is successful, an informational message displays at the top of the page indicating this. In addition, a green checkmark displays next to the [Test Connection] button. This indicates that the module can establish a connection to your PI server. If this checkmark and message do not appear, check your work and try again.

3. Click [Save].

You have completed the trust configuration process.

Time Synchronization

The FactoryTalk Historian ME and FactoryTalk Historian SE or PI server systems must be synchronized prior to transferring data. In the FactoryTalk Historian ME Web, click on the *Advanced* tab and select *Time Management* from the left-hand column of the FactoryTalk Historian ME Web. Time Synchronization options include Controller Time, NTP Server, Historian SE or PI server and manual Set. To set time, please see “Setting Time in FactoryTalk Historian ME” on page 13.

Transferring Data

Follow these steps to set up Data Transfer.

1. Click on *Configure Historian* in the top navigation bar.

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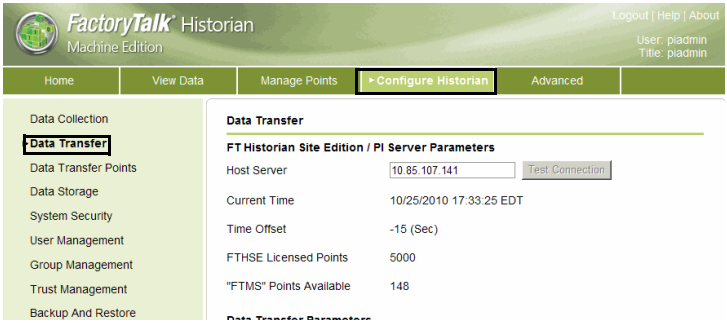
2. Click on *Data Transfer* in the left-hand navigation bar. This opens the Data Transfer page.



3. Under *FT Historian Site Edition/ PI Server Parameters*, enter the host name or IP address of the FactoryTalk Historian SE or PI server in the *Host Server Name* data field.

4. Click [Test Connection] to confirm that the specified host server can be accessed.

   If the connection is successful, the following information is returned:

Property Name	Property Description
Current Time	This is the current time of the FactoryTalk Historian SE or PI server. It is a read-only property.
Time Offset	This is the time difference between the FactoryTalk Historian SE or PI server and the time setting on FactoryTalk Historian ME.
FTHSE Licensed Points (FactoryTalk Historian SE)	This is the total number of points that have been granted based on the currently active license for FactoryTalk Historian SE. See *Licensing* in the *FactoryTalk Historian ME User's Guide* for more information.

Property Name	Property Description
Total Licensed Points (PI server)	This is the number of points that have been assigned to the PI server. It is an indication of the number of FactoryTalk Historian ME points that can be transferred to the PI server.
"FTMS" Points Available (FactoryTalk Historian SE)/ Available License Points (PI server)	This represents the total number of points granted by the license minus the number of points that are already being transferred to the FactoryTalk Historian SE or PI server.

Under *Data Transfer Parameters*, the *Status* field displays the current Data Transfer status (started or stopped). If necessary, click [Start] or [Stopped] to start or stop Data Transfer.

5. Set the following Data Transfer properties:

Property Name	Property Description
Maximum Events Per Transfer	This is the maximum number of events that can be transferred to the FactoryTalk Historian SE or PI server per transfer session. The range is 5,000 to 150,000. The default setting is 50,000.

Check the *Enable Auto Transfer* box if you want to have FactoryTalk Historian ME transfer data automatically for newly created points.

6. Click [Save].

The Data Transfer process records performance statistics that determine the connection reliability. These statistics can be used to refine the settings in the configuration subsystem. The *Data*

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Transfer Statistics section of the *Data Transfer* page contains the following information:

Property Name	Property Description
Transfer Rate	This is the total number of retrieved events sent to FactoryTalk Historian SE or the PI server, divided by the time spent retrieving events sent to FactoryTalk Historian SE or the PI server (in events per minute).
Successful Attempt Rate	This is the number of successful data transfers from FactoryTalk Historian ME to FactoryTalk Historian SE or the PI server per hour.

Data Transfer Points

After you have set up the connection to the FactoryTalk Historian SE or PI server, you must specify which points you want to transfer.

The *Data Transfer Points* page allows you to search for points in the FactoryTalk Historian ME database and assign them for transfer to the selected FactoryTalk Historian SE or PI server.

To open the *Data Transfer Points* page, click on *Configure Historian* in the top navigation bar, and then click on *Data Transfer Points* in the left-hand navigation bar.

