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Experion PKS
Software Installation User's Guide

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1 About this guide

This guide describes how to install Experion, and the different methods to install Experion.

Intended Audience

This guide is for people who are installing Experion.

Prerequisite skills

You should have knowledge about Experion system, and know the Experion components that you have licensed and need to install and configure. You should also know how to complete system administration tasks in the Windows operating system.

Related documents

For more information about installing Experion, refer to the:

- *Getting Started with Experion Software Guide*
- Experion migration guides

Revision history

Version	Date	Description
A	February 2015	Initial release of the document.

2 Introduction to Experion installation

Related topics

“Experion installation methods” on page 10
“Overview of Experion Software Installation Server (ESIS)” on page 12
“Overview of Experion PKS System Initialization media” on page 13
“Overview of Experion Process Control Network (PCN)” on page 16
“Simplified and seamless Experion installation process using ESM” on page 17
“Experion End User License Agreement (EULA)” on page 18

2.1 Experion installation methods

You can install Experion using one of the following methods.

- Installation using Experion Software Installation Server (ESIS)
- Installation using DVD

ESIS can be setup on a network share, USB drive, or a removable hard drive.

Installation method	Basic requirement	Necessary user action	Number of nodes on which Experion can be installed at a time.
Using ESIS	• For ESIS on a network share. – Network connection between the ESIS node and the installation node. – To initiate installation, browse to the network share that has ESIS repository on the installation node. • For ESIS on USB drive or removable hard drive. – Insert the removable drive or USB drive on the system where you want to install Experion. – To initiate installation, browse to the ESIS repository.	For ESIS based installation, no user action is required after installation starts.	• Experion can be installed on multiple nodes at the same time. – If ESIS is set up on a computer that is accessible on the network. – If ESIS is set up on a removable device connected to a computer that is accessible on the network. • Experion can be installed on a single node when ESIS is set up on a removable drive that is connected directly to the computer where Experion installation must be preformed.
Using DVD	• DVD. • To initiate installation, insert the DVD.	For DVD-based installation, media swap is required during installation.	Experion can be installed on a single node using DVD.

During Experion installation, an internal account, **HPSInstall** is created to continue with installation without requiring user interaction when restarts are required.

This account is automatically created when the system restarts the first time during the installation. Log on to **HPSInstall** account using **MNGR** account password.

CAUTION

The **HPSInstall** account is reserved for automatic login after every restart during the Experion installation. Do not create this account manually for the purpose of an Administrator account.

Attention

- If the installation fails or is interrupted before completion, the system must be restarted. Log on to **HPSInstall** account using **MNGR** account password. After logging in successfully, run the **setup.exe** from the ESIS location or the Experion PKS Installation media, depending upon the mode of installation.
- For PCUS node, HPSInstall password must be in the following format.
  - Computer name in upper case, followed by space, and $1p$1g. For example, IE11FRT6SERW1 $1p$1g.
- The **HPSInstall** account is only created when restarts are required to complete the installation.
- The **HPSInstall** account is disabled automatically after the installation is complete.
- To ensure that the security descriptor for the account is not lost, the account must not be deleted.
- If you install only optional feature(s) on a clean operating system, and the installation of the optional feature(s) requires a reboot, the **HPSInstall** account is created automatically when the system reboots the first time during installation.

2.2 Overview of Experion Software Installation Server (ESIS)

Experion Software Installation Server (ESIS) can be set up only on a local hard drive, a portable USB hard drive, or a removable USB drive. Setting up ESIS includes installing all the Experion software on a shared folder (the shared folder is created on local hard drive or USB drive) which can be accessed over a network to perform Experion installation and migration on one or more systems.

ESIS provides a single repository for all Experion software and can be used for installing and migrating Experion software on multiple systems simultaneously. ESIS can be updated for any media updates or new media releases.

2.3 Overview of Experion PKS System Initialization media

Use Experion PKS System Initialization media to set up the hardware settings and device drivers on Honeywell-qualified platforms. Experion PKS System Initialization media also installs operating system components.

The advantages of using Experion PKS System Initialization media are.

- Prepares the system for Experion installation without mandatory operating system reload, if operating system and hardware platforms are compatible (Microsoft Windows 7 Professional (64-bit)/Microsoft Windows Server 2008 R2 Standard).
- Helps install qualified operating system, if necessary.
- Installs Experion software.
- Creates configuration files for operating system and Experion. These configuration files are created and saved on the node being initialized or on external media such as USB drive or floppy drive.
- Stores configuration files for different nodes in different folders on the external media.

Use Experion PKS System Initialization media on Honeywell-qualified platforms for the following purposes.

- Installs operating system before installing Experion, if the operating system is not Microsoft Windows 7 Professional (64-bit) or Microsoft Windows Server 2008 R2 Standard.
- Reinstalls Microsoft Windows 7 Professional (64-bit) or Microsoft Windows Server 2008 R2 Standard operating system.

Tip

- Refer to the *Experion PKS System Initialization media Software Change Notice* for details about Experion installation using Experion PKS System Initialization media.
- It is not mandatory to prepare the system for Experion installation using Experion PKS System Initialization media. You can configure the operating system first and then use the Experion PKS Installation media, or choose to install the product using ESIS.

Honeywell OEM-embedded operating systems

With Experion PKS System Initialization media, Honeywell supports the following Original Equipment Manufacturer (OEM)-embedded operating systems.

- Embedded Microsoft Windows 7 Professional (32-bit) Service pack 1.
- Embedded Microsoft Windows 7 Professional (64-bit) Service pack 1.
- Embedded Microsoft Windows Server 2008 Standard Service pack 1.
- Embedded Microsoft Windows Server 2008 R2 Service pack 1.
- Embedded Microsoft Windows 7 Professional (32-bit) Service pack 1 Certificate of Authenticity (COA).
- Embedded Microsoft Windows 7 Professional (64-bit) Service pack 1 Certificate of Authenticity (COA).
- Embedded Microsoft Windows Server 2008 Service pack 1 Certificate of Authenticity (COA).
- Embedded Microsoft Windows Server 2008 R2 Service pack 1 Certificate of Authenticity (COA).

Usage rights

The operating system supplied with Experion PKS System Initialization media is licensed through Honeywell under Microsoft Embedded program. The embedded licensing states that the computer must be used in conjunction with Honeywell control software. It must not be used as a general-purpose computing device (such as a personal PC) or as a multi-function server.

Additional licensing requirements and/or usage rights

- **Specific use:** Honeywell has designed this software for a specific use. The software must be used for that purpose only.

- **Other software:** You may use other programs with the software as long as the other programs adhere to the following rules.
  - Directly support the manufacturer's specific use for the media.
  - Provides system utilities, resource management, and antivirus or similar protection.

Attention

- Do not run software that offers consumer services, business tasks or processes on systems where Experion PKS System Initialization media is used. This includes electronic mail (e-mail), word processor, spreadsheet, database, scheduling, and personal finance software. The systems must use terminal service protocols to access such software running on a server.
- Before using the software, read and accept the End User License Agreement (EULA) present on the Experion PKS System Initialization media at the following location.
  - *<root of the DVD>\PEtools\ALP_WINPREINSTALLENVIRON.rtf* for 32-bit operating systems.
  - *<root of the DVD>\PEtools\ALP_WINPREINSTALLENVIRON_X64.rtf* for 64-bit operating systems.

Verifying the Certificate of Authenticity

Honeywell COA is available on the top side of the CPU. Honeywell COA is valid only if you buy the HPS operating system reinstallation media. The following image displays the location of the COA on the computer case.

Dell platform

HP platform

Verify core settings on Dell T610 and Dell R710 machines before platform migration

Verify the following core settings on the T610 and R710 machines before migration. If you are migrating from R31x to R431.1, you must perform this procedure. If this procedure is not performed, you may get SQL installation error.

1. Press **F2** while restarting the platforms to open the **System Setup** dialog box.
2. Use the DOWN-ARROW key to select **Processor Settings**.
3. Press **ENTER**.
4. Use DOWN-ARROW key to select **Number of Cores** per Processor.
5. The Number of Core per processor must be **ALL**. Otherwise, press **SPACEBAR** to select **ALL**.
6. Press **ESC** twice.
7. Select **Save changes and exit**.
8. Press **ENTER**.

Attention

For list of supported platforms, refer to the latest *Experion PKS System Initialization media Software Change Notice*. For information about software/hardware/firmware compatibility refer to the latest *Experion Software Change Notice*.

Setting the BIOS boot order

To set the BIOS boot order for both server and workstation platforms, perform the following steps.

1. Restart the system and press **F2** to access the **System** menu.
2. Expand the **System** menu, select the Boot sequence, and press **ENTER**.
3. Press the **UP/DOWN ARROW** keys on your keyboard to select Onboard or USB CD-ROM drive and bring it to the top.
4. Ensure that the Boot sequence is set as follows:
   a. CD/DVD
   b. Hard drive
   c. Floppy drive (not applicable for Dell platforms – T3600, T320, R320 ,T3500, T5500, T105, T310, T610, R5500, and R710 and HP platforms – HP DL380 ,HPZ620, and HP DL360p).

Attention

Use this boot sequence to prevent potential errors during boot when using a floppy disk for saved configuration files.

2.4 Overview of Experion Process Control Network (PCN)

Process Control Network (PCN) is a communications network used for transmitting instructions and data between the following:

- Control and measurement units.
- Supervisory Control and Data Acquisition (SCADA) equipment.

There are three levels of networks available on an Experion system.

Network type	Network details
Experion Process Network (EPN)	Network communication for Level 1 controllers. • FTE – A single FTE network that supports Level 1 and Level 2 communications. In this topology, Level 1 and Level 2 networks are one physical network, but are logically separate by TCP/IP Subnet masks. If FTE is selected at the EPN level, it is automatically selected at the supervisory level. • ControlNet (PCIC) – A network used by C200 controllers using a PCIC card installed on a node with an RSLinx driver. • ControlNet (Ethernet) – A network used by C200 controllers using standard Ethernet and RSLinx driver. • Ethernet – It enables a simulated EPN type setup over Ethernet for usage of simulation environments without connecting to real controllers. • No communication required for real controller – This is applicable only for ACE, PCUS, and Simulation environments. This is useful when ACE does not communicate with other controllers and is used for integrating with control data using other means such as OPC. Use this option if there is no interaction of the simulated controllers with real controllers.
Supervisory network (supervisory)	Network communication for Level 2 Experion nodes. • FTE-S – It is an FTE network used only for Level 2 communication. (Example: Experion Server to Experion Flex stations). It is a single redundant Ethernet network topology used as an alternative for deploying multiple Ethernet networks. (Previously, deploying multiple Ethernet networks required the coordination of more complicated station connection files and server alias names). • Ethernet - Provides support to the Level 2 communications if FTE is not selected.
Auxiliary networks (optional)	The extra network configurations used for integrating legacy hardware with Experion such as RSLinx, DHEB, and so on. RSLinx option is available only for server node and DHEB is available only on EHG node. DHEB is selected by default and you cannot clear this selection. • RSLinx - Provides connection to other supported interfaces/controllers such as PLC (Control Logix 5500) and so on.

2.5 Simplified and seamless Experion installation process using ESM

The Installation Builder tool, part the of the ESM Tool Set, allows the user to configure nodes offline and automate large scale deployments for both physical and virtual platforms. The advantage to using this method is offsite preparation capabilities, reduced individual install/configuration times, and centralized management of the entire system configuration.

ESM Configurations require a network based ESIS and a Virtual Support Environment (if deploying Virtual systems).

You can install Experion using the following options in the Installation Builder.

- Install Experion using ESIS (operating system pre-installed)
- Create Experion-installed virtual machines using the following options.
  - Create Experion virtual machine using ESIS from an operating system-installed virtual machine template
  - Create virtual machine from an Experion-installed template
  - Install Optional Features on an Experion template deployed machine from ESM

For more information, refer to the *Installation Builder User's Guide*.

2.6 Experion End User License Agreement (EULA)

The Honeywell Experion End User License Agreement (EULA) contains important terms and conditions for installation and use of the software.

A copy of the license is installed on all Experion nodes.

To view the Experion End User License Agreement

1. In Windows Explorer, go to *<install folder>\Honeywell\Experion PKS\EULA*.
   Where *<install folder>* is the location where Experion is installed.
2. Open the Honeywell license agreement.

3 Preparing for an Experion installation

Related topics

“Installation terms and definitions” on page 20
“Installing additional hardware” on page 21
“Monitor connection method for nVIDIA Quadro NVS 420 display controller (T5500)” on page 25
“Considerations for systems with Matrox QID” on page 26
“Considerations for systems with nVIDIA Quadro NVS 450” on page 27
“Disabling the antivirus services and applications” on page 28
“Preparing FTE networks” on page 29
“Preparing non-FTE networks” on page 31
“Setting up an ESIS repository” on page 32
“Custom installation path” on page 35
“Experion installation space requirements” on page 39
“Getting oriented with Status Display” on page 41
“Configuring software protection devices” on page 42
“Configuring pre-installed Microsoft SQL Server 2012 ” on page 43

3.1 Installation terms and definitions

The following terms and definitions are used during Experion installation.

Term	Definition
Clean operating system	A clean Windows operating system installed using Windows operating system media without any software, driver, or configuration. Clean Windows operating system can be manually installed using Windows operating system media.
Supported operating system	The operating systems qualified for Experion. • Microsoft Windows 7 Professional (64-bit) • Microsoft Windows Server 2008 R2 Standard
Unsupported operating system	Any other operating system other than the qualified operating system.
Platform preparation	Platform preparation includes operating system configuration, network settings and installation of device driver, computer-specific software, operating system components, BIOS, and firmware.
Operating system reinstallation	Installation/reinstallation of supported operating system.
Configuration files	Files used for configuring Experion system with or without operating system installation.
Bare metal	A computer without any operating system installed.
ESIS	Experion Software Installation Server (ESIS) is the repository of the required media contents to perform a complete unattended installation.

You may require the following Experion media to install Experion.

3.2 Installing additional hardware

Install the following hardware before Experion installation.

- Network Interface card (NIC)
- ControlNet PCIC card
- LCNP4E card
- LCNP4M card

3.2.1 Installing NIC

Considerations

- The qualified NIC drivers are automatically detected and configured during the operating system installation. Honeywell supports the Intel PRO/1000 PT Dual Port Server Adapter, Intel Gigabit ET Dual Port Server Adapter, and Broadcom 5720 Dual NIC Adapter cards.
- The onboard Dual NICs that are part of the Honeywell qualified platforms are also automatically detected and drivers installed with the Experion installation.
- It is important to get all NIC drivers from the Experion PKS System Initialization media because Honeywell has special versions of these drivers to specially support Experion FTE operations.
- Install the NIC in accordance with the platform *Planning, Installation, and Service guide*.
- The Planning, Installation, and Service Guides are located on Honeywell Process Solutions website http://www.honeywellprocess.com

CAUTION

ESD HAZARD: Ensure proper grounding when installing any hardware in a computer. It is recommended that you use an antistatic wrist strap. Alternatively, touch metal parts on the computer frequently to prevent the buildup of static electricity.

Attention

- Use NIC1 and NIC2 for setting up FTE.
- You must use NIC3 for EHG node installation without disabling the NIC ports in the BIOS.
- NIC3 and NIC4 must be disabled in BIOS on Dell PowerEdge R710 server and HP Proliant DL380 G7 server before NIC installation.
- If you receive a configured computer from the factory, the qualified NIC is already installed. For a list of qualified switches and other network equipment, refer to the latest Experion Platform Fault Tolerant Ethernet (FTE) Specification and Technical Data.
- There is no additional NIC support for the following platforms.
  - Dell PowerEdge T320 server
  - Dell PowerEdge R320 server
  - HP Proliant DL380 G7 server
  - Dell Precision T3600XL workstation
  - HP ProLiant DL360p Gen8 server

Tip

For more information, refer to *Fault Tolerant Ethernet Installation and Service Guide*.

3.2.2 Installing ControlNet PCIC

Attention
Do not install PCIC and LCNP4, LCNP4M, or LCNP4E cards on the same computer. This combination is not supported.

Prerequisites

- Necessary computer documentation.
- Knowledge of installing computer hardware.
- Operating system installation and configuration of the required options.
- Grounding wrist strap to wear before you handle the card.
- Phillips-head and flat-head screwdriver.

Accessing the expansion slots and installing the card

To access the PCI local bus expansion slots in your computer, refer to the *Planning Installation and Service Guides (PISG)*.

Attention

- To interface PCIC interface card on Dell PowerEdge T310, T610, T320, R320, and R710,HP DL360p servers, you must use the PCIe to PCI expansion chassis.
- Honeywell has certified a new PCIe to PCI expansion chassis from Magma Inc. for these interfaces. You must use PCIe to PCI expansion chassis with these servers if ControlNet (PCIC) is used.
  - Dell R710
  - Dell T310
  - Dell T610
  - Dell T320
  - Dell R320
  - HP DL360p
- For more information, refer to Magma PCI Expansion and Chassis Installation Instructions (PE4DR-HNWL or PE3R) Guide.
- The Dell R710 server now has a PCIe to PCI riser card that must be purchased from Dell through Honeywell allowing a user to use the ControlNet cards in Dell R710.

3.2.3 Installing LCNP4/LCNP4E and slot assignment

Tip

- The LCNP4 card is a full-length PCI card that consumes one PCI slot.
- The LCNP4E card is a half-length PCIe card that consumes one PCIe slot.
- An LCNP4 does not fit in the PE2850 because of its card length.
- An LCNP4M is required in the PE2850.

CAUTION
You must not install PCIC and LCNP4/LCNP4M/LCNP4E card on the same computer. This combination is not supported.

Refer to the following table for the recommended slot location for the LCNP4, LCNP4M, or LCNP4E card.

Experion Server TPS (ESVT/ACE-T/E-APP)

Platform	Slot	Card	Reference document
Dell PE2850 server	Slot 2	LCNP4M	Planning, Installation, and Service for PE2850 Server (EP-DCX554).
Dell PE2900 server	Slot 2	PCI-X LCNP4M	PE2900 - Honeywell Server Planning, Installation, and Service Guide (EP-DPCXX7).
Dell SC1430 server	Slot 4	LCNP4/LCNP4M	SC1430-Honeywell Server Planning, Installation, and Service Guide (EP-DPCXX6).
Dell PE2950 server	Slot 2	LCNP4M	PE2950-Honeywell Server Planning, Installation, and Service Guide (EP-DPCXX8)
Dell T610 server	Slot 5	LCNP4E	Planning, Installation, and Service for T610 (EP-DPCX15)
Dell R710 server	Slot 5	• In case of TPN only node, LCNP4E board is located in the PCIe x 8 Slot 3 • Experion nodes, LCNP4E is located in the PCIe x 4 slot 1	Planning, Installation, and Service for R710 (EP-DPCX16)
Dell T310 server	Slot 2	PCIe-X 16 x 8 routing	Planning, Installation, and Service for T310 (EP-DPCX21)
Dell T320 server	Slot 3	LCNP4E	T320 Honeywell Server Planning, Installation, and Service Guide (HWDOC-X239)
Dell R320 server	Slot 1	LCNP4E	R320 Honeywell Server Planning, Installation, and Service Guide (HWDOC-X230)
HP Proliant DL380 G7 server	Slot 2	LCNP4E	HP Dl 380 G7 Honeywell Planning, Installation, and Service Guide (HWDOC-X232)
HP ProLiant DL360p Gen8 server	Slot 2	LCNP4E	PISG (HWDOC-X330–en-A)

Experion Station TPS (EST)

Platform	Slot	Card	Reference document
Dell 490 (ES-T) workstation	PCI x Slot 5	LCNP4M	Planning, Installing, and Service for WS490 (EP-DPCXX5)
Dell T5400 (ES-T) workstation	PCI x Slot 5	LCNP4M	Planning, Installing, and Service for T5400 (EP-DPCXX9).
Dell T5500 (ES-T) workstation	PCIe x 16 Slot 4	LCNP4E	Planning, Installing, and Service for T5500 (EP-DPCX14).
Dell R5500 (ES-T) workstation	PCIe x 16 Slot 2	LCNP4E	Planning, Installing, and Service for R5500 (EP-DPCX25) .
Dell T3600XL workstation	Slot 1	LCNP4E	T3600XL Honeywell Planning, Installation and Service Guide (HWDOC-X230)
HP Z620 workstation	Slot 2	LCNP4E	HPZ620 Planning Installation and Service Guide (HWDOC - X223)
R7610 workstation	• PCIe Gen3 x16 Slot-2 • PCIe Gen3 x16 Slot-4	• LCNP4e, • nVidia NVS310	R7610 Honeywell Workstation Planning Installation Service Guide (HWDOC-X273)

Considerations for 2012-13 Honeywell PC platforms

The 2012-13 Honeywell PC platforms with the Sandy Bridge chipset introduced new logic states that were not recognized by the LCNP4e card. This forced the LCNP4e card to go into a power down state from which it

could not recover. If the platform is supporting a node type of T-Node and the platform therefore has an LCNP4e card, the card will not be recognized properly if a Dell or HP BIOS is used on the platforms. If a Dell or HP BIOS is flashed on the platforms, then the LCNP4e card does not work properly.

Dell implemented a workaround in T320 and R320 BIOS to allow Honeywell to continue to offer T-Node support. Further, Honeywell discovered that the Dell BIOS workaround breaks the Application Module (AM) Ride-Through functionality in the ACE-T and E-APP nodes running on the Dell T320 and Dell R320 servers. AM Ride-Through functionality allows the AM (running on the LCNP4e on ACE-T and E-APP) and all its process points to continue to run even when the ACE-T or E-APP server machine is rebooted. The workaround causes a hard reset (powering down the server) when any soft reset (CTRL+ALT+DEL reboot) is issued. This means that upon a soft reset (CTRL+ALT+DEL reboot) of the Dell server, the AM running on the ACE-T or E-APP shuts down. This issue is found on the ACE-T and E-APP nodes that support AM Ride-Through.

The table below summarizes the AM Ride-Through status for the Honeywell 2012-13 PC's.

Node type	Dell T320 server	Dell R320 server	HP DL 380 server
ACE-T	No AM Ride-Through	No AM Ride-Through	OK
E-APP	No AM Ride-Through	No AM Ride-Through	OK

Ensure that you perform one of the following actions as a workaround.

- If a replacement PC is being considered for purchase to run R4xx ACE-T or E-APP, Honeywell recommends that you order the Dell T310 or HP DL380 instead of Dell T320 or R320. The T310 and DL380 G7 support AM Ride-Through
- If the Dell T320/R320 has already been purchased and is running R4xx ACE-T or E-APP, Engineers must inform the operators that their AM will shut down when a soft reset (CTRL+ALT+DEL reboot) is done such as after patching the machines. Refer to the Honeywell Custom BIOS SCN, available on Honeywell Process Solution website on how to apply custom BIOS.

To download patch/SCN

1. In a web browser, type the following URL: https://www.honeywellprocess.com/support.

   The **Product Support** page appears.
2. If you are a new user, register at this website. Click **Register**, and follow the on-screen instructions.
3. If you are already registered, type your user name and password, and click **Login** on the login page.

   Your account login name appears in the top-right of the page.
4. In the **Search** text box, search for one of the applicable Custom BIOS/SCN.
   - * Dell R320/T320/T3600XL SCN: Dell 12G Custom BIOS Patch SCN
   - Dell R320 BIOS: Dell R320 Honeywell Custom BIOS 1.0.0 (Applicable only for Pre MLK platforms)
   - Dell T320 BIOS: Dell T320 Honeywell Custom BIOS 1.0.0 (Applicable only for Pre MLK platforms)
   - Dell T3600XL BIOS: Dell T3600XL Honeywell Custom BIOS M27
   - HP DL380 SCN: HP DL380 G7 BIOS Patch SCN
   - HP DL380 BIOS: HP DL380 G7 Honeywell Custom BIOS P67(05/06/2011)

   Attention

   * The Dell 12G Custom BIOS Patch SCN is applicable for all three Dell BIOS patches.

3.3 Monitor connection method for nVIDIA Quadro NVS 420 display controller (T5500)

nVIDIA Quadro NVS 420 quad monitor connection

VHDCI to DVI-D converter connector position	Recommended monitor connection
Output – 1	Monitor 1
Output – 2	Monitor 3
Output – 3	Monitor 2
Output – 4	Monitor 4

nVIDIA Quadro NVS 420 triple monitor connection

VHDCI to DVI-D converter connector position	Recommended monitor connection
Output – 1	Monitor 1
Output – 2	Monitor 2
Output – 3	Do not use
Output – 4	Monitor 3

3.4 Considerations for systems with Matrox QID

The Microsoft Windows 7 Professional (32-bit) or Microsoft Windows 7 Professional (64-bit) operating system and Matrox QID with DVI monitor are installed on the Dell T5500, T5400, and PW490 platforms.

While installing Experion using the Experion PKS System Initialization media on these platforms, the display may not be displayed after the driver is installed. The error may be displayed after flashing the display driver, and logging onto the operating system.

Ensure to use Video Graphics Array (VGA) interface (using DVI to VGA converter) for connecting the monitor with Matrox QID.

3.5 Considerations for systems with nVIDIA Quadro NVS 450

Honeywell-configured Dell T5500 / T5400 / PWS490 workstations configured with nVIDIA Quadro NVS 450 display controller can be connected to quad or triple displays. In Experion installed on Microsoft Windows 7 Professional operating system, a mismatch of the display numbers occurs if the quad display connections are as per the display number mentioned on the controller.

After loading the Microsoft Windows 7 Professional operating system on the Honeywell-configured T5500 / T5400 / PWS490 platform, when the quad display connection is made according to the display number mentioned on the controller, the display numbering shows 1, 3, 4, 2 instead of 1, 2, 3, 4.

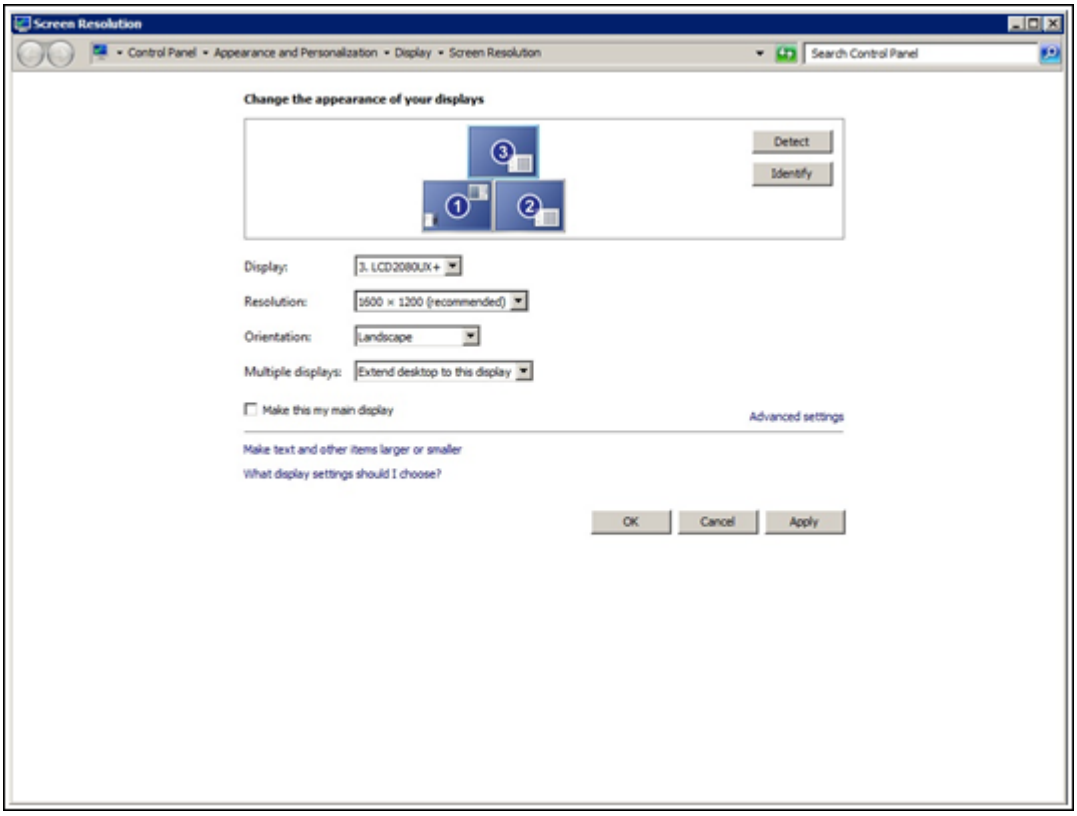
Ensure that you set the display port number as follows, before using the Experion PKS System Initialization media.

nVIDIA Quadro NVS 450 display connection

Display port number	Quad display connection for Microsoft Windows 7 Professional operating system
1	1
4	2
2	3
3	4

nVIDIA Quadro NVS 450 Triple display connection

For the triple display configuration, Experion PKS System Initialization media does not arrange the display according to required format and it does not set the screen resolution as selected in **Experion PKS System Initialization media–Dialog Manager**. After completing Experion installation, you must arrange the displays according to required format as illustrated in the image. Arrange display 1 and 2 in lower tier and 3 in upper tier.



3.6 Disabling the antivirus services and applications

To ensure proper installation of the software, before you begin with Experion installation, disable the antivirus services, if antivirus is already installed on the system.

Attention

- You must disable your antivirus only if you are installing Experion on a pre-installed operating system.
- Ensure that your network connections do not have internet access or other communications outside of your internal network.

Perform the following steps if you are not installing a new operating system and you already have antivirus software running on your target node.

To disable the antivirus services and applications

1. Click **Start** > **Run** and type **msconfig**.
2. If the **User Account Control** dialog box appears, click **Continue**.
   The **System configuration Utility** dialog box is displayed.
3. In the **Services** tab, turn off all antivirus services and applications.
4. Enable and restart these services and applications after the installation is complete.

3.7 Preparing FTE networks

This section is applicable only if the operating system was manually installed without using Experion PKS System Initialization media.

Prerequisites

- If you are using Dell R710 servers, NIC3 and NIC4 must be disabled in BIOS before installation. Use NIC1 and NIC2 for setting up FTE. You can use NIC3 for EHG node installation without disabling the NIC ports in the BIOS. For more information, refer to the, *R710 Honeywell Server Planning Installation and Service Guide*.
- Perform the following procedure only if you are manually installing the operating system.
- For more information about configuring FTE networks, refer to the following documents.
  - *Fault Tolerant Ethernet Overview and Implementation Guide*
  - *Fault Tolerant Ethernet Installation and Service Guide*

Changing network properties to support Fault Tolerant Ethernet

1. Log on as a user with local administrator rights.
2. Perform the following steps to verify the network connections for the system you are configuring.

Microsoft Windows Server 2008 R2	Microsoft Windows 7 Professional (64-bit)
Click **Start** and select **Network Properties**.	Click **Start** and select **Computer**.
Right-click **Network** or right-click the Network icon in the notification area of the task bar.	In the left pane, click the **Network** link.
Select **Properties** from the menu.	
The **Network and Sharing Center** window is displayed.	Click **Network and Sharing Center**.
Select **Manage Network Connections** from the left menu.	Select **Change Adapter Setting** from the left menu.

3. Enable network connections. Ensure that both network connections (Local Area or Yellow, Green) are enabled and network cables are connected to the corresponding adapters for the machine.
4. Select the **Local Area Connection**. (First adapter in FTE Array - it is called Yellow connection if using Experion PKS System Initialization media). Right-click the adapter and choose **Properties**.
5. Click **Continue to the User Account Control** prompt if it appears.
6. Go to **Local Area Connection -> Properties** window.
7. Select **Internet Protocol Version 4 (TCP/IPv4)** and change the network configuration settings for your test configuration. Specify only the IP Address, Subnet Mask, Default gateway, and DNS Servers. You do not have to set up any of the advanced settings.
8. Click **OK**. Select the **Local Area Connection** (First adapter in FTE Array- It is called Yellow if using Experion PKS System Initialization media) again. Right-click the adapter and select **Properties**.
9. Click **Continue to the User Account Control** prompt.
10. Click **Configure**. Select the **Link Speed** or **Advanced** tab to change the speed and duplex of your adapter type to 100 mbps/ Full Duplex from AUTO.
11. In the **Advanced** tab.
    - Set the **IPv4 Large Send Offload, IPv6 Large Send Offload**, and **Receive Side Scaling** to **Disable** for the adapters (Receive Side Scaling may not be present for Intel NICs).
    - Verify that Jumbo MTU is set to 1500 on Broadcom adapters.
    - Verify that Jumbo packet is disabled on Intel adapters.
12. Click **OK**. Select the **Local Area Connection 2** (Second adapter in FTE Array- it is called Green if using Experion PKS System Initialization media) again. Right-click the adapter and select **Properties**.

13 Click **Continue to the User Account Control** prompt.

14 Click **Configure**.

- Change the speed and duplex of your adapter to **100 mbps /Full Duplex** from AUTO.
- Set the **IPv4 Large Send Offload** and **Receive Side Scaling** to **Disable**. (Receive Side Scaling may not be present for Intel NICs).
- Verify that Jumbo MTU is set to 1500 on Broadcom adapters.
- Verify that Jumbo packet is disabled on Intel adapters.

15 Click **OK**.

To verify IP address of FTE

- It is important that the FTE Yellow (NIC1) adapter be configured correctly before FTE installation occurs. Ensure to setup the IP address of **NIC1** with the IP address of the **FTE MUX** to ensure any future updates are operational. For more information, refer to the *Configure FTE network connections* section in *FTE Installation and Service Guide*.

3.8 Preparing non-FTE networks

Attention
Perform this procedure only if you are running Experion without FTE. This section is applicable only if you are not using Experion PKS System Initialization media.

1 On the **Start** menu, right-click **Network** and choose **Properties**.
The **Network and Sharing** window is displayed.

2 In the **Network and Sharing** window, select **Manage Network Connections**.
The **Network Connections** window is displayed.

3 In the **Network Connections** window, right-click the second (traditionally Green) NIC adapter icon and select **Disable**.

4 If the controllers are in a separate subnet, perform the following to add a static route to servers, consoles, and ACEs.

a Start up the command prompt with administrator privileges.

b Type the following command: `route add a.b.c.d mask m.m.m.m <yellow IP>–p`

- Where **a.b.c.d** and **m.m.m.m** match the entry in the embedded FTE parameter page in Control Builder and <yellow IP> is the IP address of the computer where the static route is being added.
- For example, if the server with IP address 10.0.1.20 is being configured and the controller base address is 10.0.0.0 and subnet mask is 255.255.252.0, then the command line must be: `route add 10.0.0.0 mask 255.255.252.0 10.0.1.20-p`
- This ensures that the route is persistent through the reboots.

3.9 Setting up an ESIS repository

If you want to use the Experion Software Installation Server(ESIS) to perform installation/migration, you must set up an ESIS repository.

The ESIS is a file server/file share. It is an accessible Windows node with account security, capable of hosting a share that has available disk space to host the Experion installation media. You can set up an ESIS to host the Experion software. The ESIS can be accessed over the network or a removable drive for installation/migration of system software on Experion system nodes. If you use ESIS, you do not have to insert the software medias into the Experion node to install the system software.

ESIS repository consists of the following media.

- Experion PKS Installation media
- Microsoft SQL Server 2012 SP2 media
- Experion PKS Support Software media
- Microsoft Visual Studio for CAB Developer media. (optional, required only if CAB is selected).
- Experion PKS System Initialization media
- Experion PKS System Initialization Updates media
- Experion PKS with PMD controller media (optional)
- Windows 7 Professional 64-bit HPS OS reinstallation media (optional)
- Windows Server 2008 R2 HPS OS reinstallation media (optional)
- Experion Support and Maintenance media

Attention

- DO NOT install/setup ESIS on Experion nodes.
- You can create an ESIS repository on a local hard disk that can be accessed using a network share, USB drive, or a removable hard drive.
- For setting up an ESIS repository, the minimum space required on the ESIS server is 33 GB.

  Tip
  Depending upon your preferences for ESIS setup, the minimum size required for ESIS setup varies.

- You must have .Net Framework 2.0 or higher version installed on your computer for creating an ESIS repository.
- You can create the ESIS repository on the following operating systems.
  - Microsoft Windows XP (32-bit) (Service Pack 2 or above)
  - Microsoft Windows 7 Professional (32-bit)
  - Microsoft Windows 7 Professional (64-bit)
  - Microsoft Windows Server 2003 (32-bit) (Service Pack 1 or above)
  - Microsoft Windows Server 2008 R2 (32-bit)
  - Microsoft Windows Server 2008 R2 Standard (64–bit)
- The ESIS and Experion Migration Storage Node (EMSN) can be hosted on the same server. When hosted on the same node, while connecting to EMSN or ESIS, ensure to use the same account (with same permission) during migration.

Prerequisites

- On the ESIS node, you must disable **On-Access Scan** for your virus protection software before setting up or updating ESIS.
- The network link speed on the node where ESIS is being set up, must match the link speed on the switch to which the node is connected (Link speed is 100 Mbps Full Duplex for an FTE-based network).

To set up an ESIS repository

1 Insert **Experion PKS Installation media**.

The **Honeywell Experion PKS Installer** screen is displayed.

> **Attention**
> If auto run is disabled on a system and **Honeywell Experion PKS Installer** screen does not appear, perform the following steps.
>
> 1. Using the Windows Explorer, browse to the media \Browser\cdbrowse path.
> 2. Double-click **cdbrowse.exe**.

2 Click **Setup an Experion Software Installation Server**.

> **Attention**
> - If the ESIS tool fails to start and an error message **Net 2.0 or higher needs to be installed** is displayed.
>   - Click **OK** to exit.
>   - Navigate to *<Install Media> \Packages\Microsoft\DotNet3.5\dotnetfx35.exe* , and install .Net framework 3.5.
>
>   Or
>
>   Add .Net 2.0 by starting *Experion PKS System Initialization media\Packages\Software \Net_Framework\2.0\Dotnetfx.exe.*.
> - If you are creating ESIS on Microsoft Windows XP (32-bit) SP2, an error **You must install Windows Installer 3.1 to complete installation. Microsoft .Net 3.5 Framework requires that Windows Installer 3.1 be installed prior to the installation** is displayed.
>   - Click **OK** to exit.
>   - In the Experion PKS Installation mediaExperion Application DVD, navigate to *\Packages\Software \Net_framework* path and install .Net 2.0 and continue with ESIS preparation.
> - If a message for file security appears, click **Run**.

The **Welcome to ESIS** page is displayed.

The options in the **Welcome to ESIS** page are as follows:

- Create a new ESIS repository
- Upgrade existing ESIS repository
- Resume a failed ESIS repository creation
- Remove an existing ESIS repository

> **Attention**
> When the **ESIS Preparation Utility** is started on the node for the first time, only the option **Create a New ESIS Repository**, is selected by default and all the other options are unavailable.

3 Select **Create a New ESIS Repository** if not already selected and click **Next**.

The **Select a path** dialog box is displayed.

4 Click **Browse** to select the destination folder for the ESIS repository.

> **Attention**
> The destination folder must be located only on USB drives, removable hard drives, or local system drives.

If you select local system drive, a message prompting to share the destination location is displayed. Perform the following steps.

1. Click **OK**.
2. In the **<Folder Name> Properties** dialog box, select **Sharing**.
3. Select **Share this folder**.
4. Enter the **Share name**.

5. Click **Permissions** to assign the share permissions.
6. Click **OK**.

Tip

- **Read** permission is required for ESIS share.

5 Click **Next**.
The **Select media** page is displayed.

Attention

If you want to install or migrate Experion node without using Experion PKS System Initialization media, then do not select the following options during ESIS creation.

- Microsoft Windows 7 Professional (64-bit)
- Microsoft Windows Server 2008 R2

6 Select the appropriate names of the media for ESIS repository creation and click **Start**.
The **Status Display** page is displayed, with the following information.

- The selected media is displayed on the left pane of the **Status Display** page.
- The **Current Step** displays the progress of the current media being copied.
- The **Overall Progress** displays the progress of all the media being copied.
- The **Description** displays a message related to the current media being copied.

7 After the selected media are successfully copied, the **Description** is updated as **ESIS Repository [<Name>] created successfully at <Destination Location>**.

8 Click **Finish**.

Attention

Ensure that you enable **On Access Scan** for your antivirus after you have completed the ESIS setup.

3.10 Custom installation path

Starting Experion R410, installation is supported on custom installation path. This feature is introduced to allow control on the path where Experion is installed and the location where the runtime files and SQL logs are stored.

Attention

- Before you choose custom installation paths for Experion, verify that there are no interoperability issues with any non-Experion applications/packages that depend on the path where Experion software, runtime files or SQL logs are stored.
- All nodes in the cluster must use the same custom installation path.

You can select the custom installation path for the following components.

- Experion software: This consists of deliverable that are part of Experion installer and third-party software.
- Experion runtime data: This consists of all the files and folders available at *C:\ProgramData\Honeywell* path for the Experion release and the Experion SQL databases.

  Following files belong to this category.

  – Runtime data
  – Experion created SQL data files
- Experion SQL logs: This consists of SQL database log files generated during installation.

Attention

The custom installation path is appended to *<>Vendor\Product Name<>*. For example, Honeywell Experion features is *<Component> Honeywell\Experion PKS\(Function-specific path)*

where, <*Component*> is user selected software path/runtime data path/SQL logs path.

The custom installation path option is not supported for the following components. These components are installed in the default path.

Component	Default path
Shared software across different Honeywell products	% CommonProgramFiles %\Honeywell\
Shared software across different vendors	% CommonProgramFiles%

The following table describes the default path and custom installation path format for the components that support custom installation paths.

Component	Default path	Custom installation path
Experion software	*C:\Program Files (x86)\Honeywell*	*%User selected path%\Honeywell*
Experion runtime data	*C:\ProgramData\Honeywell*	*%User selected path%\Honeywell*
Experion SQL logs	*C:\ProgramData\Honeywell*	*%User selected path%\Honeywell*

Attention

- You cannot change the drive letter for system or boot volume.
- If there are multiple internal hard disks or partitions on the system, the drive letter specified is reset automatically during operating system installation. You can change the drive letter before you select the custom installation path for Experion installation by performing the following steps.

