StruxureWare™

Power Monitoring Expert 8.1

Installation Guide

7EN02-0380-00

03/2016

Schneider Electric

Legal Information

Safety information

Important information

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

The addition of either symbol to a "Danger" or "Warning" safety label indicates that an electrical hazard exists which will result in personal injury if the instructions are not followed.

This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.

⚠ DANGER

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

⚠ WARNING

WARNING indicates a potentially hazardous situation which, if not avoided, **can result in** death or serious injury.

⚠ CAUTION

CAUTION indicates a potentially hazardous situation which, if not avoided, **can result in** minor or moderate injury.

NOTICE

NOTICE is used to address practices not related to physical injury. The safety alert symbol shall not be used with this signal word.

Please note

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

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

Safety Precautions

During installation or use of this software, pay attention to all safety messages that occur in the software and that are included in the documentation. The following safety messages apply to this software in its entirety.

⚠ WARNING

UNINTENDED EQUIPMENT OPERATION

- Do not use the software for critical control or protection applications where human or equipment safety relies on the operation of the control action.
- Do not use the software to control time-critical functions because communication delays can occur between the time a control is initiated and when that action is applied.
- Do not use the software to control remote equipment without securing it with an authorized access level, and without including a status object to provide feedback about the status of the control operation.

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

⚠ WARNING

INACCURATE DATA RESULTS

- Do not incorrectly configure the software, as this can lead to inaccurate reports and/or data results.
- Do not base your maintenance or service actions solely on messages and information displayed by the software.
- Do not rely solely on software messages and reports to determine if the system is functioning correctly or meeting all applicable standards and requirements.
- Consider the implications of unanticipated transmission delays or failures of communications links.

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

Contents

Introduction **9**
Summary of topics in this guide 9
Product Documentation 10
Required software **11**
Preparing the server **14**
Configuring your operating system 14
Naming your server 14
Installing .NET Framework 3.5 SP1 14
Additional information for consideration 15
Firewall configuration 16
Installing SQL Server **19**
Running anti-virus software on your SQL Server 19
Setting SQL Server memory options 19
Installing SQL Server 21
Adding an instance to an existing SQL Server Express installation 29
Adding an instance to an existing SQL Server installation 29
Tasks performed by the product Installer **31**
Power Monitoring Expert installation **32**
Setup types available in the Installer 32
Standalone Server setup type 32
Database Instance and Primary Server setup types 33
Secondary Server setup type 34
Engineering Client setup type 34
Reporting Client Only setup type 34
Setup Types and applicable Installer pages 34
Installing Power Monitoring Expert software 36
Verify that IIS is working 47
Using a Web Client **48**
Silverlight support 48
Post-installation tasks **51**
Restart your system 51
Clear your browser cache after upgrading 51
Complete the product registration 51
Activate software licenses 51
Revert write permissions for the SQL Server service 53
Check services 53
Create local user groups 53
Review Windows Task Scheduler 54
Configuring SQL Express on a Standalone Server for an Engineering Client connection 54

Security considerations 54
Power Monitoring Expert software security 54
The Diagrams application and user authentication 55
Using HTTP SSL to secure Web-site communications 55
Default passwords for SQL Server 56
NTFS and Share permissions on the product directory 56

Introduction

This guide is intended for Application Engineers, system integrators, or other qualified personnel who are responsible for configuring and installing StruxureWare™ Power Monitoring Expert software and preparing the servers on which it is installed. Experience using previous versions of the software is recommended.

The guide contains information about installing SQL Server 2012 Standard Edition SP1, SQL Server 2014 editions, and a Power Monitoring Expert system, incorporating best practices and factory-recommended procedures to help reduce the need for ongoing support and to improve the reliability of the installation.

A typical installation consists of a computer or network of computers running Power Monitoring Expert software and one or more networks of devices (such as basic energy meters, multi-function monitoring/analysis/control devices, and/or intelligent relays).

Review the *StruxureWare Power Monitoring Expert Design Guide* for information about planning for and setting up your system. See "Product Documentation" on page 10 for details about the availability of the *Design Guide.*

NOTE: Services personnel and fully-commissioned Power Monitoring Expert servers are also available – contact Schneider Electric for details.

Summary of topics in this guide

The topics in this guide provide the following information:

- **Required software**

  Summarizes the Windows operating systems and SQL Server editions required for Power Monitoring Expert installations. It also summarizes the other software components used by the product. (Information about Power Monitoring Expert system architecture, network design, and applications and system integration considerations is described in the *Design Guide*. See "Product Documentation" on page 10 for details about the availability of the *Design Guide*.)

- **Preparing the server**

  Describes the steps required to install a supported Windows operating system and SQL Server edition, and the settings required for each. Note that this information is common for the setup types available for Power Monitoring Expert installations. (See "Setup types available in the Installer" on page 32 for further information.)

- **Power Monitoring Expert installation**

  Describes the different setup types that you can install and then describes the steps for installing the software for the setup types.

- **Using a Web Client**

Describes how to access the Web Applications component of the product from a Web Client.

- **Post-installation tasks**

  Describes the tasks that you need to perform after completing the installation of the software.

Product Documentation

The following Power Monitoring Expert documentation is applicable to this version of the product.

- *What's New*, document number 7EN12-0293-00.
- *Before Installing your Software*, document number 7EN52-0383-00.
- *Using the SQL Server 2012 DVD*, document number 7EN52-0391-00.
- *Using the SQL Server 2014 DVD*, document number 7EN52-0397-00.
- *Installation Guide*, document number 7EN02-0380-00.
- *User Guide*, document number 7EN02-0379-00.
- *Hierarchy Manager – Help Topics*, document number 7EN52-0338-00.
- *Web Applications – Help Topics*, document number 7EN52-0384-00.

The following documents are available through the Power Monitoring Expert Exchange Community. Contact your Schneider Electric representative for further information.

- *Design Guide*, document number 7EN42-0118-00.
- *IT Infrastructure Preparation and Security Guide*, document number 7EN42-0120-00.
- *Licensing Guide*.
- Documentation related to product upgrades.

Online information available in the product includes:

- *Power Monitoring Expert Help* – accessible from within installed components, such as Management Console, Vista, and Designer.
- *Alarm Configuration Help* – accessible in a browser-based help format from the Alarm Configuration user interface.
- *Hierarchy Manager Help* – accessible in a browser-based help format from the Hierarchy Manager user interface.
- *Web Applications Help* – accessible in a browser-based help format from the Web Applications user interface.

Required software

The following information describes the software requirements for Power Monitoring Expert software.

Windows operating systems

You can install Power Monitoring Expert software on servers using any of the following Windows operating systems.

NOTE: Power Monitoring Expert software can be installed on servers in a domain environment, however it cannot be installed on domain controllers. If Power Monitoring Expert software is installed on a server that is subsequently changed to a domain controller, the software ceases to function correctly.

- Windows 7 Professional/Enterprise, SP1
- Windows 8.1 Professional/Enterprise
- Windows 10 Professional/Enterprise
- Windows Server 2008 R2 Standard/Enterprise, SP1
- Windows Server 2012 Standard, SP1
- Windows Server 2012 R2 Standard

SQL Server editions

If no supported SQL Server version is detected during the installation of Power Monitoring Expert on a Standalone Server, then SQL Server 2014 Express is installed. Note that if you install SQL Server 2014 Express, you can upgrade to SQL Server 2014 Standard at a later time. However, you cannot upgrade from SQL Server 2014 Express to SQL Server 2012 Standard.

If a supported edition of SQL Server Express is already installed but not configured with a database instance for use with Power Monitoring Expert, the installer adds the required database instance. Otherwise, one of the following SQL Server editions needs to be installed prior to installing Power Monitoring Expert software. (See "Installing SQL Server" on page 19 for more information.)

Note that supported 32-bit and 64-bit SQL Server editions can only be installed on supported 32-bit and 64-bit Windows operating systems, respectively. For example, a 32-bit SQL Server edition is not supported on a 64-bit Windows operating system.

SQL Server Editions	Standalone Server	Distributed Database Server
SQL Server 2008 R2 Express, SP3	Yes	No
SQL Server 2012 Express, SP2	Yes	No

SQL Server Editions	Standalone Server	Distributed Database Server
SQL Server 2014 Express, SP1	Yes	No
SQL Server 2008 R2 Standard/Enterprise, SP3	Yes	Yes [1]
SQL Server 2012 Standard/Enterprise/Business Intelligence, SP2	Yes	Yes [2]
SQL Server 2014 Standard/Enterprise/Business Intelligence, SP1	Yes	Yes [2]

[1] Supported for a distributed database server configuration on Windows Server 2008 R2 Standard/Enterprise SP1.
[2] Supported for a distributed database server configuration on Windows Server 2012 Standard SP1, and on Windows Server 2012 R2 Standard.

Localized versions

Localized versions of the software are supported as follows:

- A localized version of Power Monitoring Expert software is expected to be installed on an operating system and SQL Server of the same locale. For example, a Spanish version of the product and SQL Server should be installed on an operating system with a regional setting of Spanish.
- The English version of Power Monitoring Expert software is expected to work with non-English operating systems and SQL Server versions. For example, an English version of the product can be installed on an operating system with a regional setting of German with a German version of SQL Server.

Virtual environments

Power Monitoring Expert can be installed on hypervisors supported by the FlexNet License Administrator software. This is the same licensing software that is used to manage StruxureWare Power Monitoring Expert licenses. Consult the Flexera Software web site for more information.

The virtual environments need to be configured with one of the supported Windows operating systems and SQL Server editions. It is recommended that you copy the contents of the Power Monitoring Expert DVD to a local drive in your virtual environment and double-click `MainSetup.exe` to start the installation process.

Client computers

Engineering Client computers require Windows 7, 8.1, or 10 operating systems.

NOTE: Before you install an Engineering Client on a Windows 8.1 or Windows 10 system, you need to install .NET Framework 3.5 SP1 on your client computer. See "Installing .NET Framework 3.5 SP1 " on page 14 for more information.

Web Client computers require network connectivity to a Power Monitoring Expert primary server to access the Web Applications component of Power Monitoring Expert. The browsers that can be used on Web Client computers are listed below in *Other Software used with the product*.

Other software used with the product

The software referenced below is officially supported for Power Monitoring Expert software.

- Microsoft Excel 2010, 2013, or 2016 is required for reports exported in Excel format in the Web-based Reports application, or for the Excel-based Reporter application.
- Browsers supported on Web client workstations for the applications included in the Web Applications component:
  - Microsoft Internet Explorer versions 10 and 11.
  - Microsoft Edge*.
  - Google Chrome version 42 and later*.
  - Mozilla Firefox version 35 and later*.
  - Apple Safari versions 7 or 8 and later versions, respectively, on Mac computers.

  * The browsers support the web application framework and Dashboards, Diagrams, and Trends applications. Alarms and Tables are dependent on browser support of the Silverlight plugin.

  You can directly access an application from a client computer. For example, to directly access the Trends application, enter `http://domain_name/Web/#Trends` in the browser. (*domain_name* is the fully-qualified name of the server hosting Power Monitoring Expert.)
- Browsers supported on tablets to directly access the Dashboards, Diagrams, and Trends applications:
  - Safari and iPad tablets using iOS7 and iOS8 operating systems.
  - Browsers on tablets using Android operating systems 4.4 - 4.4.4, and 5.0.

  To directly access the Trends application with a tablet, enter `http://domain_name/Trends` (without the # character) in the browser. (*domain_name* is the fully-qualified name of the server hosting Power Monitoring Expert.) This opens the Trends application without the banner, and permits resizing of the content.
- .NET Framework 4.6.
- Microsoft Silverlight version 5.2 or later.

Preparing the server

The software Installer performs many of the setup and configuration tasks during installation to ensure that the prerequisites for your Power Monitoring Expert system are met. Complete the following before proceeding with the installation.

Configuring your operating system

Ensure that you log on to your supported Windows system as the Administrator of the system and not just as a user with administrator privileges.

Run the Windows Update service to install the latest security patches and hotfixes from Microsoft.

Naming your server

Verify that the computer name for the server conforms to Windows naming conventions. A computer name is limited to 15 characters and it must not contain blank spaces or any of the following prohibited characters:

\ (backslash)	; (semi-colon)
/ (slash)	< (less than)
* (asterisk)	> (greater than)
+ (plus)	? (question mark)
= (equals)	" (quotation mark)
| (vertical bar)	_ (underscore)
: (colon)	

For compatibility with Power Monitoring Expert software, use only letters and numbers, starting the name with a letter, for example `MyServer123`.

The computer name should not be changed after you install the Power Monitoring Expert software. If the name is changed, you should contact Technical Support for assistance in making the necessary adjustments so that the product functions.

Installing .NET Framework 3.5 SP1

.NET Framework 3.5 SP1 is required before you can install a version of SQL Server that is required by Power Monitoring Expert.

Refer to the “Hardware and Software Requirements” topic in *Hardware and Software Requirements for Installing SQL Server* provided by Microsoft at http://msdn.microsoft.com/en-us/library/ms143506.aspx. By default the page refers to SQL Server 2016. To view the document specific to your SQL Server version, select the version number from the **Other Versions** dropdown list.

Note that the "Hardware and Software Requirements" topic also includes a reference to Microsoft .NET Framework 3.5 Deployment Considerations at http://msdn.microsoft.com/library/windows/hardware/hh975396. This information provides recommendations and guidance on acquiring and enabling .NET Framework 3.5.