Selecting Points to Transfer

Follow these steps to select points to transfer:

1. Enter search criteria in the data fields using the following information:

Property Name	Property Description
Point Name	Enter a point name or use an asterisk (*) to search data with all point names.

Property Name	Property Description
Point Source	Select a point source from the drop-down menu or use an asterisk (*) to search data with all point sources.
Point Type	Select a point type from the drop-down menu or use an asterisk (*) to search data with all point types.
Scan Rate	Select a scan rate from the drop-down menu or use an asterisk (*) to search data with all scan rates.
Transfer	Indicates whether or not data has been transferred from FactoryTalk Historian ME to FactoryTalk Historian SE or a PI server. Select *Yes* from the drop-down menu to search for data points that have already been transferred or select *No* to search for data points that have not been transferred. Use an asterisk (*) to search for all data points.

2. Click [Search].

The following FT Historian Site Edition / PI Server Parameters Information is displayed:

Property Name	Property Description
FTHSE Licensed Points (FactoryTalk Historian SE)	This is the total number of points that have been granted based on the currently active license for FactoryTalk Historian SE. See *Licensing* in the *FactoryTalk Historian ME User's Guide* for more information.
Total Licensed Points (PI server)	This is the number of points that have been assigned to the PI server. It is an indication of the number of FactoryTalk Historian ME points that can be transferred to the PI server.

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Property Name	Property Description
"FTMS" Points Available (FactoryTalk Historian SE)/ Available License Points (PI server)	This represents the total number of points granted by the license minus the number of points that are already being transferred to the FactoryTalk Historian SE or PI server.

Note: It takes approximately fifteen minutes to update the FactoryTalk Historian SE or PI server, so the "FTMS" Points Available (FactoryTalk Historian SE)/Available License Points value may not update immediately.

The following FactoryTalk Historian ME Information is displayed:

Property Name	Property Description
Point Selected	This represents the total number of points already created in the FactoryTalk Historian SE or PI server.
Auto Transfer Mode	This displays whether Auto Transfer is on or off. If Auto Transfer is "On", then FactoryTalk Historian ME is set to automatically transfer data based on the settings on the *Data Transfer* page.
Newly Added Points	This represents the total number of points recently selected for transfer to FactoryTalk Historian SE or a PI server.

In addition to information about the FactoryTalk Historian SE or PI server and FactoryTalk Historian ME information, the file information for the searched data points is displayed in table format. The table lists all data points that fit the search criteria. If the point has been created in the FactoryTalk Historian SE or PI server, then this is indicated in the table. All "checked" points are tagged for transfer to the FactoryTalk Historian SE or PI server.

File information includes the following fields:

Column Name	Column Description
Selected	This indicates whether or not the point has been added to Data Transfer. Check the box under *Selected* to add the point to data transfer.
Name	This is the name of the data point in FactoryTalk Historian ME.
Type	This is the data type of the point. See *Data Types* in the *FactoryTalk Historian ME User's Guide* or *online help* for a detailed description of the data types.
Source	This indicates which ControlLogix processor the data point is coming from.
Created in SE/PI Server	This indicates whether or not the point has already been matched to the FactoryTalk Historian SE or PI server. If the point has already been matched, then this is indicated by a "Y" in the *Created in SE/PI Server* column. If not, then this is indicated by an "N."

3. Check the box for each point under *Selected* to add it to Data Transfer.
4. Click [Save].
5. To confirm the points have been mapped to FactoryTalk Historian SE or the PI server, click [Search]. The points you selected for mapping should have a "Y" in the *Created in SE/PI server* column.

Once the points have been created on the SE or PI server, they appear in the following format:

```
<ME_module_name>.<point_name>
```

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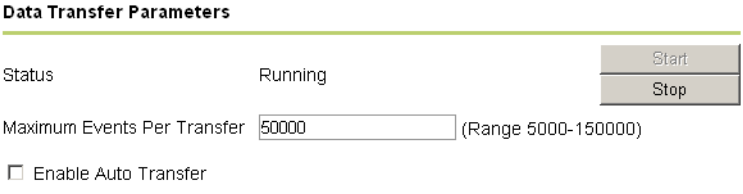
Note: You can also run a search in FactoryTalk Historian SE to verify the points have been mapped to FactoryTalk Historian SE. See the FactoryTalk Historian SE User's Guide for more information.

Starting and Stopping Data Transfer

The Data Transfer service status is either started or stopped. Click on the appropriate button on the Data Transfer page to either start or stop Data Transfer. Clicking the Enable Auto Transfer checkbox provides immediate data transfer. Clicking [Save] is not required.



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