  1. Install the operating system manually.
  2. Change the drive letter name.
     a. Right-click on the **Computer** icon on the desktop and choose **Manage**.

        The **Computer Management** window is displayed.
     b. In the left pane of the **Computer Management** window, select **Computer Management (Local) > Storage >Disk Management**.

        The disk partitions in the system are displayed in the right pane.
     c. Right-click the disk partition of which you want to change the drive letter and select **Change Drive Letter and Paths**.
     d. In the **Change Drive Letter and Paths** dialog box, click **Change**.
     e. Select the drive letter from the list and click **OK**.
  3. Select the custom path for installation and continue with installation.

Considerations for custom installation paths

Ensure that you adhere to the following guidelines for choosing the custom installation path.

- All nodes in the cluster must use the same custom installation paths.
- Custom installation paths can not be changed post installation.
- Experion software, Experion runtime data, and Experion SQL logs must have different directory and subdirectory custom installation paths.
- The Experion SQL logs custom path can be a subdirectory of the Experion runtime data custom path. However, the Experion runtime data custom path cannot be a subdirectory of the Experion SQL logs custom path.
- The Experion Software path cannot be a subdirectory of Experion SQL logs path or vice-versa.
- On a 64-bit platform, the custom installation path for Experion software can be "*C:\ProgramFiles*" or a subdirectory of "*C:\ProgramFiles*". However, the software is placed in the "*C:\ProgramFiles(x86)*" path.
- The custom installation path must not begin with the following paths.
  - *C:\ProgramData* (Experion software)
  - *C:\Program Files (x86) and C:\Program Files (Experion runtime data and Experion SQL logs).*
  - *C:\Program*
  - *C:\Windows*
  - *C:\Users*
  - *C:\Documents and Settings*
- The folder names within the path supports space ( ), hyphen (-) and underscore (_) special characters.
- While specifying the custom installation paths in the Dialog Manager, any space entered before or after the custom installation path is automatically removed.
- Only the path *C:\Program Files (x86)*, supports the use of opening and closing braces – ( ). The exact representation of this path along with the space requirements is – *C:\Program<space>Files<space>(x86)*. No variant of this representation (missing space or a different drive - refer examples) and no other path allow opening and closing braces.

  Following are some examples of paths that do NOT allow braces.

  - C:\Test (custom install path)
  - C:\Test<*space*> (custom install path)
  - C:\Program Files(x86)

  - D:\Program Files<*space*>(x86)
- You must enter only a single letter for the drive/path. For example, "**D:**".
- The maximum path length of the *custom installation path* folder is 50 characters.
- If the specified drive/path does not exist, an appropriate error message appears, and you can modify the drive name.
- Ensure that the Microsoft Windows 7 Professional (64-bit) and Microsoft Windows Server 2008 R2 operating system is installed on the **C:** drive.
- Custom installation path is supported on local drives only. It does not support network drives or removable drives.
- If optional features are already installed on your system, ensure that you provide the same path for Experion installation.
- Local drive(s) selected for the custom installation path(s) must not be compressed.

Attention

- The Experion files and folders created within the custom installation path folder have Experion specific security permissions assigned to them. This is to ensure that others users, apart from the System Administrator do not access or modify the content within these folders.

  For example, if "*"D:\Experion\Programs"*", "*D:\Experion\Data*", and "*D:\Experion\SQLLogs*" are the custom installation paths for Experion software, Experion runtime data, and Experion SQL logs respectively, the Experion security is specified on the following directories.

  - D:\Experion\Programs\Honeywell
  - D:\Experion\Data\Honeywell
  - D:\Experion\SQLLogs\Experion PKS\Honeywell

  Hence, the **Honeywell** folder within "*"D:\Experion\Programs"*", "*D:\Experion\Data*", and "*D:\Experion\SQLLogs*" paths is assigned Experion specific security permissions. Additionally, ensure that you do not have other data in this path.
- Ensure that you provide required access permissions to the custom installation path folders.
  - The **Experion software** custom path must have the access permissions as "Program Files (x86)" folder.
  - The **Experion runtime** and **Experion SQL log** custom paths must have the access permission "ProgramData" folder.

The following table describes the list of Honeywell folders/files that do not support the custom installation path.

Media/package	Installation path	Comments
Init Media folder	C:\ProgramData\Honeywell \Install\Init Media\	This folder is created by Experion PKS System Initialization media, and is used for maintaining logs and configuration files. These files are only created during install time, not accessed during runtime.
Shared Software	C:\Program Files(x86)\Common	Common files shared across the software.
ErrLog1.txt	C:\ProgramData\Honeywell \Experion PKS\ErrLog_1.txt	Refer to the **ErrLog(s)** maintained at the custom installation path location.
TraceUI	C:\ProgramData\Honeywell \TraceUI \DotNetSysMgmtDsp.txt	Log for *System Management Display* tracing tool.
Crystal Report merge module folders	• C:\css • C:\html • C:\images • C:\jss • C:\prompting	These folders are created for Crystal reports during runtime.

The following list describes the third-party packages that do not support custom installation paths.

- Adobe Reader 10.1.2

- Microsoft .NET Framework 4.5 Client Profile
- Microsoft .NET Framework 4.5 Extended
- Microsoft .NET Framework 4.5 Multi-Targeting Pack
- Microsoft Silverlight 5
- Microsoft SQL Server 2012 SP1 (Note: SQL databases and logs support custom installation paths)
- Microsoft SQL Server Compact 4.0 SP1(Note: SQL databases and logs support custom installation paths)
- Microsoft Visual C++ 2012 Redistributable
- Microsoft Visual C++ 2012 x86 Redistribuatable
- Microsoft Visual Studio 2012 Professional
- Microsoft Visual Studio 2012 Remote Debugger
- Microsoft Visual Studio 2012 Service Pack 1
- Redhat (Redhat GNU C++ compiler for CAB)
- RSLinx Classic
- SAP Crystal Reports runtime engine for .NET Framework 4.5 (32-bit)
- Sentinel Protection Installer 7.6.5
- SYCON.net Honeywell EPKS
- Internet Explorer 10
- SQL XML 4.0 SP1

3.11 Experion installation space requirements

Experion installation using Experion PKS System Initialization media

The Experion system must have minimum of 60 GB hard disk space in C drive for the Experion PKS System Initialization media to install the following:

- Operating system
- Operating system updates
- Drivers

Using the following method, calculate the minimum free hard disk space required for the operating system installation: **55 GB (operating system + base Experion) + GB RAM size x 1.5 (page file) + GB RAM size x 1.5 (dump file)**

If the calculated value is greater than 60 GB, then 60 GB is the minimum free hard disk space required. For example, in a system with 4 GB RAM, the minimum free hard disk space required for the operating system installation is 47GB (67 + 4*1.5 + 4*1.5). Hence, **67 GB** is the minimum free hard disk space required for operating system installation.

If the calculated value is lesser than 60 GB, then the calculated value is the minimum free hard disk space required. Hence, **60 GB** is the minimum free hard disk space required for operating system installation.

It is recommended to keep additional 30 GB for data migration (20 GB for Runtime Data path and 10 GB for SQL Logs path).

Attention

- If you are installing Experion in custom installation path, refer to **Custom installation path** section, for the disk space required for each of the custom install paths.
- The minimum space required in C drive (50GB) is independent of default or custom installation paths.
- The Experion PKS System Initialization media displays a warning if the recommended disk space is not available, and does not allow you to install on C: drive.

Experion installation without using Experion PKS System Initialization media

The hard disk space requirement to install Experion without using Experion PKS System Initialization media is as follows:

- **Default path:** If you are installing/migrating Experion in the default path, each node must meet minimum space requirements on C drive as follows:

Node	Minimum space
Server (ESV)	39 GB
Server TPN Connected (ESVT)	39 GB
eServer	39 GB
Application Server (EAS)	39 GB
Application Control Environment (ACE)	14.5 GB
Application Control Environment TPN Connected (ACE-T)	14 .5GB
Simulation environments	14.5 GB
Experion Hiway Gateway (EHG)	14.5 GB
App Node (E-APP)	14.5 GB
PC Universal Station (PCUS)	14.5 GB
Console Station (ES-C)	29.5 GB
Console Station TPN connected (ES-T)	29.5 GB
Console Extension Station (ES-CE)	29.5 GB

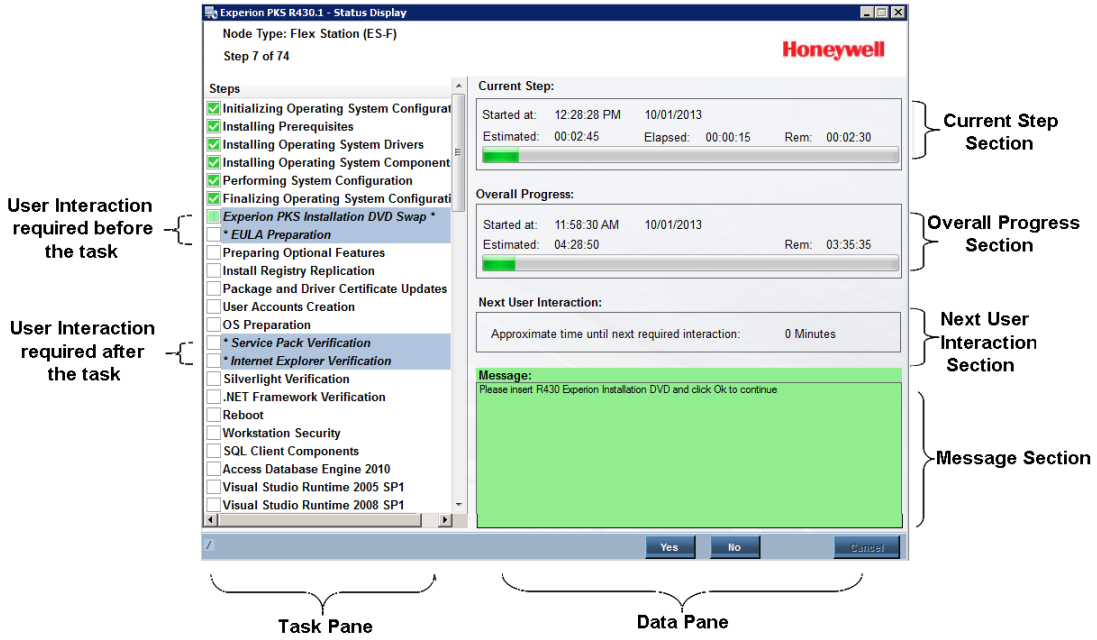
Node	Minimum space
Flex Station (ES-F)	28.5 GB
Optional components	4 GB
Collaboration Station	29.5 GB

- **Custom installation path:** If you are installing/migrating Experion in the custom installation path, the path you select for each component must meet the minimum space requirements as follows:

Node	Third party application (Default drive: C drive)	Experion Software path	Experion Runtime Data path	Experion SQL Logs path
Server (ESV)	23 GB	10 GB	5 GB	1 GB
Server TPN Connected (ESVT)	23 GB	10 GB	5 GB	1 GB
eServer	23 GB	10 GB	5 GB	1 GB
Application Server (EAS)	23 GB	10 GB	5 GB	1 GB
Application Control Environment (ACE)	9.5 GB	2 GB	2 GB	1 GB
Application Control Environment TPN Connected (ACE-T)	9.5 GB	2 GB	2 GB	1 GB
Simulation environments	9.5 GB	2 GB	2 GB	1 GB
App Node (E-APP)	9.5 GB	2 GB	2 GB	1 GB
Experion Hiway Gateway (EHG)	9.5 GB	2 GB	2 GB	1 GB
PC Universal Station (PCUS)	9.5 GB	2 GB	2 GB	NA
Console Station (ES-C)	17.5 GB	10 GB	2 GB	NA
Console Station TPN connected (ES-T)	17.5 GB	10 GB	2 GB	NA
Console Extension Station (ES-CE)	17.5 GB	10 GB	2 GB	NA
Flex Station (ES-F)	17.5 GB	10 GB	2 GB	NA
Optional components	0 GB	2 GB	2 GB	NA
Collaboration Station	17.5 GB	10 GB	2 GB	NA

3.12 Getting oriented with Status Display

The Status Display is the page displayed during installation of Experion. The following is an illustration of the Status Display page.



The Status Display page consists of the following elements.

- Task pane: The Task pane displays the list of tasks in the sequence in which they are performed. The tasks can be classified based on user interaction requirements as following:
  - Automated tasks - do not require any user intervention.
  - Tasks requiring user intervention before the task - indicated with a blue background and an asterisk before the task title. Usually occurs before a media swap step.
  - Tasks requiring user intervention after the task - indicated with a blue background and an asterisk after the task title. Usually occurs at the end of the installation or at the end of Phase 1 of migration to indicate that you must click a button (Yes/No/Cancel) after completing the task.
- Data pane: The Data pane consists of the following sections.
  - Current step section - displays the time details of the task in-progress.
  - Overall progress section - displays the time details of the tasks that have been performed.
  - Next user interaction section - displays the approximate time when the next user interaction is required. If you are multitasking, this would help you plan your tasks.
  - Message section - displays the details of what action is required for the next user interaction.

> **Attention**
> The time details displayed, such as, the time remaining for the current task in progress, the overall installation time remaining, and the time when the next user interaction is required, are all approximate values. The results may vary.

3.13 Configuring software protection devices

The software license states whether the system configuration requires the use of a software protection key (also known as a dongle device). This must be inserted in the computer before you begin installation and must remain in place for proper operation of the system.

Attention

- This task is applicable for Experion server only.
- Ensure that you have the required Experion license to use the dongle on your computer.
- Ensure that the dongle appears in the **Device Manager** window. It must appear in the **Other Devices** section or in the **Universal Serial Bus controllers** section.
- Ensure that the dongle light is turned on after it is connected to the computer.
- Ensure that dongle is connected throughout the installation.

3.14 Configuring pre-installed Microsoft SQL Server 2012

In R431, the pre-installed SQL scenario is supported to install Experion on a system where Microsoft SQL Server 2012 Standard Edition Service Pack2 (SP2) is already installed.

Considerations

- Perform the following tasks only if you have pre-installed Microsoft SQL Server 2012 Standard Edition Service Pack2 (SP2).
- The tasks ensures that a compatible Microsoft SQL Server 2012 Standard Edition configuration exists prior to initiating Experion installation.
- The pre-installed SQL scenario of Experion installation fails, when the SQL server services account is configured with Administrator account in Server Configuration menu of SQL installation and Experion PKS System Initialization media is used for configuring the system. The Experion PKS System Initialization media disables the Administrator account during operating system configuration. The Experion installation at SQL step fails if the log on account of the SQL services is disabled. Hence, prior to SQL server configuration, ensure that you change the user account to a different Windows account (with or without Administrator privileges) using the SQL Server Management Studio and SQL Server Configuration Manager.
- The SQL installation path must be same for redundant servers in a pre-installed SQL scenario.
- Ensure that the following features have been installed along with SQL.
  - Database engine services
  - SQL server replication
  - Reporting services-native
  - Client tools connectivity
  - Documentation components
  - Management tool-basic
  - Management tools-complete
- Experion only supports the default instance of the SQL Server - MSSQLSERVER

1 Ensure the architecture is selected as x86 (32-bit).

   a In the **SQL Server Installation Center** dialog box, select **Options** from the list.

   b Select **x86**.

> **Attention**
> If you have already installed Microsoft SQL Server 2012 and not selected x86 as the architecture, you must reinstall SQL Server to continue. Experion R431 is based on the x64 operating system, but is running the x86 Microsoft SQL Server 2012 version. x86 is an automatic selection if you are not pre-installing SQL Server.

2 Add the user account **HPSInstall** as a Microsoft Windows User with one of the following privileges.

   - Administrator privileges for a clean installation.
   - Administrator and Product Administrator privileges for reinstalling Experion without operating system reinstallation.

   Create **HPSInstall** account, note down the password provided for the **HPSInstall** account. The same password must be entered for **MNGR** account during Experion Installation.

3 Add a database user **HPSInstall** with the same password as used for the Windows user account.

   If Microsoft SQL Server 2012 is already installed, use SQL Server Management Studio (SSMS), and add a database user **HPSInstall**.

   Perform the following steps in the left pane of the **SSMS** Object Explorer.

   a Select **Security** > **Logins** > **HPSInstall** user/account.

   b Right-click **HPSInstall**, and choose **Properties**.

c In the left pane of the **Properties** page, select **Server Roles**.

d In the right pane of the **Properties** page, select **sysadmin**.

e Click **OK**. Exit **SSMS** Object Explorer.

4 Log off and log on using **HPSInstall** account, and start Experion installation.

4 Installing Experion on Honeywell-qualified platforms

Related topics

“Installing Experion using ESIS” on page 46
“Proceeding with Experion installation using ESIS” on page 49

4.1 Installing Experion using ESIS

This section describes how to install Experion using ESIS. You can install Experion using ESIS in one of the following ways.

- ESIS from network share
- ESIS from USB drive

Prerequisites

- To view the list of Honeywell-qualified platforms, refer to the *Experion PKS System Initialization media Software Change Notice* available in the HPS support website. In addition, for the qualified Experion PKS System Initialization media version refer to the *Experion General Release Software Change Notice*.
- For operating system reinstallation, use the *Administrator* account for generating configuration files.
- If you are using *Administrator* account for generating configuration files, **Experion PKS System Initialization media–Dialog Manager** asks you to create a new user account for installation.
- Ensure that a common account does not exist between ESIS and the installation node.
- ESIS server is added as a trusted source in Internet Explorer (if you are starting installation on Microsoft Windows Server 2003 (32-bit) operating system). To add the server, choose **Tools > Internet Options > Security > Trusted Sites**.
- The HPS Install account is deleted from the ESIS node (if it exists on the ESIS node).

Attention

– The network link speed on the node where installation is being performed using ESIS on network, must match the link speed on the switch to which the node is connected (Link speed is 100 Mbps Full Duplex for an FTE-based network).

– Ensure that you enable Windows firewall before you begin installation.

To connect to ESIS repository using ESIS from USB drive

1 Insert the USB drive or removable hard drive (containing the ESIS repository) into your machine.

2 Browse to the ESIS repository location in the USB drive/removable hard drive.

3 Double-click **setup.exe** at the root of the ESIS repository path.
The **Welcome** page is displayed.

To connect to the ESIS repository using ESIS from a network share

1 Choose **Start** > **Run**.
The **Run** dialog box is displayed.

2 Type **<<ESISServer IP>\<ShareName>** and press **ENTER**.
The **Windows Security** dialog box is displayed.

3 Perform one the following:

a Type the **<Domain Name>\Username** and **Password** if you belong to a domain and if you have share permissions.

b Type the **<ESISServer IP>\Username** and **Password** if you belong to a workgroup and if you have share permissions.

c Clear the **Remember Password** check box.

Attention
If you enter incorrect credentials, an error occurs after the first reboot of Experion installation or migration. Then, you have to enter the correct credentials to connect to the ESIS share.

4 Double-click **setup.exe** at the root of the **\<ShareName>**.

If **User Account Control** dialog box is displayed, click **Yes**. If you are prompted for the Windows credentials, perform one of the following:

- Type the **<Domain Name>\Username** and **Password** if you belong to a domain.
- Type the **<ESISServer IP>\Username** and **Password** if you belong to a workgroup.

5 Click **OK**.

The **Welcome** page is displayed.

Continuing with Experion installation

1 In the **Welcome** page of the ESIS Install utility, select **OS Preparation with/without Product Install**.

2 When you are prompted for Windows credentials.

a Type the **<Domain Name>\Username** and **Password** if you belong to a domain and if you have share permissions.

b Type the **<ESISServer IP>\Username** and **Password** if you belong to a workgroup and if you have share permissions.

c Clear the **Remember Password** check box.

> **Attention**
> If you enter incorrect credentials, an error occurs after the first reboot of Experion installation or migration. Then, you have to enter the correct credentials to connect to the ESIS share.

3 Click **Next**.

The **Installation Options** page is displayed, which consists of the following options to configure the machine/generate configuration files.

- Configure current machine.
- Configure current machine using existing configuration files.
- Generate configuration files.
- Modify existing configuration files.
- Use Config file for migration.

Select one of the following options depending upon your requirements.

Option	When to choose this option
Configure current machine	You do not have configuration files generated for the target machine.
Configure current machine using existing configuration files	You already have configuration files generated for the target machine.
Generate configuration files	You are configuring/reinstalling your operating system. Hence, you want to generate configuration files.
Modify existing configuration files	You already have configuration files generated (for installation) for a machine and you want to modify them.
Use configuration files for migration	You want to perform phase 2 migration, and the operating system is installed manually.

4 Click **Next**.

The **Platform Configuration** page is displayed. Perform the following operations.

1. The **Product Installation** check box is selected automatically.
2. Select the Experion version to install. The operating system is selected automatically.

Attention

DO NOT install the following combination of nodes and operating systems, as they are not qualified and supported currently.

- Application Server (EAS) on Microsoft Windows 7 Professional operating system.
- eServer n a Microsoft Windows 7 Professional operating system.
- Application Control Environment (ACE) node on a Microsoft Windows 7 Professional operating system.
- Collaboration Station on a Microsoft Windows Server 2008 R2 operating system.

5 Click **Next**.
The **Operating System Configuration** page is displayed.

Next steps

Follow the procedure in the section “Proceeding with Experion installation using ESIS” on page 49.

4.2 Proceeding with Experion installation using ESIS

Prerequisites

- You must not use the following user names.
  - Administrator
  - dcscomserver
  - expsqlagtsvc
  - expsqlagtsvc
  - expsqlsvc
  - localcomserver
  - mngr
  - standardaccessadmin
  - standardaccessuser
  - hpsinstall
  - SecureCommsSvc
- The user account created in the **Feature Selection** page is Windows Administrator account. This user account must not be used for any Experion application after completing the installation.
- If the installation is started using an account (with Administrator rights) other than the standard Administrator account, type the valid password for the current user account (this is not for new account creation).
- If the installation is started using a standard Administrator account, type new user name and password for creating new account with Administrator rights.
- Operating system reinstallation is supported only using the HPS operating system reinstallation media.
- If your system is in a domain, you can enter a dummy workgroup name in the page and set up the domain after the operating system installation is complete.

Proceeding with Experion installation using ESIS

1 In the **Operating System Configuration** page, perform the following:
   - Select the **Local Language** and **Time Zone**.
   - Type the **Computer Name**, **Company Name**, **Customer Name**, and **Workgroup Name**.
   - Type the **User Account Name** and passwords.

   Attention
   - **Computer Name** must not contain ONLY numbers, space, and special characters (` ~ ! @ # $ % ^ & * () = + _ {} [] \ | ; : .‘ ” “ , < >, / ?).
   - **Company Name** must not contain the underscore (_) special character.
   - **Workgroup Name** must not contain space, and special characters (***** = + [] \ | ; : “ “ , < > / ?)
   - **User Account Name** must be a maximum of 20 characters in length.

2 Click **Next**.
   The **Network and Input/Output Device Information** page is displayed.

Tip

- Select the corresponding NIC tabs, and specify the IP Address, Subnet mask, and default gateway. You can select the Network Link speed (Auto-negotiate/100 mbps Full Duplex) if you select **Ethernet** as the network type. However, selecting Auto-negotiate may significantly degrade network performance on some network hardware platforms. It is recommended to use 100MB/full duplex configuration on both NIC and switch port whenever possible.
- If you select **FTE** as the network type, the IP Address, Subnet mask, and default gateway settings are not applicable for Green adapter; they are set to DHCP by default.
- If you are reinstalling the operating system, select the NIC name to change the names. FTE Yellow or Primary Supervisory is NIC1.FTE Green or Secondary Supervisory is NIC2.
- For the third NIC (DHEB), DNS server option is disabled.
- The third NIC (DHEB) must be used only for EHG. Otherwise, disable the third NIC.
- The third and fourth NIC must be disabled if the user has a Dell PowerEdge R710 server or a HP Proliant DL380 G7 server platform.
- If **Link speed** option is displayed for FTE, select **Link speed** as *100 Mbps Full Duplex*.

3 Select the network type (FTE or Ethernet) and, I/O details, and click **Next**.
The **Configuration Summary** page is displayed.

4 Click **Generate Product Install Config Files**.
The **Welcome** page is displayed.

Attention

- It may take a few seconds to display the **Welcome** page.
- If a **Microsoft User Account Control** is displayed, select **Allow**. The **Dialog Manager** starts after **setup.exe** prepares the installation environment.

5 Read the information, and click **Next**.
The **License Agreement** page is displayed.

6 Read the EULA, select **I accept the terms in the License agreement** option, and click **Next**.
The **Setup type of Node to install** page is displayed which lists the Experion nodes supported by the operating system on your computer. The following is a list of Experion nodes that are listed.

- Server (ESV)
- Server TPN Connected (ESVT)
- eServer
- Application Control Environment (ACE)
- Application Control Environment TPN Connected (ACE-T)
- Simulation Environments
- Console Station (ES-C)
- Console Station TPN Connected (ES-T)
- Console Extension Station (ES-CE)
- Flex Station (ES-F)
- Collaboration Station
- Experion Hiway Gateway (EHG)
- APP Node (E-APP)
- Application Server (EAS)
- PC Universal Station (PCUS)

7 Choose the Experion product node type to install, and click **Next**.
The **User and License Information** page is displayed.

Type the **Customer Name** and **Company Name**, and specify the following details depending on the node type selected during installation.

Node type	Option
ESV, EHG, EAS, eServer	1. Type the **Experion system software license number** and **Authorization number**. 2. Type the **Experion System Software** details.
ESVT, E-App, EST, ES-CE, ESF, ACE-T, and Optional Features	To install licensed TPS components, click **Yes** and type the **TPS Components License details**.
Station node	Select **Install Custom Algorithm Block (CAB) Developer (Visual Studio) OR PMD features ?** only to develop CAB blocks from scratch using Control Builder and Visual Studio software, since this might increase the installation time.
ACE, ACE-T, and SCE node	1. Select **Install Custom Algorithm Block (CAB) Developer (Visual Studio) Remote Debug Software?** if you are performing any of the following: • Installing CAB Developer on a station. • Debugging the CAB blocks that you are developing on the ACE using **Visual Studio** debug. If you are not creating CAB blocks from the beginning and you are only importing existing CAB blocks, you do not require the CAB remote debug feature. 2. Type the **Experion system software license number** and **Authorization number**, if you select **Install Software**.
E-APP node	To install E-APP node base, App Solution pack and/or CL Server, type the **TPS system software license number** and **Authorization number**.
T-node	1. Select **Yes** for **Are there Licensed TPS Components to install?**. 2. To install TPS components such as GUS Display Builder, and File Transfer, you must type the **TPS license number** and **Authorization Number**.

Attention

This step is applicable only for **Server (ESV)** and **Server TPN Connected (ESVT)** nodes.

A message containing the redundancy information of the node being installed is displayed. This redundancy information is based on the machine name.

- Click **Yes** to proceed with the current redundancy type .
- Click **No** to change the redundancy type. Change the redundancy type by changing the machine name. Refer to the *Supplementary Installation Tasks Guide (SITG)* to change the machine name.

If you are providing dongle-based license, ensure that dongle is connected throughout the installation.

8 Click **Next**.

The **Installation Path Selection** page is displayed, which contains the path for Experion installation.

- If you plan to use the default paths for Experion installation, do not change the path that is set by default.
- If you plan to use custom installation paths, refer to the section “Custom installation path” on page 35.

Attention

– The Experion PKS SQL Logs path is not applicable for Console (ES-C), Console station TPN connected (ES-T), Console Extension station (ESC-E), Flex station (ES-F), and Collaboration Station nodes.

– The Experion PKS Software, Experion PKS Runtime Data, and Experion PKS SQL logs can be placed on any hard drive in the system. However, the default path for Experion PKS Software and Experion PKS Runtime Data is *<Custom Install Path selected drive>\<Custom Install Path selected folder(s)\Honeywell*. The path for Experion PKS SQL logs is *\Honeywell\Experion PKS* and you cannot change this path.

9 Click **Change** to define the paths.

The **Experion Network Selection** page is displayed.

Select the appropriate EPN, supervisory and auxiliary network. Three levels of networks are available on an Experion system. for more information, refer to the section, “Overview of Experion Process Control Network (PCN)” on page 16.

RSLinx option is applicable only if PCIC card is available on your system. RSLinx must be installed manually after completion of Experion installation. For more information, refer to the “Installing RSLinx Classic” on page 71.

For ESVT, ES-T, EAPP and ACE-T nodes, you can either select LCNP4 card or K4LCN (with ETNI) card in the auxiliary network, even if EPN or supervisory network is selected.

10 Click **Next**.

Depending upon the node type and network selection, the appropriate page listed in the following table is displayed.

Node type and network	Display page
• FTE is selected as EPN on Server (ESV) • Server TPN connected (ESVT) nodes	**FTE Bootp and NTP IP Address Configuration** page
• Ethernet is selected as EPN on Server (ESV) • Server TPN connected (ESVT) nodes	**EthNet_Sim and NTP IP Address Configuration** page
FTE or Ethernet EPN is user-selected or chosen by default	**IP config** page

Attention

The IP addresses listed in the **IP config** page are used for Level 1 to Level 2 controller communication. You can modify this information by performing the following steps after the installation is complete.

1. In **Control Builder**, click **System Preferences**.
2. Enter the appropriate information in the **Base IP Address, Subnet Mask, Default Gateway** fields.
3. Enter the appropriate information in the **NTP First IP Address and NTP Second IP Address** fields. The first IP address is set as Server A’s IP address and the second IP address is set as Server B’s IP address by default. They are used as the time synchronization nodes for the controllers.

11 Click **Next**.

The **Feature and Options Selection** page is displayed. Select the method of Experion installation.

- Select **Typical** to install the default features installed for a node.
- Select **Custom** to add **Add-on** or **Licensed features** in addition to the **Typical** install.

Tip

If you are installing Flex node on a system with Microsoft Windows Server 2008 R2 operating system, and want to install a **Remote Engineering Station Server (RESS)** node, select **Enable Terminal Services (also known as Remote Desktop Services)**. For more information, refer to “Enabling Remote Desktop Services on Flex nodes” on page 87.

12 Click **Next**.

The **Remote Server Dialog** page is displayed. This page is displayed only if you are installing Collaboration Station node. Enter the eServer name on which the Collaboration Station node must be installed.

13 Click **Next**.

The **Experion Accounts Password Entry** page is displayed. Type password for all the accounts created during installation.

Password for the accounts must adhere to the following rules.

- Passwords cannot contain the user’s account name or parts of the user’s full name that exceed two consecutive characters.
- Passwords must be minimum six characters and maximum 32 characters.
- Passwords must contain characters from three of the following four categories.
  - English uppercase characters (A through Z).

  - English lowercase characters (a through z).
  - Base 10 digits (0 through 9).
  - Non-alphabetical characters (-@#$%^&+='~!*()_+={}\\|:;\"<>,.?/)
- Type the password for each applicable account.
- Type the confirmation password for each applicable account.
- For eServer, passwords for Standard access user and Standard access administrator accounts must not contain any spaces.
- Passwords of local accounts must be configured to be the same on all nodes in the Experion cluster.
- On ACE and ACE-T node types: select the check box if the configuration requires the CDASP service to log on using the MNGR account.
- Ensure that you do not use the \ (back slash) for passwords in your Experion account.

Attention

The **Experion Server Name** page is displayed for the ES-C., EST, ACE, ACE-T, EHG, and SCE nodes.

Perform the following steps in the **Experion Server Name** page.

1. In the **Server Name** field, specify the name of the server.
2. If you have redundant servers, select the **Server is Redundant** check box.

14 Click **Next**.

The **Experion PKS Software Installation Settings** page is displayed.

Perform the following steps, depending upon your requirement.

- Use removable floppy drive, if there is no built-in floppy drive.
- Save the generated configuration files in a separate folder at the root of the C: drive, floppy drive, or USB drive.
- Click **OK** when the confirmation message is displayed.

Attention

- Configuration files for different nodes can be stored in different folders on the external media.
- If you go back and make changes in Experion PKS System Initialization options, you are prompted to reenter product details.

15 Review the summary of the settings you selected, and click **Install/Continue**.

Experion installation begins.

Tip

- If you are reinstalling operating system Experion PKS System Initialization media, refer to the section, “Preparing a platform with supported operating system” on page 154.
- If you are using Experion PKS System Initialization media on a system where operating system is not installed (bare metal), refer to the section, “Preparing a platform without operating system (bare metal)” on page 162.

Attention

Depending on the installation type selected, either **Install** or **Continue** option is displayed.

16 The status of the Experion installation is displayed in the **Status Display** page.

The Support software installation continues.

17 On completing the installation, click **Yes** to reboot.

Attention

Ensure that you click **Yes** or **No** to complete the Experion installation. If you click **No**, you have to reboot manually.

Next steps

After you complete this task, refer the section “Post-installation tasks” on page 55.

5 Post-installation tasks

Related topics

“Verifying completeness of Experion installation” on page 56
“Configuring the computer for use within a Windows domain” on page 57
“Configuring the Domain or Workgroup” on page 58
“Configuring FTE Device Index if Experion is running with FTE” on page 62
“Installing TPS personality module for T-nodes” on page 63
“Checking for updates on Honeywell Process Solutions website” on page 65
“Applying the latest patches” on page 66
“Installing the latest antivirus software” on page 67
“Defragmenting the hard disk” on page 69
“Installing RSLinx Classic” on page 71
“Upgrading the firmware in hardware components” on page 72
“Setting up time synchronization” on page 73
“Installing Microsoft Excel” on page 74
“Installing remote desktop services” on page 75
“Installing a serial adapter, printer, or modem” on page 76
“Installing the web server (IIS) role on the Experion server” on page 77
“Backing up your system” on page 78
“Configuring tasks for eServer Premium Access clients” on page 79
“Enabling comments in Programs and Features window” on page 80
“Configuring secure communication settings” on page 81

5.1 Verifying completeness of Experion installation

To verify completeness of Experion installation

1 Using Notepad, open the **ProductVersion.txt** file located in the following path.
C:\Program Files(X86)\Honeywell\Experion PKS OR <%Experion Software Path%>\Honeywell\Experion PKS.

2 Verify the **ProductVersion.txt** for the following:
+Experion PKS R431.1<Node Name> install completed on MM/DD/YYYY HH:MM:SS AM/PM.

If the above line is present, it indicates that the installation is successful.

- Do not realign the drive letter after Experion installation. Otherwise, future patch installation may fail.

5.2 Configuring the computer for use within a Windows domain

Refer to the *Network and Security Planning Guide* for detailed information on the following topics.

- Selecting to use domains or workgroups.
- Understanding security in Experion users.

Attention

- User accounts created during installation DO NOT have permission to be users of the Experion software. User accounts must be created and assigned Experion privileges.
- To use Experion, you must create at least one account for each Experion role used at the site. It is recommended to create one account per user of Experion and assign each account the specific role or roles that the users must have.
- DO NOT create an account with both Experion roles and Windows System Administrator Role.
- If an R430.1 node is installed using Experion Support and Maintenance (ESM) generated configuration files, change the password of **SecureCommsSvc** account (if the account exists) using `PWDUtil.exe` and then start the installation/migration.

5.3 Configuring the Domain or Workgroup

Refer to the *Windows Domain/Workgroup Implementation Guide* for detailed information on the following topics.

- Installing a domain controller and implementing Experion domain security.
- Adding a computer to a domain including the required step to link Experion security to the domain (Link Domain Groups command).
- Creating user accounts and assigning Experion permissions.

5.3.1 Domain Controller security policies and optional component (ESIS/DVD) installation

Considerations

- This package updates domain security policies ONLY. NO OTHER software is installed.
- If the computer is a Read-Only Domain Controller (RODC), refer to Windows Domain and Workgroup Implementation Guide. For planning information, refer to Windows Domain and Workgroup Planning Guide. For operation system migration information, refer the appropriate operating system-specific implementation guide Windows Domain Implementation Guide for Windows Server 2008 R2/Windows Domain Implementation Guide for Windows Server 2012..
- Before you begin installation on a system with Windows Server 2003 (32–bit) operating system, ensure that the Windows Server 2003 Service Pack 2 is installed to install Microsoft .NET 3.5 SP1.
- Before you configure a system with Windows Server 2012 operating system as a domain controller, ensure that Microsoft .NET 3.5 is installed manually.

Prerequisites

- Ensure that a common account does not exist between ESIS and the installation node.
- If you are installing Experion on Microsoft Windows Server 2003 (32-bit) operating system, add ESIS server as a trusted source in Internet Explorer (**Tools > Internet Options > Security > Trusted Sites**).

To start ESIS-based installation

1 In the **Welcome to ESIS** page, select **OS Preparation with/without Product Install**.
When prompted for the Windows credentials for the share.
   - Type the **<Domain Name>\Username** and **Password** if you belong to a domain and if you have share permissions.
   - Type the **<ESISServer IP>\Username** and **Password** if you belong to a workgroup and if you have share permissions.

2 Select **Product Install Only** option.

> **Attention**
> To install Domain Controller packages, you must select the **Product Install Only** option. Selecting the other options does not allow you to install the Domain Controller packages.

When prompted for the Windows credentials for the share.
   - Type the **<Domain Name>\Username** and **Password** if you belong to a domain and if you have share permissions.
   - Type the **<ESISServer IP>\Username** and **Password** if you belong to a workgroup and if you have share permissions.

3 Click **Next**.

Attention
After clicking **Next**, if an error message **Multiple users cannot be connected to the same network share** appears, refer to the section "Troubleshooting Experion for installation failure" in the *Experion Software Installation User's Guide* for the solution.

4 To continue with the installation go to "To continue with installation" section.

To start DVD-based installation

1 Log on to the Domain Controller using an account that is a member of the "Domain Admins" group.

2 Insert the Experion PKS Installation media into the DVD drive.

3 If the **Honeywell Experion PKS Installer** screen does not appear, using Windows Explorer, go to the browser folder on the Experion PKS Installation media, and double-click **setup.exe**.
The installer is automatically detected if it is executed on a Domain Controller.

4 To continue with the installation go to" To continue with installation" section.

To continue with installation

1 The **Setup** dialog box is displayed with the message, **Do you want to install the Experion PKS domain policies on this domain controller (Installing domain policies will install no other software on this machine)? NOTE: It may not be necessary to install these policies on more than one domain controller in a domain, or on the domain controller(s) for a child domain of a domain, where these policies are installed**.

- Select **No** to go to the section *Installing optional Experion components on the Domain Controller*. This bypasses installation of the domain policies and proceeds to optional component installation.
- Select **Yes** to install the Honeywell Domain Controller group policies , user accounts, and groups (this step also creates the *DCSComServer* account). Selecting **Yes** does not install any additional software on this domain controller.

The **Honeywell Security Model - Domain Controller InstallShield Wizard** is displayed.

2 Click **Next** to begin installation.
The **License Agreement** dialog box is displayed.

3 If you accept the license agreement, select **I accept the terms in the license agreement** and click **Next**.
If you do not accept the license agreement, click **Cancel**, and proceed to the section *Installing optional Experion components on the Domain Controller*.

4 If the *DcsComServer* domain account does not exist in this domain, the **DcsComServer Password** dialog box is displayed. Enter a strong password for this account in both fields, and click **Next**.
The following page is displayed, depending upon the number of organizational units (OUs) in a domain.

If	then...
the domain contains one or more organizational units (OUs)	**Link Policies to the Domain or an Organizational Unit** page is displayed
the domain does not contain organizational units (OUs)	**Ready to Install the Program** page is displayed

5 If the **Link Policies to the Domain or an Organizational Unit** page is displayed, select one of the following options, depending upon your preferences.

If	then select the option...
you are not aware of the impact and side effects of linking domain policies to an OU	Install policies at Domain level
you want the Honeywell security domain policies to be applied to the entire domain	Install policies at Domain level
you want to associate the Honeywell security domain policies with a single organizational unit	Link policies to an Organizational Unit (OU)

Select the appropriate OU, and click **Next**.

The **Ready to Install the Program** page is displayed.

6 In the **Ready to Install the Program** dialog box, click **Install** to begin the domain controller security package installation.

The **Installing Honeywell Security Model–Domain Controller** dialog box is displayed.

7 Once the installation is complete, the **InstallShield Wizard Completed** page is displayed. Click **Finish** to proceed.

8 Proceed with section *Installing optional Experion components on the Domain Controller*.

Installing optional Experion components on the Domain Controller

1 After the completion of the Honeywell security domain policies, the **Setup** dialog box is displayed with the message, **Do you want to install optional Experion PKS components on this domain controller? WARNING: if you answer "Yes" to this question, .NET 3.5 and installer-related software will be installed on this domain controller (if not already present), as it is required for the optional components that can be installed on this machine**.

- Click **Yes** to continue installing optional components.
- Click **No** to end the installation with no software installed on this domain controller.

Attention

- Clicking **Yes** installs Microsoft .NET 3.5 SP1 on this domain controller if it is not installed, even if no optional packages are installed during the procedure.
- If Microsoft .NET 3.5 SP1 is installed during this step, the system prompts for a reboot.
- After the reboot, perform the following steps, depending upon your mode of installation.

If you are installing from	then...
ESIS	1. Log on to the Domain Controller using an account that is a member of the "Domain Admins" group. 2. Double-click **setup.exe** at the root of the ESIS repository path. The **Welcome to ESIS Tool** screen is displayed. 3. Select **Product Install Only**, and click **Next**. The **Welcome to the Honeywell Experion PKS Installation Setup** screen is displayed.
DVD	1. Log on to the Domain Controller using an account that is a member of the "Domain Admins" group. 2. The **Welcome to the Honeywell Experion PKS Installation Setup** screen is displayed. If the **Welcome to the Honeywell Experion PKS Installation Setup** screen does not appear, using Windows Explorer, go to the browser folder on the Experion PKS Installation media, and double-click **setup.exe** .

2 If a **Microsoft User Account Control** dialog box is displayed, click **Yes**.

The **Setup type of Node to install** dialog box is displayed.

3 Select **Optional Features**, and click **Next**.

The **User and License Information** dialog box is displayed.