Additional information for consideration

- The minimum display resolution for Power Monitoring Expert software is 1024 x 768.
- The Web-based Reports application (in the Web Applications component) and the Excel-based Reporter component of the product can be used for generating and managing reports. See the "Reporter" topic in the *StruxureWare Power Monitoring Expert User Guide* for more information.
- If you install SQL Server 2014 Express, the maximum database size is 10GB. Alarm notification for database size is configured to generate an alert notification when 85% of 9GB is reached. See the "Alarm Configuration" topic in Database Manager's online help.
- Scheduled database backup, maintenance, and trim jobs for the Application Modules, Data, Network, and System databases are available through Windows Task Scheduler and not through Database Manager. Scheduled database archive is included for the ION_ Data database. Only users with administrative privileges can use the Task Scheduler.
- Install and configure the Terminal Server component if Terminal Server connection to the Power Monitoring Expert Primary Server is required. Refer to the “Terminal Server Licensing Overview” topic in your Microsoft Windows documentation to learn about Terminal Server Licensing requirements. Perform typical setup such as ending a disconnected or stale session and installing programs.

  Configure the Remote Desktop Connection if you require remote connection to a Power Monitoring Expert primary server, see support information provided by Microsoft.
- If you plan to use TAPI modem drivers for Windows (WinModems) in your Power Monitoring Expert system, install and configure the WinModems. Additional WinModem information is available in the *StruxureWare Power Monitoring Expert User Guide*.
- Additional information about modem use:
  - The Serial Bus in Windows 64-bit operating systems (Windows 7, Windows Server 2008 R2 Standard/Enterprise) may cause serial communication ports to lockup. If this occurs, a system reboot is required. An update to address this situation is available on request from Microsoft support. When you receive the update, install it on all Power Monitoring Expert systems where data modems are used.

    Note that the update is not included in Windows Server 2012 versions. If you use data modems with your system, you should use a Windows Server 2008 version with the update installed. Consult Microsoft support for an update to address this situation on Windows Server 2012 versions. When an update is available, install it on all Power Monitoring systems running on a Windows Server 2012 version where data modems are used.
  - Contact Technical Support for recommended serial expansion hardware. Note that any of the Prolific type USB to Serial dongles are not recommended.

Firewall configuration

Use the Microsoft knowledgebase to learn about Well Known Ports and Registered Ports required for certain networks.

Power Monitoring Expert TCP port assignments

The following tables contain the TCP port assignments that Power Monitoring Expert and associated applications or services use to communicate with PowerLogic™ devices, Power Monitoring Expert clients, and other Power Monitoring Expert servers.

TCP ports for device communications

Port	Protocol
23	Telnet (used for meter diagnostics)
25	SMTP (Required for email communications)
502	Modbus™ TCP
3721	Ethernet access for the 3720 ACM meter
7700	ION

Port	Protocol
7701	Modbus™ RTU
7800	EtherGate simultaneously through available COM ports
7801	EtherGate through the meter's COM1
7802	EtherGate through the meter's COM2/COM4
7803	EtherGate through the meter's COM3

NOTE: Some networks may contain devices that require the use of alternate ports (for example, third-party Ethernet gateway devices).

Other required ports

Port	Purpose
13666	Power Monitoring Expert services use these ports. These ports are used if a client machine needs to access the Designer and/or Vista components of Power Monitoring Expert.
13670	
13668	This port is used when the Power Monitoring Expert system contains a Secondary Server.
1433	Microsoft SQL Server uses this port.[1]
1434	Microsoft SQL Monitor uses this port to identify named database instances.
3389	Terminal Server uses this port.
139	NetBIOS and Windows “File and Printer Sharing” use this port.
80	HTTP (required for Diagrams, Reports, and Internet access) uses this port. The EWS server also uses this port.

Port	Purpose
27000	This port is used by the FlexNet License Server. The port can be changed within the range 27000 - 27009 if the port address conflicts with other software. Incoming communication on this port needs to be allowed on Primary and Secondary servers and on Client computers, but not on Database servers. For further information about changing the port, see "Changing the Enterprise License Server port" on page 17.
Dynamic Vendor Daemon port	The vendor daemon port needs to be accessible from Secondary servers and Client computers. It is dynamic by default. In some cases, operating system or network firewall settings require a static port. See "Changing the vendor daemon port" on page 18 for further information.
57777	Real-time Data Service uses this port to transfer real-time data to Power Monitoring Expert clients.[2]
[1] SQL Server uses this port if you use the default instance when you install Power Monitoring Expert. If you use a named instance when you install Power Monitoring Expert, it is recommended that you configure the named instance to use port 1433. [2] You can configure the ION Real Time Data Service to use a different port.	

NOTE: If you intend to use Engineering Clients in a firewall-enabled environment, contact Technical Support for information installation considerations.

Changing the Enterprise License Server port

In some cases, the Enterprise License Server port conflicts with other software. This can be resolved by changing the default port (`27000`) to an alternate port.

If an alternate port is required, you need to define it in both the License Manager and the FlexNet Publisher.

To change the Enterprise License Server port in License Manager:

1. Open License Manager in **Start Programs > Schneider Electric > License Manager**.
2. Click **Options > Enterprise License Server** to open the **Enterprise License Server Configuration** dialog.
3. Ensure that the **Host Name / IP Address** is set to `127.0.0.1`.
4. Under **Server Port** change the number from `27000` to a port number in the range `27000` to `27009`.
5. Click **OK** to apply your changes and close Schneider Electric License Manager.

NOTE: For client computers, open License Manager, and click **Options > Enterprise License Server**. Set the **Host Name / IP Address** to the primary server's external IP address and set the **Server Port** to 27000 or the number that was updated on the primary server.

The port number for the License Server in FlexNet Publisher needs to match the Enterprise License Server port number configured in Schneider Electric License Manager.

To change the License Server port in FlexNet Publisher:

1. Open FlexNet Publisher by entering `http://localhost:8090` in the browser address field.
2. Click the **Administration** link on the right of the header area and sign in with user name `admin` and password `admin`.

   Enter and confirm a new password if prompted.
3. Click the **Server Configuration** tab in the left navigation frame.
4. Click **License Server Configuration** to expand the contents.
5. Click **Use this Port** and enter the same port number as the one you configured in the Schneider Electric License Manager in the range `27000` to `27009`.
6. Click **Save** and close the FlexNet Publisher.

Ensure that **Host Name / IP Address** in the Schneider Electric License Manager on Client computers and Secondary Servers needs to be set to the primary server's IP address.

Changing the vendor daemon port

To change the vendor daemon port:

1. Open FlexNet Publisher by entering `http://localhost:8090` in the browser address field.
2. Click the **Administration** link on the right of the header area and sign in with user name `admin` and password `admin`.

   Enter and confirm a new password if prompted.
3. Click the **Vendor Daemon Configuration** tab in the left navigation frame.
4. Click the Administer link to the right of the port number.

   In some cases, you may need to set compatibility mode in Internet Explorer or use another supported browser. (See *Other software used by this product* in "Required software" on page 11.)
5. Select **Use this port** under **Vendor Daemon Port** and set it to `27010` or another port number if this port is already in use.
6. Click **Save** and close the FlexNet Publisher.

Installing SQL Server

The following information describes the settings that are required when you install one of the prerequisite SQL Server editions prior to installing the Power Monitoring Expert software.

If you do not want to use a separate SQL Server Standard instance, you can skip this section and choose to have SQL Server Express installed by default as part of the Power Monitoring Expert software Standalone Server installation. See "Installing Power Monitoring Expert software" on page 36 for more information.

The topics described in this section are:

- "Installing SQL Server" on page 21.
- "Adding an instance to an existing SQL Server Express installation" on page 29.
- "Adding an instance to an existing SQL Server installation" on page 29.

Note that a supported SQL Server version must be installed before installing Power Monitoring Expert.

Running anti-virus software on your SQL Server

It is recommended that you assess the software security requirements of your organization, and specifically the potential risks to your SQL Server installation. If you determine that you need to run anti-virus software on your SQL Server as a result of your assessment, follow the recommendations described in Microsoft Support article (ID: 309422) at http://support.microsoft.com/kb/309422.

Setting SQL Server memory options

Note the following recommendations for setting SQL server memory options on the server where you install a supported edition of SQL Server.

For installations using a supported edition of SQL Server:

- Where only SQL Server is running on the host server, set the SQL Server maximum memory at the system physical memory less at least 2GB for the Windows operating system. For example, if your server has 8GB of memory, set the SQL Server maximum memory to no more than 6GB. This leaves at least 2GB for the operating system.
- Where the SQL Server is sharing the host server with other server processes, including Internet Information Services (IIS) and ION services, set the SQL Server maximum memory to no more than half the physical memory on the server. For example, if you server has 8GB of memory, set the SQL Server memory to no more than 4GB. This leaves at least 4GB for the operating system and all other server processes.

In addition to setting the maximum memory option, consult with your site administrator to determine whether or not to enable the **Lock pages in memory** permission setting in Windows for the SQL service account on all SQL Server instances.

To set the maximum memory setting for your SQL Server:

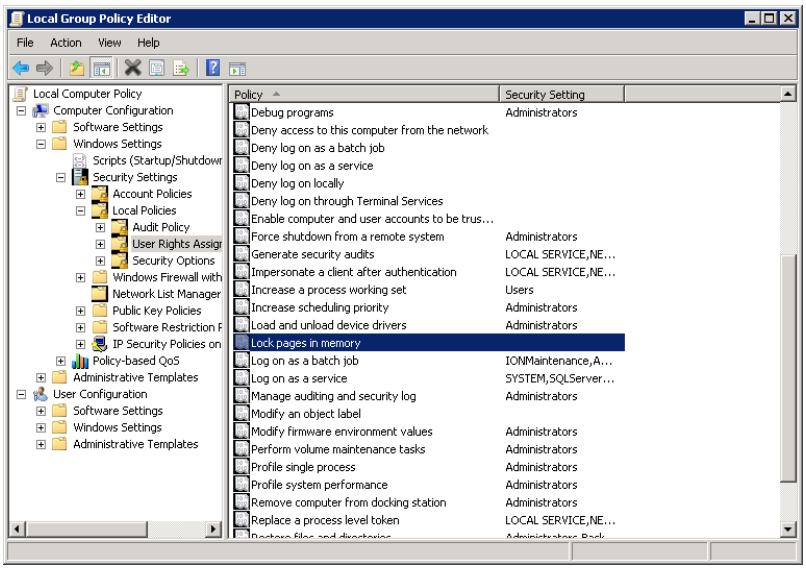
1. Start **SQL Server Management Studio** and log in to your SQL Server instance.
2. Right-click the SQL Server name and click **Properties** in the menu to open the **Server Properties** dialog.
3. Select **Memory** in the left pane and adjust the value in the **Maximum server memory** field.
4. Click **OK** to apply the changes and close the dialog.
5. Close **SQL Server Management Studio**.

   A server reboot or a restart of the SQL Server service is not required.

To enable the lock pages in memory option:

1. Click **Start > Run** and type `gpedit.msc` in the **Run** dialog to open the **Local Group Policy Editor**.
2. In the left pane, navigate to **Computer Configuration > Windows Settings > Security Settings > Local Policies**.
3. Expand **Local Policies** and select **User Rights Assignment**.

   The policies are listed in the right pane.



4. Locate **Lock pages in memory** in the list and double click the policy name to open the **Lock pages in memory Properties** dialog.
5. Click **Add User or Group** on the **Local Security Setting** tab.
6. Add an account with the privileges to run sqlserver.exe and click **OK** to close the dialog.

7. Click **OK** to close the **Local Group Policy Editor**.

   A server reboot or a restart of the SQL Server service is not required.

Installing SQL Server

You can install a supported edition of SQL Server with your SQL Server installation media, or you can order the following SQL Server editions from Schneider Electric:

- SQL Server 2012 Standard Edition (English) with Service Pack 1. (You need to update to Service Pack 2 before installing Power Monitoring Expert.)
- SQL Server 2014 Standard Edition (English) with Service Pack 1.

SQL Server 2014 Express is installed by default with the Standalone Server installation of Power Monitoring Expert if no SQL Server instance is detected during the installation. Otherwise, a supported SQL Server edition must be installed before installing Power Monitoring Expert.

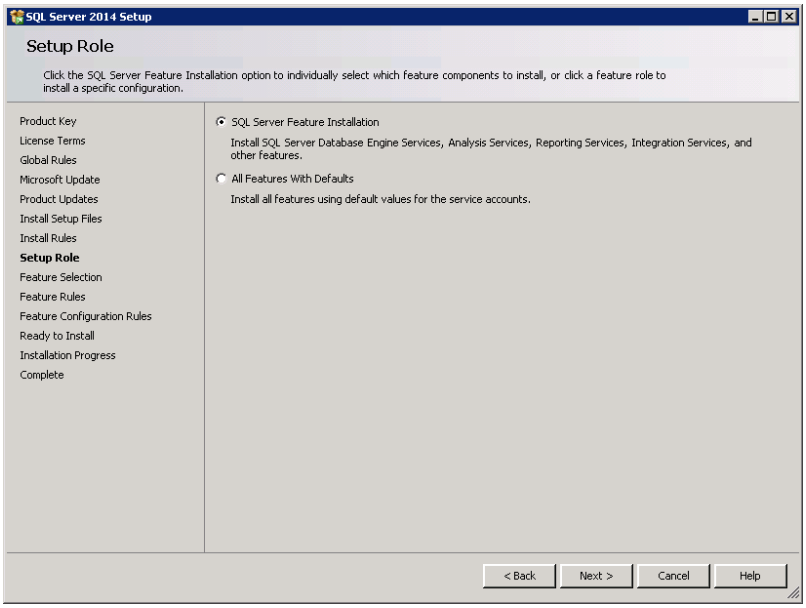
Before starting the SQL Server installation, you must be logged in as a user with administrative privileges for installing and configuring software applications. Make sure that no other programs are running, save your work, and close any open applications.

