StruxureWare™ Power Monitoring Expert

Side-by-Side Upgrade Guide

From:
Power Monitoring Expert 8.0
Power Monitoring Expert 8.0 Data Center Edition
Power Monitoring Expert 8.0 Healthcare Edition
Power Monitoring Expert 8.0 Buildings Edition

To:
Power Monitoring Expert 8.1
Power Monitoring Expert 8.1 Data Center Edition
Power Monitoring Expert 8.1 Healthcare Edition

Schneider Electric

Legal Information

The Schneider Electric brand and any registered trademarks of Schneider Electric Industries SAS referred to in this guide are the sole property of Schneider Electric SA and its subsidiaries. They may not be used for any purpose without the owner's permission, given in writing. This guide and its content are protected, within the meaning of the French intellectual property code (Code de la propriété intellectuelle français, referred to hereafter as "the Code"), under the laws of copyright covering texts, drawings and models, as well as by trademark law. You agree not to reproduce, other than for your own personal, noncommercial use as defined in the Code, all or part of this guide on any medium whatsoever without Schneider Electric's permission, given in writing. You also agree not to establish any hypertext links to this guide or its content. Schneider Electric does not grant any right or license for the personal and noncommercial use of the guide or its content, except for a non-exclusive license to consult it on an "as is" basis, at your own risk. All other rights are reserved.

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.

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

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

⚠ WARNING

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

⚠ CAUTION

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

NOTICE

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

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

Each field deployed Power Monitoring Expert (PME) 8.0 system is unique. Some systems have been modified very little from the factory defaults, while others may have been completely customized. In PME, the various configuration items and settings are stored in different locations and in different formats. Most of the configuration items and settings stored in a file or in the database are easy to migrate in bulk to the new system; however, a few must be recreated individually in the new system.

This guide is designed to help you move an old PME configuration to a new PME 8.1 system.

> **Note:** In this document, PME 8.1 is used when discussing the procedural steps. However, these steps also apply to the following PME versions:
>
> » PME 8.1 Data Center Edition
>
> » PME 8.1 Healthcare Edition

> **IMPORTANT!** The upgrade procedures in this document refer to the standard PME install path: `...\Power Monitoring Expert\...` The install folder names for the Data Center and Healthcare editions are different:
>
> » `...\Power Monitoring Expert DC Ed\...`
>
> » `...\Power Monitoring Expert for Healthcare\...`

Side-by-side Upgrade

A *side-by-side upgrade* is used when an older version of the software is upgraded to a newer version, and the software needs to be moved to a new computer. This type of upgrade is referred to as side-by-side because both systems—the old and the new—exist at the same time but on different computers.

Common reasons for moving the software to a new computer during an upgrade include:

» Either the operating system (OS) version or the database (DB) server version or both on the old PME system is no longer supported in the new system.

» The computer hardware of the old PME system is outdated and needs to be replaced or upgraded.

» The old system cannot be decommissioned until the new system is fully deployed.

» You want to start with a fresh computer environment for the installation of the new version of the software but retain the configuration of the old system.

Side-by-side Upgrade Package

This guide assumes that you are using the *Side-by-Side (SBS) Upgrade Package* to assist in the upgrade process. The SBS Upgrade Package contains upgrade tools and a folder structure to help you organize and prepare both systems for upgrade.

> **Note:** Depending on the old and new systems, you might not need to use all the folders in the SBS Upgrade Package. For example, if you are not upgrading a data center, ignore the `Data_Center_Images` folder.

Purpose

This document is intended for Application Engineers, system integrators, or other qualified project execution teams who are responsible for the upgrading and configuration of an old PME system to a newly installed PME 8.1 system on a different computer using the side-by-side approach. It includes step-by-step instructions and defines prerequisites for the tasks involved. Experience using previous versions of the software is recommended.

Challenges

The challenges with completing this system migration include:

» There is no automated way to transfer the configuration.

» Many variations of the operating system (OS) and database (DB) systems are possible.

» PME can be installed as a standalone or distributed system.

» The migration can be time consuming.

» Many configuration items and settings need to be migrated.

This document addresses these challenges and provides the necessary information and procedures to plan and execute the migration successfully. However, each migration in the field provides new challenges and risks that need to be assessed and managed.

Areas not discussed in this document include integration with third party systems. Make sure you understand the application environment in which the PME system exists so you can include this in your migration plan.

When in doubt regarding any aspect of the migration, contact Schneider Electric technical support engineers to discuss the migration before going on site.

Configurations

PME 8.1 supports a number of different OS and DB versions and can be installed as standalone or distributed systems. Because of this version support, there are a large number of possible migration scenarios between the old PME system and the new PME system. For a comprehensive list of options, refer to the *Power Monitoring Expert 8.1 Installation Guide* that is delivered with the software.

Below are some examples of common configurations.

Old system:

	Small Power Monitoring Expert	Large Power Monitoring Expert
OS:	Windows 8.1	Windows Server 2012 R2
DB:	SQL Server 2014 Express	SQL Server 2014 Standard

New system: PME 8.1

	Small Power Monitoring Expert	Large Power Monitoring Expert
OS:	Windows 8.1	Windows Server 2012 R2
DB:	SQL Server 2014 Express	SQL Server 2014 Standard

Common Migrations types:

Migrate From (Power Monitoring Expert)	Migrate To (Power Monitoring Expert)
Small Standalone System	Small Standalone System
Small Standalone System	Large Standalone System
Large Standalone System	Large Standalone System
Large Standalone System	Large Distributed System
Large Distributed System	Large Distributed System

If your situation does not exactly match any of the scenarios above, you can still use this document to help you with the migration process. Many of the steps are PME specific and do not vary much between the different OS and DB systems. However, expect to spend extra time on researching scenarios that might not be covered in this document. Extra risk may also be involved as we did not test your particular migration scenario for this document.

Prerequisites

Before starting, take the time to plan the migration. Review this entire document to understand the procedures involved and the skills required to complete the tasks. Make sure you have the necessary tools and information available at the time the tasks are performed. In particular, consider the following:

» Make sure you have a copy of the SBS Upgrade Package that is distributed with this document. This package contains tools to help you with the migration.

» You need access to the PME 8.1 Install medium (DVD or .iso file).

» You need Administrator privileges on both the old and the new computer.

» You need Supervisor privileges for the old PME system and PME 8.1 systems.

» Both systems must be in the same language. You cannot change the PME language during an upgrade.

» The old PME system must be in a functional state.

» Review the *IT Infrastructure Preparation for StruxureWare™ Guide*.

This guide is written for IT administrators to help them prepare their IT system for an upcoming installation of the PME software. The guide explains the system prerequisites needed to enable a successful installation and commissioning of the software. Example prerequisites include Windows account creation and server ports.

» The new PME 8.1 system must be installed on a different computer and must be in a functional state.

» Custom report packs must be upgraded to be compatible on the new PME 8.1 system. If you transfer non-upgraded report packs to the new system, you will not be able to use any reports. See "Troubleshooting Reports" on page 89 for more information.

» The licensing system has changed from previous releases. The new PME 8.1 system includes a 90-day trial license for all features of the product. You must activate all valid purchased software licenses within 90 days, or some software functionality is disabled. Custom Reports or configuration tools that have been previously purchased with a license might require a license upgrade to continue using them after the upgrade. See "License the New System" on page 23 for more information.

> **Note:** For details on how to install PME 8.1, refer to the *Power Monitoring Expert 8.1 Installation Guide* that is delivered with the software.

Custom Report Packs

A custom report pack contains one or more custom reports that are not part of the default PME software. Report customization can range from simple – such as adding custom images – to advanced; relying on complex folder structures or requiring DLLs that were compiled using older versions of the .NET framework.

Because of these variations, custom report packs must be upgraded to be compatible on the new PME 8.1 system.

If the old custom reports have been upgraded to be compatible with PME 8.1, follow the instructions in this guide to install the report packs to the new system. All reports, custom and default, will work as expected.

> **IMPORTANT!** If you transfer saved custom reports that were not upgraded to the new system, you will not be able to use ANY reports in the new system; including the default reports.

See "Troubleshooting Reports" on page 89 for information on using non-upgraded custom report packs.

Competencies

To maximize your chance of successfully completing the tasks described in this document, you should:

» Be familiar with the Power Monitoring Expert 8.0 and PME 8.1 software products.

» Have some experience running scripts in SQL Server Management Studio, and attaching, detaching, and restoring SQL databases.

» Be familiar with the Windows Operating System.

» Have some experience editing the Windows System Registry.

» Know how to stop and start Services in the Windows Services application.

» Know how to run command line tools at a DOS command prompt.

» Know how to restart Internet Information Services (IIS) using IIS Manager.

Estimated Upgrade Time

Section	Estimated Time
Introduction	20 minutes
Step 1 – Prepare both systems	60 minutes (+ possible troubleshooting time)
Step 2 – Copy the configuration of the old system	30 minutes + 1.5 min/GB database size (ION_Data, ION_Network, Archives)
Step 3 – Identify Settings that must be Individually Transferred	30 minutes
Step 4 – Transfer the Configuration into the New System	60 minutes
Step 5 – Upgrade the Transferred Configuration	150 minutes + 4 min/GB database size (ION_Data, ION_Network, Archives)
Step 6 – Configure the Individually Transferred Settings	90 minutes (+ possible troubleshooting time)
Step 7 – Perform a Post-upgrade System Check	60 minutes (+ possible troubleshooting time)
Total upgrade time* =	**500 minutes (8.33 hours)**

* Does not including database transfer or possible troubleshooting time.

Glossary

Certain acronyms, abbreviations, and technical terms are used throughout this document and are defined in the table below.

Term	Description
Database Server	A computer in a distributed PME system that is running the SQL database server software and the PME databases. See "Distributed System" for more details.
DB	Database (e.g., SQL Server 2008 R2).
DC	Data Center
Device	A meter or a point of data collection.
Distributed System	A PME installation where parts of the system are installed on different computers. Several combinations are possible, but the most common is the separation of the PME applications and the Database server onto different computers. For example, a simple distributed install would have all the PME relevant programs and services installed on one computer and SQL Server with the PME databases installed on a second computer. In this case, the computer running the applications is called the Primary server, and the computer running SQL Server is called the Database server. A distributed system can also have Web client computers that run Web browsers to view the PME Web applications such as Dashboards, Tables, Alarm Viewer, and Reports inside the Web framework.
Download able Devices	Standard Edition (SE) – Full support including logs etc; may be released as an installer but will become native in the subsequent release of PME. Limited Edition (LE) – Only real-time and PC based logging; created and supported by Schneider Electric; will never become native. Custom Edition (CE) – Only real-time and PC based logging; created by Schneider Electric or 3rd party. CEs are used on an as-is basis; they were previously referred to as L2 or Jenny Type device drivers. SE and LE drivers are available in the download area and can be released as dPacks. CE drivers are available on the Marketplace as-is.
ENM	Event Notification Module
HC	Healthcare
IIS	Internet Information Services
OS	Operating System
PME	Power Monitoring Expert
Primary Server	Computer in a distributed PME system that is running all of the PME applications and services. See "Distributed System" for more details.
SSDT	SQL Server Data Tools
SSMS	SQL Server Management Studio

Term	Description
Standalone Server	A single computer running all parts of a PME system. See "Standalone System" for more details.
Standalone System	A PME installation where all parts of the system are installed on the same computer, i.e., all applications and services, the SQL database server, and the databases are on a single computer. This single computer is then referred to as Standalone Server. A standalone system can also have Web client computers which are running Web browsers to view the PME Web applications like Dashboard, Tables, Alarm Viewer, and Reports inside the Web framework.
VM	Virtual Machine (as compared to a physical computer).
Web Client	A computer in a PME system that runs a Web browser to view the Web applications like Dashboard, Tables, Alarm Viewer, and Reports inside the Web framework. Both standalone and distributed PME systems can have Web clients.

Upgrade Process

> **Note:** Due to modifications in PME, the side-by-side upgrade process has changed since the previous PME release.

Each field deployed system is unique. Some systems have been modified very little from the factory defaults, while others may have been completely customized. In PME, the various configuration items and settings are stored in different locations and in different formats. Most of the configuration items and settings stored in a file or in the database are easy to migrate in bulk to the new system; however, a few must be recreated individually in the new system.

The upgrading of the configuration from the old system to the new system is accomplished in seven steps and must be done in the following order:

- » "Step 1 – Prepare both Systems" on page 22
- » "Step 2 – Copy the Configuration of the Old System" on page 26
- » "Step 3 – Identify Settings that must be Individually Transferred" on page 33
- » "Step 4 – Transfer the Configuration into the New System" on page 38
- » "Step 5 – Upgrade the Transferred Configuration" on page 53
- » "Step 6 – Configure the Individually Transferred Settings" on page 73
- » "Step 7 – Perform a Post-upgrade System Check" on page 82

The detailed steps to upgrade the configuration are covered in this section.

> **Note:** The old PME system can keep running while the configuration is upgraded. However, you might experience some performance degradation if two systems are working with the devices.

> **Note:** The procedural steps covered in this document do not include configuring new features in PME 8.1.

Step 1 – Prepare both Systems

Before starting the upgrade process, it is important to understand the operational state of both the old and the new systems.

Assess the Old System

Assess the old system by completing the following procedures:

1. Review the old PME system to see if Devices, Vista Diagrams, Reports, and any other configurations are working as expected.

2. Check the system log for errors. Correct any items in error or note them down so you can address them on the new system after the migration.

3. Check the size of the historical data database (ION_Data) and look for database archives that need to be migrated.

4. Consider trimming or emptying the PQ_Events table from the ION_Data table; this can always be rebuilt if needed. This table can get quite large and might not be needed on the new system.

5. Check the size of other tables and databases and consider what is needed in the new system. Upgrading these tables can take a very long time if there are large amounts of data being transferred and upgraded. Trim large databases to avoid long upgrade times.

6. Determine whether the old report packs have been upgraded to work on the new system. See "Custom Report Packs" on page 16 and "Troubleshooting Reports" on page 89 for more information.

7. Run the Diagnostic Tool that is found at `...\[Install location]\Schneider Electric\Power Monitoring Expert\Diagnostics Tool\Diagnostics Tool.exe`.

> **Note:** The migration of the ION_Data database is often the most time consuming part of the system migration. You can expect this process to take about 1 hour for each 15 GB in database size. It is often better to trim the database or archive portions that are no longer needed before the migration. This is especially important for large database sizes. Plan this part of the migration carefully.

Assess the New System

> **Note:** The procedures in this document are based on the assumption that PME 8.1 is installed correctly on the new computer, and that it is in a factory default configured state. Any custom configuration that exists on the new system will be overwritten by the migration procedures in this document.

Assess the new system by completing the following procedures:

1. Check a few of the basic functions such as the system log for errors, and inspect the System Configuration Report.

2. Open the Web Application and ensure that there are no Dashboards and that the default Web Reports are available.

3. Run the Diagnostic Tool that is found at `...\[Install location]\Schneider ElectricPower Monitoring Expert\Diagnostics Tool\Diagnostics Tool.exe`

After confirming the installation is working correctly, assess whether the new system has enough available hard disk space to accommodate the PME databases and the database upgrade procedures.

> **Note:** You should have at least four times the size of the PME databases in free hard disk space to allow for: backups, disk usage during the database upgrade process, and increase in the database size after the upgrade.

License the New System

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, or some software functionality is disabled.

For information on licensing, refer to the *Power Monitoring Expert* 8.1 *Installation Guide*. To find to the installation guide, open the Management Console > click **Help** > **Installation Guide**.

For quick answers to the most common licensing questions, refer to the PME Licensing Guide. (You will need to provide your PME Exchange Community login credentials.)

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

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.
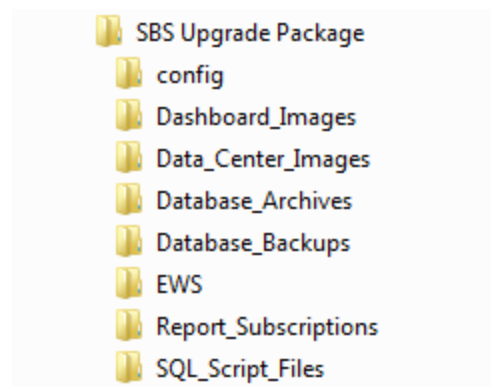
Prepare the Side-by-side Upgrade Package

The Side-by-Side (SBS) Upgrade Package contains upgrade tools and a folder structure to help you organize and prepare both systems for upgrade.

In subsequent steps you will copy configuration files from the old system to SBS Upgrade Package folders, use the tools to facilitate the upgrade, and then copy the entire SBS Upgrade Package to the new system.

To prepare the SBS Upgrade Package:

Locate the SBS Upgrade Package and copy it to the `C:\` drive of the old system.

SBS Upgrade Package
- config
- Dashboard_Images
- Data_Center_Images
- Database_Archives
- Database_Backups
- EWS
- Report_Subscriptions
- SQL_Script_Files

Distributed System Note: If the old PME system is a distributed system, copy the SBS Upgrade Package on the Primary and the Database Server in the following manner:

On the Primary Server:

SBS Upgrade Package
- config
- Dashboard_Images
- Data_Center_Images
- EWS
- Report_Subscriptions
- SQL_Script_Files

On the Database Server:

SBS Upgrade Package
config
Database_Archives
Database_Backups
SQL_Script_Files
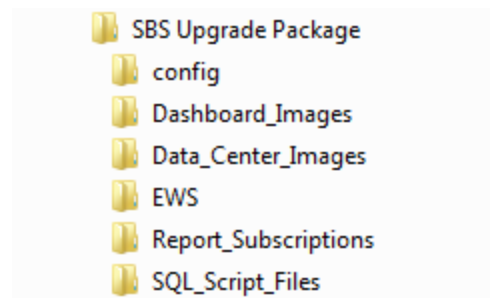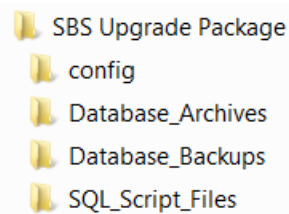
At this point, the following folders are empty:

» `\config`

» `\Custom_Reports`

» `\Dashboard_Images`

» `\Data_Center_Images`

» `\Database_Archives`

» `\Database_Backups`

» `\EWS`

`\Report_Subscription` contains the following files:

» `ExportSubscriptions.exe`

» `gacutil.exe`

» `ImportSubscriptions.exe`

» `IONSubscriptionsHelper.dll`

`\SQL_Script_Files` contains the following files:

» `Fix_PME_Users.sql`

» `SSDT_cmd_Line.bat`

» `update_server_name_in_archive_databases.sql`

» `update_server_name_in_live_databases.sql`

Step 2 – Copy the Configuration of the Old System

After assessing the old and new systems and ensuring they are operating properly, copy the old PME system configuration components to the SBS Upgrade Package.

Copy Database Backups and Archives

The database backups from the old system need to be copied to the SBS Upgrade Package. The following databases from the old system must be backed up:

» ION_Data (contains the historical data and event logs)

» ION_Network (contains the configuration information)

> **Note:** Do not copy a backup of the System Log database; it contains information relevant to the old PME system. The new PME system has its own System Event log.

> **Distributed System Note:** The databases and archives are located on the Database Server.