4 Specify the customer name and company name in the **Name** and **Company Name** fields respectively. Click **Next**.

The **Feature and Options Selection** dialog box is displayed.

5 Select the **Add-on Features** check box.

Depending upon the Domain Controller type, select the required options from the list of options displayed.

Domain Controller type	Option
Read-Only Domain Controller (RODC)	Select the following options. • System Management Runtime • Fault Tolerant Ethernet (FTE) • USB Storage Enable Disable
Writable Domain Controller	Select the following options. • System Management • Fault Tolerant Ethernet (FTE) • TPS Domain Console Configuration • USB Storage Enable Disable

Attention
System Management Runtime feature is not applicable for Windows Server 2003 and Windows Server 2008 (32-bit) operating system.

Click **Next**.

The **Summary** dialog box is displayed.

6 Review the summary of the settings selected, and click **Install**.
The **Experion PKS Status Display** dialog box is displayed, indicating the feature being installed/run.

7 If the *System Management* or *FTE* optional components were installed, perform the following procedure.

a Choose **Start** > **Run**.
b Type **dcomcnfg**, and click **OK**.
c Click **Yes** on the **User Account Control** dialog box.
d In the left pane of the **Component Services** window, select **Component Services > Computers > My Computer**.
e Right-click **My Computer**, and choose **Properties** from the context menu.
f In the **My Computer Properties** dialog box, click the **COM Security** tab.
g Click **Edit Default** for **Access Permissions**.
h In the **Access Permission** dialog box, click **Add**.
i In the **Enter the object names to select** dialog box, type **LOCAL SERVICE**, and click **OK**.
j In the **Access Permission** dialog box, select **LOCAL SERVICE** and ensure that only **Local Access Allow** is selected.
k Click **OK**.
l Click **Edit Default** for **Launch and Activation Permissions**.
m In the **Launch and Activate Permission** dialog box, click **Add**.
n In the **Enter the object names to select** dialog box, type **LOCAL SERVICE**
o In the **Launch and Activate Permission** dialog box, select LOCAL SERVICE and ensure the only permission check boxes that are checked are **Local Launch Allow** and **Local Activation Allow**.
p Click **OK**.
q In the **My Computer Properties** dialog box, click **OK**.
r Close the **Component Services** window.

8 When all packages have been successfully installed, the **Install Complete** message is displayed. Click **Yes** to complete the installation.
The system restarts automatically. After restart, log on to the system.

5.4 Configuring FTE Device Index if Experion is running with FTE

Attention
Use this section only if you are NOT using Experion PKS System Initialization media.

Setting up the FTE Device Index after Experion installation

1 Perform the following steps to navigate to the **Network and Sharing Center**.
For Windows Server 2008 R2 (64-bit) operating system.

a Click **Start** menu, right-click **Network** or right-click the network.
b Click **Network and Sharing Center**.
c Select **Manage network connections** from the left menu.

For Microsoft Windows 7 Professional operating system.

a In the **Control Panel** section, select **Network and Sharing Centre**
b Select **Change Adapter Settings** in the left pane.

2 Right-click one of the FTE network connections (Yellow or Green) and choose **Properties**.
3 Click **Continue to the User Account Control Prompt**.
4 Select **Honeywell FTE Mux-IM Protocol Driver**, and choose **Properties**.
5 Verify the **FTE MUX-IM Protocol Driver Properties** dialog and select the **Configure** tab.
6 Select the **Honeywell FTE Adapter #1** in the left pane.

- Set the values for the following:
  - **Device Index Value** for the machine-Change the value to a unique number from 1-511.
- Verify the values for the following:
  - The **IPMC Destination Address** (this is the multicast address assigned to the FTE Community default as 234.5.6.7)
  - **UDP Destination Port**— Default is 51966
  - **UDP Source Ports Port**— Default is 47837

Attention
You can modify the IPMC address and the UDP source and destination ports, but it is recommended to retain the default settings.

7 From the **Network Connections** window, select the **Honeywell FTE Adapter #1**, right-click the adapter, and choose **Properties**.
8 Click **Continue to the User Account Control Prompt** if it appears.
9 Verify the **FTE Adapter #1 Properties**: Select **Internet Protocol Version 4 (TCP/IPV4)** and choose **Properties**.
10 Verify IP Address and other IPV4 Settings. Correct any values that are incorrect or missing and then click **OK**.
11 Restart your computer.
12 Log on as local administrator.
13 Wait until the machine has completed all the process starts and network connections and then verify Network Settings using `IPConfig/all` command from the command prompt. If FTE Mux Driver is working correctly, it is displayed in the command prompt as Honeywell FTE MUX-IM Virtual Miniport Driver.

5.5 Installing TPS personality module for T-nodes

Attention

- This post-installation task is NOT applicable for Console station (ES-C), Console Extension station (ES-CE), RESS node,Collaboration station, and Flex station (ES-F).
- The LCNP personality software is necessary for the node to operate as a TPN/LCN node.
- Install the appropriate personality version, depending on your TPN/LCN version (R641.2 or greater).
- If you need to check the version of an installed and loaded AxM personality, see "Verifying TPN/LCN Installation and Version" section in the *Integrated Experion-TPS User's Guide*.

To install TPS personality for versions older than TPN R685 release

1 To install the LCNP Personality software on the local drive.
   - For **ES-T** node, insert the **GUS-TPN Software CD**.
   - For **ESVT** node, insert the **Application Module Software CD**.
   - For **ACE-T** node, insert the **Application Module Software CD**.
   - For **E-APP** node, insert the **Application Module Software CD**.

2 Double-click the **setup.exe** file.
   The **Welcome** dialog box is displayed.

3 Click **Next**.
   The **License Agreement** dialog box is displayed.

4 Select **Yes**, and click **Next**.
   The **User Information** dialog box is displayed. Perform the following:
   - Enter the name and Company name in the **Name** and **Company** fields respectively.
   - Enter **1** as the serial number in the **Serial** field.

5 Click **Next**.
   The **Enter Information** dialog box is displayed.

6 Enter **C:** as the drive letter and click **Next**.
   The **Setup Type** dialog box is displayed.

7 Select the **Typical** option and click **Next**.
   The **Start Copying Files** dialog box is displayed.

8 Click **Next**.
   The installation begins.

9 Click **Finish**.

10 Close the Windows Explorer and remove the CD.

To install TPS personality for TPN R685 and later releases

1 To install the LCNP Personality software on the local drive.
   - For **ES-T** node, insert the **GUS-TPN Software CD**.
   - For **ESVT** node, insert the **Application Module Software CD**.
   - For **ACE-T** node, insert the **Application Module Software CD**.
   - For **E-APP** node, insert the **Application Module Software CD**.

2 Double-click the **.msi** file depending upon the node type.
   - For **ES-T** node, double-click **tps-unpw.msi**.
   - For **ESVT, ACET, E-APP** nodes, double-click **tps-amw personality (am).msi**.

   The **Welcome** dialog box is displayed.

3 Click **Next**.
The **License Agreement** dialog box is displayed.

4 Read the software license agreement, select **I accept the terms in the license agreement**, and click **Next**.
The **Customer Information** dialog box is displayed. Perform the following:

- Enter the **User Name** and **Organization**.
- Select **Anyone who uses this computer (all users)**.

5 Click **Next**.
The **Setup Type** dialog box is displayed. Select the setup type as **Complete**.

6 Click **Next**.
The **Ready to Install the Program** dialog box is displayed.

7 Click **Install**.
The installation begins.

8 Click **Finish**.

9 Close the Windows Explorer and remove the CD.

5.6 Checking for updates on Honeywell Process Solutions website

Download Honeywell software updates, documentation, and recommended antivirus updates from the Honeywell Process Solutions website (http://www.honeywellprocess.com).

Attention

- You must access the Honeywell Process Solutions website from a secured computer, rather than from a node within your Experion system.
- To access zip file, save the file in the local drive and then open.

To access the Honeywell Process Solutions website

1 In a web browser, type the following URL.
https://www.honeywellprocess.com/support

The **Product Support** page appears.

2 If you are a new user, register at this website. Click **Register**, and follow the on-screen instructions.

3 If you are already registered, type your user name and password, and click **Login** to logon.
Your account logon name appears in the top-right of the page.

5.7 Applying the latest patches

The list of supported antivirus applications, and their recommended configuration, is maintained on the Honeywell Process Solutions website. If you are a new user, you must register for access at this site.

Review the antivirus recommendations and folder exclusions. Refer to the antivirus recommendations and folder exclusions details at, https://www.honeywellprocess.com/en-us/support/pages/search-results.aspx?k=Anti%2Dvirus

Attention

- You must access the Honeywell Process Solutions website from a secured computer, rather than from a node within your Experion system.
- To access zip file, save the file in the local drive and then open.

To access the Honeywell Process Solutions website

1. In a web browser, type the following URL.
   https://www.honeywellprocess.com/support
   The **Product Support** page appears.
2. If you are a new user, register at this website. Click **Register**, and follow the on-screen instructions.
3. If you are already registered, type your user name and password, and click **Login** to logon.
   Your account logon name appears in the top-right of the page.

To download and install hotfix

1. Open the **Product Support** page.
2. In **Search Support Documentation**, type **hotfix**.
   The hotfixes and other non-security updates are displayed. These are the latest hotfixes from Microsoft that are approved for use in Experion.

Attention

To download the latest Experion patches, refer to the spreadsheet available at the following link http://www.honeywellprocess.com/library/support/software-downloads/Experion/experion-update-matrix.zip.

5.8 Installing the latest antivirus software

Attention
This post-installation task is applicable for all the nodes.

Verify that the latest antivirus software is installed and patched to the proper version for your operating system. You can find the latest antivirus solution information at.

http://www.honeywellprocess.com

Attention

- You must access the Honeywell Process Solutions website from a secured computer, rather than from a node within your Experion system.
- To access zip file, save the file in the local drive and then open.

To access the Honeywell Process Solutions website

1. In the web browser, type the following URL.

   https://www.honeywellprocess.com/support

   The **Product Support** page appears.
2. If you are a new user, register for access at this site. Click **Register**, and follow the instructions on the screen.
3. If you are already registered, type your username and password, and then click **Login**.

   Your account login name appears in the top-right of the page.

To apply the latest antivirus notification

1. Open the **Product Support** page.
2. To view and download the latest antivirus notifications, click **Latest Notifications**.

   Or

   In addition, you can search for the latest notification using the search modes available in the **Product Support** page. The following table describes the search options. Choose any one of the following option and then perform the corresponding steps.

Option	Description
Search Support Documentation To use this option you must have an active support contract.	1. Click **Advanced**. The **Advanced Support Document Search** page is displayed. 2. Type all the details about the document or use wildcards to search for the notification. Click **Search**. For example, if you are searching for Anti-virus Software Guidelines, type the information and click **Search**. The document is displayed.

Option	Description
Search by Product and Subscribe to Notifications This provides the complete information about a specific product. In addition you can also subscribe to this page for alerts where a notification is sent to you about the published document.	1. Type the name of the product. The related products are displayed. 2. Click the required product with the release. The **Documentation**, **Notifications**, **Software Downloads** and **Security Updates** for the particular product are displayed. For example, type Experion R431, and select Experion R431 in the list of products displayed. The page displays the **Documentation**, **Notifications**, **Software Downloads** and **Security Updates** tabs that list all the support documents related to Experion R431.

3. Locate the required notification.
4. Once you locate the required notification, click **Download**.

   The required notification is downloaded on your computer.

5.9 Defragmenting the hard disk

You can defragment your hard disk to improve the system performance.

Prerequisites

- Ensure that other applications (Experion Server, SQL Server, and so on.) are not running on your computer because, this may require restarting the computer.

Considerations

- It is recommended that you add this task to your system's maintenance schedule, so that it is performed during control shutdowns.
- You can upgrade the default fragmentation utility included with Windows to the full version. Executive Software's Diskeeper includes a scheduler, and can defragment folders and pagefiles when a computer restarts. Defragmentation tasks affect the control system if they are set to run automatically with the scheduler. Care must be taken when scheduling defragmentation tasks. For more details, choose **Start** > **All Programs** > **Accessories** > **System Tools** > **Disk Defragmenter**, to refer to the Windows Help for Disk Defragmenter using the path.

Attention

Do Not perform this procedure on Flex station. Proceed to To defragment the hard disk procedure.

To stop the services on servers and Console stations

1. Choose **Start** > **All Programs** > **Honeywell Experion PKS** > **Server** > **Start-Stop Experion PKS Server**.
   The **Experion PKS Server** dialog box is displayed.
2. To stop the services of the Experion server, in **Full** mode of the **Start-Stop Experion PKS Server** window, select **Database Unloaded**.
3. Close all windows.
4. To stop the Experion PKS Control Data Access server services, perform the following steps.
   a. On the desktop, right-click **Computer** and select **Manage**.
      The **Server Manager** window is displayed.
   b. Expand **Configuration> Services** in the left pane.
   c. Click **Services**.
      A list of services is displayed in the right-pane.
   d. Right-click **Experion PKS Control Data Access server services**, and choose **Stop**.
      The **Stop Other Services** confirmation dialog box is displayed.
   e. Click **Yes** to stop other dependency services.
5. For systems using ControlNet, perform the following procedures.
   a. Right-click **Harmony** and choose **Stop**.
   b. Close the **Server Manager** window.

To defragment the hard disk

1. On the Windows Desktop, double-click the **Computer** icon.
   Or
   Choose **Start** > **Computer**.
2. Right-click the hard disk to defragment and choose **Properties**.
3. Click the **Tools** tab.
4. Click **Defragment now**.
   The **Disk Defragmentor** dialog box is displayed.

5 Select the disk and then click **Analyze disk**.
This analyzes the fragmentation level of the drive. The defragmented disk is displayed in Date, Time, Percentage of fragmented disk format.

6 After the analysis is complete, click **Defragment Disk** to start defragmenting the hard disk.
Depending on the level of fragmentation and usage, the task may take time to complete.

7 When the defragmentation is complete, close the **Disk Defragmentor** application.

8 Close the **Local Disk Properties** window.

9 Restart the system.

5.10 Installing RSLinx Classic

Starting with Experion R410, Allen-Bradley RSLinx software is not included with the Experion PKS Installation media.

The RSLinx software is available from Rockwell or their distributors. Version 3.60 of RSLinx is qualified for Experion R431. RSLinx can be installed using the RSLinx installation guide provided by Rockwell.

The RSLinx software is required for systems connecting to following:

- Rockwell Automation networks and devices
- Ethernet supervisory network including C200/C200E controllers
- ControlNet supervisory network including C200/C200E controllers

Perform the following steps if you have installed Experion Server (ESV) on a Controlnet (Ethernet) supervisory network.

There are four EPN and supervisory combination network where RSLinx must be installed. For more information, refer to “Overview of Experion Process Control Network (PCN)” on page 16.

1. Choose **Start**> **Run**.
   The **Run** dialog box is displayed.
2. Type **services.msc**.
   The **Services** dialog box is displayed.
3. Right-click **Experion PKS Control Data Access Server** service and select **Properties**.
   The **Experion PKS Control Data Access Server Properties** dialog box is displayed.
4. If the **Experion PKS Control Data Access Server** service is enabled, perform the following steps.
   a. Set the **Startup type** as **Disabled**.
      The **Experion PKS Control Data Access Server** service is disabled.
   b. Restart the node.
   c. Log on to the system with administrator privileges.
   d. Install **RSLinx Classic 3.60** manually.
   e. Enable the **Experion PKS Control Data Access** services.
5. If the **Experion PKS Control Data Access Server** service is disabled, perform the following steps.
   a. Install **RSLinx Classic 3.60** manually.
   b. Enable the **Experion PKS Control Data Access** services.

Attention

Honeywell recommends the following sequence for installing RSLinx, to ensure that **Experion PKS Control Data Access Server** works as intended.

1. Install Experion.
2. Manually install RSLinx.
3. Install Experion patches.

5.11 Upgrading the firmware in hardware components

If you installed Experion for use with process points, you must upgrade the firmware in hardware components.

Attention
This post-installation task is applicable only for Experion server.

Depending on the firmware that you want to upgrade, refer to the Control Builder set of documents (as appropriate) available in the PDF collection.

5.12 Setting up time synchronization

For more information about how to set up time synchronization, see the *Supplementary Installation Tasks Guide*.

5.13 Installing Microsoft Excel

For more information about installing Microsoft Excel, see the *Supplementary Installation Tasks Guide*.

5.14 Installing remote desktop services

For more information about installing a remote desktop services (previously known as terminal services), see the *Supplementary Installation Tasks Guide*.

5.15 Installing a serial adapter, printer, or modem

For more information about installing a serial adapter, printer, printer drivers, modem, see the *Supplementary Installation Tasks Guide*.

5.16 Installing the web server (IIS) role on the Experion server

If you plan to use alarm paging for email, you must install the Web Server (IIS) role on the Experion server.

For more information about installing the Web server role, see the *Supplementary Installation Tasks Guide*.

5.17 Backing up your system

Back up your computer after installing Experion. You can use the backup facility provided within the operating system or the purchased backup software.

5.18 Configuring tasks for eServer Premium Access clients

On eServer Premium Access clients, you must add the eServer server name and IP address to the Trusted Sites zone to avoid Internet Explorer giving warnings when accessing pages on the eServer.

1. On the eServer Premium Access client node, open Internet Explorer.
2. Choose **Tools > Internet Options**.
3. Click the **Security** tab.
4. Select **Trusted Sites** and click **Sites**.
5. Type the server name of the eServer node. Example: **http://[Server Name]**.
6. Type the IP address of the eServer node. Example: **http://[IP Address]**.
7. Click **OK**.

5.19 Enabling comments in Programs and Features window

Starting R400, during the installation of Experion and embedded third party software of Experion, a comment indicating that software was installed as a part of the Experion installation, is displayed in the **Programs and Features** window. This provides details about the application(s) installed as a part of Experion installation.

Perform the following steps to enable the **Comments** column in the **Programs and Features** window.

1. Choose **Start > Control Panel > Programs> Programs and Features**.
   The **Programs and Features** window is displayed.
2. Right-click on the heading and choose **More**.
   A dialog box is displayed containing the items that can be displayed as headings in the **Programs and Features** window.
3. Select the **Comments** option.
   The **Choose Details** dialog box is displayed.
4. Select **Comments**, and click **OK**.
   The **Comments** column is now displayed **Programs and Features** window. It lists details of the applications installed on the system.

5.20 Configuring secure communication settings

If you plan to use Secure Communications on the Experion nodes, you must perform clean installation of the Experion nodes. Secure Communication is not supported on Experion nodes created using an EBR image or a Virtual Machine template. For information about configuring Secure Communication settings, refer to the *Secure Communications User's Guide*.

6 Getting oriented with Product Version file

The **ProductVersion** file records the Experion packages and updates installed or removed on a system, in the order as they were executed. The **ProductVersion.txt** file is located in the following path.

<Experion PKS Software Path>\Honeywell\ExperionPKS

The file format is as follows:

Attention
The "+" sign indicates installation and the “-” sign indicates removal.

Examples:

1. +Experion PKS R431.1 Server (ESV) install completed on 23/07/2014 4:07:25 PM
   ++ Service Pack Verification:Service Pack 1 or later verified.
   ++ Internet Explorer Verification:IE 9 or Later verified
   ++ Silverlight Verification:Version 5.1 or later verified.
   ++ .NET Framework Verification:Version 4.5 or later verified
   ++ Honeywell Security Model - Workstation:043.011.02000
   ++ Microsoft SQL Server 2012:Microsoft SQL Server 2012
   ++ SQL Client Components:Microsoft SQL Server 2012 - 11.1.3000.0
   ++ Microsoft SQL Server Compact 4.0 SP1 x64 ENU:Version 4.0 SP1 or later verified
   ++ Microsoft Access Database Engine 2010:Version 14.0.4763.1000 or later verified
   ++ Microsoft Visual C++ 2005 Redistributable:8.0.61001
   ++ Microsoft Visual C++ 2008 Redistributable - x86 9.0.30729.6161:9.0.30729.6161
   ++ Microsoft Visual C++ 2010 x86 Redistributable - 10.0.40219:10.0.40219
   ++ Honeywell_HCI_Runtime:043.011.02000
   ++ Sentinel Protection Installer 7.6.5:7.6.5
   ++ Crystal Reports 8.5 Royalty-free Runtime Files:43.11.6900
   ++ SAP Crystal Reports runtime engine for .NET Framework 4 (32-bit):13.0.1.220
   ++ Diagnostic Framework:43.11.6900
   ++ Configuration Studio:043.101.0680
   ++ HMIWeb Station and Display Builder:043.011.0690
   ++ Display Builder 320.4:320.4.182.0
   ++ Honeywell Logger Service:43.11.6900
   ++ Experion Server System Displays:43.11.6900
   ++ Experion PKS Server:43.11.6900

++ Quick Builder:043.011.0690

++ odbc_client:43.11.6900

++ Experion PKS Server Support:43.11.6900

++ Batch Application Services Client Component:43.11.6900

++ IEC 61850:043.011.0690

++ IEC870:043.011.0690

++ Honeywell MLSever:

++ Honeywell_EngineeringTools_Infrastructure:043.011.02000

++ Honeywell_EngineeringTools_Application:043.011.02000

++ Honeywell_Controller_Firmware:043.011.00200

++ Honeywell_Process_Detail_Display:043.011.02000

++ Honeywell_EngineeringTools_ProcSeqTkt:043.011.02000

++ Honeywell_SecureComm_Configuration:043.011.02000

++ Honeywell_SecureComm_Agent:043.011.02000

++ Honeywell_SecureComm_Manager:043.011.02000

++ Honeywell_EngineeringTools_Support:043.011.02000

++ Honeywell_Safeview:043.011.02000

++ Honeywell System Management Runtime:043.011.02000

++ Honeywell Computers and Network Equipment Provider:043.011.02000

++ Honeywell CANE Detail Displays:043.011.02000

++ Honeywell FTE Switch Configuration Tool:043.011.00200

++ Honeywell Profit Loop Assistant:043.001.04000

++ Honeywell Installation Builder:022.021.00100

++ Experion_TPS_System_Displays:043.011.02000

++ Honeywell_INF_Support:043.011.02000

++ Experion PKS - CAB:043.011.02000

++ Honeywell_CAB_Support:043.011.02000

++ Honeywell FTE MUX Driver:043.011.02000

++ Support Media:Refer to Support Media Entries

2. +<release number> Support Media Install started on 2/3/2012 9:13:38 AM

   ++ Patch Experion PKS <release number> Configuration Studio Patch 1 installed on 2/3/2012 9:23:32

   ++ Patch ExperionPKS.<release number>.Server.PatchB32003C.Build32 Installed on 2-3-2012 09:33:04

   +<release number> Support Media Install aborted on 2/3/2012 9:38:16 AM

   +<release number> Support Media Install resumed on 2/3/2012 9:41:03 AM

   ++ Patch Experion PKS <release number> Engineering Tools Patch2C Installed on 2-3-2012 09:46:39

   +<release number> Support Media Install completed on 2/3/2012 9:47:50 AM

3. --<release number> ET Patch2 Uninstalled on 9-27-2009 11:00:00 PM

Attention

- When Experion Support Software R431.1 media is used during Experion installation, entries in the **ProductVersion.txt** file are not in chronological order. Experion Support Software R431.1 media entries come first followed by the Experion PKS Installation media entries.
- For the third party packages, **ProductVersion.txt** does not list the actual version present in the system. Instead, it describes as minimum version or latest version of the package is verified in the system.

7 Enabling Remote Desktop Services on Flex nodes

A Remote Engineering and Station Server (RESS) node is a Flex node installed on a server operating system, where Terminal Services (also known as Remote Desktop Services) are enabled.

Starting R400.3, Terminal Services are not enabled by default for a Flex node installed on a system with Microsoft Windows Server 2008 R2 operating system. To install a RESS node during Experion installation, ensure that you select **Enable Terminal Services** option in the **Feature and Options selection** page.

However, if the **Enable Terminal Services** option is not selected for a Flex node during the Experion installation, it can also be enabled manually. Perform the following steps, to enable the RDS manually.

1 Logon to the system as a user with administrator privileges.

2 Click **Start** > **Run** > type **cmd**, and click **OK**.
The command prompt is displayed.

3 Run the command **ServerManagerCmd.exe -install RDS-RD-Server -restart**

Attention

- DO NOT copy the command from this document, type it manually.
- The system restarts automatically after the command is executed.

8 Optional features

Related topics

“Licensed and non-licensed optional features for Experion” on page 90
“Installing optional features” on page 92

8.1 Licensed and non-licensed optional features for Experion

Licensed and non-licensed optional features table

Feature	Licensed?	Supported operating system	Supported nodes
APP Solution Pack	Y	Microsoft Windows Server 2008 R2	E-APP
CL Server	Y	Microsoft Windows Server 2008 R2	E-APP
GUS Display Builder	Y	Microsoft Windows 7 Professional (64-bit) Microsoft Windows Server 2008 R2	Any Experion node where GUS displays are developed.
File Transfer	Y	Microsoft Windows 7 Professional (64-bit) Microsoft Windows Server 2008 R2	ESV-T, ACE-T, ES-T, E-APP
GUS Display Runtime	Y	Microsoft Windows 7 Professional (64-bit) Microsoft Windows Server 2008 R2	ES-T
GUS Multiple Displays	Y	Microsoft Windows 7 Professional (64-bit) Microsoft Windows Server 2008 R2	ES-T, ES-CE
GUS Remote Displays	Y	Microsoft Windows 7 Professional (64-bit) Microsoft Windows Server 2008 R2	ES-CE
Diagnostic Studio	N	Microsoft Windows 7 Professional (64-bit) Microsoft Windows Server 2008 R2	ESV, EAS, ESV-T, eServer, ESC, ES-T, ES-F, ES-CE,E-APP
Remote Native Window	Y	Microsoft Windows 7 Professional (64-bit) Microsoft Windows Server 2008 R2	ESV-T, eServer, ACE, ACE-T, SCE, ES-C, ES-CE, ES-F, EHG, EAS,E-APP, ESV
Redirection Manager	N	Microsoft Windows 7 Professional (64-bit) Microsoft Windows Server 2008 R2	ESV-T, ACE, ACE-T, SCE, ES-C, ES-T, ES-F, ES-CE
PHD Point Server	N	Microsoft Windows Server 2008 Standard Microsoft Windows Server 2008 R2	Displayed on non-Experion nodes
Signon Manager	N	Microsoft Windows 7 Professional (64-bit) Microsoft Windows Server 2008 R2	Unrestricted
RSLinx Factory Talk	N	Microsoft Windows 7 Professional (32-bit) Microsoft Windows Server 2003 Microsoft Windows Server 2008 Standard	NA
Safe View	N	Microsoft Windows 7 Professional (64-bit) Microsoft Windows Server 2008 R2	Unrestricted
File Transfer Client	N	Microsoft Windows 7 Professional (64-bit) Microsoft Windows Server 2008 R2	ESC-E, ES-F

Feature	Licensed?	Supported operating system	Supported nodes
IKB/OEP Keyboard	N	Microsoft Windows 7 Professional (64-bit) Microsoft Windows Server 2008 R2	Unrestricted
Parallel Operation Keyboard	N	Microsoft Windows 7 Professional (64-bit) Microsoft Windows Server 2008 R2	ES-C, ES-F
HCI Runtime	N	Microsoft Windows 7 Professional (64-bit) Microsoft Windows Server 2008 R2	Unrestricted
System Management Runtime	N	Microsoft Windows 7 Professional (64-bit) Microsoft Windows Server 2008 R2	Unrestricted
Experion APP TPS Client	N	Microsoft Windows 7 Professional (64-bit) Microsoft Windows Server 2008 R2	Unrestricted
Fault Tolerant Ethernet	N	Microsoft Windows 7 Professional (64-bit) Microsoft Windows Server 2008 R2	Unrestricted
Experion Mobile Access	Y		eServer
Application framework	Y		EAS
Profibus Gateway Module (PGM)	N	Microsoft Windows 7 Professional (64-bit) Microsoft Windows Server 2008 R2	ESV, ES-C, ES-T, ES-F, ES-CE
OPC Server Connect	N	Microsoft Windows Server 2008 R2 Microsoft Windows 7 Professional (64-bit)	Displayed on non-Experion nodes
App Base	Y	Microsoft Windows Server 2008 R2	E-APP
Batch Application Services	N	Microsoft Windows 7 Professional (64-bit) Microsoft Windows Server 2008 R2	ESV, EAS, ESV-T, eServer, ESC, ES-T, ESF, ES-CE,EHG,ACE, ACET, SCE,E-APP
ESM Server	N	Microsoft Windows 7 Professional (64-bit) Microsoft Windows Server 2008 R2	ESV, ESV-T, EAS
USB Storage Enable Disable	N	Microsoft Windows 7 Professional (64-bit) Microsoft Windows Server 2003 (32-bit) Microsoft Windows Server 2008 Standard Microsoft Windows Server 2008 R2	Unrestricted

Attention

The PMD features can be installed only with the correct PMD option Experion license.

Experion with PMD Controller	Y	Microsoft Windows Server 2008 R2	ESV, ESVT, ES-F, ES-C, ES-CE
PMD HMI Extension	Y	Microsoft Windows 7 Professional (64-bit)	ES-C, ES-T, ES-F, CONEXT

8.2 Installing optional features

This section describes how to install optional features on a system where Experion is installed.

Prerequisites

- If optional features are installed on your system, do not configure your system using Experion PKS System Initialization media.
- If optional features are already installed on your system, ensure that you provide the same path for Experion installation.
- Before you install optional features on the non-Experion nodes, ensure that you have installed .NET 4.5 on that system.

1 Log on to the computer using an account with administrator rights.

2 Perform the following steps depending upon the mode of installation.

Installation type	Procedure
ESIS from a network share	1. Type **\\ESISServer IP>\<ShareName>** in the Windows Run dialog box (Start > Run) to connect to the ESIS repository. 2. Press **ENTER**. If you are prompted for the Windows credentials. • Type the **<Domain Name>\Username** and **Password** if you belong to a domain and if you have share permissions. • Type the **<ESISServer IP>\Username** and **Password** if you belong to a workgroup and if you have share permissions. • Clear the **Remember Password** check box. 3. Double-click **setup.exe** at the root of the **\<ShareName>**. If prompted for user account control, click **Allow**. If you are prompted for the Windows credentials. • Type the **<Domain Name>\Username** and **Password** if you belong to a domain and if you have share permissions. • Type the **<ESISServer IP>\Username** and **Password** if you belong to a workgroup and if you have share permissions. • Clear the **Remember Password** check box. 4. In the ESIS Install Utility, select **Product Install**. 5. Enter the ESIS credentials in the ESIS information section.
ESIS from a USB drive	1. Insert the USB drive or removable hard drive (containing the ESIS repository) into your machine. 2. Browse to the ESIS repository location in the USB drive/removable hard drive and double-click **setup.exe** at the root of the ESIS repository path. 3. In the ESIS Install Utility, select **Product Install**.
Experion PKS Installation media	1. Insert the Experion PKS Installation media. Double-click **setup.exe** at the root of the media. 2. Select **Yes** if a **Microsoft User Account Control** dialog box is displayed. 3. The Dialog Manager starts after **setup.exe** prepares the installation environment. The **Welcome** page is displayed.

3 Click **Next**.

If you are prompted for Windows credentials.

- Type the **<Domain Name>\Username** and **Password** if you belong to a domain and if you have share permissions.
- Type the **<ESISServer IP>\Username** and **Password** if you belong to a workgroup and if you have share permissions.

4 Click **Next**.

The **License Agreement** page is displayed.

5 Select **I accept the terms in the License agreement** after reading the EULA and click **Next**.
The **User and License Information** page is displayed.

6 The **User and License Information** page is displayed. Type the **Customer Name** and **Company Name**.

Attention

- Do not enter ampersand (&) in the **Company Name** and **Customer Name** fields.
- For ESV, EHG, EAS, eServer, and T-Node types, perform the following:
  1. Select **Yes** for **Are there Licensed TPS Components to install?** if you want to install TPS components such as GUS displays, file transfer, App node base, App solution pack and/or CL Server.
  2. Specify the TPS license number and Authorization.

7 Click **Next**.
The **Feature and Options Selection** page is displayed. By default, selected features are installed for a node. You can select additional optional features. Select the **Custom** option and select the appropriate options to install the Add-on and licensed components.

Attention
You must select **Profibus Gateway Module** to install **Sycon.net**.

8 Click **Next**.
The **Experion Accounts Password Entry** page is displayed. Type the passwords for all accounts that are created during installation. Password for the accounts must adhere to the following rules.

- Must not contain the user's account name or parts of the user's full name that exceed two consecutive characters.
- Must be minimum 6 characters and maximum 32 characters in length.
- Must contain characters from three of the following four categories.
  - English uppercase characters (A through Z).
  - English lowercase characters (a through z).
  - Base 10 digits (0 through 9).
  - Non-alphabetical characters (- @ # $ % ^ & + = ' ~ ! * ( ) _ + = { }\\ | : ; \ " < >, . ? /). Space is also a non-alphabetical character.
- Ensure that you do not use the \ (back slash) for passwords in your Experion account.

Attention
The **Experion Accounts Password Entry** page is displayed based on the features selected in the **Features and Options Selection** page.

9 Click **Next**.
The **Experion PKS Software Installation Settings** page is displayed.

10 Review the summary of the settings you have selected in the installation page and click **Install**.
The **Experion PKS Status Display** page is displayed, indicating the feature being installed/run.

11 After the installation is complete, the **Install Complete** message is displayed. Click **Yes** to restart the system.

9 Maintaining an ESIS repository

Related topics

“Upgrading an existing ESIS repository” on page 96
“Restarting a failed ESIS repository creation” on page 97
“Removing an existing ESIS repository” on page 98

9.1 Upgrading an existing ESIS repository

Prerequisites

You must disable **On Access Scan** for your antivirus program before upgrading ESIS.

1 Choose **Start > Programs > Honeywell Experion PKS > ESIS > R431.1 > ESISPrepUtil**.
The **Welcome to ESIS** dialog box is displayed. Select **Upgrade an Existing ESIS Repository**

2 Click **Next**.
The **ESIS Repository Selection** dialog box is displayed. Perform the following steps depending upon the location of your ESIS repository. Select the name of the ESIS repository you want to upgrade.

ESIS repository location	Procedure
To select an ESIS repository in your local system.	1. Select the name of the ESIS repository you want to upgrade. 2. Click **Next**.
To browse to an ESIS repository residing on an external USB drive	1. Click **Select**. 2. Click **Browse** to select the location of the ESIS repository. 3. Click **Next**.

Attention
The destination folder must be USB drives, removable hard drives, or local system drives only.

3 Click **Next**.
The **Select Media** dialog box is displayed. Select the check boxes next to the names of the media you want to select for ESIS repository creation

4 Click **Start**.
The **Status Display** dialog box is displayed. The upgrade process begins.

The status of the upgrade process is displayed in the **Status Display** dialog box.

- The selected media is displayed on the left pane of the **Status Display** dialog box.
- The **Current Step** displays the progress of the current media being copied.
- The **Overall Progress** displays the progress of all the media being copied.
- The **Description** displays a message related to the current media being copied.

5 After the upgrade is complete, the **Description** is updated to **ESIS Repository [<Name>] created successfully at <Destination Location>.**

6 Click **Finish**.

Attention
Ensure that you enable **On-Access Scan** for your virus protection software after upgrading ESIS.

9.2 Restarting a failed ESIS repository creation

You can restart a failed ESIS repository using one of the following methods.

Restarting using ESISPrepUtil

1 Choose **Start > Programs > Honeywell Experion PKS > ESIS > R431.1 > ESISPrepUtil**.
The **Welcome to ESIS** dialog box is displayed. Select the **Resume a Failed ESIS Repository Creation** option.

2 Click **Next**.
The **ESIS Repository Selection** dialog box is displayed. Select the name of the ESIS repository you want to restart/resume.

3 Perform the steps specified in *Proceeding with ESIS repository restoration*.

Retsarting using Experion PKS Installation media

1 Insert Experion PKS Installation media.
The **Honeywell Experion PKS Installer** screen is displayed.

2 Click Setup an **Experion Software Installation Server**.
The **Welcome to ESIS** page is displayed.

The options in the Welcome to ESIS page are as follows:

- Create a new ESIS repository
- Upgrade existing ESIS repository
- Resume a failed ESIS repository creation
- Remove an existing ESIS repository

3 Select **Resume a failed ESIS repository creation**.

4 Perform the steps specified in *Proceeding with ESIS repository restoration*.

Proceeding with ESIS repository restoration

1 In the The **ESIS Repository Selection** page, click **Next**.
The **Select Media** dialog box is displayed.

2 Click **Start**.
The **Status Display** dialog box is displayed.

3 The ESIS resume/restart process begins.
The status of the upgrade process is displayed in the **Status Display** dialog box.

- The selected media is displayed on the left pane of the **Status Display** dialog box.
- The **Current Step** displays the progress of the current media being copied.
- The **Overall Progress** displays the progress of all the media being copied.
- The **Description** displays a message related to the current media being copied.

> **Attention**
> The **Status Display** dialog box does not display the media that is already present/copied to the ESIS repository.

4 After the ESIS restarts, the **Description** is updated to **ESIS Repository [<Name>] resumed successfully at <Destination Location>.**

5 Click **Finish**.

9.3 Removing an existing ESIS repository

1. Choose **Start > Programs > Honeywell Experion PKS > ESIS > R431.1 > ESISPrepUtil**.
   The **Welcome to ESIS** dialog box is displayed.
2. Select **Remove Existing ESIS Repository** and click **Next**.
   The **ESIS Repository Selection** dialog box is displayed.
3. Select the name of the ESIS repository you want to remove and click **Next**.
   The **Status Display** dialog box is displayed. The deletion process begins.
4. After deleting the ESIS repository, the **Description** is updated to **ESIS Repository [<Name>] deleted successfully.**
5. Click **Finish**.

10 Removing Experion applications

Related topics

“About maintenance tool” on page 100
“Removing all Experion applications” on page 101
“Removing individual Experion feature packages” on page 103
“Removing Experion Support and Maintenance server” on page 104
“Removing Experion patches” on page 105

10.1 About maintenance tool

Experion Maintenance Tool provides information about the Experion features, programs, and patches installed on your system, as part of the Experion product. It also provides you the option to remove an Experion feature, program, or patch without using the Microsoft Windows components (**Programs and Features**).

You can perform the following operations using the Maintenance Tool.

- **View Installation Options**: This option displays the selections made during Experion installation such as installation paths, features, and so on.
- **View/Modify Experion product**: This option displays the individual packages installed and to modify configuration made during Experion installation. The **View/Modify Experion product** consists of the following options.
  - Click **Add Optional Experion Features** to view the optional feature(s) that can be installed. Select the feature(s) you want to add, and continue with installing optional features.
  - Click **View/Remove Optional Experion Features** to view or remove optional features installed as part of Experion product. Select the feature(s) you want to remove and click **Uninstall**.
  - Click **View/Uninstall Experion updates** to view or remove patches installed on Experion. To remove a patch, select the patch and click **Uninstall**.
- **View Experion Feature Packages/Uninstall Experion Product**: This option displays information about the packages installed as a part of Experion product.
  - Click **View Experion Feature Packages/Uninstall Experion Product** to view the individual packages installed and/or, to remove the entire Experion product.
  - Click **Uninstall All** to remove all Experion packages.

Maintenance Tool can be launched in the following methods.

- From the **Start** menu.

  Choose **Start > All Programs > Honeywell Experion PKS > Maintenance Tool**.
  - When the **Maintenance Tool** is launched by clicking on the above options, it is launched only in *View* mode. You cannot remove any Experion features, programs, or patches installed on your system You must be a member of at least one of the Experion created Windows groups.
  - When the **Maintenance Tool** by clicking on the above options, and right-clicking **Maintenance Tool**, and choosing **Run as administrator**, a **User Account Control** dialog box is displayed. The application is now launched with privileges where both view and remove operations can be performed. To perform this operation, you must be part of *Administrators* and *Product Administrators* group.
- From the **Control Panel**.

Operating system	Action
Microsoft Windows 7 Professional	1. Choose **Start** > **Control Panel** > **Programs** > **Programs and Features**. 2. In the **Uninstall or change a program** screen, select **Honeywell Experion PKS R431**.
Microsoft Windows Server 2008 R2 Standard	1. Go to **Start** > **Control Panel** > **Programs and Features**. 2. In the **Uninstall or change a program** screen, select **Honeywell Experion PKS R431**.

  - The application is now launched with privileges where both view and remove operations can be performed. To navigate to the **Maintenance Tool** as above, you must be a part of *Administrators* and *Product Administrators* group.

Attention

- Patches installed as a part of Experion PKS Support Software media cannot be removed.
- Maintenance Tool is not available on non-Experion nodes where optional features are installed.

10.2 Removing all Experion applications

Use the **Maintenance Tool** to remove all the installed applications.

Attention

- Removing Experion does not remove third-party software that was originally installed. Remove the third-party software manually one at a time using the **Program and Features** option.
- Before starting the removal, you must stop the SNMP services. Use the **Experion PKS Start-Stop Services Control Panel** tool to stop all services manually before removing all packages.
- If PMD is installed on your system, remove PMD manually before removing Experion.
- If ESM, is installed on your system, remove them manually after removing Experion.

Tip

– To remove ESM, refer to the section, “Removing Experion Support and Maintenance server” on page 104.

– To remove PMD, refer to the *PMD Software Installation User’s Guide*.

1 Log on to your computer using Windows account with local administrator rights.

2 Perform the following steps depending on your operating system.

Operating system	Action
Microsoft Windows 7 Professional	1. Choose **Start** > **Control Panel** > **Programs** > **Programs and Features**. 2. In the **Uninstall or change a program** screen, select **Honeywell Experion PKS R431**.
Microsoft Windows Server 2008 R2 Standard	1. Go to **Start** > **Control Panel** > **Programs and Features**. 2. In the **Uninstall or change a program** screen, select **Honeywell Experion PKS R431**.

The **Maintenance Tool** dialog box is displayed.

The Maintenance Tool displays the components and versions installed on your computer. Select one of the following options to remove Experion applications.