The installation steps are generally the same for supported SQL Servers. For illustration purposes, the images included are from the SQL Server 2014 Standard edition installation process unless indicated otherwise.

1. Insert the SQL Server Installation DVD in your DVD drive or access the installation media on your system, then navigate to the root directory on the DVD and double-click `setup.exe` to open the **SQL Server Installation Center**.
2. Select **Installation** in the left pane and **New SQL Server stand-alone installation or add features to an existing installation** on the right.
3. Follow the steps provided by the installation wizard pages until you reach the **Setup Role** page.

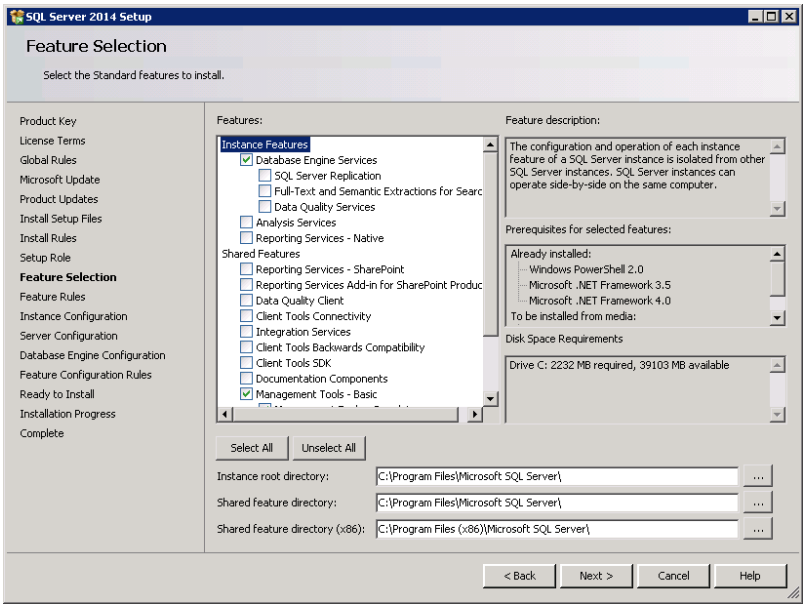
   Whenever a validation process occurs during installation, if validation is not successful, follow the instructions in the wizard to resolve the problem and click **Rerun**.

   Click **Next** when the validation is successful.
4. The **Setup Role** page: Leave **SQL Server Feature Installation** selected and click **Next**.



5. The **Feature Selection** page: Under **Instance Features**, select **Database Engine Services**. Under **Shared Features**, select **Management Tools - Basic** and **Management Tools - Complete**. Select any of the other shared features that you want to install.

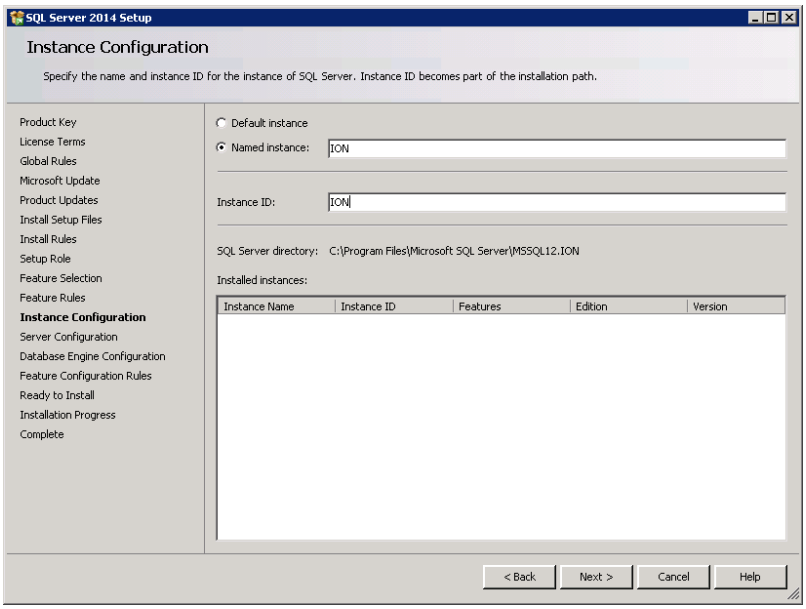
   Database Engine Services is required if you are installing on a Standalone Server or on a Database Server in a distributed system.



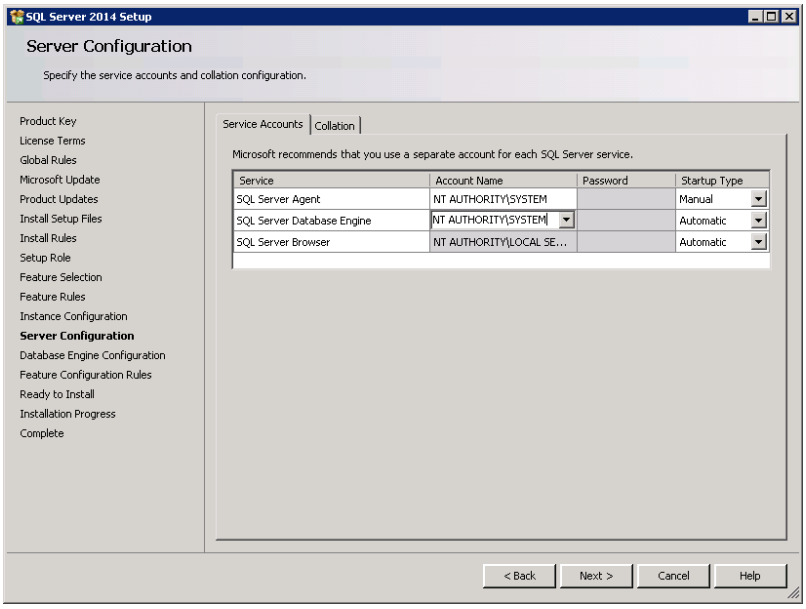
   Click **Next** when you complete your selections. The setup process validates that the installation can proceed.

6. The **Instance Configuration** page: Select **Named instance** and enter a name in the

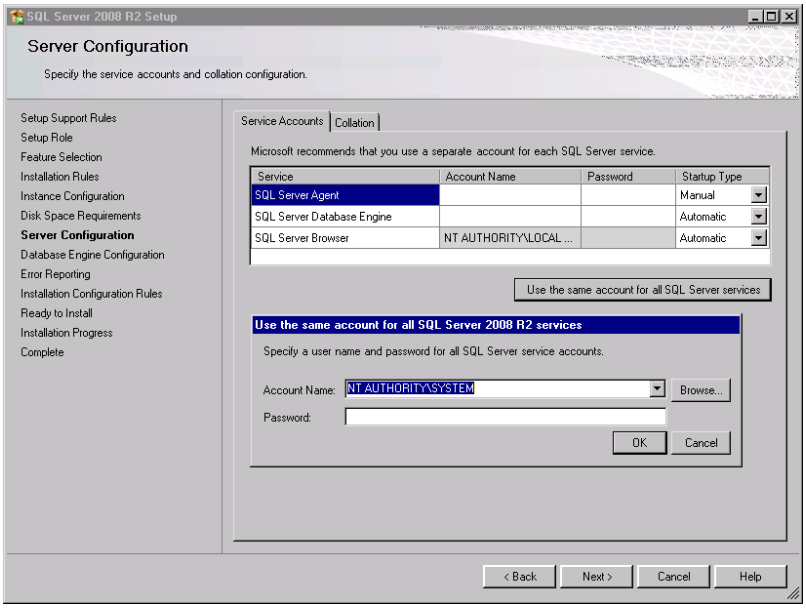
Instance Name field, for example **ION**. (Do not use an underscore character (_) within the instance name.) Click in the **Instance ID** field to automatically add your **Instance name** entry. Click **Next**.



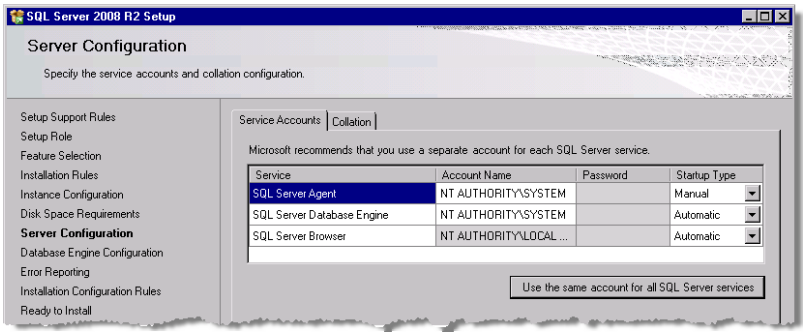
7. The **Server Configuration** page: For SQL Server 2012 and 2014 editions, change the **Account Name** for SQL Server Agent and SQL Server Database Engine to **NT AUTHORITY\SYSTEM** (your local system account). Highlight the existing entries in the **Account Name** column and enter `NT AUTHORITY\SYSTEM` for the two services. Click **Next**.



For SQL Server 2008 R2, select **Use the same account for all SQL Server services** to open the dialog.



Select **NT AUTHORITY\SYSTEM** (your local system account) in the **Account Name** list. A password is not required. Click **OK** to apply your selection and close the dialog.



Note that if you specify a Windows account other than the local system account, when you begin installing Power Monitoring Expert, the **Check System** page in the Installer indicates that the service account under which the SQL Server currently runs does not have the required system permissions. To resolve this situation, you need to do one of the following:

- Temporarily change the SQL Server service to run under an account that has Write permissions to (1) the folder created for the product's databases (the default is the install location for ...\Schneider Electric\Power Monitoring Expert, and (2), for the current logged-in user's Temp folder. (To find the full path to the Temp folder, click **Start > Run**, enter %Temp% and click **OK**.) The default local system account is an example of an account with these privileges.
- Temporarily grant Write permission for the two folders mentioned above to the Windows account that the SQL Server service runs under. Use the Windows Services control panel to identify this account. (Click **Start > Administrative Tools >**

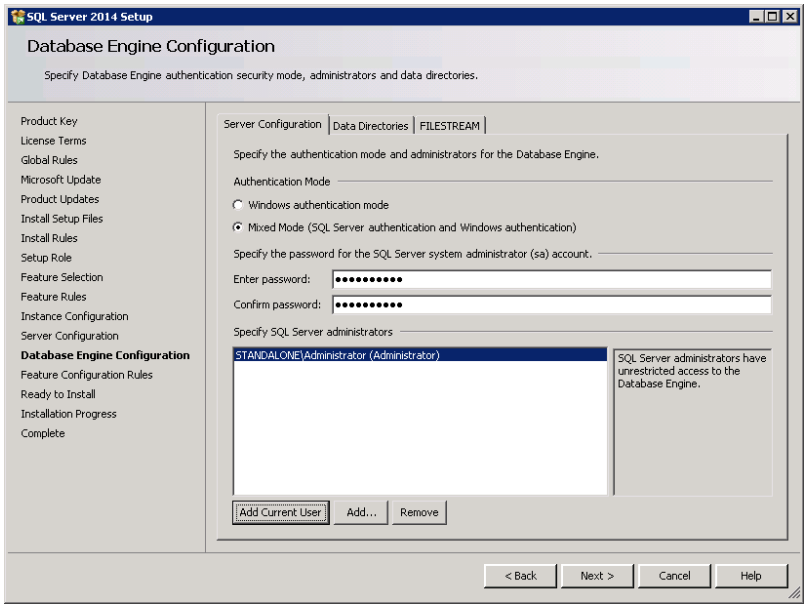
Services, right-click **SQL Server**, click the **Log On** tab in the **SQL Server Properties** dialog.)

You can revert the temporary changes after the installation of Power Monitoring Expert completes.

8. The **Database Engine Configuration** page: On the **Server Configuration** tab:
   a. Select **Mixed Mode**.
   b. Type a password for the SQL Server system administrator (sa) account in the **Enter password** and **Confirm password** fields. (Keep a record of the password for future use.)