To back up the system databases and database archives:

1. Open SQL Server Management Studio and connect to the PME database instance.

   > **Note:** You can find the location of the database files by viewing the Properties of the database in SQL Server Management Studio.
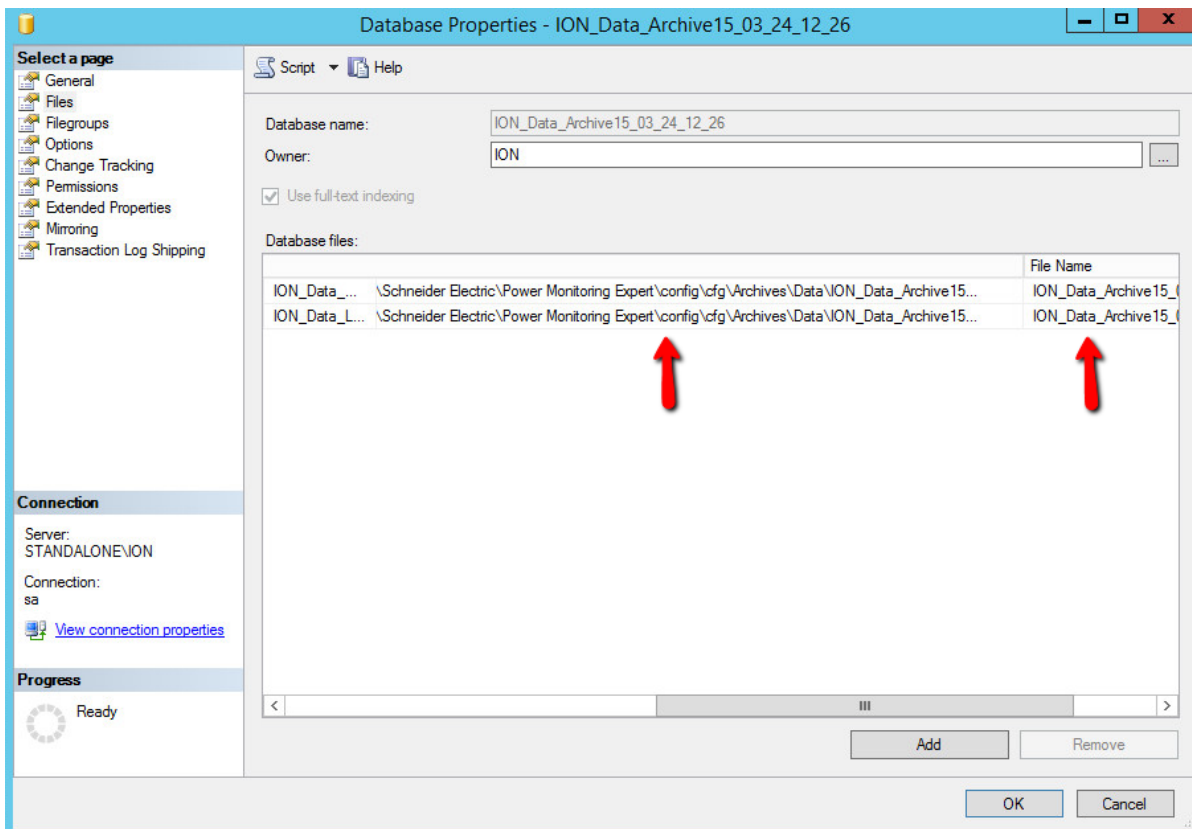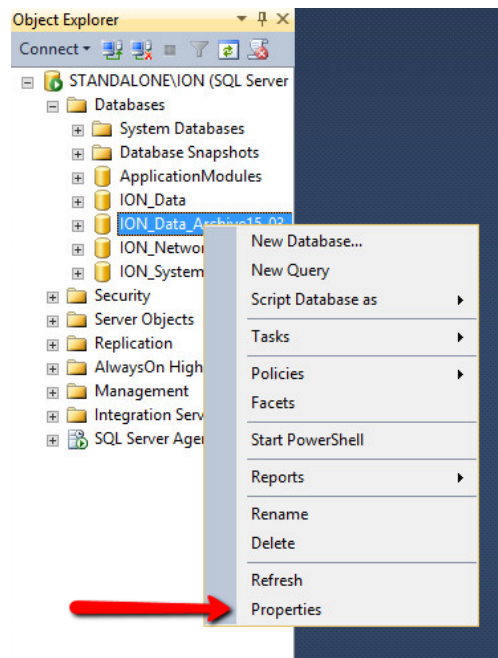
2. Right-click the ION_Data database and then click **Tasks** > **Back Up**.
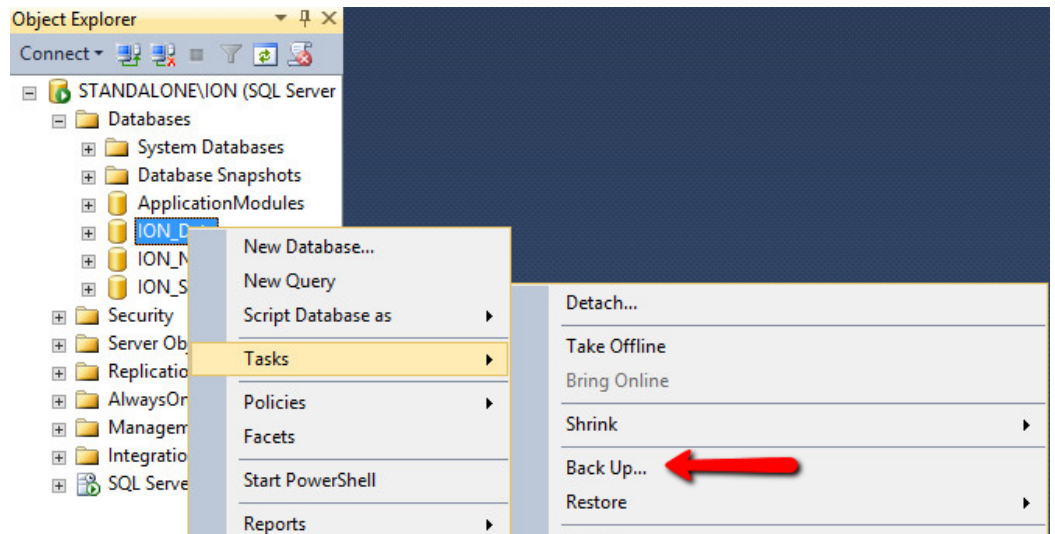
3. Name the backup file `ION_Data` and back it up to the `...\SBS Upgrade Package\Database_Backups` folder.

> **Note:** You can expect this backup process to take about 15 minutes for a 10 GB database.

4. Repeat this process for the ION_Network database. Use ION_Network as the label name for the backup file.

Repeat this process to backup the database archives from the old system, using the name of the archive as the name for the backup. Copy them to the `...\SBS Upgrade Package\Database_Archives` folder.

Copy config Folder

The config folder contains many of the system configurations in the old PME system.

However, the following …\Schneider Electric\Power Monitoring Expert\config files and folders are **not** needed for the migration and **should not be copied**:

» The DatabaseRegistry.reg file

» The \config\cfg\DBBackups and \config\cfg\Archives folders. This is where scheduled database backup and archive files are stored. These files tend to be large and since we copied the archive files separately, there is no need to copy them again.

» Any other database backups or archive files that might be stored in \config or any of its sub-folders.

» The PowerShell scripts in …\Schneider Electric\Power Monitoring Expert\config\cfg\DbScheduledTasks.

Copy the remaining content of the \config folder on the old system to the ...\SBS Upgrade Package\config folder.

> **Distributed System Note:** There is a ...\config folder on both the Primary Server and the Database Server:
> 1. Copy the \config folder on the Primary Server into the ...\SBS Upgrade Package\config folder you created for the Primary Server.
> 2. Copy the \config folder on the Database Server into the ...\SBS Upgrade Package\config folder you previously created for the Database Server.

Custom Report Packs

The old system might contain custom report packs. These must be updated before you can use them on the new system.

> **IMPORTANT!** Some custom report packs may not upgrade correctly due to missing the file Content_Types.xml and other modifications. Contact the provider of the custom report pack BEFORE upgrading to PME 8.1 and ensure its functionality has been tested on PME 8.1. See "Custom Report Packs" on page 16 and "Troubleshooting Reports" on page 89 for more information.

To check the old system for custom report packs:

1. Navigate to …\Schneider Electric\Power Monitoring Expert\web\ReportPacks\

2. Identify any custom report packs that exist on the old system.

3. Contact the report pack provider to obtain a PME 8.1 compatible version of these report packs.

Copy Report Subscriptions

The SBS Upgrade Package includes a tool that copies the old system report subscriptions. However, since report subscriptions in PME are handled differently depending on which SQL Server edition is used, the tool does not work for certain SQL server edition upgrade scenarios.

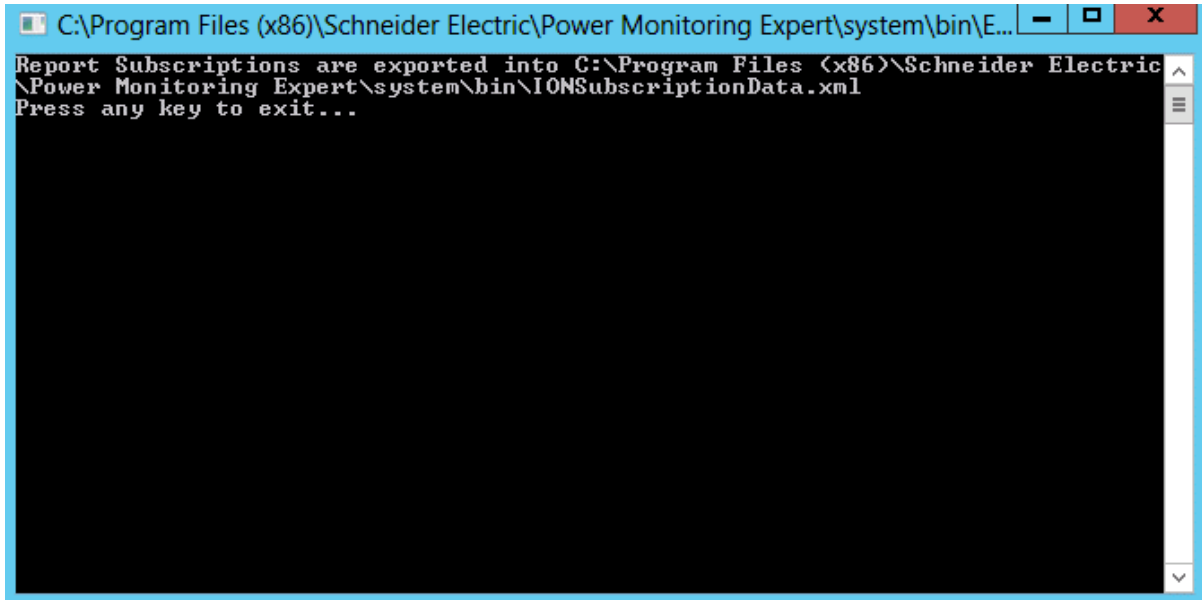| SQL Server Edition	Scheduling Tool	Configuration UI	Schedule Details
SQL Standard	SQL Agent	Report Management UI in Web Applications	Stored in msdb database (part of SQL Server)
SQL Express	ION Task Scheduler	Report Management UI in Web Applications	Stored in ION_Network database

Use the following information to determine which upgrade process to use:

	PME 8.1	Upgrade Process
SQL Standard	SQL Standard	Use SBS Upgrade Package tool (see instructions below)
SQL Express	SQL Standard	Use SBS Upgrade Package tool (see instructions below)
SQL Standard	SQL Express	Subscriptions must be recreated in PME (skip this topic)
SQL Express	SQL Express	Subscriptions are automatically transferred with the ION_ Network database migration (skip this topic)

Distributed System Note: Complete these tasks on the Primary Server.

To copy the report subscriptions:

1. In the `...\SBS Upgrade Package\Report_Subscriptions` folder, locate `ExportSubscriptions.exe` and `IONSubscriptionsHelper.dll`.

2. Copy the 2 files to the `...\Power Monitoring Expert\system\bin` folder on the old PME system.

3. As the Administrator, run `ExportSubscriptions.exe`.

   The tool opens a command prompt and indicates when the task is complete.

```
C:\Program Files (x86)\Schneider Electric\Power Monitoring Expert\system\bin\E...   _  □  X

Report Subscriptions are exported into C:\Program Files (x86)\Schneider Electric
\Power Monitoring Expert\system\bin\IONSubscriptionData.xml
Press any key to exit...
```

The output of the tool is a file called `...\Power Monitoring Exper-t\system\bin\IONSubscriptionData.xml`.

4. Press Enter to close the command prompt window.

5. Copy `IONSubscriptionData.xml` to the `...\SBS Upgrade Pack-age\Report_Subscriptions\` folder.

Step 3 – Identify Settings that must be Individually Transferred

The previous step resulted in copying configuration settings, such as the `...\config` folder or the databases, to easily transferable locations.

For this section, examine the existing system for customizations that need to be individually transferred and then decide which of these are needed on the new system.

Scheduled Tasks on the Old System

Windows Task Scheduler is used to schedule Power Monitoring Expert activities such as database archive, trim, or backup. Any such tasks that exist on the old system need to be manually recreated on the new system if desired.

PowerShell

Navigate to `...\config\cfg\DbScheduledTasks\Support\` and then open `Configuration.ps1`.

Note the following PowerShell script file settings:

» `$locationForBackupFiles`

» `$locationForArchiveDBFiles`

» `$archiveDBDaysToKeep`

» `$maximumDatabaseSizeInGigabytes`

» `$databaseSizeNotificationThresholdPercentage`

» `$diagnosticsDaysToKeep`

Navigate to `...\config\cfg\DbScheduledTasks\` and then open `Backup.ps1`.

Note the following PowerShell script file settings:

» `$numberOfBackupsToRetain`

Compare these settings later with the settings on the new system.

OPC Measurement Definitions

PME ships with a factory default file that defines which measurements are available for the different device types through OLE for Process Control (OPC).

It is possible to edit this file to add new device types and measurements. Changes made to the existing OPC measurement definition file need to be manually copied to the new system.

To check OPC Measurement Definitions for changes:

1. Navigate to the `...\Schneider Electric\Power Monitoring Expert\system\IONServices` folder.

2. Open `DefaultMeasurements.xml`.

3. Check the file and then note the changes that you want to recreate on the new system.

Registry Settings

Some functions in PME are controlled by settings that are stored in the Windows registry. Most of these settings – also called registry keys – are part of the default system install and do not need to be transferred. However, some registry keys might have been added after the install and transferred to the new system.

The most common custom registry keys are for:

» Specifying a custom network diagram (instead of using the default network diagram) to be used in the Diagrams (WebReach) part of the Web Applications.

» Enabling linking of custom device types (for example, those created with the MDI) to default diagrams in ION Vista.

This topic outlines how to:

» Export the entire set of PME registry keys to a text file as a backup in case this information is needed in the future.

» Locate for specific keys that are commonly added and that will have to be recreated on the new system.

To copy the custom registry settings:

1. Start the Windows Registry Editor.

2. Navigate to the default location for Power Monitoring Expert

   `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Schneider Electric` [for 64-bit systems]

   `HKEY_LOCAL_MACHINE\SOFTWARE\Schneider Electric` [for 32-bit systems]

3. Right-click Schneider Electric and export the registry as a TXT file.

4. Copy the TXT file into `...\SBS Upgrade Package\`

To find a customized network diagram key:

1. Open the Windows Registry Editor and browse to:

   `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Schneider Electric\Power Monitoring Expert\8.0\WebReach` [For 64-bit systems].

   `HKEY_LOCAL_MACHINE\SOFTWARE\Schneider Electric\Power Monitoring Expert\8.0\WebReach` [For 32-bit systems].

2. Search for a key named NetworkDiagram.

3. Write down the value of this key; it will look like a file path. For example: `x-pml:/-diagrams/ud/campus/campus_home.dgm`

To find a custom device type key used for Vista diagram linking:

1. Open the Windows Registry Editor and browse to:

   `HKEY_LOCAL_MACHINE\SOFTWARE\Schneider Electric\Power Monitoring Expert\8.0\DeviceInfo` [For 64-bit systems].

   `HKEY_LOCAL_MACHINE\SOFTWARE\Schneider Electric\Power Monitoring Expert\8.0\DeviceInfo` [For 32-bit systems].

2. Compare the list of device types to the list of "Default Device Drivers" on page 84.

3. Write down the custom keys and values or export that section of the registry.

ION Login Password

The Modify Login action in Database Manager changes the SQL Server password for the default login name ION.

To check whether the password has changed:

1. Open the Windows Registry Editor and browse to:

   `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Schneider Electric\Power Monitoring Expert\8.0\Databases` [For 64-bit systems]

   `HKEY_LOCAL_MACHINE\SOFTWARE\Schneider Electric\Power Monitoring Expert\8.0\Databases` [For 32-bit systems]

If there is a key named `Password`, of `Type REG_BINARY`, then the ION login has been changed. You will need to find the password and manually change it using the Database Manager tool on the new system.

If there is no such key, then the default password is used and no changes need to be made on the new system.

Dashboard Images

To copy the dashboard images from the old system:

1. In Windows Explorer navigate to `...\Schneider Electric\Power Monitoring Expert\Applications\ApplicationFramework\BackgroundImages`.

2. Copy the image files `...\SBS Upgrade Package\Dashboard_Images`.

Data Center Edition Images

> **Note:** This topic applies to PME Data Center Edition only.

1. In Windows Explorer navigate to `...\Schneider Electric\Power Monitoring Expert DC Ed\Applications\ApplicationFramework\UserImages`.

2. Copy the image files to `...\SBS Upgrade Package\Data_Center_Images`.

EcoStruxure Web Services (EWS) Configurations

By default, the EWS service is disabled in PME 8.1. It must be manually enabled.

If EWS is configured on the 8.0 system, it must be re-enabled in the 8.1 system.

To check for EWS customization on the old system:

1. In Windows Explorer navigate to `...\Schneider Electric\Power Monitoring Expert\Applications\EWS\` and then open `Web.config`.

2. Search for the following string:

   » `EWSEnabled`

   » If the `EWSEnabled` value is `1`, then EWS is configured. If the value is `0`, then it has not been enabled and does need to be updated in the new system.

3. If EWS is enabled, search for the following settings:

   » `EWSAlarmSortOrder`

   » `ContainerItemStructure`

   » `NaNValue`

» `ConcatSourceAlarmEventId`

» `RealTimeRefreshRate`

» `RefreshImmediately`

» `RealTimeSessions`

» `IgnoreCurrentCulture`

4. Note the setting values; you will need to copy these to the EWS configuration on new system.

To transfer any custom EWS device type definitions:

1. In Windows Explorer navigate to `...\Schneider Electric\Power Monitoring Expert\system\WebServices\Extensions\`.

2. Copy the Extensions folder to `...\SBS Upgrade Package\EWS`.

Step 4 – Transfer the Configuration into the New System

The topics in this section outline how to transfer the configurations from the old PME system into the new PME 8.1 system.

Prepare the New System

On the new system, prepare for transferring the configuration by completing the following steps:

Distributed System Note: Stop the services on the Primary Server.

1. Close all PME applications and use the Windows Services application to stop the following services on the Primary Server (there are no PME services running on the Database Server):

   » ApplicationModules AlarmServiceHost

   » ApplicationModules CoreServicesHost

   » ApplicationModules DataServicesHost

   » ApplicationModules ProviderEngineHost

   » ION Alert Monitor

   » ION Component Identifier Service

   » ION Connection Management Service

   » ION Event Watcher Service

   » ION Log Inserter Service * (Disable the ION Log Inserter Service after stopping it. See * below.)

   » ION Managed Circuit Service

   » ION Network Router Service

   » ION OPC Data Access Server

   » ION PQDIF Exporter Service

   » ION Query Service

   » ION Real Time Data Service

» ION Report Subscription Service

» ION Site Service

» ION Software Alarm Service

» ION Software Modbus Gateway Service

» ION Virtual Processor Service

» ION Virtual Processor Service -NVIP.PQADVISOR

» ION XML Subscription Service

» ION XML Subscription Store Service

IMPORTANT NOTES:

» * If this service starts accidentally before all changes are made, the database may become inoperable, a state from which it is difficult to recover.

» Ensure all services are stopped before proceeding.

» Some services may have Startup Type set to Manual and may not be running.

» ION services automatically restart when the computer is rebooted.

» Until the PME installer automatically starts all the necessary ION services as part of the upgrade configuration, the ION services must remain stopped.

Copy the SBS Upgrade Package to the New System

The SBS Upgrade Package must be copied to the new computer; for example by using a removable drive to transfer the files.

Copy the `...\SBS Upgrade Package` folder and all its sub-folders to the C: Drive of the new computer.

> **Distributed System Note:** Copy the Database folders to the Database Server. Copy the remaining folders to the Primary Server.

Transfer config Folder

Copy the entire `...\SBS Upgrade Package\config` folder and its contents to the `...\Schneider Electric\Power Monitoring Expert\config` location on the new system, overwriting any existing folders and files.

Segment Edition Note: This default file path is different for the PME Segment Editions.

> **Distributed System Note:** For situations involving distributed installs of PME, do one of the following:

Old System Type	New System Type	Import Steps
Distributed	Distributed	Copy the `...\SBS Upgrade Package\config` folder from the Primary Server to the new PME Primary Server. Copy the `...\SBS Upgrade Package\config` folder from the Database Server to the new PME Database Server.
Standalone	Distributed	Copy the `...\SBS Upgrade Package\config` folder to the Primary Server as described above. For the Database Server, copy the following `...\SBS Upgrade Package\config` sub-folders to the `...\Schneider Electric\Power Monitoring Expert\config` folder on the Database Server: » \AlertMonitor » \diagrams » \exporters » \lvp » \reports » \templates » \translators
Distributed	Standalone	Copy the `...\SBS Upgrade Package\config` folder from the Primary Server and the Database Server to the new PME standalone server.

Transfer Dashboard Images

To transfer the dashboard images:

1. Copy the image files from `...\SBS Upgrade Package\Dashboard_Images` to `...\Schneider Electric\Power Monitoring Expert\Applications\SystemDataService\App_Data\Images\BackgroundImages`.

> **Note:** Do NOT overwrite files in the target folder.

Transfer Data Center Edition Images

> **Note:** This topic applies to PME Data Center Edition only.

To transfer the Data Center images:

1. Copy the image files from `...\SBS Upgrade Package\Data_Center_Images`
   to `...\Schneider Electric\Power Monitoring Expert`
   `DC Ed\Applications\SystemDataService\App_Data\Images\En-`
   `ergyGadgetImages`.