- Click **View Installation Options**, the **InstallationSummary.txt** file is displayed which contains the settings specified during Experion installation such as paths, features, and so on.
- Click **View/Modify Experion Product** to view the individual packages installed and/or, to modify/ configure Experion product..
- Click **View Experion Feature Packages/Uninstall Experion Product** to to view and remove the latest patch installed on Experion. Select the patch you want to remove, and click **Uninstall**.

3 Click on **View Experion Feature Packages/Uninstall Experion Product** link to view the individual packages installed and/or remove the entire Experion product. Click **Uninstall All** to remove ALL Experion packages.

4 As the removal proceeds, check the lower-left corner of the dialog for status messages on each package and the progress bar. During the removal process, the dialog is refreshed and removed packages are no longer visible.

5 If you want to cancel the removal at any time, click **Exit**. Before exiting, the package currently being removed is completed.

A log file is created in the **Install** folder, located in the path,*<Install drive>\<Install path>\Honeywell\ Experion PKS*, for any actions taken during use of the tool.

6 Select This program installed correctly if the **Program Compatibility Assistant** dialog box is displayed.

7 The removal operation is complete when the message area in the lower-left area of the dialog displays either **Uninstall Completed** or the number of package failures (if any). Any remaining packages that failed are visible in the dialog. Click **Exit**.

8 Reboot your computer to finish the removal of the packages.

10.3 Removing individual Experion feature packages

Attention

- Refer this section only if Honeywell recommends its usage. Removing individual Experion feature packages without help from Honeywell is not advisable due to dependencies.
- Installing Experion, by default, hides all the Honeywell Experion PKS packages in Programs and Features.
- The following optional features cannot be removed using the **Maintenance Tool**.
  - PMD controller
  - PMD HMI Extension
  - EMDB Server
  - ESM Server
  - CAB Remote Debug
  - CAB Developer
  - Redirection Manager Connectivity

10.4 Removing Experion Support and Maintenance server

For information about removing ESM, refer to the section "*Removing ESM*" in the *Experion Support and Maintenance Installation Guide*.

10.5 Removing Experion patches

Perform the following steps to remove Experion patches installed on your system.

Attention

Before starting the removal, you must stop the SNMP services. If PMD is installed, use PDS Server tool from **Start** > **All Programs** > **PMD** > **Start Or Stop PDS Server** and stop the PMD services. Use the **Experion PKS Start-Stop Services Control Panel** tool to stop all services manually before removing all packages.

1 Log on to the computer using a Windows account part of *Administrators* and *Product Administrators* group.

2 Navigate to **Honeywell Experion PKS** using one of the following methods, depending upon your operating system.

Operating system	Action
Microsoft Windows 7 Professional	1. Choose **Start** > **Control Panel** > **Programs** > **Programs and Features**. 2. In the **Uninstall or change a program** screen, select **Honeywell Experion PKS R431**.
Microsoft Windows Server 2008 R2 Standard	1. Go to **Start** > **Control Panel** > **Programs and Features**. 2. In the **Uninstall or change a program** screen, select **Honeywell Experion PKS R431**.

The **Maintenance Tool** dialog box is displayed.

3 The Maintenance Tool displays the components and versions installed on your computer. Click **View/ Remove Experion updates** to remove the latest patch installed on Experion.

The list of Experion patches installed on the system are displayed.

4 Select the patch to be removed, and click **Remove**.

The selected patch is removed.

Attention

- Some patches cannot be removed. For these patches, **Uninstall** option is disabled. Refer to the SCN of the corresponding patch for details.
- Maintenance Tool is not available on non-Experion nodes where optional features and patches for optional features are installed. Patches must be removed manually, one after the other, through **Programs and Features**.

11 Reinstalling Experion applications

Related topics

“Reinstalling Experion installed with default paths” on page 108
“Reinstalling Experion installed with custom installation paths” on page 109

11.1 Reinstalling Experion installed with default paths

Perform the following steps to reinstall Experion installed on default paths.

Attention
If you are reinstalling Experion without operating system reinstallation, refer to the section “Configuring pre-installed Microsoft SQL Server 2012 ” on page 43 before proceeding with Experion installation.

1 Remove Experion. Refer to the section “Removing Experion applications” on page 99 for removing Experion.

Attention
Do not perform this step if operating system is being reinstalled.

2 Take a backup of user data, and delete these folders.

3 Reinstall Experion (with or without operating system reinstallation).

11.2 Reinstalling Experion installed with custom installation paths

Perform the following steps if you are reinstalling Experion installed with custom installation paths.

- If you are reinstalling Experion by reinstalling operating system on a system where Experion is installed on custom installation path, refer to the section, **Experion reinstallation with operating system reinstallation**.
- If you are reinstalling Experion without reinstalling operating system on a system where Experion is installed on custom installation path, refer to the section, **Experion reinstallation without operating system reinstallation**.

Experion reinstallation with operating system reinstallation

1 Take a backup of the user data present in the custom installation paths.

2 Reinstall the operating system manually.

3 After reinstalling the operating system, delete destination folders used for custom installation paths in previous installations.

Tip

- If you are using Experion PKS System Initialization media to configure the operating system and then install Experion, refer to the section “Installing Experion using ESIS” on page 46.
- If you are installing Experion using Experion PKS Installation media, refer to the section , “Installing Experion”.

Experion reinstallation without operating system reinstallation

1 If PMD is installed on your system, remove PMD manually before removing Experion.

2 If ESM, is installed on your system, remove them manually before removing Experion.

3 Remove Experion. Refer to section “Removing Experion applications” on page 99 for removing Experion. If CAB is installed on systems with Console or Flex nodes, manually remove **Microsoft Visual C++ 2012 x86 Runtime - 10.0.40219** after removing Experion.

Tip

- To remove ESM, refer to the section, “Removing Experion Support and Maintenance server” on page 104.
- To remove PMD, refer to the *PMD Software Installation User’s Guide*.
- For Console and Flex nodes where CAB is installed, you must manually remove **Microsoft Visual C++ 2012 x86 Runtime 10.0.40219** after removing Experion.

4 Take a backup of the user data present in the custom installation paths.

5 Delete the **Client** folder located in the `<Experion PKS Runtime Data>\Honeywell\Experion PKS` path. Perform the following steps to delete the **Client** folder.

a Click **Start > Run**.

b Type **Services.msc**

The **Services** window appears.

c Right-click **SQL Server (MSSQLSERVER)** and then choose **Stop** to stop the **SQL Server (MSSQLSERVER)**.

d Delete the **Client** folder located in the `<Experion PKS Runtime Data>\Honeywell\Experion PKS` path.

e Right-click **SQL Server (MSSQLSERVER)** and then choose **Start** to start the **SQL Server (MSSQLSERVER)**.

f Right-click **SQL Server Agent (MSSQLSERVER)** and then choose **Start** to start the **SQL Server Agent (MSSQLSERVER)**.

6 Create **HPSInstall** user account if it is not present and add it to *Administrators*, and *Product Administrators* groups.

7 Reinstall Experion. Refer to the section “Configuring pre-installed Microsoft SQL Server 2012 ” on page 43 before proceeding with Experion installation.

Attention
DO NOT use Experion PKS System Initialization media for configuring the operating system.

12 Alternate scenarios for installing Experion on Honeywell-qualified platforms

Related topics

“Installing Experion with operating system using ESIS” on page 112
“Installing Experion using DVD media” on page 116

12.1 Installing Experion with operating system using ESIS

Prerequisites

- To see the list of Honeywell-qualified platforms, refer to the latest *Experion PKS System Initialization media Software Change Notice*.
- Disable Administrator account if it exists on the installation node.
- If the logged-on account on the installation node has access to ESIS share, the same account credentials must be provided for connecting to the ESIS share when prompted during the installation.
- If you are installing Experion on Microsoft Windows Server 2003 (32-bit) operating system, add ESIS server as a trusted source in Internet Explorer (**Tools > Internet Options > Security > Trusted Sites**).
- If HPSInstall account exists on the ESIS node, delete it from the ESIS node.

Attention

– Ensure that you enable Windows firewall before you begin installation.

12.1.1 Installing Experion with operating system reinstall

To connect to ESIS repository using ESIS from USB drive

1. Insert the USB drive or removable hard drive (containing the ESIS repository) into your machine.
2. Browse to the ESIS repository location in the USB drive/removable hard drive.
3. Double-click **setup.exe** at the root of the ESIS repository path.
   The **Welcome** page is displayed.

To connect to the ESIS repository using ESIS from a network share

1. Choose **Start** > **Run**.
   The **Windows Run** dialog box is displayed.
2. Type **<<ESISServer IP>\<ShareName>** and press **ENTER**.
   The **Welcome** dialog box is displayed.
3. In the **Welcome** dialog box of the ESIS Install Utility, if you are prompted for the Windows credentials, perform the following:
   a. Type the **<Domain Name>\Username** and **Password** if you belong to a domain and if you have share permissions.
   b. Type the **<ESISServer IP>\Username** and **Password** if you belong to a workgroup and if you have share permissions.
   c. Clear the **Remember Password** check box.

   Attention
   If you enter incorrect credentials, an error occurs after the first reboot of Experion installation or migration. Then, you have to enter the correct credentials to connect to the ESIS share.
4. Double-click **setup.exe** at the root of the **\<ShareName>**.
5. If prompted for user account control, click **Allow**.
6. If you are prompted for the Windows credentials, perform the following:
   a. Type the **<Domain Name>\Username** and **Password** if you belong to a domain and if you have share permissions.
   b. Type the **<ESISServer IP>\Username** and **Password** if you belong to a workgroup and if you have share permissions.

c Clear the **Remember Password** check box.

7 Click **Next**.

The **Welcome** page is displayed.

To continue with Experion installation

1 In the **Welcome to ESIS** page, select **OS Preparation with/without Product Install**.

When prompted for the Windows credentials for the share.

- Type the **<Domain Name>\Username** and **Password** if you belong to a domain and if you have share permissions.
- Type the **<ESISServer IP>\Username** and **Password** if you belong to a workgroup and if you have share permissions.

2 Click **Next**.

The **Installation Options** page is displayed, which consists of the following options to configure the machine/generate configuration files.

Select one of the following options depending upon your requirements.

Option	When to choose this option
Configure current machine	You do not have configuration files generated for the target machine.
Configure current machine using existing configuration files	You already have configuration files generated for the target machine.
Generate configuration files	You are configuring/reinstalling your operating system. Hence, you want to generate configuration files.
Modify existing configuration files	You already have configuration files generated for your machine and you want to modify them.
Use configuration files for migration	You want to perform phase 2 migration, and the operating system is installed manually.

Attention

If Experion PKS System Initlialization patches are provided during installation, a message, **InitMedia Patches found** is displayed.

3 In this step, either select **Configure current machine** or **Configure current machine using existing configuration files** only, and click **Next**.

The subsequent dialogs are displayed with the selections made as per the configuration files. You can modify the selections if required.

4 Click **Next**.

The **Platform Configuration** page is displayed. Perform the following operations.

1. Select **Reinstall OS and configure system**. The hardware platform and operating system are automatically selected.
2. Select the **Product Installation** check box.

Attention

DO NOT install the following combination of nodes and operating systems, as they are not qualified and supported currently.

- Application Server (EAS) on Microsoft Windows 7 Professional operating system.
- eServer n a Microsoft Windows 7 Professional operating system.
- Application Control Environment (ACE) node on a Microsoft Windows 7 Professional operating system.
- Collaboration Station on a Microsoft Windows Server 2008 R2 operating system.

5 Click **Next**.

The **Operating System Configuration** page is displayed.

Next steps

Follow the procedure in the section “Proceeding with Experion installation using ESIS” on page 49

12.1.2 Installing Experion on a node on which operating system does not exist (bare metal)

Prerequisites

If you want to create configuration files, use a machine other than the target machine to create configuration files for the target machine.

To connect to ESIS repository using ESIS from USB drive

1. On the machine other than the target machine, insert the USB drive or removable hard drive (containing the ESIS repository) into the machine.
2. Browse to the ESIS repository location in the USB drive/removable hard drive.
3. Double-click **setup.exe** at the root of the ESIS repository path.
   The **Welcome** page is displayed.

To connect to the ESIS repository using ESIS from a network share

1. Use a machine other than the target machine, and choose **Start** > **Run**.
   The **Windows Run** dialog box is displayed.
2. Type **<<ESISServer IP>\<ShareName>** and press **ENTER**.
   The **Welcome** dialog box is displayed.
3. In the **Welcome** dialog box of the ESIS Install Utility, if you are prompted for the Windows credentials, perform the following:
   a. Type the **<Domain Name>\Username** and **Password** if you belong to a domain and if you have share permissions.
   b. Type the **<ESISServer IP>\Username** and **Password** if you belong to a workgroup and if you have share permissions.
   c. Clear the **Remember Password** check box.

   Attention
   If you enter incorrect credentials, an error occurs after the first reboot of Experion installation or migration. Then, you have to enter the correct credentials to connect to the ESIS share.
4. Double-click **setup.exe** at the root of the **\<ShareName>**.
5. If prompted for user account control, click **Allow**.
6. If you are prompted for the Windows credentials, perform the following:
   a. Type the **<Domain Name>\Username** and **Password** if you belong to a domain and if you have share permissions.
   b. Type the **<ESISServer IP>\Username** and **Password** if you belong to a workgroup and if you have share permissions.
   c. Clear the **Remember Password** check box.
7. Click **Next**.
   The **Welcome to ESIS** page is displayed.
8. Follow the procedure in section,*To continue with Experion installation*.

To continue with Experion installation

1. In the **Welcome to ESIS** page, select **OS Preparation with/without Product Install**.
2. When you are prompted for Windows credentials.

a Type the **<Domain Name>\Username** and **Password** if you belong to a domain and if you have share permissions.

b Type the **<ESISServer IP>\Username** and **Password** if you belong to a workgroup and if you have share permissions.

3 Click **Next**.

The **Installation Options** page is displayed, which consists of the following options to configure the machine/generate configuration files.

Select one of the following options depending upon your requirements.

Option	When to choose this option
Configure current machine	You do not have configuration files generated for the target machine.
Configure current machine using existing configuration files	You already have configuration files generated for the target machine.
Generate configuration files	You are configuring/reinstalling your operating system. Hence, you want to generate configuration files.
Modify existing configuration files	You already have configuration files generated for your machine and you want to modify them.
Use configuration files for migration	You want to perform phase 2 migration, and the operating system is installed manually.

4 Select **Generate Configuration Files**, and click **Next**.

The **Platform Configuration** page is displayed.

5 In the **Platform Configuration** page, perform the following operations.

a Select the hardware platform, and operating system is selected by default.

b Select the **Product Installation** check box.

Attention

If you are using ESIS from a USB drive, if you already have configuration files generated for the target machine, select **Modify existing configuration files**.

6 Click **Next**.

The **Operating System Configuration** page is displayed.

Next steps

Follow the procedure in the section “Proceeding with Experion installation using ESIS” on page 49

12.2 Installing Experion using DVD media

12.2.1 Installing Experion on a pre-installed OS using DVD media

This section describes the steps install Experion using Experion media (Experion PKS System Initialization media), on a system where operating system is already installed.

1 Insert the Experion PKS System Initialization media.

2 Right-click **setup.exe** at the root of the media and run as Administrator. Or click **Launch Setup** on the **Autorun** screen.

The **Installation Options** page is displayed, which consists of the following options to configure the machine/generate configuration files.

Select one of the following options depending upon your requirements.

Option	When to choose this option
Configure current machine	You do not have configuration files generated for the target machine.
Configure current machine using existing configuration files	You already have configuration files generated for the target machine.
Generate configuration files	You are configuring/reinstalling your operating system. Hence, you want to generate configuration files.
Modify existing configuration files	You already have configuration files generated for your machine and you want to modify them.
Use configuration files for migration	You want to perform phase 2 migration, and the operating system is installed manually.

3 Click **Next**.

The **Platform Configuration** page is displayed, which consists of the following options.

Section	Option	Description
Choose Configuration	Platform configuration	• Select **Configure System** option if you are not reinstalling the operating system or if you have a pre-installed operating system. Select **Reinstall OS and configure system** if you are reinstalling the operating system using Experion PKS System Initialization media.
Choose Configuration	Product installation	Select the Experion version to be installed.
Select Platform		• Select **Workstation**, if you are installing/configuring a workstation. • Select **Server**, if you are installing/configuring a server.
Select operating system		• Select **Client**, if you are installing/configuring a client operating system. • Select **Server**, if you are installing/configuring a server operating system.

Attention

DO NOT install the following combination of nodes and operating systems, as they are not qualified and supported currently.

- Application Server (EAS) on Microsoft Windows 7 Professional operating system.
- eServer n a Microsoft Windows 7 Professional operating system.
- Application Control Environment (ACE) node on a Microsoft Windows 7 Professional operating system.
- Collaboration Station on a Microsoft Windows Server 2008 R2 operating system.

4 Select one of the following options depending upon your requirements, and click **Next**.

The **Operating System Configuration** page is displayed. Perform the following:

- Select the **Local Language**, and **Time Zone**.
- Type the **Computer Name**, **Company Name**, **Customer Name**, and **Workgroup Name**.
- Type the user account and password details in the **User Account Name**, **Password** and **Confirm Password** fields.

Attention

- **Computer Name** must not contain ONLY numbers, space, and special characters (` ~ ! @ # $ % ^ & * () = + _ {} [] \ | ; : .‘ ” “ , < >, / ?).
- **Company Name** must not contain the underscore (_) special character.
- **Workgroup Name** must not contain space, and special characters (* = + [] \ | ; : “ “ , < > / ?)
- **User Account Name** must be a maximum of 20 characters in length.

5 Click **Next**.

The **Network Input/Output Device Information** page is displayed. Select the network type (FTE or Ethernet) and I/O details.

Attention

- For an FTE network, the IP Address, Subnet mask, and default gateway settings are not applicable for Green adapter; they are set to DHCP by default.
- If you are reinstalling the operating system, select the NIC name to change the names. NIC1 is the first NIC (FTE Yellow or Primary Supervisory). NIC2 is the second NIC (FTE Green or Secondary Supervisory).
- For the third NIC (DHEB), DNS server option is disabled.
- The third NIC (DHEB) must be used only for EHG. Otherwise, disable the third NIC.
- The fourth NIC must be disabled if the user has a Dell R710 platform
- If you have Matrox RPS installed on your machine, select the **RPS** check box. Once you select the check box, the **Monitor arrangement** and **Monitor resolution** fields cannot be edited. After completing Experion installation, you can configure the display using Matrox Power Desk.
- If **Link speed** option is displayed for FTE, select **Link speed** as *100 Mbps Full Duplex*.

6 Click **Next**.

The **Configuration Summary** page is displayed.

7 Verify the configuration summary details, and click **Generate configuration files**.

8 Remove the Experion PKS System Initialization media insert the Experion PKS Installation media.

The **Honeywell Experion PKS Installer** page is displayed.

Attention

If **Honeywell Experion PKS Installer** page does not appear, using Windows Explorer browse to the drive (or folder) and run **setup.exe** at the root of the media to start the Installer sequencer.

9 Click **Install/Migrate Experion PKS** to begin installation.

Attention

Click **Yes** if a Microsoft User Account Control page is displayed.

The **Welcome to the Honeywell Experion PKS Installation Setup** Wizard is displayed.

10 Read the information in the page, and click **Next**.

The **License Agreement** page is displayed.

11 Read the license terms carefully before accepting the terms in the license agreement and then select **I accept the terms in the License agreement**. Click **Next**.

The **Setup type of Node to install** page is displayed.

The Experion nodes supported for the operating system on which you are installing are listed. Select the Experion node you want to install.

- Server (ESV)
- Server TPN Connected (ESVT)
- eServer
- Application Control Environment (ACE)
- Application Control Environment TPN Connected (ACE-T)
- Simulation Environments (SCE)
- Console Station (ES-C)
- Console Station TPN Connected (ES-T)
- Console Extension Station (ES-CE)
- Flex Station (ES-F)
- Collaboration Station
- Experion Hiway Gateway (EHG)
- APP Node (E-APP)
- Application Server (EAS)
- PC Universal Station (PCUS)

Tip

The **Optional features** is also displayed in the node selection page. However, it is not a node type, but is used to add additional features to an existing node type.

12 Select the Experion node you want to install and click **Next**.

The **User and License Information** dialog box is displayed.

Type the **Customer Name** and **Company Name**, and specify the following details depending on the node type selected for installation.

Tip

Do not enter ampersand (&) in the **Company Name** and **Customer Name** fields.

Node type	Option
Server, EHG, EAS, eServer node	1. Type the **Experion system software license number** and **Authorization number**. 2. Type the Experion System Software details.
Station node	Select **Install Custom Algorithm Block (CAB) Developer (Visual Studio) OR PMD features?** only if you want to develop CAB blocks from scratch using Control Builder using Visual Studio software, since this might increase the installation time.
ACE, ACE-T, and SCE node	1. Select **Install Custom Algorithm Block (CAB) Developer (Visual Studio) Remote Debug Software?** if you are also installing CAB Developer on a station and if you are debugging the CAB blocks that you are developing on the ACE using **Visual Studio** debug. If you are not creating CAB blocks from the beginning and you are only importing existing CAB blocks, you do not need the CAB remote debug feature. 2. Type the **Experion system software license number** and **Authorization number**, if you select **Install Software**.

Node type	Option
E-APP node	To install E-APP node base, Application Solution pack and/or CL Server, type the **Experion system software license number** and **Authorization number**.
T-node	1. Select **Yes** for **Are there Licensed TPS Components to install?** 2. If you want to install TPS components such as GUS Display Builder, and File Transfer, you must type the **TPS license number** and **Authorization Number**.

Attention

This step is applicable only for **Server (ESV)** and **Server TPN Connected (ESVT)** nodes.

1. A message containing the redundancy information of the node being installed is displayed. This redundancy information is based on the machine name.
   - Click **Yes** to proceed with the current redundancy type .
   - Click **No** to change the redundancy type. Change the redundancy type by changing the machine name. Refer to the *Supplementary Installation Tasks Guide (SITG)* to change the machine name.
2. Click **Next**.

13 Click **Next**.

The **Installation Path Selection** page is displayed.

- If you plan to use the default paths for Experion installation, do not change the path that is set by default.
- If you plan to use custom installation paths, refer to the section “Custom installation path” on page 35.

Attention

– The Experion PKS SQL Logs path is not applicable for Console (ES-C), Console station TPN connected (ES-T), Console Extension station (ESC-E), Flex station (ES-F), and Collaboration Station nodes.

– The Experion PKS Software, Experion PKS Runtime Data, and Experion PKS SQL logs can be placed on any drive. However, the default path for Experion PKS Software and Experion PKS Runtime Data is *<Custom Install Path selected drive>\<Custom Install Path selected folder(s)\Honeywell*. The path for Experion PKS SQL logs is *\Honeywell\Experion PKS* and you cannot change this path.

14 Click **Change** to define the paths.

The **Experion Network Selection** page is displayed.

Select the appropriate EPN, supervisory and auxiliary network. Three levels of networks are available on an Experion system. for more information, refer to the section, “Overview of Experion Process Control Network (PCN)” on page 16.

RSLinx option is applicable only if PCIC card is available on your system. RSLinx must be installed manually after completion of Experion installation. For more information, refer to the “Installing RSLinx Classic” on page 71.

For ESVT, ES-T, EAPP and ACE-T nodes, you can either select LCNP4 card or K4LCN (with ETNI) card in the auxiliary network, even if EPN or supervisory network is selected.

15 Click **Next**.

Depending upon the node type and network selection, the appropriate page listed in the following table is displayed.

Node type and network selection	page displayed
• FTE is selected as EPN on Server (ESV) • Server TPN connected (ESVT) nodes	**FTE Bootp and NTP IP Address Configuration** page
• Ethernet is selected as EPN on Server (ESV) • Server TPN connected (ESVT) nodes	**EthNet_Sim and NTP IP Address Configuration** page

Attention

The IP addresses listed in the **FTE Bootp and NTP IP Address Configuration** page are used for Level 1 to Level 2 controller communication. You can modify this information after the installation in **Control Builder > System Preferences**.

1. Enter the appropriate information in the displayed fields for **Base IP Address, Subnet Mask, and Default Gateway**.
2. Enter the appropriate information in the displayed fields for **NTP First IP Address and NTP Second IP Address**. By default, the first IP address is set to Server A's IP address and the second IP adress is set to Server B's IP address. They are then used as the time synchronization nodes for the controllers.

16 Click **Next**.

The **Feature and Options Selection** page is displayed. Select the method of Experion installation.

Attention

- Based on the node selected, the feature and options for that node are available.
- By default, selected features are installed for a node. You can select additional optional features.

- Select **Typical** to install the default optional components for a node.
- Select **Custom** to add **Add-on** or **Licensed features** components in addition to the **Typical** install. Select appropriate options to install the **Add-on** and **Licensed features** components.

Tip

If you are installing Flex node on a system with Microsoft Windows Server 2008 R2 operating system, and want to install a **Remote Engineering Station Server (RESS)** node, select **Enable Terminal Services (also known as Remote Desktop Services)**. For more information, refer to "Enabling Remote Desktop Services on Flex nodes" on page 87.

17 Click **Next**.

The **Remote Server Dialog** page is displayed. This page is displayed only if you are installing Collaboration Station node. Enter the eServer name on which the Collaboration Station node must be installed.

18 Click **Next**.

The **Experion Server Name** page is displayed for the ES-C, EST, ACE, ACE-T, EHG, and SCE nodes. Perform the following steps in the **Experion Server Name** page.

1. Enter the name of the server in the **Server Name** field.
2. Select the **Server is Redundant** check box if you have redundant servers.

Attention

If redundant, type the base name without the 'a' or 'b' suffix.

If you are installing Collaboration Station, enter the name of the eServer in the **Server Name** field.

19 Click **Next**.

The **Experion PKS Software Installation Settings** page is displayed.

20 Perform the following steps, as necessary.

- If you select **Save Configuration Files**, browse and select the appropriate location (floppy drive, USB, local hard disk) to save the configuration files to be used on this computer for future use.
- Use removable floppy drive, if there is no built-in floppy drive.
- Save the generated configuration files in a separate folder at the root of the C: drive, floppy drive, or USB drive.
- Click **OK** when the confirmation message is displayed.

Attention

- Configuration files for different nodes can be stored in different folders on the external media.
- If you go back and make changes in some Experion PKS System Initialization options, you are prompted to reenter product details.

21 Review the summary of the settings you selected and click **Install/Continue**.
A message is displayed to insert Experion PKS System Initialization media.

22 Insert the Experion PKS System Initialization media and click **OK**.
The system configuration continues.

> **Attention**
> If you are using virtual machine for Experion migration, refer to Creating new Experion virtual machines section in *Experion Virtualization Planning and Implementation Guide*.

Next steps

Go to section “Proceeding with Experion installation using DVD media” on page 126.

12.2.2 Installing Experion on node without operating system (bare metal)

1 Insert the Experion PKS System Initialization media on the machine other than the target machine, to create configuration files.

2 Browse to the CD/DVD drive and double-click **Setup.exe** at the root of the media
The **Installation Options** page is displayed, which consists of the following options to configure the machine/generate configuration files.

Option	When to choose this option
Configure current machine	You do not have configuration files generated for the target machine.
Configure current machine using existing configuration files	You already have configuration files generated for the target machine.
Generate configuration files	You are configuring/reinstalling your operating system. Hence, you want to generate configuration files.
Modify existing configuration files	You already have configuration files generated for your machine and you want to modify them.
Use configuration files for migration	You want to perform phase 2 migration, and the operating system is installed manually.

3 Select **Generate configuration files**, and click **Next**.
The **Platform Configuration** page is displayed.

4 Select the **Product Installation** check box and select the Experion release.
By default, the following fields are selected.

- **Platform Configuration**
- **Select Platform**
- **Select Operating System**

5 Click **Next**.
The **Operating System Configuration** page is displayed.

6 In the **Operating System Configuration** page, perform the following:

- Select the **Local Language, and Time Zone**.
- Type the **Computer Name, Company Name, Customer Name, and Workgroup Name**.
- Type the user account and password details in the **User Account Name**, **Password** and **Confirm Password** fields.

Attention

- **Computer Name** must not contain ONLY numbers, space, and special characters (` ~ ! @ # $ % ^ & * () = + _ {} [] \ | ; : . ‘ ” “ , < >, / ?).
- **Company Name** must not contain the underscore (_) special character.
- **Workgroup Name** must not contain space, and special characters (***** = + [] \ | ; : “ “ , < > / ?)
- **User Account Name** must be a maximum of 20 characters in length.

7 Click **Next**.

The **Network Input/Output Device Information** page is displayed. Select the network type (FTE or Ethernet) and I/O details.

Attention

- In case of FTE, the IP Address, Subnet mask, and default gateway settings are not applicable for Green adapter; they are set to DHCP by default.
- If you are reinstalling the operating system, select the NIC name to change the names. NIC1 is the first NIC (FTE Yellow or Primary Supervisory); NIC2 is the second NIC (FTE Green or Secondary Supervisory).
- For the third NIC (DHEB), DNS server option is disabled.
- The third NIC (DHEB) must be used only for EHG. Otherwise, disable the third NIC.
- The fourth NIC must be disabled if the user has a Dell R710 platform
- If you have Matrox RPS installed on your machine, select the **RPS** check box. Once you select the check box, the **Monitor arrangement** and **Monitor resolution** fields become cannot be edited. After completing Experion installation, you can configure the display using Matrox Power Desk.
- If **Link speed** option is displayed for Ethernet, select **Link speed** as *100 Mbps Full Duplex*.

8 Click **Next**.

The **Configuration Summary** page is displayed.

9 Verify the configuration summary details, and click **Generate configuration files**.

10 When the CD/DVD drive automatically opens and prompts to insert the Experion PKS Installation media, remove the Experion PKS System Initialization media and insert the Experion PKS Installation media.

11 Click **OK**.

The **Honeywell Experion PKS Installer** page is displayed.

Attention

If **Honeywell Experion PKS Installer** page does not appear, using Windows Explorer browse to the drive (or folder) and run **setup.exe** at the root of the media to start the Installer sequencer.

12 Click **Generate Product Install Config Files**.

The **Welcome** page is displayed.

Attention

- It may take a few seconds to display the **Welcome** page.
- If a **Microsoft User Account Control** is displayed, select **Allow**. The **Dialog Manager** starts after **setup.exe** prepares the installation environment.

13 Read the information, and click **Next**.

The **License Agreement** page is displayed.

14 Read the EULA, select **I accept the terms in the License agreement** option, and click **Next**.

The **Setup type of Node to install** page is displayed which lists the Experion nodes supported by the operating system on your computer. The following is a list of Experion nodes that are listed.

- Server (ESV)
- Server TPN Connected (ESVT)
- eServer
- Application Control Environment (ACE)

- Application Control Environment TPN Connected (ACE-T)
- Simulation Environments
- Console Station (ES-C)
- Console Station TPN Connected (ES-T)
- Console Extension Station (ES-CE)
- Flex Station (ES-F)
- Collaboration Station
- Experion Hiway Gateway (EHG)
- APP Node (E-APP)
- Application Server (EAS)
- PC Universal Station (PCUS)

15 Choose the Experion product node type to install, and click **Next**.

The **User and License Information** page is displayed.

Type the **Customer Name** and **Company Name**, and specify the following details depending on the node type selected for installation.

Node type	Option
Server node/EHG	1. Type the **Experion system software license number** and **Authorization number**. 2. Type the **Experion System Software** details. 3. To install licensed TPS components, click **Yes** and type the **TPS Components License details**.
Station node	Select **Install Custom Algorithm Block (CAB) Developer (Visual Studio) OR PMD features?** only to develop CAB blocks from scratch using Control Builder and Visual Studio software, since this might increase the installation time.
ACE, ACE-T, and SCE node	1. Select **Install Custom Algorithm Block (CAB) Developer (Visual Studio) Remote Debug Software?** if you are performing any of the following: • Installing CAB Developer on a station. • Debugging the CAB blocks that you are developing on the ACE using **Visual Studio** debug. If you are not creating CAB blocks from the beginning and you are only importing existing CAB blocks, you do not require the CAB remote debug feature. 2. Type the **Experion system software license number** and **Authorization number**, if you select **Install Software**.
E-APP node	To install E-APP node base, App Solution pack and/or CL Server, type the **Experion system software license number** and **Authorization number**.
T-node	1. Select **Yes** for **Are there Licensed TPS Components to install?**. 2. To install TPS components such as GUS Display Builder, and File Transfer, you must type the **TPS license number** and **Authorization Number**.

Attention

This step is applicable only for **Server (ESV)** and **Server TPN Connected (ESVT)** nodes.

1. A message containing the redundancy information of the node being installed is displayed. This redundancy information is based on the machine name.
   - Click **Yes** to proceed with the current redundancy type .
   - Click **No** to change the redundancy type. Change the redundancy type by changing the machine name. Refer to the *Supplementary Installation Tasks Guide (SITG)* to change the machine name.
2. Click **Next**.

16 Click **Next**.

The **Installation Path Selection** page is displayed, which contains the path for Experion installation.

- If you plan to use the default paths for Experion installation, do not change the path that is set by default.
- If you plan to use custom installation paths, refer to the section “Custom installation path” on page 35.

Attention

– The Experion PKS SQL Logs path is not applicable for Console (ES-C), Console station TPN connected (ES-T), Console Extension station (ESC-E), Flex station (ES-F), and Collaboration Station nodes.

– The Experion PKS Software, Experion PKS Runtime Data, and Experion PKS SQL logs can be placed on any hard drive in the system. However, the default path for Experion PKS Software and Experion PKS Runtime Data is *<Custom Install Path selected drive>\<Custom Install Path selected folder(s)\Honeywell*. The path for Experion PKS SQL logs is *\Honeywell\Experion PKS* and you cannot change this path.

17 Click **Change** to define the paths.

The **Experion Network Selection** page is displayed.

Select the appropriate EPN, supervisory and auxiliary network. Three levels of networks are available on an Experion system. for more information, refer to the section, “Overview of Experion Process Control Network (PCN)” on page 16.

RSLinx option is applicable only if PCIC card is available on your system. RSLinx must be installed manually after completion of Experion installation. For more information, refer to the “Installing RSLinx Classic” on page 71.

For ESVT, ES-T, EAPP and ACE-T nodes, you can either select LCNP4 card or K4LCN (with ETNI) card in the auxiliary network, even if EPN or supervisory network is selected.

18 Click **Next**.

Depending upon the node type and network selection, the appropriate page listed in the following table is displayed.

Node type and network	Display page
• FTE is selected as EPN on Server (ESV) • Server TPN connected (ESVT) nodes	**FTE Bootp and NTP IP Address Configuration** page
• Ethernet is selected as EPN on Server (ESV) • Server TPN connected (ESVT) nodes	**EthNet_Sim and NTP IP Address Configuration** page
FTE or Ethernet EPN is user-selected or chosen by default	**IP config** page

Attention

The IP addresses listed in the **IP config** page are used for Level 1 to Level 2 controller communication. You can modify this information by performing the following steps after the installation is complete.

1. In **Control Builder**, click **System Preferences**.
2. Enter the appropriate information in the **Base IP Address, Subnet Mask, Default Gateway** fields.
3. Enter the appropriate information in the **NTP First IP Address and NTP Second IP Address** fields. The first IP address is set as Server A’s IP address and the second IP address is set as Server B’s IP address by default. They are used as the time synchronization nodes for the controllers.

19 Click **Next**.

The **Feature and Options Selection** page is displayed. Select the method of Experion installation.

- Select **Typical** to install the default features installed for a node.
- Select **Custom** to add **Add-on** or **Licensed features** in addition to the **Typical** install.

20 Click **Next**.

The **Remote Server Dialog** page is displayed. This page is displayed only if you are installing Collaboration Station node. Enter the eServer name on which the Collaboration Station node must be installed.

21 Click **Next**.

The **Experion Accounts Password Entry** page is displayed. Type passwords for all the accounts created during installation.

Password for the accounts must adhere to the following rules.

- Passwords cannot contain the user's account name or parts of the user's full name that exceed two consecutive characters.
- Passwords must be minimum six characters and maximum 32 characters.
- Passwords must contain characters from three of the following four categories.
  - English uppercase characters (A through Z).
  - English lowercase characters (a through z).
  - Base 10 digits (0 through 9).
  - Non-alphabetical characters (-@#$%^&+='~!*()_+={}\\|:;\"<>,.?/)
- Type the password for each applicable account.
- Type the confirmation password for each applicable account.
- For eServer, passwords for Standard access user and Standard access administrator accounts must not contain any spaces.
- Passwords of local accounts must be configured to be the same on all nodes in the Experion cluster.
- On ACE and ACE-T node types: select the check box if the configuration requires the CDASP service to log on using the MNGR account.

Attention

The **Experion Server Name** page is displayed for the ES-C., EST, ACE, ACE-T, EHG, and SCE nodes.

Perform the following steps in the **Experion Server Name** page.

1. In the **Server Name** field, specify the name of the server.
2. If you have redundant servers, select the **Server is Redundant** check box.

22 Click **Next**.

The **Experion PKS Software Installation Settings** page is displayed.

Perform the following steps, depending upon your requirement.

- If you select **Save Config Files**, browse and select the appropriate location (floppy drive, USB drive, local hard disk) to save the configuration files on this computer for future use.
- Use removable floppy drive, if there is no built-in floppy drive.
- Save the generated configuration files in a separate folder at the root of the C: drive, floppy drive, or USB drive.
- Click **OK** when the confirmation message is displayed.

Attention

- Configuration files for different nodes can be stored in different folders on the external media.
- If you go back and make changes in Experion PKS System Initialization options, you are prompted to reenter product details.

Next steps

Go to section "Installing Experion with operating system reinstall using DVD media" on page 125.

12.2.3 Installing Experion with operating system reinstall using DVD media

Prerequisites

Before you begin installation, ensure that you have saved the configuration file generated for this machine on removable media and connect it on target machine.

1 In the target machine, insert Experion PKS System Initialization media and boot from the Experion PKS System Initialization media.

> **Attention**
> Ensure that the boot sequence in BIOS is set to boot from CD/DVD drive first.

2 Press any key when you see the message **Press any key to boot from CD or DVD**.

3 Browse to the configuration files and select **InitMediaOptions.xml** file.

4 Click **Next**.

The **Experion PKS System Initialization Pre-Install Utility** screen is displayed when the system boots from Experion PKS System Initialization media. Additionally, WinPE is loaded into the target machine.

5 The **Experion PKS System Initialization PreInstall Utility** loads the configuration information from InitMediaOptions.xml file.

- Experion PKS System Initialization media does not allow you to select the hard disk partitions (drive path) based on your custom installation path selection.
- Select **Use Drive C:** option if you want to format only C drive and install operating system on this drive. In this case, the data on the other partitions are retained. Select this option only if the computer has more than one partition and no raw partitions.
- In the **Partition Count** drop down list, select drive or the number of partitions required. The minimum size for primary partition is . If the disk space is less than , only one partition can be created.

6 Enter configuration details for hard disk in the **Disk Configuration** section. Select the appropriate media location. It can be any one of the following:

- DVD
- ESIS from network
- ESIS from USB

In this case, select the **DVD** option and click **Next**.

7 Select **I accept the terms in the License agreement** on the **License Agreement** dialog box after reading the EULA.

8 Click **Install**. Insert the operating system media when prompted.

> **Attention**
> DO NOT install the following combination of nodes and operating systems, as they are not qualified and supported currently.
>
> - Application Server (EAS) on Microsoft Windows 7 Professional operating system.
> - eServer n a Microsoft Windows 7 Professional operating system.
> - Application Control Environment (ACE) node on a Microsoft Windows 7 Professional operating system.
> - Collaboration Station on a Microsoft Windows Server 2008 R2 operating system.

Next steps

Go to section “Proceeding with Experion installation using DVD media” on page 126.

12.2.4 Proceeding with Experion installation using DVD media

- You must not use **Administrator** or **Mngr** as user name. The user account created in the **Feature Selection** dialog box is Windows Administrator account. This user account must not be used for any Experion application after completing the installation.
- If the installation is started on an account (with Administrator rights) other than the standard Administrator account, type the valid password for the current user account (this is not for new account creation).
- If the installation is started on a standard Administrator account, type new user name and password for creating new account with Administrator rights.

- If your system is in a domain, you can enter a dummy workgroup name in the dialog box and set up the domain after the operating system installation.

1 After the operating system installation is completed, insert Experion PKS System Initialization media again when the **Experion PKS System Initialization** dialog box is displayed.
   - If the **Autorun** dialog box is displayed, close it. During installation, if **Restart Now** prompts appear, no action is required. The system reboots automatically.
   - During installation, if you see **Found New Hardware** screens, do not take any action.
   - The system restarts several times automatically while using Experion PKS System Initialization media.
   - If the media is already present in the local machine, installation proceeds without prompting Experion PKS System Initialization media.

2 The Experion PKS Installation media status is displayed indicating the feature being installed, approximate remaining time for the feature installation, and overall installation to run and a description/message area that gives information about the installation.
   - System restarts automatically.
   - If it fails to restart automatically, restart the system manually.
   - After restart, it may be necessary to start the services manually. Verify whether the Experion services are running properly in Service Control panel.

3 The message **Please insert Experion PKS System Initialization Updates DVD** is displayed. Insert the Experion PKS System Initialization Updates media and click **OK**.
   The operating system updates begins.

> **Attention**
> Insert the Experion PKS System Initialization Updates media only if Microsoft Windows operating system service pack is not installed.

4 The message **The Experion Installation DVD is required to continue the install. Insert the DVD into drive (source drive letter) and press YES to continue or Press No to terminate** is displayed. Insert the Experion PKS Installation media and click **Yes**.
   The Experion installation continues.

5 A message, **The Microsoft SQL Server 2012 is required to continue the install** is displayed. Insert the Microsoft SQL Server 2012 media, and click **Yes**.

> **Attention**
> If you have other versions of SQL (apart from Microsoft SQL Server 2012) installed on your system, a message **SQL Pkg Version is not a supported SQL Server version** is displayed. You must stop the Experion installation, remove the existing SQL version, and resume with Experion installation.