> ***NOTICE***
>
> **LOSS OF DATA**
>
> - Use a strong password for the System Administrator account consisting of at least 6 characters that are a combination of uppercase and lowercase letters, numbers, and symbols such as @, #, $, %.
> - Only allow users with advanced knowledge of SQL Server databases access to the SQL Server.
>
> **Failure to follow these instructions can result in unauthorized access to SQL Server databases.**

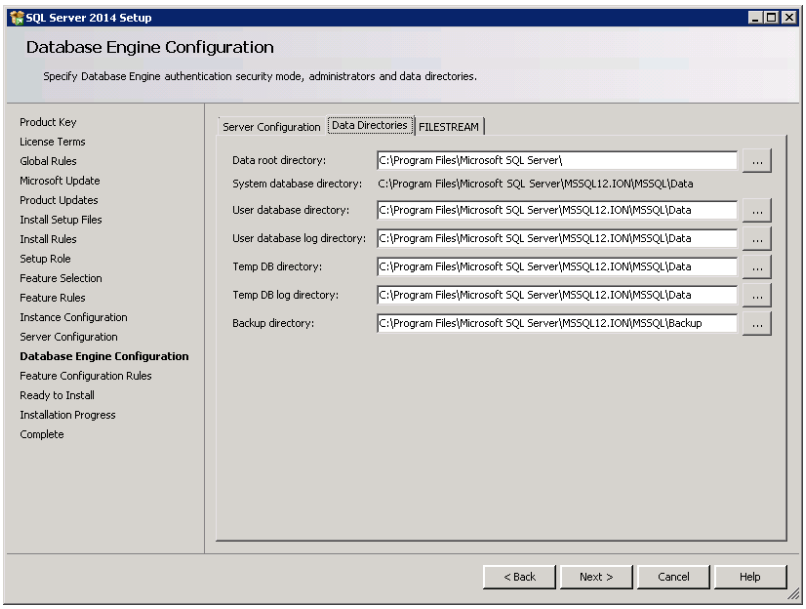
   c. Click **Add Current User** to add the SQL Server Administrator.
   d. Click the **Data Directories** tab.



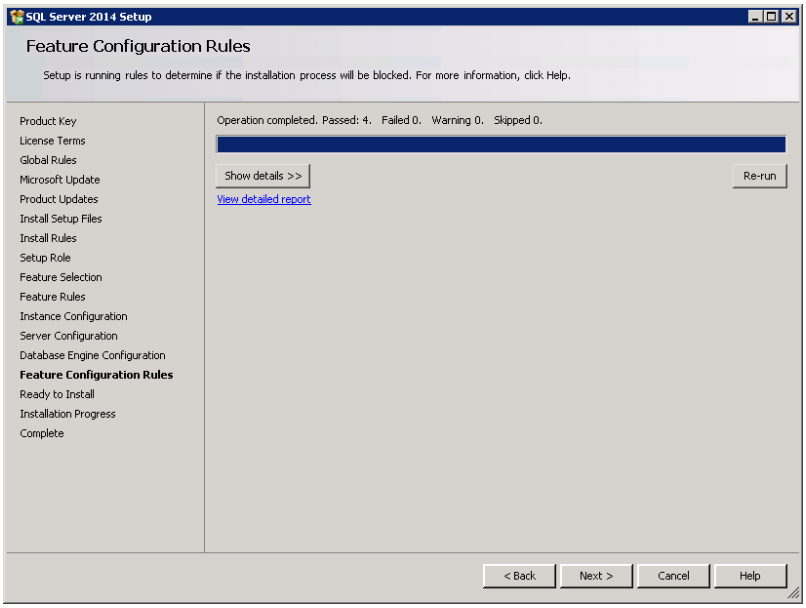
9. The **Database Engine Configuration** page: On the **Data Directories** tab, specify a different drive, if available, for the TempDB directory and Temp DB log directory. Click

Next to proceed to the **Feature Configuration Rules** page.

The specification of different drives is for performance reasons. If all of the files are located on the same drive, data that is being inserted, updated, or deleted can potentially result in slower write operations than if the Temp DB directories are located on a separate drive. The specification of different drives is dependent on your hardware configuration and may not be possible in all cases. Review the *Design Guide* for performance and hard drive considerations. See "Product Documentation" on page 10 for details about the availability of the *Design Guide*.

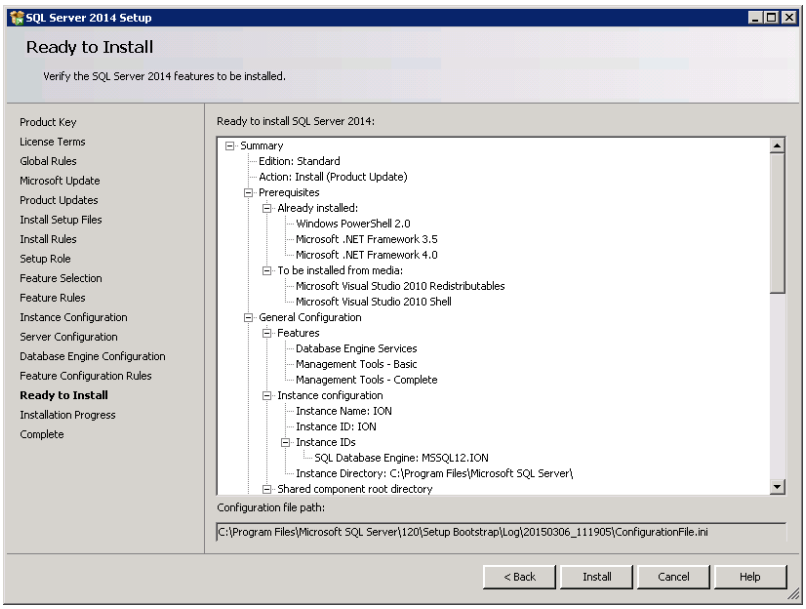


10. The **Feature Configuration Rules** page: The rules are run automatically to validate that the installation can proceed. If validation is successful, the next page opens. If validation is not successful, follow the instructions on the page and click **Rerun**. Click **Next** when the validation is successful.



11. The **Ready to Install** page: Click **Install**.

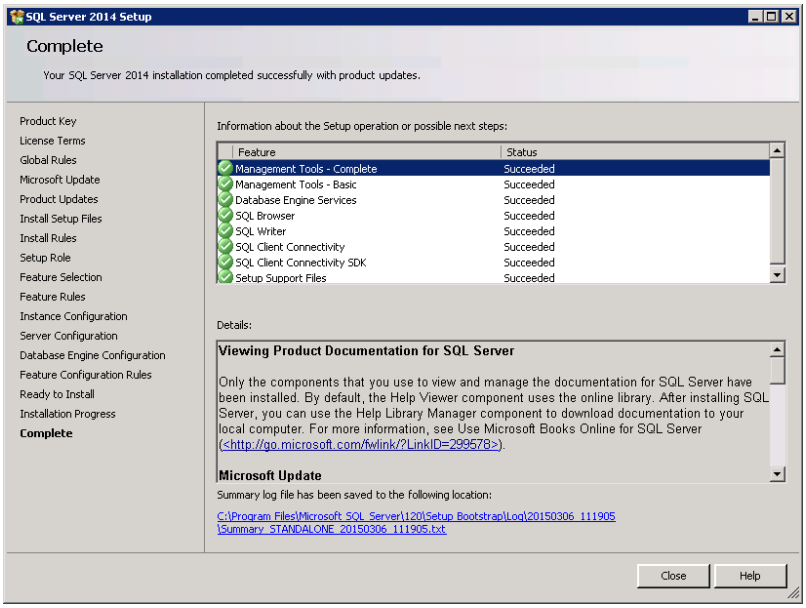
    The page shows the SQL Server features that are about to be installed.



    When the installation finishes, the **Complete** page opens.

12. The **Complete** page: Click **Close** to close the setup dialog.

    The **Complete** page contains information about the Setup operations or possible next steps, as well as supplemental information related to your installation.



13. Go to the **Maintenance** page in the **SQL Server Installation Center** and click **Launch Windows Update to search for product updates** that you can install.
14. Close the **SQL Server Installation Center**.

Next step

You can now install Power Monitoring Expert software on a Standalone Server or in a distributed configuration consisting of a Database Server and Primary Server. For a description of the installation process, see "Power Monitoring Expert installation" on page 32.

Adding an instance to an existing SQL Server Express installation

If you have previously installed SQL Server 2014 Express, the Power Monitoring Expert Installer adds the instance that is required by Power Monitoring Expert. See "Installing Power Monitoring Expert software" on page 36 for installation instructions.

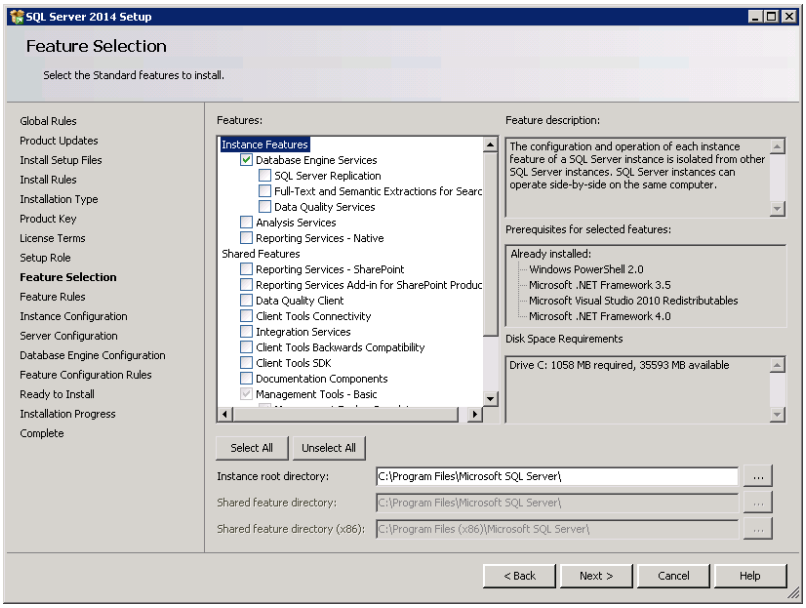
Adding an instance to an existing SQL Server installation

To configure a SQL Server instance specifically for use by Power Monitoring Expert, you need to rerun the SQL Server Setup wizard and follow the steps described in "Installing SQL Server" on page 21.

In most cases, fewer steps are required. The **Feature Selection** page and the **Instance Configuration** page are slightly different, as noted below.

The **Feature Selection** page:

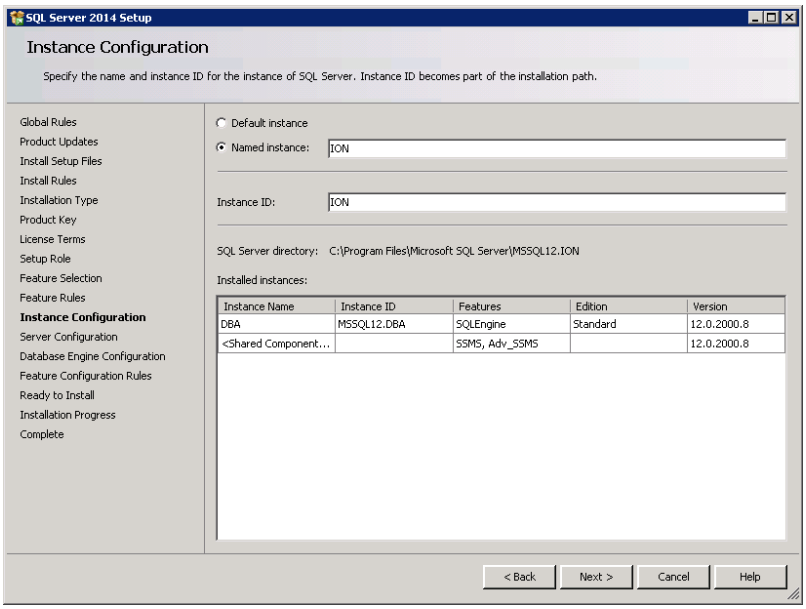
1. Under **Instance Features**, select **Database Engine Services**.
2. Under **Shared Features**, select **Management Tools - Basic** and **Management Tools - Complete** if they are not already selected. Select any of the other shared features that you want to install.



The **Instance Configuration** page:

1. Enter a name in the **Instance Name** field, for example **ION**. (Do not use an underscore character (_) within the instance name.)
2. Click in the **Instance ID** field to automatically add your **Instance name** entry.
3. Click **Next**.

Any existing instance names appear in the **Installed Instances** area on the page.



Complete the remaining steps in the instance addition process and close the **SQL Server Installation Center**.

Next step

You can now install Power Monitoring Expert software on a Standalone Server or in a distributed configuration consisting of a Database Server and Primary Server. For a description of the installation process, see "Power Monitoring Expert installation" on page 32.

Tasks performed by the product Installer

Depending on your operating system version, your SQL Server edition, and the setup type (server or client) that you select for installation, the Power Monitoring Expert Installer performs several tasks prior to the installation of the software:

The following Installer tasks are performed. Some of these are dependent on the software configuration to be installed:

- Checks if you are running the installation as a local administrator, and if not, instructs you to run the installation on the server using a local administrator account.
- Checks for the presence of .NET Framework 4.6 and initiates its installation if required.
- Checks that adequate disk space is available for the files that are written to the hard disk.
- Verifies that the SQL Server Agent is installed for SQL Server Standard editions.
- Validates that a supported SQL Server edition and service pack level are installed.
- Verifies the connection to the SQL Server instance.
- Checks for the presence of ASP.NET. For Windows Server 2012, Windows 8.1, or Windows 10, it checks for the presence of .NET Framework 3.5. See "Installing .NET Framework 3.5 SP1 " on page 14 for installation instructions.
- Verifies that the Windows account that the SQL Server service runs under has the proper folder permissions to proceed.

The Installer performs configuration tasks during the installation process. Some of these tasks are listed below. See the Installation log that is available at the conclusion of the installation process to view all of the actions performed by the Installer.