> **Note:** Do NOT overwrite files in the target folder.

Connect the Old Databases

You need to remove, rename, or delete the factory (new) database files before you can connect the old databases to the new system.

> **Distributed System Note:** Complete these steps on the Database Server.

Detach the Default Databases

Before you can remove, rename, or delete the factory installed ION_Data, ION_Network, and ApplicationModules databases on the new PME system with the copies made from the old PME system, you must first detach the factory installed databases.

To detach the ION_Data database from the new system:

1. Go to SQL Server Management Studio and right-click **ION_Data** > **Tasks** > **Detach**.

   > **Note:** If you cannot detach a database because of active connections, select the Drop Connections option in the detach dialog in SQL Server Management Studio. For example:
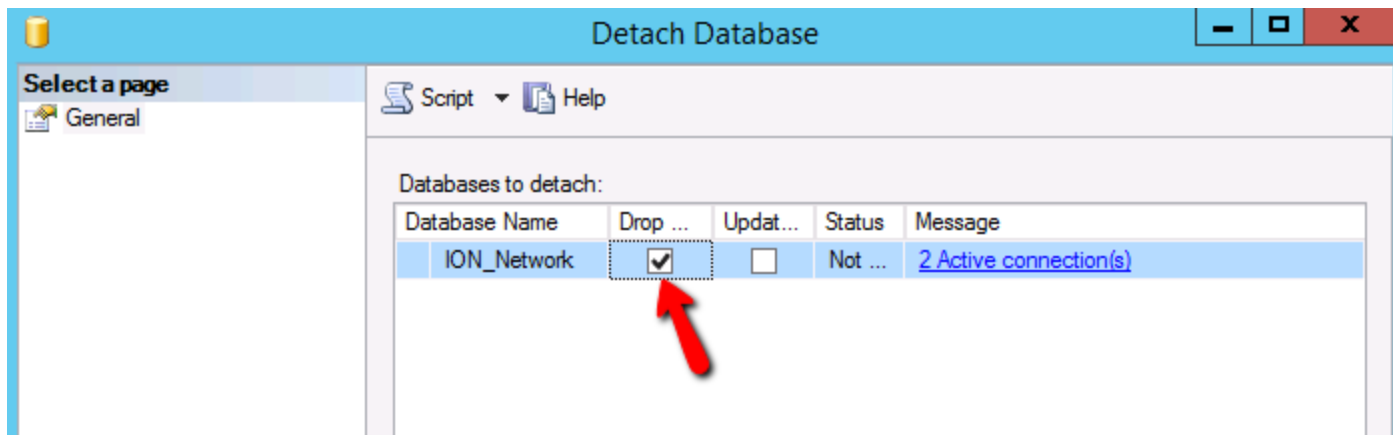
2. Follow the same steps to detach the ION_Network and ApplicationModules databases.

Remove, Rename, or Delete the Factory Databases

Detaching the databases will not remove the database files from the new PME folder structure. Since the old databases that you need to upgrade must be in the same location as the factory ones, you need to delete, remove, or rename the factory database files. The factory database files are located at `...\Schneider Electric\Power Monitoring Expert\Database\ApplicationModules, \Data, \Network`.

1. Navigate to `...\Schneider Electric\Power Monitoring Expert\Database\ApplicationModules, \Data, \Network`.

2. Rename the factory database files.

   For example:
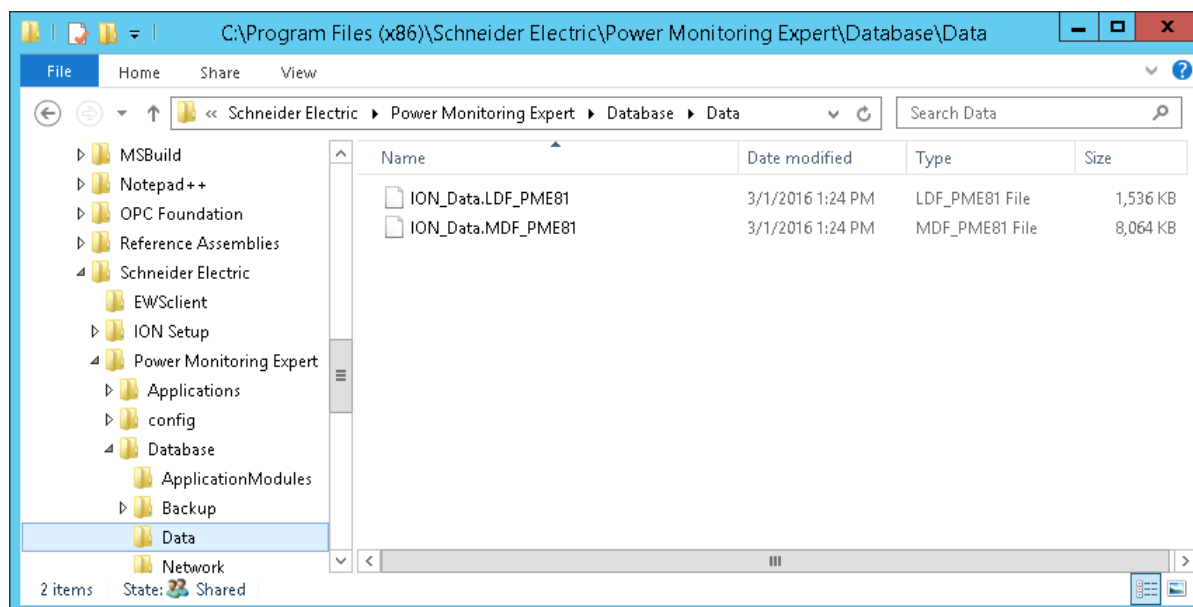
Restore the Databases from the Old System

Restore the old databases to the new PME system at their default location:

- » ION_Data database: …\Schneider Electric\Power Monitoring Expert\Database\Data

- » ION_Network database: …\Schneider Electric\Power Monitoring Expert\Database\Network

- » ApplicationModules database: …\Schneider Electric\Power Monitoring Expert\Database\ApplicationModules

To restore copies of the old PME databases into the new PME system:

1. In SQL Server Management Studio, right-click **Databases** and then click **Restore Database**.

2. Click **Device** and then click **...** (the ellipsis button).

---

3. Click **Add**.

4. In the Locate Backup File dialog, navigate to the PME database file from the `...\SBS Upgrade Package\Database_Backups` folder and enter the database name in the **File name** field.

For example:
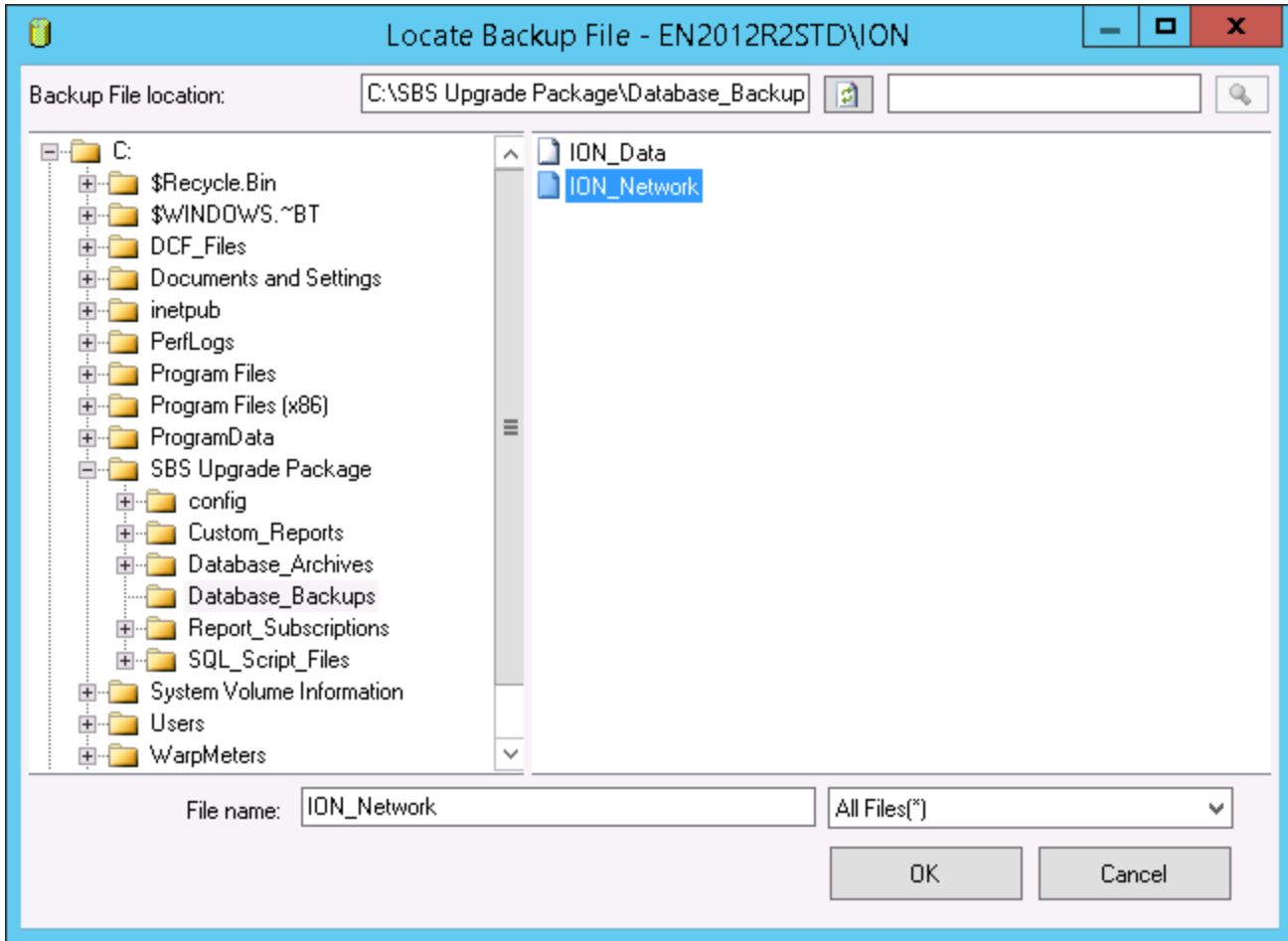
5. Click **OK**.

6. Make sure that **Restore** is checked:
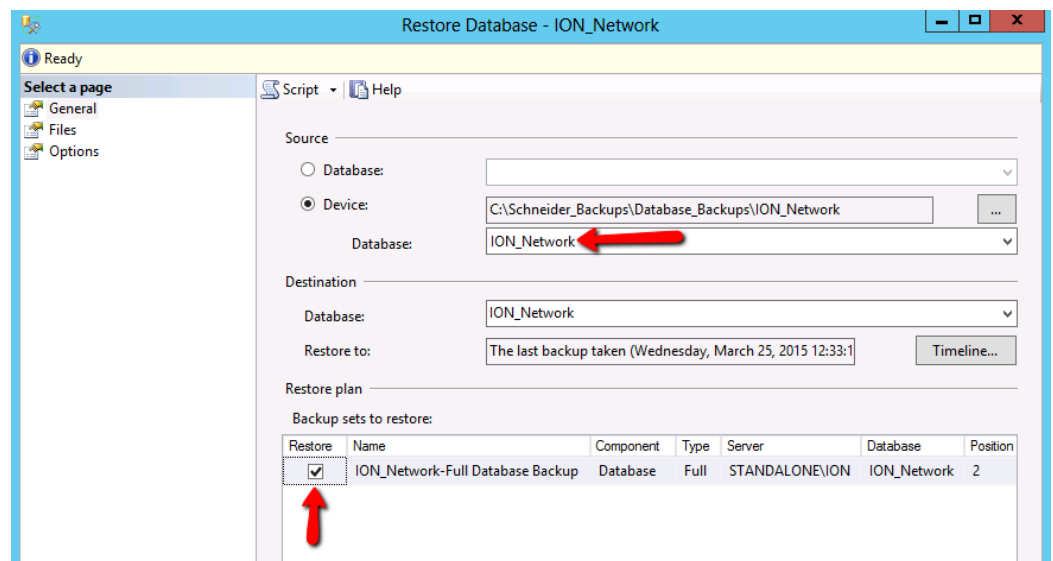
7. Click on the **Files** tab on the upper left of the window, click **Relocate** all files to folder, and then select the location for restoring the database:
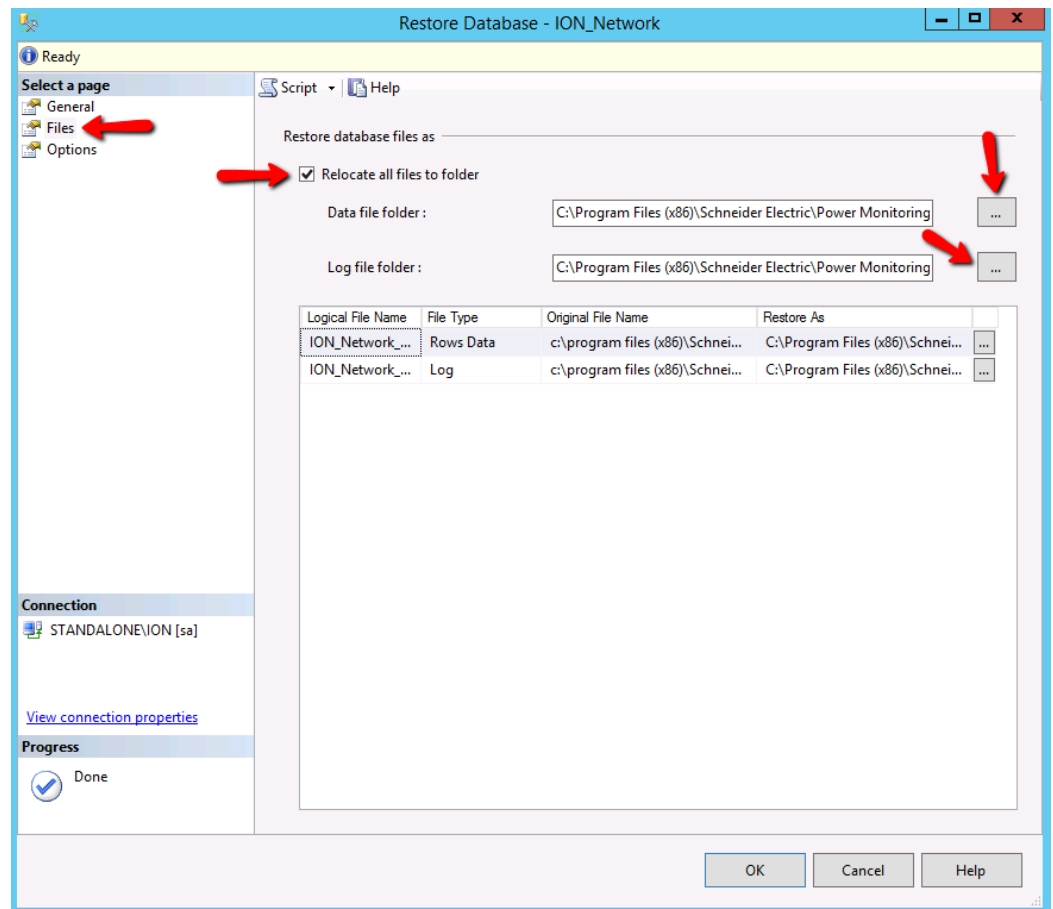
8. Select the default location for the PME databases. For example:
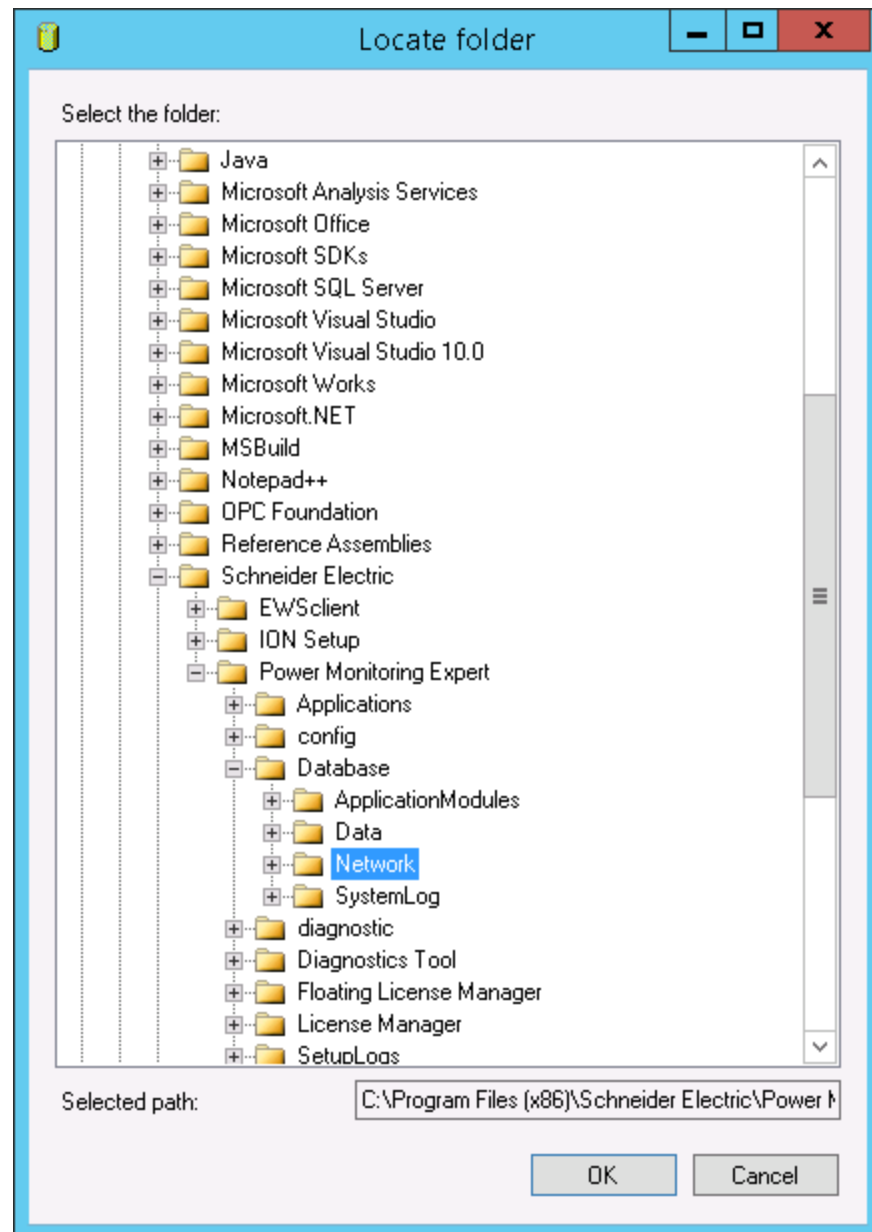
9. Click **OK**.

The following image shows the restored databases:
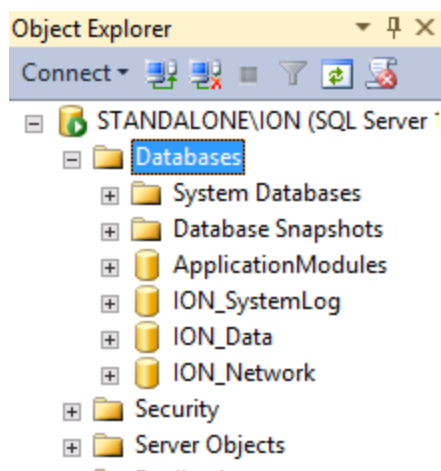
> **Note:** You can expect the database restore to take about 5 minutes for a 10 GB database.

Restore the Archive Databases to the New System

Since the new PME system does not have a default folder location for database archives, create a folder called …`\Schneider Electric\Power Monitoring Expert\Database\Archives`.

Repeat steps 1 through 9 above, restoring the archive databases to this folder.