   The installation of Microsoft SQL Server 2012 begins

6 The message **The Experion Installation DVD is required to continue the install. Insert the DVD into drive (source drive letter) and press YES to continue or Press No to terminate** is displayed. Insert the Experion PKS Installation media and click **Yes**.
   The Experion installation continues.

7 A message, **Experion Support and Maintenance media is required to continue the install. Insert the Experion Support and Maintenance media into drive (source drive letter) and click YES to continue** is displayed.
   Experion Support and Maintenance installation begins.

8 The message **The Experion Installation DVD is required to continue the install. Insert the DVD into drive (source drive letter) and press YES to continue or Press No to terminate** is displayed. Insert the Experion PKS Installation media and click **Yes**.
   The Experion installation continues.

9 If you are installing CAB.
   a The message **The CAB DVD is required to continue the install. Insert the DVD into the drive (source drive letter) and press Yes to continue or Press No to terminate** is displayed.

b Insert the Microsoft Visual Studio CAB Developer media (optional, required only if CAB is selected) and click **Yes** to begin CAB installation.

c On completion of CAB installation, the message **The Experion Installation DVD is required to continue the install. Please insert it into drive (source drive letter) and press YES to continue or Press NO to terminate** is displayed.

d Insert the Experion PKS Installation media and click **Yes**.

The Experion installation continues.

10 The message **The Experion Installation DVD is required to continue the install. Insert the DVD into drive (source drive letter) and press YES to continue or Press No to terminate** is displayed. Insert the Experion PKS Installation media and click **Yes**.

The installation of Experion continues.

11 You are prompted for Experion PKS with PMD controller media, only if you have selected PMD as an optional feature. Insert the Experion PKS with PMD controller media, and continue with PMD installation.

12 The message **The Experion Installation DVD is required to continue the install. Insert the DVD into drive (source drive letter) and press YES to continue or Press No to terminate** is displayed. Insert the Experion PKS Installation media and click **Yes**.

The Experion installation continues.

13 If you are installing Support Software.

The message, **The Experion Support DVD is required to continue the install. Insert it into the drive (source drive letter) and press Yes to continue or Press No to terminate** is displayed. Insert the Experion Support Software R431.1 media and click **Yes**.

- The Support Software installation begins.
- After the Support Software installation is complete, the system restarts automatically.

Next steps

After you complete this task, go to the section “Post-installation tasks” on page 55.

13 Installing Experion on other Honeywell platforms

Related topics

“Introduction” on page 130
“Preparing for an Experion installation” on page 131
“Installing Experion on other Honeywell platforms” on page 134
“Post-installation tasks” on page 141

13.1 Introduction

Other Honeywell Platforms are models that do not contain configurations and hardware components specific to the Honeywell configuration. These computers are purchased directly from Dell/HP or from other manufacturer and may not contain the same qualified hardware. However, they are qualified by Honeywell only for specific Experion nodes. The following Experion nodes are qualified for installation on *Other Honeywell Platforms*.

- Experion Console (ES-C)
- Experion Flex (ES-F)
- Experion Server (ESV)

Considerations for *Other Honeywell Platforms*

- Use of an LCNP card is not supported.
- Mounting in Honeywell consoles or cabinets is not supported.

13.2 Preparing for an Experion installation

Related topics

"Prerequisites" on page 131
"Verifying the time and time zone settings" on page 131
"Setting up screen resolution and color quality" on page 131
"Setting up NIC adapter" on page 132
"Changing the network firewall settings" on page 132
"Setting up a user account" on page 133

13.2.1 Prerequisites

- Ensure that the required hardware drivers are installed on your computer.
- Ensure that Microsoft Windows 7 Professional operating system is installed before you begin Experion installation.
- Refer to this section only if you are installing Experion using DVD. If you are installing Experion using ESIS, these operations are performed automatically.

13.2.2 Verifying the time and time zone settings

The system time and time zone settings must remain consistent during installation. Before starting installation, ensure that the time and time zone settings are the same on both server and client nodes (Console stations, Flex stations, and so on).

Support for the latest fixes for Daylight Savings Time are included with the Experion software. However, because of the recent global time zone adjustments, it may be necessary to reset the time zone settings during some installation scenarios.

To change the time zone

1 Click the time and date displayed in the task bar.
2 Click **Change date and time settings**.
The **Date and Time** dialog box appears.
3 Click **Change time zone**.
4 Select the correct **Time zone** and click **OK**.
5 Click **Apply** and **OK**.

13.2.3 Setting up screen resolution and color quality

To set up screen resolution and color quality for Microsoft Windows 7 Professional (64-bit) operating system

1 Click **Start** > **Control Panel**.
The **Control Panel** dialog box is displayed.
2 Click **Appearance and Personalization**, and in **Display**, select **Adjust Resolution**.
3 Select the resolution as **1280x1024 (recommended)** from the drop-down list.
Or
Move the slider to the resolution required. Ensure that the resolution is at least 1024x768 or higher.
4 Click **Apply**.

5 Click **Keep changes** to retain the new resolution.
6 Click **Advanced Settings** and click the **Monitor** tab.
7 From the **Colors** drop-down list, select the color as **True Color (32 bit)**.
8 Click **OK**.
9 Click **Yes** to confirm the color quality change, and click **OK**.
10 Close the **Display** window.

13.2.4 Setting up NIC adapter

Perform the following procedure to update NIC driver for an existing FTE node. This procedure is used for verifying if the network physical adapter properties are configured correctly after a driver update.

Tip
For more information, refer to the *Verify/change physical adapters settings* section in the *Fault Tolerant Ethernet Installation and Service Guide*.

1
Select

2 Right-click one of the FTE network connections (Yellow or Green) and choose **Properties**.
The **User Account Control** dialog box is displayed.
3 Click **Continue**.
Verify the **Adapter Yellow/Green Properties** window.
4 In the **Networking** tab, select **Configure**.
5 In the **Advanced** tab, perform the following procedure for Broadcom and Intel adapters .
Broadcom adapters
a **IPv4 Checksum Offload** and ensure the value is set to **Rx & Tx Enabled**.
b Click **IPV4 Large Send Offload v2** and verify/change the value to **Disabled**.
c **Jumbo Packet** and verify/change the value to **Disabled**.
d **Jumbo MTU** and verify/change the value to **1500**.
e **Receive Side Scaling** and verify/change to **Disabled**.
f **Link Speed & Duplex** and verify/change the value to **100Mb full**.

Intel adapters
a **Jumbo Packet** verify/change the value to **Disabled**.
b **Large Send Offload (IPv4)** verify/change the value to **Disabled**.
c **Large Send Offload (IPv6)** verify/change the value to **Disabled**.
d **Receive Side Scaling** verify/change the value to **Disabled**.
e **Link Speed Tab** and verify/change the value to **100Mbps/Full Duplex**.
6 Click **OK**.
7 Click **Close** from the **Adapter Properties** window.
8 Repeat this procedure for the second adapter.

13.2.5 Changing the network firewall settings

To change the network settings from public to private network

1 Choose **Start** > **Control Panel**.

2 Click **Network and Internet** > **Network and Sharing Center**.
The **Network and Sharing Center** window is displayed.

3 In the left pane, click **Change advanced sharing settings**.
The **Advanced sharing settings** window is displayed.

4 Make the following changes for both Home or Work (private) option and public network.
   a In **Network discovery** section, select **Turn on network discovery** option.
   b In **File and printer sharing** section, select **Turn on file and printer sharing** option.
   c Click **Save Changes**.

13.2.6 Setting up a user account

To set up an user account

1 Create a local account using a name of your choice as follows:

Tip
The account must be a member of only the Local Administrators group and not a member of any of the Honeywell groups that are created by the Experion security package.

   a Right-click **My Computer** on your desktop, and choose **Manage**.
   The **Computer Management** window is displayed.
   b In the left pane, select **Local Users and Groups**, and click **Users** folder.
   c In the right pane, from **Users** click **More Actions** > **New User**.
   The **New User** dialog box is displayed.
   d Specify the user name and password and select the **Password Never Expires** check box.
   e Click **Create**.
   The new user account is created.

2 Disable the standard Windows **Administrator** account.

3 Assign Administrator privileges to the new user account.
   a Right-click the newly created user, and choose **Properties**.
   b In the **Member of** tab, click **Add**.
   The **Select Groups** dialog box is displayed.
   c Enter the name of the user/group and click **OK** in the **Select Groups** dialog box.
   d Click **OK** in the **Member Of** tab.

4 Log off and then log on using the created account.

13.3 Installing Experion on other Honeywell platforms

Prerequisites

Ensure that you enable Windows firewall before you begin installation.

To connect to ESIS repository using ESIS from USB drive

1. Insert the USB drive or removable hard drive (containing the ESIS repository) into your machine.
2. Browse to the ESIS repository location in the USB drive/removable hard drive.
3. Double-click **setup.exe** at the root of the ESIS repository path.
   The **Welcome** page is displayed.
4. In the **Welcome** page of the ESIS Install utility, select **OS Preparation with/without Product Install**.
5. When you are prompted for Windows credentials.
   a. Type the **<Domain Name>\Username** and **Password** if you belong to a domain and if you have share permissions.
   b. Type the **<ESISServer IP>\Username** and **Password** if you belong to a workgroup and if you have share permissions.
   c. Clear the **Remember Password** check box.

   Attention
   If you enter incorrect credentials, an error occurs after the first reboot of Experion installation or migration. Then, you have to enter the correct credentials to connect to the ESIS share.
6. Click **Next**.
   The **Installation Options** page is displayed, which consists of the following options to configure the machine/generate configuration files.
   - Configure current machine.
   - Configure current machine using existing configuration files.
   - Generate configuration files.
   - Modify existing configuration files.
   - Use Config file for migration.
7. Select **Configure current machine**, and click **Next**.
   The **Platform Configuration** page is displayed. Perform the following operations.
   1. The **Product Installation** check box is selected automatically.
   2. Select the Experion version to install. The operating system is selected automatically.
8. Click **Next**.
   The **Operating System Configuration** page is displayed.
9. In the **Operating System Configuration** page, perform the following:
   - Select the **Local Language** and **Time Zone**.
   - Type the **Computer Name**, **Company Name**, **Customer Name**, and **Workgroup Name**.
   - Type the **User Account Name** and passwords.

Attention

- **Computer Name** must not contain ONLY numbers, space, and special characters (` ~ ! @ # $ % ^ & * () = + _ {} [] \ | ; : . ‘ ” “ , < >, / ?).
- **Company Name** must not contain the underscore (_) special character.
- **Workgroup Name** must not contain space, and special characters (***** = + [] \ | ; : “ “ , < > / ?)
- **User Account Name** must be a maximum of 20 characters in length.

10 Click **Next**.
The **Network and Input/Output Device Information** page is displayed.

Tip

- If you are reinstalling the operating system, select the NIC name to change the names. FTE Yellow or Primary Supervisory is NIC1.FTE Green or Secondary Supervisory is NIC2.
- For the third NIC (DHEB), DNS server option is disabled.
- The third NIC (DHEB) must be used only for EHG. Otherwise, disable the third NIC.
- The third and fourth NIC must be disabled if the user has a HP Proliant DL380 G7 server platform.
- If **Link speed** option is displayed for FTE, select **Link speed** as *100 Mbps Full Duplex*.

11 Select the network type (FTE)and I/O details, and click **Next**.
The **Configuration Summary** page is displayed.

12 Click **Generate Product Install Config Files**.
The **Welcome** page is displayed.

Attention

- It may take a few seconds to display the **Welcome** page.
- If a **Microsoft User Account Control** is displayed, select **Allow**. The **Dialog Manager** starts after **setup.exe** prepares the installation environment.

13 Read the information, and click **Next**.
The **License Agreement** page is displayed.

14 To continue with Experion installation, go to *To continue with Experion installation*.

To connect to the ESIS repository using ESIS from a network share

1 Choose **Start** > **Run**.
The **Windows Run** dialog box is displayed.

2 Type **<<ESISServer IP>\<ShareName>** and press **ENTER**.
The **Welcome** dialog box is displayed.

3 In the **Welcome** dialog box of the ESIS Install Utility, if you are prompted for the Windows credentials, perform the following:

a Type the **<Domain Name>\Username** and **Password** if you belong to a domain and if you have share permissions.

b Type the **<ESISServer IP>\Username** and **Password** if you belong to a workgroup and if you have share permissions.

c Clear the **Remember Password** check box.

Attention
If you enter incorrect credentials, an error occurs after the first reboot of Experion installation or migration. Then, you have to enter the correct credentials to connect to the ESIS share.

4 Double-click **setup.exe** at the root of the **\<ShareName>**.
You are prompted for user name and password. Perform one of the following:

- Type the **<Domain Name>\Username** and **Password** if you belong to a domain.

- Type the **<ESISServer IP>\Username** and **Password** if you belong to a workgroup.

5 If prompted for user account control, click **Allow**.

6 If you are prompted for the Windows credentials, perform the following:

a Type the **<Domain Name>\Username** and **Password** if you belong to a domain and if you have share permissions.

b Type the **<ESISServer IP>\Username** and **Password** if you belong to a workgroup and if you have share permissions.

c Clear the **Remember Password** check box.

7 Click **Next**.

The **Welcome** page is displayed.

8 In the **Welcome** page of the ESIS Install utility, select **OS Preparation with/without Product Install**.

9 When you are prompted for Windows credentials.

a Type the **<Domain Name>\Username** and **Password** if you belong to a domain and if you have share permissions.

b Type the **<ESISServer IP>\Username** and **Password** if you belong to a workgroup and if you have share permissions.

c Clear the **Remember Password** check box.

Attention

If you enter incorrect credentials, an error occurs after the first reboot of Experion installation or migration. Then, you have to enter the correct credentials to connect to the ESIS share.

10 Click **Next**.

The **Installation Options** page is displayed, which consists of the following options to configure the machine/generate configuration files.

- Configure current machine.
- Configure current machine using existing configuration files.
- Generate configuration files.
- Modify existing configuration files.
- Use Config file for migration.

11 Select **Configure current machine**, and click **Next**.

The **Platform Configuration** page is displayed. Perform the following operations.

a The **Product Installation** check box is selected automatically.

b Select the Experion version to install. The operating system is selected automatically.

12 Click **Next**.

The **Operating System Configuration** page is displayed.

13 In the **Operating System Configuration** page, perform the following:

- Select the **Local Language** and **Time Zone**.
- Type the **Computer Name**, **Company Name**, **Customer Name**, and **Workgroup Name**.
- Type the **User Account Name** and passwords.

Attention

- **Computer Name** must not contain ONLY numbers, space, and special characters (` ~ ! @ # $ % ^ & * () = + _ {} [] \ | ; : . ‘ ” “ , < >, / ?).
- **Company Name** must not contain the underscore (_) special character.
- **Workgroup Name** must not contain space, and special characters (* = + [] \ | ; : “ “ , < > / ?)
- **User Account Name** must be a maximum of 20 characters in length.

14 Click **Next**.

The **Network and Input/Output Device Information** page is displayed.

Tip

- If you are reinstalling the operating system, select the NIC name to change the names. FTE Yellow or Primary Supervisory is NIC1.FTE Green or Secondary Supervisory is NIC2.
- For the third NIC (DHEB), DNS server option is disabled.
- The third NIC (DHEB) must be used only for EHG. Otherwise, disable the third NIC.
- The third and fourth NIC must be disabled if the user has a HP Proliant DL380 G7 server platform.
- If **Link speed** option is displayed for FTE, select **Link speed** as *100 Mbps Full Duplex*.

15 Select the network type (FTE) and I/O details, and click **Next**.
The **Configuration Summary** page is displayed.

16 Click **Generate Product Install Config Files**.
The **Welcome** page is displayed.

Attention

- It may take a few seconds to display the **Welcome** page.
- If a **Microsoft User Account Control** is displayed, select **Allow**. The **Dialog Manager** starts after **setup.exe** prepares the installation environment.

17 Read the information, and click **Next**.
The **License Agreement** page is displayed.

18 To continue with Experion installation, go to *To continue with Experion installation*.

To install Experion using DVD

1 Insert the Experion PKS Installation media.

2 Right-click the CD-ROM drive and select **Run Experion Media Browser**.

3 On the **Honeywell Experion PKS Installer** page, click **Install/Migrate Experion PKS** to begin installation.

Attention

- Click **Yes** if a **User Account Control** page is displayed.
- If **Honeywell Experion PKS Installer** screen does not appear, using Windows Explorer browse to the drive (or folder) and run **setup.exe** at the root of the media to start the Installer

The **Welcome to the Honeywell Experion PKS Installation Setup** wizard is displayed.

4 Read the information on the page, and click **Next**.
The **Experion PKS Dialog manager** is displayed.

5 The **Experion PKSDialog manager** has the following options.

- If you are performing a fresh Experion R431 installation, select **Install Clean**.
- If you are migrating from a previous release to Experion R431, select **Continue Migration**.

Attention

Select the **Configure Current Machine with already existing configuration files** option if you want to configure your system with existing configuration files.

Select **Install Clean** and click **Next**.

A migration warning message is displayed.

6 Click **Yes** to continue installation of Experion.
The **License Agreement** page is displayed.

7 To continue with Experion installation, go to *To continue with Experion installation*.

To continue with Experion installation

1 Read the **EULA** and select **I accept the terms in the License agreement**. Click **Next**.
The **Setup type of Node to install** page is displayed.

Experion product node types supported on *Other Honeywell Platforms* are.

- Server (ESV)
- eServer
- Console Station (ES-C)
- Console Station TPN Connected (ES-T)
- Console Extension Station (ES-CE)
- Flex Station (ES-F)
- Collaboration Station
- Application Server (EAS)
- Optional Features
- PC Universal Station (PCUS)
- EHG (Experion Hiway Gateway)

Attention

- The third NIC (DHEB) must be used only for EHG. Otherwise, disable the third NIC.
- Though these nodes are supported on *Other Honeywell Platforms*, Honeywell qualifies the installation of the following nodes on *Other Honeywell Platforms*.
  - **Flex (ES-F)**
  - **Console (ES-C)**
  - **Server (ESV)**

You must select Flex (ES-F) or Console (ES-C), or Server (ESV) nodes while installing Experion on *Other Honeywell Platforms*.

2 Select the Experion node type you want to install and click **Next**.

Attention

This step is applicable only for **Server (ESV)** node.

A message containing the redundancy information of the node being installed is displayed. This redundancy information is based on the machine name. Click **Yes** to proceed with the current redundancy type or click **No** to change it. You can change the redundancy type by changing the machine name. Click **Next**.

The **User and License Information** page is displayed. Specify the customer name and company name in the **Name** and **Company Name** fields respectively.

3 Click **Next**.

4 Click **Change** to define the paths, and click**Next**.
Select the appropriate EPN, supervisory and/or auxiliary networks.

RSLinx option is applicable only if PCIC card is available on your system. RSLinx must be installed manually after completion of Experion installation.

For more information, refer to the “Installing RSLinx Classic” on page 71.

For ESVT, EST, and ACET nodes, you can either select LCNP4 or K4LCN in the auxiliary network, even if EPN or supervisory network is selected.

Tip

Three levels of networks are available on an Experion system. For more information, refer to the section, “Overview of Experion Process Control Network (PCN)” on page 16.

5 Click **Next**.
The **Feature and Options Selection** page is displayed. Select the method of Experion installation.

Attention

- Based on the node selected, the feature and options for that node are available.
- By default, selected features are installed for a node. You can select additional optional features.

- Select **Typical** to install the default optional components for a node.
- Select **Custom** to add **Add-on** or **Licensed features** components in addition to the **Typical** install. Select appropriate options to install the **Add-on** and **Licensed features** components.

Tip

If you are installing Flex node on a system with Microsoft Windows Server 2008 R2 operating system, and want to install a **Remote Engineering Station Server (RESS)** node, select **Enable Terminal Services (also known as Remote Desktop Services)**. For more information, refer to "Enabling Remote Desktop Services on Flex nodes" on page 87.

6 Click **Next**.

The **Remote Server Dialog** page is displayed. This page is displayed only if you are installing Collaboration Station node. Enter the eServer name on which the Collaboration Station node must be installed.

7 Click **Next**.

The **Experion Accounts Password Entry** page is displayed.

Attention

This step is applicable for **Console (ES-C)** node (on Other Honeywell platforms) only.

The **Experion Server Name** dialog box is displayed.

Perform the following steps in the **Experion Server Name** dialog box.

1. Enter the name of the server in the **Server Name** field.
2. Select the **Server is Redundant** check box if you have redundant servers.

Attention

If redundant, type the base name without the 'a' or 'b' suffix.

8 Type passwords for all the accounts created during installation.

The **Experion PKS Software Installation Settings** page is displayed.

Attention

Passwords of local accounts must be configured to be the same on all nodes in the Experion cluster.

Click **Next**.

The **Summary** page is displayed.

9 Review the summary of the settings you selected, and click **Install**.

The **Experion PKS Status Display** page is displayed.

This page indicates the feature being installed/run, approximate time remaining for the feature installation and a description/message area that gives information of the installation.

- System restarts automatically.
- If it fails to automatically restart, restart the system manually.
- After restart, it may be necessary to start the services manually. Verify whether the Experion services are running properly in Service Control panel.

10 If you are installing CAB.

a The message **The CAB DVD is required to continue the install. Insert the DVD into the drive (source drive letter) and press Yes to continue or Press No to terminate** is displayed.

b Insert the Microsoft Visual Studio CAB Developer media (optional, required only if CAB is selected) and click **Yes** to begin CAB installation.

c On completion of CAB installation, the message **The Experion Installation DVD is required to continue the install. Please insert it into drive (source drive letter) and press YES to continue or Press NO to terminate** is displayed.

d Insert the Experion PKS Installation media and click **Yes**.

The Experion installation continues.

11 Insert the Experion PKS Installation media and continue with Experion installation.

The installation continues and the system restarts automatically after sometime.

12 The message **The Experion Installation DVD is required to continue the install. Insert the DVD into drive (source drive letter) and press YES to continue or Press No to terminate** is displayed. Insert the Experion PKS Installation media and click **Yes**.

The Experion installation continues.

13 If you are installing Support Software.

The message, **The Experion Support DVD is required to continue the install. Insert it into the drive (source drive letter) and press Yes to continue or Press No to terminate** is displayed. Insert the Experion Support Software R431.1 media and click **Yes**.

- The Support Software installation begins.
- After the Support Software installation is complete, the system restarts automatically.

14 The Experion installation continues.

After the installation complete, the **Install Complete** message is displayed. Click **Yes** to restart the system.

Next steps

After successful completion of Experion installation, go to *Post-installation tasks* .

13.4 Post-installation tasks

Related topics

“Adding a node to a Windows domain or workgroup” on page 141
“Configuring the computer for use within a Windows domain” on page 57
“Configuring the Domain or Workgroup” on page 142
“Configuring FTE Device Index post-installation if Experion is running with FTE” on page 142
“Setting up host files” on page 143
“Installing the Microsoft security updates” on page 144
“Installing the Experion software updates” on page 146
“Installing the latest antivirus software” on page 67
“Defragmenting the hard disk” on page 147
“Setting up time synchronization” on page 148
“Installing Microsoft Excel” on page 74
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“Re-connecting the modem and entering user settings” on page 149
“Backing up your system” on page 149

13.4.1 Adding a node to a Windows domain or workgroup

Prerequisites

- For adding a node to Windows domain.
  - You must have a Windows domain controller installed and operational.
  - You must have an operational DNS server.
  - The node being added has DNS and (optionally) WINS server information configured.

To add a node to a Windows domain or workgroup

1. Click **Start** > **Control Panel** > **System and Security** > **System**.
2. Click **Change Settings**.
   The **System Properties** dialog box is displayed.
3. On the **Computer Name** tab, click **Change**.
   The **Computer Name Changes** dialog box is displayed.
4. Select the respective **Domain** or **Workgroup** of the system.
5. Click **OK** to acknowledge the message, and then restart the computer.
6. Log on to the computer using a Windows account with local administrator rights.

13.4.2 Configuring the computer for use within a Windows domain

Refer to the *Network and Security Planning Guide* for detailed information on the following topics.

- Selecting to use domains or workgroups.
- Understanding security in Experion users.

Attention

- User accounts created during installation DO NOT have permission to be users of the Experion software. User accounts must be created and assigned Experion privileges.
- To use Experion, you must create at least one account for each Experion role used at the site. It is recommended to create one account per user of Experion and assign each account the specific role or roles that the users must have.
- DO NOT create an account with both Experion roles and Windows System Administrator Role.
- If an R430.1 node is installed using Experion Support and Maintenance (ESM) generated configuration files, change the password of **SecureCommsSvc** account (if the account exists) using *PWDUti1.exe* and then start the installation/migration.

13.4.3 Configuring the Domain or Workgroup

Refer to the Windows Domain and Workgroup Implementation Guide. For planning information, refer to Windows Domain and Workgroup Planning Guide. For operation system migration information, refer the appropriate operating system-specific implementation guide Windows Domain Implementation Guide for Windows Server 2008 R2/Windows Domain Implementation Guide for Windows Server 2012. for detailed information on the following topics.

- Installing a domain controller and implementing Experion domain security.
- Adding a computer to a domain including the required step to link Experion security to the domain (Link Domain Groups command).
- Creating user accounts and assigning Experion permissions.

13.4.4 Configuring FTE Device Index post-installation if Experion is running with FTE

Attention

- Use this section only if you are NOT using Experion PKS System Initialization media.
- For more information about setting up the FTE Device index after Experion installation, refer to the *Fault Tolerant Ethernet Installation and Service Guide*.

Setting up the FTE Device Index after Experion installation

1. In the **Control Panel** section, select **Network and Sharing Centre**
2. Select **Change Adapter Settings** in the left pane.
3. Right-click one of the FTE network connections (Yellow or Green) and choose **Properties**.
4. Click **Continue to the User Account Control Prompt**.
5. Select **Honeywell FTE Mux-IM Protocol Driver**, and choose **Properties**.
6. Verify the **FTE MUX-IM Protocol Driver Properties** dialog box and select the **Configure** tab.
7. In the left pane, select the **Honeywell FTE Adapter #1**.
   Set the values for the following:
   - **Device Index Value** for the machine - Change the value to a unique number from 1-511.

   Verify the values for the following:
   - The **IPMC Destination Address** (this is the multicast address assigned to the FTE Community default as **234.5.6.7**)
   - **UDP Destination Port**, default value is **51966**
   - **UDP Source Port**, default value is **47837**

   Attention
   You can modify the **IPMC Destination Address**, **UDP Source Port**, and **UDP Destination Port**. However, it is recommended to retain the default settings.

8 From the **Network Connections** window, select the **Honeywell FTE Adapter #1**, right-click the adapter, and choose **Properties**.

9 Click **Continue to the User Account Control Prompt** if it appears.

10 Verify the **FTE Adapter #1 Properties**: Select **Internet Protocol Version 4 (TCP/IPV4)** and select **Properties**.

11 Verify IP Address and other IPV4 Settings. Correct any values that are incorrect or missing and then click **OK**.

12 Log out and log in back as local administrator.

13 Wait until the machine has completed all the process starts and network connections and then verify Network Settings using `IPConfig/all` command from a command window. If FTE Mux Driver is working correctly, Honeywell FTE MUX-IM Virtual Miniport Driver is displayed in the **ipconfig** command.

13.4.5 Setting up host files

You must identify the computer name and associated IP address of each Experion server and Console station in the *hosts* file. Both server and client computers require a modified *hosts* file with identical entries, to edit the *hosts* file on one computer and then copy it to each computer in the Experion system. The *hosts* file is located in *%SystemRoot%\system32\drivers\etc* path where *%SystemRoot%* is usually *C:\WINDOWS*.

Attention

In case of redundant server pair, if you are planning to perform a server hardware change or operating system re-installation of one or both servers, ensure to perform the following steps for updating the hosts file. Not performing these steps may lead to Loss of View (LOV) and overwriting of system repository data on the primary server with the data available on the backup server.

1. On the server where you are performing the hosts file updates, perform the following steps.
   a. Click **Start > All Programs > Honeywell Experion PKS> Server > Start-Stop Experion PKS Server**.

      The **Experion PKS Server (Primary)** dialog box appears.

   b. In **Full** mode of the **Start-Stop Experion PKS Server** window, click **Database Unloaded** or **Database Only**.
   c. Update the existing hosts file then click **Save**.
   d. Set the server to **Database & Daemons**.
2. On the other server of the redundant pair (not the one on which hosts file are updated), open **Station** and verify the link on **Redundancy Status** page to be OK (appears in green).
3. Set the server on which the hosts file was updated to **System Running**.

To edit the *hosts* file in Notepad.

1. Go to **All Programs** > **Accessories**.
2. Right-click Notepad, and choose **Run as Administrator**.

The following server naming conventions are used in the host file examples provided.

- Standalone server network name: SERVER
- Redundant primary server network name: SERVER A
- Redundant secondary server network name: SERVER B
- Console station XX network name (where XX = 01 - 10): CSTNXX

The following examples show system configurations and the entries that must be included in the *hosts* file. The examples assume that the system contains two Console stations. Replace network addresses and network names with value appropriate for your configuration. Any text following "#" (without quotes) on a single line is a comment and may be omitted from the hosts file.

Example 1: Standalone (non-redundant Cluster Server system) with Single Link (Single LAN / FTE)

Network address	Network name	Node type
127.0.0.1	localhost	
192.168.0.1	SERVER	# Server
192.168.0.3	CSTNE	# Console Station
192.168.0.5	CSTNF	# Console Station

Example 2: Redundant (redundant Cluster Server system) with Single Link (Single LAN / FTE)

Network address	Network name	Node type
127.0.0.1	localhost	
192.168.0.1	SERVERA SERVERA0	# Server A
192.168.0.3	SERVERB SERVERB0	# Server B
192.168.0.5	CSTNE	# Console Station
192.168.0.7	CSTNF	# Console Station

Example 3: Standalone (non-redundant Cluster Server system) with Dual Links (Dual LAN)

Network address	Network name	Node type
127.0.0.1	localhost	
192.168.0.1	SERVER SERVER0	# Server
12.1.0.1	SERVER1	
192.168.0.3	CSTNE CSTNE0	# Console Station 01
12.1.0.3	CSTNE1	
192.168.0.4	CSTNF CSTNF0	# Console Station 02
12.1.0.4	CSTNF1	

Example 4: Redundant (redundant Cluster Server system) with Dual Link (Dual LAN)

Network address	Network name	Node type
127.0.0.1	localhost	
192.168.0.1	SERVERA SERVERA0	# Server A
12.1.0.1	SERVERA1	
192.168.0.2	SERVERB SERVERB0	# Server B
12.1.0.2	SERVERB1	
192.168.0.3	CSTNE CSTNE0	# Console Station 01
12.1.0.3	CSTNE1	
192.168.0.4	CSTNF CSTNF0	# Console Station 02
12.1.0.4	CSTNF1	

13.4.6 Installing the Microsoft security updates

Install the Microsoft security updates that are applicable to the operating system installed on this system. Go to the Honeywell Process Solutions website for more information. If you are a new user, you can register for access at this site.

Attention

- You must access the Honeywell Process Solutions website from a secured computer, rather than from a node within your Experion system.
- To access zip file, save the file in the local drive and then open.

To access the Honeywell Process Solutions website

1 In a web browser, type the following URL.
https://www.honeywellprocess.com/support

The **Product Support** page appears.

2 If you are a new user, register at this website. Click **Register**, and follow the on-screen instructions.

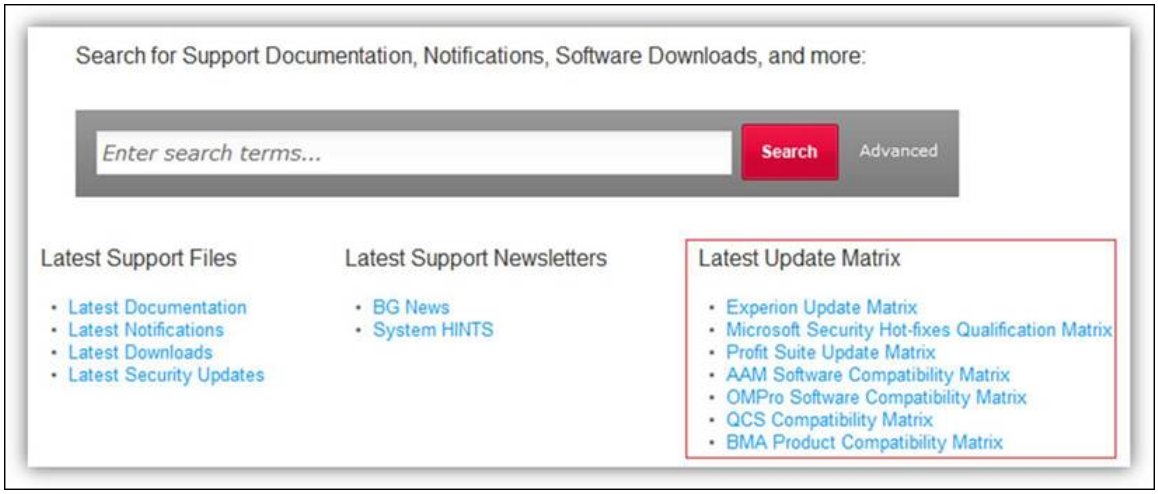
3 If you are already registered, type your user name and password, and click **Login** to logon.
Your account logon name appears in the top-right of the page.

To download and install the security updates

1 In the **Search** box, type the following search phrases to locate security-related information:

Search for	Description
Microsoft Security Hot-fixes Honeywell Qualification Matrix	This matrix provides recommendations for the installation of Microsoft security updates for each HPS product.
Microsoft Security Updates ISO	Monthly releases of an ISO image that contains the HPS Update Manager application and HPS qualified Microsoft updates. For more information about the HPS Update Manager, search for HPS Update Manager on the HPS website.
Experion Patch Update Matrix	This spreadsheet identifies the updates/patches that need to be installed onto the system.

In addition, you can locate the security-related information in the **Latest Update Matrix** listed below the **Search** box.



2 If the security update cannot be located in the list displayed, you can search using the **Search** toolbar.

3 To search with **Advanced** link, click the **Advanced** link in the **Search** toolbar.
The **Advanced Support Document Search** page appears.

4 Type the details of the security update.

13.4.7 Installing the Experion software updates

You must download and install Experion server, Quick Builder, HMIWeb, Configuration Studio, and Experion TPS integration (if applicable) software updates from the Honeywell Process Solutions website. If you are a new user, you can register for access at this site.

Attention
Controller and tools updates must not be installed until the migration of the entire system is complete.

Attention

- You must access the Honeywell Process Solutions website from a secured computer, rather than from a node within your Experion system.
- To access zip file, save the file in the local drive and then open.

To access the Honeywell Process Solutions website

1 In a web browser, type the following URL.
https://www.honeywellprocess.com/support
The **Product Support** page appears.

2 If you are a new user, register at this website. Click **Register**, and follow the on-screen instructions.

3 If you are already registered, type your user name and password, and click **Login** to logon.
Your account logon name appears in the top-right of the page.

To download and install hotfix

- In **Search Support Documentation**, type **hotfix**.
The hotfixes and other non-security updates are displayed. These are the latest hotfixes from Microsoft that are approved for use in Experion.

Attention
To download the latest Experion patches, refer to the spreadsheet available at the following link http://www.honeywellprocess.com/library/support/software-downloads/Experion/experion-update-matrix.zip.

13.4.8 Installing the latest antivirus software

Attention
This post-installation task is applicable for all the nodes.

Verify that the latest antivirus software is installed and patched to the proper version for your operating system. You can find the latest antivirus solution information at.

http://www.honeywellprocess.com

Attention

- You must access the Honeywell Process Solutions website from a secured computer, rather than from a node within your Experion system.
- To access zip file, save the file in the local drive and then open.

To access the Honeywell Process Solutions website

1. In the web browser, type the following URL.
https://www.honeywellprocess.com/support
The **Product Support** page appears.

2. If you are a new user, register for access at this site. Click **Register**, and follow the instructions on the screen.
3. If you are already registered, type your username and password, and then click **Login**.

   Your account login name appears in the top-right of the page.

To apply the latest antivirus notification

1. Open the **Product Support** page.
2. To view and download the latest antivirus notifications, click **Latest Notifications**.

   Or

   In addition, you can search for the latest notification using the search modes available in the **Product Support** page. The following table describes the search options. Choose any one of the following option and then perform the corresponding steps.

Option	Description
Search Support Documentation To use this option you must have an active support contract.	1. Click **Advanced**. The **Advanced Support Document Search** page is displayed. 2. Type all the details about the document or use wildcards to search for the notification. Click **Search**. For example, if you are searching for Anti-virus Software Guidelines, type the information and click **Search**. The document is displayed.
Search by Product and Subscribe to Notifications This provides the complete information about a specific product. In addition you can also subscribe to this page for alerts where a notification is sent to you about the published document.	1. Type the name of the product. The related products are displayed. 2. Click the required product with the release. The **Documentation**, **Notifications**, **Software Downloads** and **Security Updates** for the particular product are displayed. For example, type Experion R431, and select Experion R431 in the list of products displayed. The page displays the **Documentation**, **Notifications**, **Software Downloads** and **Security Updates** tabs that list all the support documents related to Experion R431.

3. Locate the required notification.
4. Once you locate the required notification, click **Download**.

   The required notification is downloaded on your computer.

13.4.9 Defragmenting the hard disk

Prerequisites

- Ensure that other applications (Experion Server, SQL Server, and so on.) are not running on your computer because, this may require restarting the computer.

Considerations

- It is recommended that you add this task to your system's maintenance schedule, so that it is performed during control shutdowns.
- You can upgrade the default fragmentation utility included with Windows to the full version. Executive Software's Diskeeper includes a scheduler, and can defragment folders and pagefiles when a computer restarts. Defragmentation tasks affect the control system if they are set to run automatically with the scheduler. Care must be taken when scheduling defragmentation tasks. For more details, choose **Start** > **All**

Programs > **Accessories** > **System Tools** > **Disk Defragmenter**, to refer to the Windows Help for Disk Defragmenter using the path.

Attention
Do Not perform this procedure on Flex station. Proceed to To defragment the hard disk procedure.

To stop the services on servers and Console stations

1. Choose **Start** > **All Programs** > **Honeywell Experion PKS** > **Server** > **Start-Stop Experion PKS Server**.
   The **Experion PKS Server** dialog box is displayed.
2. To stop the services of the Experion server, in **Full** mode of the **Start-Stop Experion PKS Server** window, select **Database Unloaded**.
3. Close all windows.
4. To stop the Experion PKS Control Data Access server services, perform the following steps.
   a. On the desktop, right-click **Computer** and select **Manage**.
      The **Server Manager** window is displayed.
   b. Expand **Configuration> Services** in the left pane.
   c. Click **Services**.
      A list of services is displayed in the right-pane.
   d. Right-click **Experion PKS Control Data Access server services**, and choose **Stop**.
      The **Stop Other Services** confirmation dialog box is displayed.
   e. Click **Yes** to stop other dependency services.
5. For systems using ControlNet, perform the following procedures.
   a. Right-click **Harmony** and choose **Stop**.
   b. Close the **Server Manager** window.

To defragment the hard disk

1. On the Windows Desktop, double-click the **Computer** icon.
   Or
   Choose **Start** > **Computer**.
2. Right-click the hard disk to defragment and choose **Properties**.
3. Click the **Tools** tab.
4. Click **Defragment now**.
   The **Disk Defragmentor** dialog box is displayed.
5. Select the disk and then click **Analyze disk**.
   This analyzes the fragmentation level of the drive. The defragmented disk is displayed in Date, Time, Percentage of fragmented disk format.
6. After the analysis is complete, click **Defragment Disk** to start defragmenting the hard disk.
   Depending on the level of fragmentation and usage, the task may take time to complete.
7. When the defragmentation is complete, close the **Disk Defragmentor** application.
8. Close the **Local Disk Properties** window.
9. Restart the system.

13.4.10 Setting up time synchronization

After completing the migration, you must synchronize the time between the node and the time server.

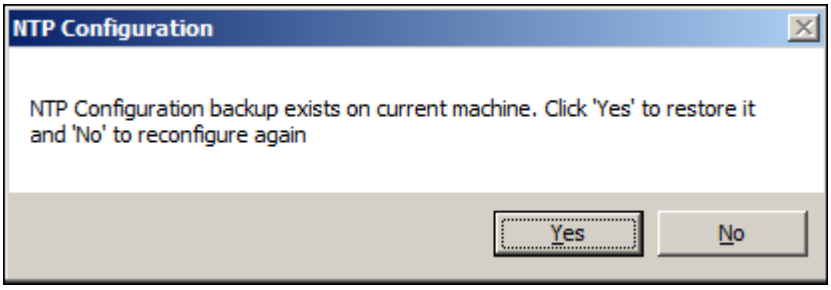
You must log on to the migrated node with Windows System Administrator permission.

To run the NTPConfig utility

1 In Windows Explorer, navigate to *C:\Program Files (x86)\Honeywell\Experion PKS\Utilities\NTPSetup*.
For custom installation path, navigate to *<User selected path>\Honeywell\Experion PKS\Utilities\NTPSetup*.

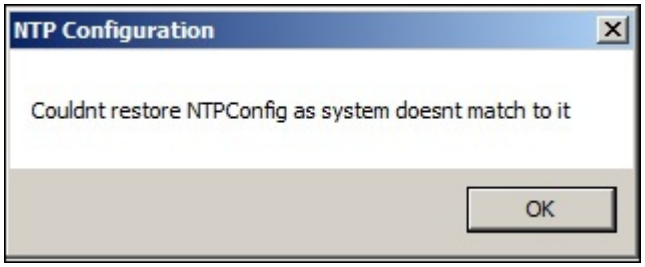
2 Right-click **NTPConfg.exe** and select **Run as administrator**.
The **NTP Configuration** dialog box is displayed.

3 To restore previous NTP configuration settings, click **Yes**.



The previous NTP configuration settings are restored.