- Installs SQL Server components for backwards compatibility.
- Installs Schneider Electric License Manager, Schneider Electric Floating License Manager, and trial licenses. See "Activate software licenses" on page 51 for further information.
- Configures SQL Server Agent for SQL Server Standard editions.
- Configures ASP.NET.
- Configures SQL Server.
- Registers, verifies the registration of, and starts services.
- Installs and configures Internet Information Services (IIS).

Power Monitoring Expert installation

The Power Monitoring Expert installation consists of running the Installer and selecting options as you proceed through the installation process. This topic describes the different setup types that are available during installation and also provides a step-by-step description of the installation process.

Setup types available in the Installer

The Installer lets you select a setup type for your Power Monitoring Expert installation. The setup types are:

- Standalone Server.
- Database Instance (for a distributed installation).
- Primary Server (for a distributed installation).
- Secondary Server.
- Engineering Client.
- Reporting Client Only.

Standalone Server setup type

A Standalone Server hosts Power Monitoring Expert configuration files, the services that are required for the system to function, and a SQL Server instance for the Power Monitoring Expert databases.

Make sure your computer meets the operating system and SQL Server requirements summarized in "Required software" on page 11. It is recommended that you run the Windows Update service before and after installing the software.

To ensure that client computers and Secondary Servers can be installed and will operate successfully, the Standalone Server (or Primary Server in a distributed installation) must meet the following requirements:

- Exists on the Local Area Network (LAN).
- Shares full Read and Write permissions on the Power Monitoring Expert folder.
- Enables file and printer sharing on the LAN properties.

Perform the software installation directly on the server. Remote installation is not recommended.

Considerations for a Standalone installation

Before proceeding with the Standalone Server installation, ensure that you complete the following tasks:

- "Configuring your operating system" on page 14.
- "Installing SQL Server" on page 19, or if applicable, "Adding an instance to an existing SQL Server installation" on page 29.
- Ensure that the Windows user or the SQL Server user is a member of the sysadmin SQL Server role. This is required for the Authentication option for installing database software.

If you intend to use a supported SQL Server Express edition, it is installed at the same time as Power Monitoring Expert on a Standalone Server.

NOTE: After installing Power Monitoring Expert, it is recommended that you change the SQL Server Express sa account password.

Database Instance and Primary Server setup types

The Database Instance and Primary Server setup types comprise a distributed installation.

The server used for the Database Instance in a distributed installation hosts an edition of Microsoft SQL Server and your Power Monitoring Expert databases. This network configuration requires that you install the server hosting your Database Instance on your network before installing the Primary Server.

A Primary Server in a distributed installation hosts Power Monitoring Expert configuration files and the services that are required for the system to function. The Primary Server communicates with a separate Database Server to access Power Monitoring Expert databases.

Review the *Design Guide* for information about planning for and setting up your system. The guide also provides information about a Database Server deployed in a clustered SQL Server environment. See "Product Documentation" on page 10 for details about the availability of the *Design Guide*.

Distributed installation considerations

Before proceeding with the installation of your distributed system, ensure that you complete the following tasks:

- "Configuring your operating system" on page 14.
- "Installing SQL Server" on page 19, or if applicable "Adding an instance to an existing SQL Server installation" on page 29.
- Ensure that the Windows user or the SQL Server user is a member of the sysadmin SQL Server role. This is required for the Authentication option for installing database software.
- Prior to beginning the installation, ensure that all of the servers on the network can communicate with each other. For example, to test for this, open a command prompt on each server and type `ping` *computer_name*, where *computer_name* is the name of the computer you want to contact. A successful response shows 4 attempts to contact the computer, lists the IP Address, indicates `Packets: Sent = 4. Received = 4, Lost`

`= 0 (0% loss)`, plus timing data. If this is not the case, it indicates that the computers cannot communicate and that you need to resolve the connectivity situation. Note that the ping utility requires that Internet Control Message Protocol (ICMP) be enabled on your network. Contact your Network Administrator if ping does not work.

- Run the Windows Update service on both the server hosting the Database Instance and the Primary Server to install the latest security patches and hotfixes from Microsoft.
- For a distributed installation, you need to install the server hosting the Database Instance on your network before installing the Primary Server.

Secondary Server setup type

Secondary Server installations are not common, and are used only in exceptional circumstances. For example, an intermediary Secondary Server may be required when you have a large number of devices that use software-based logging. Secondary Server installations require advanced network configuration.

Review the *Design Guide* for additional information about Secondary Servers. See "Product Documentation" on page 10 for details about the availability of the *Design Guide*.

Engineering Client setup type

An Engineering Client workstation provides administrators and power users access to the Power Monitoring Expert graphical user interface components (Management Console, Vista, Designer), and the Excel-based Reporter component. You can use these components to add and configure devices, troubleshoot your system, edit graphics, or perform ION programming tasks. An Engineering Client needs to be installed after a Standalone Server or a Primary Server is installed and running.

NOTE: Before you install an Engineering Client on a Windows 8.1 or Windows 10 system, you need to install .NET Framework 3.5 SP1 on your client computer. See "Installing .NET Framework 3.5 SP1 " on page 14 for more information.

Reporting Client Only setup type

A Reporting Client workstation provides administrators and power users with the ability to generate reports using the Excel-based Reporter component of Power Monitoring Expert. A Reporting Client needs to be installed after a Standalone Server or a Primary Server is installed and running.

Setup Types and applicable Installer pages

The following table indicates the pages in the Installer associated with each setup type. Because Secondary Server installations are not common, the Secondary Server setup type is excluded from the table. The "Y" indicates that the Installer page appears during the installation of that setup type, and the "n/a" indicates that the page is not applicable and does not appear during the installation process.

Installer pages	Setup Types				
	Standalone	Distributed Installation		Engineering Client	Reporting Client Only
		Database Instance	Primary Server		
Application Language	Y for all setup types				
Welcome	Y for all setup types				
License Agreement	Y for all setup types				
Setup Type	Y for all setup types				
User Information	Y for all setup types				
Supervisor Account	Y	n/a	Y	n/a	n/a
Web Application	Y	n/a	Y	n/a	n/a
File Destination	Y for all setup types				
Primary Server	n/a	n/a	n/a	n/a	n/a
Database Software	Y	Y	n/a	n/a	n/a
Database Instance	n/a	n/a	Y	n/a	n/a
Check System	Y for all setup types				
Ready to Configure	Y for all setup types				
Copy Files	Y for all setup types				
Configure System	Y for all setup types				
Complete	Y for all setup types				

Installing Power Monitoring Expert software

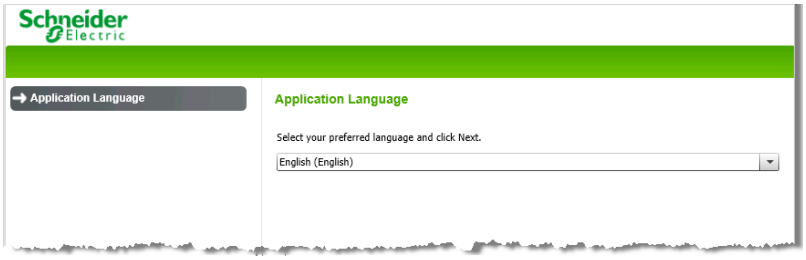
Start the installation process by inserting the Power Monitoring Expert DVD into the DVD drive. If the installation does not start automatically, use Windows Explorer to navigate to the DVD drive and double-click `MainSetup.exe`.

1. Install Microsoft .NET Framework if prompted.

   After installing the .NET Framework, you are prompted to restart your system. After the restart, double-click `MainSetup.exe` to continue the Power Monitoring Expert installation.

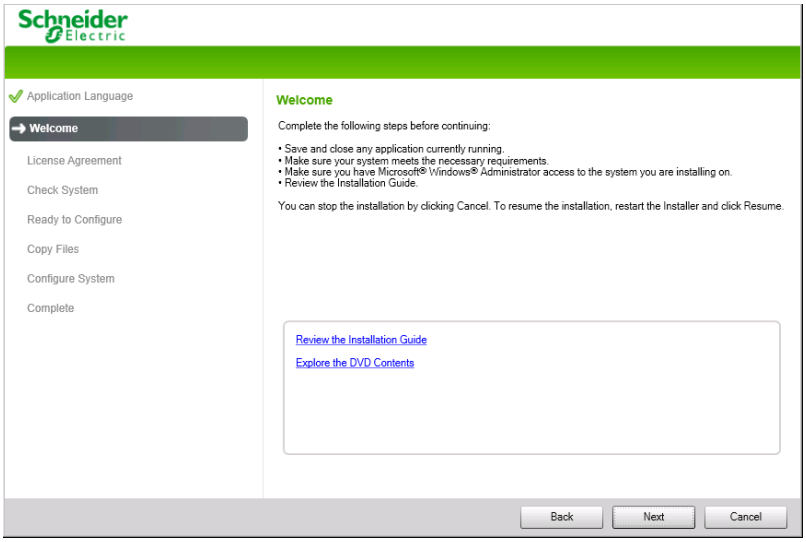
2. **Application Language** page for all setup types:

   Select the **Application Language** from the list and click **Next**.



3. **Welcome** page for all setup types:

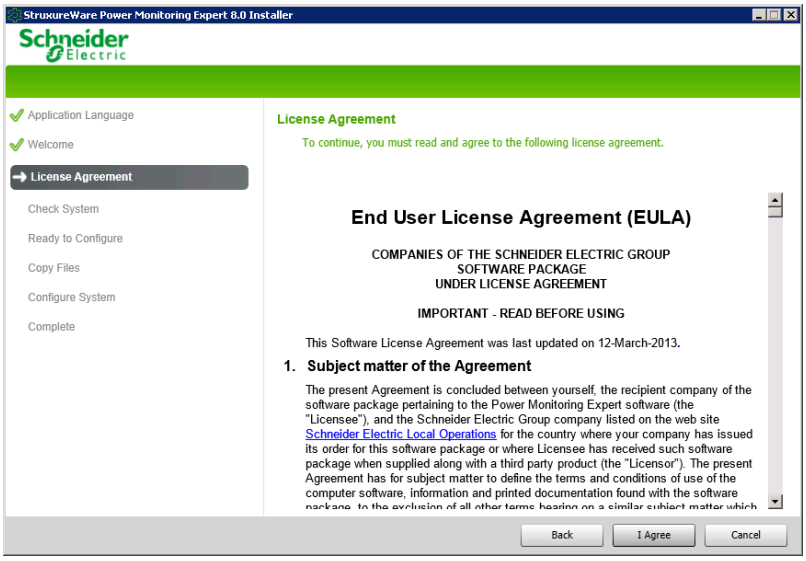
   Click **Next** on the **Welcome** page to proceed to the **License Agreement** page.



   The **Welcome** page provides reminders for tasks to complete before continuing with the installation.

4. **License Agreement** page for all setup types:

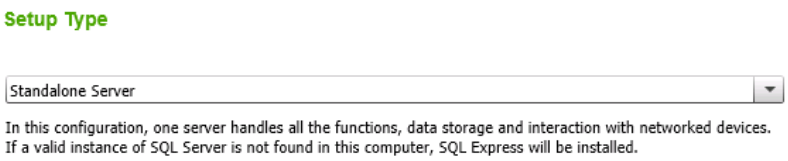
   Read the End User License Agreement (EULA) on the **License Agreement** page.



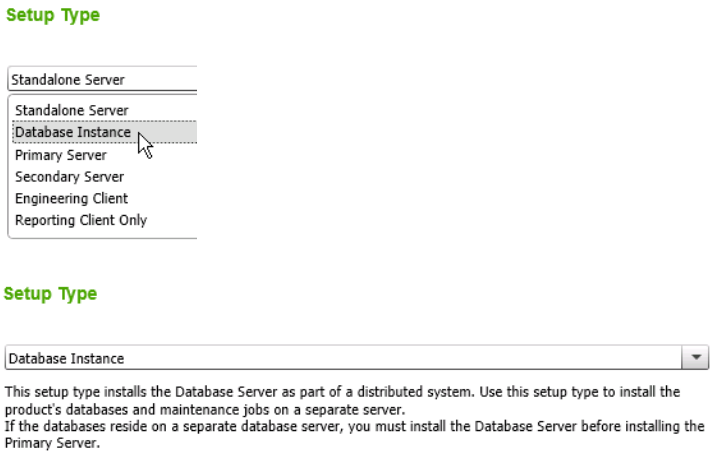
If you accept the terms of the license agreement, click **I Agree** to proceed to the **Setup Type** page.