For example:
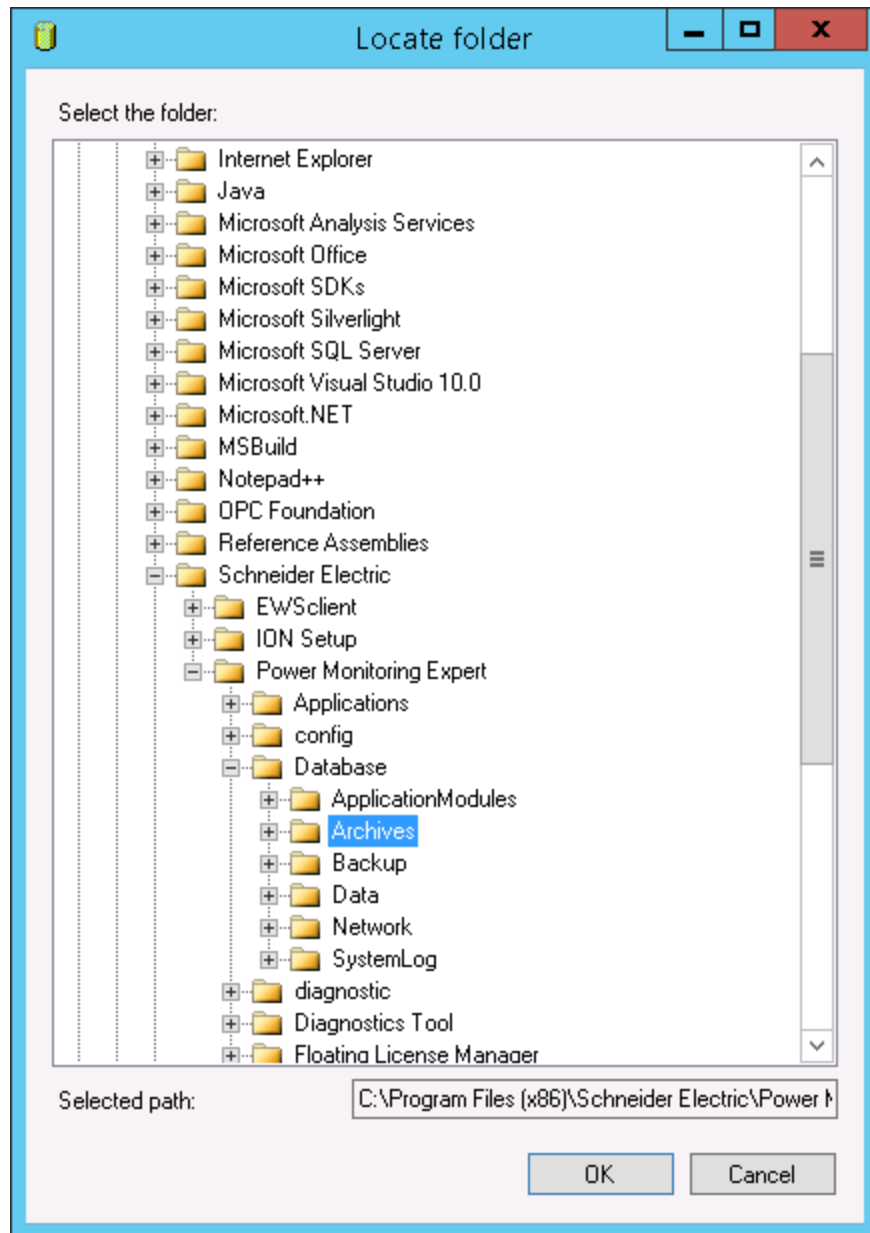
Import Custom Report Packs

> **Note:** Upgrading custom reports is not within the scope of this SBS upgrade process. Contact your report provider to upgrade the old reports to PME 8.1. Once upgraded, you can install them on the new PME system.

Importing the upgraded custom report packs into the new PME system is a 2 step process:

1. Copy the upgraded report packs into the new system.

2. Install them on the new PME system.

You will complete the first step now; step two will be completed later.

> **Distributed System Note:** Complete this step on the Primary Server.

To copy the report pack into the new system:

1. Copy all upgraded report packs to `…\Schneider Electric\Power Monitoring Expert\Web\ReportPacks\`.

Import Report Subscriptions

Since report subscriptions in PME 8.0 and PME 8.1 are handled differently depending on which SQL Server edition is used, use the following information to determine which import process to use:

PME 8.0	PME 8.1	Import Process
SQL Standard	SQL Standard	Copy the SBS Upgrade Package report subscriptions to the new system (see instructions below)
SQL Express	SQL Standard	Copy the SBS Upgrade Package report subscriptions to the new system (see instructions below)
SQL Standard	SQL Express	Subscriptions must be recreated in PME 8.1 (skip this topic)
SQL Express	SQL Express	Subscriptions are automatically transferred with the ION_Network database migration (skip this topic)

> **Distributed System Note:** Complete the following steps on the Primary Server.

To import the report subscriptions:

1. Copy the contents of the `...\SBS Upgrade Package\Report_Subscriptions\` folder into the `…\Schneider Electric\Power Monitoring Expert\system\bin\` folder.

    The report subscriptions will be installed in a subsequent step.

At this point, all of the old PME configuration has been moved to the new system and is ready to be upgraded and installed on the new PME system.

IMPORTANT! The configuration is still NOT ready for use. More steps are required to upgrade the configuration to make it compatible with the new system.

# Step 5 – Upgrade the Transferred Configuration

To upgrade the transferred configuration on the new system, complete the tasks in this section.

> **IMPORTANT!** The new PME system is NOT in a functional state. You cannot start the services or run the applications. Make sure you follow the exact sequence provided below. Whether done manually or by using the SQL script, the databases MUST be upgraded before the server name changes are made.

Upgrade ION_Data, ION_Network, and archived databases

> **IMPORTANT!** Make sure the new system has at least four times the size of the PME databases in free hard disk space to allow for: backups, disk usage during the database upgrade process, and increase in the database size after the upgrade.

Use the Database Manager tool in PME to upgrade the databases for ION_Data, ION_Network, and archive databases. Since the system is not yet functional, you cannot start PME Management Console to access the Database Manager. To open this tool, start `Data-baseManager.exe` from the `…\Schneider Electric\Power Monitoring Expert\system\bin` folder.
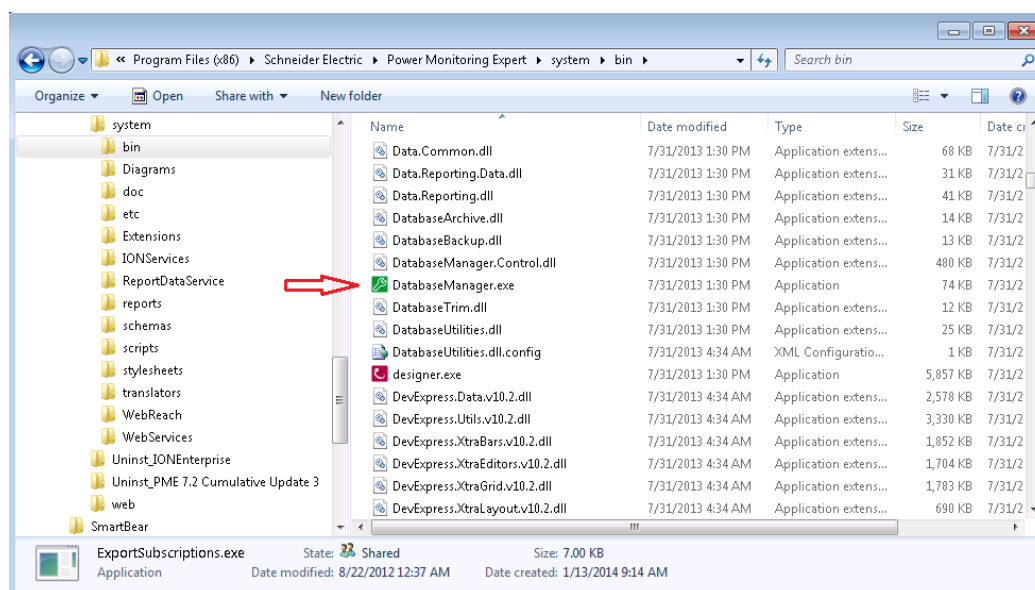
> **Distributed System Note:** Complete these steps on the Database Server.

> **Note:** Upgrading large databases is a time consuming process. Expect this to take approximately one hour for each 15GB of database size. Also, the disk space required for the upgrade can be as much as 4 times the size of the original database. Make sure there is sufficient disk space for this upgrade.
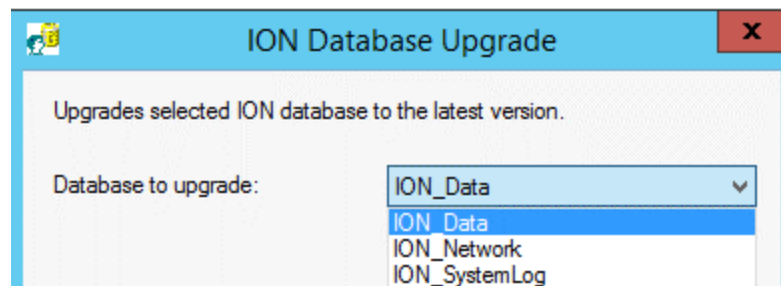
> **IMPORTANT!** Upgrade the ION_Data database first, before you upgrade the ION_Network database or any other archived databases.

To upgrade the database:

1. In Database Manager, select **Upgrade Databases**.
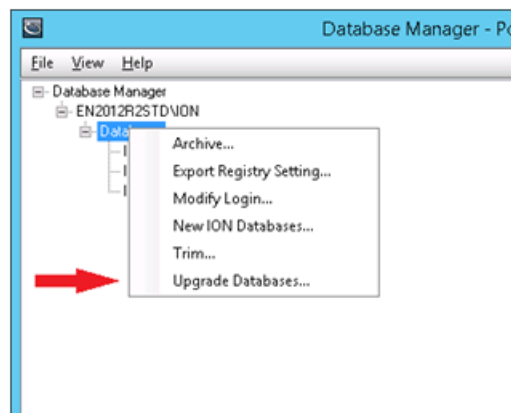
2. Select **ION_Data** for upgrade.

ION_Data Upgrade is Complete
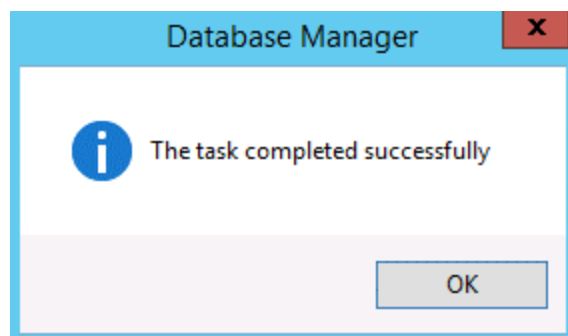
3. Repeat steps 1 and 2 to upgrade ION_Network and any archived databases.

The ApplicationModules database follows a different process. See the steps below to upgrade this database.

Upgrade ApplicationModules Database

PME Segment Edition Note: The default path for any of the PME Segment Editions is different and needs to be changed to reflect this.

1. Navigate to the `...\SBS Upgrade Package\SQL_Script_Files` folder and use a text editor to open `SSDT_cmd_Line.bat`.

2. Before running the script, make the following changes to the file in this order:

   a. In a text editor open `SSDT_cmd_Line.bat`, right-click and select **Edit**.
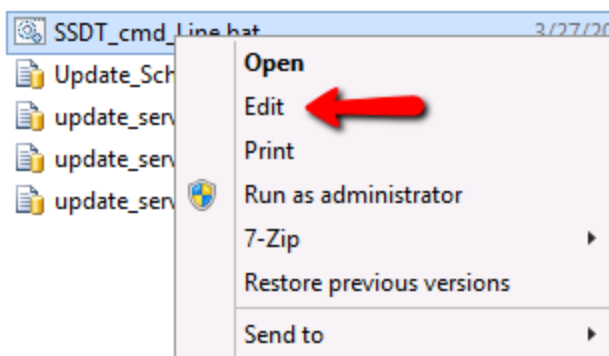
   b. Verify the Microsoft SQL Server path is correct. Edit the path if it is not the following:

   ```
   SET "PathToSqlPackage=Microsoft SQL Server-
   \120\DAC\bin\sqlpackage.exe"
   ```

   c. Verify that the SQL path and the SQL Instance are correct. Change if different from the following:

» The MDFPath and the LDFPath need to reflect the SQL Version being used and the SQL Instance respectively, NOT the database path.

» SQL 2008R2 will be `MSSQL10_50.<SQL Instance>\MSSQL\DATA`

» SQL 2012 will be `MSSQL11.<SQL Instance>\MSSQL\DATA`

» SQL 2014 will be `MSSQL12.<SQL Instance>\MSSQL\DATA`

d. (Optional) If the PME system is not installed at the default file location, edit the following parameter to match to the system's exact file path:

```
SET PMEPath=C:\Program Files (x86)\Schneider Elec-
tric\Power Monitoring Expert
```

3. After saving the file, execute it by double-clicking on the file name.

```
SSDT_cmd_Line.bat - Notepad
File   Edit   Format   View   Help
@ECHO OFF
SETLOCAL
:: Settings
:: Do not put quotes around the paths in these settings.
:: They are quoted when they are used in the script and double
:: quoting will cause problems.
:: ========================================================
SET PathToSqlPackage=Microsoft SQL Server\120\DAC\bin\sqlpackage.exe
SET DatabaseServerName=(local)
SET MDFPath=C:\Program Files\Microsoft SQL Server\MSSQL12.ION\MSSQL\DATA
SET LDFPath=C:\Program Files\Microsoft SQL Server\MSSQL12.ION\MSSQL\DATA
SET PMEPath=C:\Program Files (x86)\Schneider Electric\Power Monitoring Expert

:: ========================================================
```

After the above batch file is executed, close the prompt window. An `Applic-ationModules.sql` file is created in the `...\SBS Upgrade Package`.

4. Before running the `ApplicationModules.sql` file, enable the SQLCMD mode:

a. In SQL Server Management Studio click **Tools** > **Options** > **Query Execution** > **SQL Server** > **General**.

b. Select **By default, open new queries in SQLCMD mode**, then click **OK**.
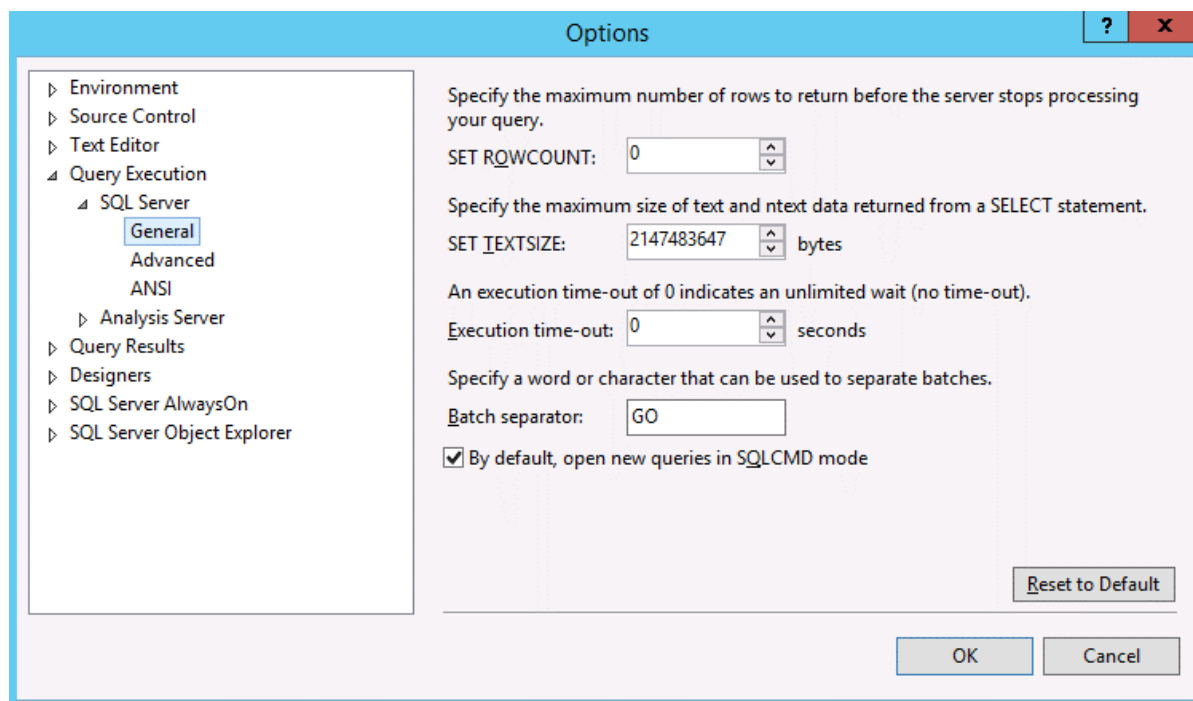
5. In SQL Server Management Studio open the `ApplicationModules.sql` file and then click **Execute** to run the script.

6. After running the `ApplicationModules.sql` file, disable the SQLCMD mode:

   a. In SQL Server Management Studio click **Tools** > **Options** > **Query Execution** > **SQL Server** > **General**.

   b. Uncheck **By default, open new queries in SQLCMD mode**, then click **OK**.

7. Update the DataSourceSignature:

   a. In SQL Management Studio, go to the ApplicationModules.DataSourceBus.DataSource table.

   b. Right-click the table and select **top 1000 rows**.

   c. Copy the Signature by right-clicking and selecting **Copy**.
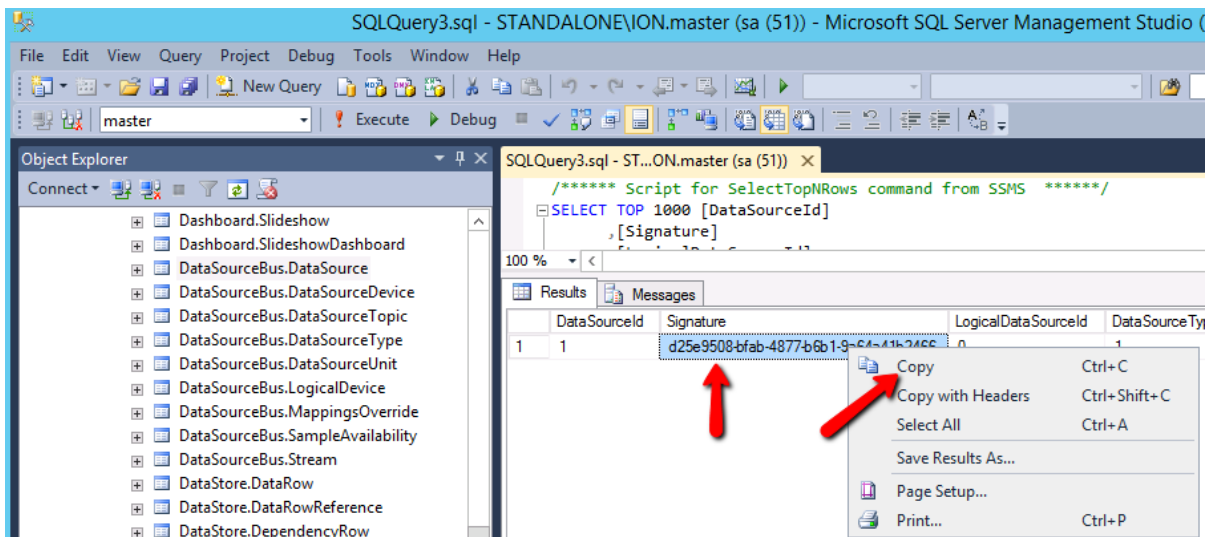
8. In a text editor open …\Schneider Electric\Power Monitoring Expert\Applications\bin\DataServicesHost.config and then update the DataSourceSignature value to match the one you copied in the image above.
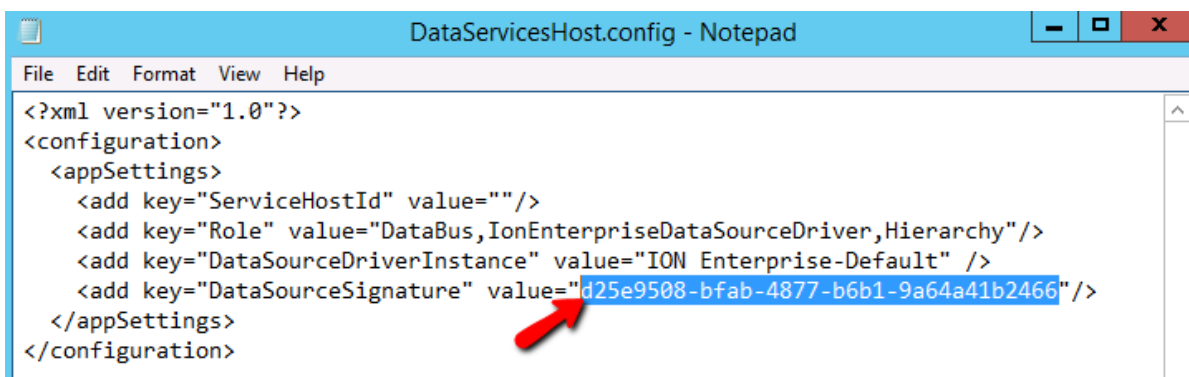
> **Note:** Once the upgrade is complete, it is recommended that you make a backup of the upgraded databases. Should your database become corrupted at a later time, this backup of the upgraded databases will help you to complete the upgrade successfully. A suggested location for these backups is …\Schneider Electric\Power Monitoring Expert\config\cfg\DBBackups.

Update Server Name

> **Note:** These steps are required only if the new server name is different from the old one. If the names are the same, you can skip this section.

Some applications in PME reference the name of the computer where the system resides. Since the old name is embedded in the databases and configuration files of the old system, it is transferred to the new system with this configuration. If the name of the new computer or server is different from the old one, there is a mismatch.