4 If NTP configuration settings is not restored due to a file mismatch, then the following message is displayed.



5 Click **OK**.
If the NTP configuration settings are not restored, refer to the *Experion Supplementary Installation Tasks Guide* and *Experion Server and Client Planning Guide* to reconfigure the NTP settings.

13.4.11 Installing Microsoft Excel

For more information about installing Microsoft Excel, see the *Supplementary Installation Tasks Guide*.

13.4.12 Installing remote desktop services

For more information about installing a remote desktop services (previously known as terminal services), see the *Supplementary Installation Tasks Guide*.

13.4.13 Re-connecting the modem and entering user settings

The modem must be reconnected to the computer after a product hardware change or an operating system install or reinstall. For more information, refer to *Supplementary Installation Task Guide*.

13.4.14 Backing up your system

Other Honeywell Platforms hardware is supported with EBR R400. You must create a custom recovery media for restoring the backup of *Other Honeywell Platforms* to the same platform. For more information, refer to the *EBR User's guide*.

Attention

You can restore *Other Honeywell Platforms* to another platform of the same type or on the same platform only. Restoring any Honeywell-qualified platform to *Other Honeywell Platforms* is not supported.

14 Installing/Configuring operating system on Honeywell-qualified platforms using Experion PKS System Initialization media

Related topics

“Prerequisites” on page 152
“Preparing a platform with supported operating system” on page 154
“Preparing a platform with unsupported operating system” on page 159
“Preparing a platform without operating system (bare metal)” on page 162

14.1 Prerequisites

- Before you begin using the Experion PKS System Initialization media, ensure that you have the following:
  - Microsoft Windows 7 Professional (32-bit) or Microsoft Windows 7 Professional (64-bit) or Microsoft Windows Server 2008 Standard or Microsoft Windows Server 2008 R2 Standard operating system.
  - NET framework 2.0 or higher versions.
- Replace the Intel Pro 100S Dual server cards on server machines and the PRO 100 S or Pro 1000 MT Dual server cards in stations.
- If optional features are installed on your system, do not configure your system using Experion PKS System Initialization media.

Install the PRO 1000 PT Dual server card into one of the following PCI-e slots of your computer.

- Dell Precision T5500 , R5500 workstation – Install the Intel ® PCI-e Pro 1000 PT / Pro 1000 ET card in PCI-e x 8 Slot-1.
- Dell Precision T3500 workstation – Install Intel ® PCI-e Pro 1000 PT/ Pro 1000 ET card in PCIe x 4 Slot-1.
- Dell PWS490 and T5400.
  - Intel Pro 1000 MT PCI-based NIC is a default card, which is installed in PCI Slot-6.
  - To use Intel Pro 1000 PT/Pro 1000 ET Optional PCIe-based NIC card in these platforms, use Slot 1.
  - Currently, in PWS 490 Slot-1 is used for power adapter cable.
  - To use this optional PCIe-based NIC card in PWS490 platforms, this power adapter cable must be pushed back to Slot-6. Do not mix the NIC cards.
- Dell T3400.
  - Intel Pro 1000 MT PCI based NIC is a default offering NIC which is installed in Slot-1.
  - To use Intel Pro 1000 PT/ Pro 1000 ET Optional PCIe-based NIC, use Slot-3.
  - Do not mix the NIC cards.
- SC 1430.
  - Has default option of Intel Pro 1000 MT card and that is inserted in Slot-6.
  - In case of Pro 1000 PT and Intel Gigabit Dual Port ET server adapter, this is optional and goes into Slot 1, (PCi-e slot).
  - You can use any one of these cards at a time.
- Dell PE 2950/2950III.
  - Has default option of Intel Pro 1000MT card apart from onboard broadcom ethernet adapter and that is inserted in PCIx slot 2.
  - Intel Pro 1000 PT card and Intel Gigabit Dual Port ET server adapter are optional cards.
  - It is recommended to install in PCIe x 8 Slot #1.
- Dell PE2900/2900III.
  - Has default option of Intel Pro 1000MT card apart from onboard broadcom ethernet adapter and that is inserted in PCIx slot 1.
  - Intel Pro 1000 PT and Intel Gigabit Dual Port ET server adapter are optional cards.
  - It is recommended to install in slot 3, that is, PCi-e x 8.
- Dell PE T310.
  - Has default option of Intel Pro 1000PT card apart from onboard broadcom ethernet adapters.
  - You can also use Intel Gigabit Dual Port ET server adapter and is recommended to install in Slot 1 PCIe x8.
- Dell PE R710.
  - Has default option of Intel Pro 1000PT card apart from onboard broadcom ethernet adapters.

  - You can also use Intel Gigabit Dual Port ET server adapter and is recommended to install in Slot 3 PCIe x8.
- Dell T320/R320 server
  - No add-on on NIC supported for FTE
- Dell Precision T3600XL workstation
  - No add-on on NIC supported for FTE
- HP DL 380 server
  - No add-on on NIC supported for FTE
- Dell PE T610 server.
  - Has default option of Intel Pro 1000PT card apart from onboard broadcom ethernet adapters.
  - You can also use Intel Gigabit Dual Port ET server adapter and is recommended to install in Slot 1 PCIe x4.
- HP DL360p
  - No Add-on NIC support for FTE.

Attention

- Use HPS operating system reinstallation media(Microsoft Windows 7 Professional (64-bit)and Microsoft Windows Server 2008 R2 Standard) (recommended).

14.2 Preparing a platform with supported operating system

Configuring the operating system using Experion PKS System Initialization media

1 Insert the Experion PKS System Initialization media, right-click **setup.exe** at the root of the media and run as Administrator.

Attention

- Format the drives that are not formatted (raw partitions) before using Experion PKS System Initialization media.
- Local user account without Administrator rights must not be used to start installation using Experion PKS System Initialization media.

The **Installation Options** page is displayed which contains the following options to configure the machine/ generate configuration files.

- Configure current machine.
- Configure current machine using existing configuration files.
- Generate configuration files.
- Modify existing configuration files.
- Use configuration file for migration.

2 Select **Generate Configuration Files** and click **Next**.

The **Platform Configuration** page is displayed which consists of options to install Experion and/or configure operating system on a selected platform. The following options are present.

Section	Option	Description
Choose Configuration	Platform configuration	• Select **Configure System** if the operating system is installed manually. • Select **Reinstall OS and configure system** if supported operating system is not present. Choose this option and configure the system.
Choose Configuration	Product installation	Select the Experion version to be installed.
Select Platform		Select the type of platform for installing and configuring the operating system, and Experion (depending upon your requirements). • Select **Workstation**, if you are installing/configuring a workstation. • Select **Server**, if you are installing/configuring a server. **Attention** If you are installing Experion R410 on a VMware Virtual Platform, select the VMware tool version from the **VMware Tools** drop down. However, if you are installing Experion R430 on a VMware Virtual Platform, the VMware tool version is selected automatically.
Select operating system		Depending on the platform type, and product version selected, the supported operating systems are listed. • The **Client** option is selected if you are installing/ configuring a **Workstation** platform • The **Server** option is selected if you are installing/ configuring a **Server** operating system.

Attention

DO NOT install the following combination of nodes and operating systems, as they are not qualified and supported currently.

- Application Server (EAS) on Microsoft Windows 7 Professional operating system.
- eServer n a Microsoft Windows 7 Professional operating system.
- Application Control Environment (ACE) node on a Microsoft Windows 7 Professional operating system.
- Collaboration Station on a Microsoft Windows Server 2008 R2 operating system.

The following options are available in the **Platform Configuration** page, depending on your selection in **Platform configuration** and **Installation Options** pages.

Installation option	Platform configuration options	Options available
Configure Current Machine	• Select **Configure System**. • Select **Product Installation** check box and choose an Experion version to be installed.	• **Select Platform** is disabled. • **Select Operating System** is disabled.
Configure Current Machine	• Select **Configure System**. • Do not select **Product Installation**.	• **Select Platform** is disabled. • **Select Operating System** is disabled.
Configure Current Machine	• Select **Product Installation** checkbox, and select an Experion version to be installed. • Select a 64-bit operating system in **Select Operating System**. • **Platform configuration** is automatically set as **Reinstall OS and Configure system**.	• **Select Platform** is disabled. • **Select Operating System** is enabled.
Configure Current Machine	• **Platform configuration** is **Reinstall OS and Configure system**. • Select **Product installation** check box, and select an Experion version to be installed.	• **Select Platform** is disabled. • **Select Operating System** is enabled.
Generate configuration files	• **Platform Configuration** is **Reinstall OS and Configure system**. • Select **Product installation**.	• **Select Platform** is enabled. • **Select Operating System** is enabled.
Generate configuration files	• Select **Product Installation**. • **Select Platform** has **Other Honeywell Platform** option.	• **Platform configuration** is **Configure System**. • **Select Operating System** is enabled.
Configure current machine using existing configuration files	• Select **Product installation**. • **Select Platform** has **Other Honeywell Platform** option.	• **Platform configuration** is **Configure System**. • **Select Operating System** is enabled.

Tip

- If the target machine is qualified, the hardware platform is automatically selected. Otherwise, you can only generate or edit the configuration files.
- The **Product Installation** check box is selected by default. Clear this check box.

3 Select installation type, platform, and operating system, and click **Next**.

The **Operating system Configuration** page is displayed, which consists of the fields required for operating system installation. Perform the following operation.

- Select the **Local Language** and **Time Zone**.
- Type the **Computer Name**, **Company Name**, **Customer Name**, and **Workgroup Name**.
- Type the user account name and passwords in the **User Account Name**, **Password** and **Confirm Password** fields.

Attention

- **Computer Name** must not contain ONLY numbers, space, and special characters (` ~ ! @ # $ % ^ & * () = + _ {} [] \ | ; : .‘ ” “ , < >, / ?).
- **Company Name** must not contain the underscore (_) special character.
- **Workgroup Name** must not contain space, and special characters (***** = + [] \ | ; : “ “ , < > / ?)
- **User Account Name** must be a maximum of 20 characters in length.

4 Click **Next**.

The **Network and Input/Output Device Information** page is displayed, which consists of the following options depending upon the Network type selected.

Section	Option	Description	Value
Network Configuration	Network Type	The different types of network on which you can install Experion.	• Ethernet • FTE
	No. of Adapters	The number of network adapters needed for Experion installation.	• Ethernet: **1** (minimum) • FTE: **2** (minimum) • If you are installing EHG, you must select **3**.
	NIC1	• The first NIC (FTE Yellow or Primary Supervisory). • Applicable to Ethernet and FTE network types.	
	NIC2	• The second NIC (FTE Green or Secondary Supervisory). • Applicable to FTE network type. • Set to DHCP by default.	
	NIC3	• The third NIC (DHEB). • Used only for EHG. • DNS server option is disabled.	
I/O details	RPS Available	Select this option to install Extio’s software on your system. If this option is not selected, Extio is not installed on your system.	This option is available on the following workstations only. • Dell Precision 490 workstation • Dell Precision T5400 workstation • Dell Precision T5500 workstation • Dell Precision R5500 workstation • Dell Precision T3600XL workstation • HP Z620 workstation
	Monitor arrangement	• Number of monitors connected to your system. • The options are displayed depending upon the video card installed on your system.	**Single** is selected and the option is disabled.

Section	Option	Description	Value
	Monitor resolution	Minimum resolution to be set for the monitor.	One of the following monitor resolution is set for workstations, and the option is disabled. • 1024*768 • 1280*1024 • 1600*1200 • 1680*1050 • 1920*1200 • 1920*1080 **Attention** • 1280*1024 default when **RPS available** is selected, and the option is then disabled. • 1280*1024 (default for Microsoft Windows 7 Professional, Microsoft Windows Server 2008 R2 server) • 1024*768 (default for VMware)
	Touchscreen type		Following Touchscreen type options are available for workstations (Dell Precision Workstation 490, T5400, T5500, R5500, T3600XL, and HP Workstation Z620). • None • SAW USB • SAW Serial
Network Link Speed **(Ethernet Network type only)**		The mode of data transmission over the network.	• Auto negotiate • 100 mbps full duplex **Attention** You must select **100 mbps full duplex** if you are using FTE switch.
FTE Configuration **(FTE Network type only)**	Multicast Address	The multicast address assigned to the FTE Community.	234.5.6.7 (default)
	Device Index		A unique number between 1 and 511
	UDP Source port		47837 (default)
	UDP Destination Port		51966 (default)
	Friendly Name	Alias name for the FTE network.	

Attention

- If you select FTE, the IP Address, Subnet mask, and default gateway settings are not applicable for Green adapter, and they are set to DHCP by default.
- If you are reinstalling the OS, click the NIC name to change the names.
  - NIC1 is the first NIC (FTE Yellow or Primary Supervisory)
  - NIC2 is the second NIC (FTE Green or Secondary Supervisory).
  - NIC3 must be used for EHG only. DNS server option is disabled.
- You cannot change the **I/O details** settings for **Server** and **VMware**.
- If **Link speed** option is displayed for FTE, select **Link speed** as *100 Mbps Full Duplex*.

5 Select the network type and I/O details and click **Next**.

The **Configuration Summary** page is displayed, to confirm the selected options.

The following options are displayed depending on the options you selected.

If you select	Then option displayed is...	Perform the following action
Product Installation option in **Platform Configuration** page	Generate Product Install Config Files	1. Click **Generate Product Install Config Files**. 2. Click **Install** to proceed with Experion installation. The Experion product installation begins.
Reinstall OS and configure system option in **Platform Configuration** page	Save config files	1. Click **Save File**. The **Browse for folder** page is displayed. 2. Select the path to save the configuration files and click **OK** and click **Finish**.

Attention

- The Experion System Initialization sequencer runs in the background, sequentially installing selected features and communicating the same to the status display. The status display shows the following information:
  - Feature being installed.
  - Approximate time for the feature installation and overall installation time.
  - Description that gives information for the features being installed.
- You can abort the installation by clicking **Cancel**. It can be restarted at a later time by running **setup.exe** .

6 When the **Install complete** message is displayed, click **OK** to finish the installation.

Attention

System restarts several times automatically during Experion PKS System Initialization installation.

- System restarts automatically.
- If it fails to automatically restart, then restart the system manually.

14.3 Preparing a platform with unsupported operating system

Installing the operating system using DVD

1 Insert Experion PKS System Initialization media,

2 Right-click **setup.exe** at the root of the media, and run as Administrator.

The **Installation Options** page is displayed, which consists of the following options to configure the machine / generate configuration files.

- Configure current machine.
- Configure current machine using existing configuration files.
- Generate configuration files.
- Modify existing configuration files.
- Use Config file for migration.

Select one of the following options depending upon your requirements.

Option	When to choose this option
Configure current machine	You do not have configuration files generated for the target machine.
Configure current machine using existing configuration files	You already have configuration files generated for the target machine.
Generate configuration files	You are configuring/reinstalling your operating system. Hence, you want to generate configuration files.
Modify existing configuration files	You already have configuration files generated for your machine and you want to modify them.
Use configuration files for migration	You want to perform phase 2 migration, and the operating system is installed manually.

Select **Configure current machine**.

3 Click **Next**.

The **Platform Configuration** page is displayed.

Since **Configure current machine** option was selected, **Reinstall operating system and configure system** is selected by default and you cannot change this selection. The hardware platform and operating system is automatically selected.

Perform the following operation.

- Clear the **Product Installation** check box.
- Select the operating system details.

4 Click **Next**.

The **Operating system Configuration** page is displayed. Perform the following operation.

- Select the **Local Language** and **Time Zone**.
- Type the **Computer Name**, **Company Name**, **Customer Name**, and **Workgroup Name**.
- Type the user account name and passwords in the **User Account Name**, **Password** and **Confirm Password** fields.

Attention

- **Computer Name** must not contain ONLY numbers, space, and special characters (` ~ ! @ # $ % ^ & * () = + _ {} [] \ | ; : . ‘ ” “ , < >, / ?).
- **Company Name** must not contain the underscore (_) special character.
- **Workgroup Name** must not contain space, and special characters (***** = + [] \ | ; : “ “ , < > / ?)
- **User Account Name** must be a maximum of 20 characters in length.

5 Click **Next**.

The **Network and Input/Output Device Information** page is displayed. Select the network type and I/O details.

Attention

- You can expand the NIC names and double-click IP Address, Subnet mask and default gateway to type the appropriate IP address or click the **TCP/IP Properties** button to edit. You can select the Network Link speed (Auto-negotiate/100 mbps Full Duplex) in case you select **Network Type** as **Ethernet**. However, selecting Auto-negotiate may significantly degrade network performance on some network hardware platforms. It is recommended to use 100MB/full duplex configuration on both NIC and switch port whenever possible.
- In case of FTE, the IP Address, Subnet mask, and default gateway settings are not applicable for Green adapter, and they are set to DHCP by default.
- If you are reinstalling the operating system, select and click the NIC name to change the names. NIC1 is the first NIC (FTE Yellow or Primary Supervisory); NIC2 is the second NIC (FTE Green or Secondary Supervisory).
- For third NIC (DHEB), DNS server option is disabled.
- Third NIC (DHEB) should only be used for EHG. Otherwise, disable the third NIC.
- If **Link speed** option is displayed for FTE, select **Link speed** as *100 Mbps Full Duplex*.

6 Click **Next**.

The **Configuration Summary** page is displayed.

7 Since **Product Installation** was not selected the **Generate Product Install Config Files** option is not available. Click **Finish** to proceed with Experion installation using Experion PKS System Initialization media.

8 Read the instructions to start operating system installation and click **OK** to exit the **Dialog Manager**.

9 In the target machine, insert Experion PKS System Initialization media and boot from the Experion PKS System Initialization media.

Attention

Ensure that Boot Sequence in BIOS is set to boot from CD/DVD drive first.

10 Press any key when you see the message **Press any key to boot from CD or DVD**.

11 Browse to the configuration files and select **InitMediaOptions.xml** file.

12 Click **Next**.

The **Experion PKS System Initialization Pre-Install Utility** screen is displayed when the system boots from Experion PKS System Initialization media. Additionally, WinPE is loaded into the target machine.

13 The **Experion PKS System Initialization PreInstall Utility** loads the configuration information from Options files.

- Experion PKS System Initialization media does not allow you to select the hard disk partitions (drive path) based on your custom installation path selection.
- Select **Use Drive C:** option if you want to format only C drive and install operating system on this drive. In this case, the data on the other partitions are retained. Select this option only if the computer has more than one partition and no raw partitions.
- Select **C:** drive or the number of partitions required. The minimum size for primary partition is . If the disk space is less than , only one partition can be created.

14 Enter configuration details for hard disk in the **Disk Configuration** section. Select the appropriate media location. It can be any one of the following:

- DVD
- ESIS from network
- ESIS from USB

For ESIS-based installation using USB, browse to the ESIS repository.

15 For ESIS from network.

- Enter the ESIS path **<ESIS server IP Address\Username>**and **Password**.
- enter the **IP details, Subnet Mask, and Default Gateway** in the **Network Configuration** for local machine section. Click **Next**.

16 Select the **I accept the terms in the License agreement** radio button on the **License Agreement** page after reading the EULA and click **Install**.

The Experion PKS Installation media status is displayed indicating the feature being installed/run, approximate time remaining for the feature installation and a description/message area that gives information of the installation.

- System restarts automatically.
- If it fails to automatically restart, restart the system manually.
- After restart, it may be necessary to start the services manually. Verify whether the Experion services are running properly in Service Control panel.

17 After the operating system installation is completed, insert Experion PKS System Initialization media when you see the Experion PKS System Initialization page.

Attention

- If the **Autorun** dialog is displayed, close it.
- During installation, if you see **Restart Now** prompt, no action is required.System restarts several times automatically during Experion PKS System Initialization installation.
- During installation, if you see a **Found New Hardware** message, do not take any action.
- If the media is already present in the local machine, installation proceeds without prompting Experion PKS System Initialization media.

18 The Experion PKS System Initialization sequencer is running in the background sequentially running install features and communicating to the status. If product installation was selected, a message is displayed prompting for Experion PKS Installation media.

19 Insert the Experion PKS Installation media and click **OK** to begin Experion installation.

Attention

You can abort the installation by clicking **Cancel**. It can be restarted at a later time by running **setup.exe** .

- System restarts automatically.
- If it fails to automatically restart, restart the system manually.
- After restart, it may be necessary to start the services manually. Verify whether the Experion services are running properly in Service Control panel.

14.4 Preparing a platform without operating system (bare metal)

Prerequisites

Since the target machine does not have any operating system, you must use a machine other than the target machine to run Experion PKS System Initialization and create configuration files for the target machine.

Installing the operating system using DVD media

1 Insert Experion PKS Installation media in a machine (other than the target machine) and double-click **setup.exe** at the root of the media.

2 Click **Configure current machine**.

The **Installation Options** page is displayed, which consists of the options to configure the machine/generate configuration files.

- Configure current machine.
- Configure current machine using existing configuration files.
- Generate configuration files.
- Modify existing configuration files.
- Use configuration file for migration.

3 Select **Generate Configuration Files** and click **Next**.

The **Platform Configuration** page is displayed. Select installation type, platform, and operating system information.

Attention

DO NOT install the following combination of nodes and operating systems, as they are not qualified and supported currently.

- Application Server (EAS) on Microsoft Windows 7 Professional operating system.
- eServer n a Microsoft Windows 7 Professional operating system.
- Application Control Environment (ACE) node on a Microsoft Windows 7 Professional operating system.
- Collaboration Station on a Microsoft Windows Server 2008 R2 operating system.

4 Click **Next**.

The **Operating system Configuration** page is displayed. Perform the following operation.

- Select the **Local Language** and **Time Zone**.
- Type the **Computer Name**, **Company Name**, **Customer Name**, and **Workgroup Name**.
- Type the user account name and passwords in the **User Account Name**, **Password** and **Confirm Password** fields.

Attention

- **Computer Name** must not contain ONLY numbers, space, and special characters (` ~ ! @ # $ % ^ & * () = + _ {} [] \ | ; : . ‘ ” “ , < >, / ?).
- **Company Name** must not contain the underscore (_) special character.
- **Workgroup Name** must not contain space, and special characters (* = + [] \ | ; : “ “ , < > / ?)
- **User Account Name** must be a maximum of 20 characters in length.

5 Click **Next**.

The **Network and Input/Output Device Information** page is displayed. Select the network type and I/O details

Attention

- You can expand the NIC names and double-click IP Address, Subnet mask and default gateway to type the appropriate IP address or click the **TCP/IP Properties** button to edit. You can select the Network Link speed (Auto-negotiate/100 mbps Full Duplex) in case you select **Network Type** as **Ethernet**. However, selecting Auto-negotiate may significantly degrade network performance on some network hardware platforms. It is recommended to use 100MB/full duplex configuration on both NIC and switch port whenever possible.
- In case of FTE, the IP Address, Subnet mask, and default gateway settings are not applicable for Green adapter, and they are set to DHCP by default.
- If you are reinstalling the operating system, select the NIC name to change the names. NIC1 is the first NIC (FTE Yellow or Primary Supervisory); NIC2 is the second NIC (FTE Green or Secondary Supervisory).
- For third NIC (DHEB), DNS server option is disabled.
- Third NIC (DHEB) should only be used for EHG. Otherwise, disable the third NIC.
- If **Link speed** option is displayed for FTE, select **Link speed** as *100 Mbps Full Duplex*.

6 Click **Next**.
The **Configuration Summary** page is displayed. Since the **Product Installation** option was not selected, the **Generate Product Install Config Files** button is not available.

7 Click **Finish** to proceed with installation.

8 Read the instructions carefully to start operating system installation and click **OK** to exit the **Dialog Manager**.

9 In the target machine, insert Experion PKS System Initialization media and boot from the Experion PKS System Initialization media.

Attention
Ensure that Boot Sequence in BIOS is set to boot from CD/DVD drive first.

10 Press any key when you see the message **Press any key to boot from CD or DVD**.

11 Browse to the configuration files and select **InitMediaOptions.xml** file.

12 Click **Next**.
The **Experion PKS System Initialization Pre-Install Utility** screen is displayed when the system boots from Experion PKS System Initialization media. Additionally, WinPE is loaded into the target machine.

13 The **Experion PKS System Initialization PreInstall Utility** loads the configuration information from Options files.
- Experion PKS System Initialization media does not allow you to select the hard disk partitions (drive path) based on your custom installation path selection.
- Select **Use Drive C:** option if you want to format only C drive and install operating system on this drive. In this case, the data on the other partitions are retained. Select this option only if the computer has more than one partition and no raw partitions.
- Select **C:** drive or the number of partitions required. The minimum size for primary partition is . If the disk space is less than , only one partition can be created.

14 Enter configuration details for hard disk in the **Disk Configuration** section. Select the appropriate media location. It can be any one of the following:
- DVD
- ESIS from network
- ESIS from USB

For ESIS - based installation using USB, browse to the ESIS repository folder.

15 For ESIS from network.
- Enter the ESIS path **<ESIS server IP Address\Username>**and **Password**.
- enter the **IP details, Subnet Mask, and Default Gateway** in the **Network Configuration** for local machine section. Click **Next**.

16 Click **Next**. Select the **I accept the terms in the License agreement** radio button on the **License Agreement** page after reading the EULA and click **Install**.

The Experion PKS Installation media status is displayed indicating the feature being installed/run, approximate time remaining for the feature installation and a description/message area that gives information of the installation.

- System restarts automatically.
- If it fails to automatically restart, restart the system manually.
- After restart, it may be necessary to start the services manually. Verify whether the Experion services are running properly in Service Control panel.

Attention

When you install operating system on an external hard disk drive using Experion PKS Installation media, the content in the external hard disk drive is not formatted during operating system installation.

17 After the operating system installation is completed, insert Experion PKS System Initialization media when you see the Experion PKS System Initialization page.

Attention

- If the **Autorun** dialog is displayed, close it.
- During installation, if you see **Restart Now** prompt, no action is required. System restarts several times automatically during Experion PKS System Initialization installation.
- During installation, if you see a **Found New Hardware** message, do not take any action.
- If the media is already present in the local machine, installation proceeds without prompting Experion PKS System Initialization media.

18 The Experion PKS System Initialization sequencer is running in the background sequentially running install features and communicating to the status. If product installation was selected, a message is displayed prompting for Experion PKS Installation media.

19 Insert the Experion PKS Installation media and click **OK** to begin Experion installation.

Attention

You can abort the installation by clicking **Cancel**. It can be restarted at a later time by running **setup.exe** .

- System restarts automatically.
- If it fails to automatically restart, restart the system manually.
- After restart, it may be necessary to start the services manually. Verify whether the Experion services are running properly in Service Control panel.

Attention

If you install the operating system on an additional hard disk drive connected to your system, the drive letter specified is reset automatically during operating system installation. You can change the drive letter, by performing the following steps.

1. Right-click on the **Computer** icon on the desktop and choose **Manage**.

   The **Computer Management** window is displayed.
2. In the left pane of the **Computer Management** window, select **Computer Management (Local) > Storage >Disk Management**. The disk partitions in the system are displayed in the right pane.
3. Right-click the disk partition of which you want to change the drive letter and select **Change Drive Letter and Paths**.
4. In the **Change Drive Letter and Paths** dialog box, click Change.
5. Select the drive letter from the list and click **OK**.

15 Planning to deploy VMware virtual machines

Identify deployment methods for virtual machines.

Attention

Experion virtual machines should be created and deployed using the procedures described in this section. See the related topics.

Consideration needs to be given to the location were new virtual machines are created.

- When you are creating virtual machines for the initial installation for a new plant, install the Experion virtual machines directly on the production ESXi hosts, which can be connected to the Level 2 FTE network, as the system is not online and the effects of the installation will not degrade the process.
- When you are creating virtual machines for an existing plant on a new production ESXi host, install the Experion virtual machines directly on the production ESXi host that is disconnected from the Level 2 FTE network. Connect the production ESXi host to the production network when you are ready to cut over to the new production ESXi host.
- When you are creating virtual machines for an existing plant on an existing production ESXi host, install the Experion virtual machine on the management ESXi host, which has no direct connection to the production network. Any effect of the installation will not degrade the performance of any production ESXi hosts. This virtual machine can then be *cold migrated* to the required production ESXi host when it is ready to use.

New operating system virtual machines can be deployed from templates. When deploying new virtual machines that are based on templates, you need appropriate Windows operating system licenses for each new virtual machine.

Technique	Description
Templates	A template is a “golden image” of an operating system only virtual machine that can be used as a master copy to create and deploy new virtual machines. Like the original virtual machine that the template was created from, the template often includes an operating system and applications (but not Experion applications). From a template, you can deploy new virtual machines, which retains the template for future use, or you can convert the template to a new virtual machine. Templates are supported for operating systems and Experion nodes. It is very important to use the sysprep process exactly as defined when creating new operating system virtual machines and templates and when deploying new operating system virtual machines from a template. For more information, see the related topics. Failure to adhere to these instructions produces a virtual machine that is not unique (WSUS will see all virtual machines as the same virtual machine) and the potential for unacceptable performance levels (running the default sysprep without the use of the unattended file uninstalls all device drivers and results in a “best guess” of the operating system, which has poor performance).

Technique	Description
Cloning	A clone is a copy of an existing virtual machine, or a copy of a template. The original virtual machine is called the parent of the clone. While changes to the parent virtual machine do not appear in the clone, the parent and virtual machine may share virtual disks. If you want to save the current state of a virtual machine, so you can revert to that state at a later date, take a snapshot. If you want to make a copy of a virtual machine for a separate virtual machine, create a clone. You can also clone an existing physical computer and create a virtual machine. You can create templates from clones. **Attention** Cloning is supported for off-process usage and for cloning on-process virtual machines to be taken for off-process usage. It is very important to use the sysprep process exactly as defined when creating new operating system virtual machines and templates and when deploying new operating system virtual machines from a template. For more information, see the related topics. Failure to adhere to these instructions produces a virtual machine that is not unique (WSUS will see all virtual machines as the same virtual machine) and the potential for unacceptable performance levels (running the default sysprep without the use of the unattended file uninstalls all device drivers and results in a “best guess” of the operating system, which has poor performance).

Tip

For guidelines on deploying ETN based virtual machines and thin client, refer to the following documents.

- Virtualization: *Experion Virtualization Planning and Implementation Guide*
- Thin client: *Wyse Z90DE7 Thin Client Planning Installation and Service Guide*

Related topics

“Creating new Experion virtual machines” on page 167

Creating new Experion virtual machines in the virtual environment is conceptually similar to creating physical Experion nodes, including the use of the Experion System Initialization media.

16 Creating new Experion virtual machines

Creating new Experion virtual machines in the virtual environment is conceptually similar to creating physical Experion nodes, including the use of the Experion System Initialization media.

However, there are some differences for virtual machines, and these differences are related to the preparation of an Experion System Installation Server (ESIS) and the need for a Utility virtual hard disk. ESIS is implemented as a virtual hard disk, rather than as a file share or removable media. The advantages of virtual hard disks is that they can be copied faster within the virtualization environment and allow for a more secure installation. In addition, an ESIS virtual hard disk has the following advantages:

- All of the required files for a full Experion node installation are available from a single location, and avoids the complication of accessing physical media and swapping physical media from a virtual machine.
- The fastest Experion node installation time within a virtual environment.

The recommended process for creating Experion virtual machines is described in this section and introduces the use of an ESIS virtual hard disk and a Utility virtual hard disk.

Attention

If they are creating virtual machines on a BladeCenter-S, it is important to be aware of the implications of using the CD/DVD drive on the BladeCenter S to read media. See the *Experion Virtualizatoin with BladeCenter-S* guide for more information, but at a minimum ensure that before connecting the BladeCenter S chassis CD/DVD drive to another Blade in the chassis, you must first disconnect the CD/DVD drive from the host device in the current virtual machine that is using the CD/DVD.

A summary of the process for creating a new Experion virtual machine is:

1. You complete the following once for each release of Experion:
   a. Create a shell vmdk for the ESIS and Utility virtual hard disks.
   b. Mount the virtual hard disks, format them, and create volumes on them for storing the ESIS/Utility content.
   c. Install the required content on the ESIS and Utility virtual hard disks.
   d. Relocate the ESIS and Utility virtual hard disk vmdk files to folders on the management ESXi host's datastore.
2. When you are creating each Experion virtual machine, you add the ESIS and Utility vmdk to the virtual machine, so that the contents of the ESIS and Utility virtual hard disks are available for the Experion installation process.

Tip

Drive letters are assigned to the ESIS and Utility disks during the install process. This assignment affects the letters assigned to logical partitions when the primary disk of the VM is configured into more than one partition. If drive letter assignment is important on additional logical partitions, we recommend replacing logical partitions with virtual hard disks or partitioning replacement virtual hard disks. Partition replacement disks are created to match the desired partition size, then added to the VM in the desired letter order.

Related topics

“Preparing the ESIS virtual hard disk” on page 169

The Experion System Installation Server (ESIS) virtual hard disk contains all of the Experion and operating system media contents required to complete an Experion node installation.

“Preparing the Utility virtual hard disk” on page 173

“Renaming the master ESIS and/or Utility virtual hard disks” on page 178

If the master ESIS and Utility virtual hard disks have the same vmdk file name, you can rename either vmdk file name, or you can rename both. You may also want to rename the vmdk file names so that they can be easily identified once they are copied to other locations.

“Preparing partition replacement virtual hard disks” on page 181

If you configure the primary disk of your Experion VM with more than one partition you should consider replacing the additional logical partitions with virtual disks or Partition Replacement virtual disks.

“Creating an Experion node virtual machine” on page 184

“Create virtual machine templates manually” on page 196

“Planning to deploy VMware virtual machines” on page 165

Identify deployment methods for virtual machines.

16.1 Preparing the ESIS virtual hard disk

The Experion System Installation Server (ESIS) virtual hard disk contains all of the Experion and operating system media contents required to complete an Experion node installation.

This media represents a single release of Experion and should be labeled to represent that release. Best practice is to create a new ESIS virtual hard disk for each new releases of Experion.

Related topics

"Creating the ESIS virtual hard disk" on page 169
"Installing ESIS on the ESIS virtual hard disk" on page 170
"Creating the master ESIS virtual hard disk" on page 171

16.1.1 Creating the ESIS virtual hard disk

Prerequisites

Attention

If you are building an Experion R400 ESIS configuration application does not work on a 64-bit Windows operating system, you will need access to a Windows 7 32-bit or Windows Server 2008 32-bit virtual machine with vSphere Client installed on it. You may need to create a separate virtual machine on the management ESXi host for this purpose. If there is an existing virtual machine with vSphere Client installed on the management ESXi host, and this virtual machine contains a supported version of the Windows operating system, you can use this virtual machine.

For the purposes of creating the Utility virtual hard disk (and ESIS virtual hard disk), this virtual machine is known as the *ESIS/Utility creation virtual machine*.

To create the ESIS virtual hard disk

1. From the vSphere Client, right-click on the *ESIS/Utility creation virtual machine* and choose **Rename**.
   Record the current name and then change the name to ESIS-HD. This rename is required so that the new virtual hard disk .vmdk file is created with this name. You can use a name that includes the Experion release in the name (for example, ESIS-HD-EPKSR400-2) if your system could include future releases of Experion.
2. From the vSphere Client, right-click on the ESIS/Utility creation virtual machine and choose **Edit Settings**.
   The **Virtual Machine Properties** window appears.
3. Click the **Hardware** tab.
4. If more than one **Hard disk** is listed, click **Cancel**. Browse to the datastore and folder where the virtual machine is running and record the names of all the .vmdk files. This is to ensure that the new hard disks that show as vmdk files are clearly identified after they are created. Right-click on the ESIS/Utility creation virtual machine and choose **Edit Settings**.
5. Click **Add**.
   The **Add Hardware** wizard appears.
6. Select **Hard Disk** and then click **Next**.
7. Select **Create a new virtual disk** and then click **Next**.
8. Change the **Disk Size** to `22 GB`.
   A larger disk size of 33GB should be used if CAB and ESM are included in the repository.
9. Select the **Allocate and commit space on demand (Thin Provisioning)** check box.
10. Ensure that **Store with the virtual machine** is selected.
11. Click **Next**.
12. In the **Virtual Device Node** list, use the default value.

13 Select the **Independent** check box and then select **Persistent**.

14 Click **Next**.

15 Review the summary and then click **Finish**.

16 Click **OK** to close the **Virtual Machine Properties** window.

17 In the **Home** > **Inventory** > **Datastores** view, browse the datastore and locate the folder where the ESIS/Utility creation virtual machine files are stored.
You should see a new file called *ESIS-HD* with the *.vmdk* extension.

18 From the vSphere Client, right-click on the ESIS/Utility creation virtual machine and choose **Rename**.
Change the name back to the original name as seen in vCenter Server.

19 From the vSphere Client, connect to the console of the ESIS/Utility creation virtual machine and log on as a user with administrator privileges.

20 In the Windows Control Panel, click **System and Maintenance**, then **Administrative Tools**. Double click **Computer Management**.

21 In the left tree, select **Disk Management**.
The **Initialize Disk** dialog box appears.

22 Ensure that the new disk and MBR are selected and then click **OK**.
A new disk appears in the bottom center pane of the window and will have 22GB (33GB if you created a larger virtual hard disk) of unallocated space.

23 Right-click on the disk and choose **New Simple Volume**.
The **New simple volume** wizard appears.

24 Click **Next**.

25 Click **Next**.

26 Select **Assign the following drive letter** and assign an appropriate drive letter to the new disk (the default value should be acceptable).

27 Click **Next**.

28 Ensure that the disk is to be formatted as NTFS with default allocation unit size, change the volume label to **ESIS-HD**, select the **Perform a Quick Format** check box, and then click **Next**.

29 Review the settings and click **Finish**.
The new disk will now be visible in Windows Explorer as **ESIS-HD**.

16.1.2 Installing ESIS on the ESIS virtual hard disk

Prerequisites

- You have created the ESIS virtual hard disk.
- You have the following Experion and Windows operating system installation media:
  - Experion PKS Installation media
  - Experion PKS Support Software media
  - Experion PKS System Initialization Updates media
  - Experion PKS System Initialization media
  - Operating system installation media as appropriate for your Experion release

To install ESIS on the ESIS virtual hard disk

1 On the management host (the ESXi host containing the vSphere Server virtual machine), create a folder named *ISO_Media* on the datastore. Skip this step if this folder already exists.

2 Convert the contents of the required media files to an ISO file.
There needs to be a single ISO file for each media.

3 Copy the ISO file to the *ISO_Media* folder that you created on the ESXi host datastore.

4 In the ESIS/Utility creation virtual machine, create the *ESIS* folder in the root of the ESIS virtual hard disk.

5 In vSphere Client, right-click on the ESIS/Utility creation virtual machine and choose **Edit Settings**.

6 Mount the Experion System Initialization media ISO file in the virtual machine's DVD drive.
If autorun is enabled, the **Honeywell - Experion PKS Installer** window appears.

If autorun is not enabled, in Windows Explorer browse to the *Browser* folder on the Experion System Initialization ISO image and double-click on the *CDBROWSE.exe* file.

7 Click **Setup an Experion Software Installation Server**.

8 In the **User Access Control** dialog box, click **Yes**.

9 Click the **Create a new ESIS Repository** option button and then click **Next**.

10 Browse to the *ESIS* folder on the ESIS-HD virtual hard disk and then click **Next**.
The **ESISPrepUtil** dialog box appears.

11 Click **OK**.

12 Click **Share and enable folder sharing with the default options**.

13 Click **OK**.

14 If the **Network discovery and file sharing** dialog box appears, click **Public networks**.

15 Select the **EPKS Sys Initialization DVD**, **Microsoft Windows 7 DVD**, and **Microsoft Windows 2008 DVD** check boxes.
The **VS DVD**, **MSDN DVD**, and **Experion Sup and Maint DVD** check boxes are only required if you intend to use CAB and ESM in your environment.

16 Click **Start**.
The **ESISPrepUtil** dialog box appears.

17 Click **OK**.

18 Edit the virtual machine settings and mount each requested ISO file in the virtual machine's DVD drive to complete the ESIS creation.

19 When the ESIS process is complete, click the **Finish**.

16.1.3 Creating the master ESIS virtual hard disk

You need to create a master ESIS virtual hard disk so that a known ESIS repository is available in the virtual infrastructure, which can then be copied to new Experion virtual machines to form the media requirements for an Experion node installation.

To create the master ESIS virtual hard disk

1 Remove the ESIS virtual hard disk from the ESIS/Utility creation virtual machine:

a Shutdown the ESIS/Utility creation virtual machine.
To be able to remove the virtual hard disk, you need to shutdown the virtual machine first. If you don't shutdown the virtual machine, the operating system on the virtual machine is left in a state that may cause problems with vDR backups.

b From the vSphere Client, right-click on the ESIS/Utility creation virtual machine and choose **Edit Settings**.
The **Virtual Machine Properties** window appears.

c Click the **Hardware** tab.

d Select the ESIS virtual hard disk (ensure that you select the correct 22-33GB disk) and click **Remove**.

e Click the **Remove from virtual machine** option button and then click **OK**.

2 In the datastore where you intend to store the master ESIS file (the staging datastore), create a new folder in the root of the datastore and name it *ESIS-Master*.

This folder is where the ESIS virtual hard disk .vmdk file will be copied to and kept as a master for future use. It is from this location that the .vmdk file will be copied from to new Experion virtual machines.

3 Move the ESIS virtual hard disk to a new folder on the datastore.

   a Locate the 22GB (33GB where used) vmdk file created when the ESIS virtual hard disk was created.

   b Cut and paste this file into the *ESIS-Master* folder on the datastore.

   c Ensure that the .vmdk file does not appear in the ESIS/Utility creation virtual machine's datastore folder where you copied the .vmdk file from.

16.2 Preparing the Utility virtual hard disk

The Utility virtual hard disk is used to supply configuration information and third party installation media to the virtual machine during the Experion node creation. It can be used for any Experion installation. Where required, use different folders within the Utility virtual hard disk so that it can be used to store configuration information for operating system only virtual machines.

Related topics

"Creating the Utility virtual hard disk" on page 173

"Creating the Experion System Initialization media configuration files for Experion installations" on page 174

"Preparing the Utility virtual hard disk to include third-party applications" on page 176

The Utility virtual hard disk should contain the third party application installation software. Having these installation files available on the Utility virtual hard disk will simplify the installation process of Experion nodes.