5. Select the setup type you want to install from the list if it is not already selected, and click **Next**.

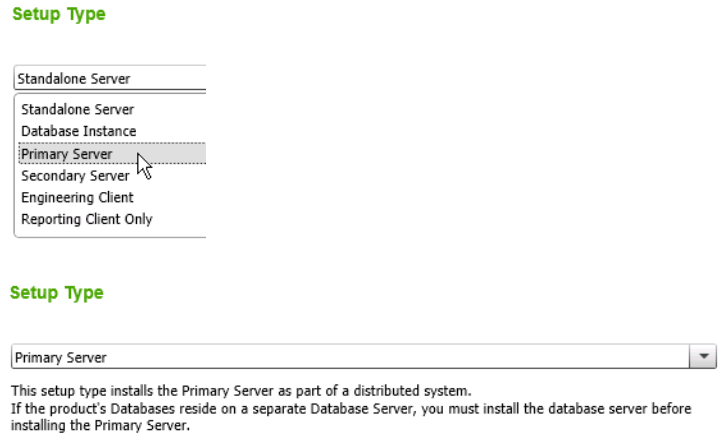
For **Standalone Server**:



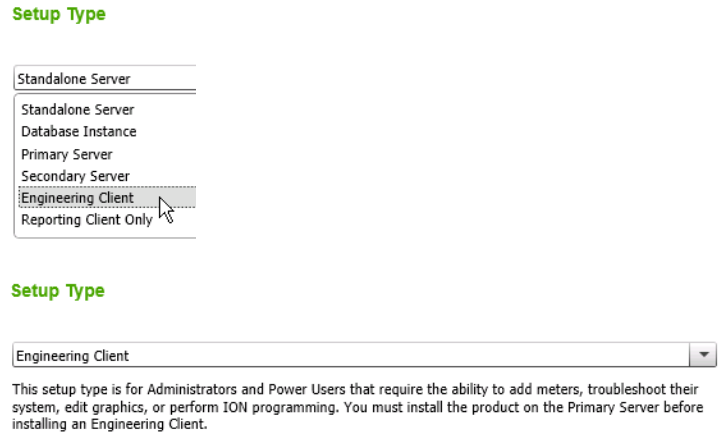
For **Database Instance**:



For **Primary Server**:

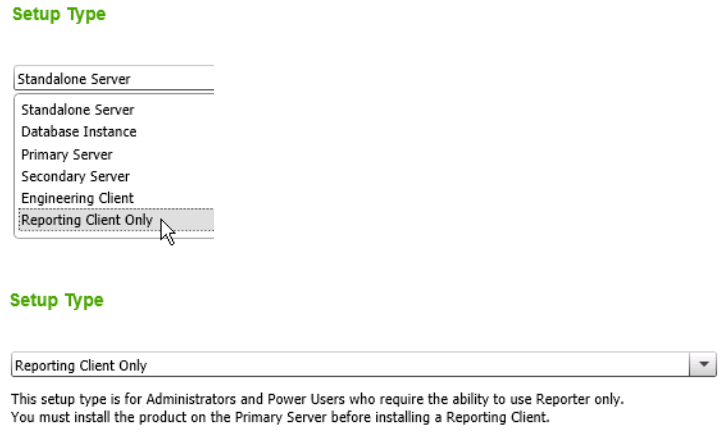


For **Engineering Client**:



NOTE: Before you install an Engineering Client on a Windows 8.1 or Windows 10 system, you need to install .NET Framework 3.5 SP1 on your client computer. See "Installing .NET Framework 3.5 SP1 " on page 14 for more information.

For **Reporting Client Only**:



6. **User Information** page for all setup types:

   Enter the user-related information in the **User Name** and **Company Name** fields on the **User Information** page and click **Next**.

7. **Supervisor Account** page for **Standalone Server** and **Primary Server** setup types only:

   Use the **Supervisor Account** page to enter and confirm a password for the supervisor account for the software. Select **Show characters** to see the password in alpha/numeric format. Click **Next**.

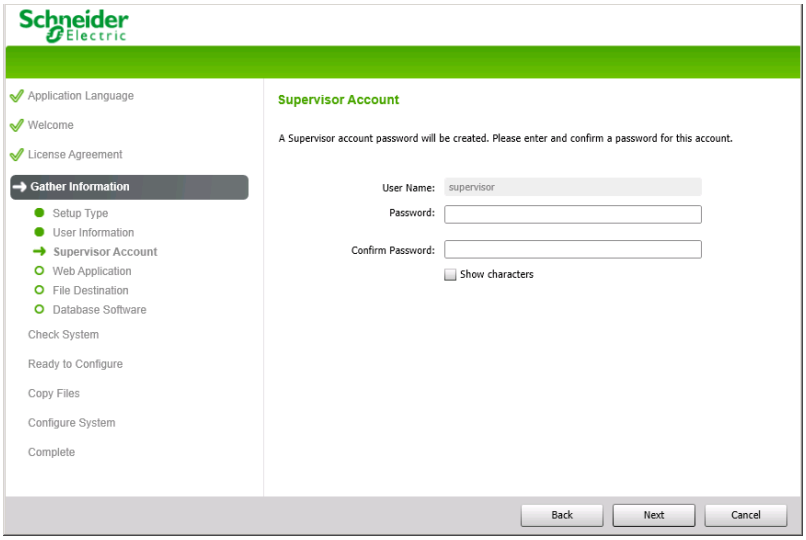
   NOTICE

   LOSS OF DATA

   - Use a strong password for the supervisor account consisting of at least 6 characters that are a combination of uppercase and lowercase letters, numbers, and symbols such as @, #, $, %.
   - Only allow users with advanced knowledge of site administration supervisor account access.

   Failure to follow these instructions can result in unauthorized access to Power Monitoring Expert system components.

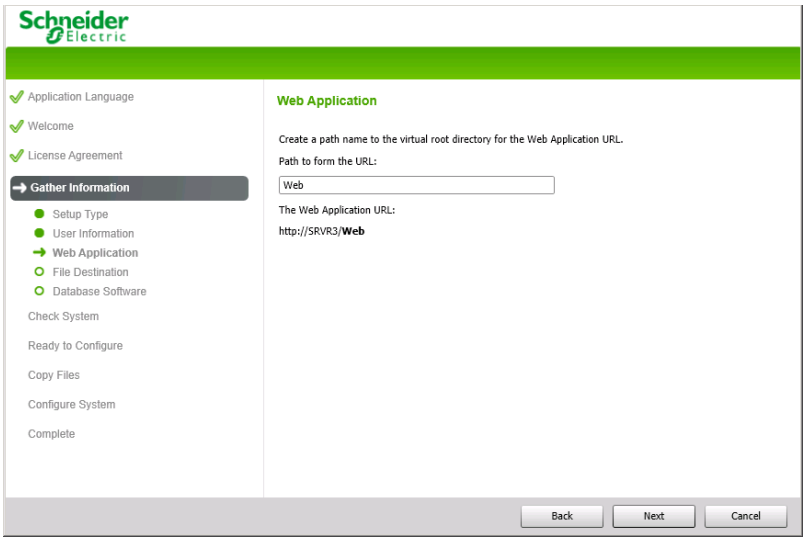
   The supervisor account has the highest level of access to the system.

   After installation of the software, you can open **User Manager** to add additional users, assign passwords, and select the appropriate access level for each user. Open **Management Console** and select **Tools > User Manager**.

8. **Web Application** page for **Standalone Server** and **Primary Server** setup types only:

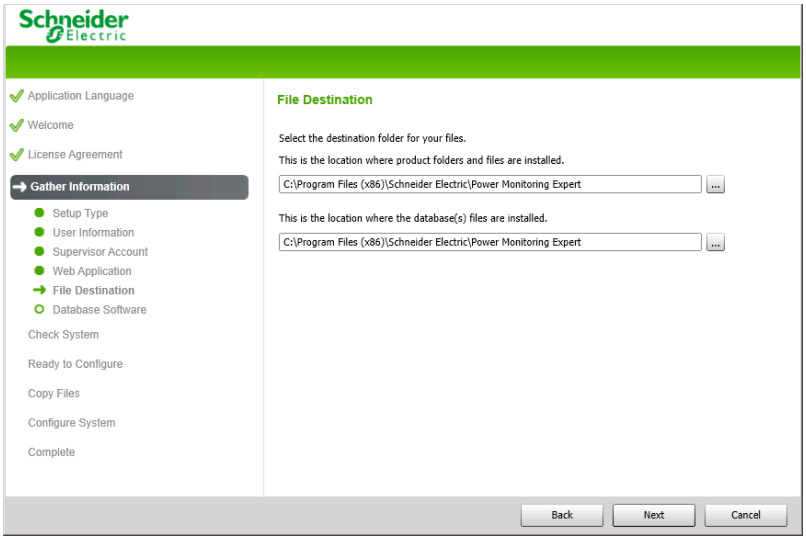
Use the **Web Application** page to change the default URL path for the Web Applications component of the product or use the default values and click **Next**.



9. **File Destination** page for **Standalone Server** and **Database Instance** setup types only:

   The **File Destination** page indicates the default installation locations for the product folders and files, and for the location of the databases. Use the browse button to select different locations if desired. Ensure that there is no space in the folder name for the installation locations. Click **Next**.

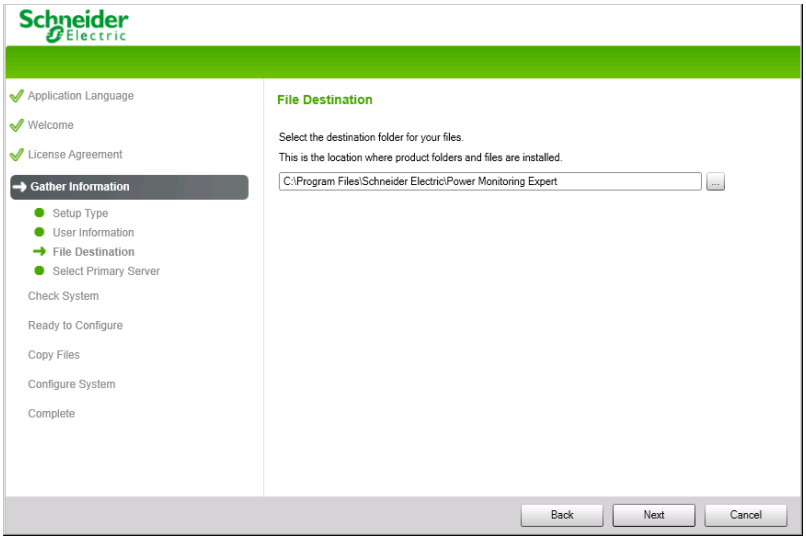
   Click **Yes** if you are prompted to create the folders.



10. **File Destination** page for **Primary Server**, **Engineering Client**, and **Reporting Client Only** setup types:

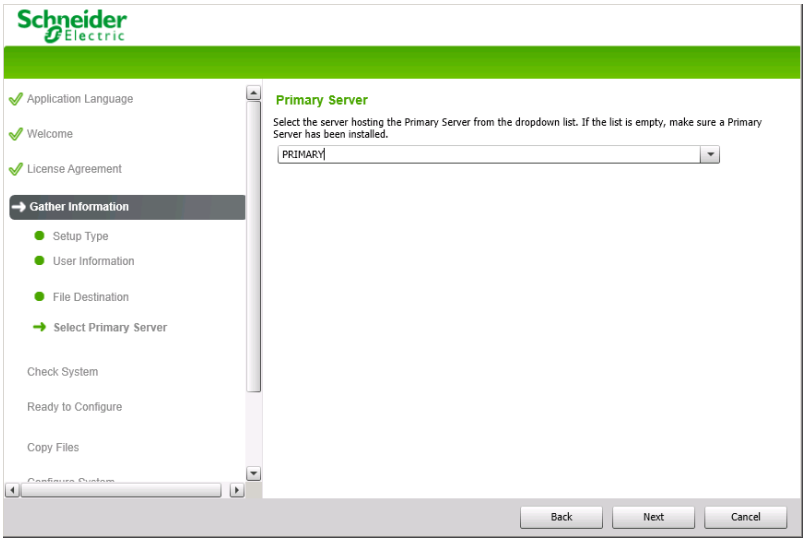
The **File Destination** page indicates the default installation location for the product folders and files. Use the browse button to select a different location.

Click **Yes** if you are prompted to create the folder.



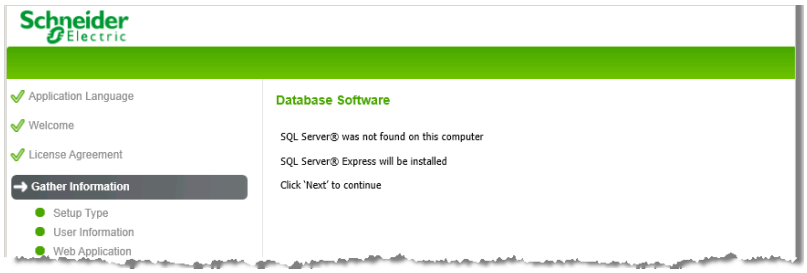
11. **Primary Server** page for **Engineering Client** or **Reporting Client Only** setup types:

    Use the **Primary Server** page to identify the server hosting the graphical user interface components (Management Console, Vista, Designer) that administrators and power users can access from an **Engineering Client**. For the **Reporting Client Only** workstation, administrators and power users can access the Primary server to generate reports using the Excel-based Reporter component.