The topics in this section describe how to remove this mismatch by updating the name stored in the configuration to the new computer or server name.

> **Distributed System Note:** Unless otherwise noted, complete these steps on the Primary Server.

Locate and Note Server Name in Management Console

You will need to reference the new server name in subsequent tasks.

To find the name of the computer the PME 8.1 server is running on:

1. In Windows Server 2012 or later, right-click the Windows **Start** button and then select System.

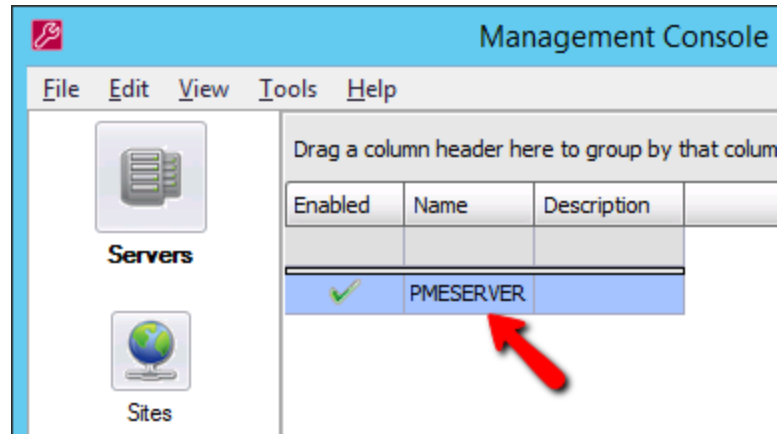   The computer name is displayed in the System dialog:
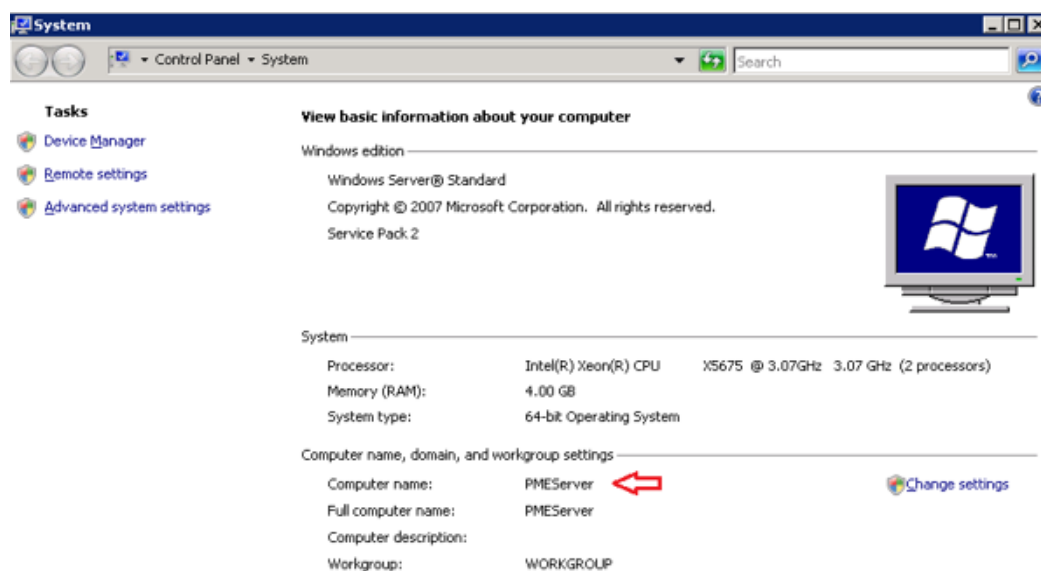
2. Note the computer name; you will need to reference it later.

To find the old server name that is currently configured in the transferred configuration:

1. Log in to the Management Console using the old system login credentials.
2. View the Servers panel.

    For example:

> **Note:** Since the ION_Network database is now accessible, the Management Console can be opened.

3. Note the existing server name. You will need to reference it later.

Update Server Name in the Databases

> **Distributed System Note:** Complete these steps on the Database Server.

To update the server name in the ION_Data and ION_Network databases:

1. Open SQL Server Management Studio, select **File** > **Open File**, then select the `update_server_name_in_live_databases.sql` script in the `...\SBS Upgrade Package\SQL_Script_Files` folder.

2. Edit the script to provide the old and new server names and the instance name.

```
DECLARE @OldName nvarchar (100)
DECLARE @newName nvarchar (100)
DECLARE @OldsqlServerName nvarchar (100)
DECLARE @NewsqlServerName nvarchar (100)

-- Replace the variables <OLD_PME_SERVERNAME> and <NEW_PME_SERVERNAME> below with the actual names of the old
and new PME server.
-- Use all upper-case letters for the names. Do not remove the single quotes " ' ". Example: SET @oldName =
'PMESERVER'.
-- NOTE: This is the PME server name for both standalone and distributed systems. It is NOT the DB server name.

SET @oldName = '<OLD_PME_SERVERNAME>'
SET @newName = '<NEW_PME_SERVERNAME>'


-- Replace the variables <OLD_SQL_SERVERNAME_AND_INSTANCE> and <NEW_SQL_SERVERNAME_AND_INSTANCE> below with the
actual names of the old and new SQL server and instance.
-- Use all upper-case letters for the names. Do not remove the single quotes " ' ". Example: SET
@OldsqlServerName = 'server=PMESERVER\ION'.
-- If you are using a default SQL instance do not add \ instance name
-- NOTE: For standalone PME systems the SQL server name is the same as the PME server name. For distributed PME
systems, the SQL server name is the name of the DB server.

SET @OldsqlServerName = 'server=<OLD_SQL_SERVERNAME_AND_INSTANCE>'
SET @NewsqlServerName = 'server=<NEW_SQL_SERVERNAME_AND_INSTANCE>'
```

3. Save the script and then click **!Execute** to update the server name in the databases.

4. Verify that the script worked by looking in ION_Data.dbo.Source table. The LOGINSERTER source should now show the new server name.

> **Note:** For any archived databases, complete steps 1 to 3 above, but use the `update_server_name_in_archive_databases.sql` script instead. Repeat these steps for each archived database.

Update Server Name for the VIP

When PME is installed, a factory default VIP is created. The configuration files and folder for this VIP contain references to the server name. You need to replace the VIP that was created during the new PME installation with the VIP from the old PME system. This only addresses the default VIP. Custom VIPs are addressed in a subsequent step.

> **Note:** Do not modify the VIP. PQADVISOR. This is a new VIP that was introduced in PME 8.1.

To update the server name for the VIP:

1. Find the old and new VIP folders in `...\Schneider Electric\Power Monitoring Expert\config\cfg\vip`.
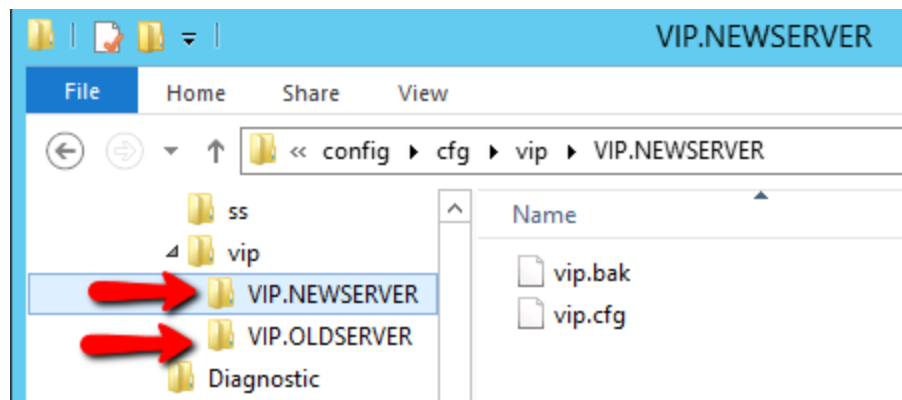
2. Copy `vip.bak` and `vip.cfg` from the old VIP folder (VIP.OLDSERVER in the example) into the new one (VIP.NEWSERVER in the example), overwriting the files, and then delete the old folder.

    This transfers the configuration of the default VIP from the old system into the new PME system.

3. Find the node diagram for the VIP in …`\Schneider Electric\Power Monitoring Expert\config\diagrams\nd`, delete the new node diagram, if one exists, and rename the old one to match the new server name. Not every system will have this `\nd` configured with the VIP.

4. If they exist, delete all the VIP tree files, new and old, in …`\Schneider Electric\Power Monitoring Expert\config\trees`.
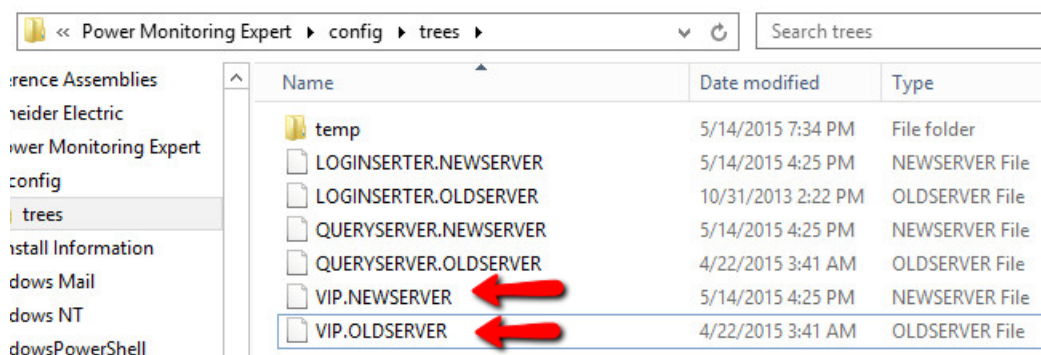
Update Server Name for other Components

The names for files related to the Diagnostics and the Designer node diagrams need to be updated.

> **Note:** The `\nd` folder will not be on your system if it has not been configured. Skip this step if nothing is there.

> **Distributed System Note:** Complete these steps on the Primary Server and on the Database Server (for those files that exist on the DB server).

To update the server name for other components:

1. Delete the old server Diagnostics Configuration file in ...`\Schneider Electric\Power Monitoring Expert\config\Diagnostic\`.
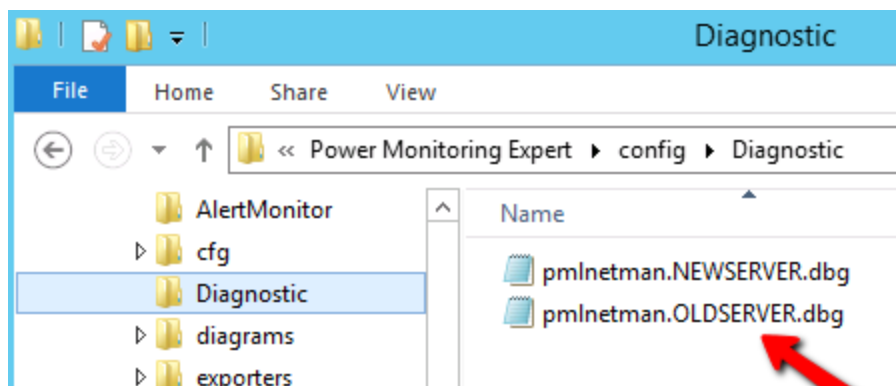
2. Rename or delete the old Query Server and Log Inserter Designer files if any are present in ...`\Schneider Electric\Power Monitoring Expert\config\diagrams\nd\`. Only the new server name files are needed.
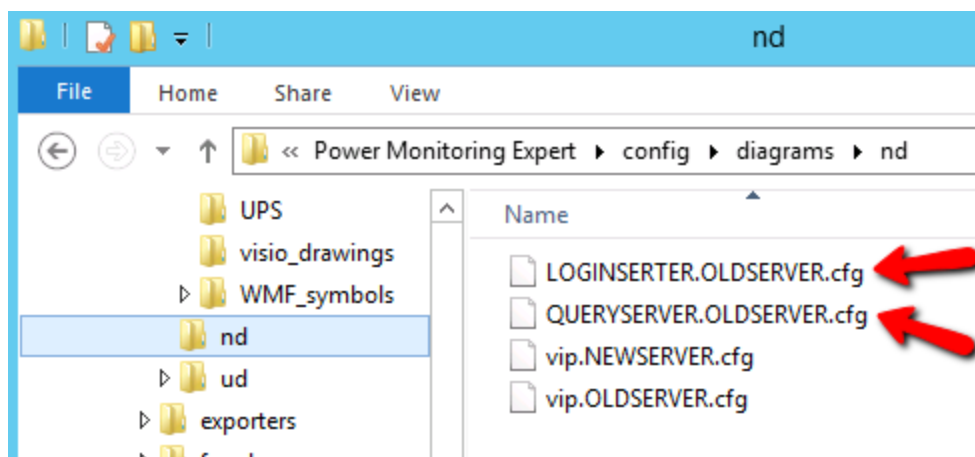
Update Server Name for Alert Monitor

The Alert Monitor configuration file includes the server name. If the Alert Monitor configuration file was configured in the old system, replace the {*Old Server Name*} with the {*New Server Name*}.

To update the Alert Monitor configuration file name:

1. In Windows Explorer navigate to `...\Schneider Electric\Power Mon-itoring Expert\config\AlertMonitor`.

2. If a `{Old Server Name}.AlertMonitor.config` file exists, rename it with the name of the new server.(Do NOT delete the `{MachineName}.Aler-tMonitor.config` template.)
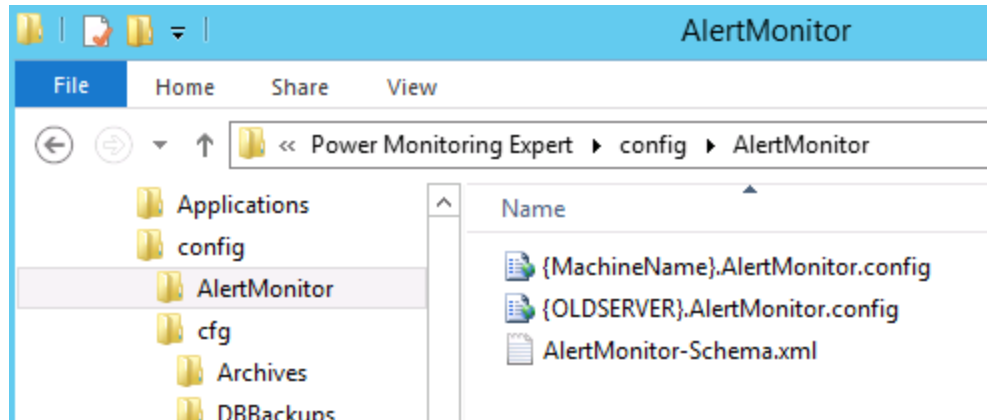

Delete old Log Inserter and Query Server Folders

The Log Inserter and the Query Server in PME store configuration information in folders and files that reference the existing system's server name. These folders and files must be deleted for the old configurations.

> **Note:** A backup file might be present depending on the customizations done to the Log Inserter or Query Server. If there is a customized Log Inserter or Query Server, consult Technical Support for instructions on how to migrate them to the new system.

To delete the old configuration files:

1. Navigate to the Log Inserter and Query Server configuration folders in `...\Sch-neider Electric\Power Monitoring Expert\config\cfg\logsrv`.

2. Delete the older server folders.
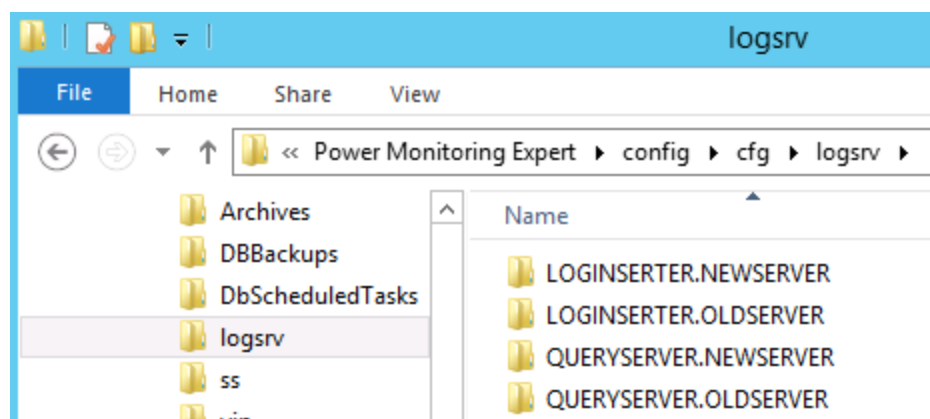
Register Custom VIPs

If the old PME system contained custom VIPs, then you need to register them in the new system before they can be used. The configuration folders and files for these VIPs were transferred as part of the \config folder transfer.

> **Distributed System Note:** Complete the following steps on the Primary Server.

To determine if there are custom VIPs:

1. Navigate to `…\Schneider Electric\Power Monitoring Expert\config\cfg\vip`

   If there are custom VIPs in this folder, they need to be registered on the new system.

To register custom VIPs:

1. Open a command prompt as the Administrator.

2. Change to the `…\Schneider Electric\Power Monitoring Expert\system\bin` folder.

3. Run `vip.exe –Service –N<custom VIP name>`.

   The new service is added for the custom VIP.
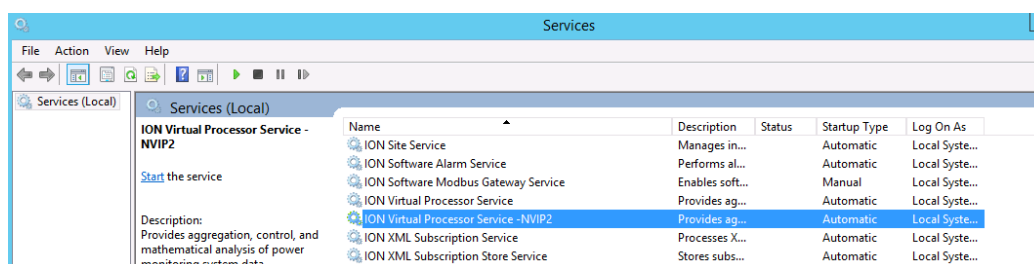
> **Note:** The VIP name service registration is case sensitive; make sure you spell it exactly as it was in the old PME system.

# Install the Report Subscriptions

Installing the report subscriptions depends on the SQL Server Editions used by the old and new systems:

PME 8.0	PME 8.1	Install Process
SQL Standard	SQL Standard	Use the SBS Upgrade Package tool (see instructions below)
SQL Express	SQL Standard	Use the SBS Upgrade Package tool (see instructions below)
SQL Standard	SQL Express	Subscriptions must be recreated in PME 8.1 (skip this topic)
SQL Express	SQL Express	Subscriptions are automatically transferred with the ION_Network database migration (skip this topic)

> **Distributed System Note:** Complete these steps on the Primary Server.

To install the Report Subscriptions:

1. Navigate to `…\Schneider Electric\Power Monitoring Expert\system\bin` folder and then run `ImportSubscriptions.exe`.

2. In the dialog box that opens, make sure the file path is `…\Schneider Electric\Power Monitoring Expert\system\bin\IONSubscriptionData.xml`:
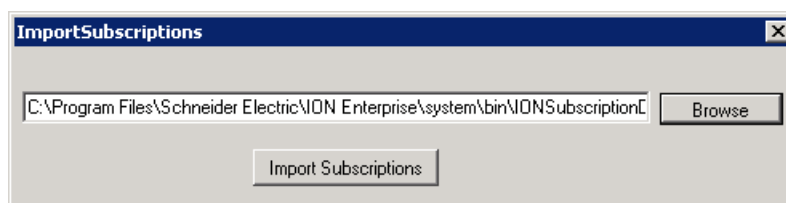
3. Click **Import Subscriptions**.

   When the import is complete, a Successfully Imported Subscriptions dialog is displayed.