"Creating the master Utility virtual hard disk" on page 177

16.2.1 Creating the Utility virtual hard disk

If you have an existing Utility virtual hard disk, you can skip this task.

To create the Utility virtual hard disk

1. From the vSphere Client, right-click on the ESIS/Utility creation virtual machine and choose **Rename**.
   Record the current name and then change the name to Utility. This rename is required so that the new virtual hard disk *.vmdk* file is created with this name. You can use a name that includes the Experion release in the name (for example, Utility-EPKSR400-2) if your system could include future releases of Experion that require another Utility virtual hard disk.
2. From the vSphere Client, right-click on the ESIS/Utility creation virtual machine and choose **Edit Settings**.
   The **Virtual Machine Properties** window appears.
3. Click the **Hardware** tab.
4. If more than one Hard disk is listed, click **Cancel**. Browse to the datastore and folder where the virtual machine is running and record the names of all the *.vmdk* files. This is to ensure that the new hard disks that show as vmdk files are clearly identified after they are created. Right-click on the ESIS/Utility creation virtual machine and choose **Edit Settings**.
5. Click **Add**.
   The **Add Hardware** wizard appears.
6. Select **Hard Disk** and then click **Next**.
7. Select **Create a new virtual disk** and then click **Next**.
8. Change **Disk Size** to `5 GB`.
9. Select the **Allocate and commit space on demand (Thin Provisioning)** check box.
10. Ensure that **Store with the virtual machine** is selected.
11. Click **Next**.
12. In the **Virtual Device Node** list, use the default value.
13. Select the **Independent** check box and then select **Persistent**.
14. Click **Next**.
15. Review the summary and then click **Finish**.
16. Click **OK** to close the **Virtual Machine Properties** window.

17 In the **Home** > **Inventory** > **Datastores** views, browse the datastore (right-click on the datastore and choose **Browse**) and locate the folder where the ESIS/Utility creation virtual machine files are stored. You should see a new file with the *.vmdk* extension. The file should have the ESIS/Utility creation virtual machine name and possibly a numeric suffix. The file should indicate 5,242,880KB in provisioned size. Record the current name of this file as it will be used later.

18 From the vSphere Client, right-click on the ESIS/Utility creation virtual machine and choose **Rename**.
Change the name back to the original name as seen in vCenter Server.

19 From the vSphere Client, connect to the console of the ESIS/Utility creation virtual machine, or if you are already connected to the ESIS/Utility creation virtual machine, log on as a user with administrator privileges.

20 In the Windows Control Panel, click **System and Security**, then **Administrative Tools**. Double click **Computer Management**.

21 In the left tree, select **Disk Management**.
The **Initialize Disk** dialog box appears.

22 Ensure that the new disk and MBR are selected and then click **OK**.
A new disk appears in the bottom center pane of the window and will have 5.00GB of unallocated space.

23 Right-click on the on the disk and choose **New Simple Volume**.
The **New simple volume** wizard appears.

24 Click **Next**.

25 Click **Next**.

26 Select **Assign the following drive letter** and assign an appropriate drive letter to the new disk (the default should be acceptable).

27 Click **Next**.

28 Ensure that the disk is to be formatted as NTFS with default allocation unit size, change the volume label to `Utility`, select the **Perform a Quick Format** check box, and then click **Next**.

29 Review the settings and click **Finish**.
The new disk will now be visible in Computer as Utility.

16.2.2 Creating the Experion System Initialization media configuration files for Experion installations

There are two methods of creating Experion System Installation Media configuration files that support unattended installations:

1. The **Create Installation files** option of the Experion Support and Maintenance (ESM) Installation Builder.
   This approach is useful for system wide install and validation. Once ESM has been used to install a system, it should be used for future node installs as well.
2. The **Generate Configuration** option provided on the Experion System Initializition media.
   This approach is useful when a small number of each node type is to be installed.

Choose one of the following methods to create Installation configuration files.

To create Installation configuration files from Experion Support and Maintenance (ESM) Installation Builder

1 Installation configuration files created by the (ESM) Installation Builder have an added value in that they are validated against other node definitions. Validation catches many user entry errors early. ESM configuration files are also used by the (ESM) commissioning task to perform the following post installation actions:

   a Updates local hosts file

   b Configures NTP

   c Joins the node to the domain if defined

   d Links the domain and local security groups

2 More information about the (ESM) Installation Builder can be found in the “About Installation Builder” topic in the *Installation Builder Users Guide*.

3 Installation Builder requires the ESM server to be installed on one Experion server node in the system. Installation of the ESM server is a user selectable option during the Experion Server install configuration. References to the Experion Support and Maintenance server are found in the Experion PKS Software Installation User Guide (SIUG). ESM Server and Installation Builder can also be installed on a offline (Non-Experion) node using the ESM media. The offline feature allows for the creation of a complete Experion System configuration prior to the installation process for the purpose of generating installation configuration files to automate the install process.

4 For instruction on how to install ESM Server and client on a single offline computer. Find the ESM R2XX Installation Instructions guide using the following link. https://www.honeywellprocess.com/library/support/Documents/Experion/esm-installation-guide.pdf

5 The following steps assume that:

   a ESM Installation Builder was used to create the node definitions of all the Experion nodes in the system.

   b Domain Controllers and other 3rd party nodes were included and defined as the "Other" node type to capture their IP addresses for the Hosts file.

   c Installation Builder "Create installation files" option was used to create installation files for all Experion nodes to be installed.

6 Copy the ANCIM folder and its entire contents generated by the Installation Builder to the root of the Utility disk.

7 Skip the following "Generate Configuration Files" topic and continue with the next topic.

To create initialization configuration files from the "Generate Configuration files" option on the Experion System Installation media

1 Identify the Experion nodes that you require in your system, and then identify the following information:

   - Assign the IP and other IP settings specific for this virtual machine in the Yellow network
   - computer name
   - FTE ID and FTE multicast address (the FTE UDP source and destination ports must match the values of existing systems)
   - node type
   - Microsoft operating system type
   - Microsoft operating system keys
   - Honeywell authorization keys

2 In the Utility virtual hard disk, create the *EPKS* folder at the root of the virtual hard disk. Consideration could be made to the Experion release that is being used and the folder could include the release name for Example EPKS-R400-2.

3 Within the *EPKS* folder, create a new folder for each Experion node that you identified in step 1.

4 Mount the Experion System Initialization ISO image.

   If autorun is enabled, the **Honeywell Experion PKS System Initialization Media** window appears.

   If autorun is not enabled, in Windows Explorer browse to the *Browser* folder on the Experion System Initialization ISO image and double-click on the *CDBROWSE.exe* file.

5 Click **Launch Setup**.

6 In the **User Account Access** dialog box, click **Allow**.

   The **Experion PKS System Initialization** wizard appears.

7 Select **Generate configuration files** and click **Next**.

8 Select the **Product Installation** check box.

9 Select the **Reinstall OS and Configure System** check box.

10 Select the appropriate release check box.

11 Select the required platform type of server or workstation and select VMware virtual platform.

12 Ensure that the operating system is correct.

13 Click **Next**.

14 Adjust the local language and time zone for your location.

15 Type the machine name.

16 Type the Microsoft operating system key.

17 Leave the User as ExperionAdmin and type a strong password.

18 Click **Next**.

19 Select **FTE** as the required network type.

20 Assign the IP address reserved for this virtual machine to the FTE Yellow Ethernet adapter (for level 2 FTE networks) or to the single Ethernet adapter (for level 3 networks). Leave the FTE Green Ethernet adapter with default values.

21 For level 2 FTE networks, adjust any other FTE configurations.

22 Type the required **FTE Device ID**.

23 Click **Next**.
The confirmation page of the wizard appears.

24 Click **Generate Product Install Config Files**.

25 When prompted, mount the Experion Installation media ISO image as a DVD and then click **OK**. Cancel autorun for the media.

26 Select the options required for the specific Experion node that you are configuring.
For more information, see the *Software Installation User's Guide*.

27 When you return to the confirmation pages of the wizard, click **Save Config. Files** and save the configuration files to the folder that was created for this Experion node on the Utility virtual hard disk.

> **Attention**
> Save all the configuration files in a separate folder on the Utility virtual hard disk as files will be overwritten if they are saved in the same folder.

28 To create other Experion node configuration files, continue to click the **Back** button until you reach the **Platform configuration** page of the wizard, and adjust all the required settings, then continue forward through the wizard.

29 When you have completed creating the required configuration files, click **Finish**.

30 Click **OK**.

31 Review that you have created all of the Experion node configuration files.

16.2.3 Preparing the Utility virtual hard disk to include third-party applications

The Utility virtual hard disk should contain the third party application installation software. Having these installation files available on the Utility virtual hard disk will simplify the installation process of Experion nodes.

To prepare the Utility virtual hard disk to include third-party applications

1 At the root of the Utility virtual hard disk, create the *APPS* folder.

2 Copy any third-party application installer files, such as anti-virus and Microsoft Office to the *APPS* folder.
You may also consider downloading the latest Honeywell supplied Microsoft operating system and Office patches and include these.

3 If any of the Experion nodes are to be connected to an IKB keyboard, copy the Wyse TCX Software Suite installation files to the *APPS* folder.
For more information on how to download the Wyse TCX Software Suite, see the related topics.

4 If you are using vDR, do the following:

   a At the root of the Utility virtual hard disk, create the vDR folder.

   b Create any vDR batch files that may be required for Experion servers.

   c Copy these batch files to the vDR folder.

   For more information about the vDR batch files, see the related topics.

16.2.4 Creating the master Utility virtual hard disk

You need to create a master Utility virtual hard disk so that a known Utility repository is available in the virtual infrastructure, which can then be copied to new Experion virtual machines to form the media requirements for an Experion node installation.

To create the master Utility virtual hard disk

1 Remove the Utility virtual hard disk from the ESIS/Utility creation virtual machine:

   a Shutdown the ESIS/Utility creation virtual machine.

   To be able to remove the virtual hard disk, you need to shutdown the virtual machine first. If you don't shutdown the virtual machine, the operating system on the virtual machine is left in a state that may cause problems with vDR backups.

   b From the vSphere Client, right-click on the ESIS/Utility creation virtual machine and choose **Edit Settings**.

   The **Virtual Machine Properties** window appears.

   c Click the **Hardware** tab.

   d Select the Utility virtual hard disk (ensure that you select the correct 5GB disk) and click **Remove**.

   e Click the **Remove from virtual machine** option button and then click **OK**.

2 In the datastore where you intend to store the master Utility file (the staging datastore), create a new folder in the root of the datastore and name it *Utility-Master*.

   This folder is where the Utility virtual hard disk .vmdk file will be copied to and kept as a master for future use. It is from this location that the .vmdk file will be copied from to new Experion virtual machines.

3 Move the Utility virtual hard disk to a new datastore folder by following these steps:

   a Locate the 5GB vmdk file that was created when the Utility virtual hard disk was created.

   b Cut and paste this file into the *Utility-Master* folder on the datastore.

   c Ensure that the .vmdk file does not appear in the ESIS/Utility creation virtual machine's datastore folder where you copied the .vmdk file from.

16.3 Renaming the master ESIS and/or Utility virtual hard disks

If the master ESIS and Utility virtual hard disks have the same vmdk file name, you can rename either vmdk file name, or you can rename both. You may also want to rename the vmdk file names so that they can be easily identified once they are copied to other locations.

For more information about renaming vmdk file names, see VMware KB article 1002491.

Prerequisites

- You have disabled lockdown mode on the ESXi host where the master ESIS and/or Utility virtual hard disk are stored.

  For more information about disabling lockdown mode, see VMware KB article 1008077.
- You have installed the latest version of the vSphere Command-Line Interface (CLI) on the physical computer or virtual machine that is connected to the management network, where you will perform these tasks.

To rename the master ESIS virtual hard disk

1 Open a Windows Command Prompt window and change folder to the CLI location (that is, *C:\Program Files\VMware\VMware vSphere CLI\bin*).

For example:

```
cd C:\Program Files\VMware\VMware vSphere CLI\bin
```

2 List the files contained within the ESIS-Master folder.

For example:

```
vifs.pl --server <esxi_host> -D "[<datastore_name>] <folder_name>"
```

Where:

- *<esxi_host>* is the name or IP address of the ESXi host.
- *<datastore name>* is the name of the datastore containing the ESIS-Master folder.
- *<folder name>* is the path to the ESIS-Master folder.
- the quotation marks (") are required, where indicated.

This command will prompt you for the user name and password to connect to the ESXi host.

3 Rename the virtual hard disk vmdk file name.

For example:

```
vmkfstools.pl --server <esxi host> -E "[<datastore name>] <folder name>/<vmdk file>"
"[<datastore name>] <folder name>/<vmdk file>"
```

Where:

- *<esxi_host>* is the name or IP address of the ESXi host.
- *<datastore_name>* is the name of the datastore containing the ESIS-Master folder.
- *<folder_name>* is the path to the ESIS-Master folder.
- *<vmdk_file>* is the file name of the ESIS-Master virtual hard disk.
- the quotation marks (") are required, where indicated.

This command will prompt you for the user name and password to connect to the ESXi host.

4 Validate that the file has been renamed. For example:

```
vifs.pl --server <esxi_host> -D "[<datastore_name>] <folder_name>"
```

Where:

- *<esxi_host>* is the name or IP address of the ESXi host.
- *<datastore_name>* is the name of the datastore containing the ESIS-Master folder.
- *<folder_name>* is the path to the ESIS-Master folder.
- the quotation marks (") are required, where indicated.

This command will prompt you for the user name and password to connect to the ESXi host.

5 Enable lockdown mode on the ESXi host where the ESIS-Master virtual hard disk is stored. For more information about enabling lockdown mode, see VMware KB article 1008077.

To rename the master Utility virtual hard disk

1 Open a Windows Command Prompt window and change folder to the CLI location (that is, *C:\Program Files\VMware\VMware vSphere CLI\bin*).
For example:

```
cd C:\Program Files\VMware\VMware vSphere CLI\bin
```

2 List the files contained within the Utility-Master folder.
For example:

```
vifs.pl --server <esxi_host> -D "[<datastore_name>] <folder_name>"
```

Where:

- *<esxi_host>* is the name or IP address of the ESXi host.
- *<datastore name>* is the name of the datastore containing the Utility-Master folder.
- *<folder name>* is the path to the Utility-Master folder.
- the quotation marks (") are required, where indicated.

This command will prompt you for the user name and password to connect to the ESXi host.

3 Rename the virtual hard disk vmdk file name.
For example:

```
vmkfstools.pl --server <esxi host> -E "[<datastore name>] <folder name>/<vmdk file>"
"[<datastore name>] <folder name>/<vmdk file>"
```

Where:

- *<esxi_host>* is the name or IP address of the ESXi host.
- *<datastore_name>* is the name of the datastore containing the Utility-Master folder.
- *<folder_name>* is the path to the Utility-Master folder.
- *<vmdk_file>* is the file name of the Utility-Master virtual hard disk.
- the quotation marks (") are required, where indicated.

This command will prompt you for the user name and password to connect to the ESXi host.

4 Validate that the file has been renamed. For example:

```
vifs.pl --server <esxi_host> -D "[<datastore_name>] <folder_name>"
```

Where:

- *<esxi_host>* is the name or IP address of the ESXi host.
- *<datastore_name>* is the name of the datastore containing the Utility-Master folder.
- *<folder_name>* is the path to the Utility-Master folder.
- the quotation marks (") are required, where indicated.

This command will prompt you for the user name and password to connect to the ESXi host.

5 Enable lockdown mode on the ESXi host where the Utility-Master virtual hard disk is stored. For more information about enabling lockdown mode, see VMware KB article 1008077.

16.4 Preparing partition replacement virtual hard disks

If you configure the primary disk of your Experion VM with more than one partition you should consider replacing the additional logical partitions with virtual disks or *Partition Replacement virtual disks*.

Drive letters assigned to logical partitions created during the install of a virtual machine using ESIS and Utility disks start with F. Drive letters D and E are assigned to the ESIS and Utility Disks before the partition is created, so this leaves `F` as the first available drive letter. Replacing a logical disk partition with a "Partition Replacement virtual hard disk" allows you to control the assigned drive letters.

When creating the primary Virtual Hard disk for the Experion VM, remember to size it based on the total size identified in the HPS Virtualization Specification minus the total size of the partition replacement virtual disks.

For example: `C: Primary Disk size = Total disk size - Partition disk size`.

Currently, Experion has a 45GB minimum size requirement for the C: primary drive. When dividing the recommended disk size into logical chunks, make sure the *`C: primary disk`* meets the current minimum required size.

As with the ESIS and Utility disks, create a master copy of the Partition replacement disk so it can be copied to the folder of the VM during the VM creation process.

Related topics

“Creating the partition virtual hard disk” on page 181
“Creating the master partition virtual hard disk” on page 182

16.4.1 Creating the partition virtual hard disk

1. From the vSphere Client, right-click on the ESIS/Utility creation virtual machine and click **Rename**. Record the current name and then change the name to **`D-Partition-HD`** or **`E-Partition-HD`**. This rename is required so that the new virtual hard disk *`.vmdk`* file is created with this name. You can use a name that more accurately represents the use of the partition if your system.
2. From the vSphere Client, right-click on the ESIS/Utility creation virtual machine and click **Edit Settings**.
   The **Virtual Machine Properties** dialog box appears.
3. Click the **Hardware** tab.
4. If more than one hard disk is listed, click **Cancel**. Browse to the datastore and folder where the virtual machine is running and record the names of all the *`.vmdk`* files. This is to ensure that the new hard disks that show as *vmdk* files are clearly identified after they are created.
5. Right-click on the ESIS/Utility creation virtual machine and click **Edit Settings**.
6. Click **Add**.
   The **Add Hardware** window appears.
7. Select **Hard Disk** and then click **Next**.
8. Select **Create a new virtual disk** and then click **Next**.
9. Change the disk size to the desired size for this partition in GB.
10. Clear the **Allocate and commit space on demand (Thin Provisioning)** check box.
11. Select the **Ensure that Store with the virtual machine** check box.
12. Click **Next**.
13. Select the **Independent** check box, then select **Persistent**.
14. Click **Next**.
15. Review the summary, then click **Finish**.
16. Click **OK**.

17 In the **Home > Inventory > Datastores** view, browse the datastore and locate the folder where the ESIS/Utility creation virtual machine files are stored. You should see a new file called `D` or `E-Partition-HD` with the *`.vmdk`* extension.

18 From the vSphere Client, right-click on the ESIS/Utility creation virtual machine and choose **Rename**. Change the name back to the original name as seen in vCenter Server.

19 From the vSphere Client, connect to the console of the ESIS/Utility creation virtual machine and log on as a user with administrator privileges.

20 In the Windows Control Panel, click **System**, then **Security** , then **Administrative Tools**.

21 Double–click **Computer Management**

22 Select **Disk Management**.
The **Initialize Disk** dialog box appears.

23 Ensure that the new disk and MBR are selected and then click **OK**.
A new disk appears in the bottom center pane of the window and will have GB size specified earlier of unallocated space.

24 Right-click on the disk and click **New Simple Volume**.
The **New Simple Volume** window appears.

25 Click **Next**.

26 Click **Next**.

27 Select **Assign the following drive letter** and assign an appropriate drive letter to the new disk (the default value should be acceptable).

28 Click **Next**.

29 Ensure that the disk is to be formatted as *NTFS* with default allocation unit size, change the volume label to **`D`** or **`E-Partition-HD`**, or give it a label.

30 Select the **Perform a Quick Format** check box, then click **Next**.

31 Review the settings and click **Finish**.
The new disk will now be visible in Windows Explorer as the specified Label Name.

16.4.2 Creating the master partition virtual hard disk

The master partition virtual hard disk can be copied to new Experion virtual machines to form the media requirements for an Experion node installation.

1 Remove the Partition virtual hard disk from the ESIS/Utility creation virtual machine:

   a Shutdown the ESIS/Utility creation virtual machine. To be able to remove the virtual hard disk, you need to shutdown the virtual machine first. If you don't shutdown the virtual machine, the operating system on the virtual machine is left in a state that may cause problems with vDR backups.

   b From the vSphere Client, right-click on the ESIS/Utility creation virtual machine and click **Edit Settings**.
   The **Virtual Machine Properties** window appears.

   c Click the **Hardware** tab.

   d Select the Partition virtual hard disk (ensure that you select the correct disk) and click **Remove**.

   e Click **Remove from virtual machine**, then click **OK**.

2 In the datastore where you intend to store the master Partition file (the staging datastore), create a new folder in the root of the datastore and name it *`Partition-Master`*.
This folder is where the Partition virtual hard disk `.vmdk` file will be copied to and kept as a master for future use. It is from this location that the `.vmdk` file will be copied from to new Experion virtual machines.

3 Move the Partition virtual hard disk to a new folder on the datastore.

   a Locate the partition `.vmdk` file created when the Partition virtual hard disk was created.

b Cut and paste this file into the *Partition-Master* folder on the datastore.

c Ensure that the `.vmdk` file does not appear in the ESIS/Utility creation virtual machine's datastore folder.

4 Create additional disk partitions as required. For more information, see the related topics..

16.5 Creating an Experion node virtual machine

Related topics

"Creating a virtual machine" on page 184

Start the New Virtual Machine Wizard and configure the required virtual machine.

"Connecting a virtual machine to networks" on page 186

"Connecting a USB device" on page 186

"Starting an Experion installation using the Experion System Initialization media" on page 187

"Installing VMware Tools for an Experion node" on page 188

VMware Tools enhance the performance of the virtual machine's guest operating system and improves the management of the virtual machine.

"Installing the Wyse TCX Suite for an Experion node" on page 189

For virtual machines that need to be accessible from a thin client and need access to a USB device, you need to install the Wyse TCX Suite. Otherwise, the Wyse TCX Suite is not required.

"Completing the Experion node installation" on page 190

"Preparing virtual machines for thin clients" on page 192

"Creating an Experion node virtual machine template" on page 194

16.5.1 Creating a virtual machine

Start the New Virtual Machine Wizard and configure the required virtual machine.

Prerequisites

- *HPS Virtualization Specification*.
- *vSphere Virtual Machine Administration*.

To create a virtual machine

- Create a new virtual machine by following the instructions in *vSphere Virtual Machine Administration*. Use the following table to identify appropriate values to enter in the **New Virtual Machine Wizard**.

New Virtual Machine Wizard page	Description
Configuration	Select **Custom**.
Name and Location	Type a unique and recognizable name for the virtual machine. Select a location, such as a folder, that is consistent with your chosen structure for organizing VMware inventory objects.
Datastore	Select a datastore location, which can be local storage or shared storage (for Level 3 virtual machines on DCS architecture and SCADA architecture). If you are creating this virtual machine on the management ESXi host, you should select the staging datastore. You should not store non-management workload virtual machines on the management datastore.
Virtual Machine Version	Select **Virtual Machine Version 8**.
Guest Operating System	Select the required Windows operating system for the node type.
CPUs	See the *HPS Virtualization Specification* for the recommended number of CPUs for the node type. Note: Apply the recommended number of CPUs for node type to the **Number of Cores per virtual** socket value. Leave **Number of Virtual Sockets** as **1**.

New Virtual Machine Wizard page	Description
Memory	See the *HPS Virtualization Specification* for the recommended memory for the node type.
Network	For FTE networks: • In the **How many NICs do you want to connect** list, choose **2**. • In the **NIC 1** list, do the following: – In the **Network** list, choose the yellow network. – In the **Adaptor** list, choose **E1000**. – Select the **Connect at Power On** check box. • In the **NIC 2** list, do the following: – In the **Network** list, choose the green network. – In the **Adaptor** list, choose **E1000**. – Select the **Connect at Power On** check box. For non-FTE networks: • In the **How many NICs do you want to connect** list, choose **1**. • In the **Network** list, choose the network. • In the **Adaptor** list, choose **E1000**. • Select the **Connect at Power On** check box.
SCSI Controller	For Windows 7 and Windows Server 2008 virtual machines, select **LSI Logic SAS**.
Select a Disk	Select the **Create a new virtual disk** option button.
Create a Disk	See the *HPS Virtualization Specification* for the recommended disk size for the node type. **Attention** Remember to adjust the disk size from the recommended size if using Partition virtual disks. For example: C: Disk size = Total size - Partition size. Ensure that the **Allocate and commit space on demand** is *not* selected when creating virtual machines for on-process usage.
Advanced Options	Leave the default values.
Ready to Complete	Review the virtual machine settings to ensure that they match the details above.

Add partition virtual hard disks

1 Copy the Partition-HD *.vmdk* file or files from the Partition-Master folder to the new virtual machine's folder (this folder will have the same name as the virtual machine name, as shown in vCenter Server)

2 Edit this virtual machine's settings as follows:

a Add new hardware by selecting the following options:

- **Hard disk**
- **Use an existing virtual disk**

b Browse this **virtual machine datastore** folder and select one Partition-HD .vmdk file in the desired drive letter order D then E, and so on.

c Accept default value for **Virtual Device Node**

d Make sure the Mode option of **Independent** is not checked, then finish adding the hard disk.

e Repeat this process for each Partition virtual hard disk.

16.5.2 Connecting a virtual machine to networks

When you create a new virtual machine using vSphere Client, the virtual machine's virtual network adapters connect to one or many virtual machine port groups. These virtual machine port groups allow the virtual machine to communicate with the virtual switch and all network traffic on that virtual switch.

Use the Networking display in vSphere Client to check that the new virtual machine is connected to the correct network.

To ensure the virtual machine is connected to the virtual network, edit the virtual machine settings and select each network adapter and ensure the **Connected** and **Connect at power on** options are selected. When a new Experion node is being installed on the management ESXi Host, ensure the Experion virtual machine is connected to a vSwitch that does not have uplinks configured. For more information, see "Network configuration for a management host in a DCS architecture".

To disconnect the virtual machine from the virtual network, edit the virtual machine settings and select each network adapter and clear the **Connected** and **Connect at power on** check boxes.

16.5.3 Connecting a USB device

The process of adding a USB device to a virtual machine, such as an Experion USB securtity key, requires the following:

1. Adding the USB controller to the virtual machine.
2. Inserting the USB device into the ESXi host
3. Waiting at least 5 minutes.
4. Adding the USB device.

Prerequisites

- You have created the virtual machine.
- *vSphere Virtual Machine Administration*

Adding the USB controller to the virtual machine

1. In vSphere Client, select the virtual machine and right-click and choose **Edit Settings**.
2. Click **Add**.

   The **Add Hardware** dialog box appears.
3. In the list of available devices, click **USB Controller** and then click **Next**.
4. Click **Next**.
5. Ensure that the summary states that the hardware type is a USB Contoller and then click **Finish**.
6. On the **Virtual machine properties** dialog box, click **OK** to finish the process of adding the USB controller.

   The virtual machine will now have a new hardware item shown as USB Controller. This will allow USB device to be added to the virtual machine.

Adding the USB device

1. Ensure that the virtual machine has a USB controller added and that the USB device is inserted into the ESXi host where the virtual machine is running and allowed 5 minutes to pass so that the ESXi host has registered the presence of the USB device.
2. In vSphere Client, select the virtual machine and right-click and choose **Edit Settings**.
3. Click **Add**.

   The **Add Hardware** dialog box appears.

4. In the list of available devices, click **USB Device** and then click **Next**.
5. If you plan to use vMotion with this Experion virtual machine, select the **Support vMotion while device is connected** check box.

   For more information about vMotion support for USB devices, see the "Configuring USB Devices for vMotion" topic in *vSphere Virtual Machine Administration*.
6. Select the required USB Device and ensure that the connection is shown as **available**.
7. Click **Next**.
8. Review the summary and then click **Finish**.
9. On the **Virtual machine properties** dialog box, click **OK** to finish the process of adding the USB device.

   The virtual machine will now have a new hardware item shown as USB Controller. This will allow USB device to be added to the virtual machine.

> **Attention**
> If you are using shared storage for your virtual machines, ensure that you select the **Support vMotion while device is connected** check box within this procedure. This will allow the virtual machine to continue to see the USB device if vMotion is used.

16.5.4 Starting an Experion installation using the Experion System Initialization media

To start an Experion installation using the Experion System Initialization media

1. Mount the Experion System Initialization ISO image and ensure that the **Connect at power on** check box is selected.

   If this installation is being performed on an ESXi host other than the management ESXi host, you need to copy the ISO file for the media to a local datastore on that ESXi host.
2. Copy the ESIS-HD vmdk file from the *ESIS-Master* folder and the Utility vmdk file from the *Utility-Master* folder to the new virtual machine's folder (this folder will have the same name as the virtual machine name, as shown in vCenter Server).
3. Edit the virtual machine settings, adding a new hard disk to the virtual machine:
   a. Browse the virtual machine datastore folder and select the ESIS-HD vmdk file that was copied specifically for this virtual machine to use.
   b. Select the advanced option of **Independent** and **Nonpersisient**.
4. Edit the virtual machine settings, adding a second new hard disk to the virtual machine:
   a. Browse the virtual machine datastore folder and select the Utility vmdk file that was copied specifically for this virtual machine to use.
   b. Select the advanced option of **Independent** and **Nonpersisient**.
5. Power on the virtual machine.

   It should start from the Experion System Initialization media ISO file mounted as a DVD.
6. The dialog will request the init media configuration files to continue:
   a. Browse to the required node folder in the *EPKS* folder in the Utility virtual hard disk and select the *InitMediaOptions.xml* file for the Experion node that you want to install.

      > **Attention**
      > The ANCIM folder and UIInfo.xml file are selected if using installation files from ESM's Installation Builder.

   b. Click **Next**.
7. Select **ESIS** from USB drive option and then browse to the *ESIS* folder in the ESIS-HD virtual hard disk. The ESIS path should show *Q:\ESIS*.
8. Click **Next**.
9. Accept the license agreement then click **Install**.

Attention

A dialog box is displayed indicating that multiple hard disks are detected. Ensure that the disk selected for formatting is the original virtual machine disk not the ESIS-HD or Utility virtual hard disks. This can be determined by the size of the disk.

10. In the dialog box, click **Yes** to continue.

    The Windows operating system and Experion applications are installed in an unattended mode and user interaction is not required until the Experion application installation is complete. RSLinx will require acceptance of the Rockwell software drivers.

11. When the Experion installation has completed click **OK** to close the Experion Installation Status Display and complete the Experion Install.

Attention

The ESM commissioning task is launched now when ESM installation files are used to perform the install. Repeat the following steps after a reboot to postpone commissioning until instructed to do so in the "Completing the Experion node installation task".

12. If a commissioning task dialog is displayed to "remove any removable media", click **OK**.
13. If a commissioning task dialog is displayed with options of Yes, No and Cancel, click **No** to stop commissioning task and to continue on next reboot.
14. Continue to the next task.

16.5.5 Installing VMware Tools for an Experion node

VMware Tools enhance the performance of the virtual machine's guest operating system and improves the management of the virtual machine.

Prerequisites

- *Installing and Configuring VMware Tools* provides information for several VMware products to install, upgrade, and configure VMware Tools. When using this documentation, follow the instructions for "vSphere virtual machines".

To install VMware Tools

1. Install VMware Tools by following the instructions in the "Install VMware Tools on a Windows Guest" topic in chapter 8, "Installing and Upgrading VMware Tools" of the *vSphere Virtual Machine Administration Guide*.
2. In the vSphere Client, right-click on the virtual machine where you want to install VMware Tools and choose **Guest** > **Install/Upgrade VMware Tools**.
3. Select the **Interactive Tools Installation** option button and then click **OK**.
4. Open the virtual machine's console, and log into the Windows operating system.
5. If autorun is enabled, click **OK** to confirm the autorun to start. If autorun is not enabled, browse to the virtual CD/DVD drive and double-click the `setup.exe` file (or the `setup64.exe` file if running Windows 64-bit).

   The **VMware Tools installation** wizard appears.
6. Click **Next**.
7. Select the **Typical** option and then click **Next**.
8. Click **Install**.
9. Restart the virtual machine to complete the installation.

   DO NOT configure the virtual machine to automatically upgrade VMware Tools when an updated version is available. This might affect the performance of the system. Hence, you need to manually upgrade to the newer version. For instructions, see the "Upgrade VMware Tools" topic in *Installing and Configuring VMware Tools* for manually upgrading the VMware Tools.

Attention

The ESM commissioning task is launched after a reboot when ESM installation files are used to perform the install. Perform the following steps after the reboot to postpone commissioning until instructed to do so in the "Completing the Experion node installation task"

10 If a commissioning task dialog is displayed to "remove any removable media", click **OK**.

11 If a commissioning task dialog is displayed with options of Yes, No and Cancel, click on **No** - to stop commissioning task and to continue on next reboot.

12 Continue to the next task.

16.5.6 Installing the Wyse TCX Suite for an Experion node

For virtual machines that need to be accessible from a thin client and need access to a USB device, you need to install the Wyse TCX Suite. Otherwise, the Wyse TCX Suite is not required.

Attention

Before installing the Wyse TCX Suite software, you need to disable User Account Control (UAC) and then restart the virtual machine. After doing this, you can install the Wyse TCX Suite software. When you have finished installing the Wyse TCX Suite on the virtual machine, you need to re-enable UAC and restart the virtual machine.

If performing an install using ESM installation files UAC should already be disabled. The ESM commissioning task requires UAC to be disabled. Do not re-enable UAC when performing an install with ESM installation files.

To install the Wyse TCX Suite

1 Disable User Account Control (UAC) and then restart the virtual machine.

2 Log onto the virtual machine using a Windows account that has sufficient privileges to install software.

3 Browse to the location where the Wyse TCX installation package was previously copied to the Utility virtual hard drive (or downloaded and stored if you installed the Windows operating system using Microsoft media).

4 Double-clicking on the *Wyse TCX Server Suite.msi* file.

5 Click **Next**.

6 Click **Accept** to accept the EULA.

7 Click **Typical** installation.

8 Follow the on screen instructions, accepting the default installation options.

9 Restart the virtual machine.

Attention

The ESM commissioning task is launched after a reboot when ESM installation files are used to perform the install. Perform the following steps after the reboot to postpone commissioning until instructed to do so in the "Completing the Experion node installation task"

10 If a commissioning task dialog is displayed to "remove any removable media", click **OK**

11 If a commissioning task dialog is displayed with options of Yes, No and Cancel, click **No** to stop commissioning task and to continue on next reboot.

12 If a commissioning task dialog is *not* displayed, re-enable the User Account Control (UAC).

To confirm that the installation was successful

1 Choose **Start** > **Control Panel** > **Administrative Tools** > **Services**.

2 Check that the **Wyse Technology USB Virtualizer** service is listed and that the service is running.

To disable TCX warnings

1 Choose **Start** > **All Programs** > **Wyse TCX Server Suite Configuration**.
The **TCX Server Suite Configuration Utility** window appears.
2 Click the **USB Virtualizer** tab.
3 Clear the **Show Security Warnings** check box.
4 Click **OK**.

To confirm that the Wyse TCX Suite license is valid and to check the Wyse TCX Suite software version

1 Choose **Start** > **All Programs** > **WyseTCX Server Suite Configuration**.
The **TCX Server Suite Configuration Utility** window appears.
2 Click the **General** tab.
3 Click **About**.
The **About** dialog box appears.
4 Confirm that license status is valid.
The TCX Server Suite product versions should match the versions specified in the *HPS Virtualization Specification*.

16.5.7 Completing the Experion node installation

To complete the Experion node installation

1. Install any third party applications that are required on the virtual machine. For example, install the anti-virus and Microsoft Office software. These application installers should be in the *Apps* folder on the Utility virtual hard disk.
2. For virtual machines with the Windows Server 2008 operating system, set the hardware acceleration of the display adapter to full.

   For more information about enabling hardware acceleration, see the related topics.
3. Apply any Microsoft operating system and software updates. Microsoft updates are provided through Honeywell Process Solutions web site. You may need to install Microsoft operating system and software updates on Experion virtual machines before connecting them to the process network.
4. In the Window operating system, add the **ExperionAdmin** user to the Product Administrators group.
5. Remove the ESIS and Utility virtual hard disks by:
   a. Shutting down the virtual machine. Before removing the virtual hard disk, you need to shutdown the virtual machine. If you don't shutdown the virtual machine, the operating system on the virtual machine is left in a state that may cause problems with vDR backups.
   b. In the vSphere Client, right click on the virtual machine and choose **Edit**.
   c. Select the last hard disk in the list (this should be the *Utility* hard disk) and then click **Remove**.
   d. When prompted, select **Remove from virtual machine and delete files from disk**.
   e. Select the last non-deleted hard disk in the list (this should be the *Esis* hard disk) and then click **Remove**.
   f. When prompted, select **Remove from virtual machine and delete files from disk**.
6. Click **OK** to finish the removal process.
7. Connect the virtual machine to the virtual network. To connect the virtual machine to the virtual network edit the virtual machine settings and select each Network adapter and ensure that the **Connected** check box and the **Connect at power on** check box are selected.

To set CPU and memory resource reservations

1. Resource reservations should now be set on critical Experion nodes. To identify the required CPU Mhz values for the following Experion nodes, see the *HPS Virtualization Specification*.

Experion virtual node	CPU reservation	Memory reservation
Experion Server	Set the CPU reservation to 60% of the CPU Mhz value, as stated in the *HPS Virtualization Specification*.	Set memory reservation to 100% of allocated memory.
Experion Console Station	Set the CPU reservation to 60% of the CPU Mhz value, as stated in the *HPS Virtualization Specification*.	Set memory reservation to 100% of allocated memory.
All other Experion nodes	Set the CPU reservation to 30% of the CPU Mhz value, as stated in the *HPS Virtualization Specification*.	None

To set virtual machine IOP limits

Setting IOP limits for virtual machines helps minimize storage performance impact on virtual machines on the same storage device during an abnormal circumstance; such as virtual machine start up, database initialization, or an antivirus exception scan.

To set the virtual machine IOP limits:

1. From the vSphere Client, select the Resource Allocation tab for each host or cluster, then select the Storage view to display the virtual machine storage resource items.
2. Refer to the *HPS Virtualization Specification* to determine the maximum IOPs from the performance matrix table for each virtual machine within the system been configured.
3. Set the IOP - Limit values per virtual machine taking the following rules into consideration:
   a. For each virtual machine with maximum IOPs setting of 400 or less in the *HPS Virtualization Specificiation*, set the hard drive **Limit – IOPs** value to **400**.

      For Console Station virtual machines, set the **Limit - IOPs** to **800**. To ensure that the virtual infrastructure is monitored for virtual machine disk latency issues, whenever virtual machine IOP limits are applied it is important to add a virtual machine disk latency alarm in vSphere. For more information see “Custom Alarms" in this guide.

      Console Stations with multiple virtual hard disks will require special consideration. Contact Honeywell Support for more information.
   b. For each virtual machine with maximum IOPs setting of greater than 400 in the *HPS Virtualization Specificiation*, set the hard drive **Limit – IOPs** to the maximum IOPs value in the performance matrix table.
   c. For virtual machines with 2 or more disks, split the **Limit - IOPs** between each disk and ensure that disk 1 has at least 400 IOPs. After applying the Limit - IOPs value to a virtual machine with a multiple drives the hard disks should be monitored for storage latency.

Virtual machines with 3rd party applications not covered by the *HPS Virtualization Specification* should also have IOP Limits applied in line with the application vendor recommendations. If no recommendations exist, set **Limit – IOPs** to **400** and monitor the virtual machine and application for high disk latency or slow application responses and increase IOP limits if required.

Additional tasks

1. If the virtual machine is still shutdown power it back on and login.
2. If ESM installation files were used to install this virtual machine then the ESM commissioning task will automatically start.
   a. Click **OK** to close the dialog for "removing any removable media".
   b. Click **Yes** to perform commissioning.
   c. If prompted, provide a domain account and password used for joining nodes to your process domain. The ESM Commissioning task will automatically perform steps 3, 4, and 5 below.
   d. Proceed to step 6 below.

3. If the Experion node is part of a Windows domain, add it to the required Windows domain. For more information, see the “Adding a node to a Windows domain” section of the Experion *Windows Domain/ Workgroup Implementation Guide*.
4. Configure time synchronization. For more information about time synchronization, see the related topics.
5. Setup the hosts file for the Experion virtual machine. For more information, see the “Setting up hosts files” section of the Experion *Software Installation User's Guide*.
6. Continue to engineer the control system. For more information about how to engineer and configure the Experion system, see the *Experion PDF Collection*.

16.5.8 Preparing virtual machines for thin clients

Complete the following tasks so as to prepare the virtual machine for use with a thin client.

Task	Description
Enable Remote Connection on the virtual machines	Ensure that Remote Desktop Access is enabled on the virtual machine and that the appropriate user accounts have been added to the Remote Desktop Users group.
Dual displays	Windows 7 Professional and Windows Server 2008 Remote Desktop Protocol (RDP) connections support multiple high-resolution displays in a spanned remote session. Thin clients can be configured to operate in spanned mode with a resolution that matches the monitor resolutions that are connected to it. For a virtual machine, the desktop will appear as a single logical entity.
Configure Safeview Workspace	If dual screens are required, SafeView must be configured to handle the workspace management. For more information about SafeView and configuring workspaces, see the *SafeView User's Guide*. **Attention** Existing dual screen SafeView workspaces can be reused in virtual machines that are accessed from thin clients. However, the screen resolutions used in the physical environment must be the same as the screen resolutions connected to the thin clients. Ensure that the Safeview workspace X and Y axis "0,0" reference points are correctly implemented as display spanning may impact the orientation and layout.
IKB Keyboard	When a Honeywell IKB keyboard is connected to a thin client, the IKB Service and Station toolbar files must be configured.
USB device access	The Wyse TCX Suite enables USB device redirection from a thin client to the virtual machine that it is connected to. For security and other reasons, you may want to disable the use of USB devices from thin clients. The Wyse TCX Suite can be configured to disable USB redirection for specific devices and device types. To disable USB redirection for specific devices and device types: 1. Log on to Experion virtual machine using a Windows account that has local administrator privileges. 2. Choose **Start** > **All Programs** > **WyseTCX Suite Server Configuration**. 3. Click on the **USB Virtualizer** tab. 4. Clear the check boxes next to the devices that you want to disable. To disable USB flash drives, clear the **Mass Storage Devices** check box. 5. Click **Apply**. 6. Click **OK**.
Configure Experion Station connection	As with Stations on physical computers, Stations in a virtual environment must be configured before use. For more information about configuring Stations, see the *Server and Client Configuration Guide*.
Configure Experion virtual machine lock-down	As with Stations on physical computers, it is possible to lock down the Experion virtual machine so that various operating system functions and behaviors are limited. For more information, see the “Securing access to the Windows operating system” chapter of the *Network and Security Planning Guide*.