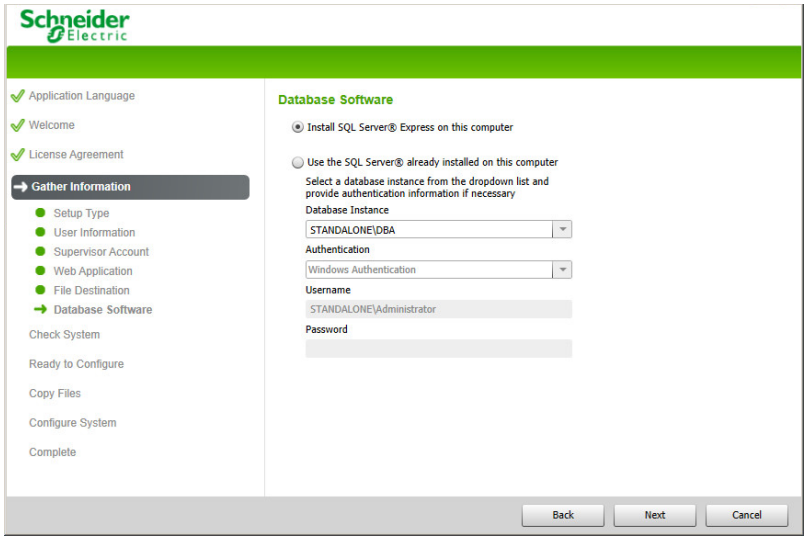


12. **Database Software** or **Database Instance** page for **Standalone Server** or **Primary Server** setup types, respectively:

- If a SQL Server instance is **not** found on your server, the **Database Software** page indicates that SQL Server Express will be installed. Click **Next** to continue with the installation.



- If a SQL Server Express instance is found on your server but it is not intended for use with Power Monitoring Expert, you need to select the **Install SQL Server Express on this computer** option to install an instance specifically for use with Power Monitoring Expert. Click **Next** to continue with the installation.



  Upon completion of the SQL Server Express installation, a system check is performed to verify that the mandatory prerequisites have been met. The results of the verification are shown on the **Check System** page.

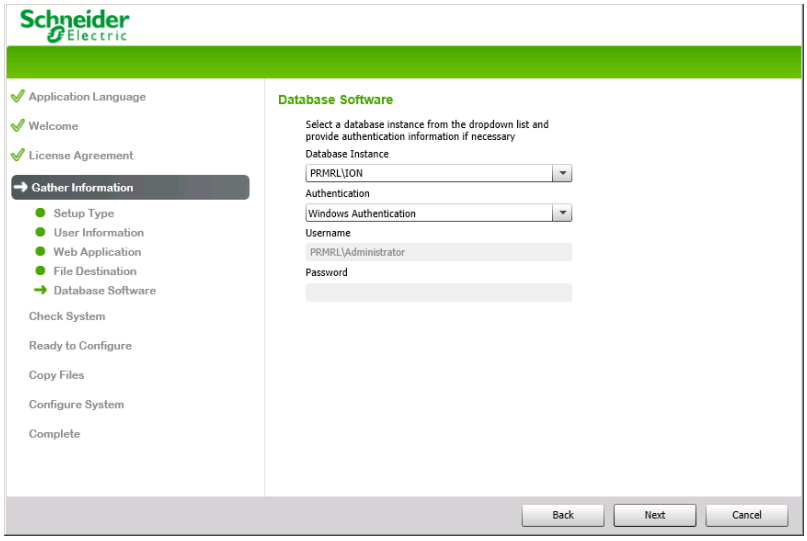
  NOTE: After installing Power Monitoring Expert, it is recommended that you change the SQL Server Express sa account password.

- If a SQL Server Standard/Enterprise instance is installed on your server as the prerequisite for installing a **Standalone Server** setup type:

  Select the database instance for your SQL Server on the **Database Software** page, provide the necessary authentication values, and click **Next**.

NOTE: For the Windows Authentication option, the current Windows user needs to be a member of the sysadmin SQL Server role. For the specified SQL Server authentication option, The SQL Server user needs to be a member of the sysadmin SQL Server role.

The SQL Server instance that you want to select is the one that you specified for use with Power Monitoring Expert when you installed or reconfigured the SQL Server.

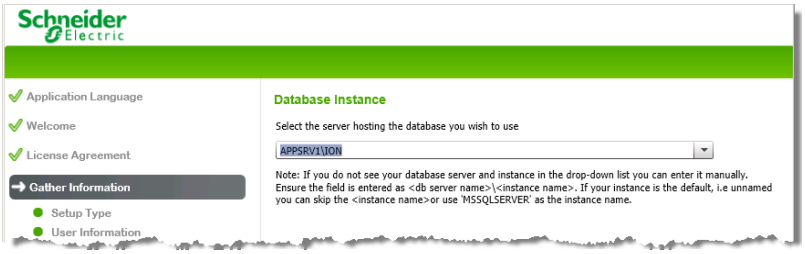


- If SQL Server Standard/Enterprise instance is installed on your Database server as a prerequisite for installing a **Primary Server** setup type for a distributed environment:

  Select the database instance for your SQL Server on the **Database Instance** page, provide the necessary authentication values, and click **Next**.

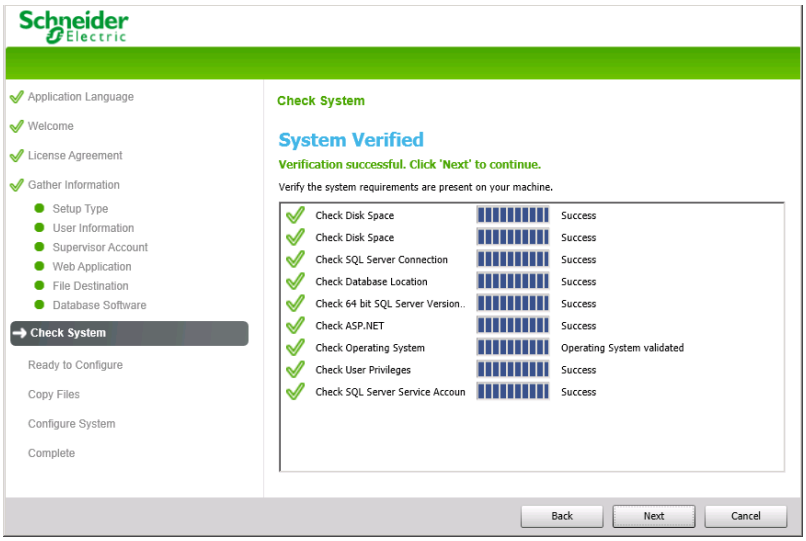
  NOTE: For the Windows Authentication option, the current Windows user needs to be a member of the sysadmin SQL Server role. For the specified SQL Server Authentication option, The SQL Server user needs to be a member of the sysadmin SQL Server role.

  The SQL Server instance that you want to select is the one that you specified for use with Power Monitoring Expert when you installed or reconfigured the SQL Server on the Database server.



13. **Check System** for all setup types:

    The **Check System** page verifies that the mandatory prerequisites have been met before proceeding. (For Windows Server 2012 or Windows 8.1, the **Check ASP.NET** item is replaced by **Check .NET 3.5**.) If a problem occurs during the system check, the item is identified and clicking on it displays additional information about the situation. Click **Next**.



    Note that if you specified a Windows account other than the local system account when you installed a supported edition of SQL Server Standard or Enterprise, the **Check System** page will indicate that the service account under which the SQL Server currently runs does not have the required system permissions. To resolve this situation you need to do one of the following:

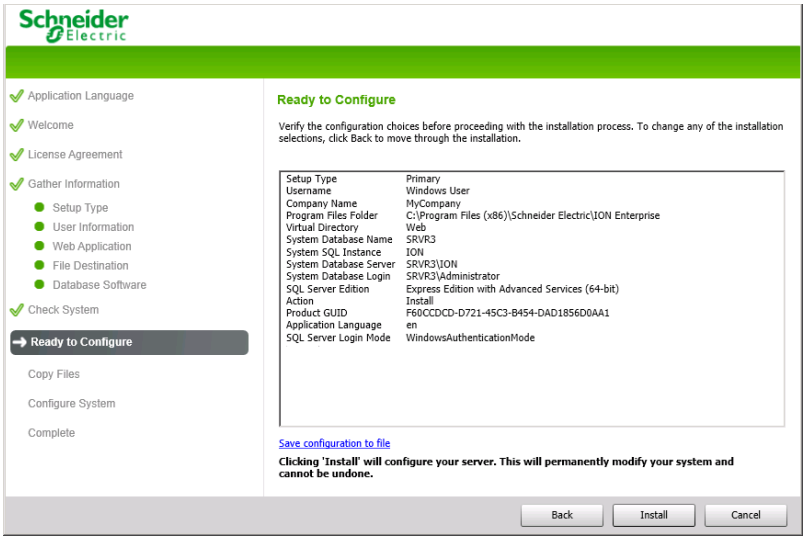
    - Temporarily change the SQL Server service to run under an account that has Write permissions to (1) the folder created for the product's databases (the default is the install location for ...\Schneider Electric\Power Monitoring Expert, and (2), for the current logged-in user's Temp folder. (To find the full path to the Temp folder, click **Start > Run**, enter %Temp% and click **OK**.) The default local system account is an example of an account with these privileges.
    - Temporarily grant Write permission for the two folders mentioned above to the Windows account that the SQL Server service runs under. Use the Windows Services

control panel to identify this account. (Click **Start > Administrative Tools > Services**, right-click **SQL Server**, click the **Log On** tab in the **SQL Server Properties** dialog.)

You can revert the temporary changes after the installation of Power Monitoring Expert completes.

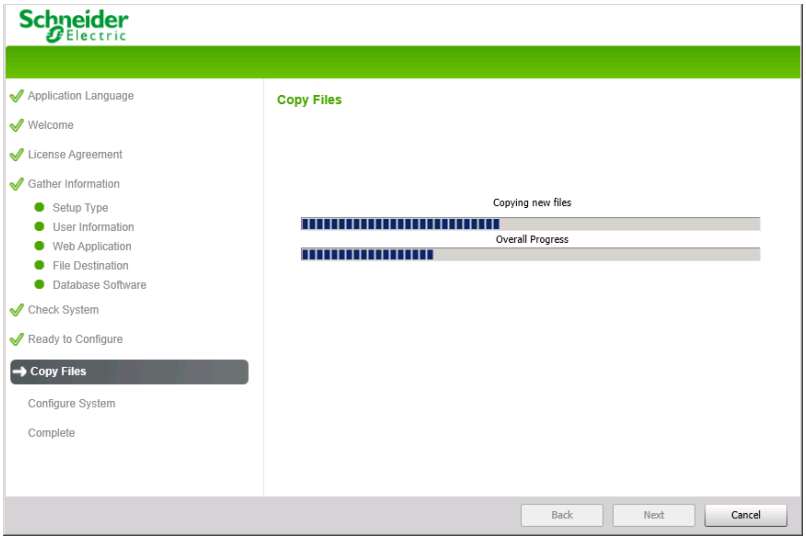
14. **Ready to Configure** page for all setup types:

    The **Ready to Configure** page summarizes your configuration for the installation of the software. Click **Install** to begin the installation.

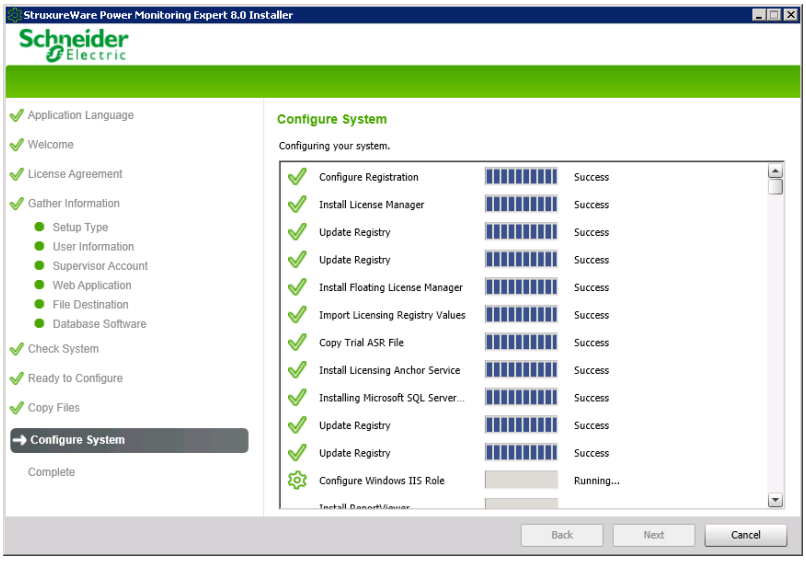


15. **Copy Files** page for all setup types:

    The **Copy Files** page indicates the progress as files are copied to the server as part of the installation.



When the copying operation is complete, the **Configure System** page opens.

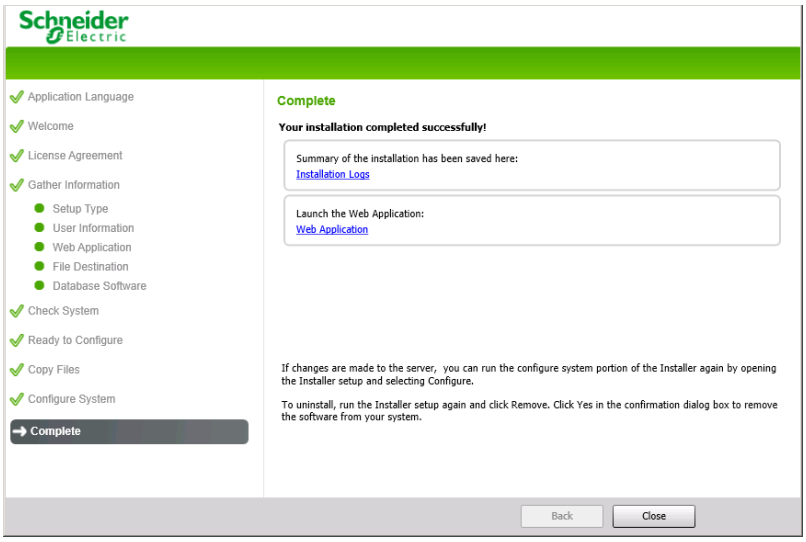


The **Configure System** page indicates each of the configuration actions taking place during the installation. If a configuration step is not successful, an X appears in a column to the left of the item. You can click the link on the message text on the right of the item to display instructions for resolving the error. If you correct the problem, click **Try Again** to continue with the installation. Otherwise, cancel the install process until you can resolve the problem.