Update SQL Server Logins

To update the SQL Server logins:

1. In SQL Server Management Studio, navigate to the `...\SBS Upgrade Package\SQL_Script_Files` folder.

2. Using a text editor, open `Fix_PME_Users.sql`.

3. Replace `<NEW_PME_SERVERNAME>` with the name of the server on the new system:

```
-- Deletes and re-adds the IONMaintenance account in master, ION_Network, ION_Data, ApplicationModules, ION_SystemLog.
-- Fixes the ionedsd user in ION_Data and ION_Network.
-- Fixes AMUser in ApplicationModules.
-- Fixes the ENM user for segment editions
-- Removes the ION user with DBO role membership and assigns it as the DBO.


-- NOTE: Replace <NEW_PME_SERVERNAME> with the name of the PME server. There are 7 instances of this in the script that need to be replaced. Use
   upper-case letters for the server name.
-- Example: DROP LOGIN [PMESERVER\IONMaintenance]

USE [master]
IF EXISTS (SELECT * FROM sys.syslogins WHERE name = N'<NEW_PME_SERVERNAME>\IONMaintenance')
DROP LOGIN [<NEW_PME_SERVERNAME>\IONMaintenance]

USE [ION_SystemLog]
IF  EXISTS (SELECT * FROM sys.database_principals WHERE name = N'IONMaintenance')
DROP USER [IONMaintenance]

USE ION_Network
ALTER USER ionedsd WITH LOGIN = ionedsd
IF  EXISTS (SELECT * FROM sys.database_principals WHERE name = N'IONMaintenance')
DROP USER [IONMaintenance]
EXEC sp_change_users_login 'Auto_Fix', 'ENM'

USE ION_Data
ALTER USER ionedsd WITH LOGIN = ionedsd
IF  EXISTS (SELECT * FROM sys.database_principals WHERE name = N'IONMaintenance')
DROP USER [IONMaintenance]
EXEC sp_change_users_login 'Auto_Fix', 'ENM'

USE ApplicationModules
ALTER USER AMUser WITH LOGIN = AMUser
IF  EXISTS (SELECT * FROM sys.database_principals WHERE name = N'IONMaintenance')
DROP USER [IONMaintenance]

-- Recreate IONMaintenance login and DB users


USE [master]
CREATE LOGIN [<NEW_PME_SERVERNAME>\IONMaintenance] FROM WINDOWS WITH DEFAULT_DATABASE=[master]

USE [ApplicationModules]
```

4. Save the script file and then execute it.

Update SQL Server name for PQDIF reports

For server configurations that contain PQDIF Reports in Reporter:

1. Find and edit the `PQDIFExporterConfig.xml` configuration file in the …`\Sch-
    neider Electric\Power Monitoring Exper-
    t\config\exporters\PQDIF\config` folder.

2. Update the SQLServer Name and Password. The SQLServer name should match the
    new server name, and the password should match that of the RepGen reports; see

```
20          - revision  # of the PQDIF E:
21
22   <DatabaseConnection
23     SQLServer=""
24     DataDB=""
25     NetworkDB=""
26     SystemLogDB=""
27     User=""
28     Password=""
29     Timeout="60"
30     CommandTimeout="180"
31   />
32   <!-- DatabaseConnection
33          - SQLServer   - the SQL ¦
```

> **Note:** If there is nothing configured for PQDIF then these values will be blank ("").

Reconfigure PME 8.1

The PME 8.1 Installer is used to upgrade additional configuration files. Access to the PME 8.1 Install medium (DVD or .iso file) is required for this step.

> **Note:** Upon completion of the steps below, the "supervisor" account password is reset to the password that was specified when PME 8.1 was first installed. It will not be the same as it was on the old PME system. Use the User Manager application that is accessed via the Management Console to change the password if needed.

> **Distributed System Note:** Complete the following steps on the Database Server first, and then on the Primary Server.

To update the configuration files:

1. Close any PME programs that may be running.

2. Change the ION Log Inserter service back to Automatic. It was previously disabled.

3. Run the PME 8.1 installer or the `MainSetup.exe`.

4. Choose **Configure** to upgrade the configuration.
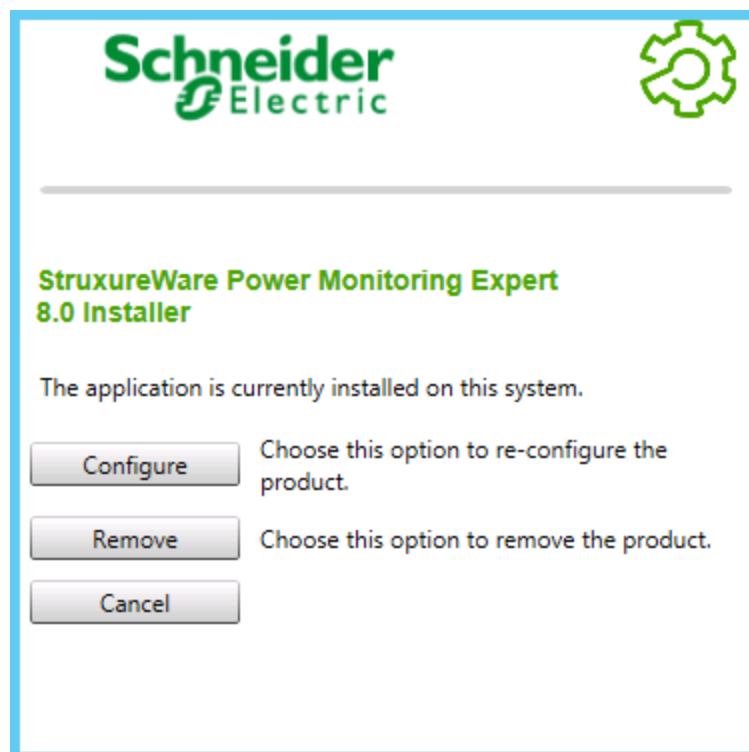
5. Once the configuration is successfully complete, click **Next** to complete the recon-figuration.

> **Note:** The PME Installer will start all necessary ION Services as part of the con-figuration upgrade. Any Custom VIP service configured must be started manually. Start the ION Services using the administrative credentials.
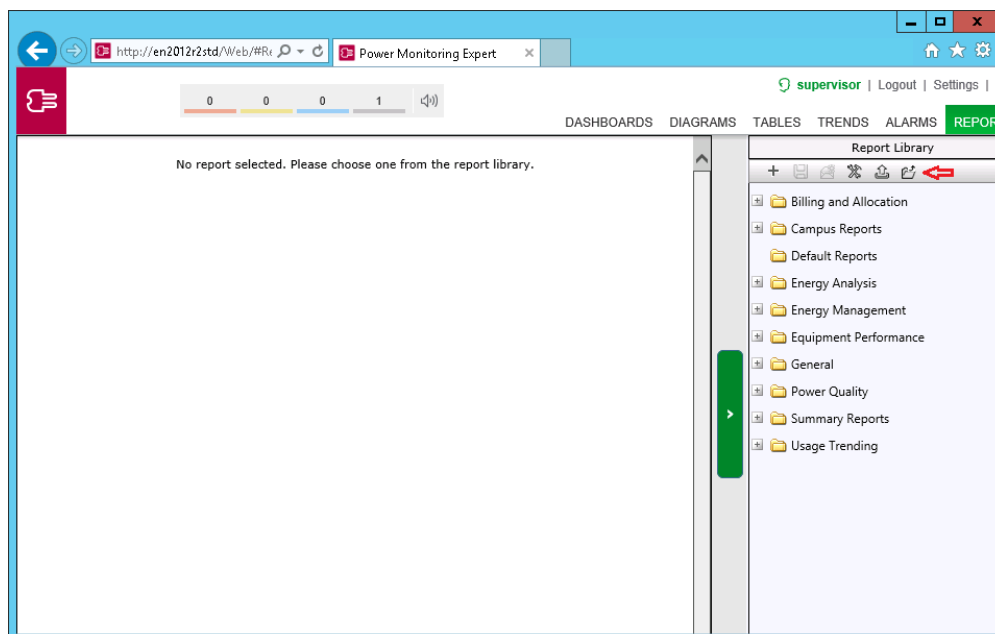
Install Custom Web Report Packs

In an earlier step, the PME 8.1 compatible custom web report packs were copied into ...\Sch-
neider Electric\Power Monitoring Expert\Web\ReportPacks on the new
PME system. They need to be installed on the new system.

> **Distributed System Note:** Complete the following steps on the Primary Server.

To install the report packs:

1. The Report Pack should be available in the Reports application. If not, then open

    Web Applications > **Reports**. In the Report Library section in the right pane, use
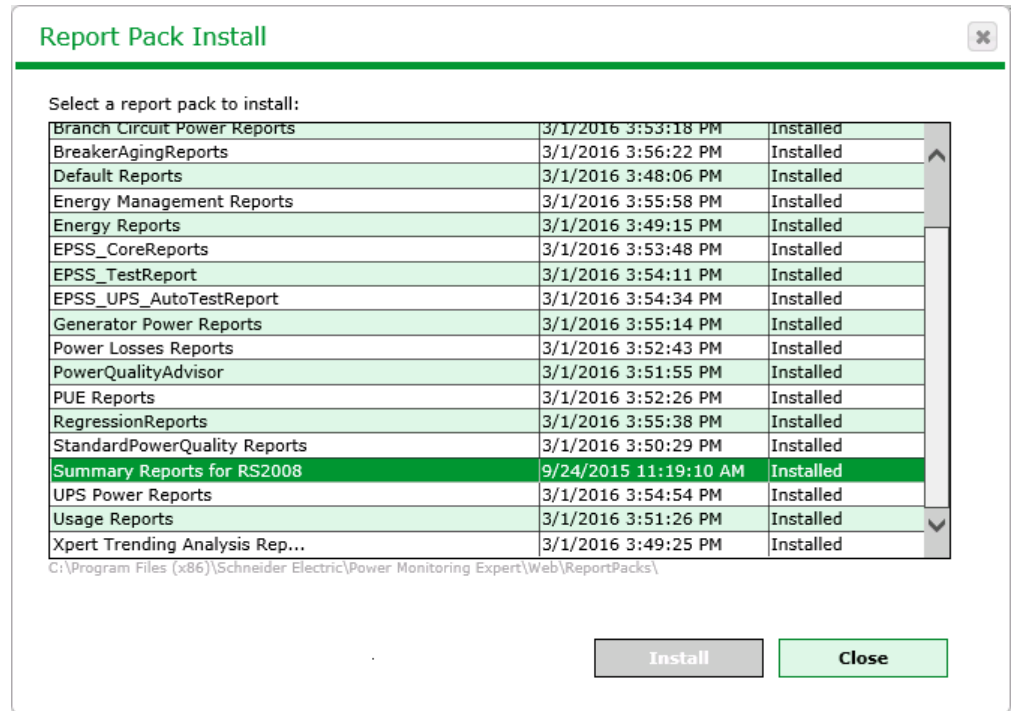
the tools provided to upload the report pack.

> **Note:** The reports list in the Report Library may be empty until the custom reports have been installed.

2. Select the report packs to install and then click **Install**.

   For example:

System Reboot

At this point in the upgrade process, many configuration changes are complete, and it is recommended that you reboot the system.

Step 6 – Configure the Individually Transferred Settings

These steps adjust those settings and configuration items that are not part of the SBS Upgrade Package transfer.

Scheduled Tasks

PME 8.1 uses Microsoft Windows Task Scheduler to schedule database maintenance jobs such as archiving or backup. Details of the default PME database maintenance jobs are defined in a number of PowerShell scripts.

Compare the default settings on the new system to the ones noted from the old system. Decide which settings should apply to the new system and encode them into these script files.
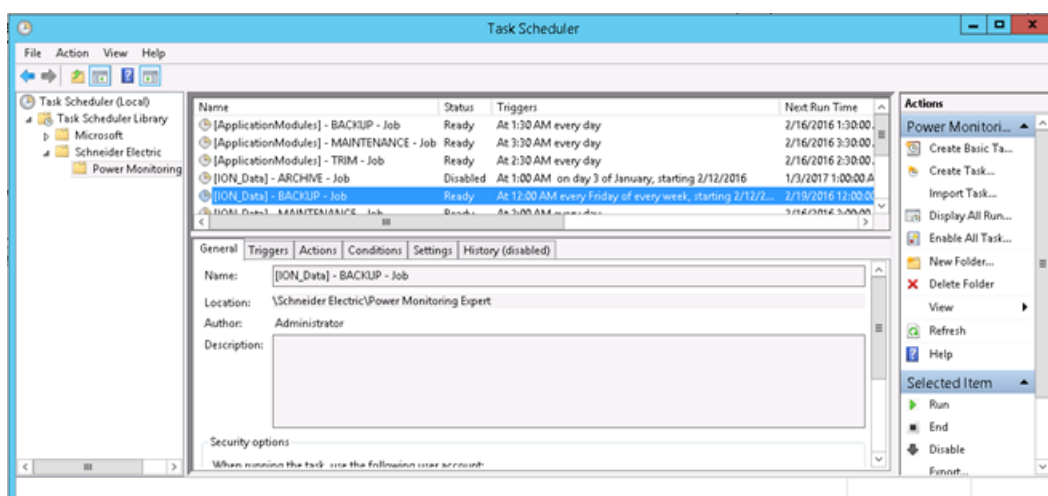
To review the PowerShell script settings:

1. In Windows Explorer navigate to …\config\cfg\DbScheduledTasks\Support and open Configuration.ps1.

2. Note the setting values for:

   » $locationForBackupFiles

   » $locationForArchiveDBFiles

   » $archiveDBDaysToKeep

   » $maximumDatabaseSizeInGigabytes

   » $databaseSizeNotificationThresholdPercentage

   » $diagnosticsDaysToKeep

3. Navigate to …`\config\cfg\DbScheduledTasks\` and open `Backup.ps1`.

4. Note the setting values for:

   » `$numberOfBackupsToRetain`

5. Compare these settings to the ones noted from the old system. Decide which settings should apply to the new system and encode them into these script files. If in doubt, use the default settings on the new system.

Vista Diagram Links

Because the Query Server name includes the computer name, which has changed from the old system to the new, any Vista diagrams that use Custom Query Server links must be updated. Updating the Custom Query Server links can be done manually by opening the diagram and changing the Query Server link of the diagram background.

If inheritance is used in the Vista diagram, then only the top most diagram needs to have its Query Server link updated. The update filters down into any linked diagrams.
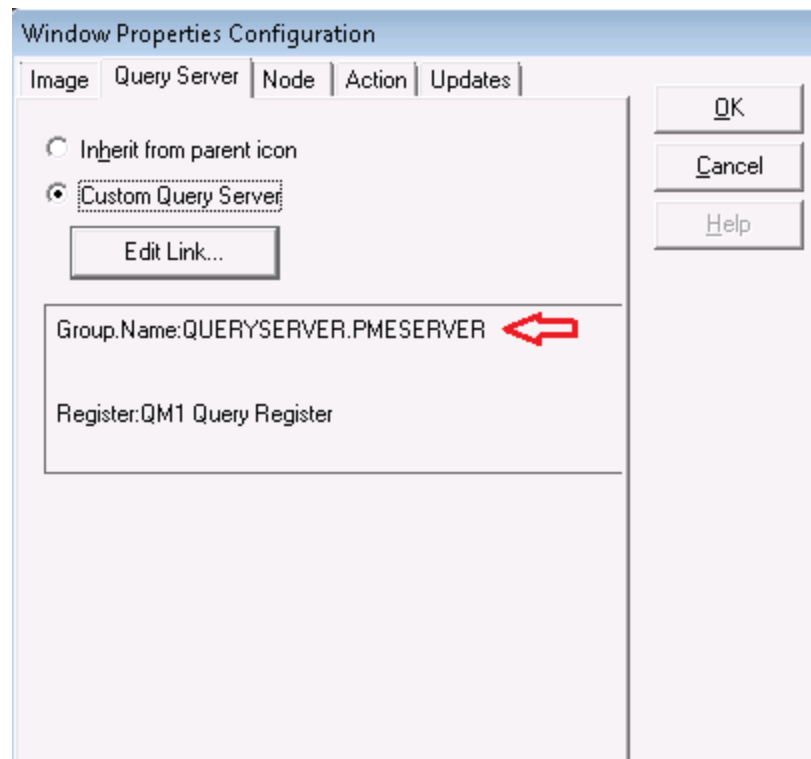
However, for a large number of diagrams, use a search and replace tool that can find the Query Server strings in the diagram files and update them to the new server name.

Note: Search for the Query Server string settings where the `use_parent` link option is set to `0`. There are many server references in each Vista diagram that have a `use_parent` link set to `1`; you can ignore these.

The same is true for any links in the diagrams (for example, a numeric value) to the VIP(s) that were migrated from the old system to the new. The name of the VIP might reference the computer name, and if this name has changed, then the links to the VIPs must be updated.

If you encounter issues, see "Device Diagram Customizations" on page 97 in the Troubleshooting section.

OPC Measurement Definitions

Update the `DefaultMeasurements.xml` file with the changes identified in "OPC Measurement Definitions" on page 33.

Note: If you simply copy the old file into the new system, you overwrite any new additions to the file that are part of the new PME system. This might be acceptable or not, depending on if you need the device types and measurements that have been added. In general, it is a better practice to keep the new file and manually add any customizations.

Web Report Subscription Parameters

Since the system was moved from one computer to another, it is possible that file paths that were previously configured for saving reports as part of a subscription need to be changed.

To update these file paths:

1. Open the Manage Reports in the Reports Web Application.
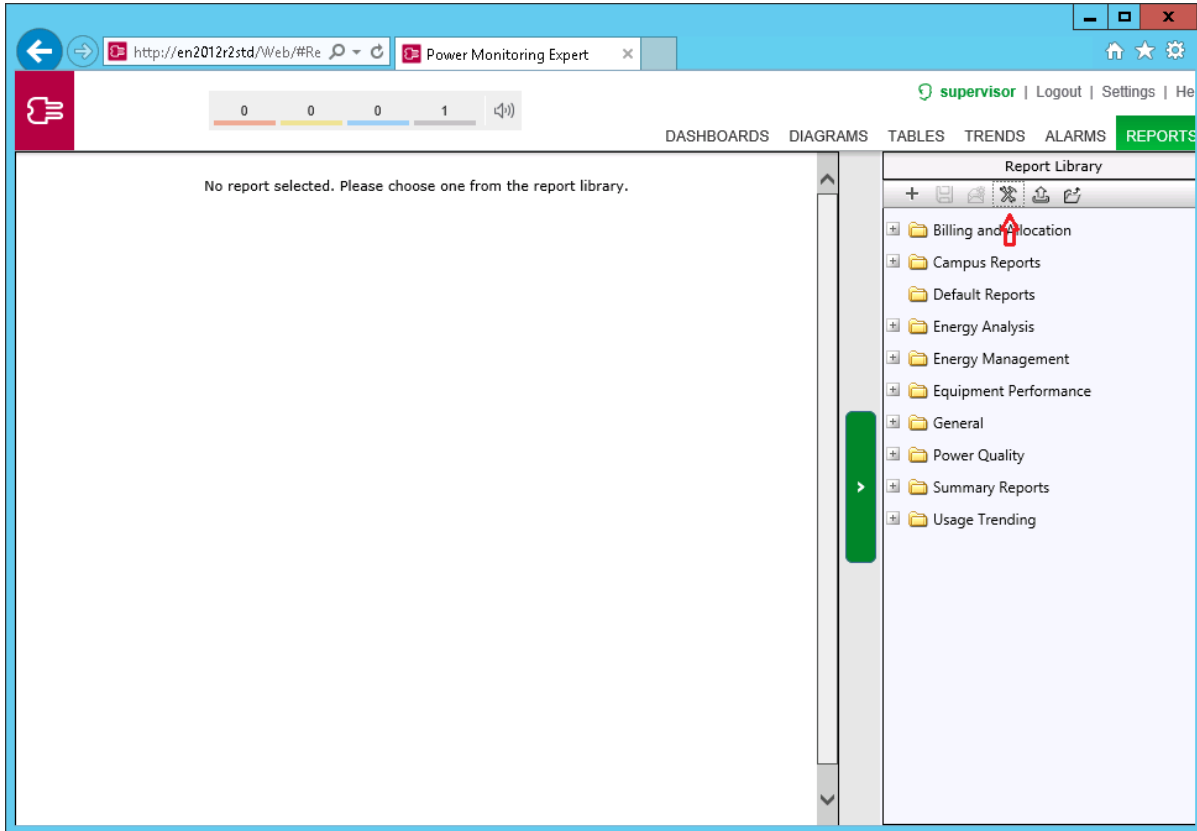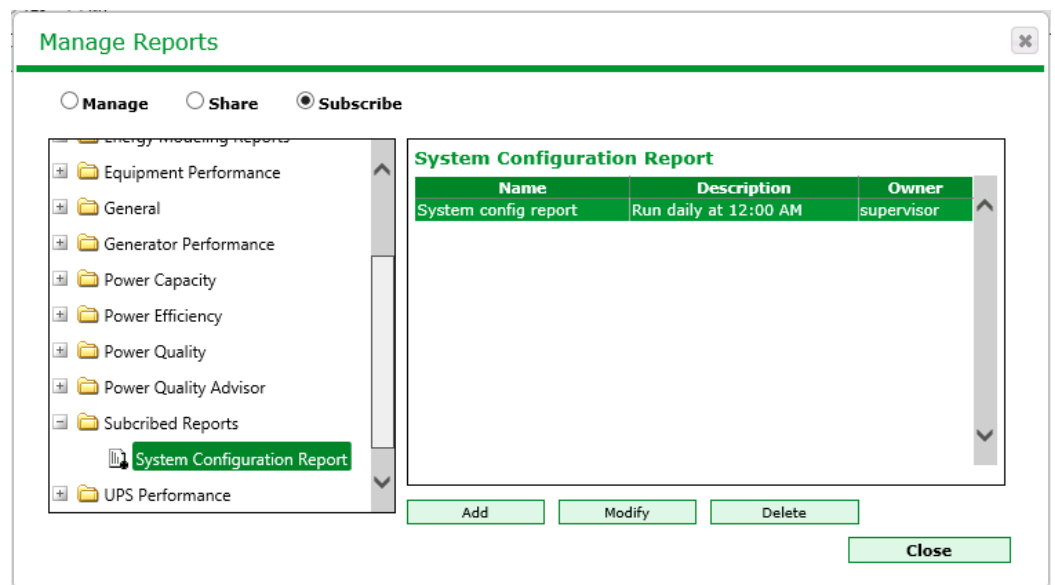

2. Click **Subscribe** and then **Modify**.

3. Select the File share option and enter the Report destination path.

> **Note:** The Windows IONUser account needs write permission to the folder where the report is being delivered.