Task	Description
Operating system client licensing requirements for Experion nodes	Ensure appropriate licensing model is implemented for Experion client nodes that will be connected to using Thin Clients.
Enable Audio on Server Operating Systems	If your virtual machine is running Windows Server 2008 and audiable alarms or PC audio is required, you must configure the Operating System to enable this feature. The Windows Audio service must be configured for auto startup and RDP must have audio enabled. 1. Use Remote Desktop to connect to the Windows Server 2008 machine. 2. Click **Start > Administrative Tools > Services**. The **Services** dialog box appears. 3. Right-click on the Windows Audio Service, and click on **Properties**. . The **Windows Audio Properties** dialog box appears 4. If necessary, click **Start** to start the service. In the Startup type list, click **Automatic**. 5. Click **OK**. 6. Close the **Services** dialog box. 7. Select **Run** from the start menu, type **`tsconfig.msc`** and then press **Enter**. The **Remote Desktop Services Configuration Management Console** appears. 8. In the **Connections** list, right-click on **RDP-TCP** and click **Properties**. 9. Click the **Client Settings** tab. 10. Click **OK**. 11. Click **OK** to acknowledge the Remote Desktop Services Configuration message. 12. Clear the **Audio** check box. 13. Log off the virtual machine and log on again. The virtual machine should now be able to play sounds.
Restrict number of Remote Desktop Sessions on Server Operating System	If your virtual machine is running Windows Server 2008 and is an Experion Flex Station, Console Station, or Console Extension Station, you must restrict the number of Remote Desktop connections to 1. To do this: 1. Select **Run** from the start menu, type **`tsconfig.msc`** and then press **Enter**. The **Remote Desktop Services Configuration Management Console** appears 2. In the **Connections** list, right-click on **RDP-TCP** and click **Properties**. 3. Click the **Network Adapters** tab. 4. Change the maximum connections value to **`1`**. 5. Click **OK**. 6. Click **OK** to acknowledge the Remote Desktop Services Configuration message. 7. Log off the virtual machine and log on again. The virtual machine will now only allow 1 RDP session at a time.

Task	Description
Allow users to connect to Windows 2008 Server using a thin client	If your virtual machine is running Windows Server 2008, any local windows user or domain user that is not a member of the local administrators group needs to added to the Remote Desktop Users group on the virtual machine to be granted remote desktop access using a thin client. To do this: 1. Use Remote Desktop to connect to the Windows Server 2008 machine. Ensure that you log in as a user with local administrative privileges. 2. Click **Start > Administrative Tools > Server Manager**. The **Server Manager Management Console** appears. 3. Expand **Configuration**, then **Local Users and Groups** and then click **Groups** 4. Double click on the Remote Desktop users group. 5. Click **Add** to add a local windows user, domain group, or domain user that requires access through the thin client. 6. Click **OK** and then click **OK** again. 7. Log off the virtual machine and log on again with the new user added to the Remote Desktop Users group.

16.5.9 Creating an Experion node virtual machine template

Experion virtual machine templating is supported on the following node types for R410.2 and newer releases:

- Experion Servers
- Console Stations
- Flex Stations
- Console Extension Stations
- ACE and SCE nodes

To unmount virtual hard disks and media

- Remove the ESIS-HD and UTILITY virtual hard disks for the virtual machine before conversion to a template.
  a. From the vSphere client, Right-click on the virtual machine and click **Edit settings**.
  b. Select Hard disk 2 and click **Remove**.
  c. Select the **Remove from virtual machine and delete files from disk** option.
  d. Select Hard disk 3 and click **Remove**.
  e. Select the **Remove from virtual machine and delete files from disk** option.
  f. Click **OK**.

To prepare an Experion virtual machine to create a template

1. Complete the Experion installation.
2. Log into the virtual machine with a userid that has administrative privileges.
3. Use Windows Explorer to browse to the *Program files (x86)\Honeywell\Experion PKS\Utilities \NodeRenameUtil folder*.
4. Right-click on the application called preparevm_template.exe and select **Run as Administrator**. A confirmation dialog box appears, confirming that the application is intended for creating templates.
5. Click **OK** to continue.
   The Experion System Preparation tool dialog box appears. If a CD/DVD is attached to the virtual machine, use the vSphere Client to remove it and then click **Yes**. The PrepareVM_template application runs and shuts down the virtual machine.

Converting a virtual machine to a template

1. Wait for the virtual machine to shutdown.
2. Using the vSphere client, right-click on the virtual machine and choose **Template** > **Convert to template**. The virtual machine disappears from the **Hosts and clusters** view when the conversion is complete.
3. Change to the **VMs and templates** view and the new virtual machine template can be seen.

16.6 Create virtual machine templates manually

Related topics

“Creating an Experion-installed virtual machine template manually” on page 196
“Creating an operating system-installed virtual machine template manually” on page 197

16.6.1 Creating an Experion-installed virtual machine template manually

Attention

These are manual steps and ESM is not required for this procedure.

Ensure to clear the event logs prior to creating the template. After creating an Experion machine using this template, the old logs appear when you check the status of the newly created Experion machine.

Prerequisites

Before creating Experion template, ensure Product Administrator group is member of HPSInstall user. If Product Administrator group is not part of HPSInstall user, then add Product Administrator group to HPSInstall user.

To prepare an Experion virtual machine to create a template

1. On the virtual machine, complete the Experion installation. For more information about the Experion installation, see the *Software Installation User’s Guide*.
2. Log on to the virtual machine with a User ID that has required administrative privileges and is part of Product Administrator group.

   Attention

   If the virtual machine is an Experion R431.1 node, ESM R230 Client is only installed.
3. Use Windows Explorer to browse to the *Program files (x86)\Honeywell\Experion PKS\Utilities\NodeRenameUtil folder*. This path may change for a Custom Installation Path (CIP) installation.
4. Right-click **preparevm_template.exe** and select **Run as Administrator**. A confirmation dialog box appears, indicating that the application is intended for creating templates.

   Tip

   The user account running this command must be a member of the Product Administrators group.
5. Click **OK** to continue.

   The Experion System Preparation tool dialog box appears. If a CD/DVD is attached to the virtual machine, use the vSphere client to remove it and then click **Yes**. The **preparevm_template** application runs and shuts down the virtual machine.

Converting a virtual machine to a template

1. In the vSphere client (in the **Hosts and Clusters** view), right-click the virtual machine and select **Template** > **Convert to template**.

   The virtual machine disappears from the **Hosts and clusters** view when the conversion is complete.
2. Change to the **VMs and templates** view.
3. Ensure that the template appears in the view after the conversion.

16.6.2 Creating an operating system-installed virtual machine template manually

Note
These are manual steps and ESM is not required for this procedure.

Tip
Antivirus software must be not installed on an operating system installed virtual machine.

To create an OS-installed virtual machine template for Windows Server 2008 R2 and Windows 7

1 Create a virtual machine with hard disk size less than 45 GB and install Windows 7 Professional 64-bit or Windows Server 2008 R2 operating system.

Tip
For information about creating an OS-installed virtual machine, see the *System Administration Guide*.

2 Disable the User Account Control.
   a Browse to **Start > Control Panel > User Accounts**.
   b Click **User Accounts > Change User Account Control settings**.
   c Move the slider to **Never Notify** and click **OK**.

3 On the target node, perform the following steps to enable File and Printer Sharing in Windows Firewall.
   a Browse to **Start > Control Panel > System and Security > Windows Firewall > Allow Program and features.**
   b Scroll to **File and Printer Sharing** and select all the check boxes placed with this option.
   c Browse to **Control Panel > Windows Firewall >Advanced Settings > Inbound Rules**.
   d Navigate to **File and Printer Sharing (Echo Request - ICMPv4-In)** for **Private** profile.
   e Double-click to open the properties and click **Scope** tab. In **Remote IP addresses** box, ensure that **Any IP Address** is selected.
   f Repeat these steps for **Public** and **Domain** profiles.

4 Install VMware tools in the virtual machine. Right click the **VM > Guest > Install/Upgrade VMware tools**.

5 In Windows Server 2008 R2 operating system, manually enable .Net 3.5.
   a Browse to **Start** and right-click **Computer**.
   b Select **Manage**.
   c Click **Features**>**Add Features**.
   d Select **.NET Framework 3.5.1** below **.NET Framework 3.5.1 Features**.
   e Click **Next**. Click **Install** and click **Close**.

6 In Windows Server 2008 R2 operating system, create an user and add it to the Administrator group and disable the Administrator user .
   a Browse to **Start** and right-click **Computer**.
   b Click **Manage**.
   c In the User Account Control dialog box, click **Continue**.
   d Expand **Configuration** > **Local User and Groups** and right-click **Users**.
   e Click **New User**.
   f In the **New User** dialog box, type all the details.
   g Click **Create** and add the new user to Administrators group.
   h To disable the Administrator user, right-click **Administrator** and in the **Properties** dialog box, select **Account is disabled**.

7 Shut down the virtual machine.

8 Right-click the VM and then click **Edit Settings**.
The **Virtual Machine Properties** window appears.

9 In the **Hardware** tab, select **Video Card**.

10 On the right pane, ensure that **Auto-detect** settings is selected.

11 Click **OK**.

Converting a virtual machine to a template

1 In the vSphere client (in the **Hosts and Clusters** view), right-click the virtual machine and select **Template > Convert to template**.
The virtual machine disappears from the **Hosts and clusters** view when the conversion is complete.

2 Change to the **VMs and templates** view.

3 Ensure that the template appears in the view after the conversion.

17 Creating virtual machines from templates or physical computers

You can create new operating system virtual machines by deploying from a template or new Experion virtual machines by cloning from a physical computer.

Related topics

"Deploying new operating system virtual machines from templates" on page 200

Deploy new virtual machines from an existing operating system virtual machine template.

"Cloning from existing physical computers" on page 202

Clone (convert) an existing physical Experion node to a virtual machine using Experion Backup and Restore (EBR).

"Deploying Experion virtual machines from templates" on page 204

17.1 Deploying new operating system virtual machines from templates

Deploy new virtual machines from an existing operating system virtual machine template.

Attention

- Virtual machines deployed from templates require Windows operating system licenses. For more information about the use of Windows operating system licenses in an Experion virtualization environment, contact Microsoft or your Honeywell representative.
- Honeywell recommends that Experion virtual machines use the installation procedures outlined within this guide.
- The use of operating system templates can be used for all non Experion nodes.

Prerequisites

- You have created an operating system virtual machine template.

To deploy a new Windows 2008 or Windows 7 operating system virtual machines from a template

1. On the vSphere Client, choose the **Home** > **Inventory** > **VMs and Templates** view.
2. Locate the virtual machine template, right-click on it and choose **Deploy Virtual Machine from this Template**.
   This creates a new virtual machine, retaining the virtual machine template.
3. Complete the following wizard steps:
   - Name and Location–Name the new virtual machine and select the required inventory location.
   - Host/Cluster – Select the destination host that the new virtual machine needs to run on.
   - Resource Pool – Select the resource pool that the new virtual machine needs to run in.
   - Datastore – Identify the datastore for the virtual machine.
   - Disk Format – Select the disk format required. On-process usage requires thick format.
   - Guest Customization – Select **Do not customize**.
   - Ready to Complete – Click **Finish**.
4. Once the virtual machine has been created, right-click on it and choose **Edit Settings**.
5. Select **Network adapter 1** and then clear the **Connect at power on** check box.
6. If **Network adapter 2** is present, select it and then clear the **Connect at power on** check box.
7. Click **OK**.
8. Right-click on the virtual machine and choose **Power** > **Power On**.
9. When prompt, answer the sysprep questions to rename and prepare the virtual machine.
   In Windows 7, a new user will be created during this process. This user should not be used and should be disabled later.
10. Log on as ExperionAdmin, for virtual machine templates where the operating system was installed using the Experion System Initialization media, or an account with Administrator privileges, for virtual machine templates where the operating system was installed using Microsoft media.
11. Update the IP address and other network settings of the virtual machine.
12. Connect the virtual machine to the required virtual network.

To deploy a new Windows 2003 or Windows XP operating system virtual machines from a template

1. On the vSphere Client, choose the **Home** > **Inventory** > **VMs and Templates** view.
2. Locate the virtual machine template, right-click on it and choose **Deploy Virtual Machine from this Template**.
   This creates a new virtual machine, retaining the virtual machine template.

3 Complete the following wizard steps:

- Name and Location–Name the new virtual machine and select the required inventory location.
- Host/Cluster – Select the destination host that the new virtual machine needs to run on.
- Resource Pool – Select the resource pool that the new virtual machine needs to run in.
- Datastore – Identify the datastore for the virtual machine.
- Disk Format – Select the disk format required. On-process usage requires thick format.
- Guest Customization – Select **Customize using the customization Wizard**. Answer all questions in the wizard.
- Ready to Complete – Click **Finish**.

You could also choose the following deployment techniques if you don't want to deploy a virtual machine from the template.

Alternate deployment technique	Description
Convert to Virtual Machine	Converts the template to a new virtual machine. The selected template will no longer be available. Complete the following wizard steps: • Select the name of the ESXi host. • Assign the virtual machine to a resource pool.

17.2 Cloning from existing physical computers

Clone (convert) an existing physical Experion node to a virtual machine using Experion Backup and Restore (EBR).

Attention

- For Experion R31x: cloning from physical computers (P2V) is only supported for off-process usage.
- For Experion R4xx: cloning from physical computers (P2V) is only supported for the off-process usage of Windows Server 2008.
- This procedure does not support operating systems and hardware platforms where the EBR driver validation fails with a SATA AHCI controller. For example, you cannot clone Experion nodes that run on Dell Precision 490 or T5400 hardware platforms.

You can take a full backup image of an existing Experion node using EBR, and then convert it to a virtual machine and import it into an ESXi host using the VMware Converter Enterprise Client.

Prerequisites

- You have installed and configured Experion Backup and Restore (EBR), and you have generated a full backup of the Experion node that you want to convert to a virtual machine.
- You have copied the backup image files generated by EBR (.sv2i and .v2i files) to a location that is accessible when you connect to the vCenter Server as a UNC file share.
- You have installed the VMware vCenter Converter plug-in on the vCenter Server. For more information, see the *vCenter Converter Administration Guide* from VMware, Inc.
- You have installed and enabled the VMware Converter Enterprise Client on your vSphere Client. You can verify whether the VMware Converter Enterprise Client is installed and enabled through the Plug-in Manager. For more information, see the *vCenter Converter Administration Guide* from VMware, Inc.
- If the physical computer uses an OEM version of the Windows operating system, you may need the following:
  - A volume license or retail Windows operating system media and key.

    Attention

    There are licensing restrictions related to the Windows operating system in a virtualization environment. For more information about the use of Windows operating system licenses in an Experion virtualization environment, contact Microsoft or your Honeywell representative.
  - Experion installation media.

To clone an existing physical Experion computer

1. Start vSphere Client and log in to vCenter Server.
2. Right-click on the ESXi host, cluster, or resource pool where you want the virtual machine to run, and choose **Import Machine**.

   The **Import** wizard appears.
3. Click **Next**.
4. On the **Source type** page, choose **Other**.
5. Type the UNC path to the location where the .sv2i file created by EBR is located.
6. Type the user credentials required to access the UNC path.
7. Click **Next**.
8. Keep the default disk size settings and click **Next**.
9. On the **Destination** page, click **Next**.
10. On the **Options** page, do the following:

a Edit the **Destination attributes** section to include the name that will be displayed for the virtual machine and the destination folder.

b Edit the **Devices** section to ensure that the processor and memory resource requirements are met.

c Edit the **Networks** section to ensure that the correct numbers of network adapters are added to the virtual machine.

11 Click **Next**.

12 Select the ESXi host, cluster, or resource pool from which the virtual machine will run, and then click **Next**.

13 Select the datastore for the virtual machine's configuration files and disks, and then click **Next**.

14 Select the number of Network Adapters, and then click **Next**.

15 Click **Next**.

16 On the **Schedule Task** page, select **Run this task immediately**, and then click **Next**.

17 On the **Ready to Complete** page, review the import information, and then click **Finish**.

The task appears in the **Recent Tasks** list as well as on the **Tasks & Events** tab. A status bar indicates the percent complete. When the conversion is complete, the status field reports **Completed**.

To convert an OEM version of the Windows operating system to a volume license or retail version

1 Convert the Windows operating system license by following the instructions on the Microsoft Help and Support web site, based on the installed operating system.

Option	Description
Windows Server 2003	http://support.microsoft.com/kb/816579
Windows XP	http://support.microsoft.com/kb/978788
Windows Server 2008	If the you plan to continue to use the physical machine and the Windows Server 2008 license, you will need a new license for Windows Server 2008 on the virtual machine. For more information, see http://support.microsoft.com/kb/949748 Activate Windows Server 2008 with the Virtual Key, or with a volume or retail license.
Windows 7	Not supported.

2 For Windows Server 2008: If the Experion physical machine has FTE software installed, on the new virtual machine, you will need to uninstall the FTE software, restart the virtual machine, and then reinstall the FTE software. Before you uninstall the FTE software, make note of the FTE Multicast address, Device ID, and UDP source and destination ports. You will need this information later when you reinstall the FTE software.

Care should be taken to ensure that the yellow NIC has the correct IP address assigned and that the yellow NIC is the NIC with the lowest MAC address and the first in the NIC binding order *before* reinstalling the FTE software. After reinstalling the FTE software, reenter the FTE Multicast address, Device ID, and UDP source and destination ports that you captured before uninstalling the FTE software.

3 For Experion R31x only, do the following:

a On the virtual machine, install the qualified Windows operating system service pack for the Experion release that you are using.

b On the virtual machine connect to the Experion Installation media and in the *packages/hwredist* folder on the Experion Installation media, double-click on *setup.exe*. Follow the on-screen instructions.

Next steps

Power on the virtual machine to check that it starts correctly.

17.3 Deploying Experion virtual machines from templates

> **Attention**
> Virtual machines deployed from templates require Windows operating system licenses. For more information about the use of Windows operating system licenses in an Experion virtualization environment, contact Microsoft or your Honeywell Service representative.

To help speed up deployment of an Experion system, templates can be used for each Experion node type. Virtual machine templates must be created using the guidance in the "Creating an Experion node virtual machine template" section of this guide.

To deploy Experion virtual machines from templates

1. On the vSphere Client, choose the **Home** > **Inventory** > **VMs and Templates** view.
2. Locate the virtual machine template, right-click on it and choose **Deploy Virtual Machine from this Template**.
3. Complete the following wizard steps:
   - Name and Location–Name the new virtual machine and select the required inventory location.
   - Host/Cluster – Select the destination host that the new virtual machine needs to run on.
   - Resource Pool – Select the resource pool that the new virtual machine needs to run in.
   - Datastore – Identify the datastore for the virtual machine.
   - Disk Format – Select the disk format required. On-process usage requires thick Provision Eager Zeroed format.
   - Guest Customization – Select **Do not customize**.
   - Ready to Complete – Click **Finish**.
4. Right-click on the new virtual machine and click **Edit Settings**.
5. Select **Network adapter 1** and then clear the **Connect at power on** check box.
6. If **Network adapter 2** is present, select it and select the **Connect at power on** check box.
7. Click **OK**.
8. Right-click on the virtual machine and choose **Power** > **Power On**.
9. Open the virtual machine console.
10. Read and accept the Microsoft EULA and click **Start**.
    a. On windows 7 machines, you might have to select the date/time settings. The computer starts configuring Windows settings. The welcome screen appears, followed by the **NodeRename Sysprep** wizard.
11. Click **Next** on the Welcome screen.
12. Read and Accept the Honeywell EULA and click **Next**.
13. Enter the **computer name**, **customer name**, **company name**, **passwords** and other details that are asked then click **Next**. If the node is a Console Station you will need to enter the Experion Server details.
14. Click **Start** to start the node rename operation.
    A status bar indicating the progress will be displayed and the system may reboot multiple times during the operation.
15. A dialog box stating that the Node Rename has completed successfully appears. Click **OK**.
16. From the vSphere client, right-click on the virtual machine and click **Edit Settings**.
17. Select **Network adapter 1** and then select the **Connect at power on and connected** check box.
18. If Network adapter 2 is present, select it and then clear the **Connect at power on and connected** check box.
19. Click **OK**.

20 Login to the virtual machine.

21 Adjust the IP address of the virtual machine.

22 From the virtual machine console, join a windows domain if applicable for the system.

23 Restart the virtual machine.

All Experion virtual machines deployed from templates have `sysprep` run during the rename process. This creates a unique and new virtual machine that will require a new Microsoft product key and will require activation with Microsoft.

18 Upgrading Virtual Hardware and VMware tools versions

Use the following steps to upgrade virtual machines to use the latest virtual hardware version and/or VMware Tools with Update Manager. Note that the upgrade requires one or more re-boots of the virtual machine in order to complete the upgrade.

Use this procedure if

- You are upgrading virtual machines that were created on a vSphere release that is older than the current release. This is optional. The current vSphere release will support virtual machines deployed with older Virtual Hardware or VMware tools versions. Refer to VMware compatibility guides to determine which Virtual Hardware or VMware tools versions are supported with each vSphere release.
- You created new virtual machines on vSphere 5.1 with the vSphere client. In this case, the new virtual machine wizard limits you to using Virtual Hardware version 8 (VH 8). To deploy the virtual machine with Virtual Hardware version 9 (VH 9), follow these instructions.

Attention

If you are deploying virtual machines on a single host with different virtual hardware versions you may experience unpredictable performance behavior.

To upgrade Virtual Hardware or VMware Tools versions on virtual machines

1. From the vSphere client that is connected to vCenter Server, select **Inventory**, and then **VMs and Templates Inventory**.
2. Power on any virtual machines that are not running by right-clicking on the machine name and clicking **Power**.
3. From the navigation pane of the **VMs and Templates Inventory** view, right-click on your datacenter and click **New Folder**. Name the new folder `R430 Upgrades`.
4. Drag and drop the virtual machines that are to be upgraded into the new **R430 Upgrades** folder.
5. Create baselines for your virtual machines:
   a. From the navigation pane of the **VMs and Templates Inventory** page, select the **R430 Upgrades** folder, and click the **Update Manager** tab.
   b. Click **Attach**. The **Attach Baseline or Group** dialog box appears.
   c. Select the **VMware Tools Upgrade to Match Host** (Predefined) and **VM Hardware Upgrade to Match Host** (Predefined) check boxes.
   d. Click **Attach**.
   e. Check that baselines now exist for all your virtual machines.
6. Scan your virtual machines against the baselines:
   a. Click **Scan**. The **Confirm Scan** dialog box appears.
   b. Select the **VM Hardware upgrades** and **VMware Tools upgrades** check boxes.
   c. Clear the **Virtual appliance upgrades** check box, then click **Scan**.

d When the scan finishes, check that your virtual machines are either **0% compliant** or **n% compliant**.

7 Upgrade the VMware Tools version in your virtual machines (if only upgrading Virtual Hardware, proceed to step 6):

a From the **VMs and Templates Inventory** page, select the **R430 Upgrades** folder, and click the **Update Manager** tab.

b Click **Remediate**. The **Remediate wizard** appears.

c On the **Remediation Selection** page, select the **VMware Tools Upgrade to Match Host** (Predefined) baseline.

d Check that all the virtual machines are selected and click **Next**.

e On the **Schedule** page, accept the defaults and click **Next**.

f On the **Rollback Options** page, clear the **Take a snapshot of the virtual machines before remediation to enable rollback option** check box, then click **Next**.

g On the **Ready to Complete** page, review the upgrade information and click **Finish**.

8 Upgrade VM Hardware to match the host in your virtual machines:

a From the navigation pane of the **VMs and Templates Inventory** page, select the **R430 Upgrades** folder, and click the **Update Manager** tab.

b Click **Remediate**. The **Remediate wizard** appears.

c On the **Remediation Selection** page, select **VM Hardware Upgrade to Match Host** (Predefined).

d Check that all the virtual machines are selected and click **Next**.

e On the **Schedule** page, accept the defaults and click **Next**.

f On the **Rollback Options** page, clear the **Take a snapshot of the virtual machines before remediation to enable rollback** check box, then click **Next**.

g On the **Ready to Complete** page, review the upgrade information and click **Finish**.

9 When remediation finishes, check that all of the virtual machines are compliant with the attached baselines.

10 Select each virtual machine and click the **Summary** tab. Check that the Virtual Hardware version is **9**, and that VMware Tools has a value of **Current**.

19 Installing PDF Collection

Related topics

“About PDF Collection” on page 210
“Installing Experion PDF collection” on page 211

19.1 About PDF Collection

PDF Collection

Use the PDF Collection to view the Experion platform documentation in PDF format. You can search across the documentation set and print pages or entire publication titles.

If AutoPlay is enabled for your optical media drive, the Experion PDF Collection page appears when you insert the CD into the drive. If AutoPlay is not enabled, in Windows Explorer browse to the PDF Collection CD and double-click on the **DocumentList.htm** file.

To search the PDF collection, in Windows Explorer browse to the PDF Collection CD, double-click on the search.pdf file, and then follow the on-screen instructions.

19.2 Installing Experion PDF collection

You can install Experion PDF Collection, which consists of Experion documentation in PDF format. There are two PDF Collection sets in Experion.

- Experion SCN PDF Collection
- Experion PDF Collection

Experion SCN PDF Collection consists of Experion installation, migration documents, and software changes notices (SCNs).

Experion PDF Collection consists of other Experion documents.

Tip

- Run the **Experion PKS R431.1 SCN.msi** to install **Experion SCN PDF Collection**.
- Run the **Experion PKS_ R431_PDFCollection_Installer.msi** to install **Experion PDF Collection**.

1. Insert the Experion PDF Collection media into the media drive.
2. In Windows Explorer, browse to the PDF collection folder on the media and double-click on **Experion PKS R431.1 SCN.msi/Experion PKS_ R431.1_PDFCollection_Installer.msi**.
   The **Welcome** dialog box is displayed.
3. Click **Next**.
   The **License Agreement** dialog box is displayed.
4. Select **I accept the terms in the license agreement**, and click **Next**.
   The **Destination Folder** dialog box is displayed.
5. The default path where the PDF Collection is installed, is displayed. Perform the following steps to change the default path.
   a. Click **Change**.
   b. Specify the path for PDF Collection installation in the **Folder Name** field.
   c. Click **OK**.
6. Click **Next**.
   The **Ready to Install the Program** dialog box is displayed.
7. Click **Install**.
   The installation begins. After completion, the **InstallShield Wizard Completed** dialog box is displayed.
8. Click **Finish** to complete installation.

20 Troubleshooting Experion Installation

Related topics

“Troubleshooting Experion for installation failure” on page 214
“Running 32-bit Snap-ins in 64-bit Windows operating system” on page 217
“Configuring Matrox QID display driver (PAR# 1-KS3W3F)” on page 218

20.1 Troubleshooting Experion for installation failure

Attention

If you want to log on to Windows manually during Experion installation, you must log on with HPSInstall account for which the password is the password of MNGR account.

Error indication	An error occurs when a step in the installation fails to install on any node type (for example, at the Utility Directory Preparation step).
Cause	
Solution	1. Click **OK** to acknowledge the error. 2. Select **Yes** to cancel the remaining installation. 3. Fix the issue that leads to the step failure. 4. If the fix requires the user to reboot the computer, then you must log back onto the computer as HPSInstall account on the current computer. 5. Restart the **setup.exe** in the root directory of the installation media. OR Run **HWInstallSequencer.exe** from *<Install drive:>\<Install Path>Honeywell \ Experion PKS\Install* folder to resume installation.

Error indication	An error, **The Windows Installer service is not responding** occurs when a step in the installation fails to install on any node type
Cause	Windows Installer Service is not responding
Solution	1. Click **OK** to acknowledge the error. 2. Reboot the computer, then you must log back onto the computer as HPSInstall account on the current computer. 3. Restart the **setup.exe** in the root directory of the installation media. OR Run **HWInstallSequencer.exe** from *<Install drive:>\<Install Path>Honeywell \ Experion PKS\Install* folder to resume installation.

Error indication	A loss of view of C200s/C300s occurs on Console stations when Server B is rebuilt after a failure.
Cause	On a system with C200s/C300s and Console station, rebuild the Server B after failure and connect it to the network with a blank ERDB. The views of all the C200s/C300s are lost.

Solution	Perform the following steps after the server is rebuilt (installed and updated to current system patch levels) without putting it on the network. 1. Stop **ErServer** service and dependent services. 2. Stop **EMDB Server** service and dependent services, if they are configured. 3. Stop HSC server. 4. Connect to the network. 5. Run **Config Studio** on Server B, and log on to enterprise. 6. Run **DBAdmin** (EMDB) and run the **Recover Primary** task. 7. Start **EMDB Server** service. 8. Launch **DBAdmin**. 9. Run **Recover Primary** task. 10. If the system configuration files are large, disconnect from the network. 11. Start **ERServer** service and dependent services. 12. Monitor the memory size of **SysRep** using the task manager. When it reaches the approximate size of Server A, reconnect the system to the network. 13. Start HSC server. 14. Using station, synchronize the servers. 15. Return to **DBAdmin** functions for EMDB and ERDB and perform the following tasks. • Disable replication. • Enable replication.

Error indication	Multiple users cannot be connected to the same network share.
Cause	
Solution	1. Perform one of the following steps. • If any of the Explorer windows having the ESIS UNC path is open, then close all the Explorer windows and click **Next**. • Right-click **My Computer** and select **Disconnect Network Drives** . In the list, select the ESIS server if present and click **OK** to disconnect. Click **Next**. • Cancel the installation, log off, log on, and start the installation. 2. If the error still appears, perform the following steps. • Choose **Start > Run** and type **control userpasswords2** . Press **ENTER** . • Choose **Advanced > Manage Passwords**. Select the UNC path and select **Remove**. • Reboot your system and start the installation.

Installation errors while using ESIS

The following message indicates that an error was detected during the operating system installation on ESIS.

Error indication	Network-based installation of operating system is not working.
Cause	Unknown
Solution	Remove <EnableNetwork> True </EnableNetwork> from the **AutoUnattend.xml** file available in the configuration files saved on the floppy/network/USB device.

The following issue may occur after the first reboot while installing Experion using ESIS.

Error indication	An error is displayed after the first reboot indicating unable to connect to ESIS and prompts for credentials to ESIS path.
Cause	

Solution	1. Click **OK** to acknowledge the error message. 2. In the **Experion PKS R431.1 Status Display** page, an error message **"ERROR – Installation Media Validation not available"** is displayed. 3. Click **OK** to exit the install process. 4. Browse to the ESIS repository location on the USB drive or network share to verify the connection to the ESIS share. 5. Run **setup.exe** from the root of the ESIS share OR double-click the file located at *<System Drive>:\Program Files\Honeywell\Experion PKS\Install \hwinstallsequencer.exe* .

The following issue may occur after the first reboot while installing Experion using ESIS.

Error indication	An error message appears after the first reboot, indicating an error occurred while trying to connect to ESIS and prompts for credentials to ESIS path.
Cause	
Solution	1. Type **Username** and **Password** to connect to the ESIS share. 2. Click **OK** to proceed with the installation.

The following issue occurs while creating an ESIS repository on the local drive of a machine with Microsoft Windows XP (32-bit) operating system.

Error indication	**Folder Properties** dialog box appears without a **Sharing** tab.
Cause	**Use simple file sharing [Recommended]** check box is selected, in the **Folder Options** dialog box.
Solution	1. Cancel the ESIS creation. 2. Choose **Start** > **Settings** > **Control Panel**. 3. From the **Tools** menu, click **Folder Options**. The **Folder Options** dialog box appears. 4. Click **View** tab. 5. Clear the **Use simple file sharing [Recommended]** check box. 6. Log off and then log on to the system. 7. Resume the **ESIS** creation.

Error indication	You cannot upgrade the USB-based ESIS repository on a system if it is created on a different system.
Cause	Refer to Error Indication.
Solution	Upgrade/Resume the USB-based ESIS repository from the same system where it was created

20.2 Running 32-bit Snap-ins in 64-bit Windows operating system

The Microsoft Management Console (MMC) is a component of Windows operating systems that provides system administrators and advanced users with a flexible interface through which they may configure and monitor the system. The management console can display one or more modules which are Component Object Model components called Snap-ins. Most of Microsoft's administration tools included with both Windows operating system, and Windows Server System products are implemented as MMC "snap-ins". Snap-ins are registered in the **[HKEY_CLASSES_ROOT]\{CLSID} and [HKEY_LOCAL_MACHINE\Software \Microsoft\MMC\Snapins]** registry keys.

Diagnostic check

Microsoft 64-bit operating systems can run both 32-bit MMC (MMC32) and 64-bitMMC(MMC 64). By default, when MMC is started, it is the 64-bit version. For example, the **Honeywell Node Admin** Snap-in is a 32-bit code. Hence, it is not listed in the of available snap-ins.

Solution

To open the a 32-bit Snap-in, perform the following steps:

1. Go to the *"C:\WINDOWS\SysWOW64"* path on the computer where Experion is installed.
2. Execute the **mmc.exe** using the command, **"mmc –32 mmc.exe"**.

20.3 Configuring Matrox QID display driver (PAR# 1-KS3W3F)

Error Indication	Honeywell configured Dell T5500 / T5400 / PWS490 workstations with Matrox QID quad display controller can be connected to quad or triple displays. The current Experion PKS System Initialization media configures the displays using windows display management. However, to get a better display control/performance, the OEM vendor recommends configuring displays using **PowerDesk-SE** software.
Cause	After loading the Microsoft Windows 7 Professional (64-bit) operating system on Honeywell configured T5500 / T5400 / PWS490 systems configured with Matrox QID display controller, when the user inserts the Experion PKS System Initialization media and configures in **Network and Input/Output Device Information** window, the user is not allowed to select multiple monitors & resolutions. It defaults to single display, and resolution as **1280x1024**. If the user configures systems using already generated configuration files, after completing the Experion installation, the user must configure the displays using **PowerDesk-SE** software.
Solution	After completing Experion installation, the user must perform the following steps to configure quad/triple displays using **PowerDesk-SE** software.

Triple display configuration

1. On the task bar, right-click **M (Matrox)** icon, and choose **Multi-Display Setup**.

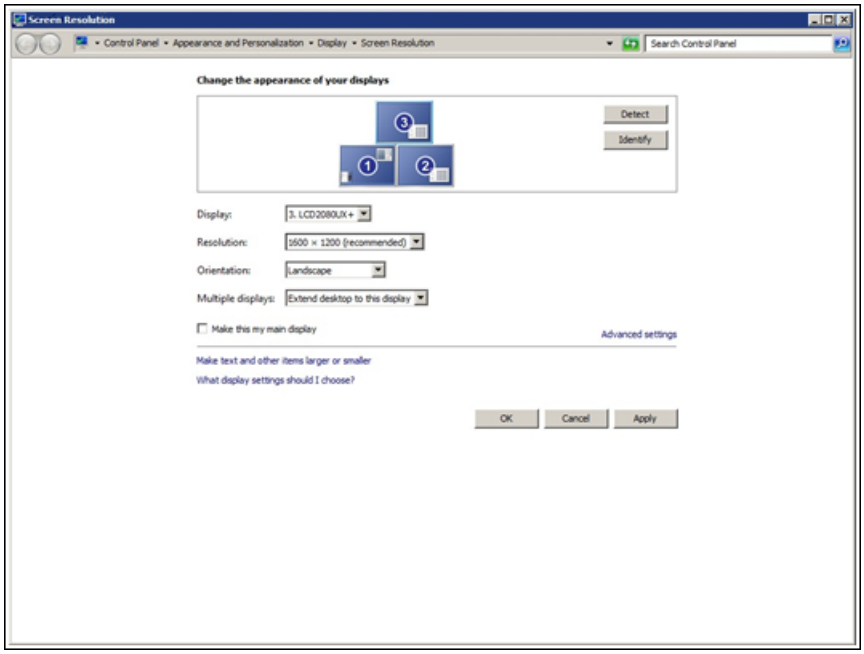
   The **Matrox PowerDesk-SE** dialog box is displayed with the Matrox display devices listed in the left pane.
2. Select **Use advanced Matrox display controls** option and in the multi-display setup section, select **Independent mode**. Select **3 display** from the menu.

   Attention
   While using a Matrox display mode, use the Matrox display controls to change the display settings. Corresponding Windows controls are available, but cannot be used.
3. Select the appropriate display resolution from the **Display mode** menu and click **Apply**.

   Your display setup has changed. Do you want to keep these settings message is displayed.

   Attention
   Ensure that all four displays are at the same resolution and refresh rate.
4. Click **Yes**, and click **OK**.
5. Choose **Start > Control Panel > Appearance and personalization > Display > Adjust resolution**.

   The **Screen Resolution** window is displayed.
6. Arrange the displays in the order of 1 and 2 in lower tier, and 3 on top of 1 and 2 as shown.



7. Click **Apply**, and click **OK**.

Quad display configuration

1. In the task bar, right-click **M (Matrox)**, and choose **Multi-Display Setup**.

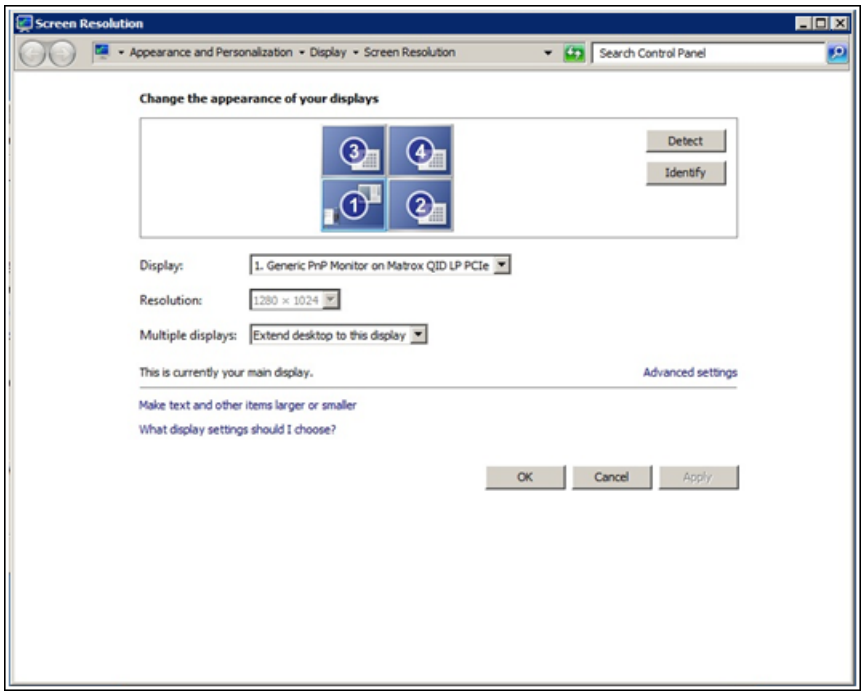
   The **Matrox PowerDesk - SE** dialog box is displayed with the Matrox display devices listed in the left pane.
2. Select **Use advanced Matrox display controls** and in the Multi-display setup section select **Independent mode**. Select **4 display** from the menu.

   Attention
   While using a Matrox display mode, use the Matrox display controls to change the display settings. Corresponding Windows controls are available, but cannot be used.
3. Select the appropriate display resolution from the **Display mode** menu and click **Apply**.

   The message, **Your display setup has changed. Do you want to keep these settings?** is displayed.

   Attention
   Ensure all four displays are at the same resolution and refresh rate. Maximum display resolution supported for four monitor configurations is **1600 x 1200**.
4. Click **Yes**, and click **OK**.
5. Choose **Start > Control Panel > Appearance and personalization > Display > Adjust resolution**.

   The **Screen Resolution** window is displayed.
6. Arrange the displays in the order of 1 and 2 in lower tier, 3 on top of 1 and 4 on top of 2, as shown.



7. Click **Apply**, and click **OK**.

21 Notices

Trademarks

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21.1 Documentation feedback

You can find the most up-to-date documents on the Honeywell Process Solutions support website at:

http://www.honeywellprocess.com/support

If you have comments about Honeywell Process Solutions documentation, send your feedback to:

hpsdocs@honeywell.com

Use this email address to provide feedback, or to report errors and omissions in the documentation. For immediate help with a technical problem, contact your local Honeywell Process Solutions Customer Contact Center (CCC) or Honeywell Technical Assistance Center (TAC) listed in the “Support and other contacts” section of this document.

21.2 How to report a security vulnerability

For the purpose of submission, a security vulnerability is defined as a software defect or weakness that can be exploited to reduce the operational or security capabilities of the software.

Honeywell investigates all reports of security vulnerabilities affecting Honeywell products and services.

To report a potential security vulnerability against any Honeywell product, please follow the instructions at:

https://honeywell.com/pages/vulnerabilityreporting.aspx

Submit the requested information to Honeywell using one of the following methods:

- Send an email to security@honeywell.com.

  or

- Contact your local Honeywell Process Solutions Customer Contact Center (CCC) or Honeywell Technical Assistance Center (TAC) listed in the “Support and other contacts” section of this document.

21.3 Support

For support, contact your local Honeywell Process Solutions Customer Contact Center (CCC). To find your local CCC visit the website, https://www.honeywellprocess.com/en-US/contact-us/customer-support-contacts/Pages/default.aspx.

21.4 Training classes

Honeywell holds technical training classes on Experion PKS. These classes are taught by experts in the field of process control systems. For more information about these classes, contact your Honeywell representative, or see http://www.automationcollege.com.