Click **Next** when the configuration process ends to open the **Complete** page.

16. **Complete** page for all setup types:

    The **Complete** page contains links that open the Installation Log and start the Web Applications component, respectively.



The Installation Log summarizes the processing that took place during the installation process. (You can access the installation log at a later time in the install location within ...\Schneider Electric\Power Monitoring Expert\SetupLogs.)

Click the Web Application link to verify that Web Applications component launches successfully in a browser.

17. Click **Close** to close the installer.

NOTE: It is recommended that you restart your system after installing the software to complete the configuration of the services that have been installed, and to ensure that the software components run successfully.

Verify that IIS is working

Ensure that Internet Information Services (IIS) is working by typing the URL `http://localhost/` in the address field of your browser to display an IIS image. (In some cases, security restrictions may block access to this web page.)

Using a Web Client

A Web Client can be used by operators and others to access the Web Applications component of Power Monitoring Expert on a day-to-day basis. Web Applications encompass Dashboards, Diagrams, Tables, Trends, Alarms, and Reports.

The browsers supported on Web Client computers are:

- Microsoft Internet Explorer versions 10 or 11.
- Microsoft Edge*.
- Google Chrome versions 42 and later*.
- Mozilla Firefox version 35 and later*.
- Apple Safari versions 7 or 8 and later versions, respectively, on Mac computers.

  * The browsers support the web application framework and Dashboards, Diagrams, and Trends applications. Alarms and Tables are dependent on browser support of the Silverlight plugin.

To access Web Applications from a Web Client, enter an IP address or an address in the following format in your browser:

`http://domain_name/Web`

where *domain_name* is the fully-qualified name of the server hosting Power Monitoring Expert and `Web` is the default root directory, which can be changed during installation. For example, for server name **srv1**, company name **MyCompany**,and a root directory of **Web**, enter the address in the browser as:

`http://srv1.MyCompany.com/Web`

By default, the first application on the Navigation Bar in Web Applications opens in the browser. To specify which application should open first, add one of the following application parameters to the Web address. Note that the parameters are case-sensitive.

```
/#Dashboards
/#Diagrams
/#Tables
/#Trends
/#Alarms
/#Reports
```

For example, `http://srv1.MyCompany.com/Web/#Tables` opens the Tables application in the browser.

Silverlight support

Any computer that you use to access the browser-based Web Applications component requires Silverlight version 5.2 or later. If Silverlight is not installed, a Web page indicates that you need to install it before you can proceed. Click **Click now to install** to open a download

pop-up. Select **Run** to install it over the Internet.

Unable to install Silverlight?

If a message indicates that the Internet Explorer Security settings prevent the downloading of the file, you need to update the browser's internet options.

1. Click the Tools icon or the Tools menu item and select **Internet options**.
2. Click the **Security** tab, click **Internet** in the **Select a zone to view or change security settings** area, then click **Custom level**.
3. Scroll through the **Settings** list and locate **Downloads > File download**.
4. Select **Enable** and then click **OK** to close the Security Settings dialog.
5. Click **OK** to close the Internet Options dialog.
6. Click **Click now to install** to open a download pop-up and proceed with installation of Silverlight.

If your site restricts access to the Internet, you should contact your System Administrator, as indicated when you click **Unable to install Silverlight?**.

Unable to install Silverlight?
You must have internet access to install Silverlight. If you require access to this application and your corporate policy restricts either internet access or application installations, contact your System Administrator.

Your System Administrator can use an Internet-enabled computer to review the Silverlight deployment methods described in the Microsoft Silverlight Deployment Guide at

http://download.microsoft.com/download/C/D/5/CD5AAAE3-21F7-47A8-B7D5-39E36BAF9AC8/Silverlight_Deployment_Guide.docx

Post-installation tasks

Perform the following procedures after you install the Power Monitoring Expert software.

Restart your system

It is recommended that you restart (reboot) your system after installing the software to complete the configuration of the services that have been installed, and to ensure that the software components run successfully.

Clear your browser cache after upgrading

After upgrading from a previous version of Power Monitoring Expert, clear the browser cache on each client computer used to access the Web Applications component. Review the help for your browser for instructions on clearing the cache.

Complete the product registration

When you log in to Management Console, a registration reminder message opens. You can complete the product registration by following the instructions in the Product Registration dialog. The message continues to appear at each log in until you complete the registration.

Activate software licenses

The installed software includes a 90-day trial license for all features of the product. You must activate valid purchased software licenses within 90 days, otherwise some software functionality is disabled.

NOTICE

LOSS OF COMMUNICATION

- Be sure to activate product and component licenses prior to the expiry of the trial license.
- Ensure that you activate sufficient licenses for the servers and devices in your system.

Failure to follow these instructions can result in loss of data.

You need to purchase and activate licenses for the following software features:

- Communications Server – requires Server and Device licenses.
- Vista/Designer – requires an Engineering Client license.
- OPC Server – requires an OPC DA Server license.
- Application Modules – requires the appropriate Application Module license.
- Event Notification Module (ENM) – requires the ENM license.
- Web Clients – require Web Client licenses.

When your order is processed, a Software Certificate with your unique Authorization Code is sent to you. (If you provided an email address, it is sent from softwarelicensing@schneider-electric.com. You may need to change the settings in your email application to ensure that this email arrives in your inbox and is not routed to your spam folder.)

When you receive your Authorization Code, use the PME Licensing Portal to obtain your software licenses. The portal, at pme-licensing.schneider-electric.com, is accessible through the internet or the Schneider Electric intranet. Mobile devices are supported.

1. Ensure that you have your Authorization Code.

   It is required in order to obtain your software licenses.

2. Log in to the PME Licensing Portal.

   If this is your first time accessing the portal, you need to register before you can log in.

3. Select **Generate Licenses**, then follow the instructions to obtain your software licenses.

To activate your software licenses:

1. Locate your Entitlement Certificate.
2. Follow these instructions to activate your licenses:
   a. Open the **Schneider Electric Floating License Manager** from **Start > All Programs > Schneider Electric**.
   b. Click **Activate** to open the **Activation Method** dialog.
   c. Choose one of the available activation methods and follow the detailed instructions provided in the dialog.

      Note that you can activate Power Monitoring Expert software licenses:

      - By Web, if your system is connected to the Internet.
      - By Web portal, if you do not have access to the Internet, but you have access to another system that is connected to the Internet.
      - By email, if you can send and receive emails on your system.

      Phone activation is not available at this time.

   d. Follow the directions on the **Activation ID** page of the dialog and enter the Activation IDs obtained from the PME Licensing Portal.
   e. Click **Finish** to complete the process.

For Secondary communication servers or Engineering Client computers, additional steps may need to be completed before the software detects the licenses. It is recommended that you contact Technical Support for instructions in completing these steps.

Contact the Software Registration Center if you experience any problems activating your software licenses. Click **Help > Support** in **Schneider Electric Floating License Manager** for the contact information.

Refer to the online help in **Schneider Electric Floating License Manager** for additional information.

Revert write permissions for the SQL Server service

If you implemented write permissions for the SQL Server service during installation of SQL Server, you should now revert those changes since they are only intended as a temporary measure to ensure a successful installation of SQL Server. See the information related to specifying the **Account Name** in "Installing SQL Server" on page 21.

Check services

Open the Windows Services dialog and ensure that all of the necessary ION and Schneider Electric services are started. The services run under the Local System account, by default. You can change the **Log On As** attribute of a service by specifying the account and password. Use the **Log On** tab on the service properties dialog to do this. The **Log On As** account must have read/write permissions on the product's installation directory, which by default is `...\Schneider Electric\Power Monitoring Expert`.

For more information, see the "ION Services" topic in the online *Power Monitoring Expert Help*.

Create local user groups

You can create Microsoft Windows local user groups on a Power Monitoring Expert primary server (that is, on the Standalone Server or the Primary Server) as a way to manage user access through group permissions. The table below shows the permissions assigned to an administrator group and a user group:

Group Name	Access to ...\Power Monitoring Expert\system[1]	Access to ...\Power Monitoring Expert\config[1]
Administrator_Group_Name, which is the name you create for your administrator group.	Full Control	Full Control
User_Group_Name, which is the name you create for your user group.	Read	Change
[1]On a 32-bit server, this is under ...\Program Files\Schneider Electric\. On a 64-bit server, this is under ...\Program Files (x86)\Schneider Electric\.		

Review Windows Task Scheduler

The Windows Task Scheduler has preconfigured scheduled jobs for performing backups, maintenance, size notification, trims, and archiving (on the ION_Data database) on the Power Monitoring Expert databases. Review these schedules and make any modifications that you require.

For more information, refer to the Database Manager and Windows Task Scheduler section in the online *Power Monitoring Expert Help*.

Configuring SQL Express on a Standalone Server for an Engineering Client connection

An Engineering Client can connect to a Standalone Server if the TCP/IP protocol is enabled in SQL Express.

Complete the following steps to enable the TCP/IP protocol:

1. Click **Start > All Programs > Microsoft SQL Server 20xx > Configuration Tools > SQL Server Configuration Manager**, where 20xx is the SQL Server version.
2. Expand **SQL Server Network Configuration** in the left pane and click **Protocols for ION**.
3. If the TCP/IP protocol status is **Disabled**, right-click **TCP/IP**, and:
   a. Select **Enable** in the menu,

      or,

   b. Click **Properties** to open the **TCP/IP Properties** dialog, select **Yes** for **Enabled**, and click **OK**.

      When you enable the TCP/IP protocol, an informational message indicates that you need to restart the service before the change takes effect.
4. Click **SQL Server Services** in the left pane under **SQL Server Configuration Manager**.
5. Click **SQL Server (ION)** to select it and then click the **Restart service** icon in the toolbar to stop the service and restart it.
6. Close SQL Server Configuration Manager.

Security considerations

This section outlines specific security considerations after the Power Monitoring Expert installation.

Power Monitoring Expert software security

Select **Help** in **User Manager** for further information about creating users and groups, and in setting system access levels.

For more information, refer to the "User Manager" section under "Management Console Tools" in *Power Monitoring Expert Help*.

The Diagrams application and user authentication

User authentication for the Diagrams application is enabled by default. It is also enabled if you upgrade from previous versions of the product.

If you access Diagrams from a browser on a Web Client computer using the URL `http://server_name/ion` (where *server_name* is the fully-qualified name of the server or its IP address), you are prompted to log in using your Power Monitoring Expert user name and password.

This also applies to Web Viewer gadgets configured to show a diagram in the Diagrams application. The user credentials of the logged in user also permit access to the applications (in the Web Applications component), during the session.

Contact your Schneider Electric representative if you want to disable user authentication for Diagrams.

Using HTTP SSL to secure Web-site communications

The Secure Socket Layer (SSL) protocol allows you to establish an encrypted link between your Web server and a browser to protect login credentials and data from interception by a 3rd party on the network.

The Web Applications component (consisting of Dashboards, Diagrams, Alarms, Tables, and Reports) can be accessed via SSL by specifying "https" instead of "http" in a Web browser on a client computer. For example:

`https://domain_name/Web`

where *domain_name* is the fully-qualified name of the server hosting Power Monitoring Expert and `Web` is the default root directory, which can be changed during installation.

Alternatively, you can use the IP address of the server.

NOTE:

- Although SSL functions out-of-the-box with Power Monitoring Expert software, Web browsers on client computers may issue a message to users indicating that the SSL certificate has not been issued by a trusted certificate authority. To remove this warning and improve the security of your system, it is recommended that you purchase and install a certificate from a certificate authority. Consult applicable Web sites for information about purchasing and installing a certificate or about creating and installing a self-signed certificate.
- To enforce the use of SSL with Power Monitoring Expert, a network-level HTTP filter must be applied. However, to maintain proper functioning of the Power Monitoring Expert software, do not disable HTTP support in IIS. It is advisable to block HTTP access to the Power Monitoring Expert server, but not to disable HTTP on the server.

- If you enter the Web Applications URL in the address field in Internet Explorer, and **Enable Protected Mode** is selected as a security setting (**Tools > Internet Options > Security**), you are blocked from opening the Web Applications component. To resolve this, add the fully-qualified Web Applications URL as a trusted site in the browser's security settings.

Default passwords for SQL Server

The default user identification and password for some of the database accounts need to be preserved for the proper operation of Power Monitoring Expert. Contact Technical Support for details before you attempt to modify user IDs and passwords.

NTFS and Share permissions on the product directory

All share permissions are automatically set to “Read” permissions for the “Everyone” group; this includes the Power Monitoring Expert share (the product's installation directory).

Change the product directory's share permission to Read/Write for users of Engineering Client computers who need to modify files, such as Vista diagrams, and for users of Reporting Client computers who need to generate reports.

Schneider Electric
35 rue Joseph Monier
92500 Rueil Malmaison – France
www.schneider-electric.com

7EN02-0380-00 03/2016