4. Click **Save**.

Update RepGen Report Parameters

Update the server name in the report .xls files.

To update the server name in the Excel report workbooks:

1. Open a report workbook from the …`\Schneider Electric\Power Mon-itoring Expert\config\reports` folder.

2. Right-click any tab and then unhide the `|PRIVATE|Datasheets`.

3. Update the server name on the far right end of the entries in this sheet to the new server name. Repeat this step for all the Excel reports in the Reports directory.

If a report is configured to be saved to disk (instead of shown on screen only), you need to update the report and re-save it in the new PME location before you generate any saved reports.

To update a report:

1. Open Reporter and click the radio button for **Manage Reports**.

2. Highlight a report and click **Edit**.

3. Click the **Distribution** tab.

4. Verify that the Save Excel report folder path is correct or create a new one.

5. Click **OK**.

6. Click the radio button for **Generate Reports** and then generate the report to verify it is working properly.

Registry Settings

Editing the registry entries in the new PME system is necessary if you want to:

» Specify a custom network diagram (instead of using the default network diagram) to be used in the Diagrams (WebReach) part of the Web Applications.

» Enable linking of custom device types (for example, those created with the MDI) to default diagrams in ION Vista.

Do NOT import any performance tuning settings from the old ION Enterprise. The default settings in PME 8.1 have been optimized for that system and should only be changed by experts with a deep understanding of the ramifications of the changes.

To customize the network diagram:

1. Start the Windows Registry Editor and browse to:

   `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Schneider Elec-tric\Power Monitoring Expert\8.1\WebReach` [For 64-bit systems]

   `HKEY_LOCAL_MACHINE\SOFTWARE\Schneider Electric\Power Mon-itoring Expert\8.1\WebReach` [For 32-bit systems]

2. Right-click to Add a new string value of NetworkDiagram.

3. Right-click **NetworkDiagram**, select **Modify**, and type the path and name of your custom network diagram in the Value data field.

For example: `x-pml:/diagrams/ud/<custom folder>/<custom dia-gram>.dgm`.

4. Restart IIS on the system to apply the changes.
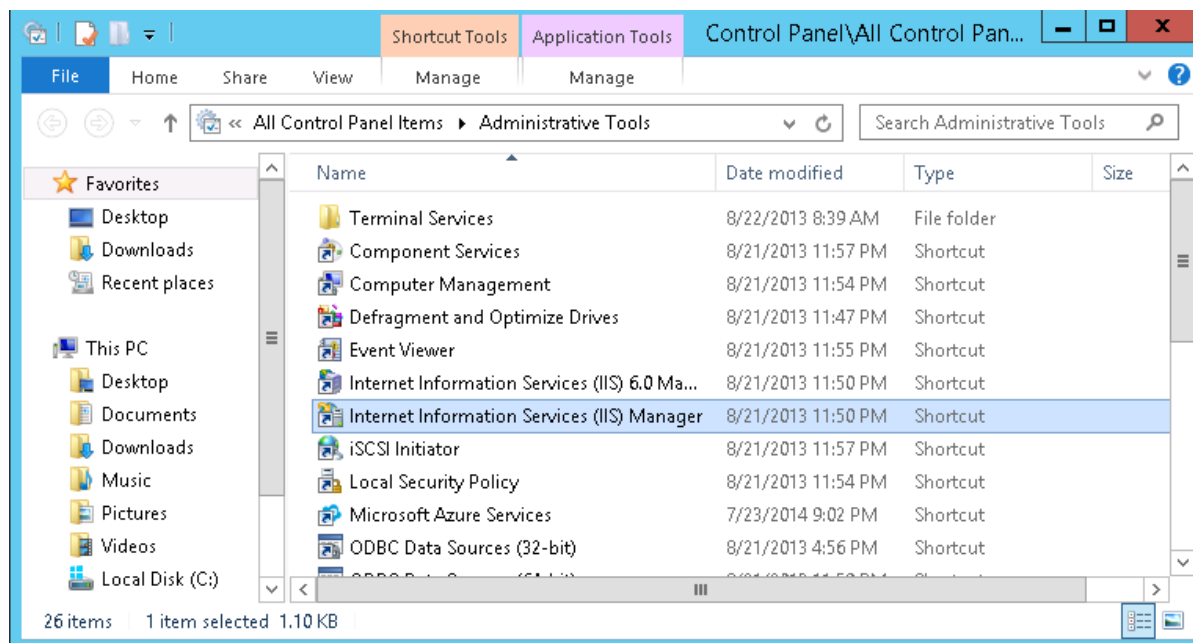
To enable the diagram linking in Vista:

1. Start the Windows Registry Editor and browse to:

   `HKEY_LOCAL_MACHINE\SOFTWARE\Wow6432Node\Schneider Elec-tric\Power Monitoring Expert\8.1\DeviceInfo` [For 64-bit systems]

   `HKEY_LOCAL_MACHINE\SOFTWARE\Schneider Electric\Power Mon-itoring Expert\8.1\DeviceInfo` [For 32-bit systems]

2. Add the necessary entries for the custom device types.

ION Login Password

The Modify Login action in the Database Manager tool changes the SQL Server password for the default login name ION. If the password was changed on the old system, it needs to be manually changed to the same string on the new system in the PME Database Manager.

To change the password:

1. Stop all PME services.

2. From the Management Console start Database Manager.

3. Right-click **Databases** then select **Modify Login** to open the Modify Login dialog.

4. Type the new password in the **New Password** and **Confirm New Password** fields. Click **OK**.

5. Restart the services.

Clear Browser Cache

Following an upgrade, it is recommended that you:

1. Delete the browser cache.

   This will clear any old configurations or cached pages that might have been on the system before the upgrade. If you are unsure about how to do this, an Internet search can help you find out how to delete the cache on every supported browser.

2. Re-run saved Web reports and re-save them.

   This ensures that the reports can be read correctly on the new system.

EcoStruxure Web Services Configurations

The EcoStruxure Web Services (EWS) service is disabled when PME is initially installed. If EWS was enabled on the old system, it must be manually enabled on the new server and updated with the values from the old system.

To enable EWS, update the EWS settings from the old system, and copy the extensions folder:

1. In Windows Explorer navigate to …`\Schneider Electric\Power Monitoring Expert\Applications\EWS\` and then open `Web.config`.

2. Search for the following string: `key="EWSEnabled"`.

3. Change its value to `1`.

4. Update the following `Web.config` values to be the same that they were on the old system:

   » `EWSAlarmSortOrder`

   » `ContainerItemStructure`

   » `NaNValue`

   » `ConcatSourceAlarmEventId`

   » `RealTimeRefreshRate`

   » `RefreshImmediately`

- » `RealTimeSessions`

- » `IgnoreCurrentCulture`

5. Copy the files from the old `Extensions` folder – `...\SBS Upgrade Pack-age\EWS` – to the new one: `...\Schneider Electric\Power Monitoring Expert\system\WebServices\Extensions`

> **Note:** There is already an `Extensions` folder in this location in the new system. Do NOT overwrite files in the target folder in case a file already exists.

6. Open Management Console.

7. Select **Tools > System > Update EWS Server**.
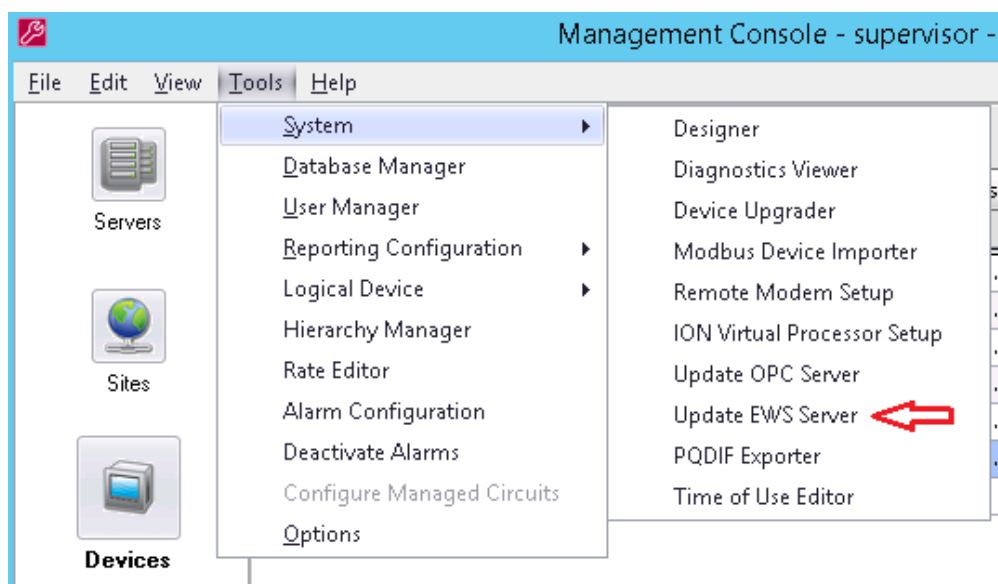
Step 7 – Perform a Post-upgrade System Check

Verify that the PME 8.1 system is configured correctly. Use the checklist below to do a system walk through. For each item in the checklist, make sure the system behaves the way you expect.

For example:

» Is all the information present?

» Are measurements being displayed and are they updating?

» Are reports running and returning the expected data?

» Are all devices configured and communicating?

Some of the new features in PME 8.1 need to be configured before they will provide the expected information or functions. Configuring these new features is not part of this document. Refer to the PME 8.1 user documentation and other product resources for information on configuring these features.

Checklist

To perform a system walk through on your newly upgraded system:

1. Check the system log in the Management Console for errors.

2. Check the Devices, Sites, and other settings in Management Console.

3. Check the availability of the archived databases for reporting in the Reporting Configuration Manager in the Management Console.

4. Log into Vista, verify the network diagram, real time data, and data logs.

5. Check the data and functions provided by the VIPs.

6. Log into the Web Applications.

7. Run the reports, Diagrams, Tables and Dashboards.

8. In Web Reporter, run saved/custom reports and verify the report subscription.

9. Log into the Reporter (also known as RepGen) application and generate the saved reports.

10. Check any scheduled tasks.

For maintenance, follow the standard maintenance best practices recommended for PME 8.1.

Reference

Supplemental Information

The following PME 8.1 documents provide supplemental information to the instructions found in this document and for the PME 8.1 software in general. The documents are available on the Schneider Electric Exchange Web site or at www.schneider-electric.com.

» What's New, document number 7EN12-0293.

» Before Installing your Software, document number 7EN52-0383.

» Using the SQL Server 2014 DVD, document number 7EN52-0391.

» Installation Guide, document number 7EN02-0380.

» User Guide, document number 7EN02-0379.

» Power Monitoring Expert Design Guide, document number 7EN42-0118.

» Power Monitoring Expert Licensing Quick Start Guide

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.

Default Device Drivers

Use the list of PME 8.0 default device drivers to determine which device drivers were customized on the old system.

3300	AccuSine_PCS	MICROLOGIC_E_IFE_IFM
3710	Acti9Smartlink	MICROLOGIC_H
3720	Acti9SmartlinkEthernet	MICROLOGIC_H_IFE_IFM
3800	Altivar_61	MICROLOGIC_P
6200	BCPM	MICROLOGIC_P_IFE_IFM
6200_RTU	Breaker Aging And Wear Provider	Momentum_PLC_A8_WAGES
7300	CM100-200	Momentum_PLC_D10_WAGES
7330	CM2000	Momentum_PLC_D16_EPSS
7350	CM3000	PM1200
7500	CM4000	PM200
7500-RTU	COMPACTNSX_A	PM3250
7550	COMPACTNSX_E	PM3255
7550-RTU	DM6200	PM5100
7600	DM6300	PM5300
7650	EM1200	PM5350
7700	EM3460	PM5350_IB_PB
8000	EM3550	PM5500
8300	EM3555	PM600
8400	EM4800-08 Delta	PM700
8500	EM4800-08 Wye	PM800
8600	EM4800-12	PM810LE
8600C	EM4800-24	PM9C
8650	EM5600	PowerEBox
8650C	EM6400	SEPAM10
8800	EM6430	SEPAM20
8800C	EM6433	SEPAM40
9200	EM6434	SEPAM48
9200_RTU	EM6436	SEPAM60
9300	EM6436_Dual	SEPAM80
9330	EM6438	SER2408
9340	EM6459	SER3200
9350	EM7000	Telvent Weather Service
9360	EnerceptMeter	Tesys_T
9500	EnerSure_BCPM	Twido_Mod_PLC_WAGES_D12_D28_D44
9500-RTU	EnerSure_iBCPM	Varlogic_NRC_12
9510	iEM3150_3250	VerisBCPM
9510-RTU	iEM3155_3255	VIGILOHM
9600	MICROLOGIC_A	
9610	MICROLOGIC_A_IFE_IFM	
9700	Micrologic_E	

Troubleshooting

This section includes troubleshooting procedures known as of the publication date of this document.

ION_Network with Database Manager

Issue: When upgrading ION_Network with the Database Manager, you may see a time-out message.
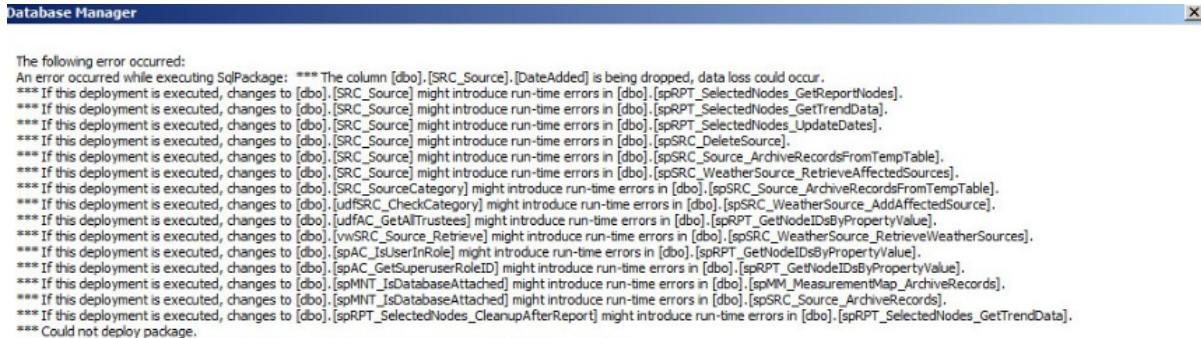
This time-out is due to a SQL configuration.

Resolution: Use the following workaround to resolve this and continue the upgrades:

» Make sure you upgrade the ION_Data database first, before you upgrade the ION_Network database. This usually resolves the time-out error.

» If you still notice the time-out error, then re-run the ION_Network upgrade.

If neither of these two options resolves the issue, then you need to modify the SQL Server Registry settings to a larger value using the Registry Editor.

> **Note:** To change the registry setting, you must have administrative privileges.

To edit the registry:

1. Go to Start and select Run.

2. Type `regedit` in the Run text box and click **OK**. A Registry Editor window opens.

3. Select **Computer** and press **Ctrl+F**. In the Find what text box, enter `QueryTimeOutSeconds`. The Registry Editor window highlights the `QueryTimeOutSeconds` registry key.

4. Right-click the registry key and select **Modify**. An Edit DWORD window opens.

> **Note:** Before you modify `Value Data`, be sure you make a note of the default value data.

5. Select the Hexadecimal option button, and set the Value Data to `258` (OR) select the Decimal option button, and set the Value Data to `600`.
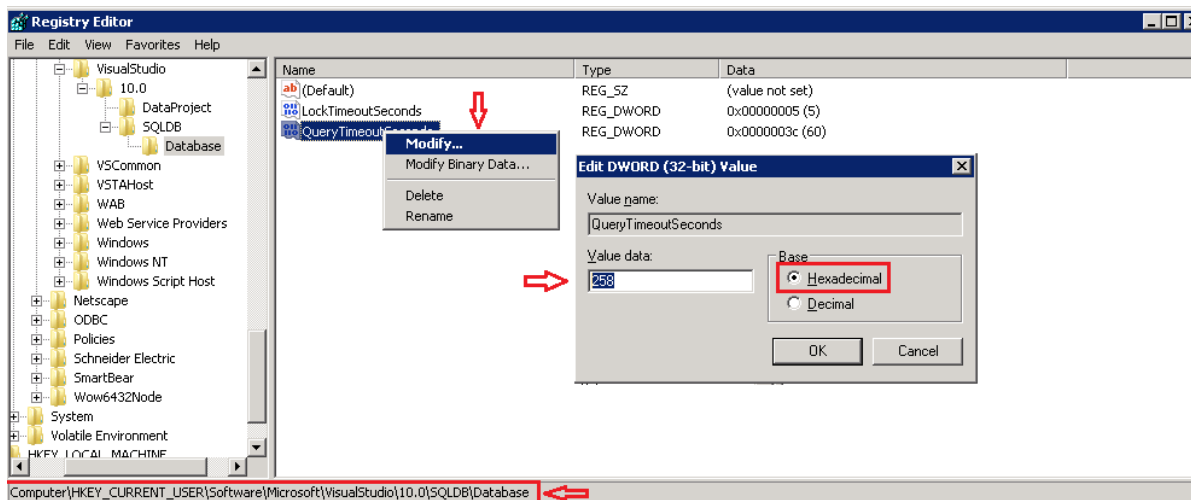
Once the upgrade is complete, it is recommended that you reset the registry to its original setting.

The time-out error may still prevail when there is NULL in a field that does not allow NULL. This occurs in the Name column of ION_Network.dbo.Scheduler table.

To correct this:

1. Go to SQL Server Management Studio.

2. Select **File** > **Open File**.

3. Navigate to the \SBS Upgrade Package\SQL_Script_Files folder and open `update_Scheduler_Table.sql.`

If a NULL value is found, the script will insert "-" in the **Name** column.
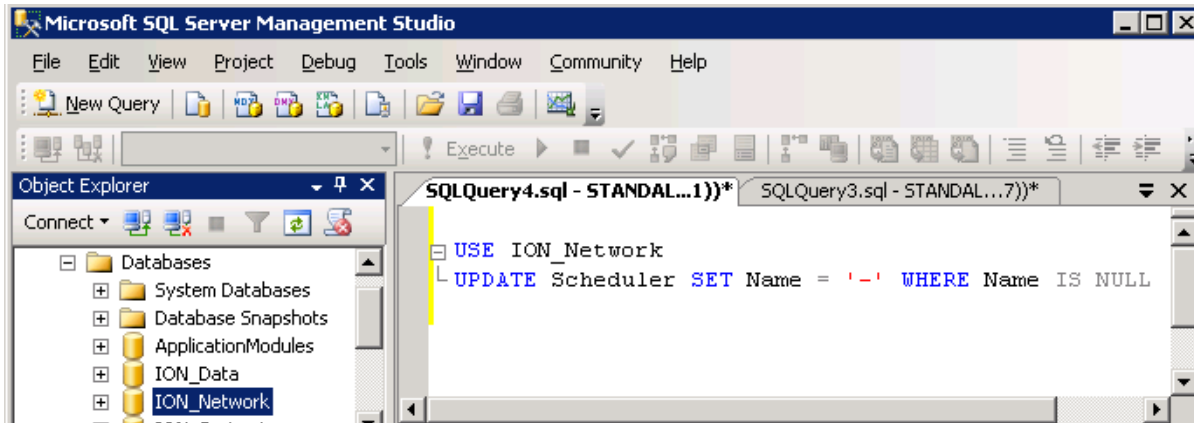
Database Manager

Issue: The upgrade of ION_Data/ION_Network does not succeed and displays a message that the `ION_Data.mdf/ION_Network.mdf` file already exists.

Resolution: The Database Logical Name needs to be different than ION_Data or ION_Network_Data, and the restore location needs to be `…\Power Monitoring Expert\Database\Data`.

Issue: The database upgrade finishes successfully, but some tables in ION_Data look corrupted with data missing.

Resolution: Make sure that `tempdb` can expand up to twice the size of the live database.

Issue: The upgrade did not succeed at the Verify Databases point due to custom measurements.

Resolution: Contact customer support; no resolution is available.

Upgrading Database Error

- Upgrade to PME 8.1 - Failed on Step: Checking Space

Issue: When trying to upgrade to PME 8.1, the process was unsuccessful at the Checking Space step.

The following entries may be seen in the Error Log:

```
System.ArgumentException: Illegal characters in path.
at System.IO.Path.CheckInvalidPathChars(String path, Boolean check-
Additional)
at System.IO.Path.NormalizePath(String path, Boolean fullCheck,
Int32 maxPathLength, Boolean expandShortPaths)
at System.IO.Path.GetFullPathInternal(String path)
at System.IO.FileInfo.Init(String fileName, Boolean checkHost)
at System.IO.FileInfo..ctor(String fileName)
at Installer.InstallTools.ConfigureSQL.GetDBFilePhysicalPath
```

```
(String dbName)
at Installer.InstallRequests.CheckDiskSpaceGenericRequest.DoJob()

executeQuery(SELECT filename FROM sysdatabases WHERE name = 'ION_
Data', master) Failed on exception:
\nSystem.InvalidCastException: Unable to cast object of type 'Sys-
tem.DBNull' to type 'System.String'.
at Installer.InstallTools.ConfigureSQL.ExecuteScalar(SqlCommand
command, String dbName)
```

Cause: SQL user ION needs Sysadmin level user privileges and the SQL Server services need to be running under the "Local System" account.

Resolution: Complete these steps:

1. Login to SQL Management Console with a Sysadmin level user.

2. In Security\Logins, double click on the ION user to bring up the Login Properties window.

3. Select **Server Roles**, and check sysadmin on the right side, then click **OK**.

4. Open Windows Services.

5. Right-click on the SQL Server service and select **Properties**.

6. In the Properties window, select the **Log On** tab, check **Log on as Local System** account, then click **OK**.

7. Do this to the SQL Agent also and then restart the SQL and SQL Agent services.

8. Re-run the upgrade.

Troubleshooting Vista

Issue: The Vista diagram does not open in the Engineering Client, even after the Engineering Client license is applied to the server.

Workaround: For the Vista diagrams to open properly, first delete the trial license from the server, and then apply the Engineering Client license to the server.

Issue: After completing the upgrade, Vista will not run. When it is launched, you see the splash screen, but before you get to the login screen, Vista crashes. You see a dialog from the operating system stating that Vista has stopped working.

Cause: This happens if your PME config\cfg\ud directory has a `global.log` file. `Global.log` is a file that is created when you add a Global Event Viewer to Vista. The old file format from ION Enterprise 6.0 or earlier is not compatible with PME 8.1 Vista.

Workaround: Delete `global.log`. You must re-add a Global Event Viewer if you want to use it in your upgraded system.

Issue: You see a configuration error in the Vista diagrams as shown below. Possibly, the ION and XML files have been updated in the new PME 8.1 system.

Cause: The Vista diagram refers to the old ION and XML files located at …\config\translator folder.

Resolution: Delete the ION and XML files from the …\config\translator folder and re-do the MDI configurations manually.

Troubleshooting Hierarchies

Issue: Hierarchies Sub Meter tab is missing, and version numbers do not match.

Resolution: Clear the web browser history and refresh the Hierarchies cache by opening Hierarchies from Management Console. Log in and press Shift + F5. Then reset IIS by navigating to `C:\Windows\System32` and double-click `iisreset.exe`.

Troubleshooting Reports

Issue: Reports do not display in the Report Library.

Possible Causes: Incorrect licensing or the custom web report packs are not installed, or properly upgraded.

Resolution:

Obtain the correct licensing.

Install the upgraded custom web report packs or delete the custom report entries from the database.

Custom web report packs were not upgraded

Review the following scenarios to understand the implications of not upgrading custom report packs:

Scenario 1: If the old custom reports have not been upgraded (i.e. they are not compatible with PME 8.1), none of the web reports will be visible in the Reports Web application.

To successfully perform the upgrade without the custom web reports:

1. Delete the custom reports (templates + saved instances) on the source system in the Manage Reports UI (in Web Apps) before transferring the system.

2. Follow the standard SBS upgrade process.

The default reports on the new system will work as expected. Once the old report packs have been upgraded, they can be uploaded and installed on the new system and they will work as expected. (Internet Information Services (IIS) needs to be restarted.)

Scenario 2: The old system has a lot of saved custom reports and the client doesn't want them deleted.

1. Try installing the old custom report pack from the source system on the target. If it installs it might not work, however, the default reports will display. The SBS upgrade can proceed.

Scenario 3: The field engineer completes the SBS upgrade with old, non-compatible custom web reports. At this point, the target system will not display any reports.

1. Determine which database table entries need to be deleted by opening the System Log in Management Console or by looking at the database tables to identify the custom reports.

2. Delete the custom report entries from the `RPT_Report` table in the ION_Network database.

The default reports on the new system will work as expected.

Troubleshooting Alarms

Issue: A message occurs when the ION_Data database contains large number of unacknowledged events or the Web Applications is not able to properly access the alarm data.

Environment: Web Applications and Alarms Tab

Scenario / Resolution 1:

This can happen if the upgraded database (ION_Data) contains a large number of unac-knowledged events. To determine if there are a large number of unacknowledged events, run the query below against ION_Data. This will return the number of unacknowledged events with a timestamp greater than the timestamp you have chosen.

NOTICE

DATABASE DAMAGE

- Do not perform this procedure unless you are familiar with SQL Server Man-agement Studio.

- Always back up databases prior to performing this procedure.

Failure to follow these instructions can result in irreparable database damage.

```
select COUNT(*)from vAlarmLog
where AckTimeUTC is null
and Priority > 127
and TimestampUTC > > '<some timestamp filter;'
```

To acknowledge all of these alarms quickly, without having to use the Alarms user interface, !Execute the following query:

```
Declare @CurrentDateTime varchar ( max )
SET @CurrentDateTime = GETUTCDATE ()
INSERT  INTO EventAcknowledgement (EventLogID ,AckTimeUTC ,User-
Name )
( SELECT a .ID , @CurrentDateTime , 'supervisor' from vAlarmLog a
where AckTimeUTC is  null  and Priority > 127 )
```

This query will use the present UTC date / time as the alarm acknowledgment, and super-visor as the account that performed the acknowledgment.

Once the alarms have been acknowledged, the Alarm Viewer will function normally. It is recommended that you delete old, unwanted events to reduce the number of events that need to be processed. Use the Trim function in Database Manager. Select Events and choose an appropriate date range.

Scenario / Resolution 2:

If the server machine is on a workgroup, change the Schneider Electric services to run under a local Windows administrator account, restart the services, perform an iisreset, and then check to ensure that alarms are coming in successfully.

Scenario / Resolution 3:

Check the Windows Host file in the C:\windows\system32\drivers\etc\ directory and check the localhost IP address. By default, webservices only allows access from 127.0.0.1, which is the default localhost. If the address is different than the default, the locahost address needs to be added to the `webservices web.config` file (such as `<add`

`ipAddress="10.70.20.81" allowed="true" />`) where the IP address is found within the Windows host file.

After changing and saving the `\host` file, restart the Schneider Electric services and perform an iisreset to verify that alarm and event data are coming in successfully.

Data Log Viewer Query

Issue: After completing the upgrade, an error occurs when trying to modify a Data Log Viewer query created in or earlier.

Cause: A space was inserted before the '`@VCN`' node, and an older query will not have this space.

Example: Old node name `[Data Rec 1@VIP2@VCN *)--"]`

Edited node name `[Data Rec 1@VIP2 @VCN *)--"]`

Workaround: Edit the node and add a space before the @VCN.
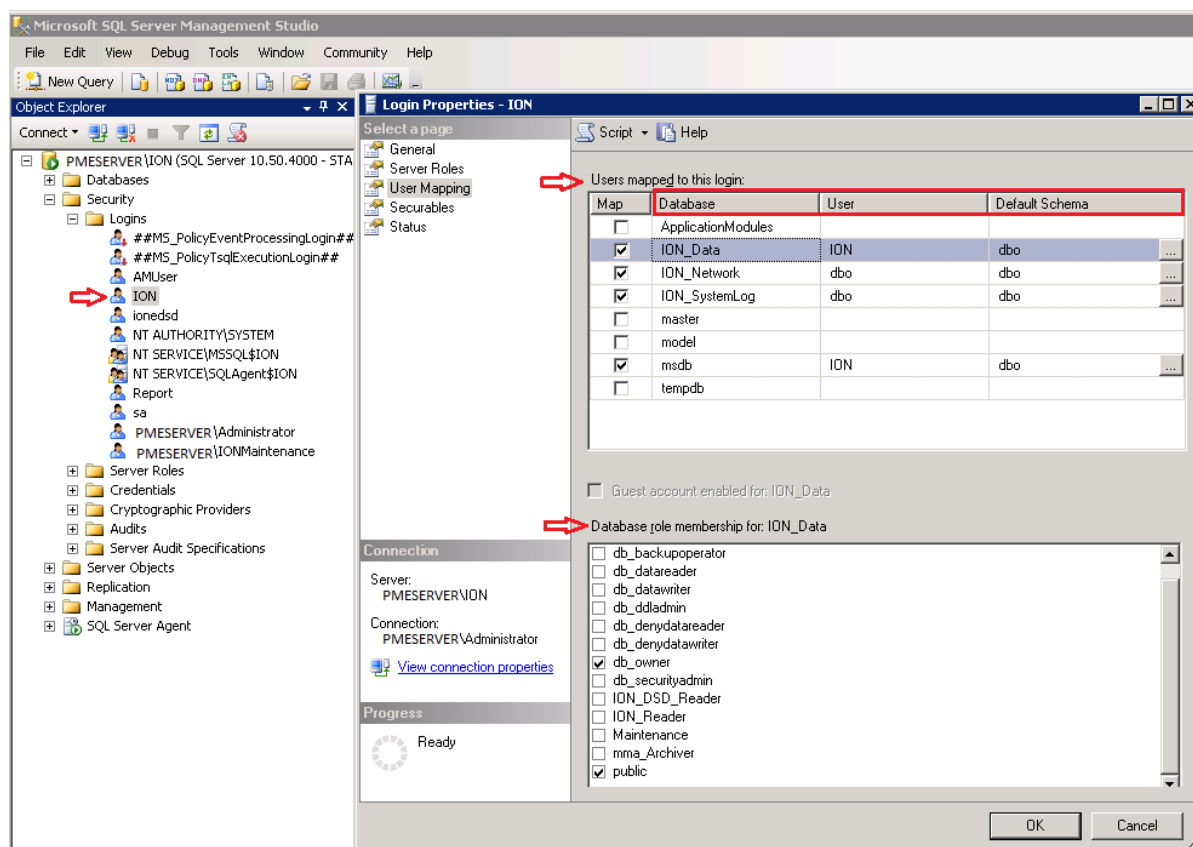
SQL User Mapping

In SQL Server Management Studio expand **Security** > **Logins**, select the Users (for example, ION) and then right-click **ION** and select **Properties**.

The Login Properties-ION window opens. Select User Mapping and in the Users mapped to this login section, select the appropriate Databases, User, and Default Schema based on the following:

Logins	Database	User	Default Schema	Role Membership
EPSS_DataCollector	ApplicationModule	EPSS_DataCollector	dbo	AMApplicationRole, public
	ION_Data	EPSS_DataCollector	dbo	Db_datacreader, EPSS, DataCollectorAccess, public
	ION_Network	EPSS_DataCollector	dbo	Db_datareader, public
AMUser	ApplicationModules	AMUser	Dbo	AMApplicationRole, public
ION	ION_Data	dbo	dbo	Db_owner, public
	ION_Network	dbo	dbo	Db_owner, public
	ION_SystemLog	dbo	dbo	Db_owner, public

Logins	Database	User	Default Schema	Role Membership
ionedsd	ION_Data	ionedsd	dbo	ION_DSD_Reader, public
	ION_Network	ionedsd	dbo	NOM_DSD_Reader, public
Report	ION_Data	Report	dbo	db_datareader, ION_Reader, public

PME Segment Edition Note: For the EPSS Data Collector user, the mappings are available only for Data Center edition and Healthcare edition (not for PME installations). The screen below shows user mapping in SQL Server Management Studio.

> **Note:** If a "user exists" message is observed during the user mapping process, contact Schneider Tech Support. They will probably have to delete the user from **Security** > **Login** > **User(s)**.

You can also use the following query to see if there are issues with the "user exists" message:

```
ALTER AUTHORIZATION ON DATABASE::ION_Data TO ION;
```

Engineering Client and Server(s) Communication

Once the Engineering Client installation is complete, follow these steps to ensure smooth communication with the PME server(s):

1. On the Engineering Client, navigate to the `$:\Win-dows\System32\drivers\etc` directory.

2. Open the `\hosts` file and edit it by adding the following details in the relevant order:

    » Client Machine IPClient Machine long name

    » Client Machine IPClient Machine short name

    » Server Machine IPServer Machine long name

    » Server Machine IPServer Machine short name

   For Example:

    » `521.456.7.x clientName.<your domain>.com`

    » `521.456.7.xclientName`

    » `521.456.7.y serverName.<your domain>.com`

    » `521.456.7.yserverName`

   > **Distributed System Note:** The `\hosts` file must be edited in the primary server as well as the database server.

3. On the primary server, go to the `…\Schneider Electric\Power Monitoring Expert` folder on the server and enable Sharing to "Everyone."

   > **Distributed System Note:** Make the following changes on the Database server.

4. On the PME standalone server, change the SQL Server Configuration Manager settings to establish the remote connections of the SQL server named instance (for example, PMEServer\ION) with the Engineering client.

5. Go to SQL Server Configuration Manager and click SQL Server Network configuration.

6. Expand the tree.

7. Click Protocols for IONE and enable the following options:

» Shared Memory

» Named Pipes

» TCP/IP

» Set VIA as disabled (by default)

» Right-click TCP/IP

» Go to Properties

» Navigate to IP Addresses tab

» Make IP3 IP address same as Engineering Client IP Address

» Enable TCP port as 1433.
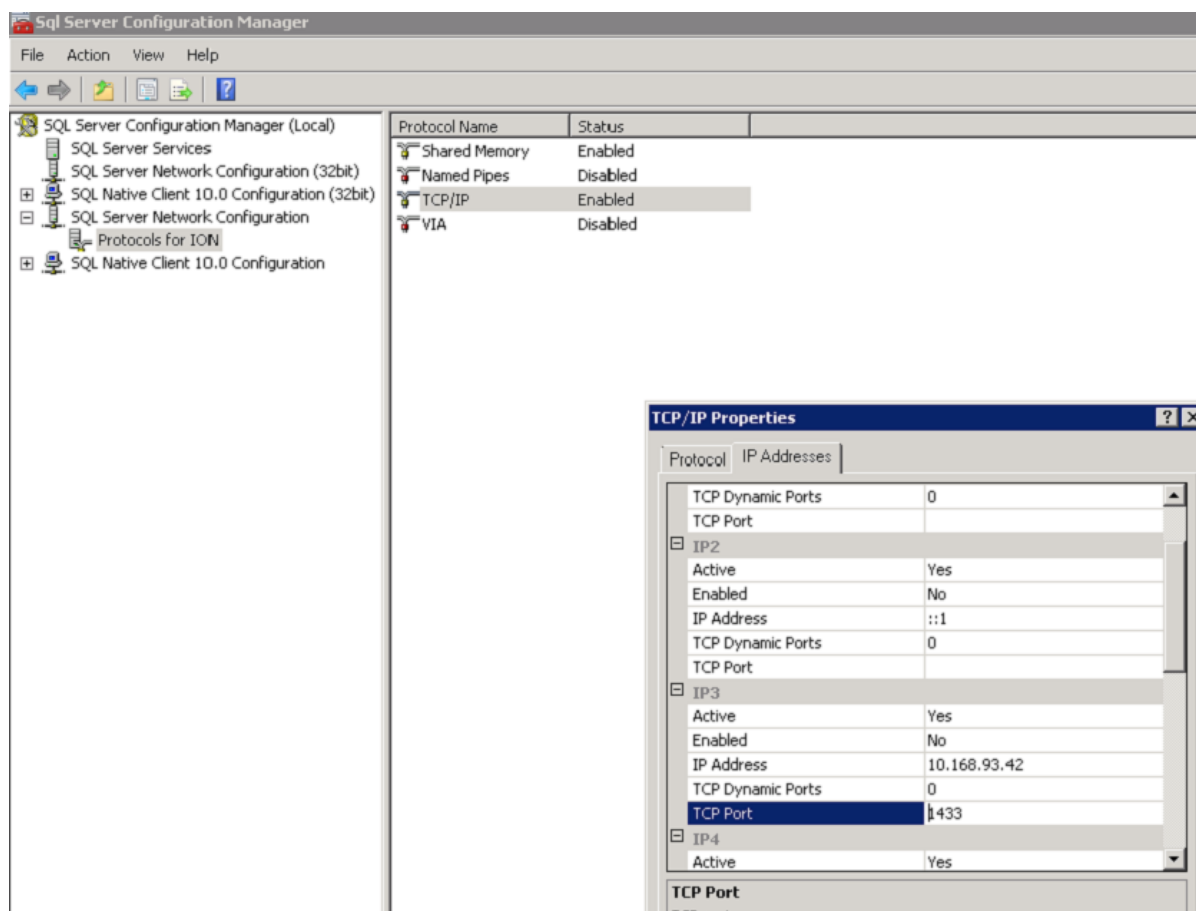
8. Check the remote connections of the SQL server 2008 R2 named instance (for example, PMEServer\ION) of the new PME server with Engineering Client as

mentioned below.

9. In Engineering Client, open a new Notepad file and save it as a `.udl` file.

    a. Open the UDL file; you need to manually enter the standalone server name with the SQL instance name (for example, PMEServer\ION) if it is not listed in the selection menu.

    b. Select the Use Windows NT Integrated security radio button.

    c. Select the **ION_Data** option from the Select the database on the server dropdown list.
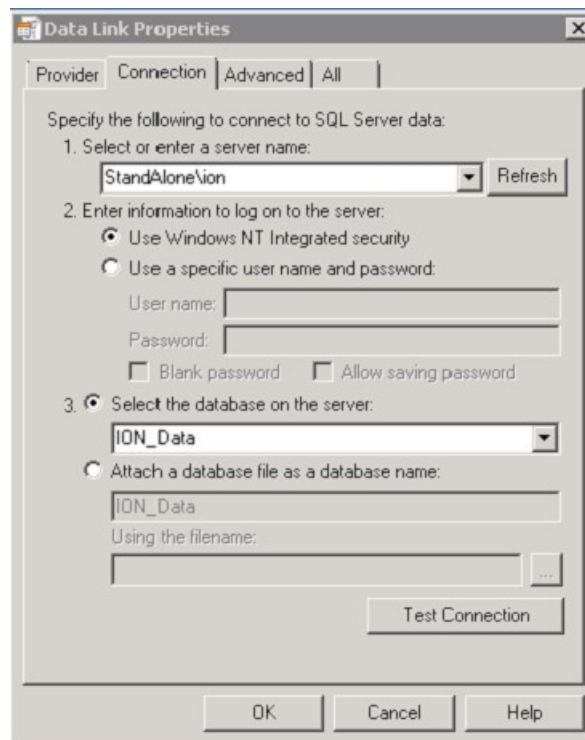
    d. Click **Test Connection**.

        Once the operation is complete, you will see a Test Connection succeeded window.

10. Install PME 8.1 on the Engineering Client.

    If the following exception displays in the Diagnostic viewer on the Engineering Client:

        To fix the exception:

1. On the command line, create a new directory called `$:\Win-dows\assembly\GAC\adodb\7.0.3300.0__b03f5f7f11d50a3a.`

2. Copy the `adodb.dll` file located in the `…\Schneider Electric\Power Monitoring Expert\system\bin` folder to the newly created directory (\GAC).

3. Log in to the Diagnostic viewer and make sure that the device status is active.

Device Diagram Customizations

Issue: Customizations to default device diagrams are lost when the diagrams were moved to the new system.

Cause: This issue can occur when a customized default device diagram on the old ION Enterprise system is configured to open from a grouping object that has the "Action" set to "Open Diagram for Meter Template".

This option will use an automatic mechanism in ION Enterprise to find the default device diagram based on the device type, firmware versions, and other settings. If the new PME system has an updated version of the default device diagram and the automatic mechanism is used to discover it, then the new one will be opened which does not have the customizations.

Workaround:

Option 1: Change the links on the new system to link to the specific default device diagram that was transferred over from the old system. Choose the option "Open User Diagram" in the dialog and then select the relevant diagram from the old system. The advantage here is that this requires relatively little time and effort. The downside is that you will not get the benefit of any bug fixes that led to the creation of the new diagrams.

Option 2: Copy the customizations that were done to the old diagram to the new diagram in PME 8.1. The advantage here is that you get any bug fixes that triggered the creation of the new diagrams. The downside is that you have to manually recreate the customization.

PME 8.0 to 8.1 Side-by-side Upgrade Guide

7EN42-0124-00 04/2016